

Appendix A

Existing Site Layout Plan
(Drawing Ref: 3229-C-200)



NORTH

River Tyne



LOCATION PLAN
SCALE 1:2000

REV.	DATE	DESCRIPTION	DR.	CH.
<input checked="" type="checkbox"/>		Information	<input type="checkbox"/>	Construction
<input type="checkbox"/>		Preliminary	<input type="checkbox"/>	Tender
			<input type="checkbox"/>	As-Built
SCALE		1:2000	A3	
DRAWN BY		DATE	CHECKED BY	
DB		Sept '12	MAT	

DTA
Consulting Engineers LLP
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Parsons House, Washington,
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TYNE & WEAR TEESSIDE



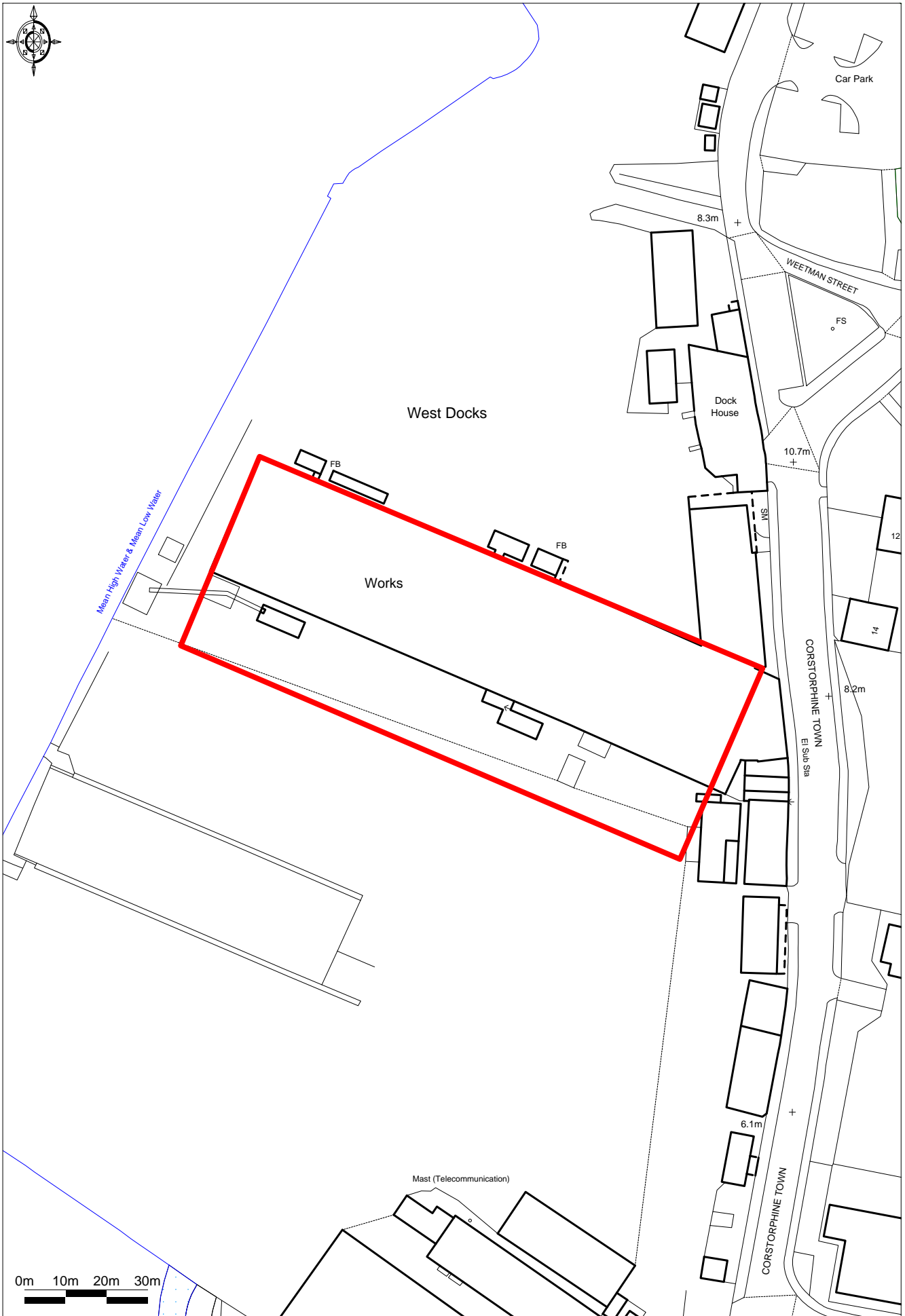
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CLIENT	PORT OF TYNE		
PROJECT	MCNULTY YARD REPORT		
TITLE	SITE LAYOUT		
DRAWING No.	3229-C-200	REV.	0

Appendix B

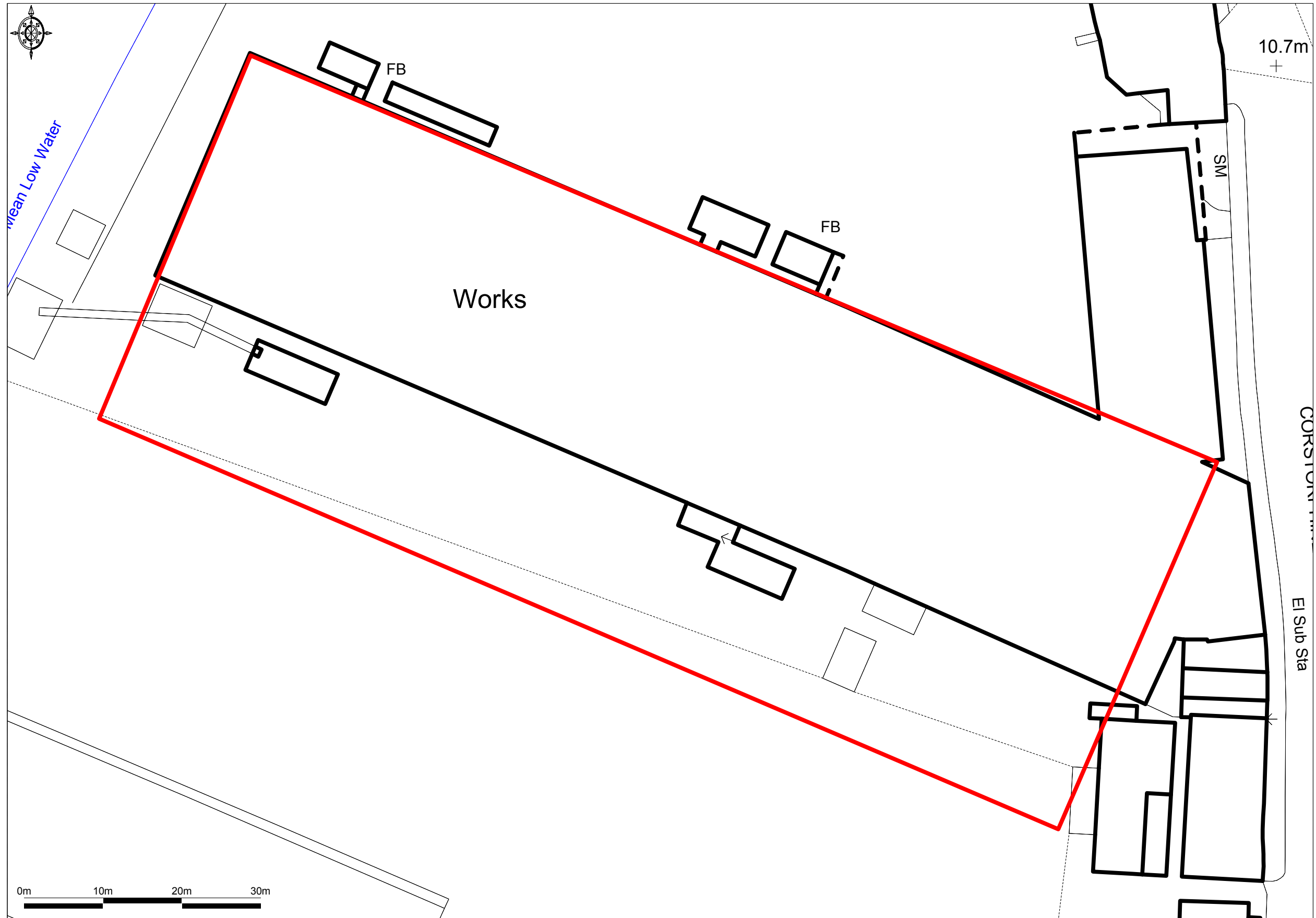
Existing and Proposed Development
Plans specific to Proposed
Engineering Shed

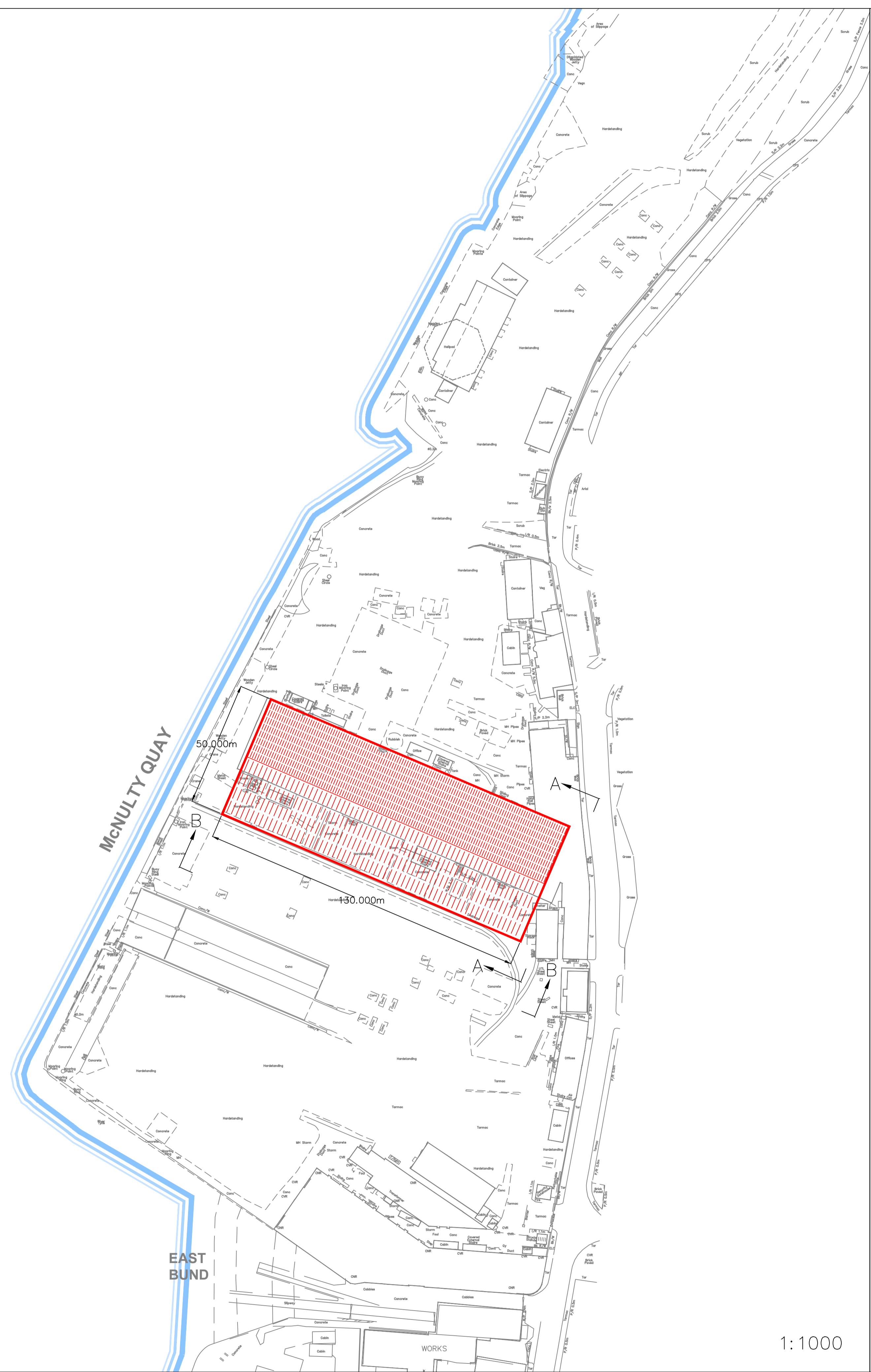
Site Location Plan



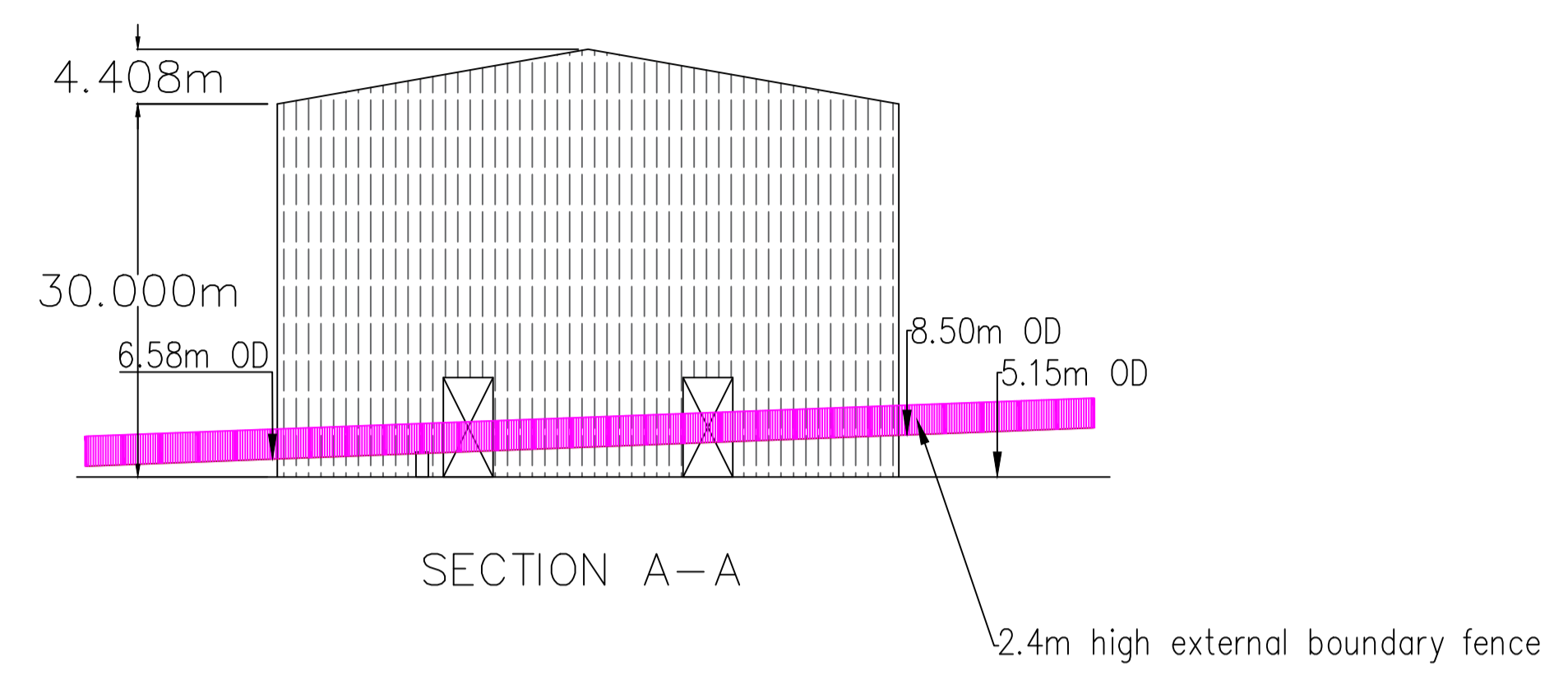
Ordnance Survey © Crown Copyright 2016. All rights reserved.
Licence number 100022432. Plotted Scale - 1:1250

Site Plan

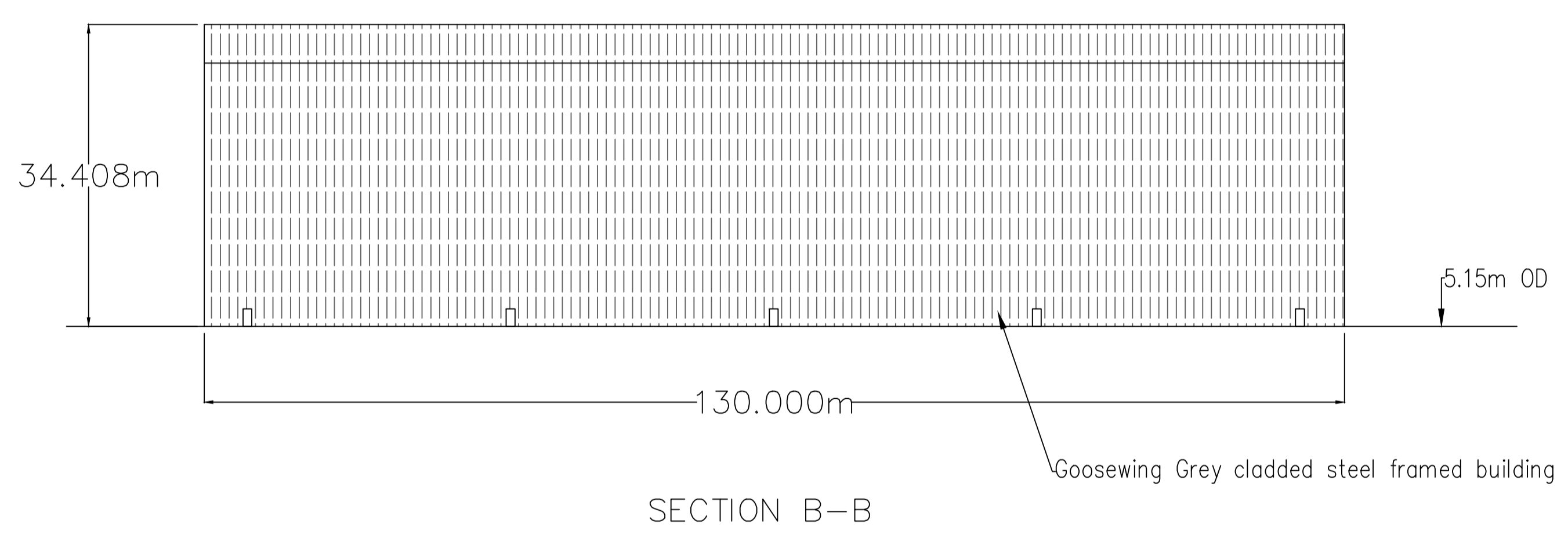




1:1000



SECTION A-A



SECTION B-B

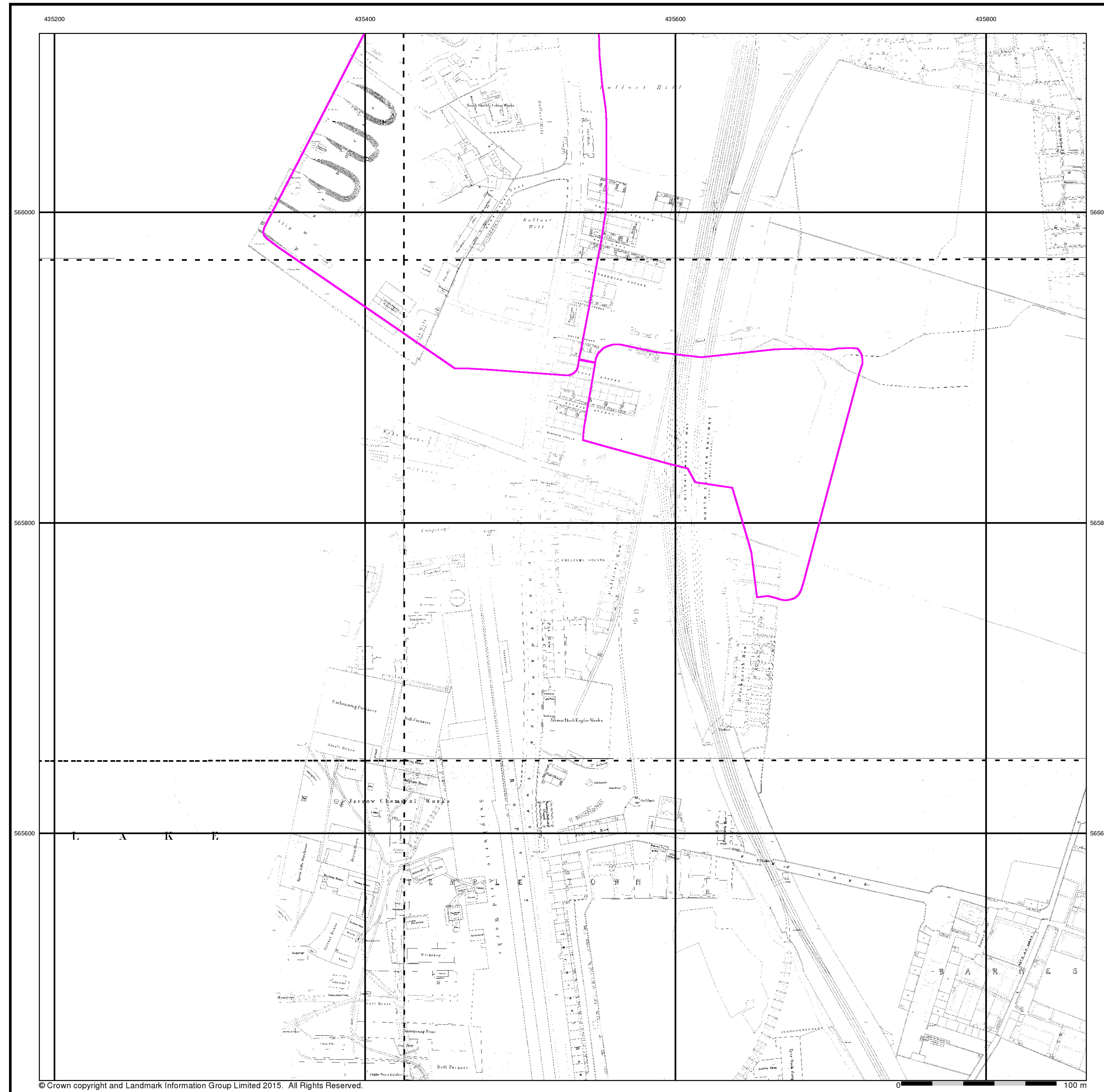
1:500

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REV	DATE	DESCRIPTION	BY	APP
REVISION / STATUS				
		MARITIME HOUSE TYNE DOCK SOUTH SHIELDS NE34 9PT 0191 4552671		
		TITLE FORMER McNULTY SITE PROPOSED SHED		
K. EMMETT BEng, CEng, M.I.C.E. HEAD OF INFRASTRUCTURE DEVT.				
PREPARED BY	KPE	CHECKED BY	ARK	
DATE	19.04.16	DATE	19.04.16	
SCALE	AS SHOWN	CLIENT REF		
DWG No.	2298-KPE-0004	REVISION	0	
COPYRIGHT © PORT OF TYNE				A1

Appendix C

Historical Maps



Northumberland
Published 1857 - 1858
Source map scale - 1:528

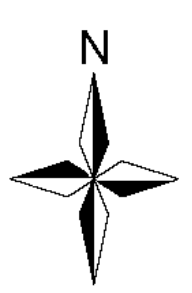
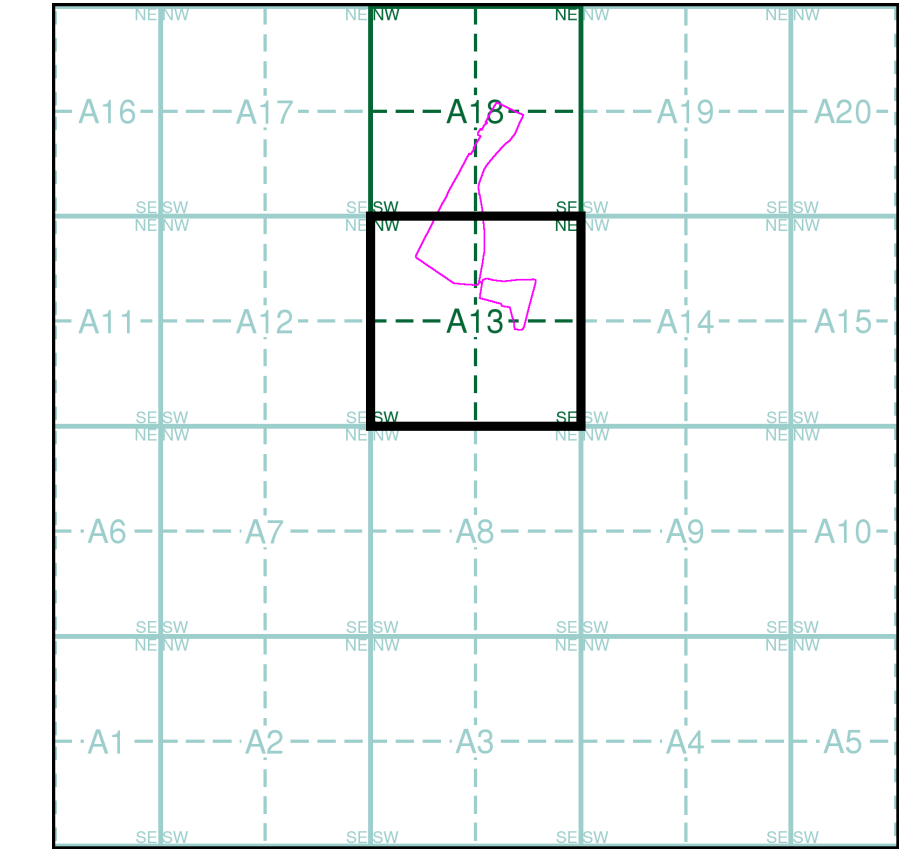
The 1:528 scale Ordnance Survey mapping was adopted in 1850 as an alternative to the 1:1056 scale, that had been deemed to be inadequate for sanitary planning, which had come very much to the fore following the passing of the Public Health Act of 1948. Around 29 towns in England and Wales were surveyed at this scale, the bulk of which were undertaken between 1850 and 1855. These were predominantly towns that were outside the areas being surveyed at 1:10,560 or 1:2500 scale. As well as showing the details characteristic of the later 1:500 plans, they show features of sanitary interest such as privies, taps, cow houses, cess pits, brew and bake houses and cart sheds and stables.

Please note: Due to the partial coverage of Historical Town Plans, it is possible that not all segments within an order will contain mapping. Only the segments that have Town Plan coverage will be generated.

Map Name(s) and Date(s)

000_00_044	000_00_045
1857	1857
1:528	1:528
000_00_047	000_00_048
1857	1858
1:528	1:528
000_00_050	000_00_051
1857	1857
1:528	1:528

Historical Town Plan - Segment A13



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 0

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

435200

435400

435600

435800



consulting engineers

Northumberland

Published 1896

Source map scale - 1:500

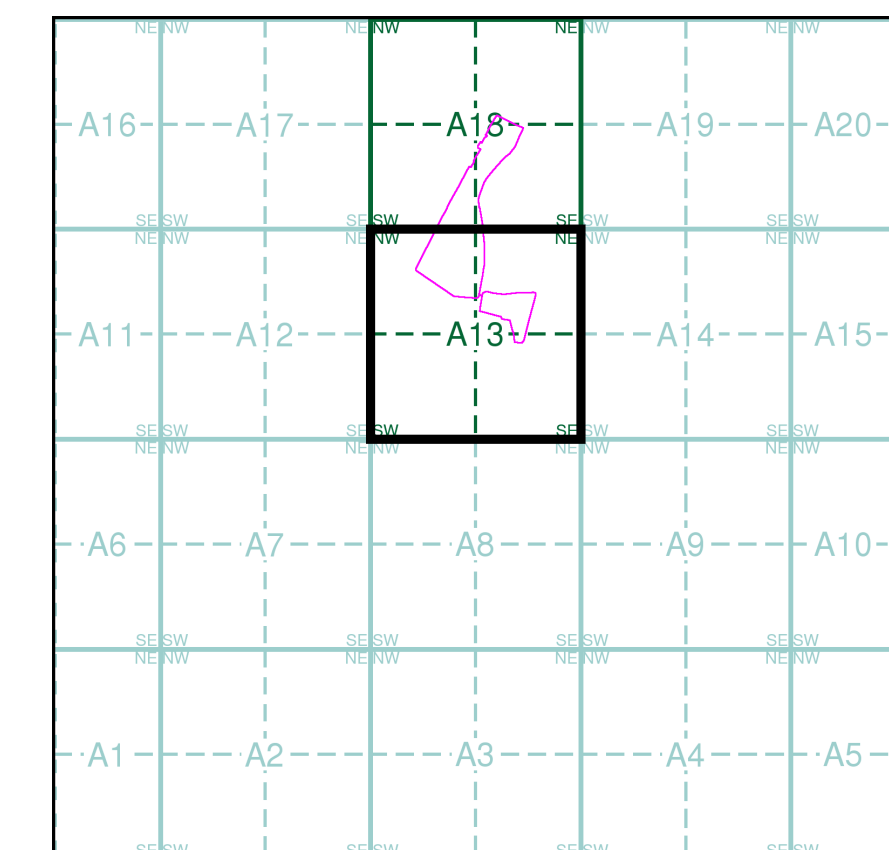
The 1:500 scale Ordnance Survey mapping was introduced in 1855 as a replacement for the 1:528 scale and to complement the 1:2500 scale that had been implemented in 1853. By 1895, the 1:500 scale covered most towns over a population of about 4000 at the time of survey, although very few towns were mapped more than once at this scale, and none have been since 1910. The 1:500 scale gives particular emphasis to such features as lamp posts, man holes, arched passages and minor building projections. Also often featured are divisions between tenements, interior ground floor layouts of public buildings, and on earlier plans, the functions of the various parts of larger industrial premises are also indicated. Content of the plans does vary however, from one town to the next in terms of, for example, the completeness of railway tracks and the coverage of public buildings.

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Map Name(s) and Date(s)

000_00_055	000_00_056
1896	1896
1:500	1:500
000_00_061	000_00_062
1896	1896
1:500	1:500
000_00_067	000_00_068
1896	1896
1:500	1:500

Historical Town Plan - Segment A13



Order Details

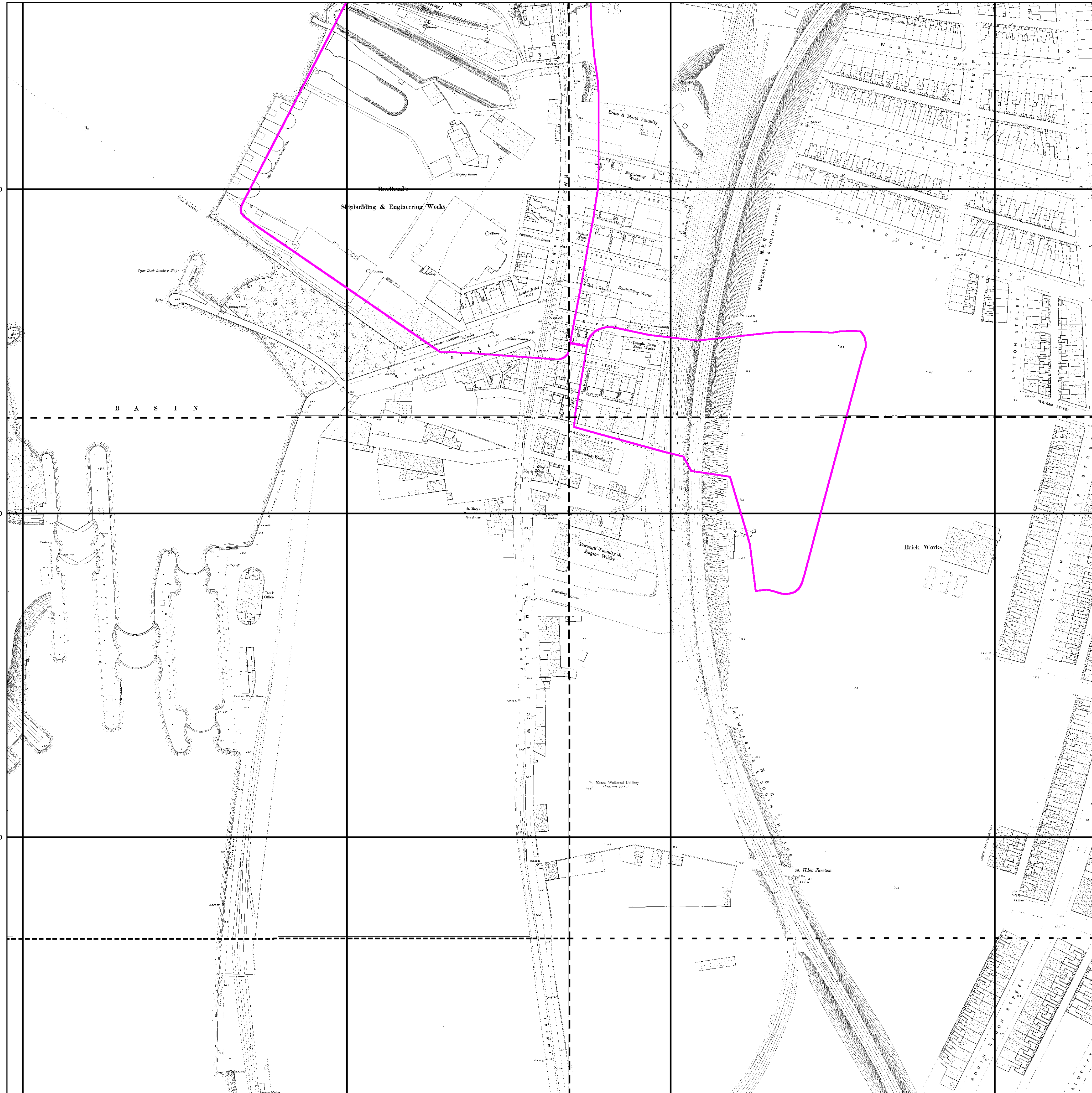
Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 0

Site Details

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435200

435400

435600

435800



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Northumberland

Published 1857 - 1860

Source map scale - 1:528

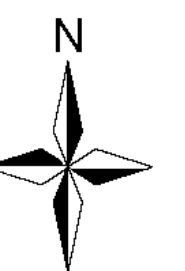
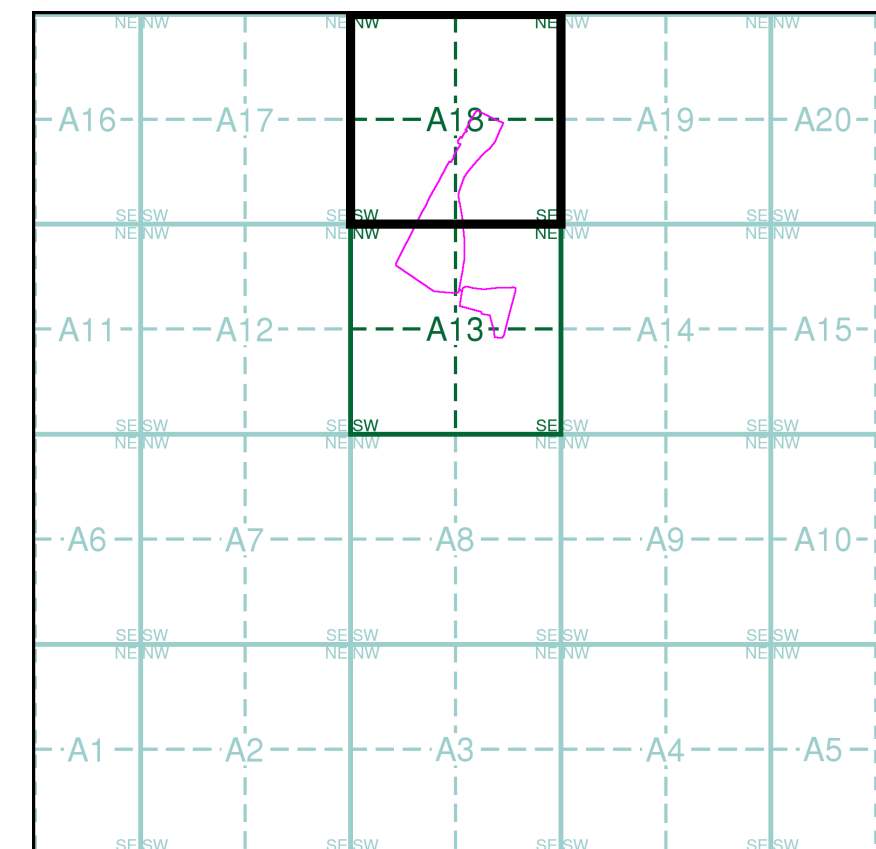
The 1:528 scale Ordnance Survey mapping was adopted in 1850 as an alternative to the 1:1056 scale, that had been deemed to be inadequate for sanitary planning, which had come very much to the fore following the passing of the Public Health Act of 1948. Around 29 towns in England and Wales were surveyed at this scale, the bulk of which were undertaken between 1850 and 1855. These were predominantly towns that were outside the areas being surveyed at 1:10,560 or 1:2500 scale. As well as showing the details characteristic of the later 1:500 plans, they show features of sanitary interest such as privies, taps, cow houses, cess pits, brew and bake houses and cart sheds and stables.

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Map Name(s) and Date(s)

000_00_037	000_00_038
1860	1858
1:528	1:528
000_00_041	000_00_042
1860	1857
1:528	1:528
000_00_044	000_00_045
1857	1857
1:528	1:528

Historical Town Plan - Segment A18

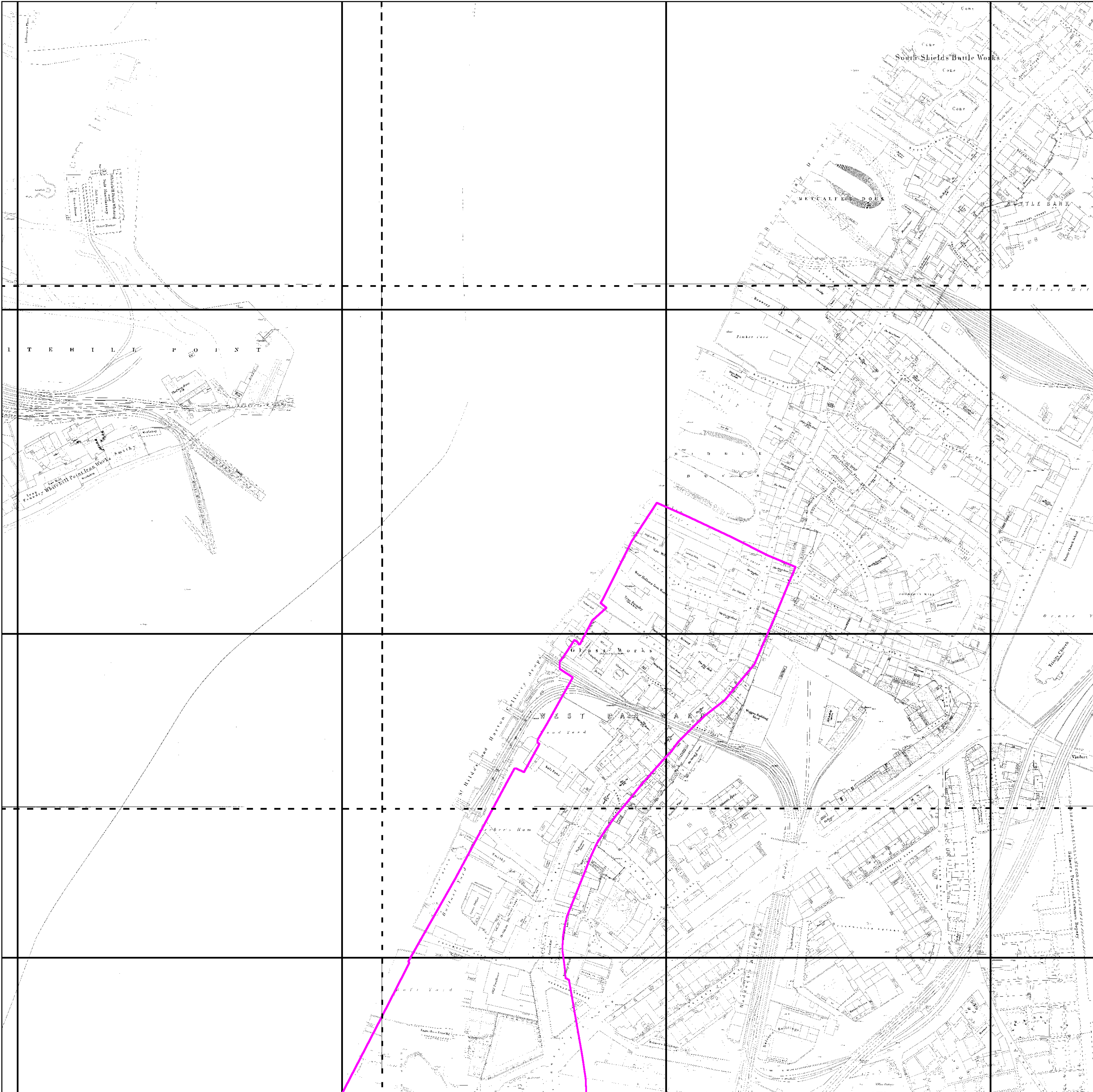


Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 0

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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435200

435400

435600

435800



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Northumberland

Published 1896

Source map scale - 1:500

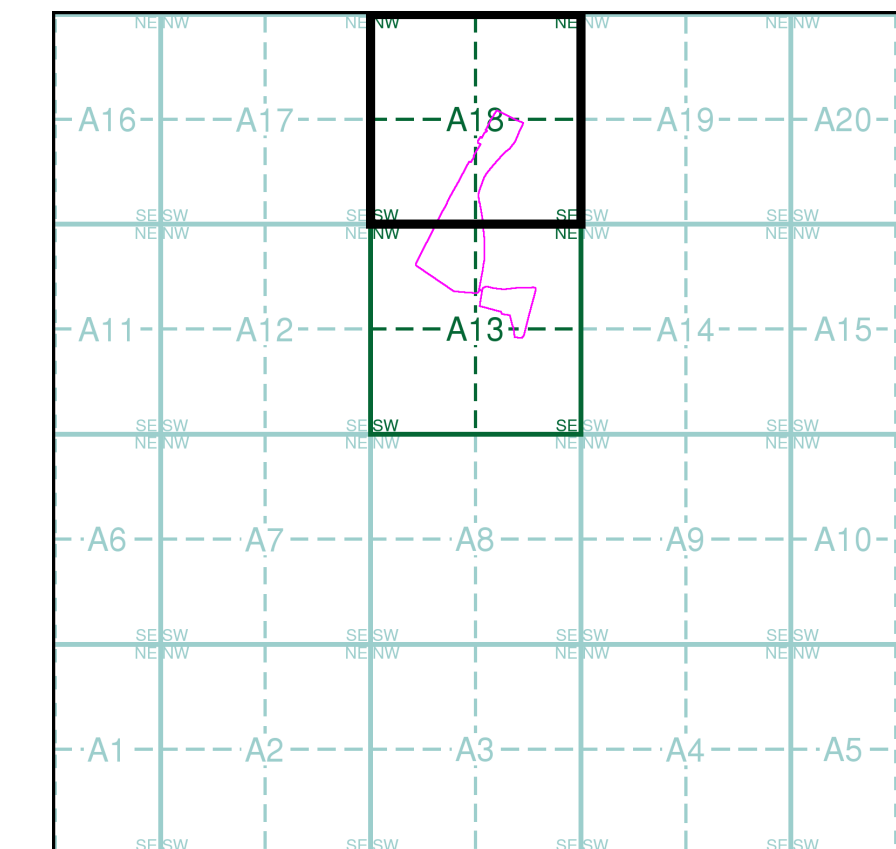
The 1:500 scale Ordnance Survey mapping was introduced in 1855 as a replacement for the 1:528 scale and to complement the 1:2500 scale that had been implemented in 1853. By 1895, the 1:500 scale covered most towns over a population of about 4000 at the time of survey, although very few towns were mapped more than once at this scale, and none have been since 1910. The 1:500 scale gives particular emphasis to such features as lamp posts, man holes, arched passages and minor building projections. Also often featured are divisions between tenements, interior ground floor layouts of public buildings, and on earlier plans, the functions of the various parts of larger industrial premises are also indicated. Content of the plans does vary however, from one town to the next in terms of, for example, the completeness of railway tracks and the coverage of public buildings.

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Map Name(s) and Date(s)

000_00_048	1896	1:500
000_00_051	1896	1:500
000_00_055	1896	1:500
000_00_052	1896	1:500
000_00_056	1896	1:500

Historical Town Plan - Segment A18

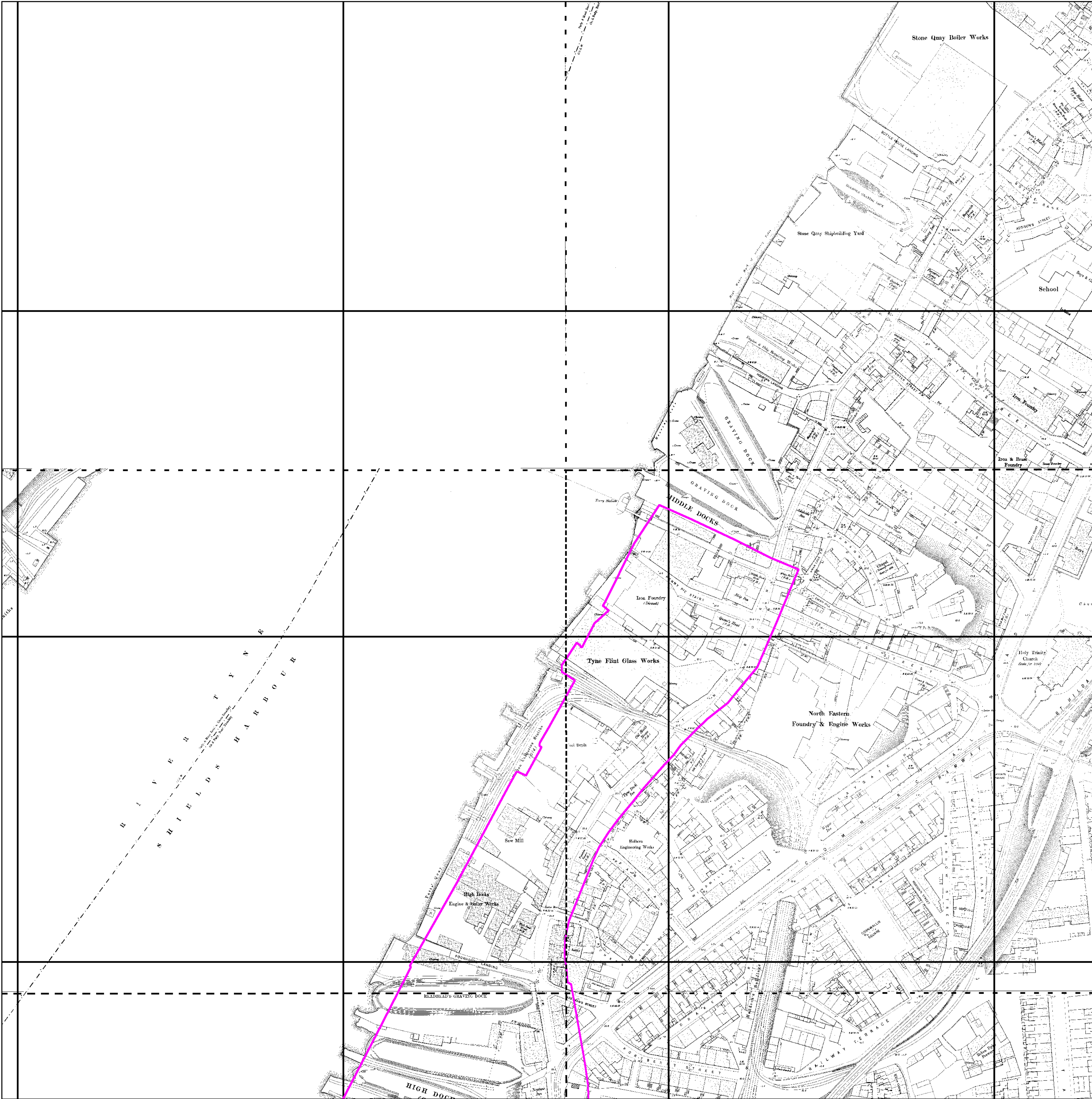


Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 0

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

Quarry **Gravel Pit** **Sand Pit**
Clay Pit **Shingle** **Refuse Heap**
Sloping Masonry **Flat Rock**
Marsh **Reeds** **Osiers**
Rough Pasture **Furze** **Wood**
Mixed Wood **Brushwood** **Orchard**
Fir **Ford** **Stepping Stones**
Ferry **Waterfall** **Lock**
Trig. Station **Altitude at Trig. Station**
B.M. 325.9 **Bench Mark** **Surface Level**
Arrow denotes flow of water **Antiquities (site of)**
Cutting **Embankment**
Railway crossing Road **Level Crossing** **Road crossing Railway**
Railway crossing River or Canal **Road over single stream** **Road over River or Canal**
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
County Borough Boundary (England)
Co. Boro. Bdy.
County Burgh Boundary (Scotland)
BP BS Boundary Post or Stone **P.C.B** Police Call Box
B.R. Bridle Road **P** Pump
E.P Electricity Pylon **S.P** Signal Post
F.B. Foot Bridge **Sl** Sluice
F.P. Foot Path **Sp.** Spring
G.P Guide Post or Board **T.C.B** Telephone Call Box
M.S Mile Stone **Tr.** Trough
M.P M.R Mooring Post or Ring **W** Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

Inactive Quarry, Chalk Pit or Clay Pit **Active Quarry, Chalk Pit or Clay Pit**
Rock **Boulders**
Cliff **Slopes** **Top**
Roofed Building **Glazed Roof Building**
Sloping Masonry **Archway**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Bench Mark** **Antiquity (site of)**
Cave Entrance **Triangulation Station** **Electricity Pylon**
Electricity Transmission Line
County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
London Borough Boundary
Symbol marking point where boundary mereing changes
BH Beer House **P** Pillar, Pole or Post
BP, BS Boundary Post or Stone **PO** Post Office
Cn, C Capstan, Crane **PC** Public Convenience
Chy Chimney **PH** Public House
D Fn Drinking Fountain **Pp** Pump
EI P Electricity Pillar or Post **SB, S Br** Signal Box or Bridge
FAP Fire Alarm Pillar **SP, SL** Signal Post or Light
FB Foot Bridge **Spr** Spring
GP Guide Post **Tk** Tank or Track
H Hydrant or Hydraulic **TCB** Telephone Call Box
LC Level Crossing **TCP** Telephone Call Post
MH Manhole **Tr** Trough
MP Mile Post or Mooring Post **Wr Pt, Wr T** Water Point, Water Tap
MS Mile Stone **W** Well
NTL Normal Tidal Limit **Wd Pp** Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250

Cliff **Slopes** **Top**
Rock **Rock (scattered)**
Boulders **Boulders (scattered)**
Positioned Boulder **Scree**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Triangulation Station** **Antiquity (site of)**
Electricity Transmission Line **Electricity Pylon**
B.M. 231.60m Bench Mark **Buildings with Building Seed**
Roofed Building **Glazed Roof Building**
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)
Bks Barracks **P** Pillar, Pole or Post
Bty Battery **PO** Post Office
Cemy Cemetery **PC** Public Convenience
Chy Chimney **Pp** Pump
Cis Cistern **Ppg Sta** Pumping Station
Dismtd Rly Dismantled Railway **PW** Place of Worship
EI Gen Sta Electricity Generating Station **Sewage Ppg Sta** Sewage Pumping Station
EI P Electricity Pole, Pillar **SB, S Br** Signal Box or Bridge
EI Sub Sta Electricity Sub Station **SP, SL** Signal Post or Light
FB Filter Bed **Spr** Spring
Fn / D Fn Fountain / Drinking Ftn. **Tk** Tank or Track
Gas Gov Gas Valve Compound **Tr** Trough
GVC Gas Governor **Wd Pp** Wind Pump
GP Guide Post **Wr Pt, Wr T** Water Point, Water Tap
MH Manhole **Wks** Works (building or area)
MP, MS Mile Post or Mile Stone **W** Well

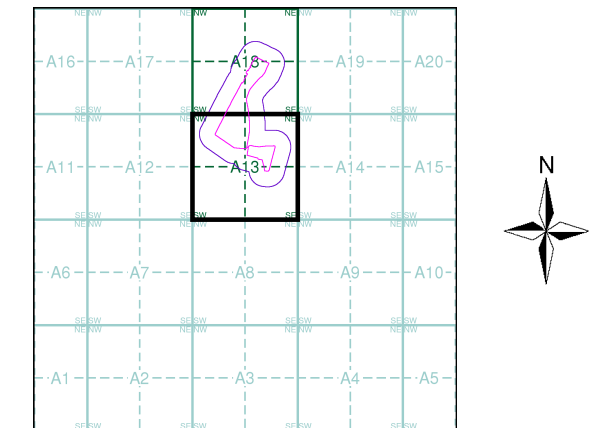


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:2,500	1858 - 1876	2
Northumberland	1:2,500	1861	3
Durham	1:2,500	1897	4
Durham	1:2,500	1915 - 1918	5
Durham	1:2,500	1938 - 1942	6
Ordnance Survey Plan	1:1,250	1956	7
Ordnance Survey Plan	1:2,500	1956	8
Ordnance Survey Plan	1:1,250	1968 - 1971	9
Ordnance Survey Plan	1:2,500	1970	10
Additional SIMs	1:1,250	1981 - 1986	11
Additional SIMs	1:1,250	1984 - 1992	12
Additional SIMs	1:1,250	1986	13
Ordnance Survey Plan	1:1,250	1989	14
Large-Scale National Grid Data	1:1,250	1993	15
Large-Scale National Grid Data	1:1,250	1996	16

Historical Map - Segment A13



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 100

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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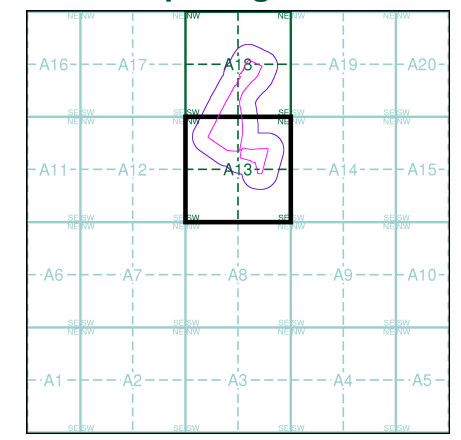
Durham
Published 1858 - 1876
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

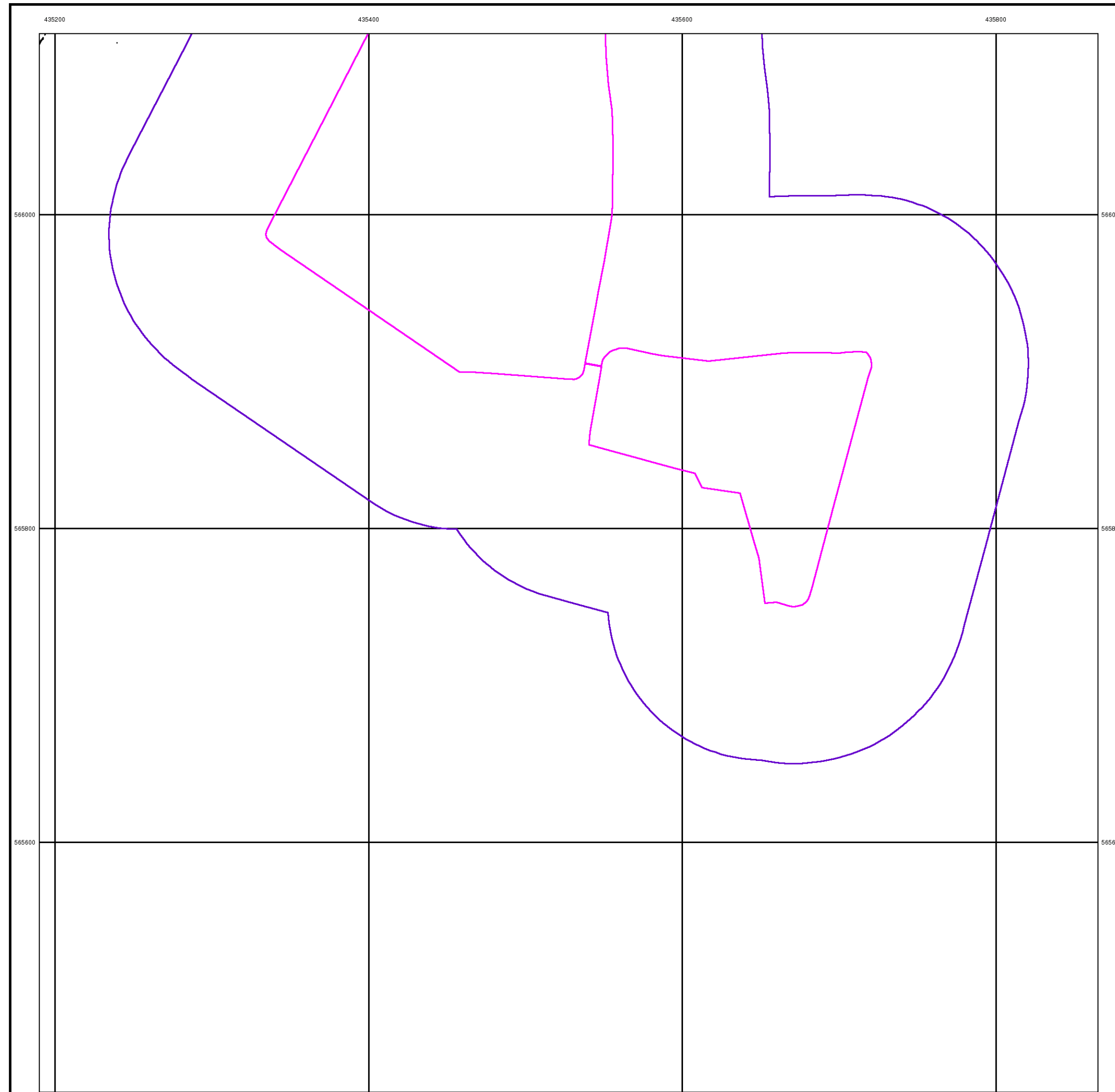
003_08 1858 1:2,500	004_05 1858 1:2,500
003_12 1876 1:2,500	004_09 1874 1:2,500

Historical Map - Segment A13



Order Details
 Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
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 Search Buffer (m): 100

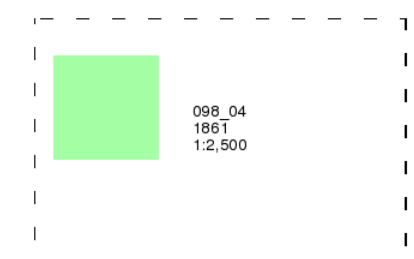
Site Details
 McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



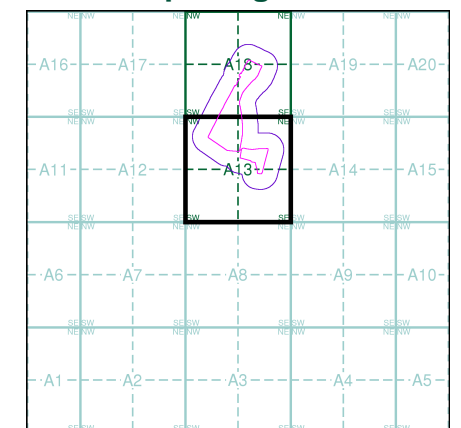
Northumberland
Published 1861
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

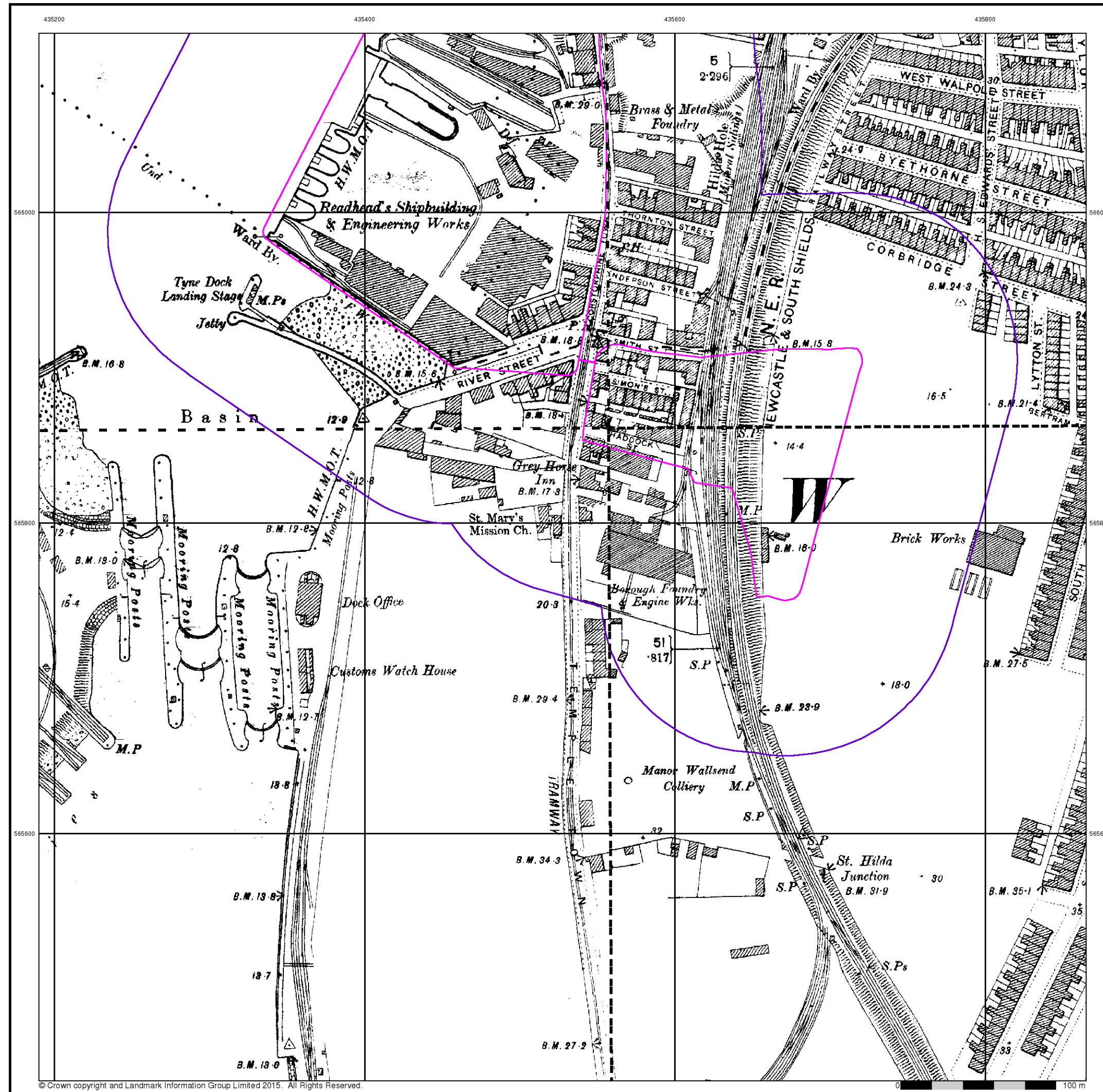
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consulting engineers

Durham

Published 1897

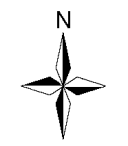
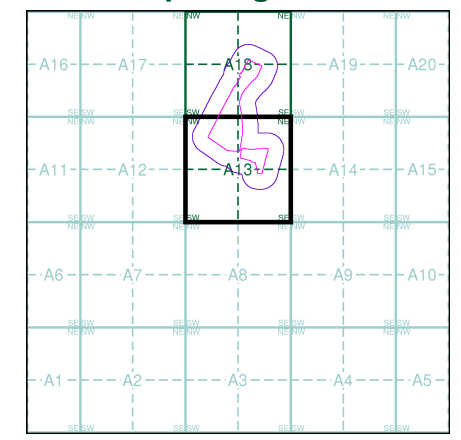
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

003_08 1897 1:2,500	004_05 1897 1:2,500
003_12 1897 1:2,500	004_09 1897 1:2,500

Historical Map - Segment A13



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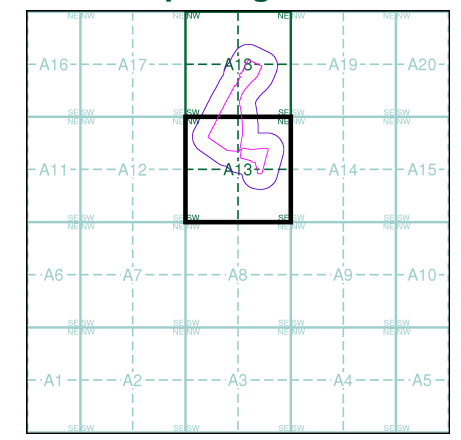
Durham
Published 1915 - 1918
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

003_08 1916 1:2,500	004_05 1915 1:2,500
003_12 1918 1:2,500	004_09 1916 1:2,500

Historical Map - Segment A13



Order Details
 Order Number: 92596393_1_1
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Site Details
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435200 435400 435600 435800

566000 565800 565600

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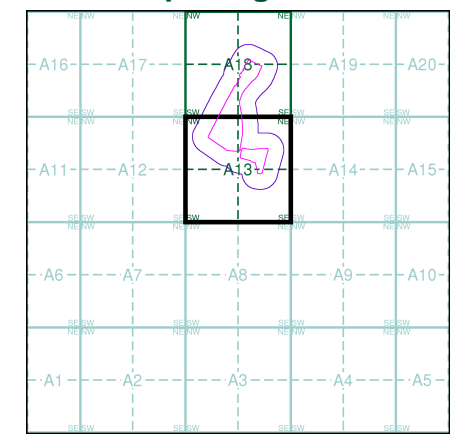
Durham
Published 1938 - 1942
Source map scale - 1:2,500

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Map Name(s) and Date(s)

003_08 1938 1:2,500		
	+	
003_12 1942 1:2,500		004_09 1942 1:2,500

Historical Map - Segment A13



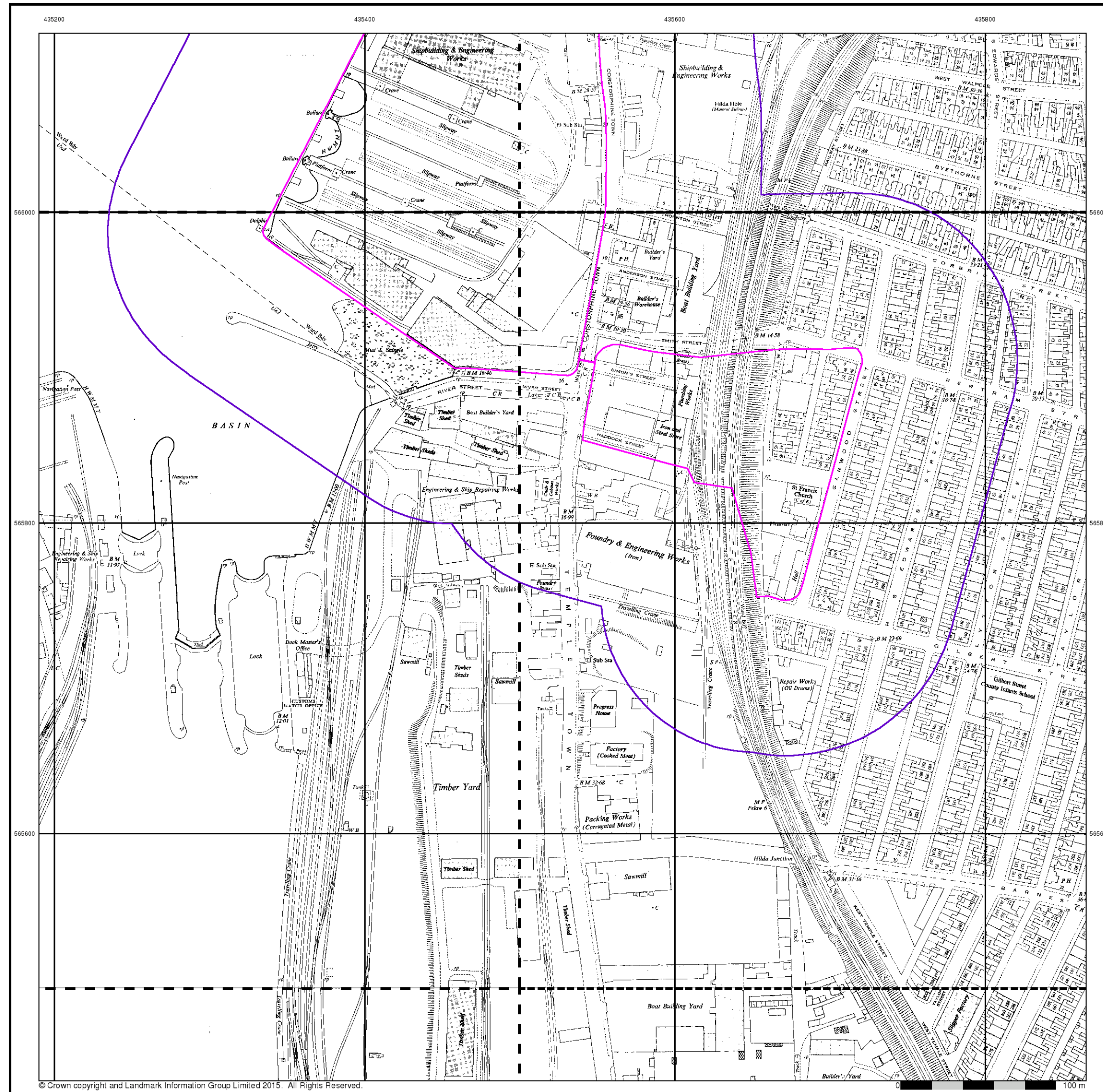
Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 100

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ

Landmark Information Group
 Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



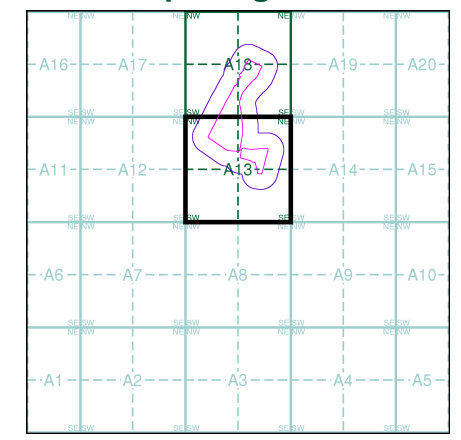
Ordnance Survey Plan
Published 1956
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

JZ3566SW	JZ3566SE
956	956
1:1,250	1:1,250
JZ3565NW	JZ3565NE
956	956
1:1,250	1:1,250
JZ3565SW	JZ3565SE
956	956
1:1,250	1:1,250

Historical Map - Segment A13



Order Details

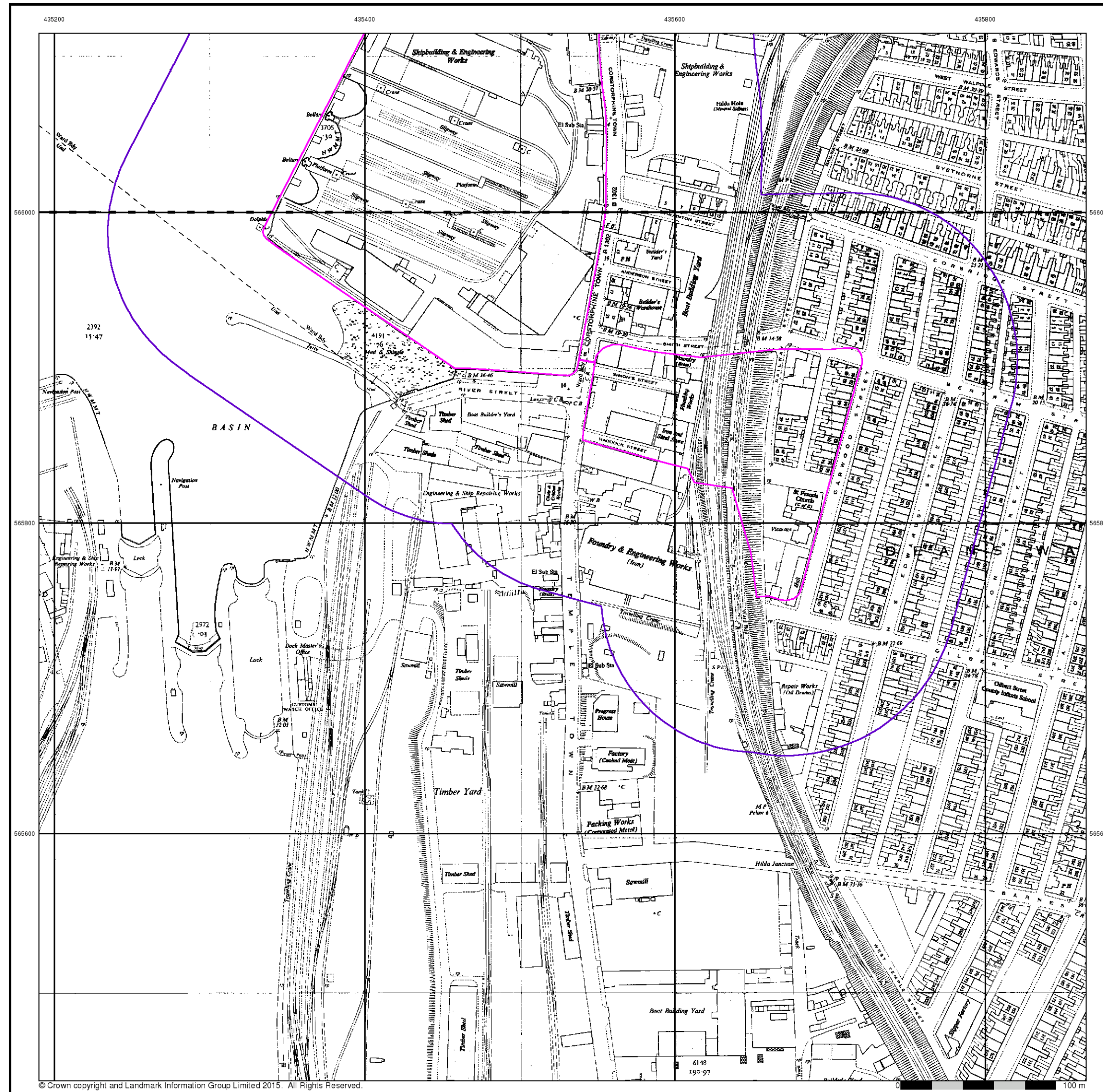
Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 100

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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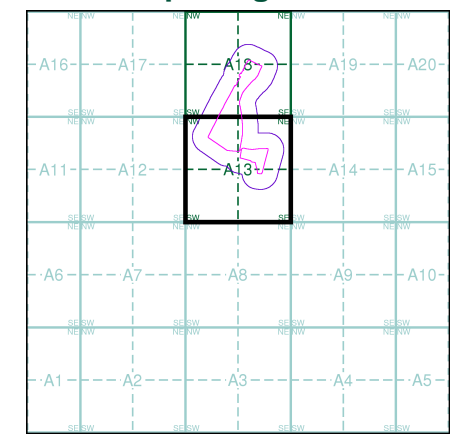
Ordnance Survey Plan
Published 1956
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

NZ3566	1956	1:2,500
NZ3565	1956	1:2,500

Historical Map - Segment A13



Order Details
 Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 100

Site Details
 McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



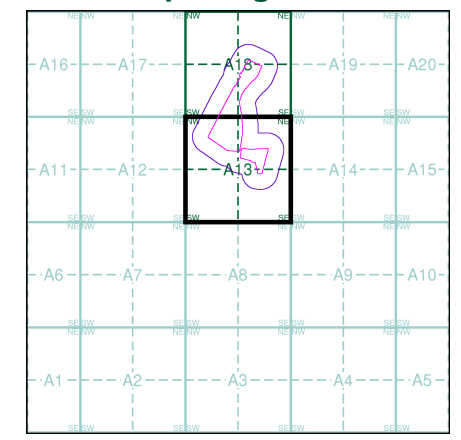
Ordnance Survey Plan
Published 1968 - 1971
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

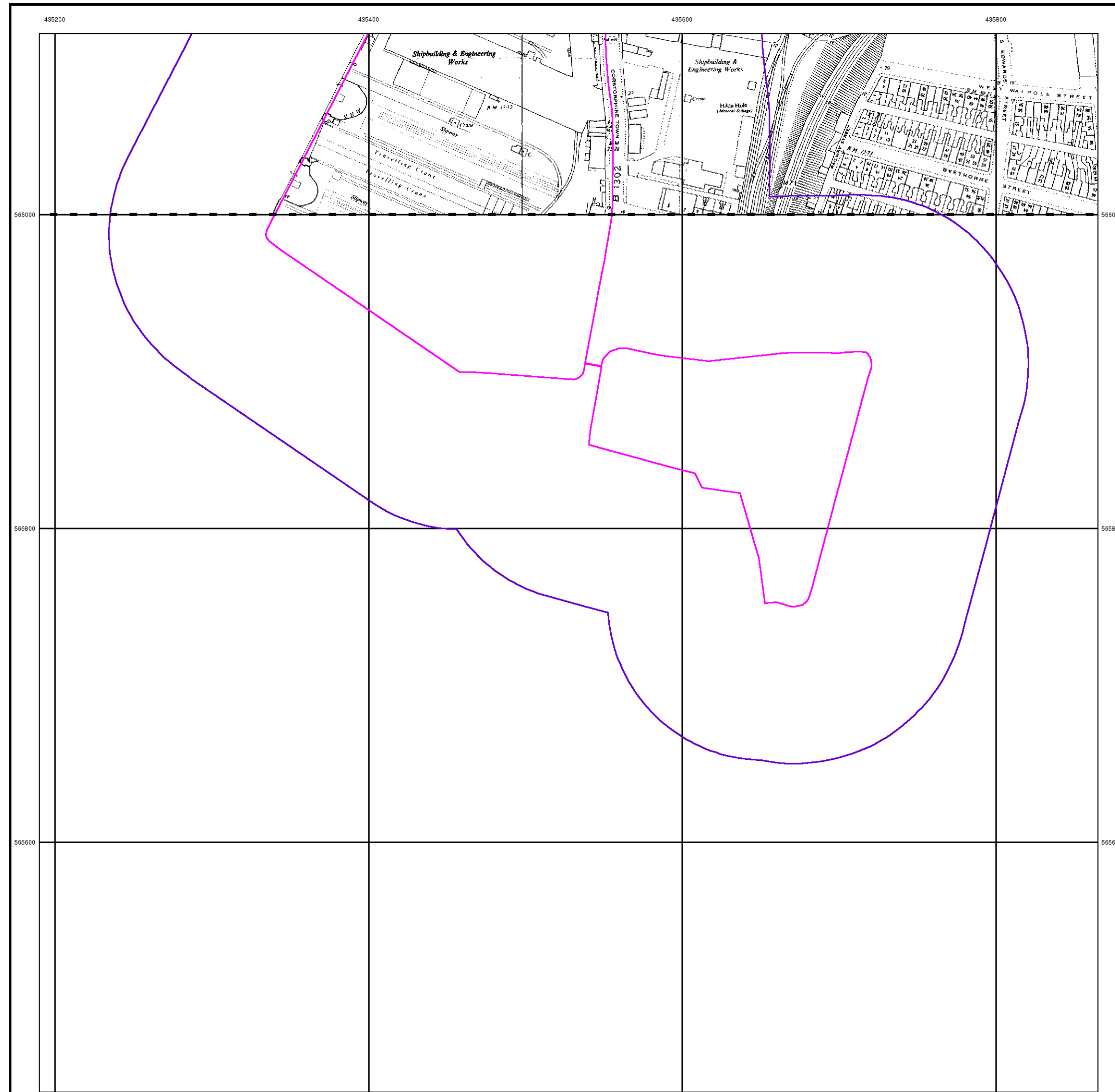
Z3566SWZ3566SE	968	968
:1,250	:1,250	
Z3565NWZ3565NE	971	971
:1,250	:1,250	
Z3565SWZ3565SE	971	968
:1,250	:1,250	

Historical Map - Segment A13



Order Details
 Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 100

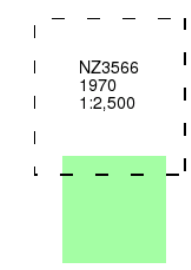
Site Details
 McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



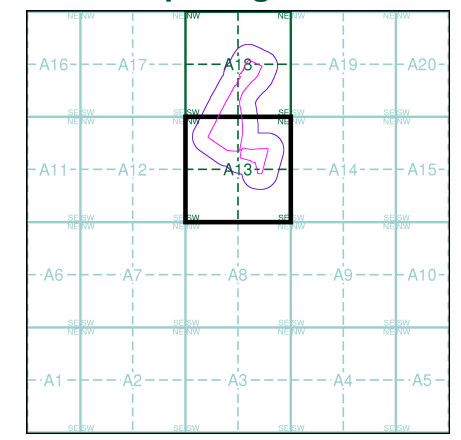
Ordnance Survey Plan
Published 1970
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

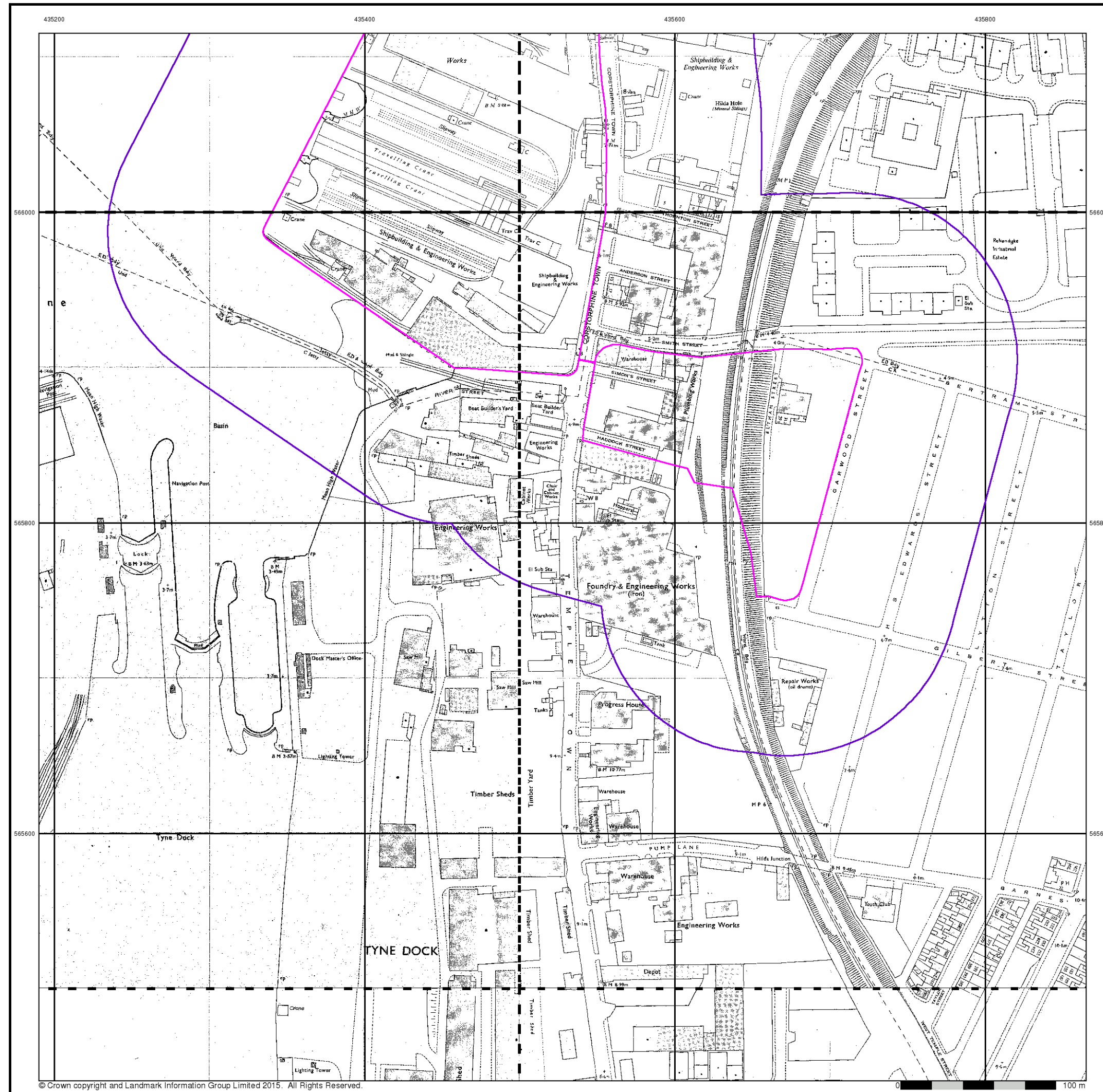
Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
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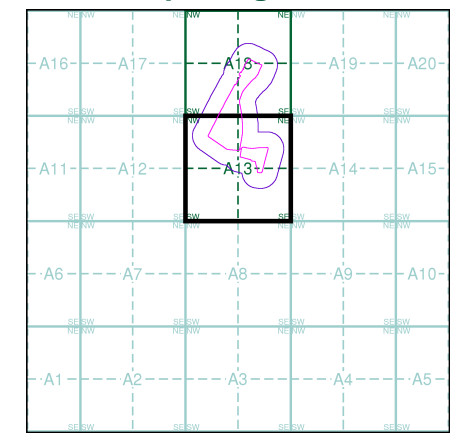
Additional SIMs
Published 1981 - 1986
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

U3566SVNZ3566SE	1981	1982
	1:1,250	1:1,250
U3565NVNZ3565NE	1982	1982
	1:1,250	1:1,250
U3565SVNZ3565SE	1986	1983
	1:1,250	1:1,250

Historical Map - Segment A13



Order Details

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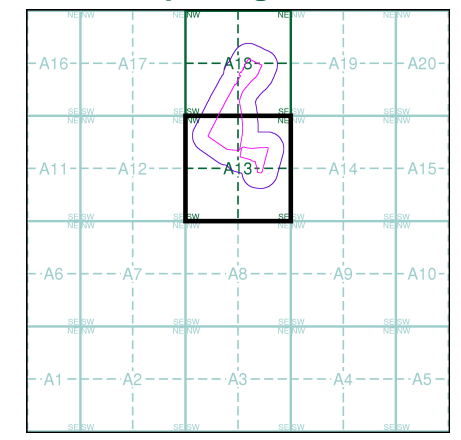
Additional SIMs
Published 1984 - 1992
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

NZ3566SW	990	1:1,250
NZ3565NE	1984	1:1,250
NZ3565WNZ3565SE	992 995	1:1,250 1:1,250

Historical Map - Segment A13



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 100

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



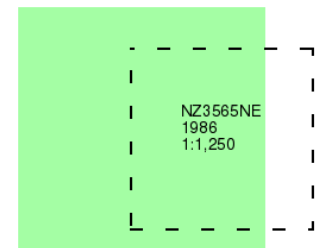
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



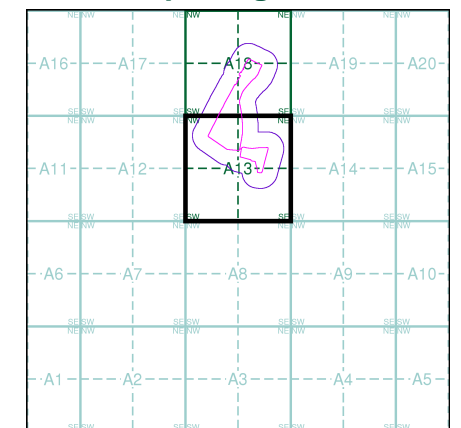
Additional SIMs
Published 1986
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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 Customer Ref: 16633
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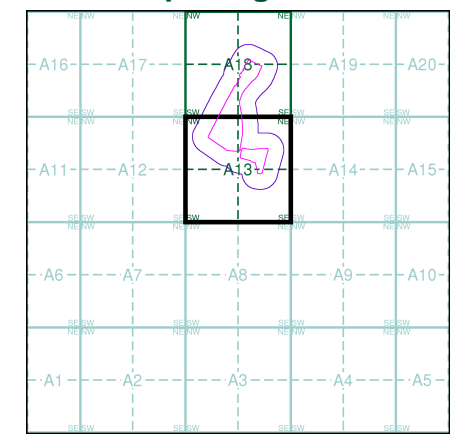
Ordnance Survey Plan
Published 1989
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

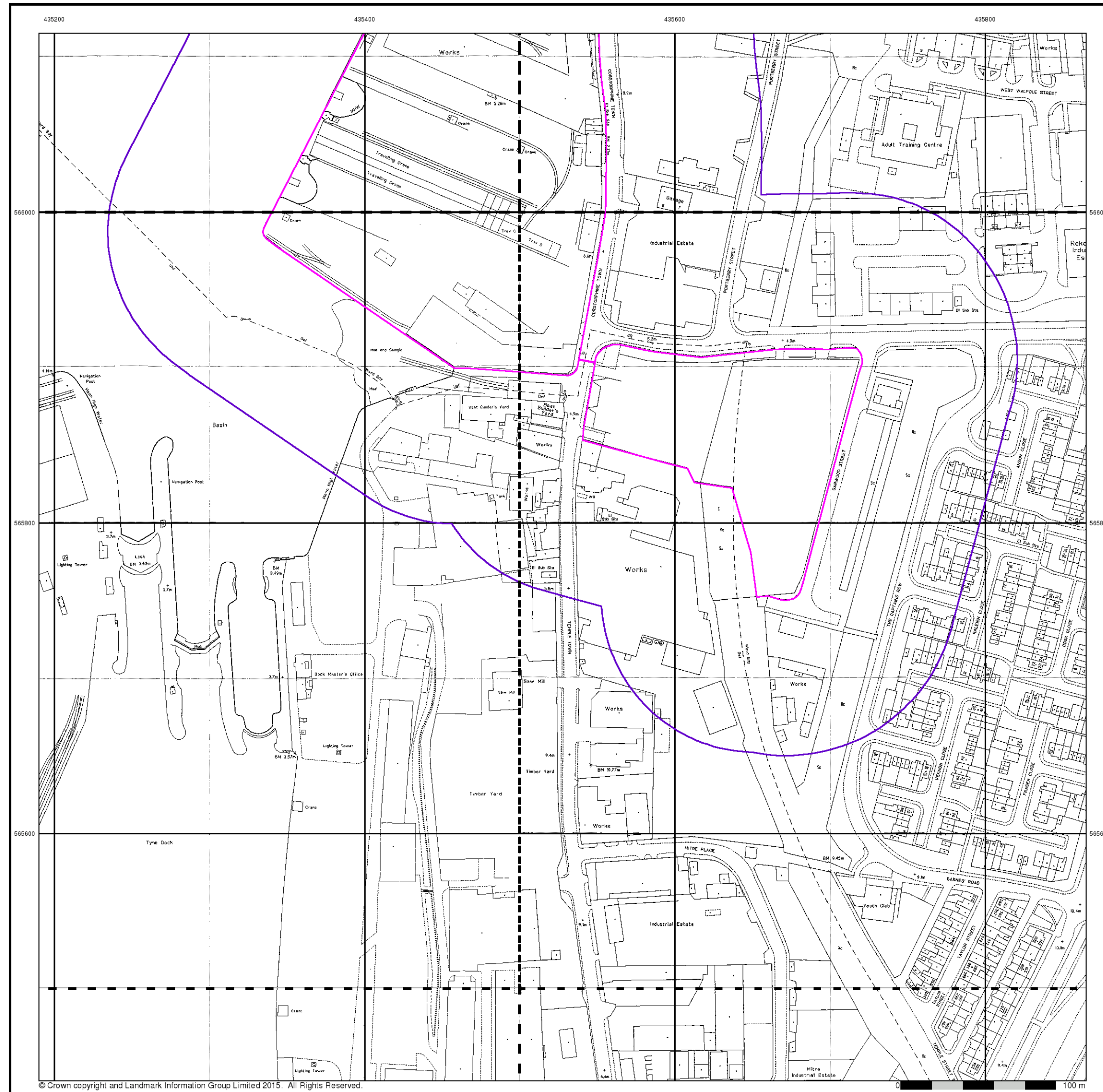
NZ3566SE	1989	1:1,250
NZ3565NE	1989	1:1,250
NZ3565SE	1989	1:1,250

Historical Map - Segment A13



Order Details
 Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 100

Site Details
 McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



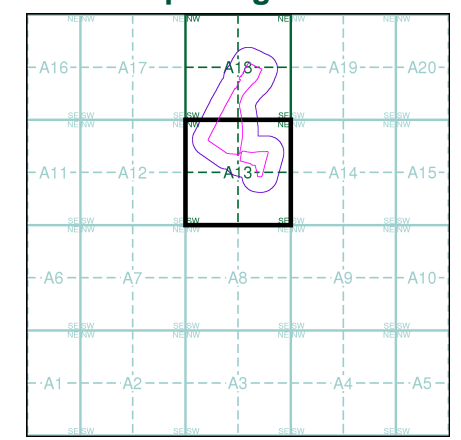
Large-Scale National Grid Data
Published 1993
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

QZ3566SWZ3566SE	993	1:1,250
QZ3565NWZ3565NE	993	1:1,250
QZ3565SWZ3565SE	993	1:1,250

Historical Map - Segment A13



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
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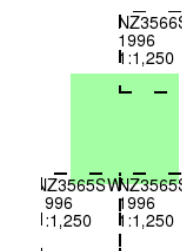
Large-Scale National Grid Data

Published 1996

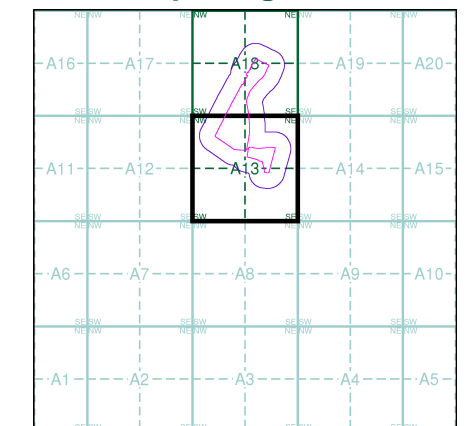
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
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Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

Quarry **Gravel Pit** **Sand Pit**
Clay Pit **Shingle** **Refuse Heap**
Sloping Masonry **Flat Rock**
Marsh **Reeds** **Osiers**
Rough Pasture **Furze** **Wood**
Mixed Wood **Brushwood** **Orchard**
Fir **Ford** **Stepping Stones**
Ferry **Waterfall** **Lock**
Trig. Station **Altitude at Trig. Station**
B.M. 325.9 **Bench Mark** **Surface Level**
Arrow denotes flow of water **Antiquities (site of)**
Cutting **Embankment**
Railway crossing Road **Level Crossing** **Road crossing Railway**
Railway crossing River or Canal **Road over single stream** **Road over River or Canal**
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
County Borough Boundary (England)
County Burgh Boundary (Scotland)
Boundary Post or Stone **Police Call Box**
B.R. Bridle Road **Pump**
E.P. Electricity Pylon **S.P. Signal Post**
F.B. Foot Bridge **Sl. Sluice**
F.P. Foot Path **Sp. Spring**
G.P. Guide Post or Board **T.C.B. Telephone Call Box**
M.S. Mile Stone **Tr. Trough**
M.P. M.R. Mooring Post or Ring **W. Well**

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

Inactive Quarry, Chalk Pit or Clay Pit **Active Quarry, Chalk Pit or Clay Pit**
Rock **Boulders**
Cliff **Slopes** **Top**
Roofed Building **Glazed Roof Building**
Sloping Masonry **Archway**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Bench Mark** **Antiquity (site of)**
Cave Entrance **Triangulation Station** **Electricity Pylon**
Electricity Transmission Line
County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
London Borough Boundary
Symbol marking point where boundary mereing changes
Beer House **Pillar, Pole or Post**
Boundary Post or Stone **Post Office**
Capstan, Crane **Public Convenience**
Chimney **Public House**
Drinking Fountain **Pump**
Electricity Pillar or Post **Signal Box or Bridge**
Fire Alarm Pillar **Signal Post or Light**
Foot Bridge **Spring**
Guide Post **Tank or Track**
Hydrant or Hydraulic **Telephone Call Box**
Level Crossing **Telephone Call Post**
Manhole **Trough**
Mile Post or Mooring Post **Water Point, Water Tap**
Mile Stone **Well**
Normal Tidal Limit **Wind Pump**

Large-Scale National Grid Data 1:2,500 and 1:1,250

Cliff **Slopes** **Top**
Rock **Rock (scattered)**
Boulders **Boulders (scattered)**
Positioned Boulder **Scree**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Triangulation Station** **Antiquity (site of)**
Electricity Transmission Line **Electricity Pylon**
Bench Mark **Buildings with Building Seed**
Roofed Building **Glazed Roof Building**
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)
Barracks **Pillar, Pole or Post**
Battery **Post Office**
Cemetery **Public Convenience**
Chimney **Pump**
Cistern **Pumping Station**
Dismtd Rly **Place of Worship**
Electricity Generating Station **Sewage Ppg Sta** **Sewage Pumping Station**
Electricity Pole, Pillar **Signal Box or Bridge**
Electricity Sub Station **Signal Post or Light**
Filter Bed **Spring**
Fountain / Drinking Ftn. **Tank or Track**
Gas Valve Compound **Trough**
Gas Governor **Wind Pump**
Guide Post **Water Point, Water Tap**
Manhole **Works (building or area)**
Mile Post or Mile Stone **Well**

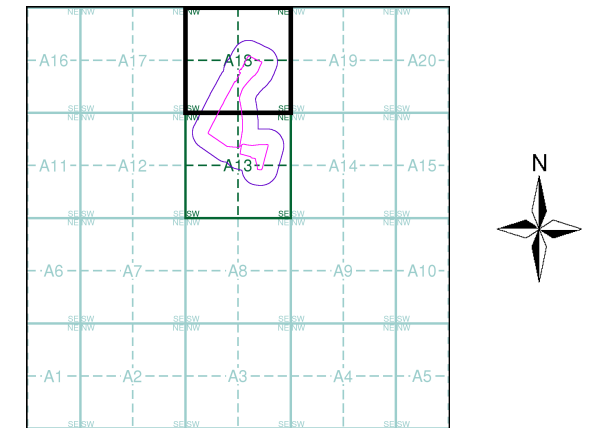


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:2,500	1858	2
Northumberland	1:2,500	1861	3
Durham	1:2,500	1897	4
Durham	1:2,500	1915 - 1916	5
Durham	1:2,500	1938	6
Ordnance Survey Plan	1:2,500	1956	7
Ordnance Survey Plan	1:1,250	1956	8
Ordnance Survey Plan	1:1,250	1968	9
Ordnance Survey Plan	1:2,500	1970	10
Additional SIMs	1:1,250	1981 - 1989	11
Ordnance Survey Plan	1:1,250	1989	12
Additional SIMs	1:1,250	1990	13
Large-Scale National Grid Data	1:1,250	1993	14
Large-Scale National Grid Data	1:1,250	1994	15
Large-Scale National Grid Data	1:1,250	1994	16
Large-Scale National Grid Data	1:1,250	1996	17

Historical Map - Segment A18



Order Details

Order Number: 92596393_1_1
Customer Ref: 16633
National Grid Reference: 435570, 565870
Slice: A
Site Area (Ha): 8.87
Search Buffer (m): 100

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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435200

435400

435600

435800



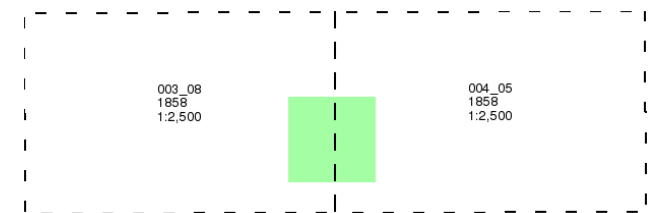
Durham

Published 1858

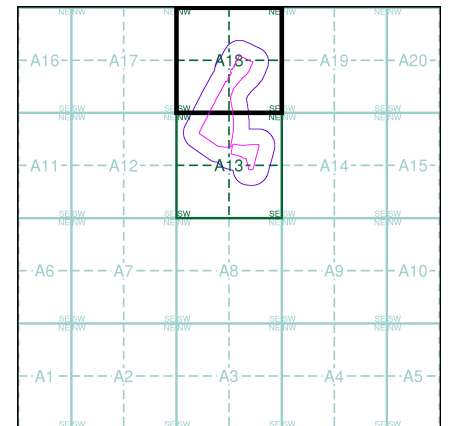
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A18



Order Details

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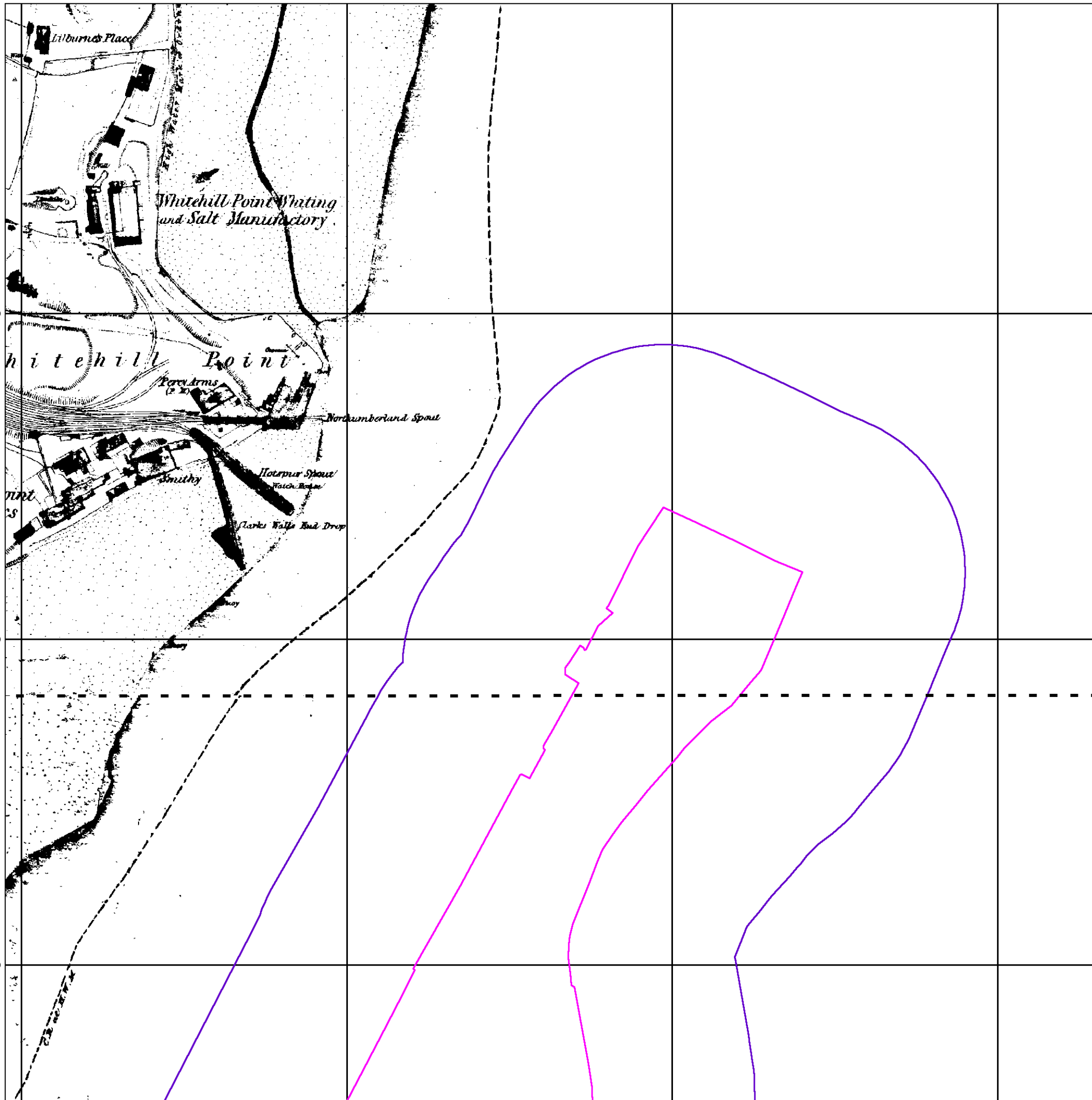


435200

435400

435600

435800



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0 100 m



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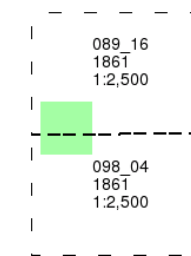
Northumberland

Published 1861

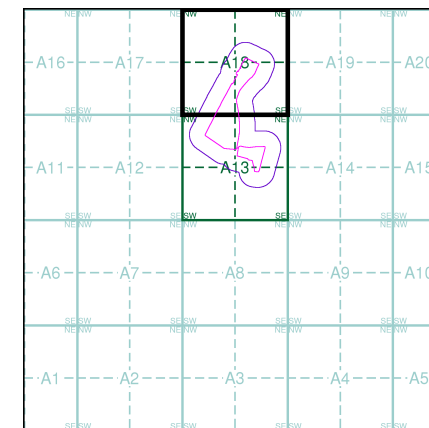
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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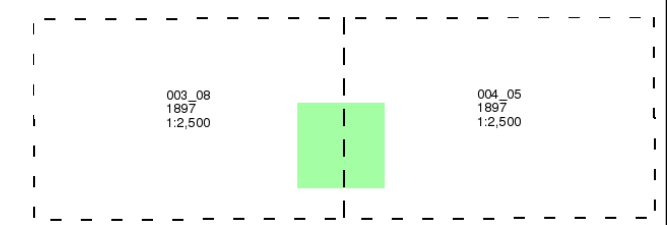
Durham

Published 1897

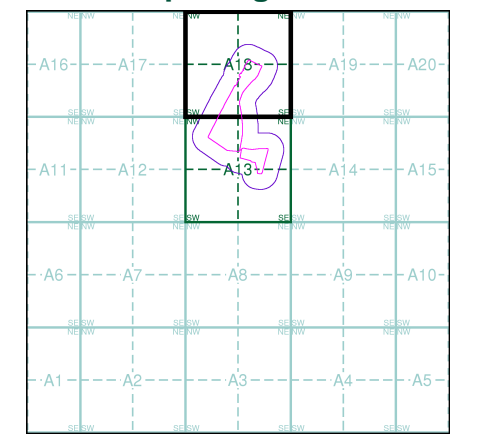
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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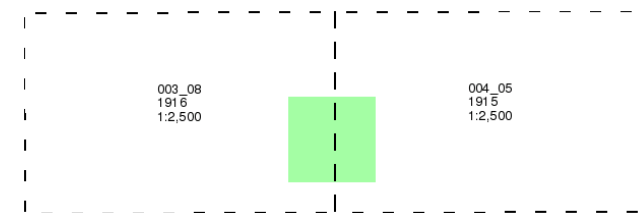
Durham

Published 1915 - 1916

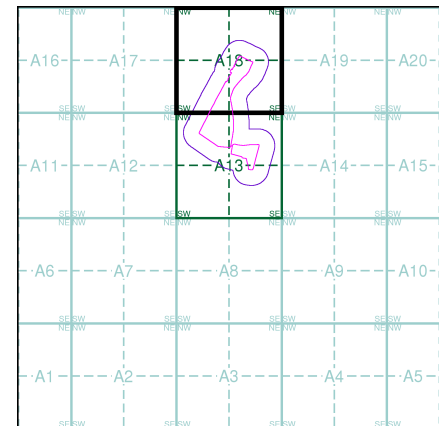
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A18



Order Details

Order Number: 92596393_1_1
Customer Ref: 16633
National Grid Reference: 435570, 565870
Slice: A
Site Area (Ha): 8.87
Search Buffer (m): 100

Site Details

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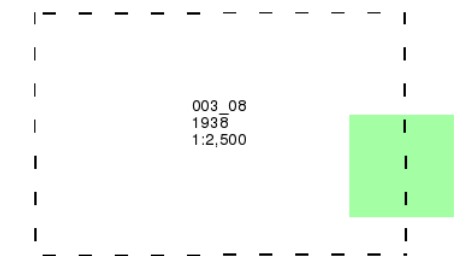
Durham

Published 1938

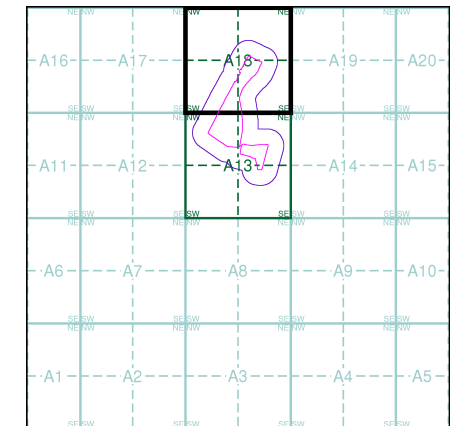
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A18



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Order Number: 92596393_1_1
Customer Ref: 16633
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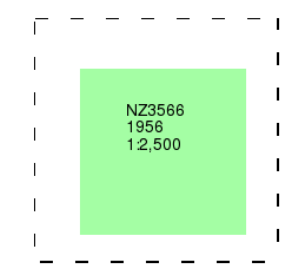




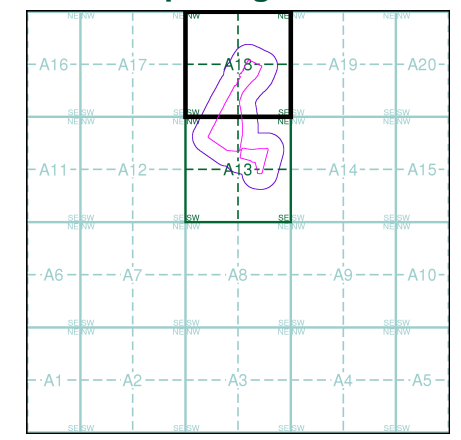
Ordnance Survey Plan
Published 1956
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A18



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
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Site Details

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Ordnance Survey Plan

Published 1956

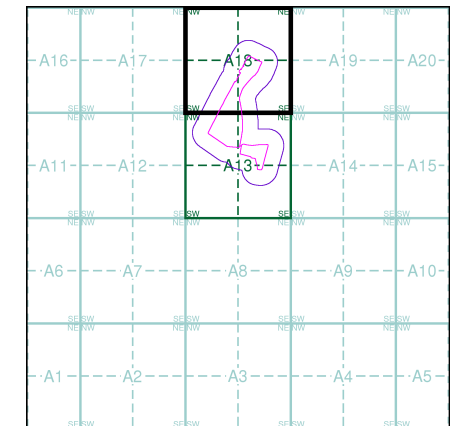
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

NZ3566NW 1956 1:1,250	NZ3566NE 1956 1:1,250
NZ3566SW 1956 1:1,250	NZ3566SE 1956 1:1,250

Historical Map - Segment A18



Order Details

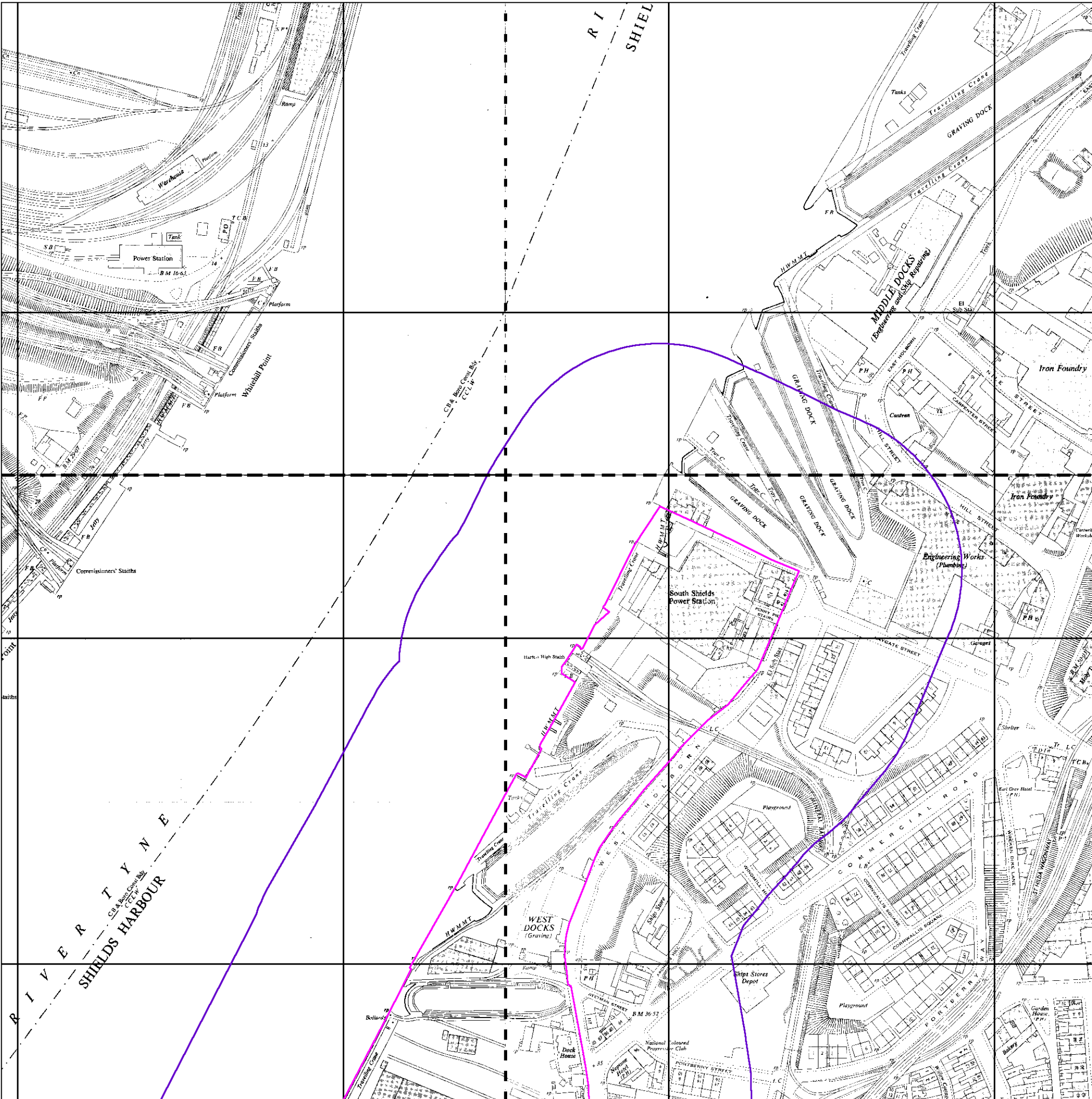
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 Search Buffer (m): 100

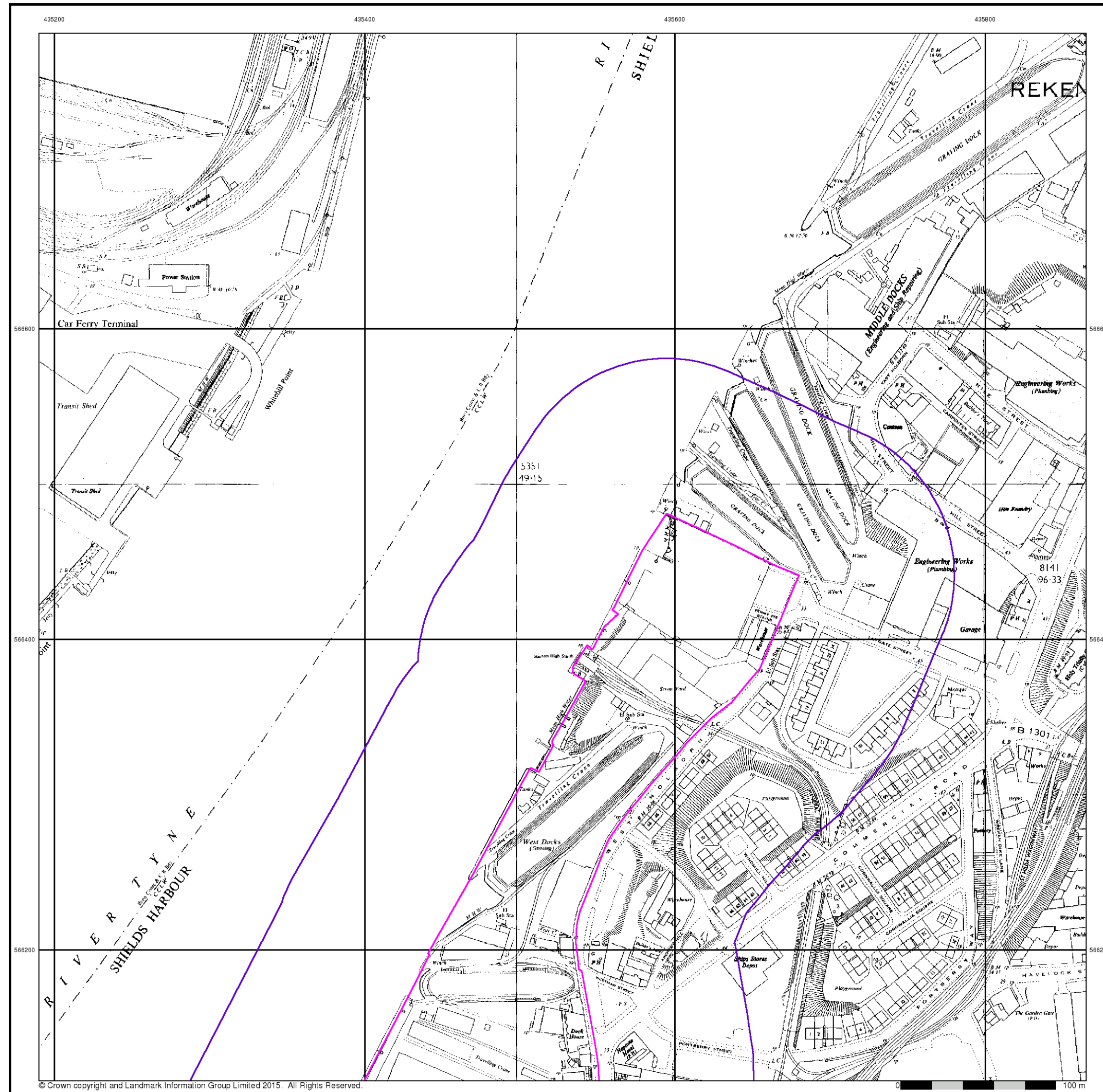
Site Details

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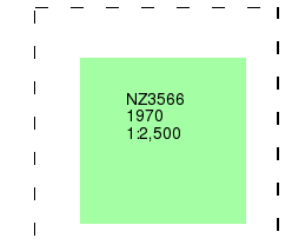




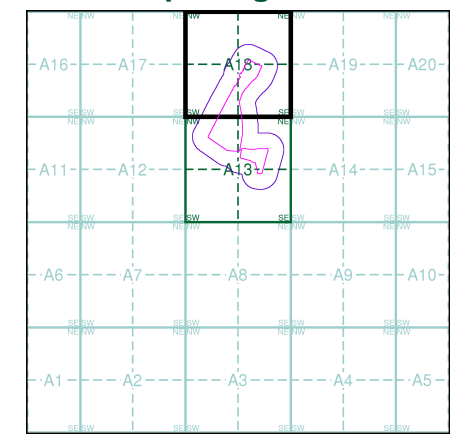
Ordnance Survey Plan
Published 1970
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A18



Order Details
 Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 100

Site Details
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Landmark Information Group
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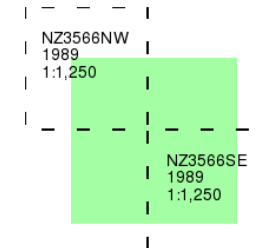
Ordnance Survey Plan

Published 1989

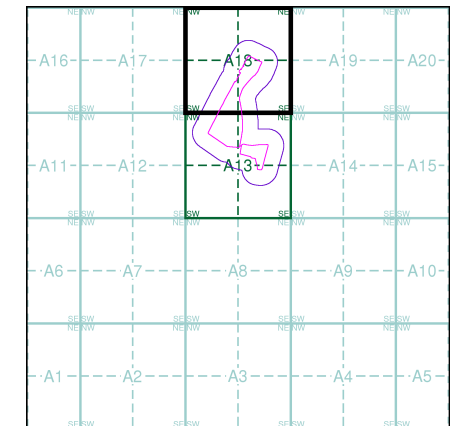
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A18



Order Details

Order Number: 92596393_1_1
Customer Ref: 16633
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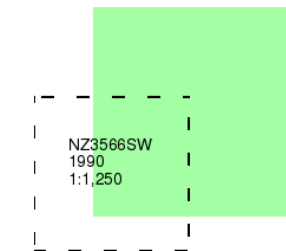
Additional SIMs

Published 1990

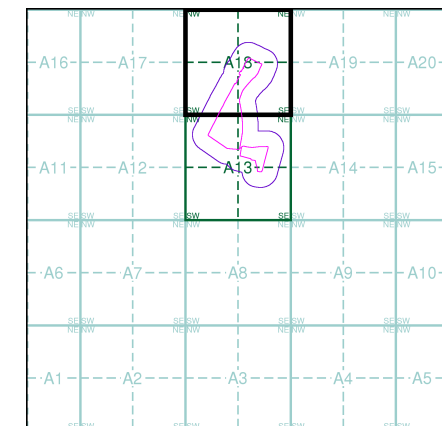
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A18



Order Details

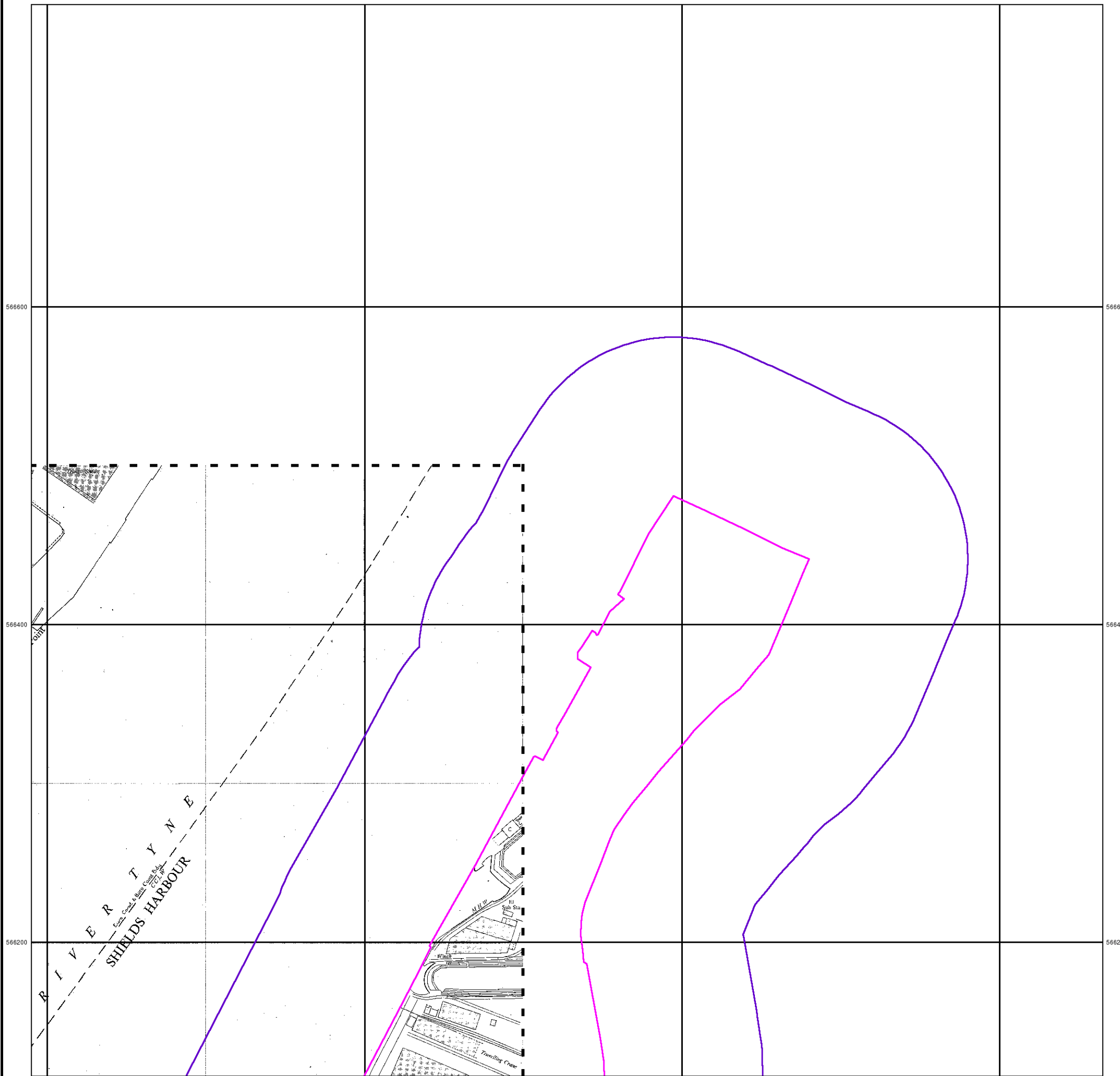
Order Number: 92596393_1_1
 Customer Ref: 16633
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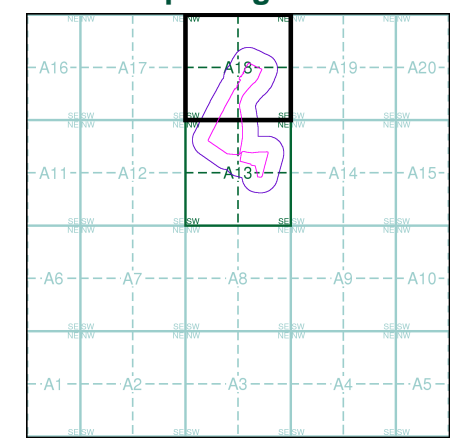
Large-Scale National Grid Data
Published 1993
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

NZ3566NW 1993 1:1,250	NZ3566NE 1993 1:1,250
NZ3566SW 1993 1:1,250	NZ3566SE 1993 1:1,250

Historical Map - Segment A18



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
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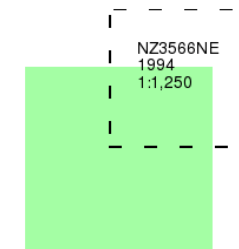
Large-Scale National Grid Data

Published 1994

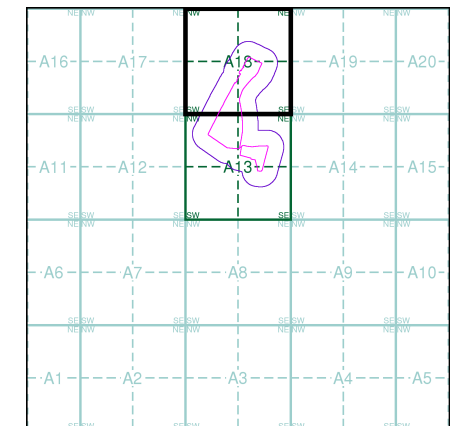
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A18



Order Details

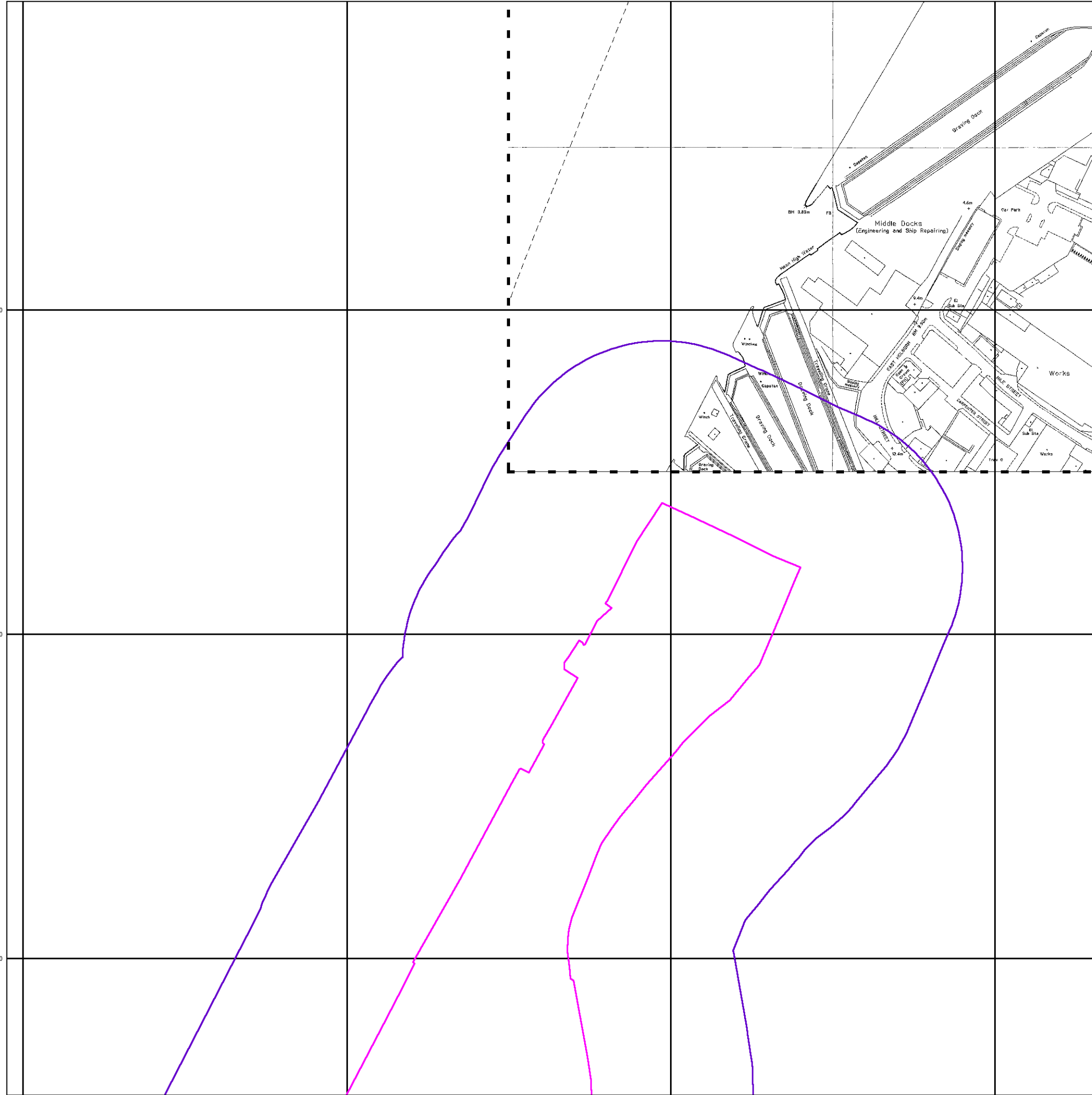
Order Number: 92596393_1_1
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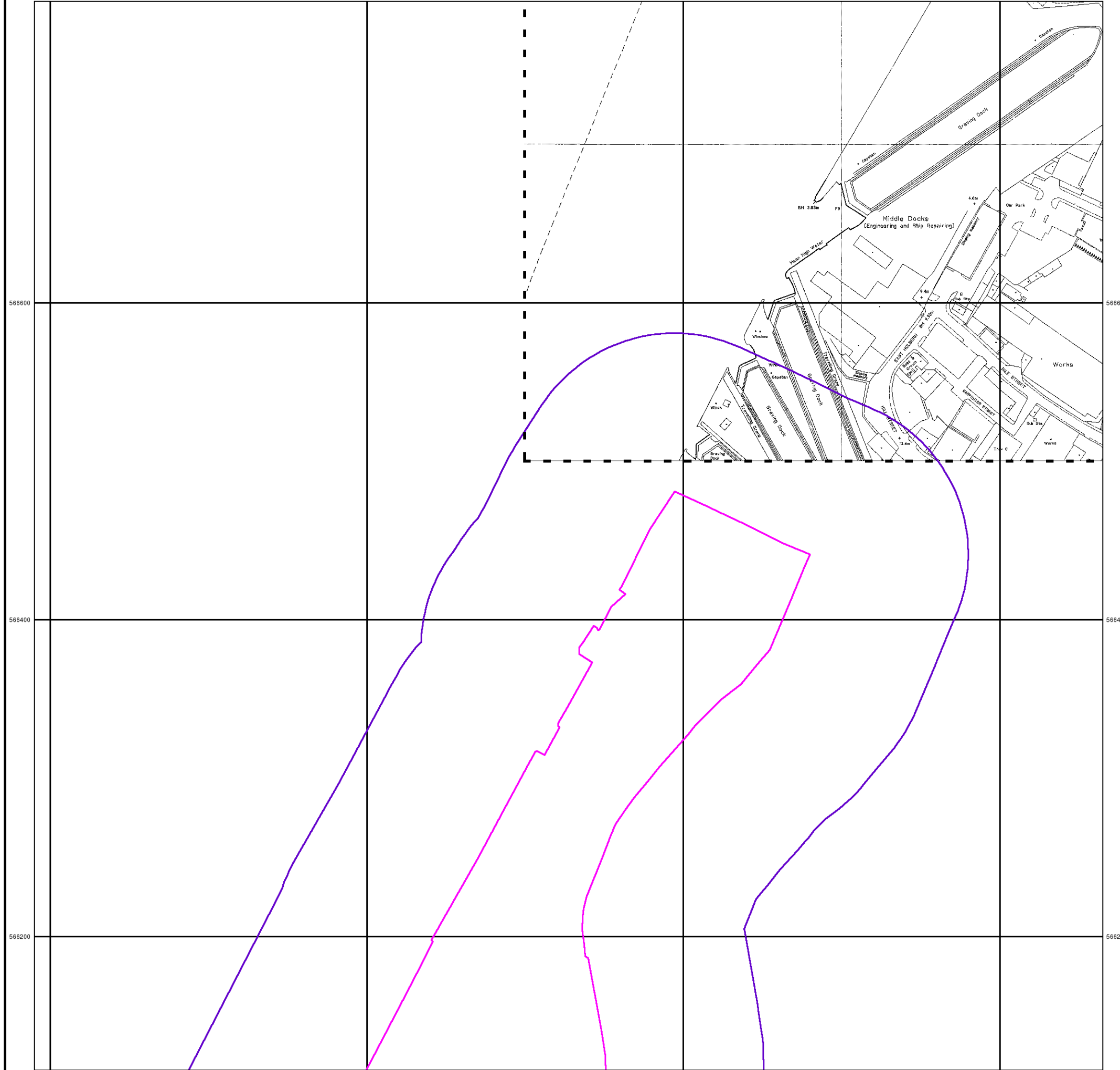


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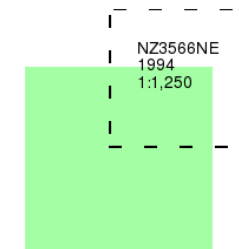
Large-Scale National Grid Data

Published 1994

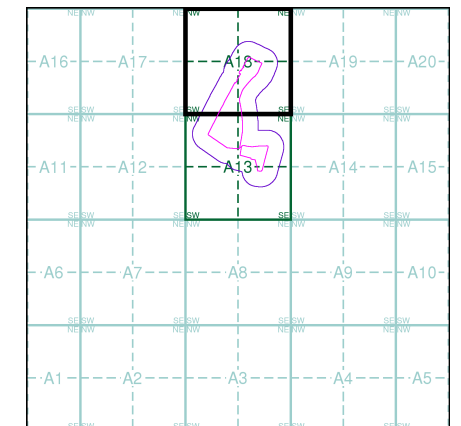
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A18



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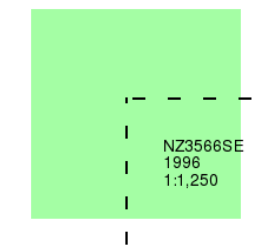
Large-Scale National Grid Data

Published 1996

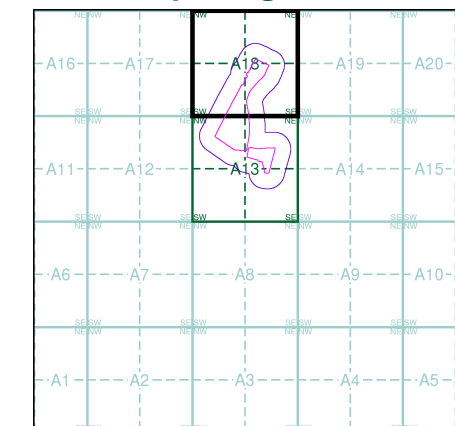
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'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A18



Order Details

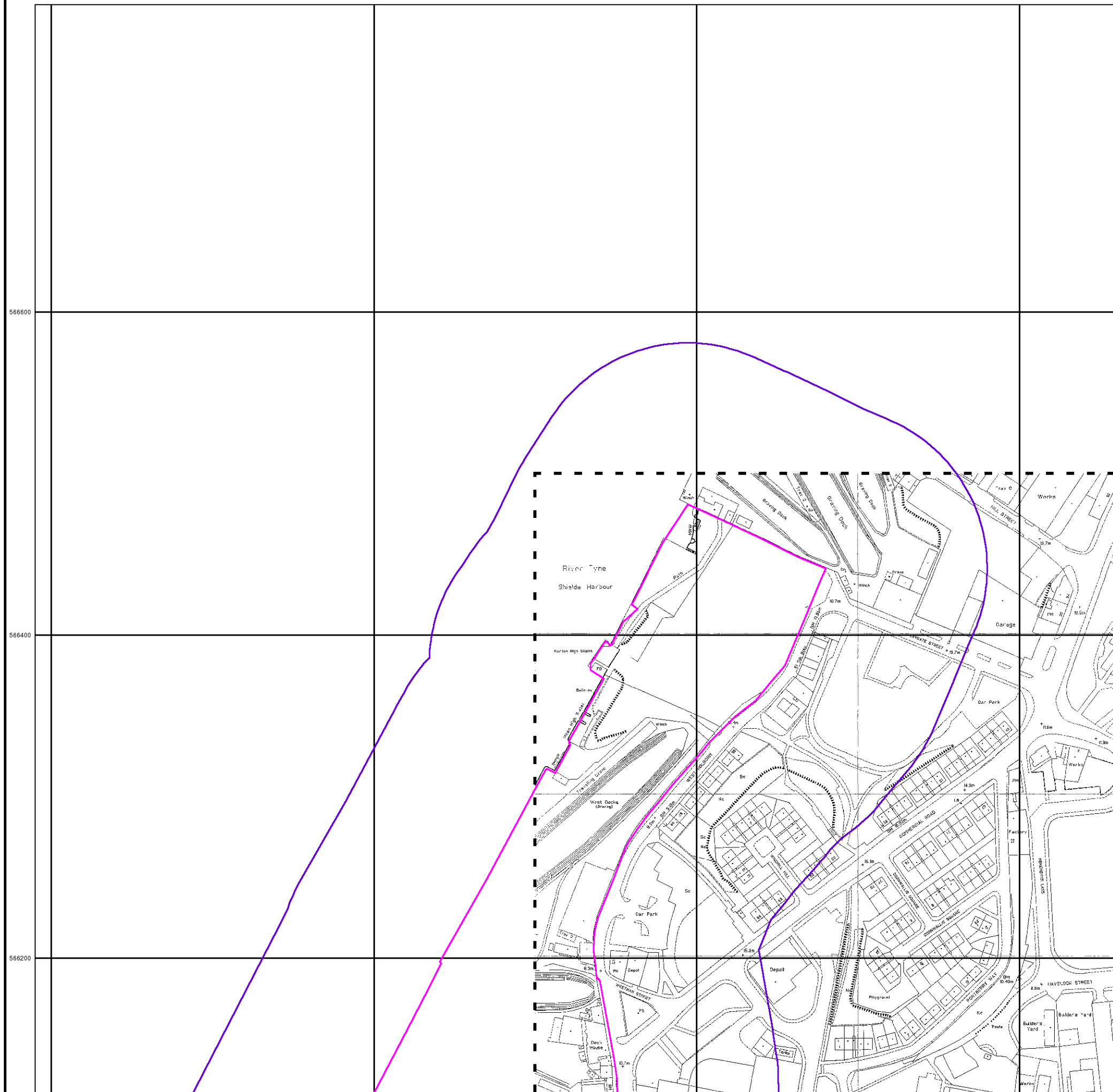
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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

	Gravel Pit		Sand Pit		Other Pits
	Quarry		Shingle		Orchard
	Osiers		Reeds		Marsh
	Mixed Wood		Deciduous		Brushwood
	Fir		Furze		Rough Pasture
	Arrow denotes flow of water		Trigonometrical Station		
	Site of Antiquities		Bench Mark		
	Pump, Guide Post, Signal Post		Well, Spring, Boundary Post		
	-285 Surface Level				
	Sketched Contour		Instrumental Contour		
	Main Roads		Minor Roads		
	Sunken Road		Raised Road		
	Road over Railway		Railway over River		
	Railway over Road		Level Crossing		
	Road over River or Canal		Road over Stream		
	Road over Stream				
	County Boundary (Geographical)				
	County & Civil Parish Boundary				
	Administrative County & Civil Parish Boundary				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	Rural District Boundary				
	Civil Parish Boundary				

Ordnance Survey Plan 1:10,000

	Chalk Pit, Clay Pit or Quarry		Gravel Pit
	Sand Pit		Disused Pit or Quarry
	Refuse or Slag Heap		Lake, Loch or Pond
	Dunes		Boulders
	Coniferous Trees		Non-Coniferous Trees
	Orchard		Scrub
	Coppice		Bracken
	Heath		Rough Grassland
	Marsh		Reeds
	Saltings		
	Building		Glasshouse
	Sloping Masonry		Pylon
	Electricity Transmission Line		Pole
	Cutting		Embankment
	Standard Gauge Multiple Track		Standard Gauge Single Track
	Siding, Tramway or Mineral Line		Narrow Gauge
	Geographical County		
	Administrative County, County Borough or County of City		
	Municipal Borough, Urban or Rural District, Burgh or District Council		
	Borough, Burgh or County Constituency Shown only when not coincident with other boundaries		
	Civil Parish Shown alternately when coincidence of boundaries occurs		
	BP, BS Boundary Post or Stone		Pol Sta Police Station
	Ch Church		PO Post Office
	CH Club House		PC Public Convenience
	F E Sta Fire Engine Station		PH Public House
	FB Foot Bridge		SB Signal Box
	Fn Fountain		Spr Spring
	GP Guide Post		TCB Telephone Call Box
	MP Mile Post		TCP Telephone Call Post
	MS Mile Stone		W Well

1:10,000 Raster Mapping

	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil, parish or community boundary
	District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
	Area of wooded vegetation		Non-coniferous trees
	Non-coniferous trees (scattered)		Coniferous trees
	Coniferous trees (scattered)		Positioned tree
	Orchard		Coppice or Osiers
	Rough Grassland		Heath
	Scrub		Marsh, Salt Marsh or Reeds
	Water feature		Flow arrows
	MHW(S) Mean high water (springs)		MLW(S) Mean low water (springs)
	Telephone line (where shown)		Electricity transmission line (with poles)
	Bench mark (where shown)		Triangulation station
	Point feature (e.g. Guide Post or Mile Stone)		Pylon, flare stack or lighting tower
	Site of (antiquity)		Glasshouse
	General Building		Important Building

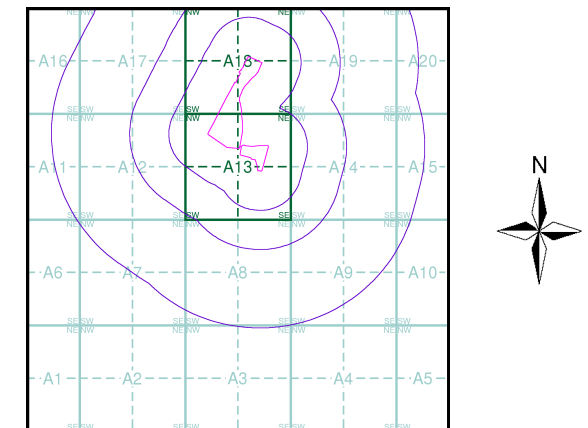


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:10,560	1862	2
Northumberland	1:10,560	1864 - 1865	3
Durham	1:10,560	1898	4
Northumberland	1:10,560	1899	5
Durham	1:10,560	1921	6
Durham	1:10,560	1938	7
Ordnance Survey Plan	1:10,000	1951 - 1952	8
Ordnance Survey Plan	1:10,000	1957	9
Ordnance Survey Plan	1:10,000	1967 - 1968	10
Ordnance Survey Plan	1:10,000	1973 - 1977	11
Ordnance Survey Plan	1:10,000	1982 - 1987	12
Ordnance Survey Plan	1:10,000	1992 - 1995	13
10K Raster Mapping	1:10,000	2000	14
Street View	1:10,000	2016	15

Historical Map - Slice A



Order Details

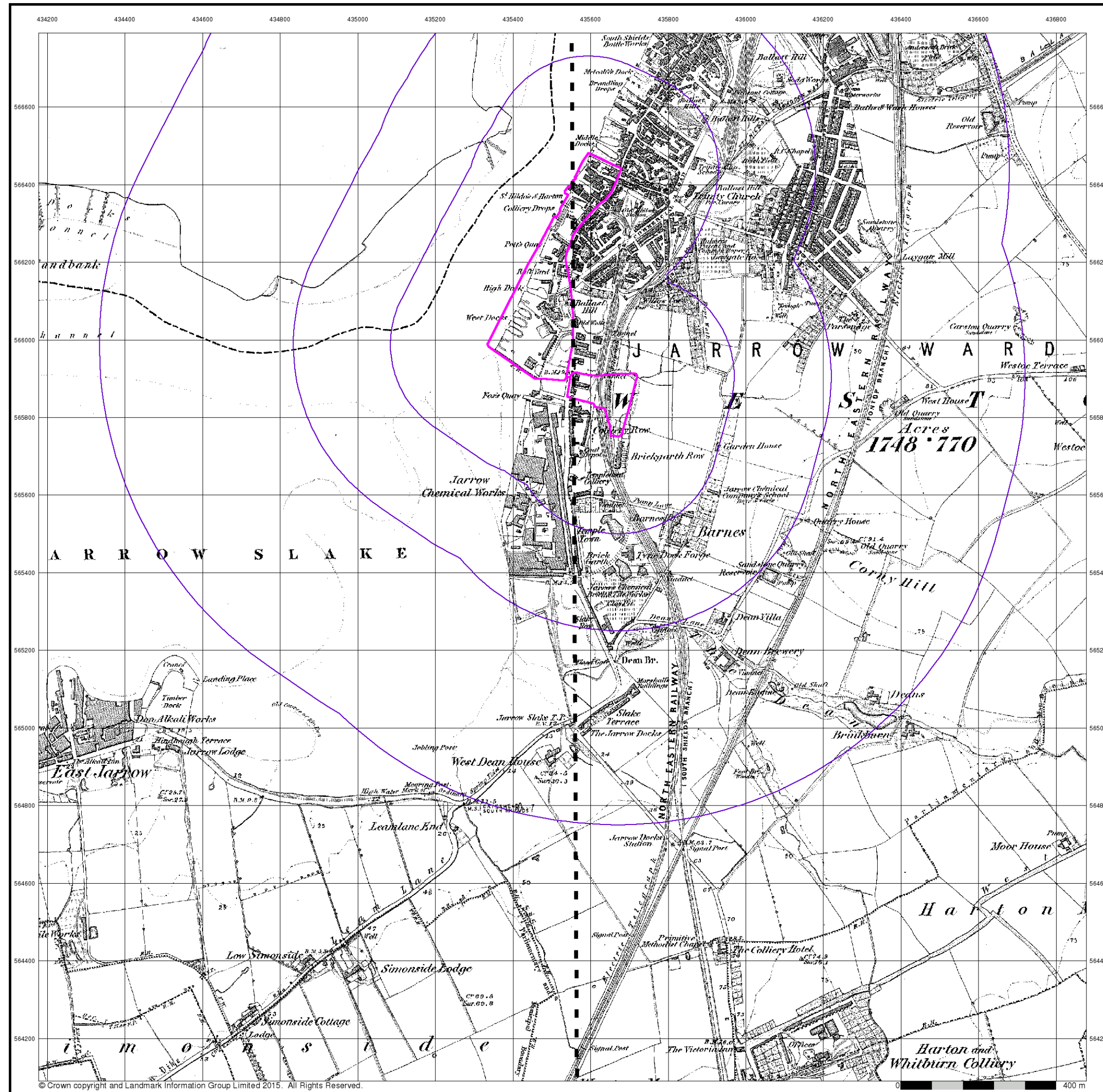
Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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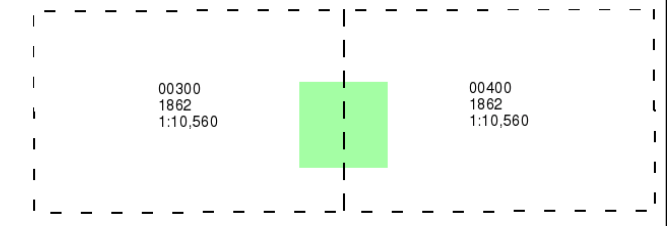
Durham

Published 1862

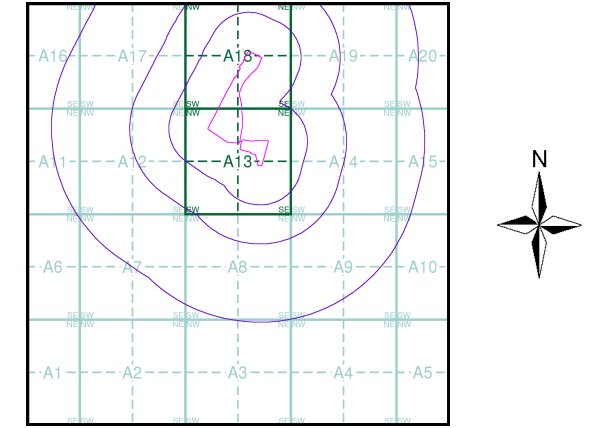
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

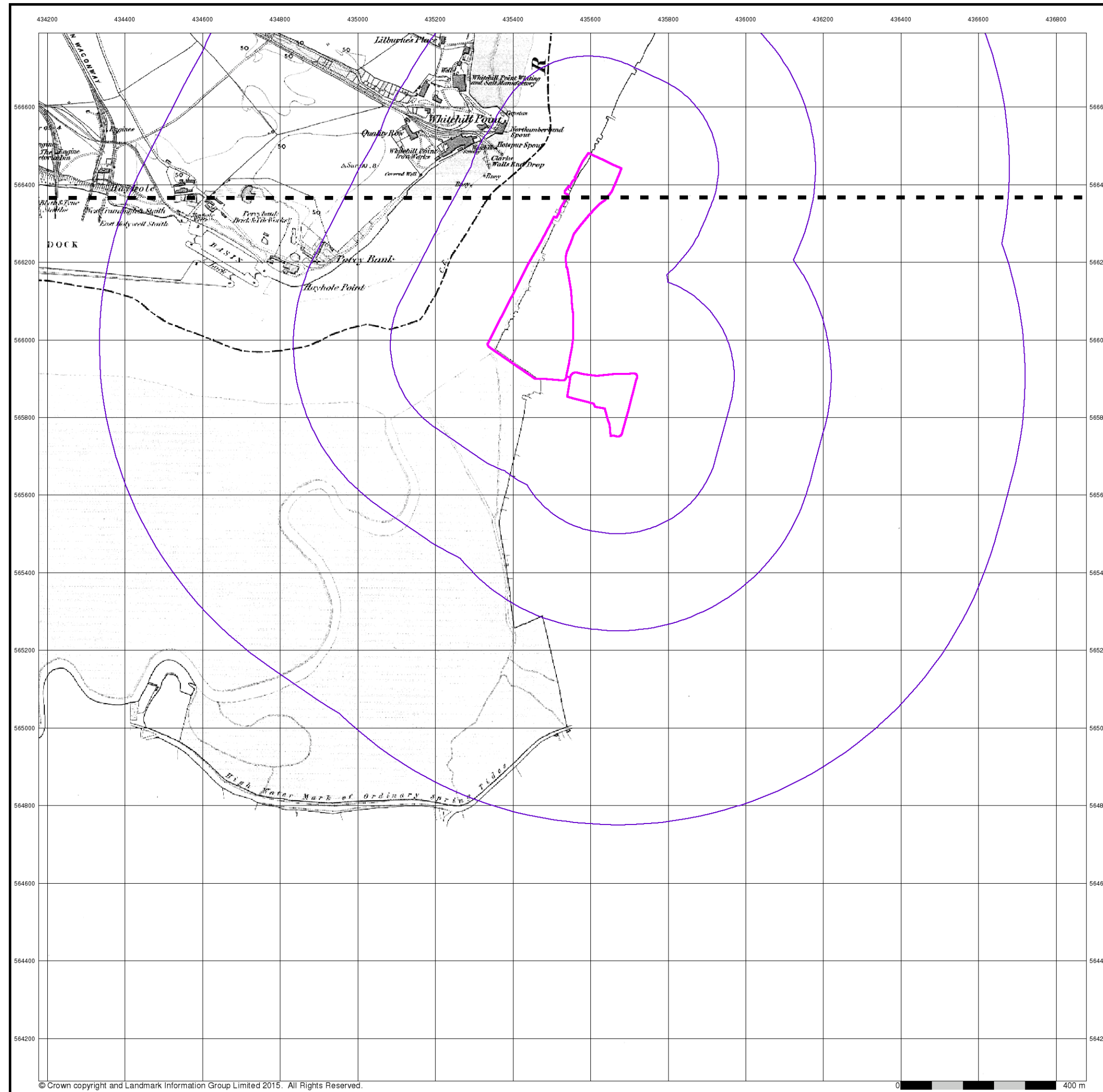
Order Number: 92596393_1_1
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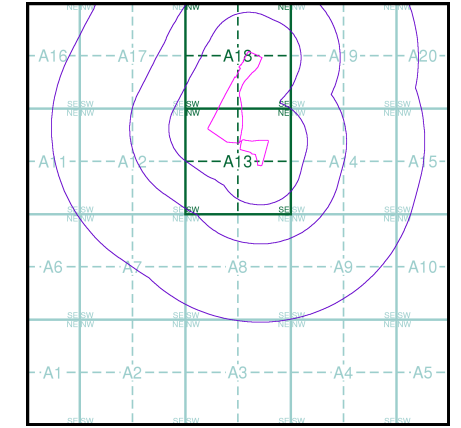
Northumberland
Published 1864 - 1865
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

08900	1865	1:10,560
09800	1864	1:10,560

Historical Map - Slice A



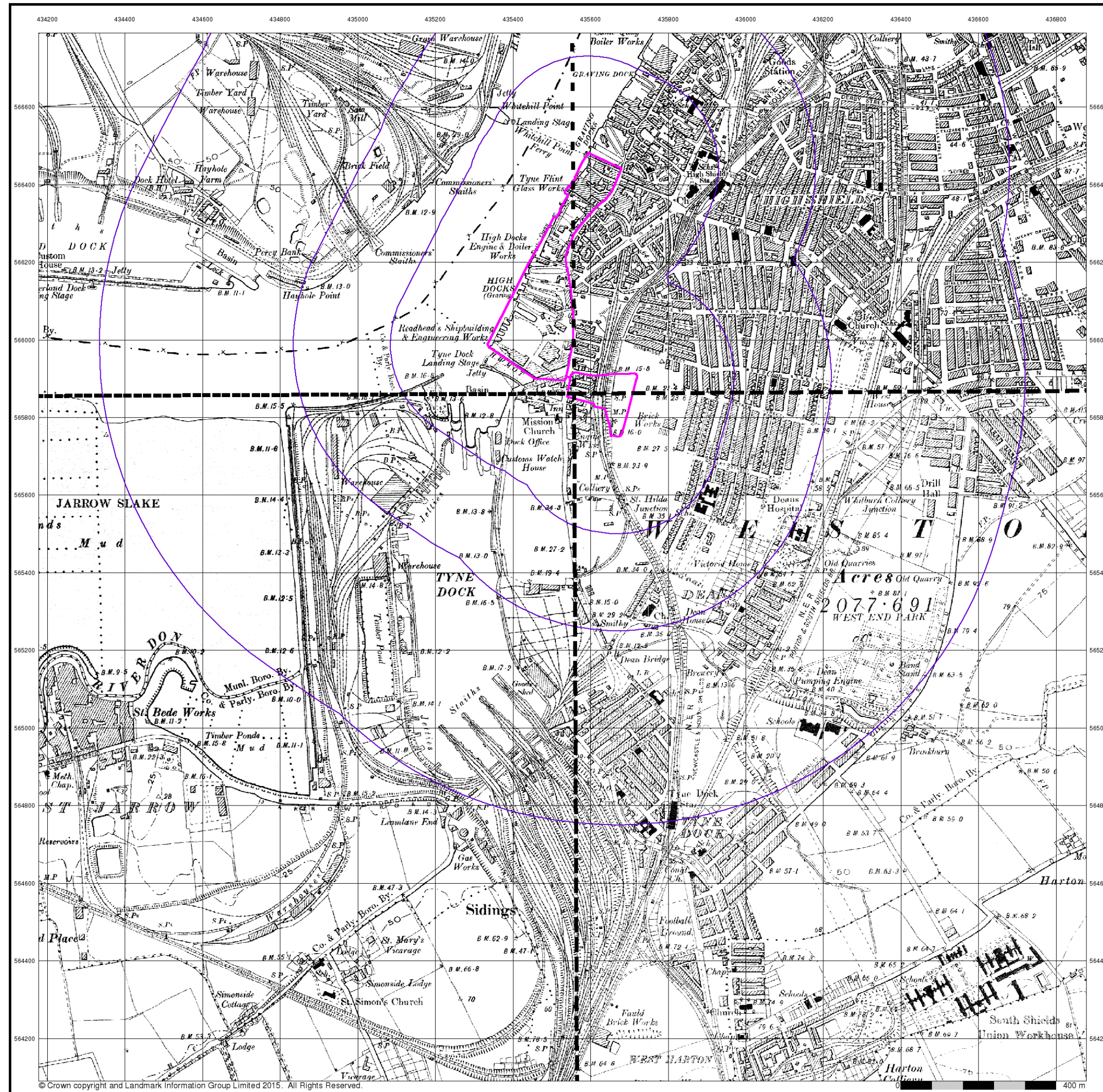
Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ





3E consulting engineers

Durham

Published 1898

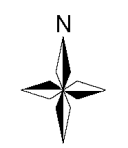
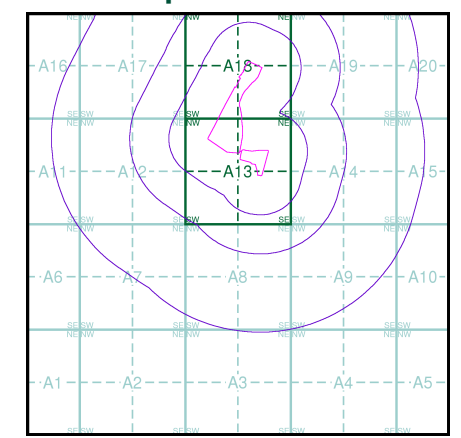
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

003NE 1898 1:10,560	004NW 1898 1:10,560
003SE 1898 1:10,560	004SW 1898 1:10,560

Historical Map - Slice A



Order Details

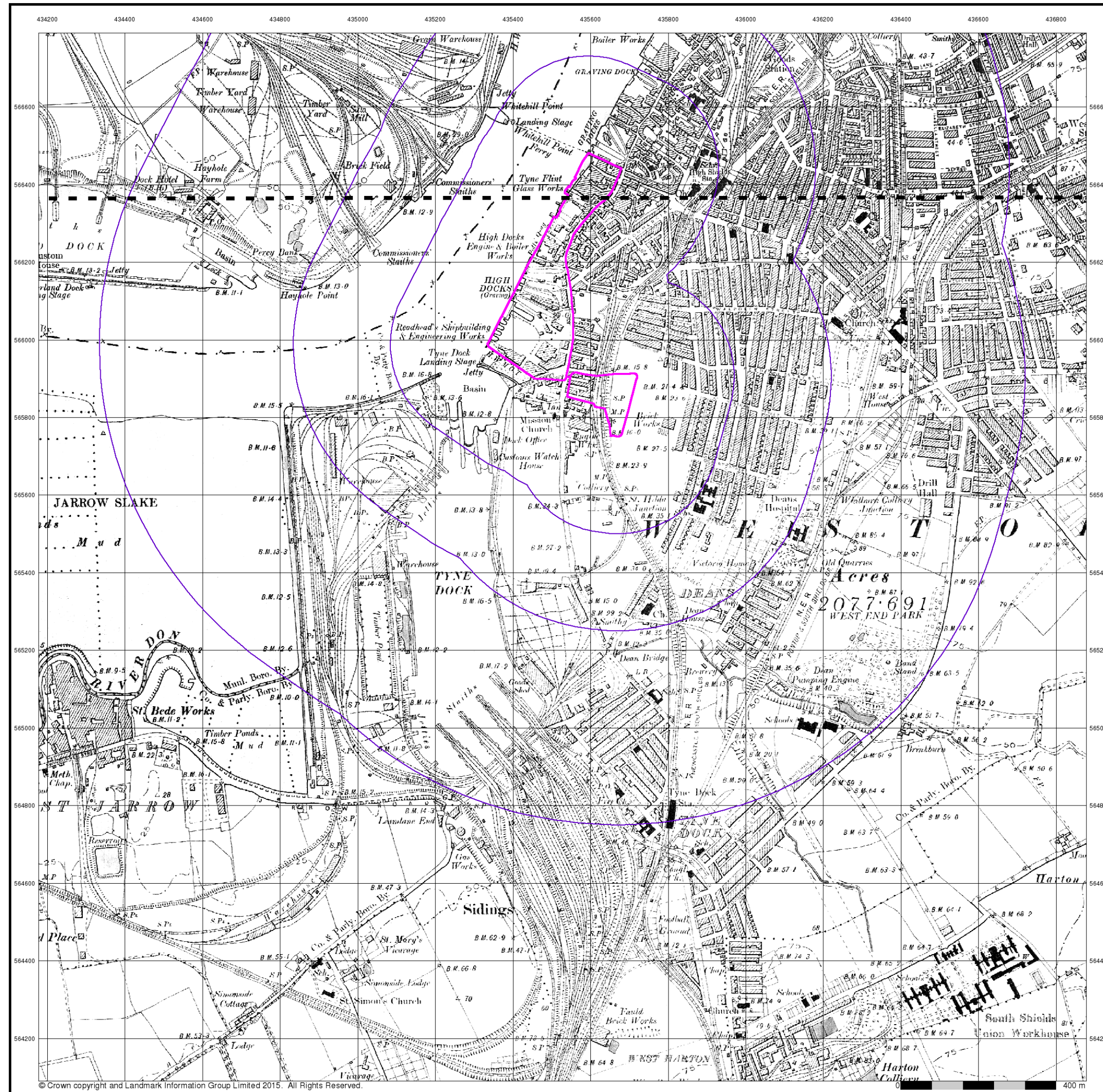
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 Customer Ref: 16633
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 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

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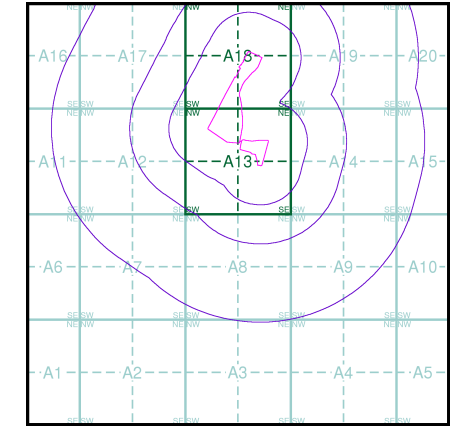
Northumberland
Published 1899
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

089SE	1899	1:10,560
098NE	1899	1:10,560

Historical Map - Slice A



Order Details

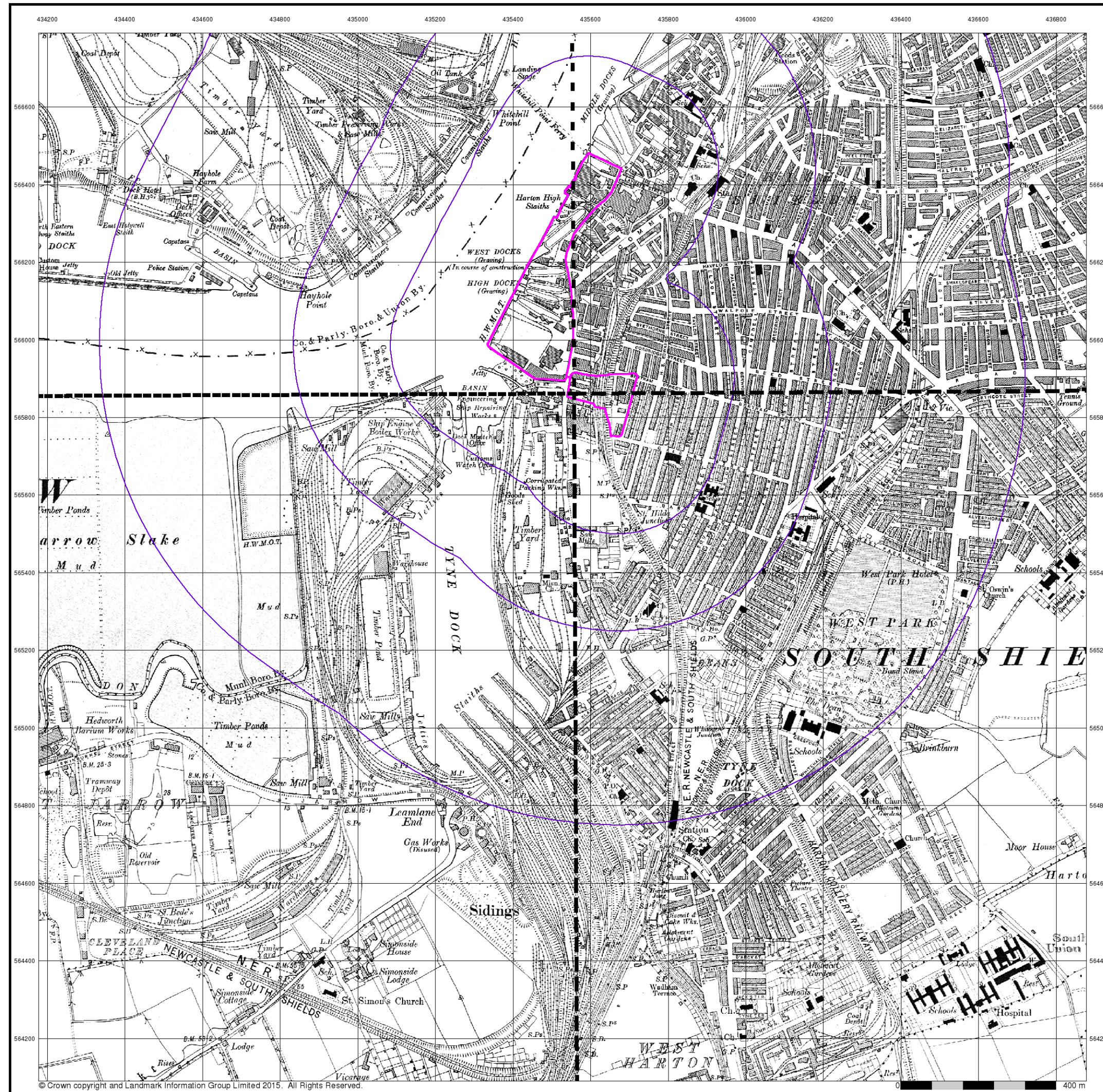
Order Number:	92596393_1_1
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Slice:	A
Site Area (Ha):	8.87
Search Buffer (m):	1000

Site Details

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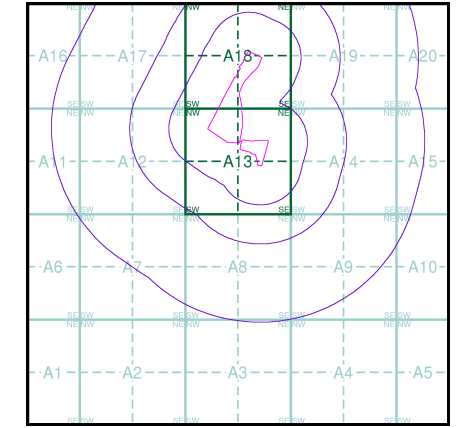
Durham
Published 1921
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

003NE 1921 1:10,560	004NW 1921 1:10,560
003SE 1921 1:10,560	004SW 1921 1:10,560

Historical Map - Slice A



Order Details

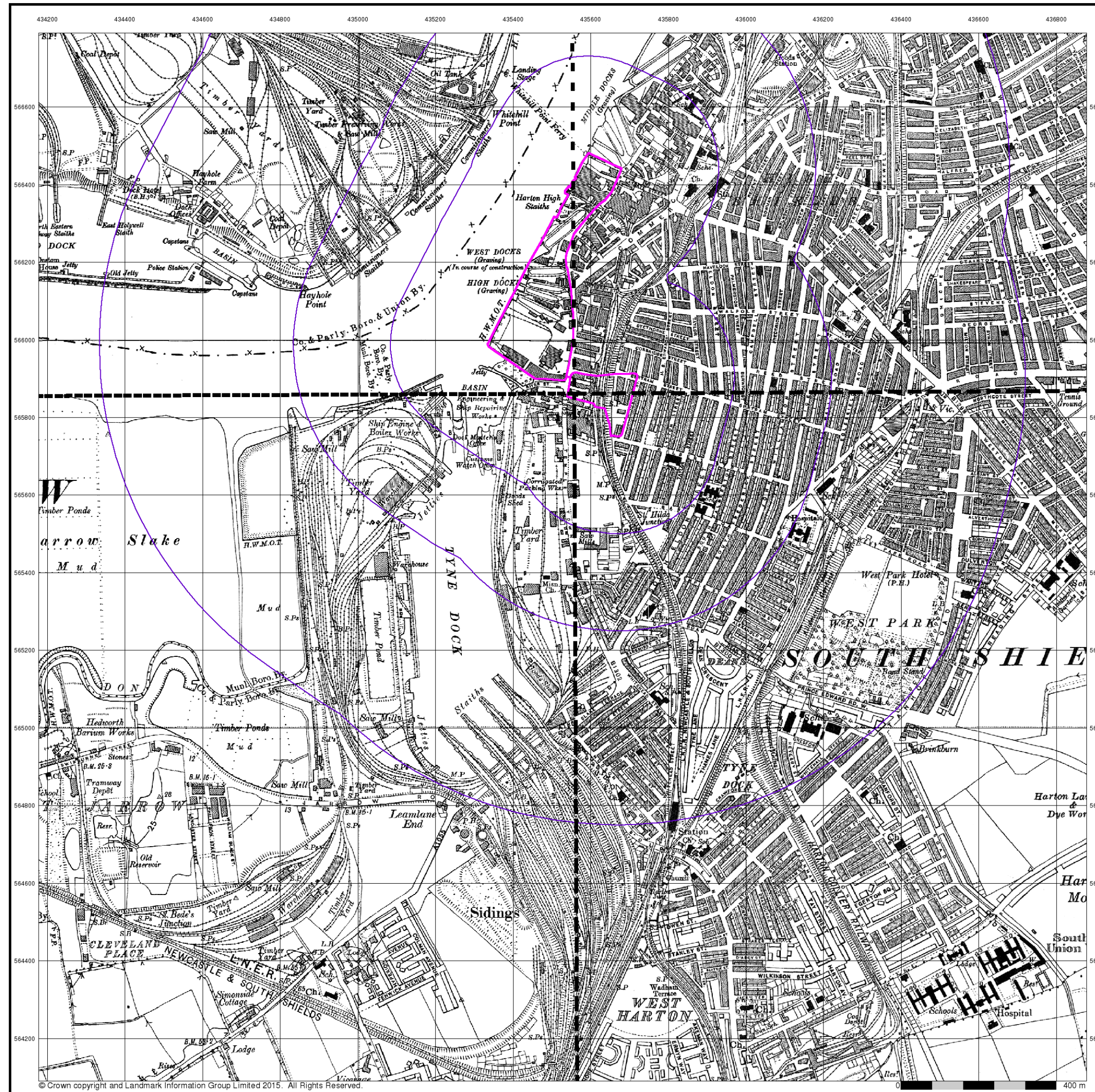
Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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consulting engineers

Durham

Published 1938

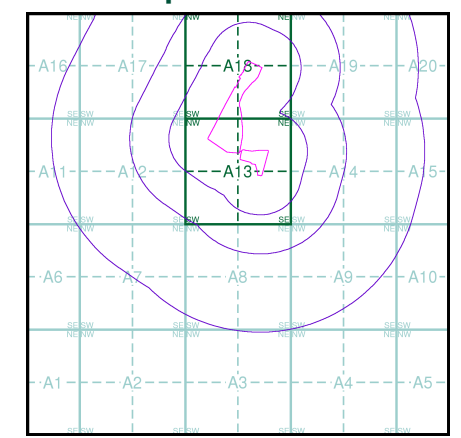
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

003NE 1938 1:10,560	004NW 1938 1:10,560
003SE 1938 1:10,560	004SW 1938 1:10,560

Historical Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

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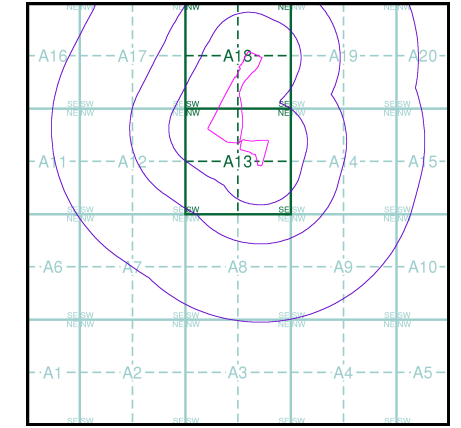
Ordnance Survey Plan
Published 1951 - 1952
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

NZ36NW	NZ36NE
1951	1952
1:10,560	1:10,560
NZ36SW	NZ36SE
1952	1951
1:10,560	1:10,560

Historical Map - Slice A



Order Details

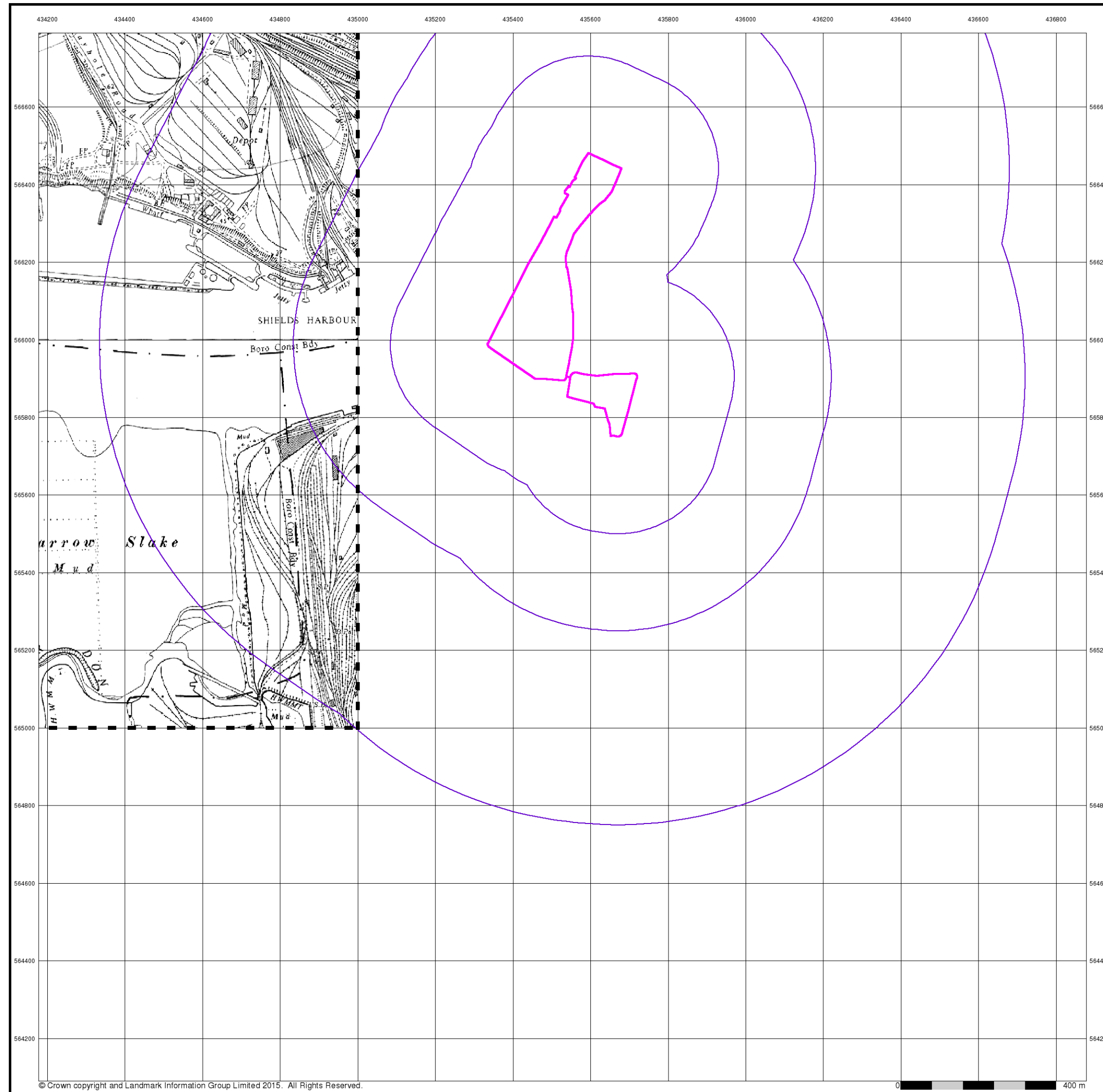
Order Number: 92596393_1_1
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Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



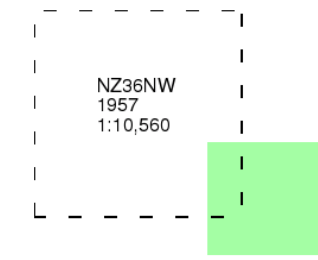
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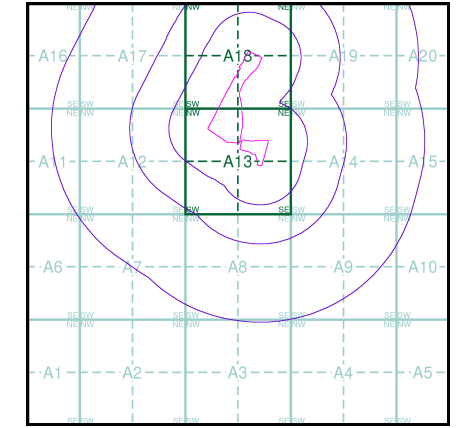
Ordnance Survey Plan
Published 1957
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



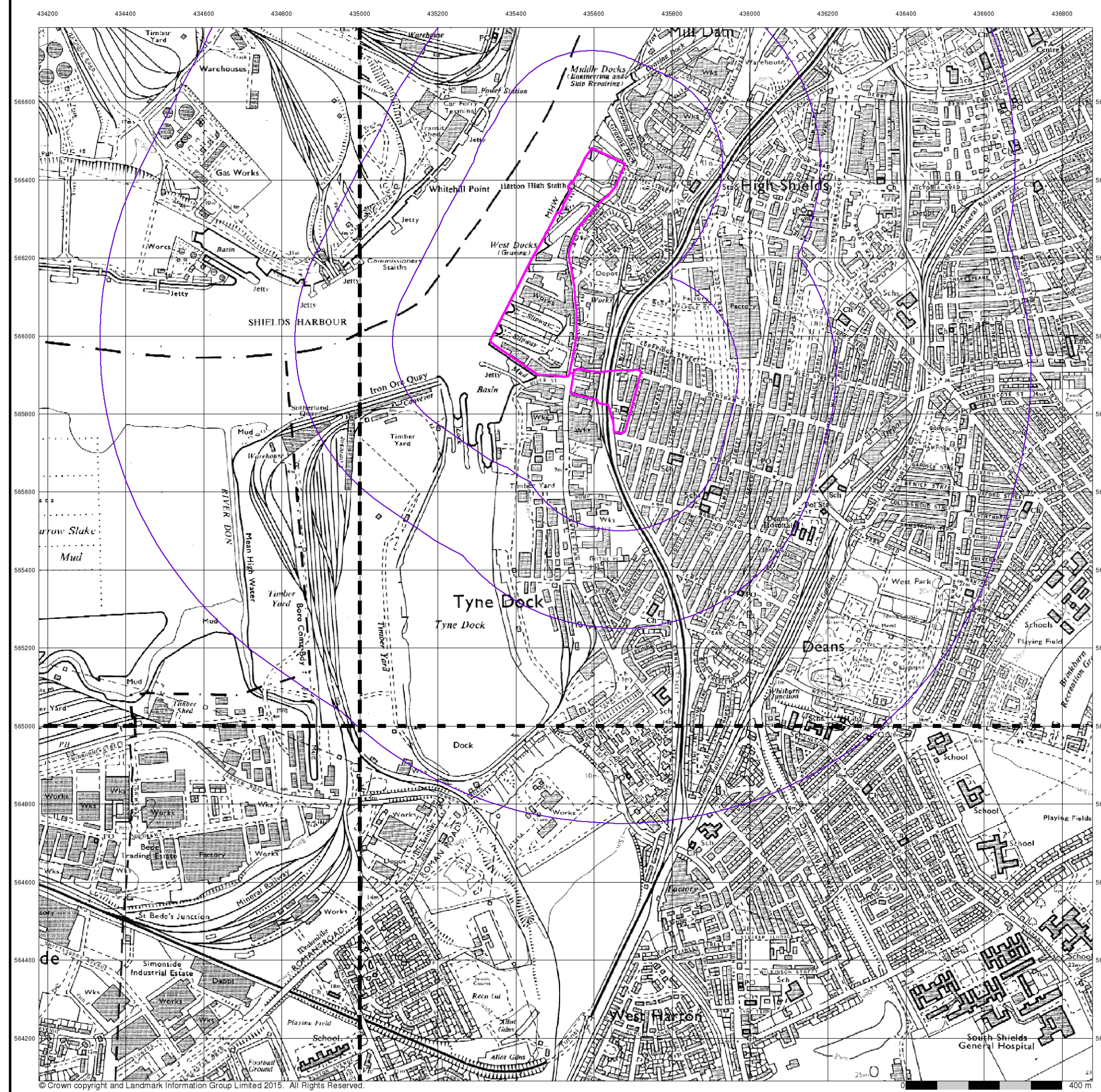
Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ





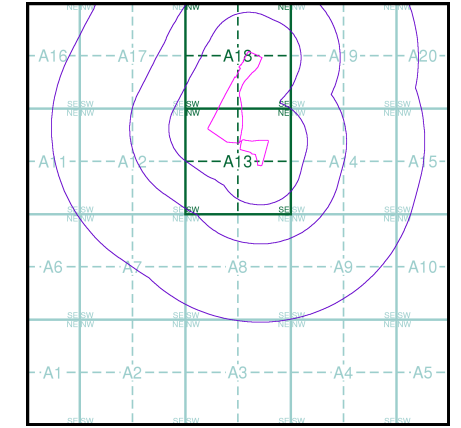
Ordnance Survey Plan
Published 1973 - 1977
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

NZ36NW	NZ36NE
1973	1976
1:10,000	1:10,000
NZ36SW	NZ36SE
1975	1977
1:10,000	1:10,000

Historical Map - Slice A



Order Details

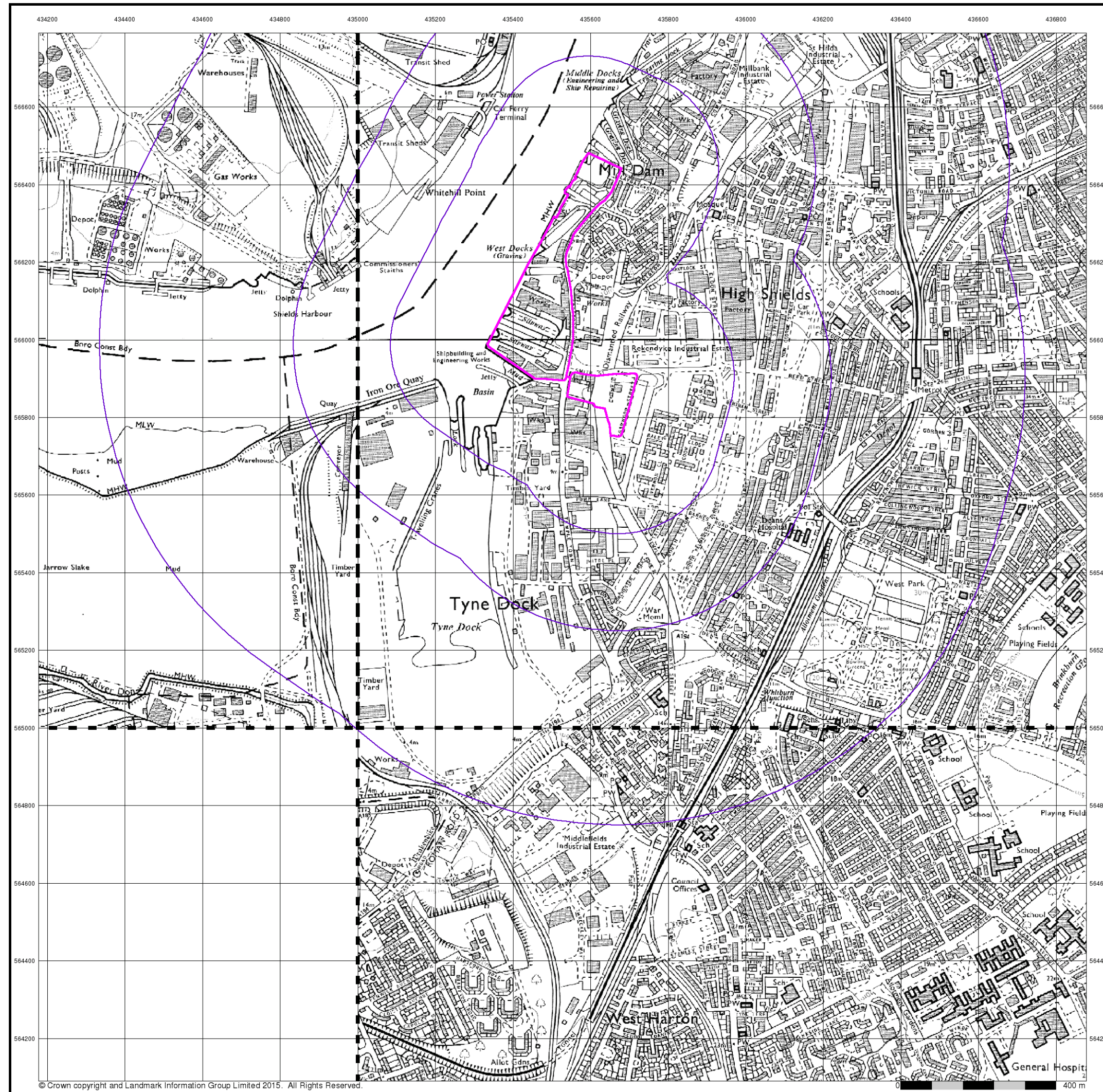
Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
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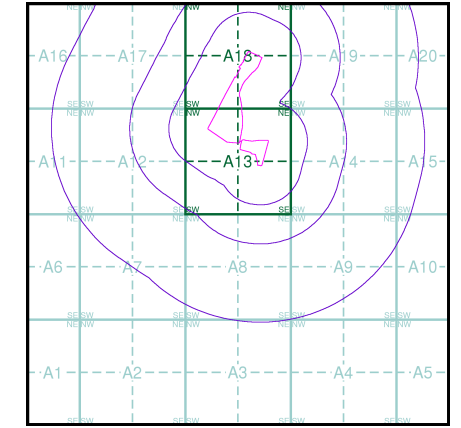
Ordnance Survey Plan
Published 1982 - 1987
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

NZ36NW	NZ36NE
1982	1986
1:10,000	1:10,000
	NZ36SE
	1987
	1:10,000

Historical Map - Slice A



Order Details

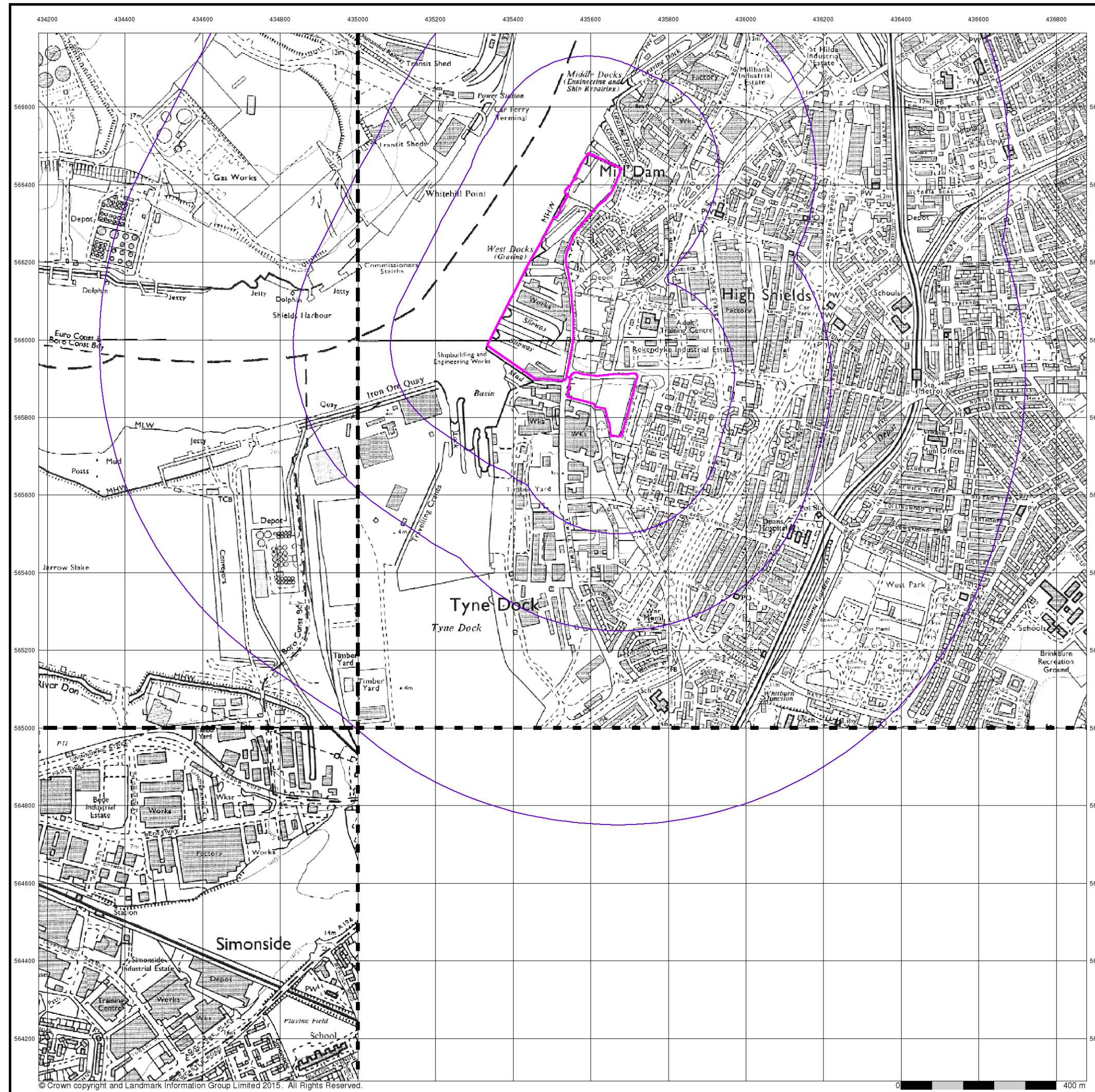
Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

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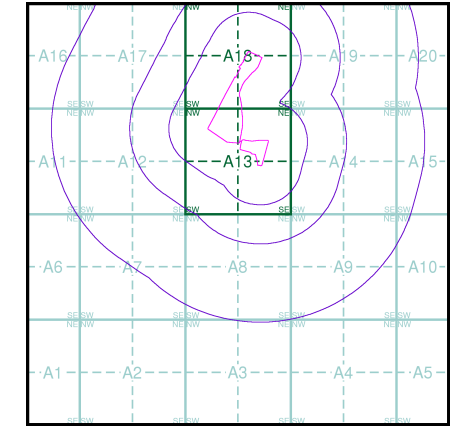
Ordnance Survey Plan
Published 1992 - 1995
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

NZ36NW 1995 1:10,000	NZ36NE 1993 1:10,000
NZ36SW 1992 1:10,000	

Historical Map - Slice A



Order Details

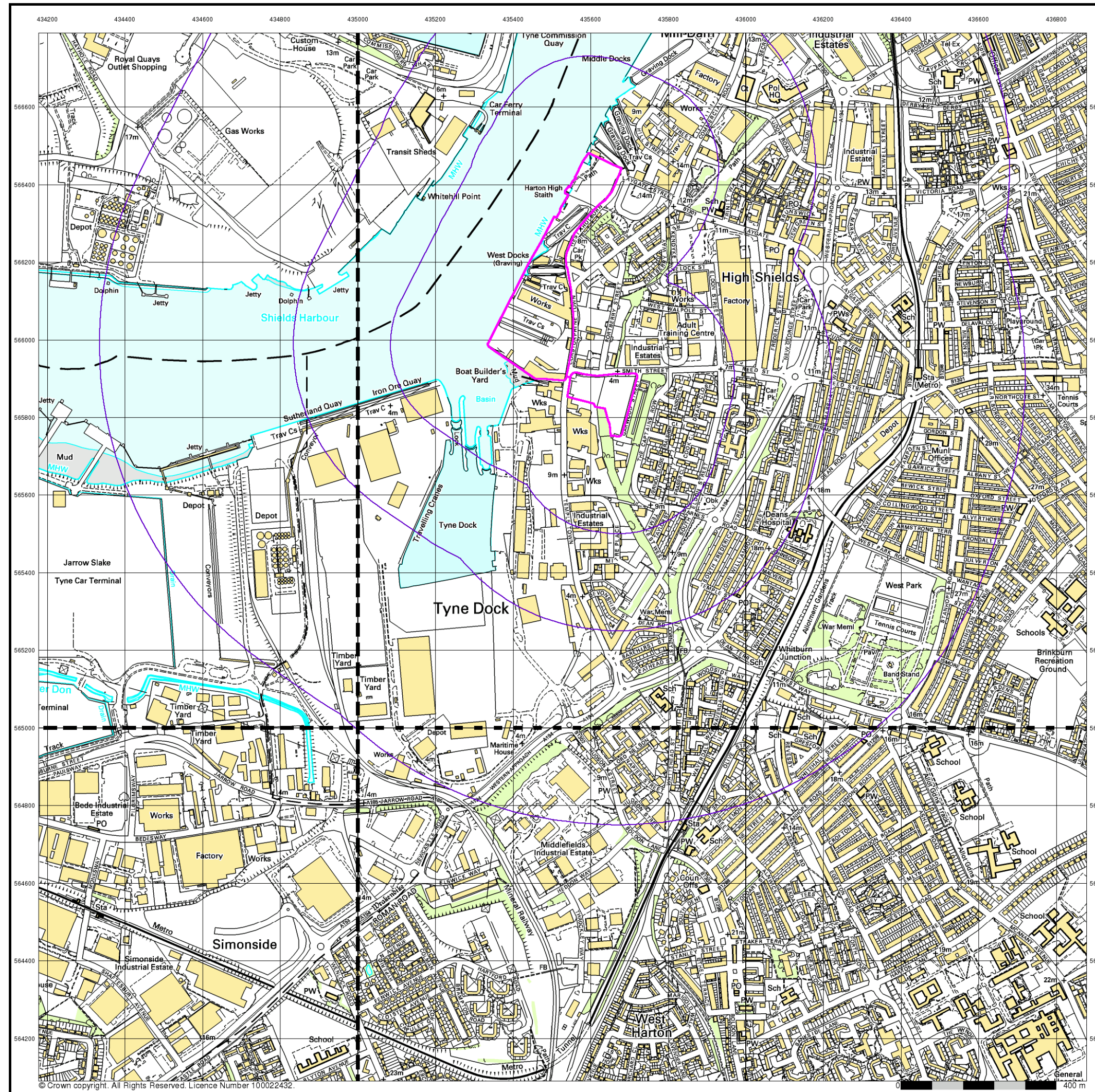
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 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
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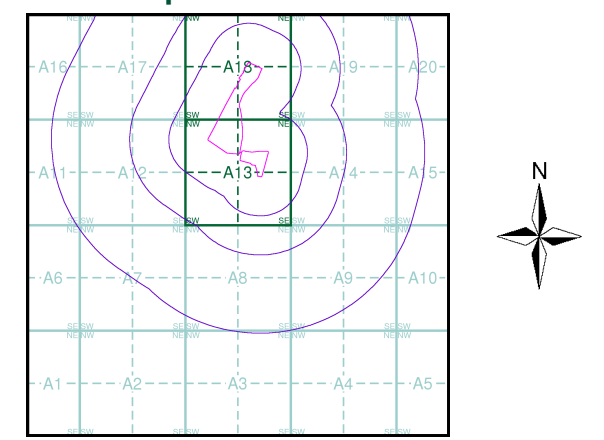
10k Raster Mapping
Published 2000
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

NZ36NW 2000 1:10,000	NZ36NE 2000 1:10,000
NZ36SW 2000 1:10,000	NZ36SE 2000 1:10,000

Historical Map - Slice A



Order Details

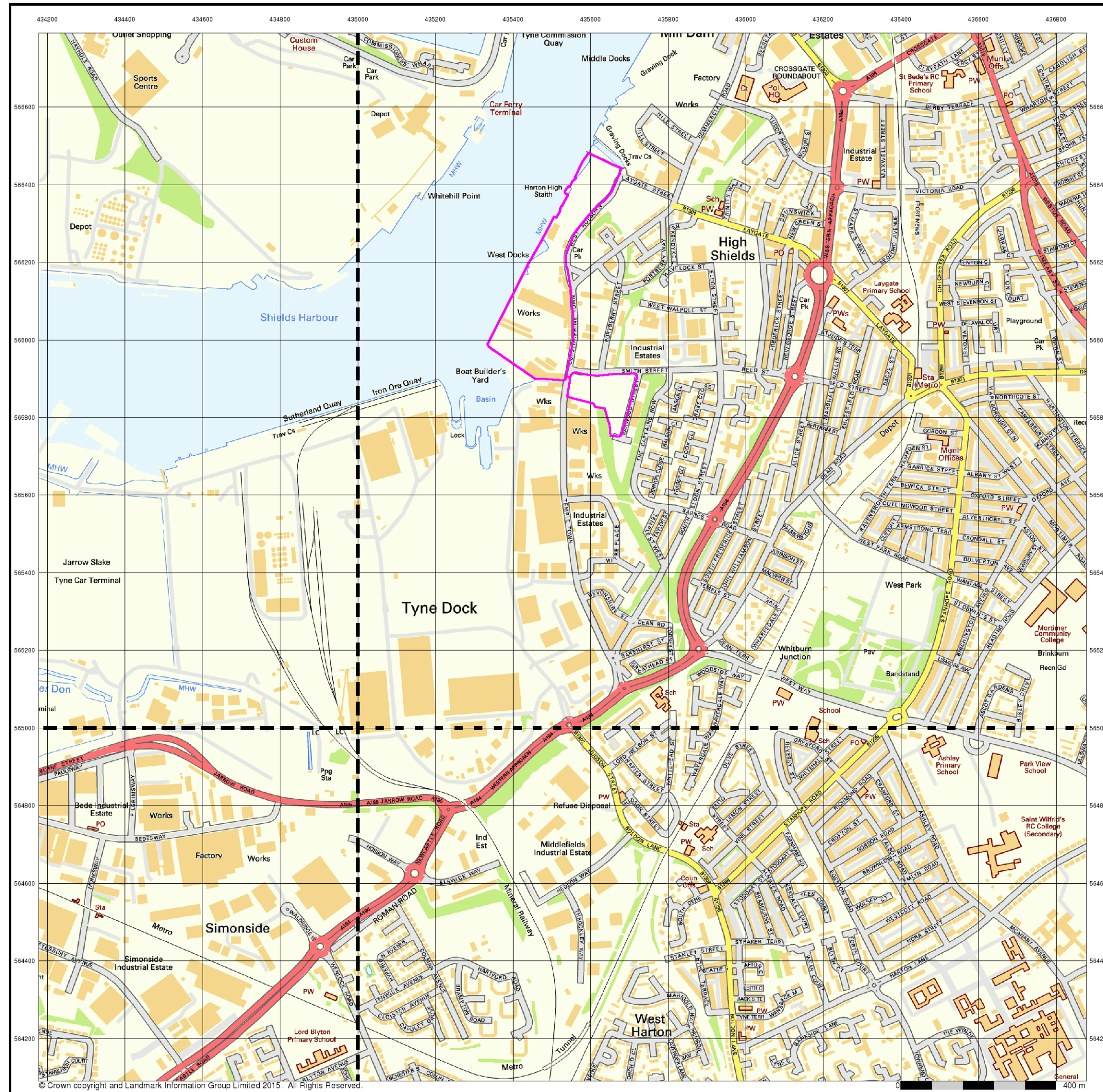
Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
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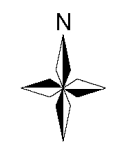
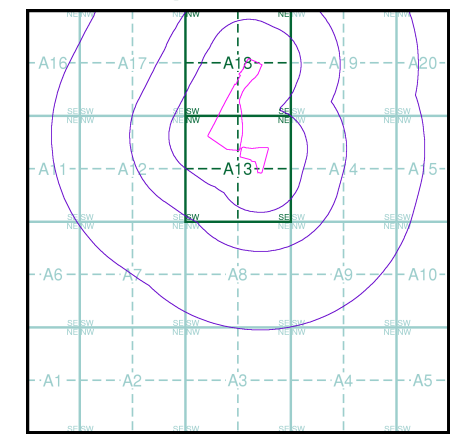
Street View
Published 2016
Source map scale - 1:10,000

Street View is a street-level map for the whole of Great Britain produced by the Ordnance Survey. These maps are provided at a nominal scale of 1:10,000

Map Name(s) and Date(s)

NZ36NW 2016 1:10,000	NZ36NE 2016 1:10,000
NZ36SW 2016 1:10,000	NZ36SE 2016 1:10,000

Street View Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

	Gravel Pit		Sand Pit		Other Pits
	Quarry		Shingle		Orchard
	Osiers		Reeds		Marsh
	Mixed Wood		Deciduous		Brushwood
	Fir		Furze		Rough Pasture
	Arrow denotes flow of water		Trigonometrical Station		
	Site of Antiquities		Bench Mark		
	Pump, Guide Post, Signal Post		Well, Spring, Boundary Post		
	-285 Surface Level				
	Sketched Contour		Instrumental Contour		
	Main Roads		Minor Roads		
	Sunken Road		Raised Road		
	Road over Railway		Railway over River		
	Railway over Road		Level Crossing		
	Road over River or Canal		Road over Stream		
	Road over Stream				
	County Boundary (Geographical)				
	County & Civil Parish Boundary				
	Administrative County & Civil Parish Boundary				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	Rural District Boundary				
	Civil Parish Boundary				

Ordnance Survey Plan 1:10,000

	Chalk Pit, Clay Pit or Quarry		Gravel Pit
	Sand Pit		Disused Pit or Quarry
	Refuse or Slag Heap		Lake, Loch or Pond
	Dunes		Boulders
	Coniferous Trees		Non-Coniferous Trees
	Orchard		Scrub
	Coppice		Bracken
	Heath		Rough Grassland
	Marsh		Reeds
	Saltings		
	Building		Glasshouse
	Sloping Masonry		Pylon
	Electricity Transmission Line		Pole
	Cutting		Embankment
	Standard Gauge Multiple Track		Standard Gauge Single Track
	Siding, Tramway or Mineral Line		Narrow Gauge
	Geographical County		
	Administrative County, County Borough or County of City		
	Municipal Borough, Urban or Rural District, Burgh or District Council		
	Borough, Burgh or County Constituency Shown only when not coincident with other boundaries		
	Civil Parish Shown alternately when coincidence of boundaries occurs		
	BP, BS Boundary Post or Stone		Pol Sta Police Station
	Ch Church		PO Post Office
	CH Club House		PC Public Convenience
	F E Sta Fire Engine Station		PH Public House
	FB Foot Bridge		SB Signal Box
	Fn Fountain		Spr Spring
	GP Guide Post		TCB Telephone Call Box
	MP Mile Post		TCP Telephone Call Post
	MS Mile Stone		W Well

1:10,000 Raster Mapping

	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil, parish or community boundary
	District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
	Area of wooded vegetation		Non-coniferous trees
	Non-coniferous trees (scattered)		Coniferous trees
	Coniferous trees (scattered)		Positioned tree
	Orchard		Coppice or Osiers
	Rough Grassland		Heath
	Scrub		Marsh, Salt Marsh or Reeds
	Water feature		Flow arrows
	MHW(S) Mean high water (springs)		MLW(S) Mean low water (springs)
	Telephone line (where shown)		Electricity transmission line (with poles)
	Bench mark (where shown) BM 123.45 m		Triangulation station
	Point feature (e.g. Guide Post or Mile Stone)		Pylon, flare stack or lighting tower
	Site of (antiquity)		Glasshouse
	General Building		Important Building

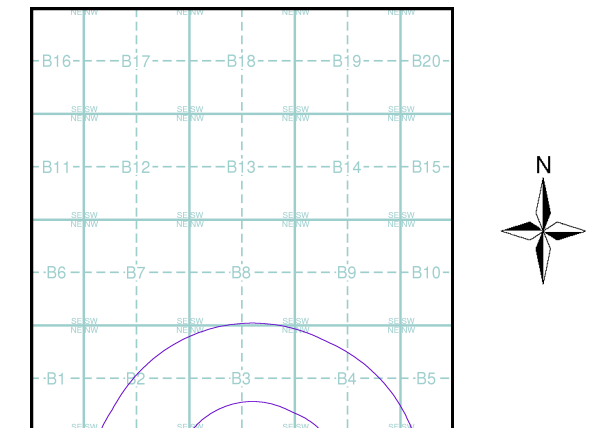


consulting engineers

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:10,560	1862	2
Northumberland	1:10,560	1865	3
Durham	1:10,560	1898	4
Northumberland	1:10,560	1899	5
Northumberland	1:10,560	1920 - 1921	6
Northumberland	1:10,560	1920	7
Durham	1:10,560	1921	8
Durham	1:10,560	1938	9
Northumberland	1:10,560	1938	10
Ordnance Survey Plan	1:10,000	1951 - 1952	11
Ordnance Survey Plan	1:10,000	1957	12
Ordnance Survey Plan	1:10,000	1967	13
Ordnance Survey Plan	1:10,000	1973 - 1976	14
Ordnance Survey Plan	1:10,000	1982 - 1986	15
Ordnance Survey Plan	1:10,000	1993 - 1995	16
10K Raster Mapping	1:10,000	2000	17
Street View	1:10,000	2016	18

Historical Map - Slice B



Order Details

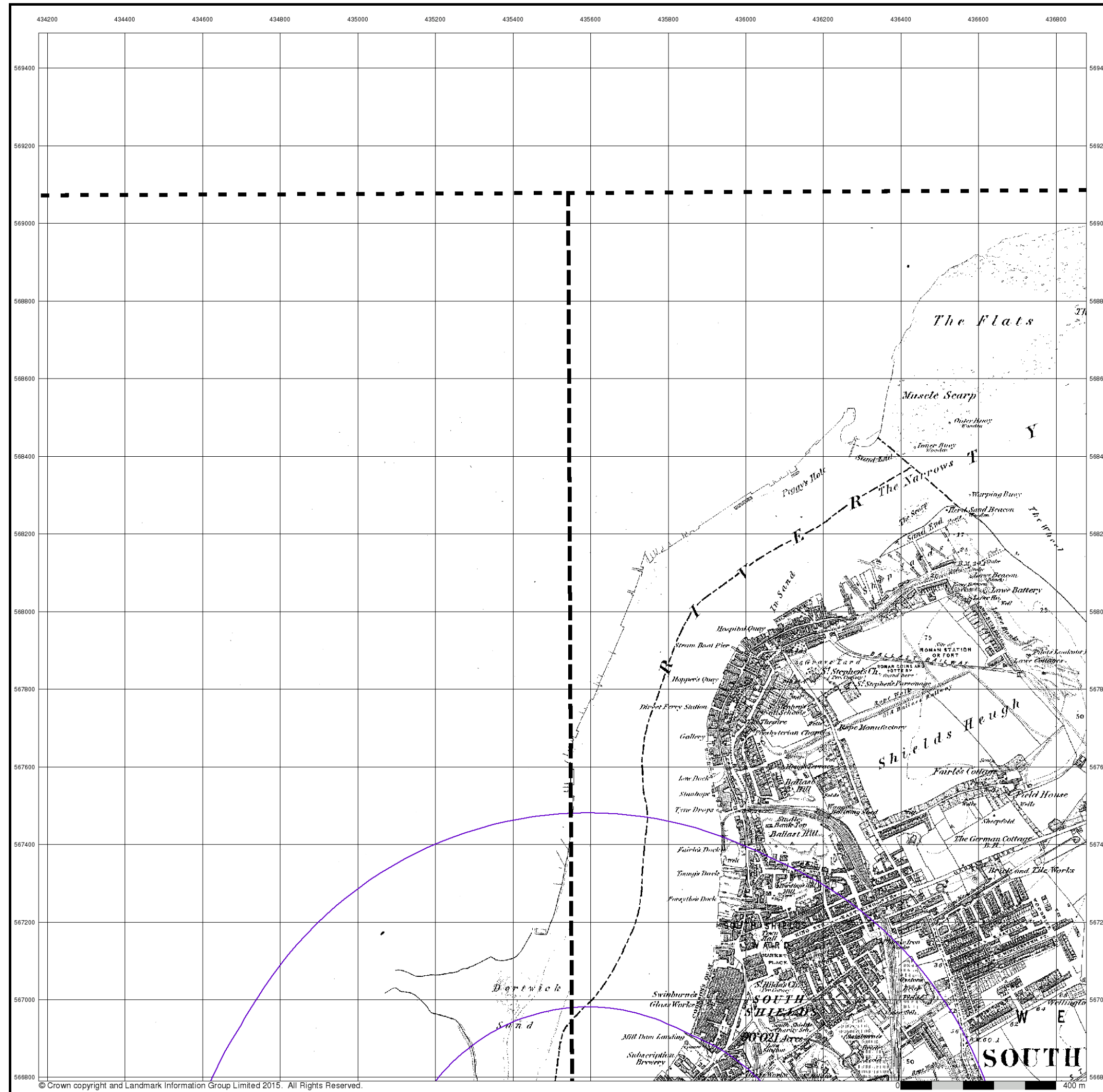
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 Slice: B
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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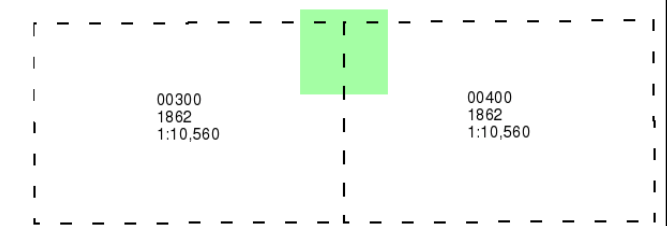
Durham

Published 1862

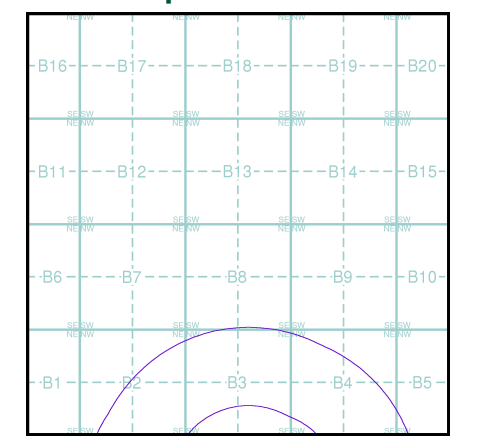
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

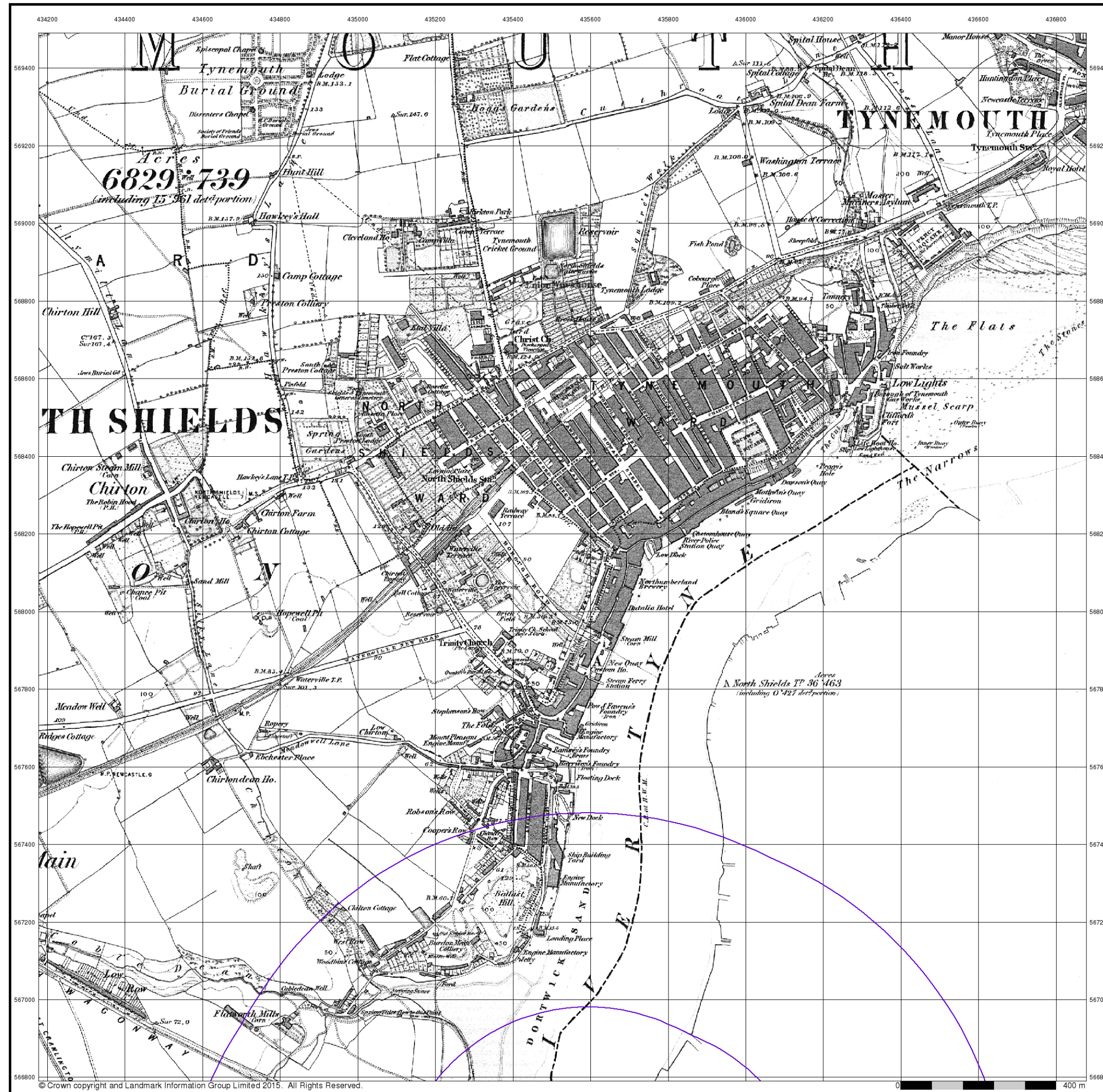
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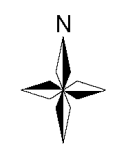
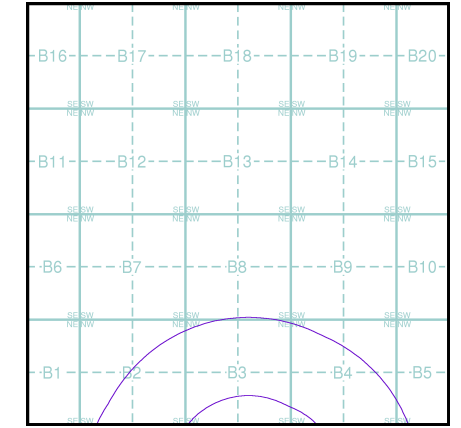
Northumberland
Published 1865
Source map scale - 1:10,560

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Map Name(s) and Date(s)

08900	
1865	
1:10,560	

Historical Map - Slice B



Order Details

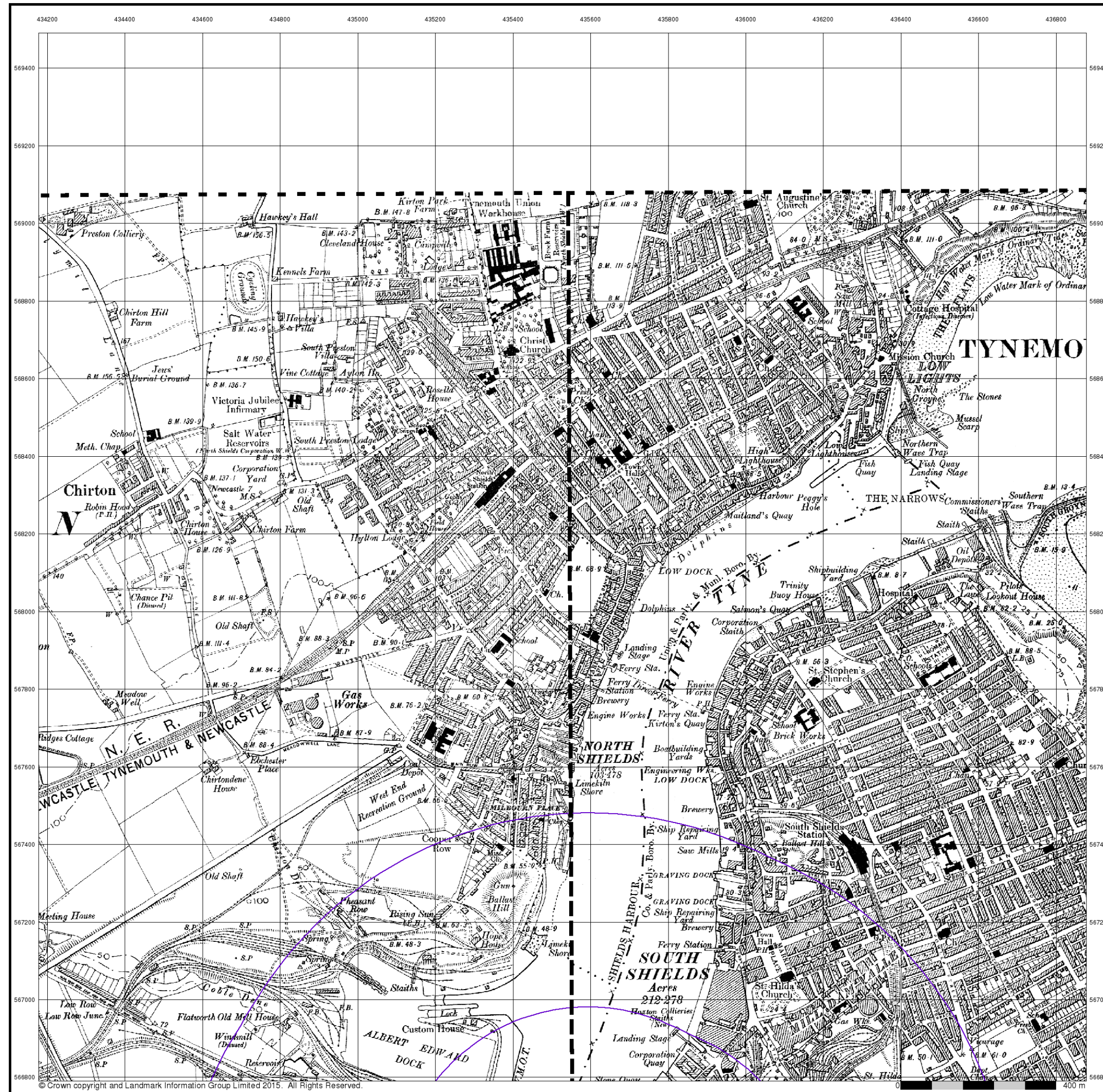
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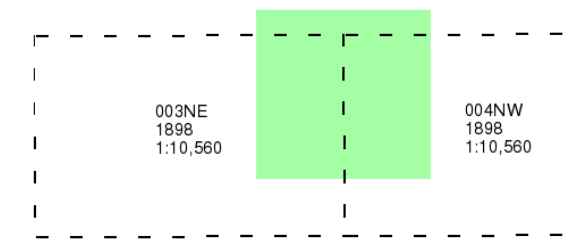
Durham

Published 1898

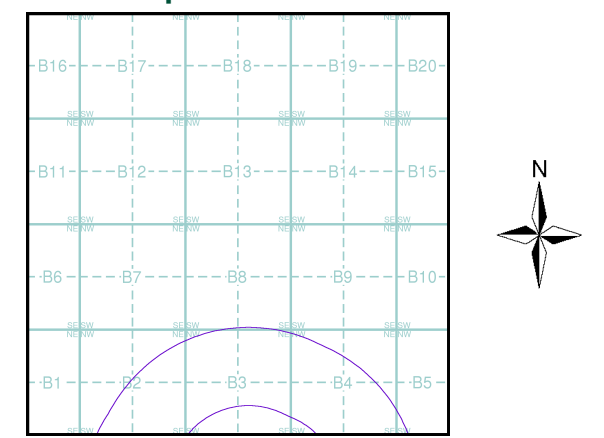
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



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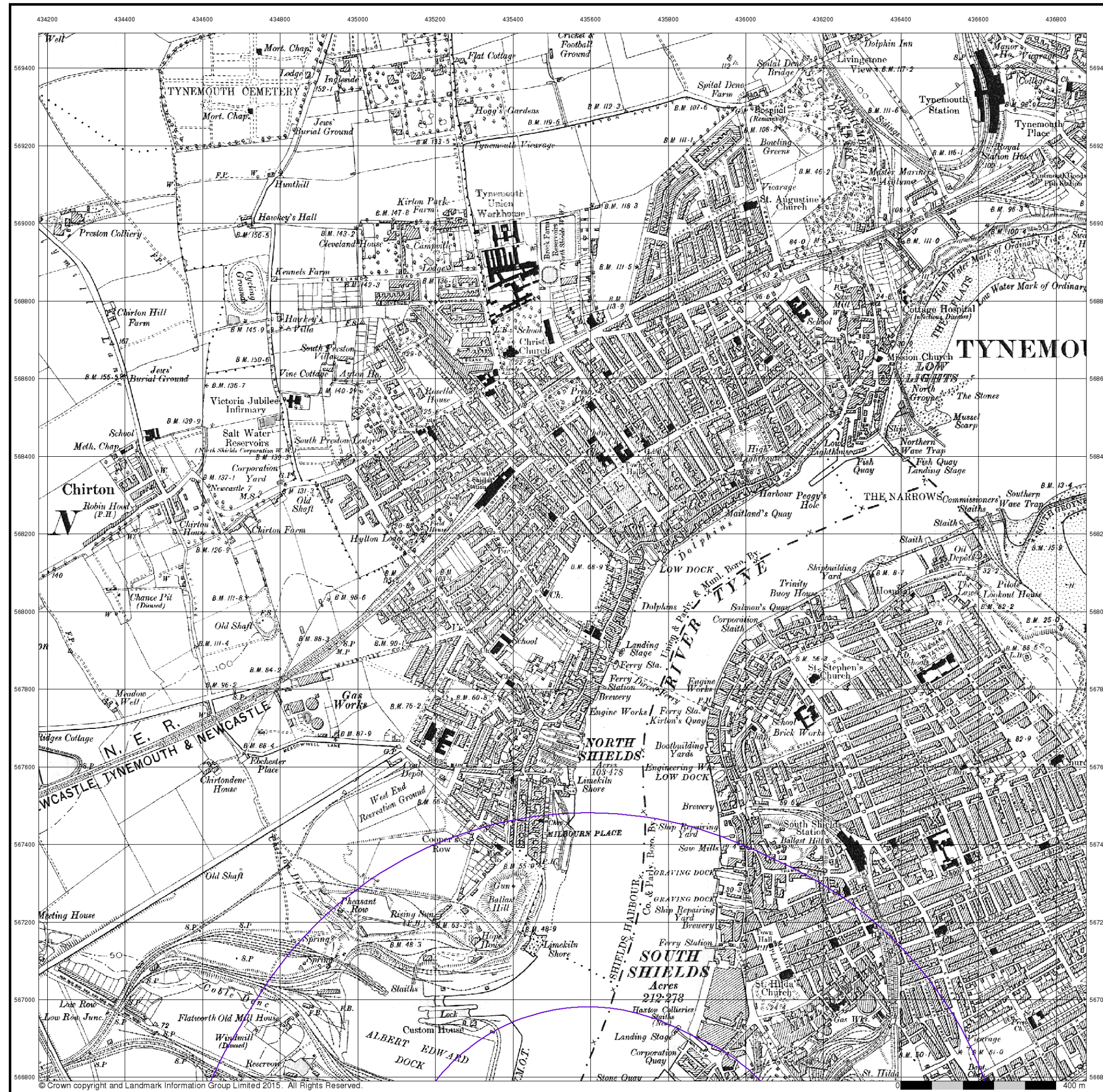
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Site Details

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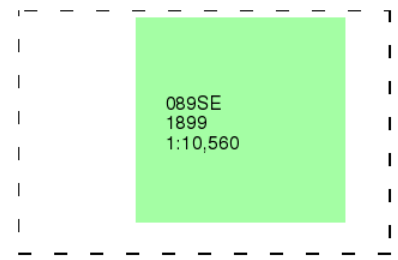
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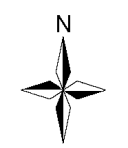
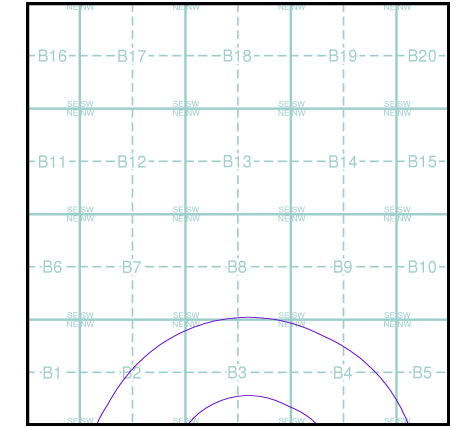
Northumberland
Published 1899
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

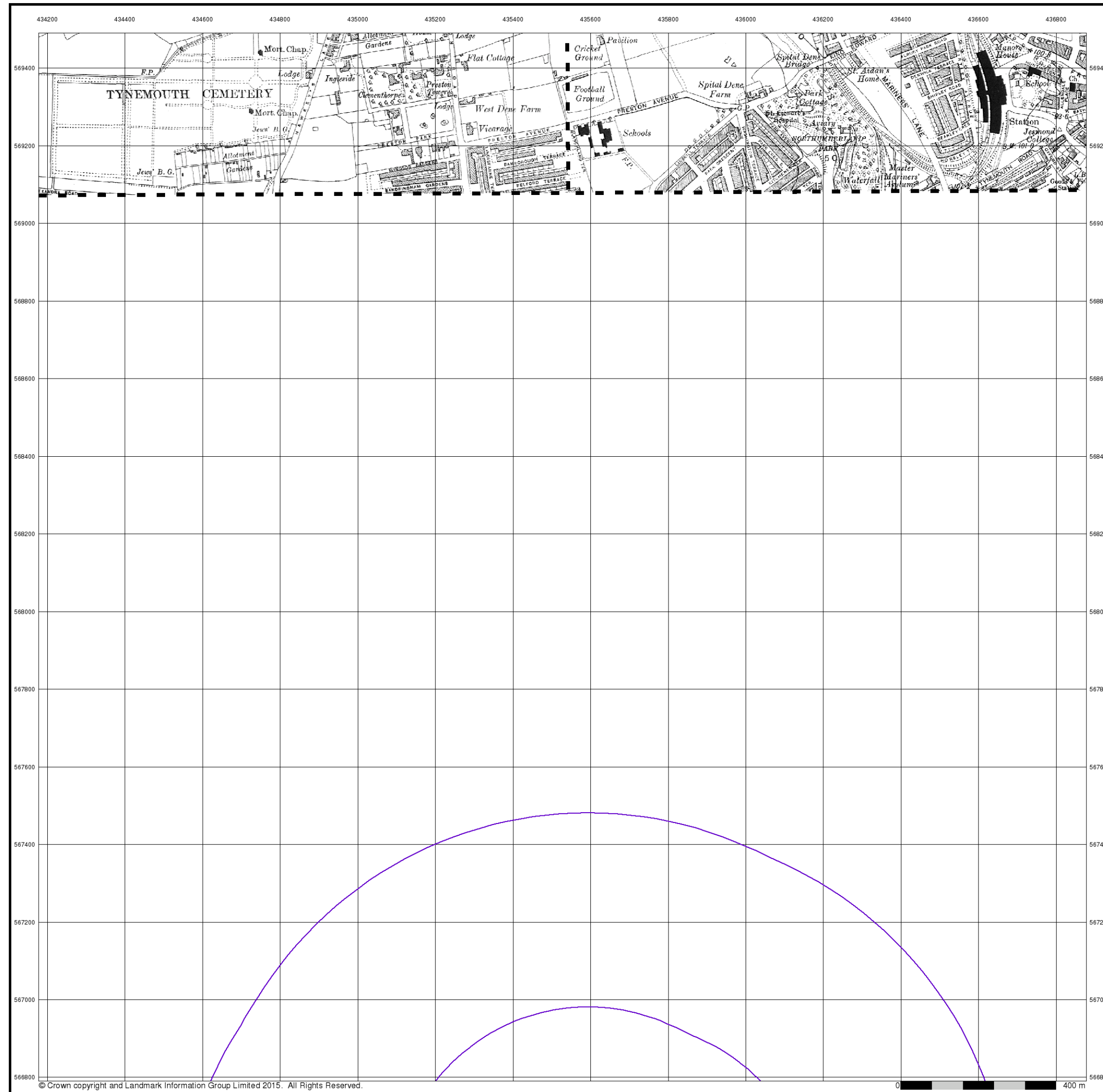
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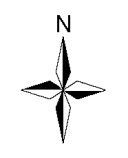
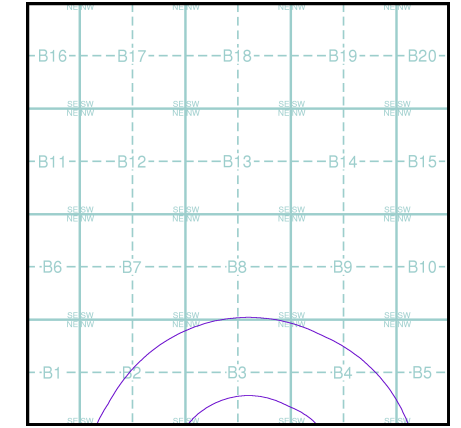
Northumberland
Published 1920 - 1921
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

086SE 1920 1:10,560	087SW 1921 1:10,560
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Historical Map - Slice B



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
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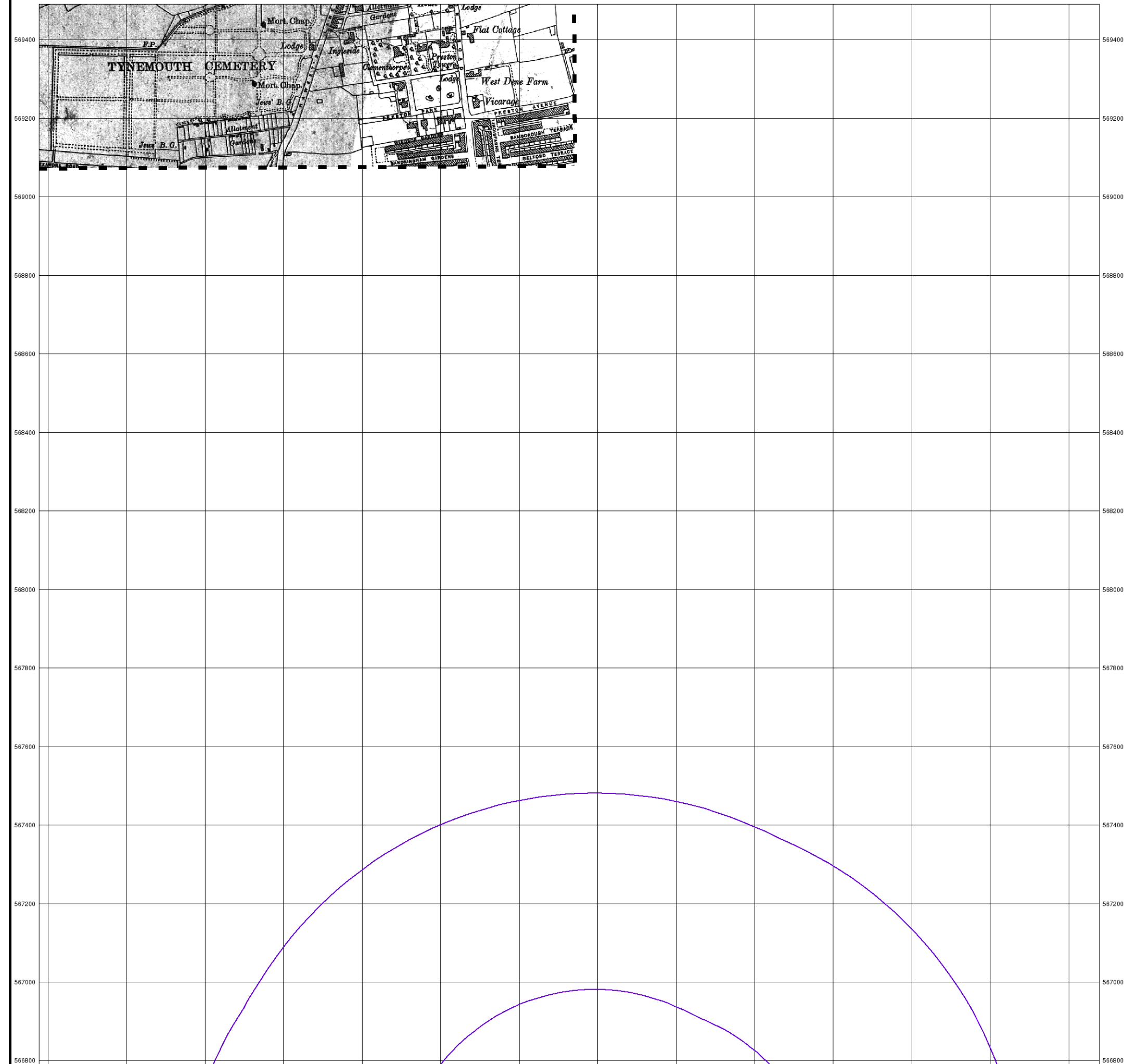
Site Details

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434200 434400 434600 434800 435000 435200 435400 435600 435800 436000 436200 436400 436600 436800



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Northumberland

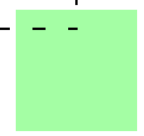
Published 1920

Source map scale - 1:10,560

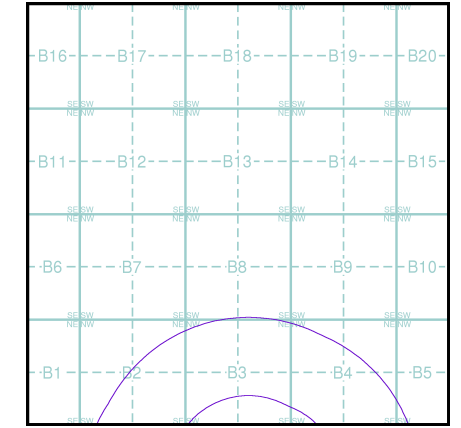
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Map Name(s) and Date(s)

086SE
1920
1:10,560



Historical Map - Slice B



Order Details

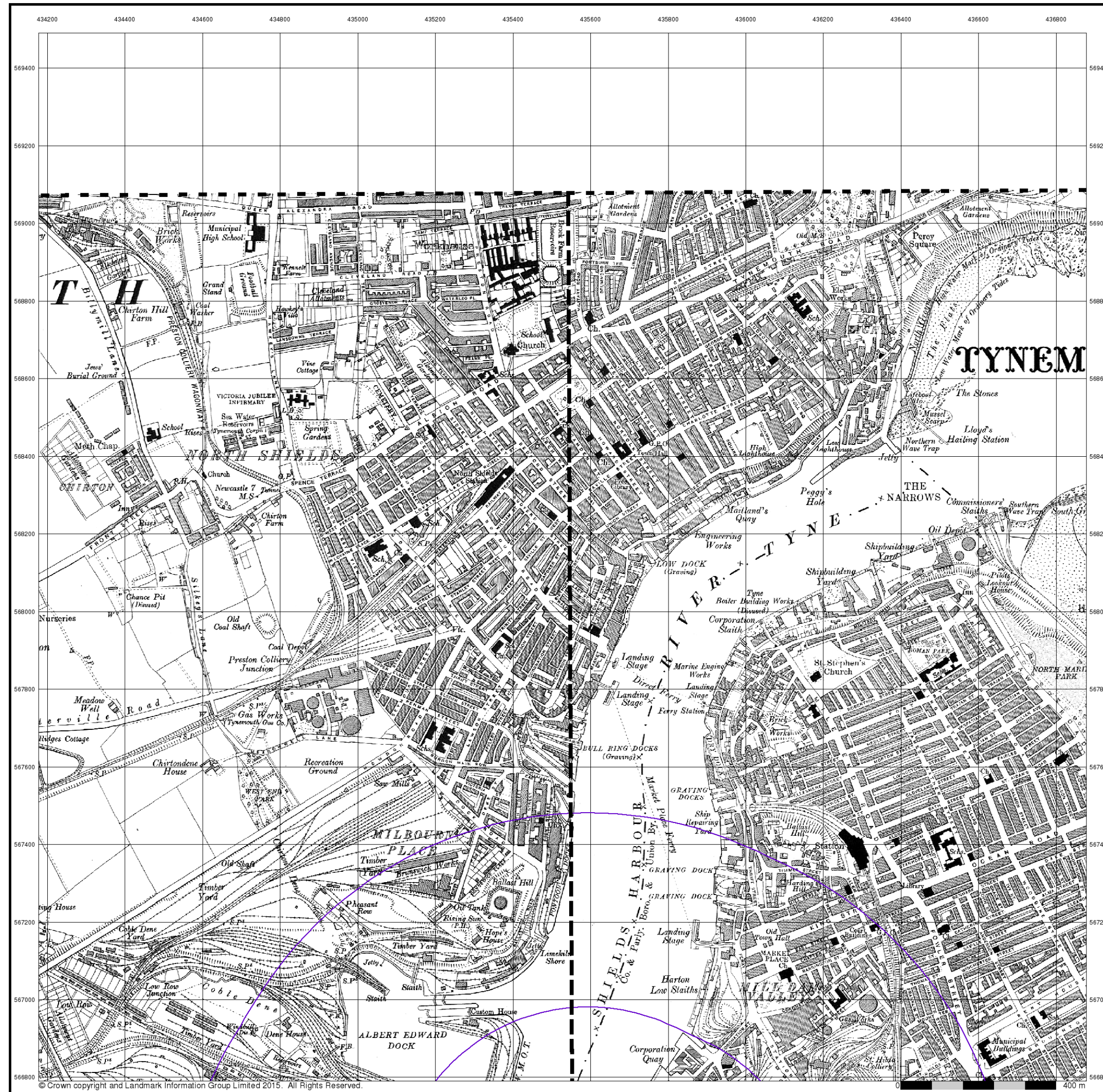
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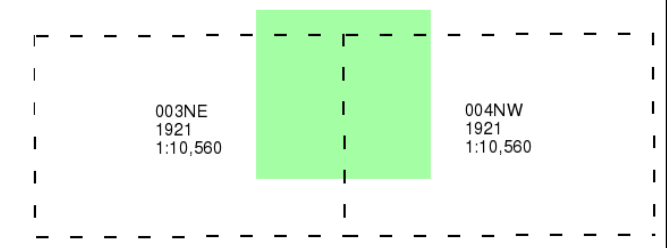
Durham

Published 1921

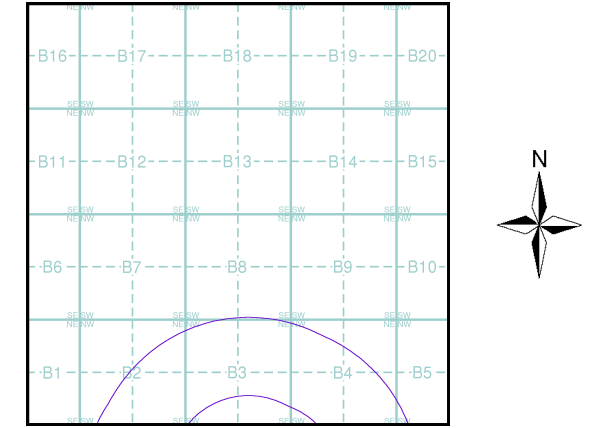
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice B



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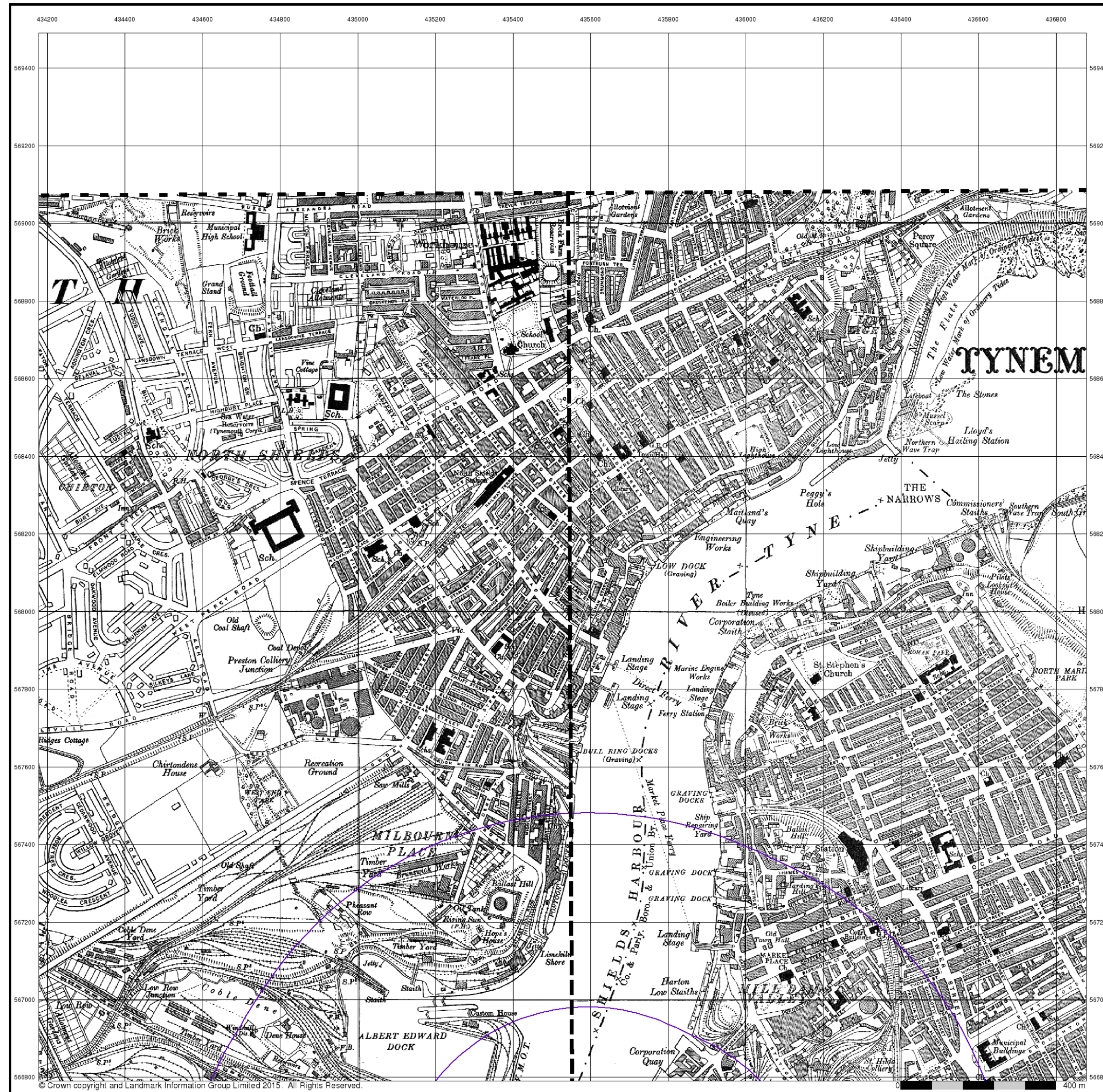
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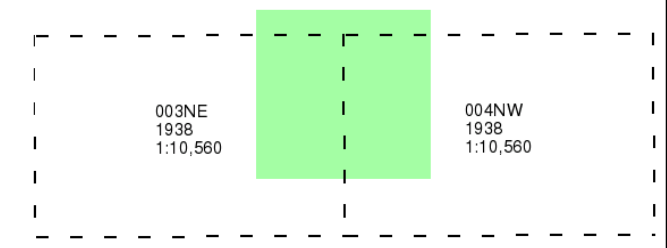
Durham

Published 1938

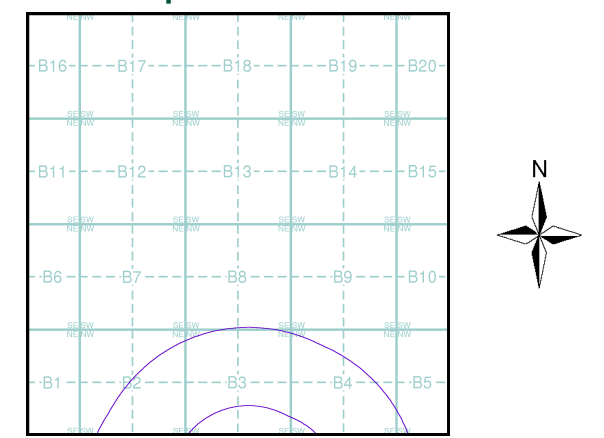
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Historical Map - Slice B



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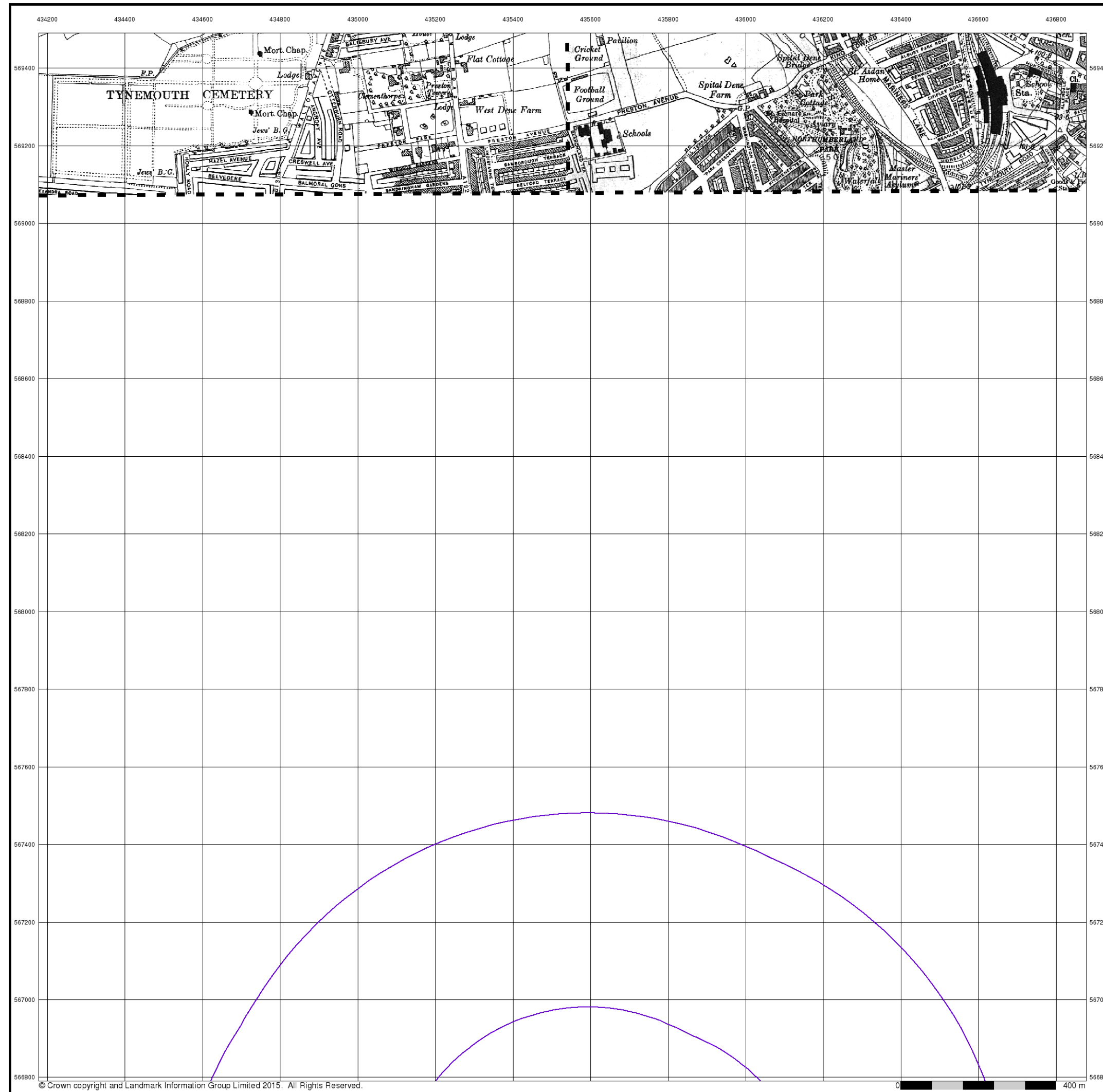
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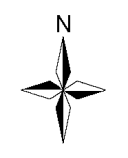
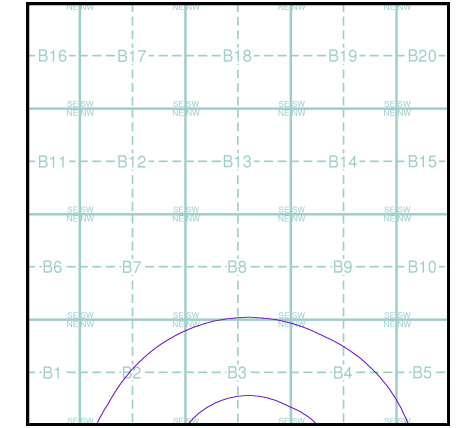
Northumberland
Published 1938
Source map scale - 1:10,560

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Map Name(s) and Date(s)

086SE 1938 1:10,560	087SW 1938 1:10,560
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Historical Map - Slice B



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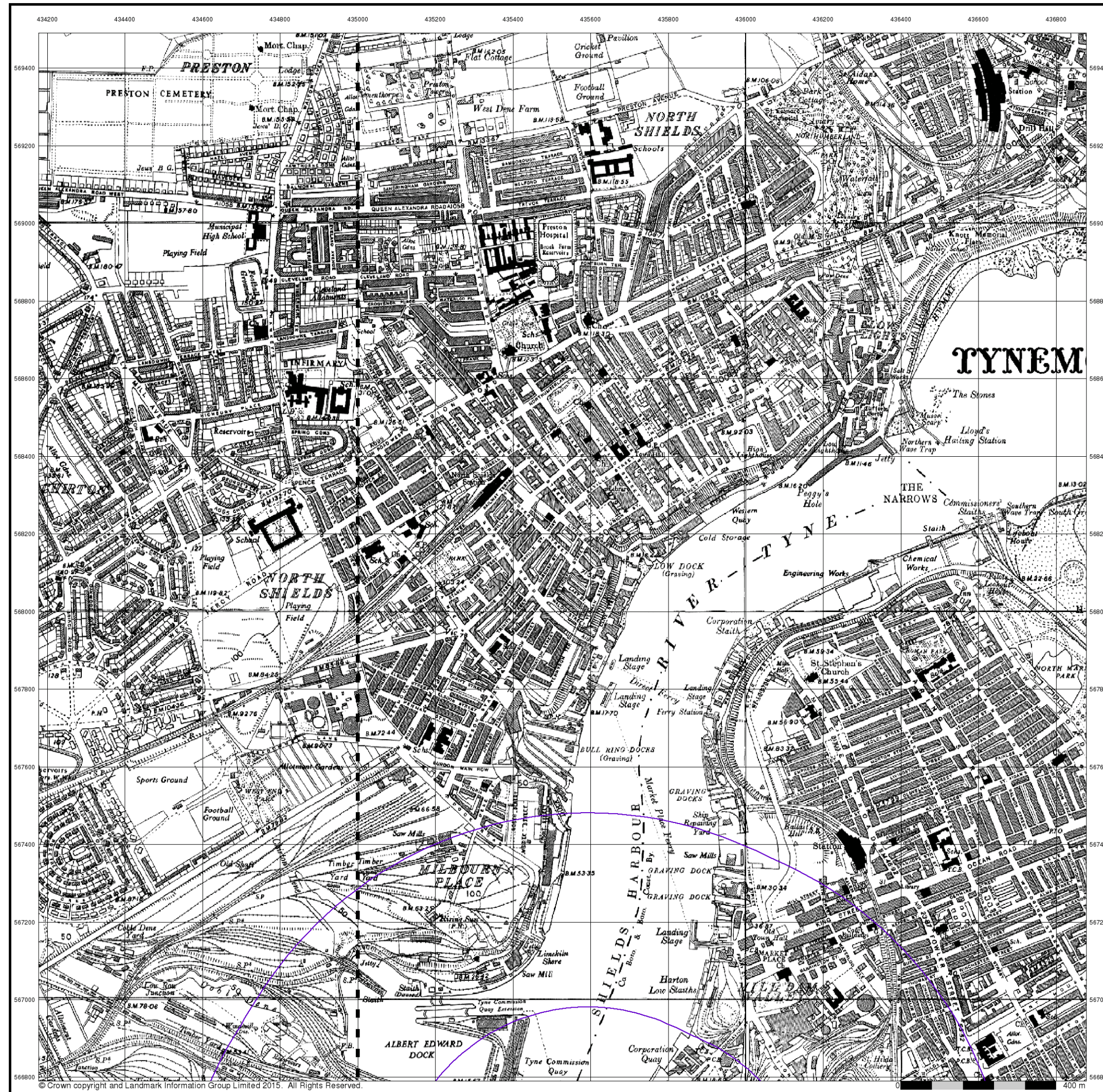
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Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



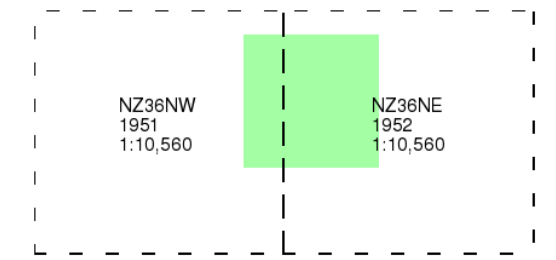
Tel: 0844 844 9952
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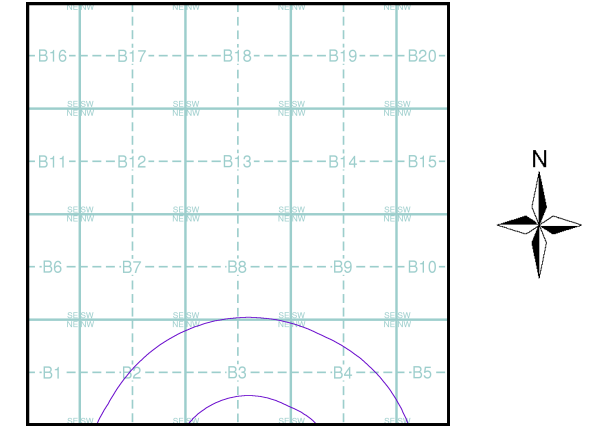
Ordnance Survey Plan
Published 1951 - 1952
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

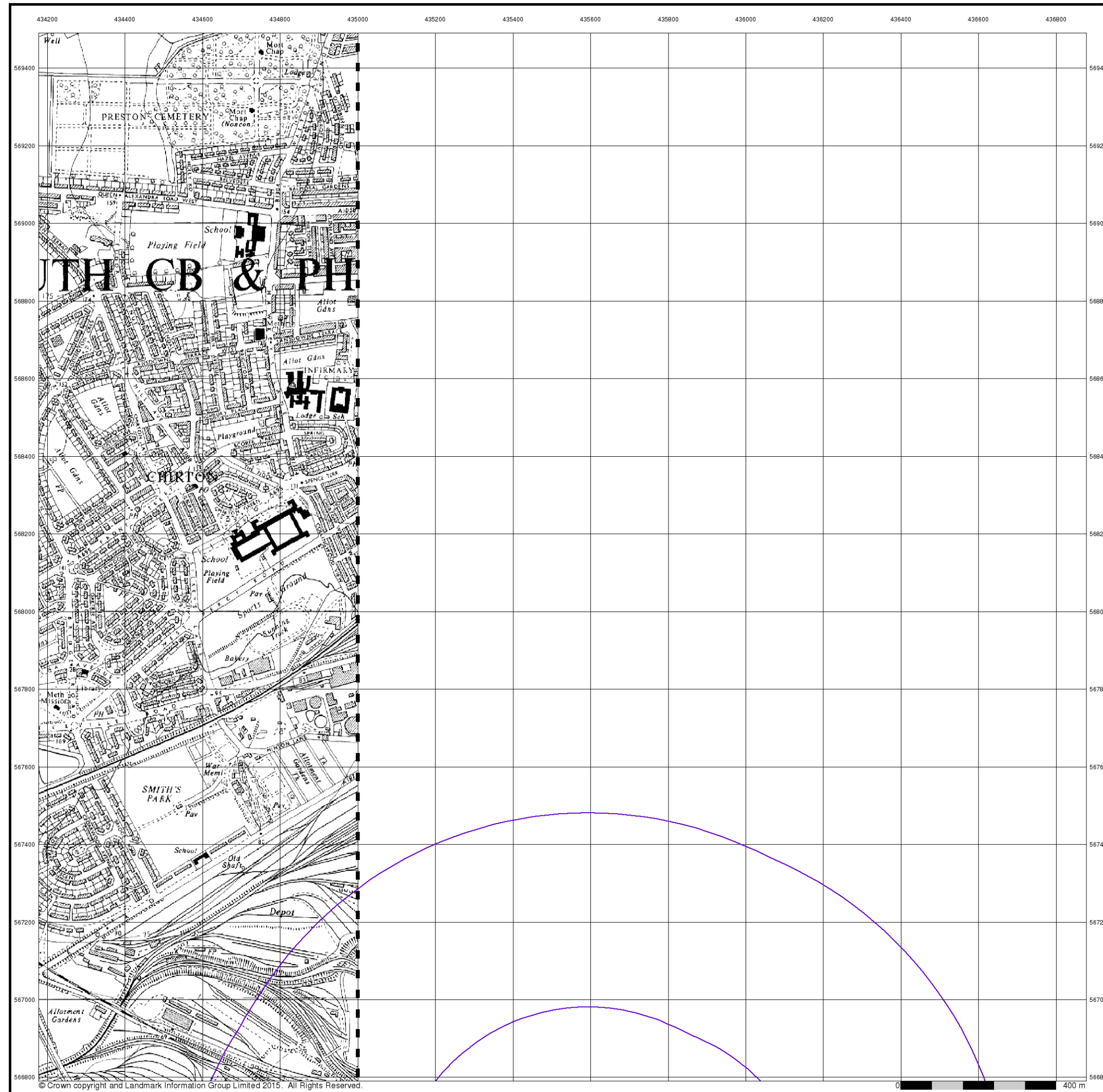
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Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



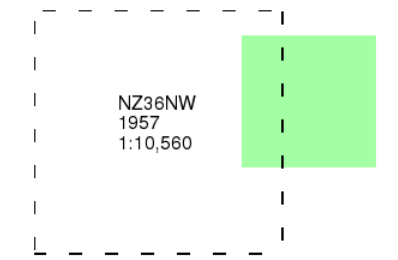
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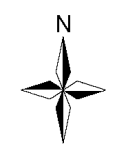
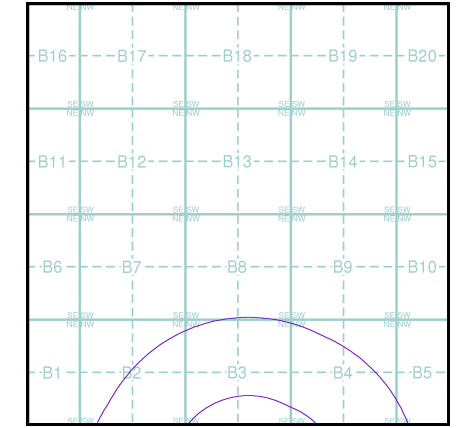
Ordnance Survey Plan
Published 1957
Source map scale - 1:10,000

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Order Details

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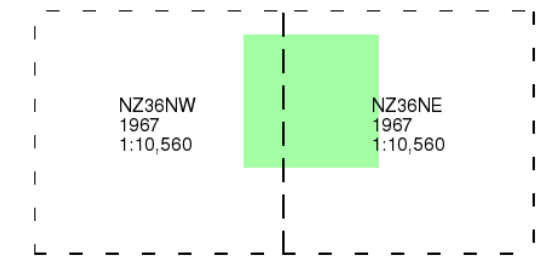


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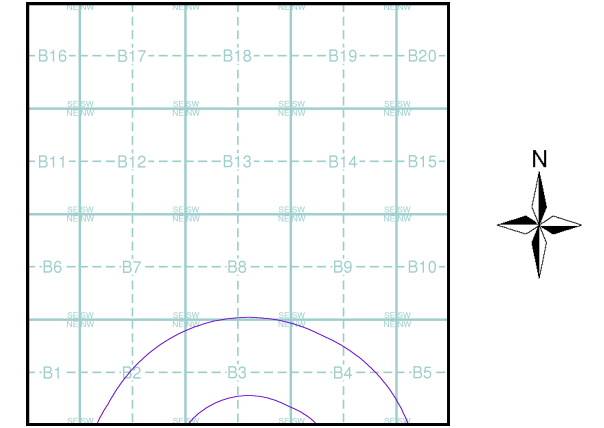
Ordnance Survey Plan
Published 1967
Source map scale - 1:10,000

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Site Details
 McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ

Landmark
Information Group

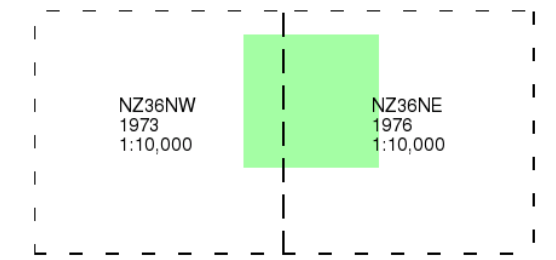
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



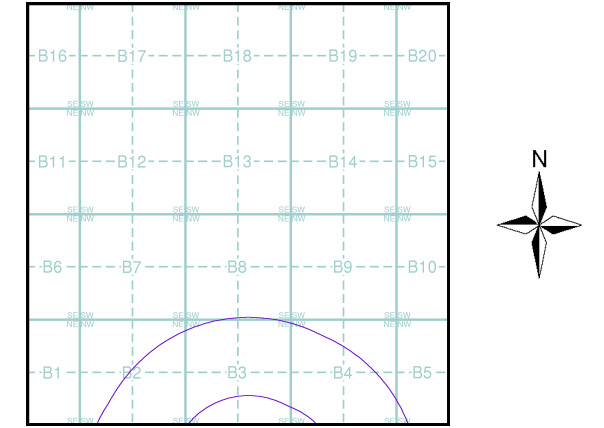
Ordnance Survey Plan
Published 1973 - 1976
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435620, 567070
 Slice: B
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ

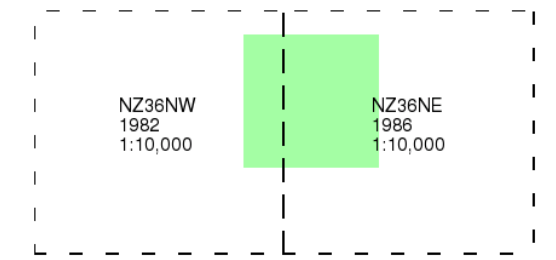
Landmark Information Group
 Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



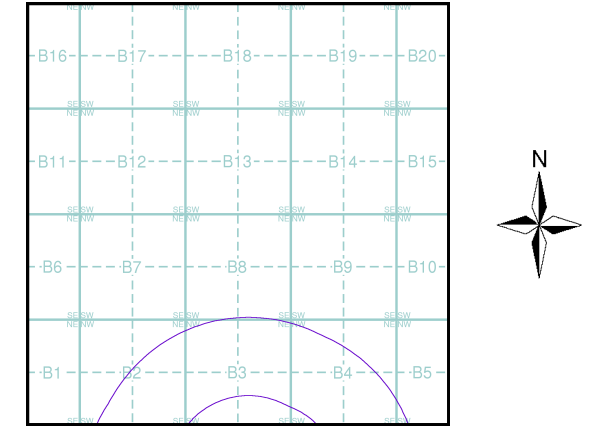
Ordnance Survey Plan
Published 1982 - 1986
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details
 Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435620, 567070
 Slice: B
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

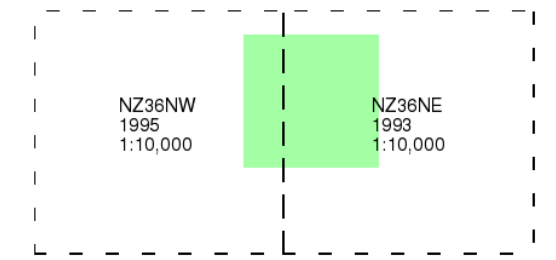
Site Details
 McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



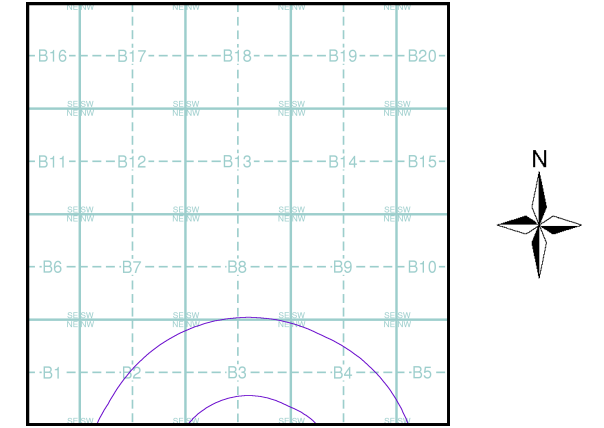
Ordnance Survey Plan
Published 1993 - 1995
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



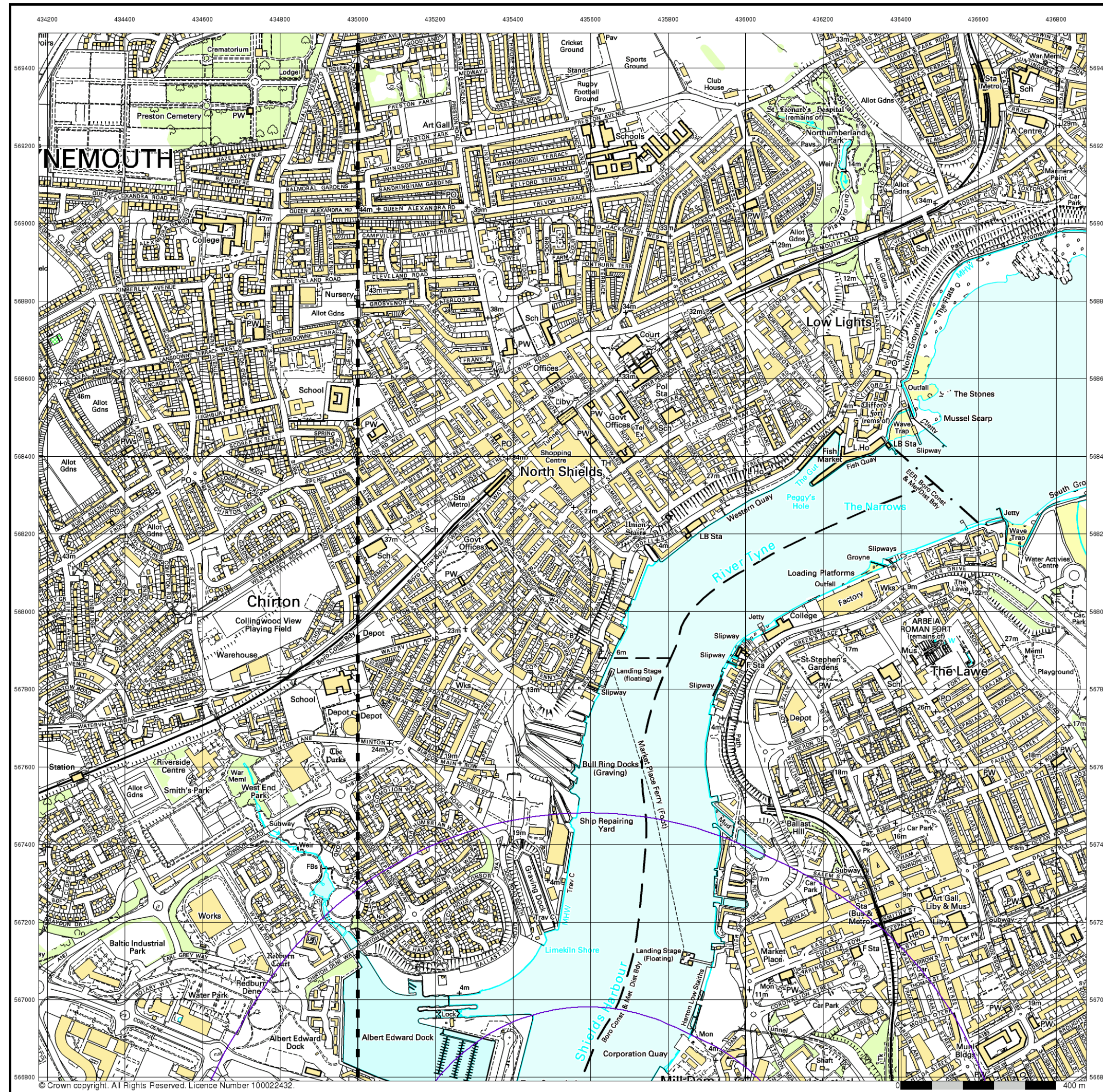
Historical Map - Slice B



Order Details
 Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435620, 567070
 Slice: B
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details
 McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ

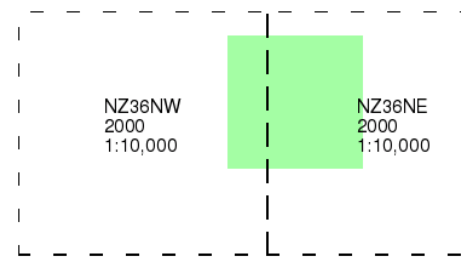
Landmark Information Group
 Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



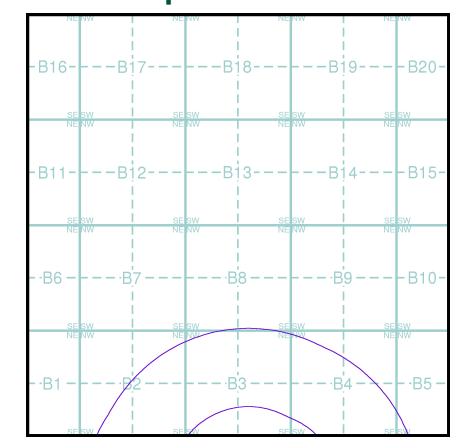
10k Raster Mapping
Published 2000
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435620, 567070
 Slice: B
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



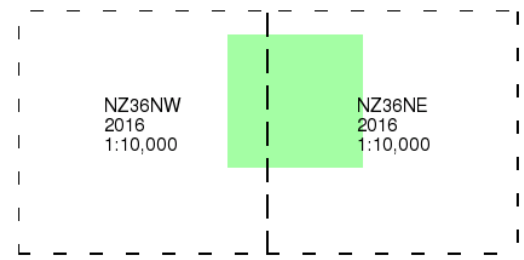
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



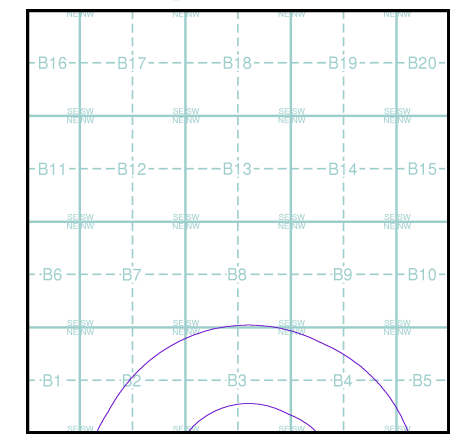
Street View
Published 2016
Source map scale - 1:10,000

Street View is a street-level map for the whole of Great Britain produced by the Ordnance Survey. These maps are provided at a nominal scale of 1:10,000

Map Name(s) and Date(s)



Street View Map - Slice B



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435620, 567070
 Slice: B
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ




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Appendix D










Envirocheck Report and
Geological Maps

Geology 1:10,000 Maps Legends









Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	SUPNM	Superficial Theme Not Mapped [For Digital Map Use Only]	Unknown/Unclassified Entry	Not Supplied - Not Supplied
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Pleistocene
	TRD	Tidal River Or Creek Deposits	Clay, Silt, Sand and Gravel	Flandrian - Pleistocene
	GLLDD	Glaciolacustrine Deposits, Devensian	Clay and Silt	Devensian - Ipswichian
	PELC	Pelaw Clay Member	Clay	Devensian - Ipswichian
	TILLD	Till, Devensian	Diamicton	Devensian - Ipswichian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Devensian - Ipswichian
	GLLD	Glaciolacustrine Deposits	Clay and Silt	Pleistocene - Pragian
	LAC	Laminated Clays	Clay	Quaternary - Ryazanian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	RML	Raisby Formation	Dolostone	Late Permian - Late Permian
	YWS	Yellow Sands Formation	Sandstone	Late Permian - Cisuralian
	PUCM	Pennine Upper Coal Measures Formation	Mudstone, Siltstone and Sandstone	Westphalian D - Bolsovian
	PUCM	Pennine Upper Coal Measures Formation	Sandstone	Westphalian D - Bolsovian
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Bolsovian - Duckmantian
	PMCM	Pennine Middle Coal Measures Formation	Sandstone	Bolsovian - Duckmantian
	Rock			
	Fault			



Geology 1:10,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:10,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around a site. This mapping may be more up to date than previously published paper maps.

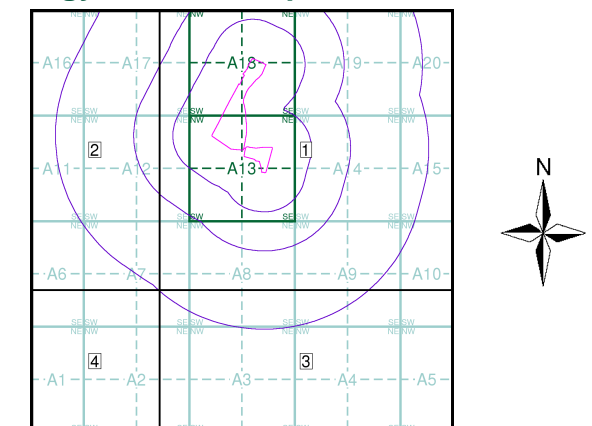
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page.

Please Note: Not all of the layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:10,000 Maps Coverage

Map ID:	1	Map ID:	3
Map Name:	NZ36NE	Map Name:	NZ36SE
Map Date:	1981	Map Date:	1975
Bedrock Geology:	Available	Bedrock Geology:	Available
Superficial Geology:	Available	Superficial Geology:	Available
Artificial Geology:	Available	Artificial Geology:	Available
Faults:	Not Supplied	Faults:	Not Supplied
Landslip:	Available	Landslip:	Not Available
Rock Segments:	Not Supplied	Rock Segments:	Not Supplied
Map ID:	4	Map ID:	2
Map Name:	NZ36SW	Map Name:	NZ36NW
Map Date:	2000	Map Date:	2000
Bedrock Geology:	Available	Bedrock Geology:	Available
Superficial Geology:	Available	Superficial Geology:	Available
Artificial Geology:	Available	Artificial Geology:	Available
Faults:	Available	Faults:	Available
Landslip:	Not Available	Landslip:	Available
Rock Segments:	Available	Rock Segments:	Available

Geology 1:10,000 Maps - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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Artificial Ground and Landslip

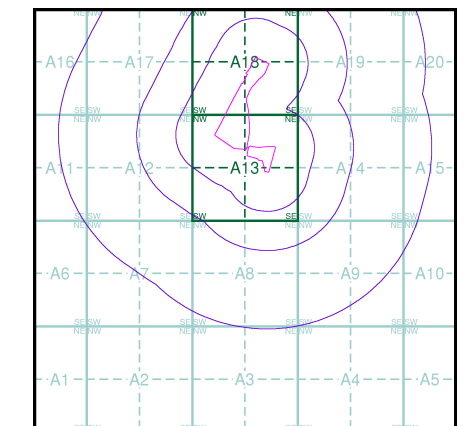
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- In-filled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes founded strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



Order Details

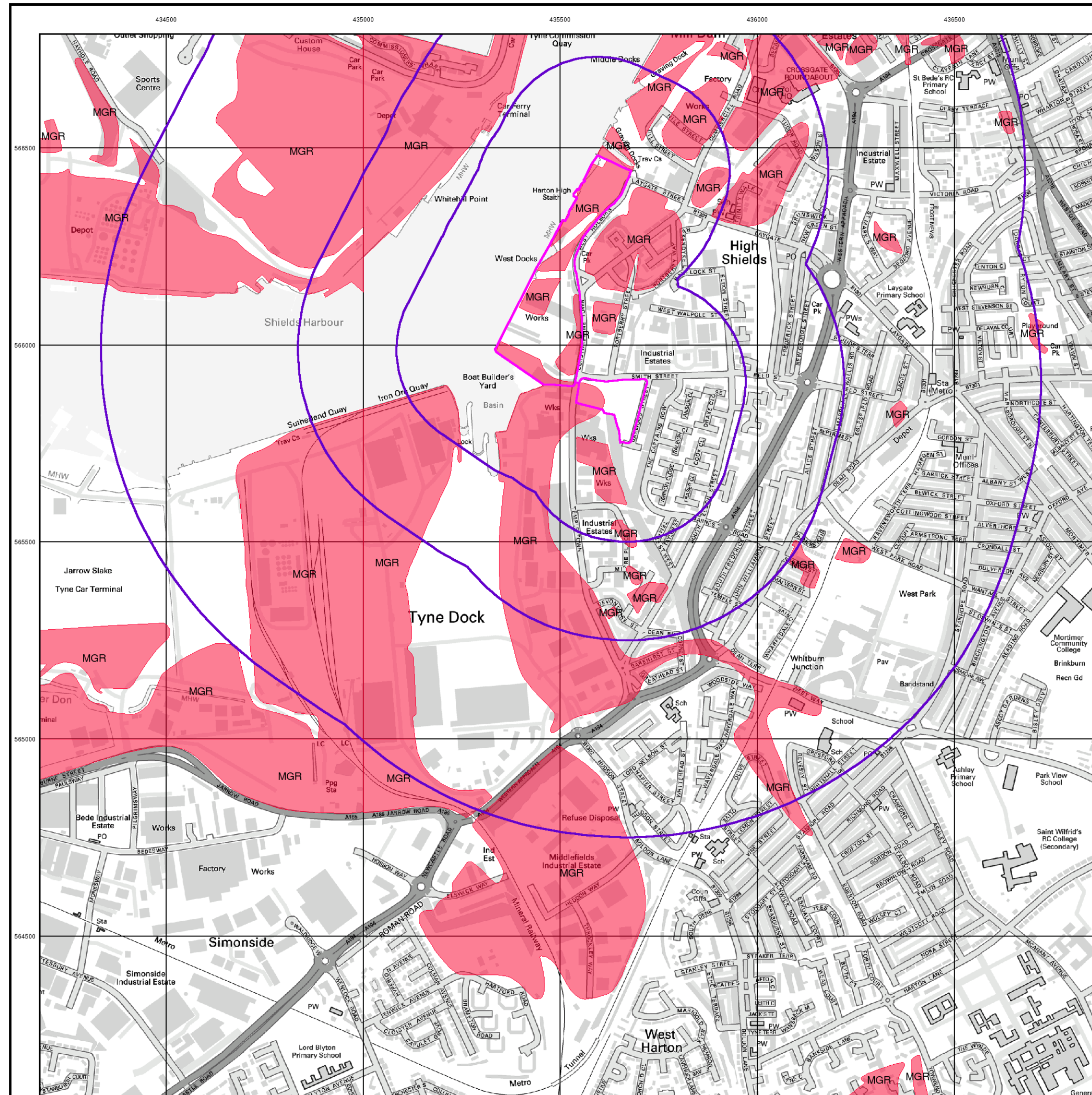
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 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

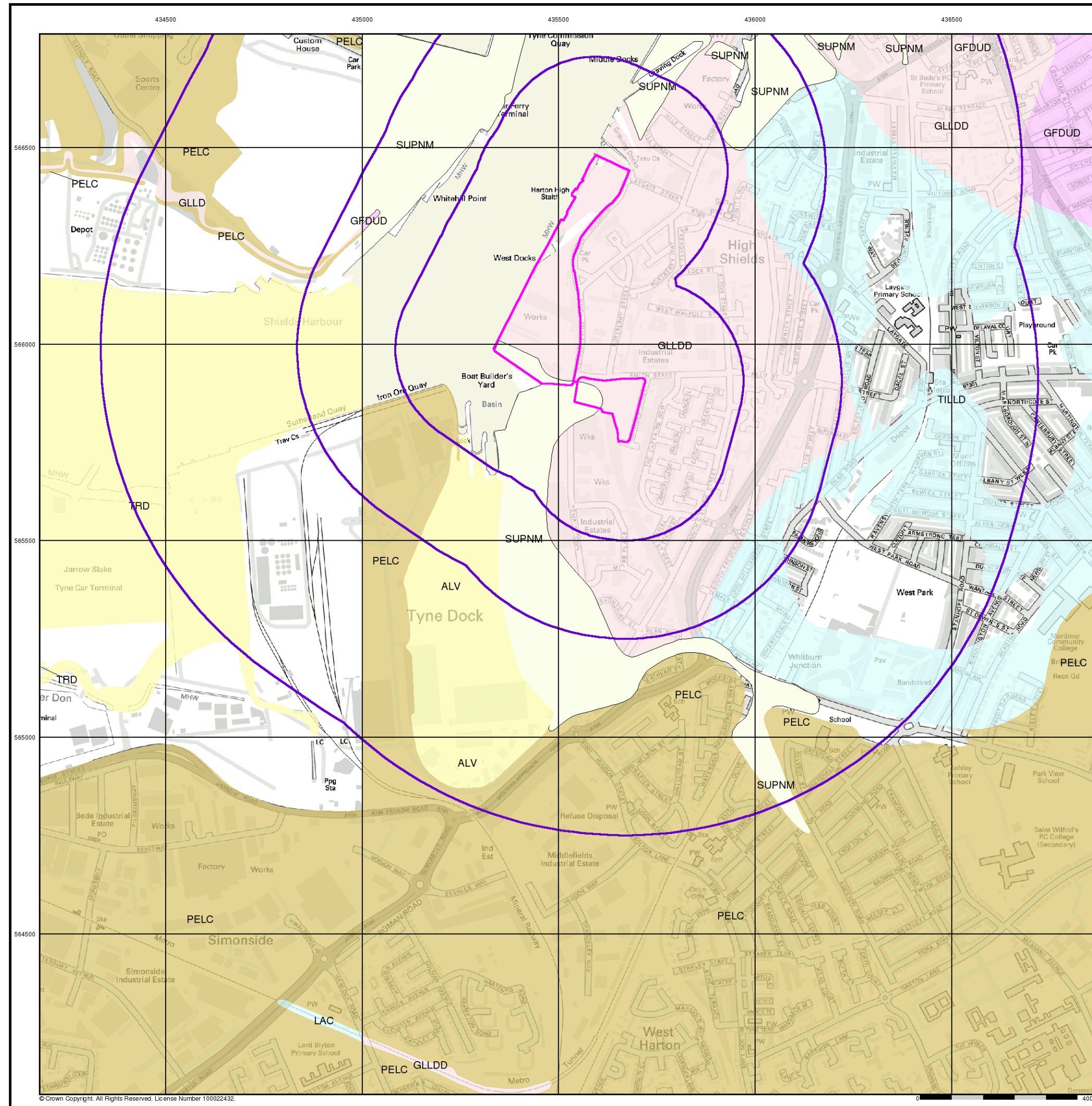
McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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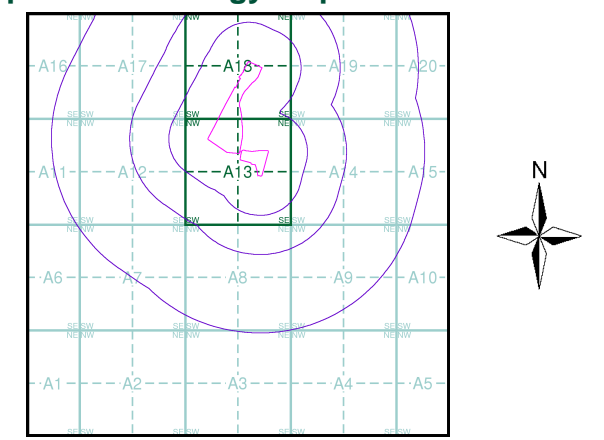
Superficial Geology

BGS 1:10,000 Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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Bedrock and Faults

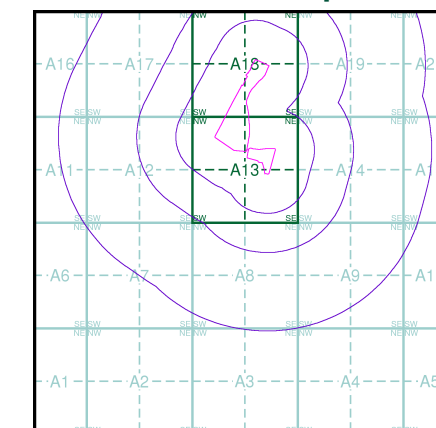
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults and thin beds mapped as lines such as coal seams and mineral veins. These are not restricted by age and could relate to features of any of the 1:10,000 geology datasets.

Bedrock and Faults Map - Slice A



Order Details

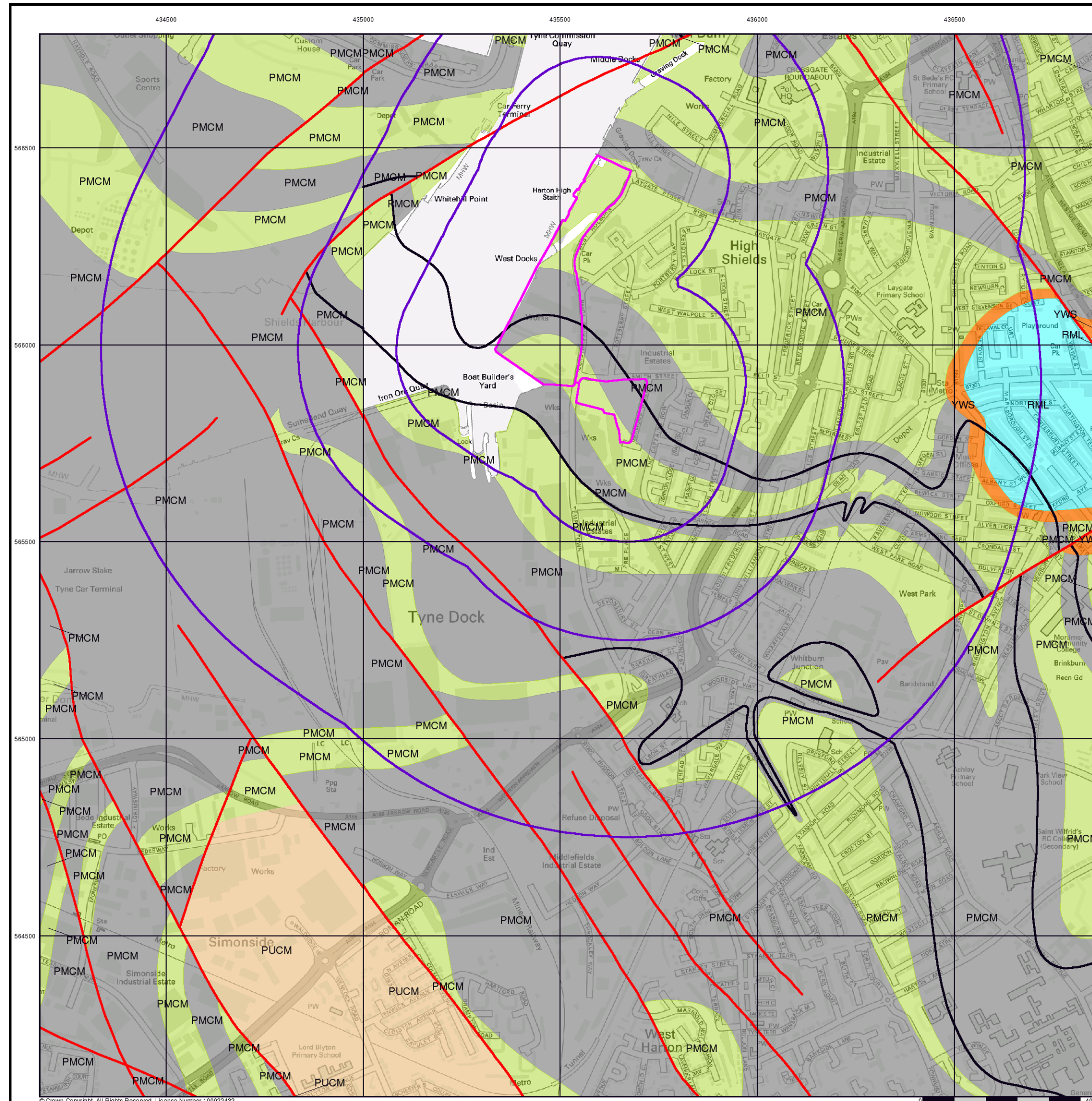
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Customer Ref:	16633
National Grid Reference:	435570, 565870
Slice:	A
Site Area (Ha):	8.87
Search Buffer (m):	1000

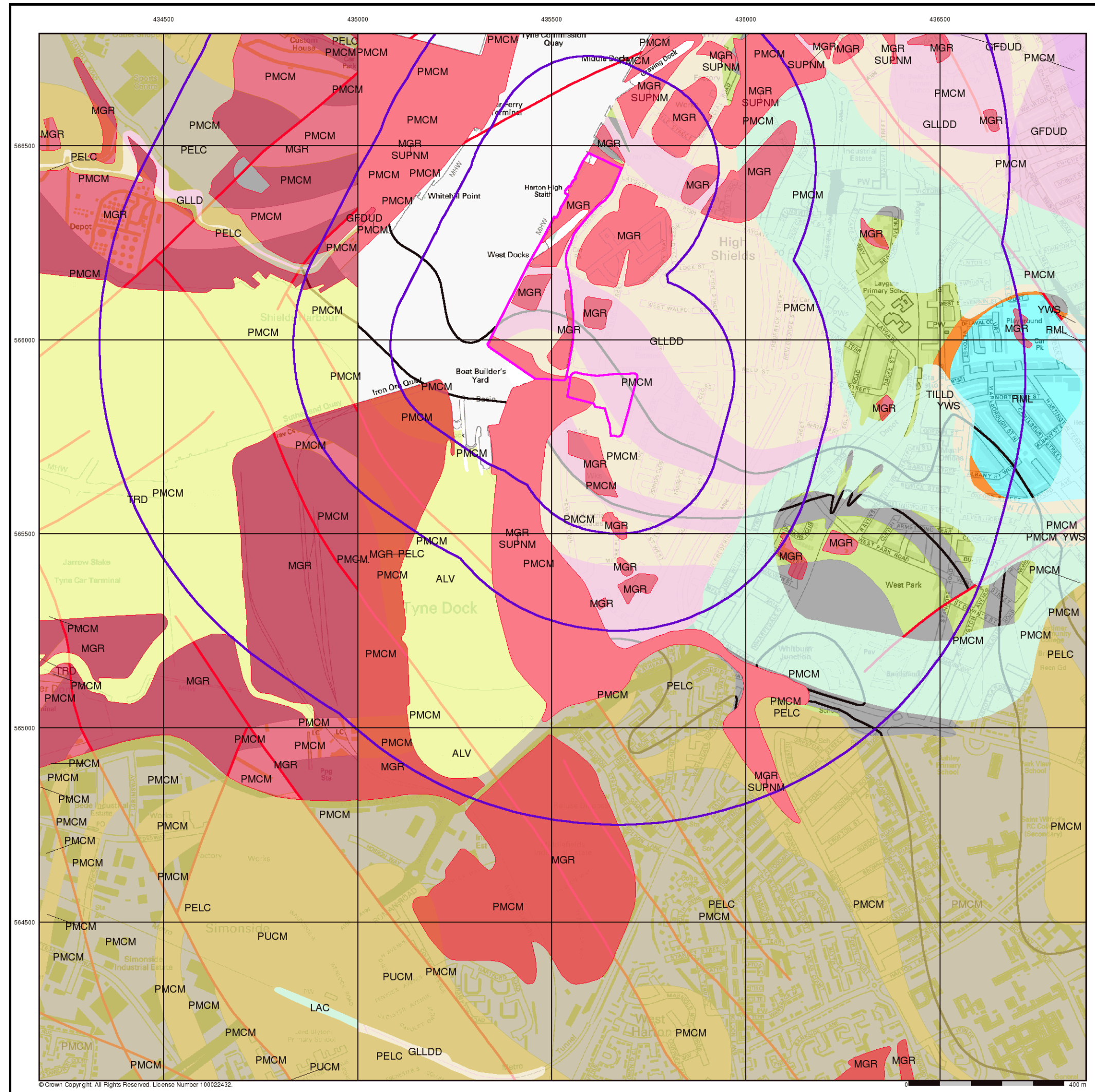
Site Details

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Fax:	0844 844 9951
Web:	www.envirocheck.co.uk





Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

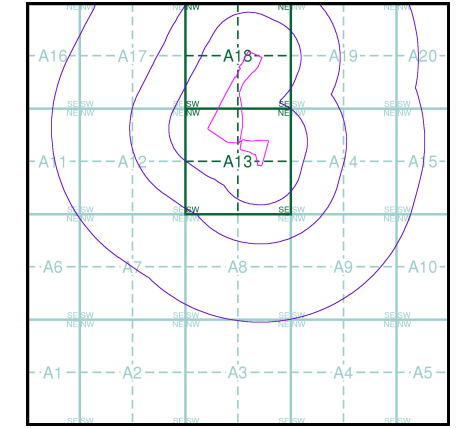
Additional Information

More information on 1:10,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
 Kingsley Dunham Centre
 Keyworth
 Nottingham
 NG12 5GG
 Telephone: 0115 936 3143
 Fax: 0115 936 3276
 email: enquiries@bgs.ac.uk
 website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

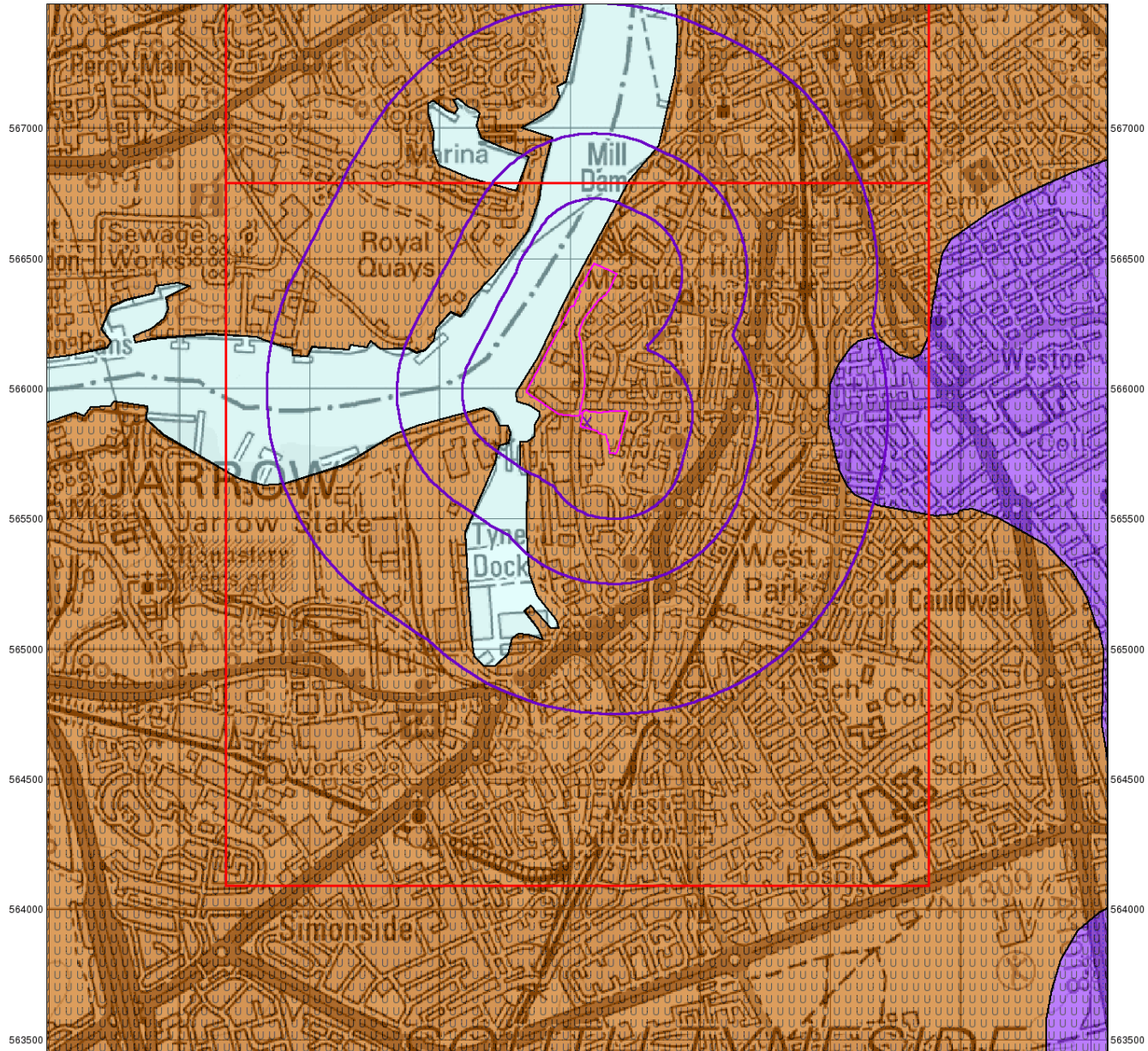
Site Details

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433500 434000 434500 435000 435500 436000 436500 437000 437500



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0 1 km



Groundwater Vulnerability

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

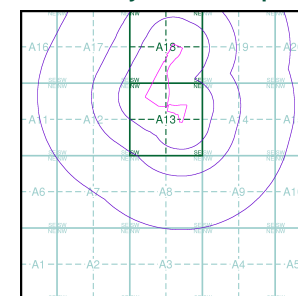
Agency and Hydrological

Geological Classes

- | | | |
|---|--|-----------------------|
| Major Aquifer (Highly Permeable) | | High (H) 1, 2, 3, U |
| | | Intermediate (I) 1, 2 |
| | | Low |
| Minor Aquifer (Variably Permeable) | | High (H) 1, 2, 3, U |
| | | Intermediate (I) 1, 2 |
| | | Low |
| Non Aquifer (Negligibly Permeable) | | |
| Water or Sea | | |
| Drift Deposit | | |

Soil Classes

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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0 1 km



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Bedrock Aquifer Designation

General

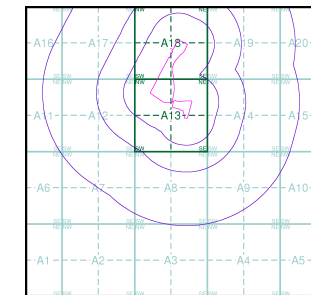
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

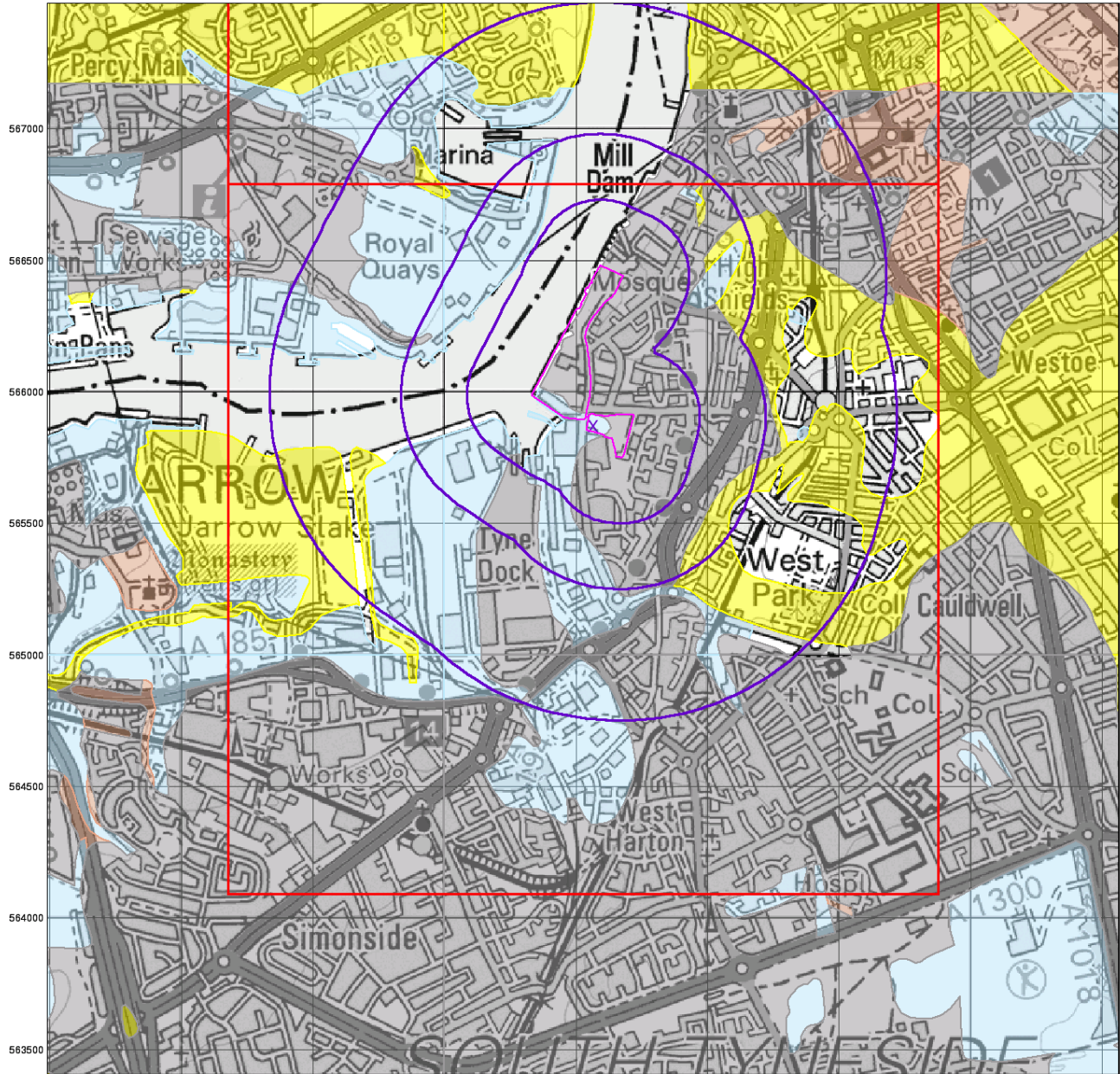
Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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433500 434000 434500 435000 435500 436000 436500 437000 437500



567000 566500 566000 565500 565000 564500 564000 563500

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0 1 km



Superficial Aquifer Designation

General

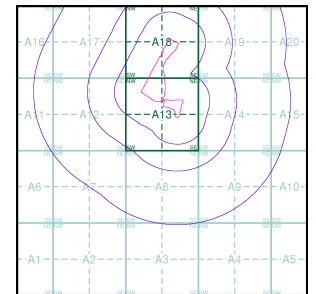
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
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Site Details

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433500 434000 434500 435000 435500 436000 436500 437000 437500



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Source Protection Zones

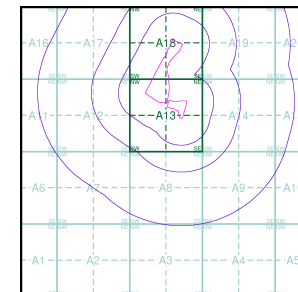
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

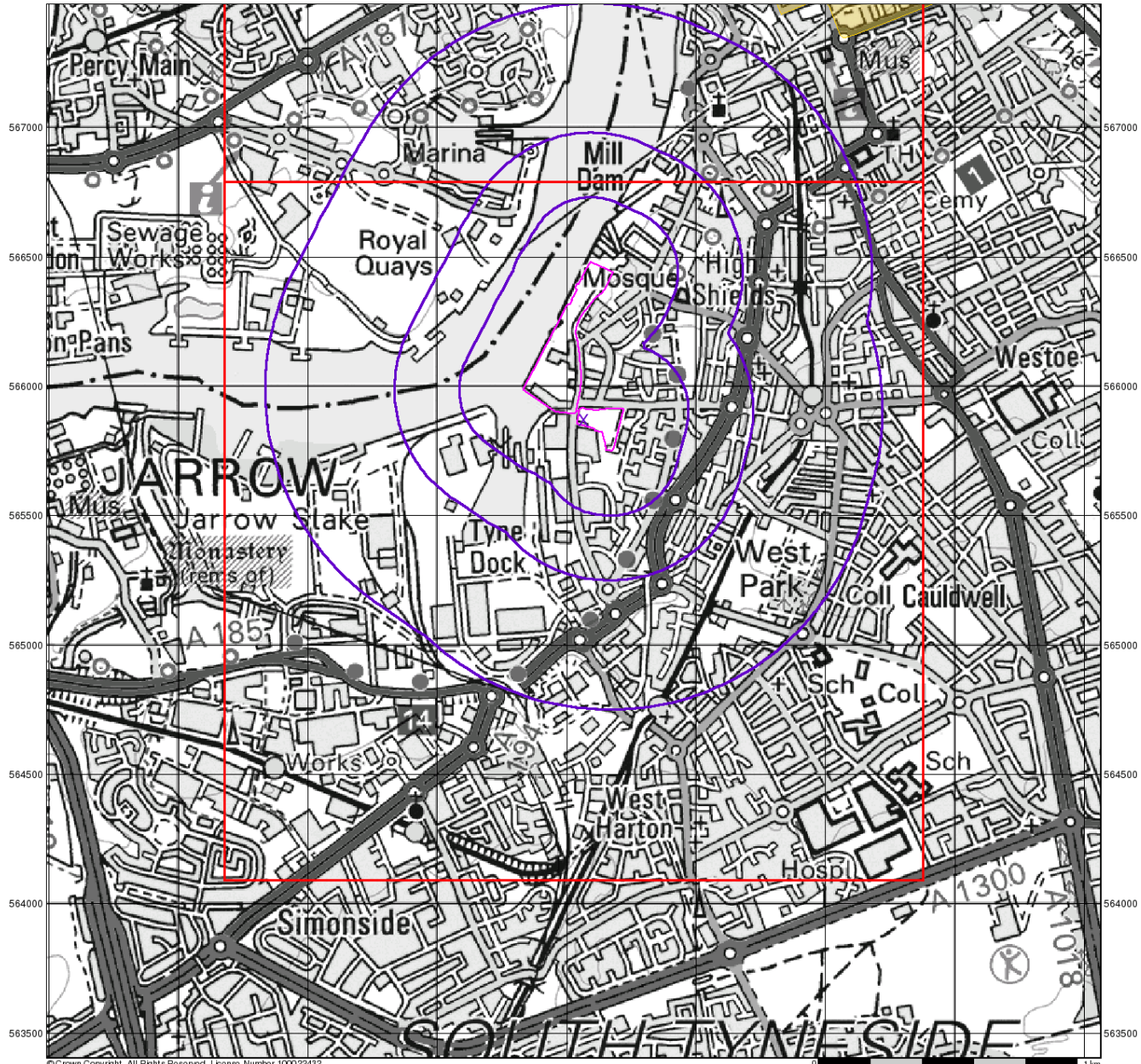
Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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Sensitive Land Uses

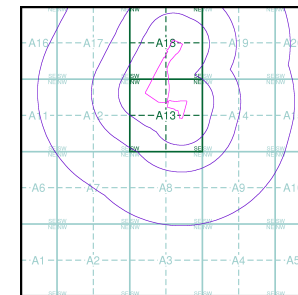
General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Slice
-  Map ID

Sensitive Land Uses

-  Ancient Woodland
-  Area of Adopted Green Belt
-  Area of Unadopted Green Belt
-  Area of Outstanding Natural Beauty
-  Environmentally Sensitive Area
-  Forest Park
-  Local Nature Reserve
-  Marine Nature Reserve
-  National Nature Reserve
-  National Park
-  Nitrate Sensitive Area
-  Nitrate Vulnerable Zone
-  Ramsar Site
-  Site of Special Scientific Interest
-  Special Area of Conservation
-  Special Protection Area
-  World Heritage Sites

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

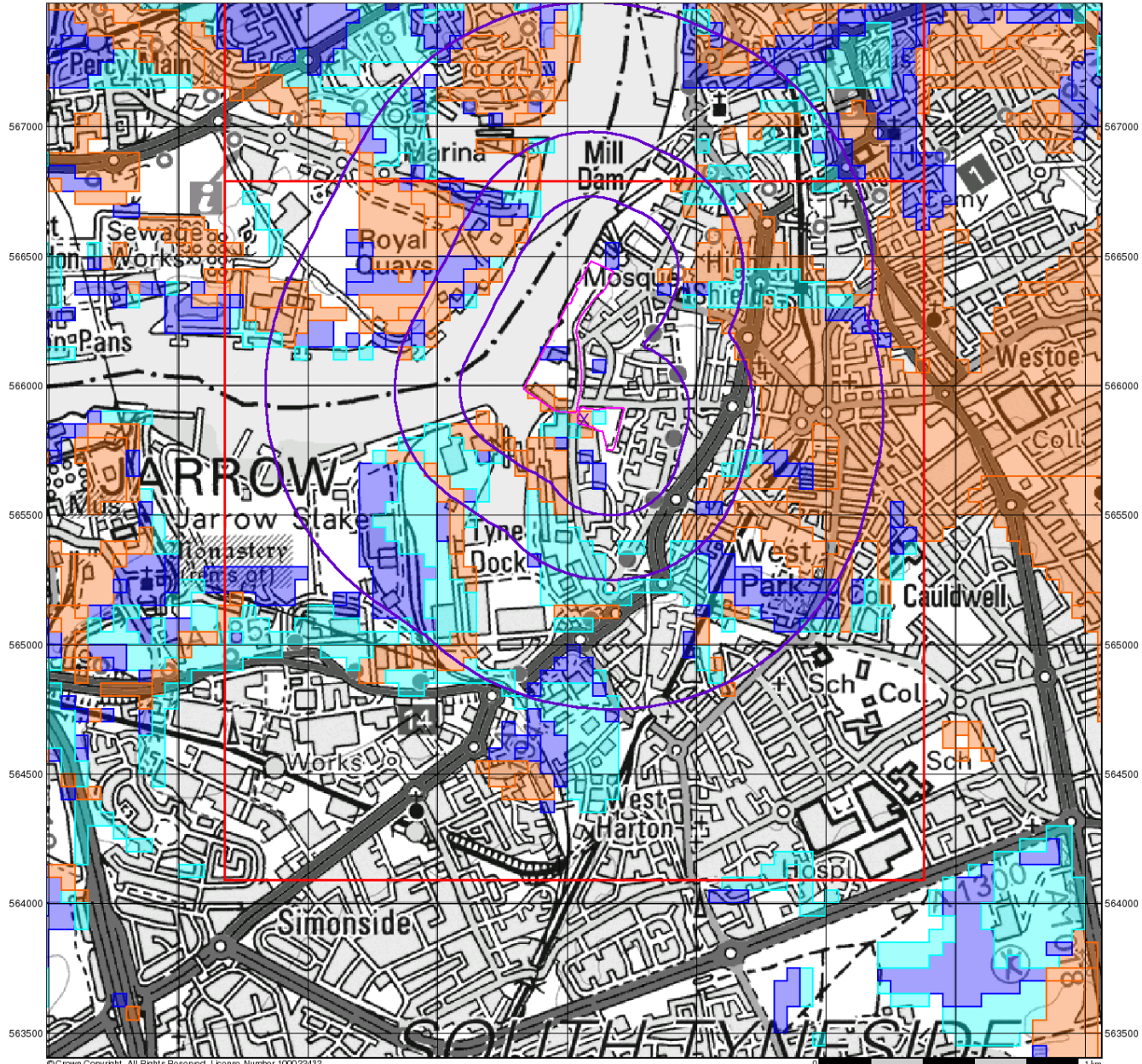
Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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433500 434000 434500 435000 435500 436000 436500 437000 437500



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BGS Flood GFS Data

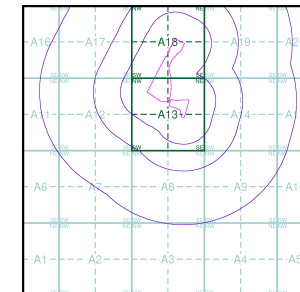
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

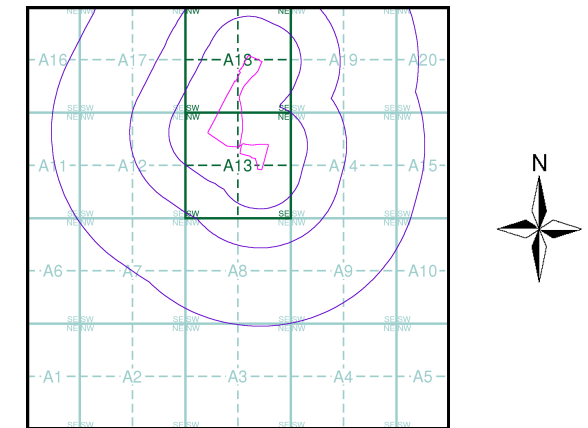
McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Waste**
- BGS Recorded Landfill Site (Location)
 - BGS Recorded Landfill Site
 - EA Historic Landfill (Buffered Point)
 - EA Historic Landfill (Polygon)
 - Integrated Pollution Control Registered Waste Site
 - Licensed Waste Management Facility (Landfill Boundary)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site
- Industrial Land Use**
- Contemporary Trade Directory Entry
 - Fuel Station Entry

Site Sensitivity Map - Slice A

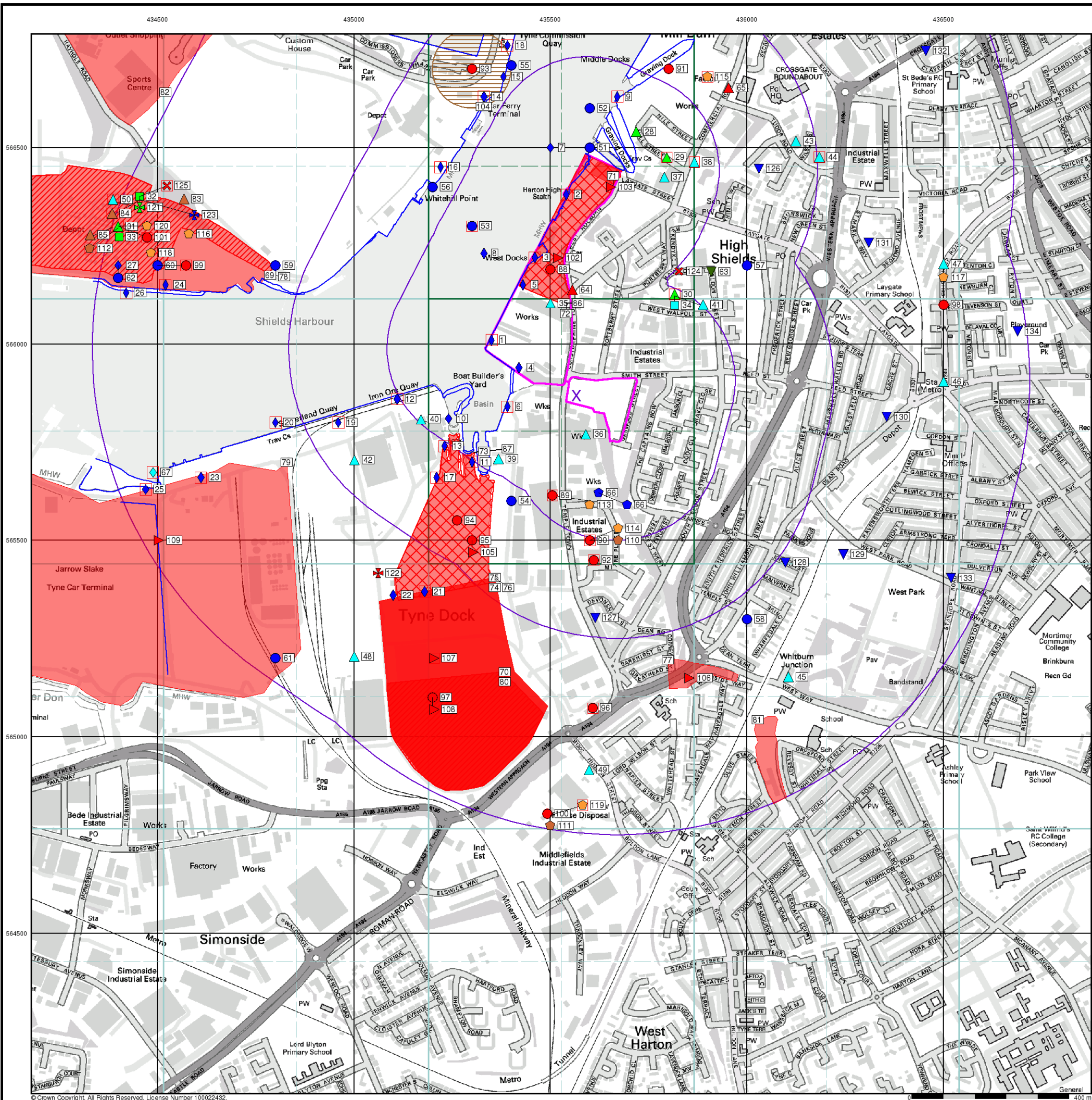


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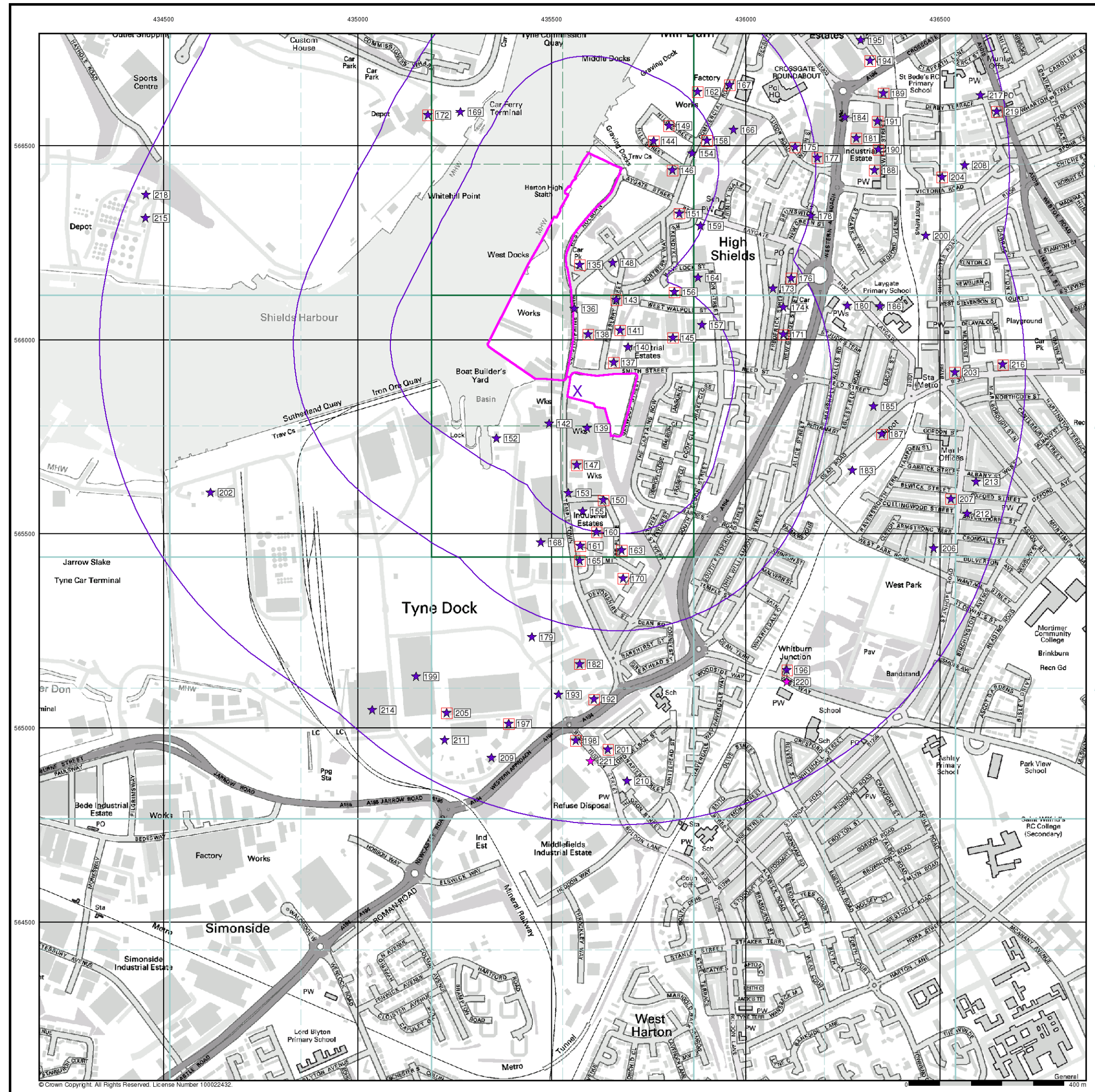
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 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



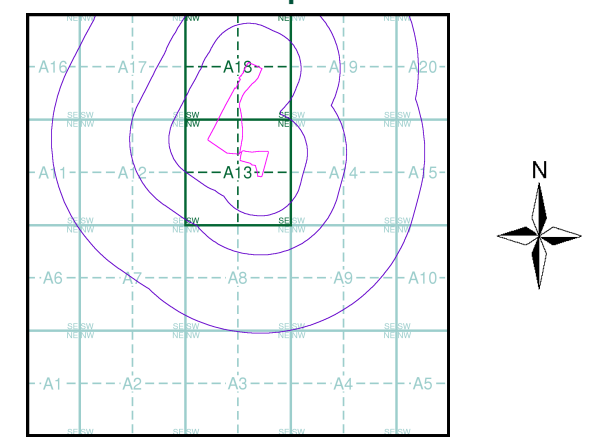
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Industrial Land Use Map

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Slice
 - Map ID
- Industrial Land Use**
- Contemporary Trade Directory Entry
 - Fuel Station Entry
 - Gas Pipeline
 - Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

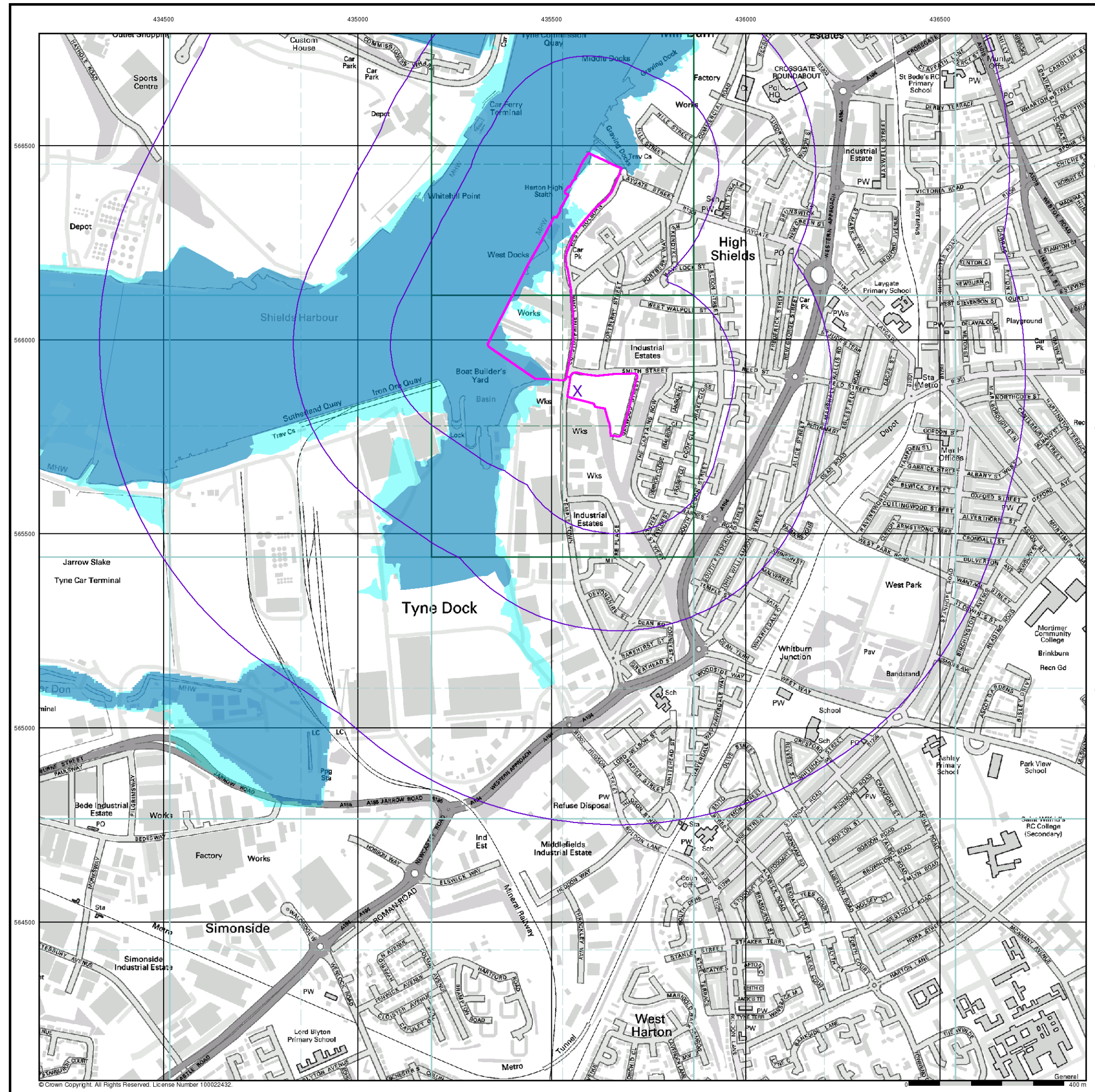
Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



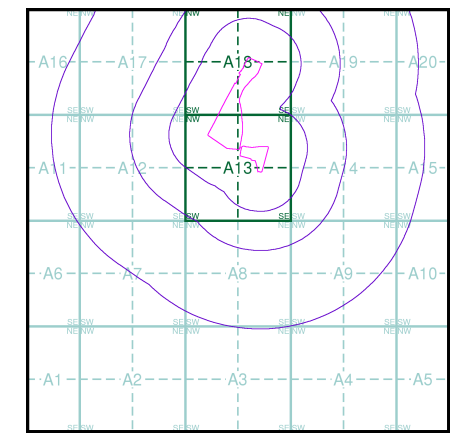
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 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



- General**
- ▭ Specified Site
 - Specified Buffer(s)
 - X Bearing Reference Point

- Agency and Hydrological (Flood)**
- ▭ Extreme Flooding from Rivers or Sea without Defences (Zone 2)
 - ▭ Flooding from Rivers or Sea without Defences (Zone 3)
 - Area Benefiting from Flood Defence
 - Flood Water Storage Areas
 - Flood Defence

Flood Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

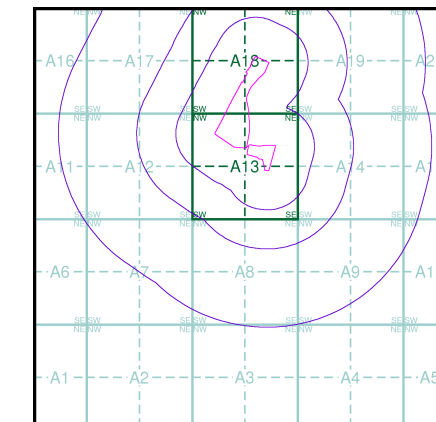
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

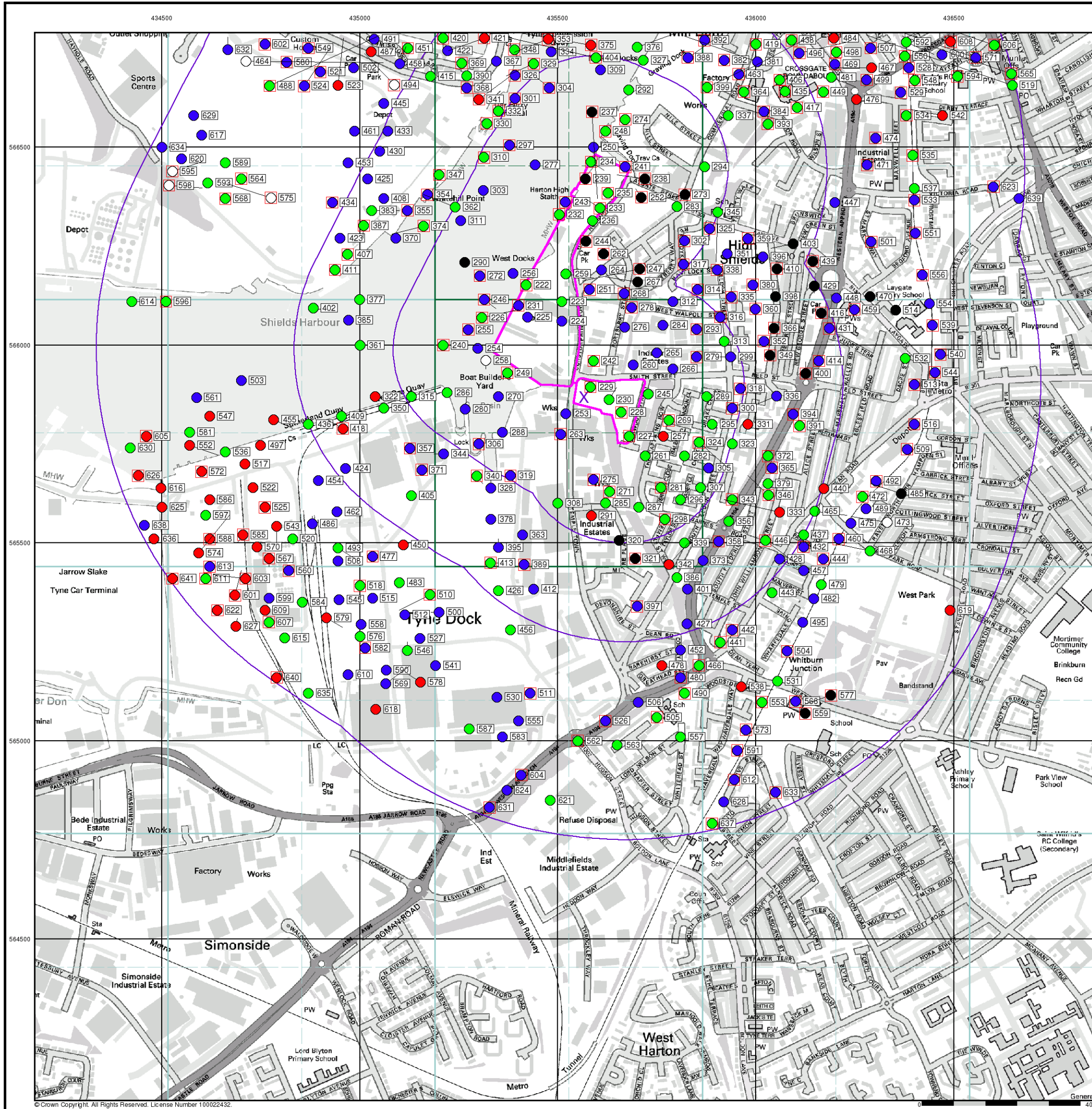
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 Customer Ref: 16633
 National Grid Reference: 435570, 565870
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 Site Area (Ha): 8.87
 Search Buffer (m): 1000

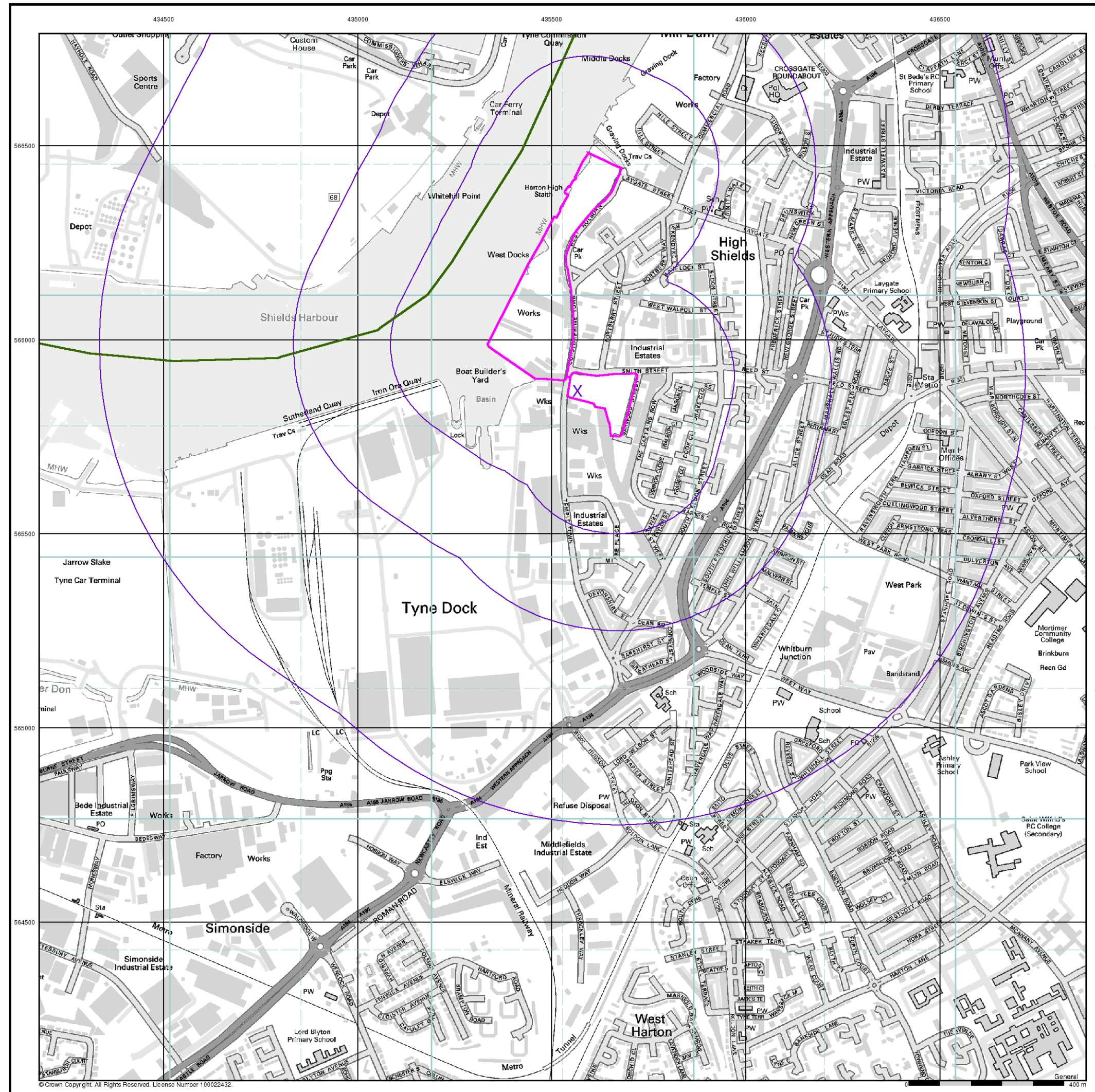
Site Details

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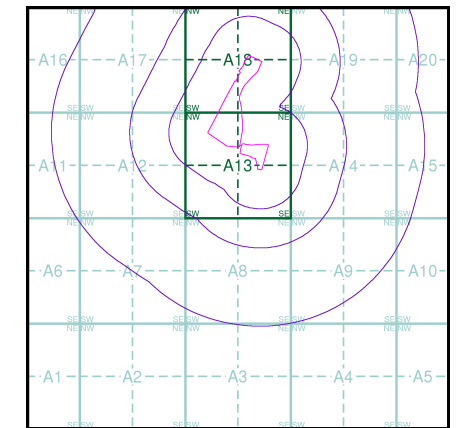
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Offline Drainage Feature
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature

EANRW Detailed River Network Map - Slice A



Order Details

Order Number: 92596393_1_1
 Customer Ref: 16633
 National Grid Reference: 435570, 565870
 Slice: A
 Site Area (Ha): 8.87
 Search Buffer (m): 1000

Site Details

McNulty's Yard, Corstorphine Town, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ



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 Web: www.envirocheck.co.uk

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

92596393_1_1

Customer Reference:

16633

National Grid Reference:

435570, 565870

Slice:

A

Site Area (Ha):

8.87

Search Buffer (m):

1000

Site Details:

McNulty's Yard
Corstorphine Town
SOUTH SHIELDS
Tyne and Wear
NE33 1RZ

Client Details:

Mrs N Watson
3e Consulting Engineers Ltd
1st Floor, Block C
Holland Park
Holland Drive
Newcastle upon Tyne
NE2 4LD

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	39
Hazardous Substances	61
Geological	62
Industrial Land Use	66
Sensitive Land Use	-
Data Currency	84
Data Suppliers	88
Useful Contacts	89

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v50.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 4	35	12	22	28
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls	pg 28		12		2
Integrated Pollution Prevention And Control	pg 30				2
Local Authority Integrated Pollution Prevention And Control	pg 31		1		
Local Authority Pollution Prevention and Controls	pg 31	1	7	2	10
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 34	Yes			
Pollution Incidents to Controlled Waters	pg 34		4	4	5
Prosecutions Relating to Authorised Processes	pg 36			1	
Registered Radioactive Substances	pg 36		1	1	
River Quality					
River Quality Biology Sampling Points					
Substantiated Pollution Incident Register	pg 37		1		
River Quality Chemistry Sampling Points					
Water Abstractions	pg 37				2
Water Industry Act Referrals					
Groundwater Vulnerability	pg 37	Yes	n/a	n/a	n/a
Drift Deposits	pg 37	1	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 37	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 38	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 38	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 38	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Detailed River Network Lines	pg 38		Yes		n/a
Detailed River Network Offline Drainage					n/a

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites	pg 39				2
Historical Landfill Sites	pg 39	2	1	3	6
Integrated Pollution Control Registered Waste Sites	pg 41				9
Licensed Waste Management Facilities (Landfill Boundaries)	pg 43	1	1		
Licensed Waste Management Facilities (Locations)	pg 43	1	2	8	15
Local Authority Landfill Coverage		1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Registered Landfill Sites	pg 50	2		2	5
Registered Waste Transfer Sites	pg 54			1	3
Registered Waste Treatment or Disposal Sites	pg 56		1	3	7
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 61				2
Explosive Sites	pg 61				1
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 61				1
Planning Hazardous Substance Consents	pg 61			1	2
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 62	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 62			2	7
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 63	Yes	n/a	n/a	n/a
Mining Instability	pg 63	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 63	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 63	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 64	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 64	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 65	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 66	1	69	47	79
Fuel Station Entries	pg 83				2
Gas Pipelines					
Underground Electrical Cables					
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	0	1	435650 566450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (E)	0	1	435600 565869
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (SW)	0	1	435550 565850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	0	1	435567 565869
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	0	1	435450 565900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	0	1	435500 565900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	0	1	435500 566100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	45	1	435600 566050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	53	1	435567 565750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	53	1	435600 565700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (SW)	67	1	435500 565800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (SW)	100	1	435450 565800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	159	1	435250 565850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	160	1	435200 565869
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (NE)	171	1	435850 566400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	172	1	435300 565800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	176	1	435850 566350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	185	1	435350 565750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (W)	241	1	435250 565750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18NW (N)	247	1	435350 566550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A18NW (N)	258	1	435400 566650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18NW (NW)	262	1	435300 566500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	266	1	435250 566400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	270	1	435200 565750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SW (NE)	271	1	435950 566400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SW (NE)	274	1	435950 566350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	285	1	435200 566350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A19SW (NE)	286	1	435950 566300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (SW)	287	1	435400 565600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A18SW (NW)	289	1	435250 566450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18NW (N)	298	1	435350 566650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (SW)	299	1	435200 565700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A17SE (NW)	307	1	435150 566300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	310	1	435200 566400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	329	1	435150 566350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18NW (N)	332	1	435400 566750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	333	1	435200 566450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19NW (NE)	342	1	435950 566650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (S)	352	1	435700 565400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	352	1	435100 566300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (SE)	356	1	436000 565600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12NE (W)	362	1	435000 565850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SE (NW)	372	1	435000 566150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A19SW (NE)	373	1	436050 566300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SE (NW)	373	1	435050 566250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SE (NW)	374	1	435100 566350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A19NW (NE)	375	1	435950 566700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	377	1	435100 566400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19NW (N)	380	1	435900 566750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	380	1	436000 565550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SE (NW)	395	1	435000 566200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18NW (NW)	399	1	435200 566600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12NE (W)	401	1	434950 566100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	418	1	434950 566150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	420	1	436100 565700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SW (NE)	421	1	436100 566400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	422	1	435150 565600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	423	1	436050 565550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	439	1	434950 566200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	440	1	435100 565600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	440	1	435000 565700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	444	1	435450 566900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	449	1	434900 566100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19NW (NE)	450	1	436100 566600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	452	1	434950 565750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SE (NW)	462	1	434950 566250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (SW)	463	1	435150 565550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	464	1	434900 566150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SW (NE)	471	1	436150 566450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (W)	474	1	435000 565650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	475	1	435400 565350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9NW (SE)	478	1	436000 565400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	481	1	436000 566800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SE (NW)	484	1	434900 566200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	486	1	435000 566400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17NE (NW)	486	1	435100 566600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	486	1	435350 566900
1	Discharge Consents Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1652 Permit Version: 2 Effective Date: 31st March 2010 Issued Date: 31st March 2010 Revocation Date: 2nd December 2010 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	0	2	435345 566008
1	Discharge Consents Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1652 Permit Version: 2 Effective Date: 31st March 2010 Issued Date: 31st March 2010 Revocation Date: 2nd December 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	0	2	435345 566008

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1652 Permit Version: 3 Effective Date: 3rd December 2010 Issued Date: 31st March 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (NW)	0	2	435345 566008
1	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1652 Permit Version: 3 Effective Date: 3rd December 2010 Issued Date: 31st March 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (NW)	0	2	435345 566008
1	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Smith St/Corstorphine Rd Cso, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1984 Permit Version: 1 Effective Date: 28th February 2005 Issued Date: 28th February 2005 Revocation Date: 21st September 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A13NW (NW)	0	2	435350 566010
1	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Smith Street/Corstorphine Road Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1651 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th February 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A13NW (NW)	0	2	435350 566010

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street Cso, Junction Of Eldon St & Reed St, South Shields, Tyne & Wear, Ne33 5ax Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1944 Permit Version: 2 Effective Date: 1st April 2010 Issued Date: 29th March 2010 Revocation Date: 1st December 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435548 566381
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street Cso, Junction Of Eldon St & Reed St, South Shields, Tyne & Wear, Ne33 5ax Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1944 Permit Version: 3 Effective Date: 2nd December 2010 Issued Date: 29th March 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435548 566381
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Temple Street Cso Opposite Junction Of, Temple St West & South Eldon St, South Shields, Tyne & Wear, Ne33 5al Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1943 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 2nd December 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Corstorphine Town Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1941 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 21st September 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street Cso, Junction Of Eldon St & Reed St, South Shields, Tyne & Wear, Ne33 5ax Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1944 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 31st March 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Mitre Place Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1940 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Smith Street Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1942 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 21st September 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Temple Street Cso Opposite Junction Of, Temple St West & South Eldon St, South Shields, Tyne & Wear, Ne33 5al Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1943 Permit Version: 2 Effective Date: 3rd December 2010 Issued Date: 28th January 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1652 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 30th March 2010 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Corstorphine Town Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1649 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Mitre Place Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1650 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Smith Street Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1648 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Trade (Unknown/Other) Location: Harton High Staithes Sewer, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1176 Permit Version: 1 Effective Date: 29th October 1992 Issued Date: 29th October 1992 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street Cso, Junction Of Eldon St & Reed St, South Shields, Tyne & Wear, Ne33 5ax Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1175 Permit Version: 1 Effective Date: 2nd September 1992 Issued Date: 2nd September 1992 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Temple Street Cso Opposite Junction Of, Temple St West & South Eldon St, South Shields, Tyne & Wear, Ne33 5al Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1177 Permit Version: 1 Effective Date: 2nd September 1992 Issued Date: 2nd September 1992 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street/Reed Street Sso, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0024 Permit Version: 1 Effective Date: 18th February 1987 Issued Date: 18th February 1987 Revocation Date: 2nd September 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Temple Street, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0025 Permit Version: 1 Effective Date: 18th February 1987 Issued Date: 18th February 1987 Revocation Date: 2nd September 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
2	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Harton High Staithes Sewer, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0040 Permit Version: 1 Effective Date: 11th February 1987 Issued Date: 11th February 1987 Revocation Date: 29th October 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	0	2	435540 566380
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn South Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1945 Permit Version: 2 Effective Date: 1st April 2010 Issued Date: 29th March 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	0	2	435466 566216
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn North Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1946 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 19th March 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	0	2	435470 566220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn South Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1945 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 31st March 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	0	2	435470 566220
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: West Holborn Pumping Station, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1655 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	0	2	435470 566220
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn North Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1653 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	0	2	435470 566220
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn South Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1654 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	0	2	435470 566220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Others Location: Weetman Street Sewer, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1178 Permit Version: 1 Effective Date: 29th October 1992 Issued Date: 29th October 1992 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A18SW (N)	0	2	435460 566220
3	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Mcnulty Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/0550 Permit Version: 1 Effective Date: 14th January 1988 Issued Date: 14th January 1988 Revocation Date: 25th December 1991 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	0	2	435500 566200
3	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Weetman Street Outfall L - B12, South Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0084 Permit Version: 1 Effective Date: 28th April 1987 Issued Date: 28th April 1987 Revocation Date: 29th October 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	0	2	435470 566220
4	<p>Discharge Consents</p> <p>Operator: Mcnulty Offshore Services Limited Property Type: Sewage Disposal Works - Other Location: Mcnulty Marine Services, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/0554 Permit Version: 1 Effective Date: 14th January 1988 Issued Date: 14th January 1988 Revocation Date: 24th July 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A13NW (NW)	0	2	435420 565940

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Discharge Consents</p> <p>Operator: Mcnulty Offshore Services Limited Property Type: Sewage Disposal Works - Other Location: Mcnulty Marine Services, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/0528 Permit Version: 1 Effective Date: 14th January 1988 Issued Date: 14th January 1988 Revocation Date: 24th July 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A18SW (NW)	0	2	435430 566150
6	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 18, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1811 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (W)	88	2	435390 565840
6	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 18, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1080 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 22nd May 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A13NW (W)	88	2	435390 565840
6	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 18, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0314 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A13NW (W)	88	2	435390 565840

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Whitehill Point Care Ferry Terminal, Albert Edward Dock, North Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/B/0041 Permit Version: 1 Effective Date: 16th July 1965 Issued Date: 16th July 1965 Revocation Date: 25th December 1965 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	90	2	435500 566500
8	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Outfall No 14a, Ro-Ro Berth No 3, W, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0310 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 4th June 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	115	2	435330 566230
9	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: East Holborn Pumping Station, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1646 Permit Version: 1 Effective Date: 7th August 1998 Issued Date: 7th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18NE (N)	158	2	435670 566620
9	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: East Holborn East Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1645 Permit Version: 1 Effective Date: 7th August 1998 Issued Date: 7th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18NE (N)	158	2	435670 566620

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: East Holborn West Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1644 Permit Version: 1 Effective Date: 7th August 1998 Issued Date: 7th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18NE (N)	158	2	435670 566620
9	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewage Disposal Works - Water Company Location: East Holborn Septic Tank, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1647 Permit Version: 1 Effective Date: 7th August 1998 Issued Date: 7th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18NE (N)	158	2	435670 566620
9	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Trade (Unknown/Other) Location: Harton Low Staithes (Middle Dock) S, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1174 Permit Version: 1 Effective Date: 29th October 1992 Issued Date: 29th October 1992 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A18NE (N)	167	2	435670 566630
9	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Harton Low Staithes (Middle Dock) S, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0083 Permit Version: 1 Effective Date: 28th April 1987 Issued Date: 28th April 1987 Revocation Date: 29th October 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18NE (N)	167	2	435670 566630

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Vehicle Washing Location: Riverside Quay Vehicle Wash, Tyne Dock, South Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1780 Permit Version: 1 Effective Date: 7th August 2000 Issued Date: 7th August 2000 Revocation Date: Not Supplied Discharge Type: Trade Discharge - Process Water Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (W)	198	2	435240 565810
11	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Coal Extraction, Surface Location: Coal Handling Plant, Tyne Dock, Jarrow Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/B/0304 Permit Version: 1 Effective Date: 3rd January 1984 Issued Date: 3rd January 1984 Revocation Date: 4th November 1998 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A13SW (SW)	254	2	435300 565700
11	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Coal Extraction, Surface Location: Coal Handling Plant, Tyne Dock, Jarrow Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/B/0303 Permit Version: 1 Effective Date: 3rd January 1984 Issued Date: 3rd January 1984 Revocation Date: 22nd May 2001 Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	254	2	435300 565700
11	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Not Given Location: Coal Handling Plant, Tyne Dock, JARROW Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/B/0303/2685 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 3rd January 1984 Revocation Date: Not Supplied Discharge Type: Septic tank Discharge: Tidal Waters Environment: Receiving Water: Tyne Status: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	258	2	435300 565695

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 20a, Riverside Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1069 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 22nd May 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A12NE (W)	258	2	435110 565860
12	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Outfall No 20a, Riverside Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0317 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	258	2	435110 565860
12	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 20a, Riverside Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1816 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	272	2	435100 565850
13	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 9, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1068 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A13SW (W)	261	2	435230 565740

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Outfall No 9, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0315 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A13SW (W)	261	2	435230 565740
14	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 15, Ro-Ro Berth No 3, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1809 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	292	2	435330 566610
14	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 14, Ro-Ro Berth No 3, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1078 Permit Version: 1 Effective Date: 4th June 1991 Issued Date: 4th June 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	295	2	435340 566630
14	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 15, Ro-Ro Berth No 3, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1079 Permit Version: 1 Effective Date: 4th June 1991 Issued Date: 4th June 1991 Revocation Date: 22nd May 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	298	2	435330 566620

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 15, Ro-Ro Berth No 3, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0311 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 4th June 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	298	2	435330 566620
14	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 14a, Ro-Ro Berth No 3, W, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1065 Permit Version: 1 Effective Date: 4th June 1991 Issued Date: 4th June 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	303	2	435330 566630
15	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Whitehill Point Pumping Station, Royal Quays, Newcastle Upon Tyne Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1622 Permit Version: 1 Effective Date: 4th March 1998 Issued Date: 4th March 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	293	2	435380 566680
16	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 16, Ro-Ro Berth No 4, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1808 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	316	2	435220 566450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 16, Ro-Ro Berth No 4, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1066 Permit Version: 1 Effective Date: 4th June 1991 Issued Date: 4th June 1991 Revocation Date: 22nd May 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A18SW (NW)	316	2	435220 566450
17	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: North West Quay, A Portable Office, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1815 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A13SW (SW)	338	2	435210 565660
17	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: North West Quay, A Portable Office, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1007 Permit Version: 1 Effective Date: 22nd May 1989 Issued Date: 22nd May 1989 Revocation Date: 22nd May 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	338	2	435210 565660
18	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 4, Tyne Commission Quay, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1074 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	346	2	435390 566760

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 4, Tyne Commission Quay, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0299 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	346	2	435390 566760
19	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 20, Riverside Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1081 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 5th December 1996 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12NE (W)	419	2	434960 565800
19	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 20, Riverside Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0316 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	419	2	434960 565800
20	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: John Herring (Timber) Ltd, Sutherland Quay, Tyne Dock Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/B/0128 Permit Version: 1 Effective Date: 23rd January 1970 Issued Date: 23rd January 1970 Revocation Date: 16th January 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Don Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	567	2	434800 565800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 21, Riverside Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1817 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	585	2	434800 565750
20	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 21, Riverside Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1070 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 7th September 2015 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	585	2	434800 565750
20	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Outfall No 21, Riverside Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0318 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	585	2	434800 565750
21	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Tyne Dock Transit Sheds Septic Tank, Tyne Dock, South Shields, Tyne & Wear Authority: Environment Agency, North East Region Catchment Area: Not Given Reference: 235/1593 Permit Version: 1 Effective Date: 23rd September 1996 Issued Date: 23rd September 1996 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	599	2	435180 565370

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Port Of Tyne Authority, Tyne Dock, South Shields Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1515 Permit Version: 1 Effective Date: 30th August 1995 Issued Date: 30th August 1995 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	599	2	435180 565370
21	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Undefined Or Other Location: Transit Sheds 5 And 6, SOUTH SHIELDS Authority: Environment Agency, North East Region Catchment Area: Not Given Reference: 235/1593 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Unknown Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A7NE (SW)	603	2	435180 565365
22	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Tyne Logistics Co Ltd, Tyne Dock, South Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1818 Permit Version: 1 Effective Date: 8th August 2001 Issued Date: 8th August 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	648	2	435100 565360
23	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Coal Extraction, Surface Location: Coal Handling Plant, Tyne Dock, Jarrow Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1806 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	782	2	434620 565670

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Coal Handling Plant Septic Tank, Tyne Dock, Jarrow Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1677 Permit Version: 1 Effective Date: 4th November 1998 Issued Date: 4th November 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	795	2	434610 565660
23	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 22, Tyne Coal Terminal, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1071 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	795	2	434610 565660
23	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Outfall No 22, Tyne Coal Terminal, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0319 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	795	2	434610 565660
24	<p>Discharge Consents</p> <p>Operator: Biolytic Systems Ltd Property Type: Sewage Disposal Works - Other Location: River Tyne Liquid Treatment Works Northumberland Dock, Hayhole Road, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1516 Permit Version: 1 Effective Date: 28th November 1995 Issued Date: 28th November 1995 Revocation Date: 30th April 1998 Discharge Type: Trade Discharge - Process Water Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	823	2	434520 566100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	<p>Discharge Consents</p> <p>Operator: Mr A S Cooper Property Type: Trade (Unknown/Other) Location: River Tyne Treatment Plant, Hayhole Road, North Shields, Tyne & Wear, Ne29 6dy</p> <p>Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1635 Permit Version: 3 Effective Date: 1st April 2001 Issued Date: 30th April 1998 Revocation Date: 31st August 2001 Discharge Type: Trade Discharge - Process Water Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17SW (W)	831	2	434520 566150
24	<p>Discharge Consents</p> <p>Operator: Mr A S Cooper Property Type: Trade (Unknown/Other) Location: River Tyne Treatment Plant, Hayhole Road, North Shields, Tyne & Wear, Ne29 6dy</p> <p>Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1635 Permit Version: 4 Effective Date: 1st September 2001 Issued Date: 30th April 1998 Revocation Date: 26th May 2004 Discharge Type: Trade Discharge - Process Water Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A17SW (W)	831	2	434520 566150
24	<p>Discharge Consents</p> <p>Operator: Mr A S Cooper Property Type: Trade (Unknown/Other) Location: River Tyne Treatment Plant, Hayhole Road, North Shields, Tyne & Wear, Ne29 6dy</p> <p>Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1635 Permit Version: 2 Effective Date: 18th January 1999 Issued Date: 30th April 1998 Revocation Date: 31st March 2001 Discharge Type: Trade Discharge - Process Water Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17SW (W)	831	2	434520 566150
24	<p>Discharge Consents</p> <p>Operator: Biolytic Systems Ltd Property Type: Trade (Unknown/Other) Location: River Tyne Treatment Plant, Hayhole Road, North Shields, Tyne & Wear, Ne29 6dy</p> <p>Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1635 Permit Version: 1 Effective Date: 30th April 1998 Issued Date: 30th April 1998 Revocation Date: 17th January 1999 Discharge Type: Trade Discharge - Process Water Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17SW (W)	831	2	434520 566150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	<p>Discharge Consents</p> <p>Operator: Biolytic Systems Ltd Property Type: Sewage Disposal Works - Other Location: River Tyne Liquid Treatment Works, Hayhole Road, North Shields Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1517 Permit Version: 1 Effective Date: 6th November 1995 Issued Date: 6th November 1995 Revocation Date: 26th May 2004 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A17SW (W)	831	2	434520 566150
25	<p>Discharge Consents</p> <p>Operator: PORT OF TYNE AUTHORITY Property Type: Trade (Unknown/Other) Location: Jarrow Slake Storage Area, Tyne Dock, South Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1699 Permit Version: 1 Effective Date: 29th June 1999 Issued Date: 29th June 1999 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A11SE (W)	917	2	434490 565630
25	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Tyne Car Terminal, Tyne Dock, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1501 Permit Version: 1 Effective Date: 18th January 1995 Issued Date: 18th January 1995 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: River Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A11SE (W)	936	2	434470 565630
25	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 1 Tyne Car Terminal, Jarrow Slake, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1812 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A11SE (W)	960	2	434440 565640

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	<p>Discharge Consents</p> <p>Operator: Director Of Port Services Property Type: Sewage Disposal Works - Other Location: Outfall No 1 Tyne Car Terminal, Jarrow Slake, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1418 Permit Version: 1 Effective Date: 26th October 1993 Issued Date: 26th October 1993 Revocation Date: 22nd May 2001 Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A11SE (W)	960	2	434440 565640
26	<p>Discharge Consents</p> <p>Operator: Simon Storage Tyne Terminal Property Type: Trade (Unknown/Other) Location: Velva Liquids, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1125 Permit Version: 1 Effective Date: 4th November 1992 Issued Date: 4th November 1992 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A16SE (W)	926	2	434420 566130
26	<p>Discharge Consents</p> <p>Operator: Mr P Cullen Property Type: Trade (Unknown/Other) Location: Velva Liquids, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1125 Permit Version: 2 Effective Date: 1st September 1992 Issued Date: 1st September 1992 Revocation Date: 3rd November 1992 Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A16SE (W)	926	2	434420 566130
26	<p>Discharge Consents</p> <p>Operator: Solvent Resource Management Ltd Property Type: Trade (Unknown/Other) Location: Chemical Manufacture & Refining Ltd, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1046 Permit Version: 2 Effective Date: 15th May 1992 Issued Date: 15th May 1992 Revocation Date: 30th June 1993 Discharge Type: Trade Discharge - Process Water Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A16SE (W)	928	2	434420 566140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	<p>Discharge Consents</p> <p>Operator: Solvent Resource Management Ltd Property Type: Trade (Unknown/Other) Location: Chemical Manufacture & Refining Ltd, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1046 Permit Version: 1 Effective Date: 13th February 1991 Issued Date: 13th February 1991 Revocation Date: 15th May 1992 Discharge Type: Trade Discharge - Process Water Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A16SE (W)	928	2	434420 566140
26	<p>Discharge Consents</p> <p>Operator: Solvent Resource Management Ltd Property Type: Trade (Unknown/Other) Location: Chemical Manufacture & Refining Ltd, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1046 Permit Version: 1 Effective Date: 13th February 1991 Issued Date: 13th February 1991 Revocation Date: 15th May 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A16SE (W)	928	2	434420 566140
27	<p>Discharge Consents</p> <p>Operator: Simon Storage Tyne Terminal Property Type: Trade (Unknown/Other) Location: Velva Liquids Limited, Northumberland Dock, North Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/B/0201 Permit Version: 1 Effective Date: 21st August 1975 Issued Date: 21st August 1975 Revocation Date: 1st September 1992 Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A16SE (W)	959	2	434400 566200
28	<p>Integrated Pollution Controls</p> <p>Name: Tyne Dock Engineering Ltd Location: PO Box 7, Hill Street, SOUTH SHIELDS, Tyne and Wear, NE33 1RN Authority: Environment Agency, North East Region Permit Reference: BF5926 Dated: 1st March 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 6.5 A (A) Coating processes and Printing within Miscellaneous Industries Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the road within the address or location</p>	A18NE (N)	103	2	435718 566536
29	<p>Integrated Pollution Controls</p> <p>Name: Tyne Dock Engineering Ltd Location: P O Box 7, Hill Street, SOUTH SHIELDS, Tyne And Wear, NE33 1RN Authority: Environment Agency, North East Region Permit Reference: AU6889 Dated: 11th September 1996 Process Type: IPC new application Description: 6.5 A (A) Coating processes and Printing within Miscellaneous Industries Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned to the road within the address or location</p>	A18NE (N)	119	2	435796 566466

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	<p>Integrated Pollution Controls</p> <p>Name: Tyne Dock Engineering Ltd Location: Po Box 7 Hill Street, SOUTH SHIELDS, Tyne And Wear, NE33 1RN Authority: Environment Agency, North East Region Permit Reference: BD4295 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 6.5 A (A) Coating processes and Printing within Miscellaneous Industries Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned to the road within the address or location</p>	A18NE (N)	120	2	435796 566471
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: AK3048 Dated: 5th November 1993 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	228	2	435816 566117
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: A18285 Dated: 11th August 1993 Process Type: IPC new application Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	230	2	435821 566117
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne and Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: Bu0621 Dated: 5th March 2003 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation revokedRevoked Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	232	2	435816 566122
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne and Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: B11703 Dated: 23rd November 2001 Process Type: IPC major (substantial) variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	232	2	435816 566122
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, South Shields, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: Bj9363 Dated: 20th December 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	232	2	435816 566122
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: AR1914 Dated: 17th May 1995 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	232	2	435816 566122

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: AV8178 Dated: 30th August 1996 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	234	2	435821 566122
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: BD6166 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	237	2	435816 566127
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: BB9687 Dated: 21st December 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	239	2	435821 566127
31	<p>Integrated Pollution Controls</p> <p>Name: Velva Liquids (north Shields) Ltd Location: Northumberland Dock, NORTH SHIELDS, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: AN6213 Dated: 12th July 1994 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.9 (A) The storage of chemicals in bulk within the chemical industry Status: Application referred to Local Authority for consideration Positional Accuracy: Manually positioned within the geographical locality</p>	A16SE (W)	983	2	434400 566290
31	<p>Integrated Pollution Controls</p> <p>Name: Velva Liquids (north Shields) Ltd Location: Northumberland Dock, NORTH SHIELDS, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: AA9547 Dated: 13th January 1992 Process Type: IPC new application Description: 4.9 (A) The storage of chemicals in bulk within the chemical industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned within the geographical locality</p>	A16SE (W)	984	2	434400 566295
32	<p>Integrated Pollution Prevention And Control</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Process Plant, Hayhole Road, NORTH SHIELDS, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: Bv4665ig Original Permit Ref: Bv4665ig Effective Date: 16th December 2005 Status: Superseded By Variation Application Type: Application App. Sub Type: New Positional Accuracy: Manually positioned to the address or location Activity Code: 5.4 A(1) (A) Activity Description: Recovery Of Waste; By Distillation Of Oil/Organic Solvent Primary Activity: Y</p>	A16SE (NW)	962	2	434454 566375

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	<p>Integrated Pollution Prevention And Control</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Process Plant, Hayhole Road, North Shields, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: KP3335MJ Original Permit Ref: Bv4665g Effective Date: 27th September 2006 Status: Superseded By Variation Application Type: Variation App. Sub Type: Minor Positional Accuracy: Manually positioned within the geographical locality Activity Code: 1.1 B (C) (I) Activity Description: Combustion; Waste Derived Fuel <3Mw But >=0.4Mw (Unless 1.1 B (B)) Primary Activity: N Activity Code: 5.4 A(1) (A) Activity Description: Recovery Of Waste; By Distillation Of Oil/Organic Solvent Primary Activity: Y</p>	A16SE (W)	979	2	434402 566283
34	<p>Local Authority Integrated Pollution Prevention And Control</p> <p>Name: Circatex Ltd Location: Eldon Street, South Shields, Tyne & Wear, NE33 5BU Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 001/6.4(a) Dated: Not Supplied Process Type: Other Activities Description: Coating plastics Status: Application Not Yet Authorised Positional Accuracy: Manually positioned to the address or location</p>	A18SE (NE)	232	3	435816 566122
35	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: McNulty Offshore Constuction Ltd Location: Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: PPC/08/3 Dated: 23rd May 1994 Process Type: Local Authority Pollution Prevention and Control Description: PG6/23 Coating of metal and plastic Status: Permitted Positional Accuracy: Located by supplier to within 100m</p>	A13NW (N)	0	3	435500 566100
36	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: C W Taylor & Son Location: Templetown, Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 5SE Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 007/2.1(A) Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG2/4 Iron, steel and non-ferrous metal foundry processes Status: Authorised Positional Accuracy: Manually positioned to the address or location</p>	A13SE (S)	61	3	435590 565766
37	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Jennings Accident Repair Centre Location: Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 1RW Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 015/6.5(b) Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles Status: Authorisation certificate surrendered by operatorSurrendered Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	112	3	435790 566421
38	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Tyne Auto Bodies Location: Hill Street, Commercial Road, SOUTH SHIELDS, Tyne an Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 029/6.4(B) Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the road within the address or location</p>	A18SE (NE)	163	3	435842 566443

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: J R Selby Location: Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 1RQ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 028/6.5(B) Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the address or location</p>	A19NW (NE)	187	3	435866 566459
39	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Port Of Tyne Authority Location: Tyne Coal Terminal, Tyne Dock, SOUTH SHIELDS, NE34 0AB Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: STC/EPR/011 Dated: 21st July 1993 Process Type: Local Authority Pollution Prevention and Control Description: PG3/5 Coal, coke and coal product processes Status: Permitted Positional Accuracy: Manually positioned to the address or location</p>	A13SW (SW)	223	3	435361 565699
40	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Tarmac Quarry Products (Eastern) Ltd Location: West Side, Tyne Dock, SOUTH SHIELDS, NE34 9PL Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 034/3.5(E) Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG3/15 Mineral drying and roadstone coating processes Status: Permitted Positional Accuracy: Manually positioned to the address or location</p>	A13NW (W)	229	3	435200 565800
41	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Circatex Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne and Wear, NE33 5BU Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 001/6.4(A) Dated: 22nd February 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG6/23 Coating of metal and plastic Status: Transferred to LAIPPC Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	232	3	435816 566122
42	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Edmund Robson & Co Location: West Side, Tyne Dock, SOUTH SHIELDS, Tyne and Wear, NE34 9PJ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 037/6.6(A) Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/2 Manufacture of timber and wood-based products Status: Permitted Positional Accuracy: Manually positioned to the address or location</p>	A12SE (W)	439	3	435001 565701
43	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Reg Vardy Plc Location: Tudor Road, SOUTH SHIELDS, Tyne and Wear, NE33 4PQ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 021/6.5(B) Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the address or location</p>	A19NW (NE)	450	3	436124 566512
44	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Be Modern Ltd Location: Western Approach, SOUTH SHIELDS, Tyne and Wear, NE33 5QZ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: PPC/08/13 Dated: 1st July 1994 Process Type: Local Authority Pollution Prevention and Control Description: PG6/2 Manufacture of timber and wood-based products Status: Permitted Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	506	3	436184 566472

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Be Modern Ltd Location: Western Approach, SOUTH SHIELDS, Tyne and Wear, NE33 5QZ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: PPC/08/13 Dated: 1st July 1994 Process Type: Local Authority Pollution Prevention and Control Description: PG1/12 Combustion of fuel manufactured from/or comprised of, solid waste in appliances between 0.4-3MW thermal input Status: Permitted Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	506	3	436184 566472
45	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Lynch Motors Ltd Location: West Way, SOUTH SHIELDS, Tyne and Wear, NE33 4SR Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 055/1.4(B) Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Application Not Yet Authorised Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	740	3	436105 565148
46	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Dean Clean Location: 174 Dean Road, South Shields, Ne33 4aq Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: STC/EPR/051 Dated: 1st September 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Located by supplier to within 100m</p>	A14NE (E)	780	3	436500 565900
47	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Posh Wash North East Ltd Location: 168 Sunderland Road, South Shields, Ne33 4hn Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: STC/EPR/052 Dated: 1st September 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Located by supplier to within 100m</p>	A19SE (E)	833	3	436500 566200
48	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Practical Compounds Ltd Location: West Side, South Shields, Tyne and Wear, NE34 9PL Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: STC/036/6.3(a)(i)/Pt B Dated: 3rd June 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG6/42 Bitumen and tar processes Status: Permitted Positional Accuracy: Located by supplier to within 100m</p>	A7NE (SW)	837	3	435000 565200
49	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Reef Service Station Location: Hudson Street, SOUTH SHIELDS, Tyne and Wear, NE34 0AA Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 071/1.4(B) Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Manually positioned to the address or location</p>	A8SE (S)	842	3	435598 564912
50	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Gb Terminals Ltd Location: Off Coble Dene, North Shields, Ne29 6dl Authority: North Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: NT0150 Dated: 2nd July 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles Status: Permitted Positional Accuracy: Manually positioned within the geographical locality</p>	A16SE (NW)	929	4	434482 566357

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
50	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Velva Liquids (North Shields) Ltd Location: Tyne Terminal, Northumberland Dock, NORTH SHIELDS, Tyne & Wear, NE29 6DY Authority: North Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: Nt00118 Dated: 28th February 2002 Process Type: Local Authority Pollution Prevention and Control Description: PG1/13 Processes for the storage, loading and unloading of petrol at terminals Status: Permitted Positional Accuracy: Manually positioned to the address or location</p>	A16SE (NW)	965	4	434447 566367
50	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Velva Liquids (North Shields) Ltd Location: Tyne Terminal, Northumberland Dock, Hayhole Road, North Shields, NEWCASTLE UPON TYNE, Tyne & Wear, NE29 6DY Authority: North Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: Nt00002 Dated: 29th June 1995 Process Type: Local Authority Air Pollution Control Description: Part B - General Fuel and Power Process (No Specific Reference) Status: Site Closed Positional Accuracy: Manually positioned to the address or location</p>	A16SE (NW)	973	4	434433 566352
	<p>Nearest Surface Water Feature</p>	A18SE (N)	0	-	435530 566350
51	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Miscellaneous Premises: Unknown Location: Jarrow / South Shields Authority: Environment Agency, North East Region Pollutant: Not Given Note: River Tyne Incident Date: 23rd May 1992 Incident Reference: 235/001314 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Other Oil Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A18NE (N)	20	2	435600 566500
52	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: River Tyne, Royal Keys Development Shields Authority: Environment Agency, North East Region Pollutant: Other Sewage Note: No Fish Killed Incident Date: 29th August 1995 Incident Reference: NT950184 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A18NE (N)	120	2	435600 566600
53	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Albert Edward Dock, NORTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Oils - Other Oil Note: Pollution Found; No Fish Killed Incident Date: 16th January 1996 Incident Reference: NT960020 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A18SW (NW)	171	2	435300 566295

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: Albert Edward Dock, NORTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Oils - Other Oil Note: No Fish Killed Incident Date: 16th January 1996 Incident Reference: NT960020 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A18SW (NW)	174	2	435300 566300
54	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Surface Water Sewers Location: Tyne Dock S/S Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Incident Date: 1st November 1990 Incident Reference: 235/000359 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	290	2	435400 566600
55	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: Albert Edward Dock, NORTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Other Note: No Fish Killed Incident Date: 11th September 1995 Incident Reference: NT950180 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	293	2	435400 566700
56	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Contaminated Land Location: Downstream Of Don Estuary, River Tyne Authority: Environment Agency, North East Region Pollutant: Oils - Gas Oil Note: Pollution Found; No Fish Killed Incident Date: 11th March 1996 Incident Reference: NT960052 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A18SW (NW)	310	2	435200 566400
57	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Water Company Sewage: Surface Water Outfall Location: SOUTH SHIELDS, Tyne And Wear Authority: Environment Agency, North East Region Pollutant: Chemicals - Acid Note: Pollution Found; No Fish Killed Incident Date: 1st October 1996 Incident Reference: NT960270 Catchment Area: Lower Tyne Receiving Water: Coastal Water Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A19SW (NE)	391	2	436000 566200
58	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Miscellaneous Premises: Unknown Location: St Pauls Church, JARROW Authority: Environment Agency, North East Region Pollutant: Not Given Note: Don Estuary Incident Date: 24th June 1994 Incident Reference: 235/002387 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Other Oil Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A9NW (SE)	556	2	436000 566300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Industrial Premises Location: NORTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Incident Date: 15th February 1992 Incident Reference: 235/001092 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Trade Effluent Complying Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	575	2	434800 566200
60	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Industrial Premises Location: Velva Liquids Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Estuary Incident Date: 26th August 1993 Incident Reference: 235/002082 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Other Industrial Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A16SE (W)	862	2	434500 566200
61	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Oil Storage Depot Location: JARROW Authority: Environment Agency, North East Region Pollutant: Not Given Note: River Don Incident Date: 27th November 1993 Incident Reference: 235/002181 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Other Oil Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A7NW (SW)	950	2	434800 565200
62	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Industrial Premises Location: N Shields Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Estuary Incident Date: 17th March 1992 Incident Reference: 235/001183 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Trade Effluent Non-Complying Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A16SE (W)	959	2	434400 566200
63	<p>Prosecutions Relating to Authorised Processes</p> <p>Location: Eldon Street, South Shield, NEWCASTLE, Tyne & Wear, NE33 5BY Prosecution Text: EA News Release 13/06/1997, Failure to ensure the proper disposal of waste from the business. Prosecution Act: EPA90 Hearing Date: 13th June 1997 Verdict: Guilty Fine: 2400 Costs: 3202 Positional Accuracy: Manually positioned to the road within the address or location</p>	A19SW (NE)	320	2	435909 566188
64	<p>Registered Radioactive Substances</p> <p>Name: Aker Mcnulty Location: Commercial Road, South Shields, SOUTH SHIELDS, Tyne And Wear, NE33 1RZ Authority: Environment Agency, North East Region Permit Reference: AY4187 Dated: 12th June 1997 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Unknown</p>	A18SE (N)	6	2	435555 566134

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
65	<p>Registered Radioactive Substances</p> <p>Name: Mcnulty Offshore Construction Ltd Location: Commercial Road, South Shields, SOUTH SHIELDS, Tyne And Wear, NE33 1RZ Authority: Environment Agency, North East Region Permit Reference: CC7412 Dated: 2nd September 2008 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA Status: Application has been authorised and any conditions apply to the operator Authorised Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NW (NE)	343	2	435953 566648
66	<p>Substantiated Pollution Incident Register</p> <p>Authority: Environment Agency - North East Region, North East Area Incident Date: 20th April 2006 Incident Reference: 392016 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Inert Materials And Wastes: Soils And Clay Pollutant: Specific Waste Materials: Commercial Waste Pollutant: Specific Waste Materials: Contaminated Construction & Demolition Material & Waste Pollutant: Specific Waste Materials: Metal Wastes</p>	A13SE (S)	135	2	435623 565621
67	<p>Water Abstractions</p> <p>Operator: Port Of Tyne Licence Number: Ne/023/0003/004 Permit Version: 1 Location: Port Of Tyne Authority: Environment Agency, North East Region Abstraction: Other Industrial/Commercial/Public Services: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 6th January 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A11SE (W)	903	2	434488 565673
67	<p>Water Abstractions</p> <p>Operator: Port Of Tyne Licence Number: Ne/023/0003/004 Permit Version: 1 Location: Port Of Tyne - Tidal Authority: Environment Agency, North East Region Abstraction: Other Industrial/Commercial/Public Services: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Tidal Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 6th January 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A11SE (W)	903	2	434488 565673
	<p>Groundwater Vulnerability</p> <p>Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 5 Tyne and Tees Scale: 1:100,000</p>	A13NE (N)	0	2	435567 565869
	<p>Drift Deposits</p> <p>Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 5 Tyne and Tees Scale: 1:100,000</p>	A13NE (N)	0	2	435567 565869
	<p>Bedrock Aquifer Designations</p> <p>Aquifer Designation: Secondary Aquifer - A</p>	A13NE (N)	0	1	435567 565869

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13NE (N)	0	1	435582 565911
	Superficial Aquifer Designations Aquifer Designation: Unknown (Lakes and Landslip)	A13NE (N)	0	1	435567 565869
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (W)	0	2	435498 565890
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (W)	0	2	435498 565897
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
68	Detailed River Network Lines River Type: Down stream of High Water Mark River Name: Not Supplied Hydrographic Area: D013 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk: Flood Risk Management Indicative/Statutory Main River Management Status: Water Course: RIVER TYNE Name: Water Course: 0029 Reference:	A18SW (NW)	151	2	435195 566136
	Detailed River Network Offline Drainage None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	<p>BGS Recorded Landfill Sites</p> <p>Site Name: Northumberland Dock Location: ALBERT DOCK, Tyne & Wear Authority: British Geological Survey, National Geoscience Information Service Ground Water: Information not available Surface Water: Information not available Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate</p>	A17SW (W)	580	-	434787 566178
70	<p>BGS Recorded Landfill Sites</p> <p>Site Name: Tyne Dock Location: SOUTH SHIELDS, Tyne & Wear Authority: British Geological Survey, National Geoscience Information Service Ground Water: No threat to ground water Surface Water: No threat to surface water Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Good</p>	A8NW (S)	646	-	435384 565165
71	<p>Historical Landfill Sites</p> <p>Licence Holder: Borough Of South Tyneside Location: Laygate, South Shield, Tyne and Wear Name: West Holborn Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06264 First Input Date: 1st March 1983 Last Input Date: 31st March 1983 Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: YO1/L/BOR015 WRC Ref: 4500/0293 BGS Ref: Not Supplied Other Ref: TW 104 ST, ST 038</p>	A18SE (N)	0	2	435660 566406
72	<p>Historical Landfill Sites</p> <p>Licence Holder: West Dock Location: Commercial Road, South Shields, Costerphine Town, Tyne & Wear Name: West Dock Operator Location: Commercial Road, South Shields, Costerphine Town, Tyne & Wear Boundary Accuracy: As Supplied Provider Reference: EAHLD35707 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 67611 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied</p>	A13NE (N)	0	2	435540 566104
73	<p>Historical Landfill Sites</p> <p>Licence Holder: Port Of Tyne Authority Location: Tyne Dock, South Shields, Tyne and Wear Name: Tyne Dock Landfill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06266 First Input Date: 31st December 1994 Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 67586 Regis Ref: TWR/L/POR001 WRC Ref: 4500/0019 BGS Ref: Not Supplied Other Ref: TW 428 ST, ST 046</p>	A13SW (SW)	217	2	435299 565725

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	<p>Historical Landfill Sites</p> <p>Licence Holder: Port Of Tyne Authority Location: South Shield, Tyne and Wear Name: Tyne Dock No.3 Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06267 First Input Date: 30th June 1983 Last Input Date: 31st December 1987 Specified Waste: Deposited Waste included Inert, Industrial, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: YO1/L/POR004 WRC Ref: 4500/0102 BGS Ref: Not Supplied Other Ref: TW 107 ST, ST 035</p>	A8NW (SW)	456	2	435358 565405
75	<p>Historical Landfill Sites</p> <p>Licence Holder: Port Of Tyne Authority Location: Tyne Dock, South Shield, Tyne and Wear Name: Tyne Dock Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06268 First Input Date: 22nd July 1977 Last Input Date: 31st December 1993 Specified Waste: Deposited Waste included Inert, Industrial, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: YO1/L/POR001 WRC Ref: 4500/0032 BGS Ref: Not Supplied Other Ref: ST 014, TW 024 ST</p>	A8NW (SW)	456	2	435358 565405
76	<p>Historical Landfill Sites</p> <p>Licence Holder: Port Of Tyne Authority Location: South Shield, Tyne and Wear Name: Tyne Dock Extension Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06269 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert, Industrial, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: YO1/L/POR003 WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: TW 062 ST, ST 010</p>	A8NW (SW)	456	2	435358 565405
77	<p>Historical Landfill Sites</p> <p>Licence Holder: Borough Of South Tyneside Location: South Shield, Tyne and Wear Name: Westway Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06270 First Input Date: 31st December 1982 Last Input Date: 31st December 1983 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: YO1/L/BOR017 WRC Ref: 4500/0294 BGS Ref: Not Supplied Other Ref: TW 106 ST, ST 036</p>	A8NE (S)	570	2	435799 565195
78	<p>Historical Landfill Sites</p> <p>Licence Holder: Not Supplied Location: East Howdon, North Tyneside Name: Northumberland Dock Operator Location: Bewick Street, Newcastle-Upon-Tyne Boundary Accuracy: As Supplied Provider Reference: EAHLD06809 First Input Date: 31st December 1960 Last Input Date: 30th November 1972 Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 1866 Other Ref: 566200, 1300/NT001, 1300/TW038NT/NT049</p>	A17SW (W)	580	2	434787 566178

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	<p>Historical Landfill Sites</p> <p>Licence Holder: Port Of Tyne Authority Location: Jarrow, South Tyneside, Tyne and Wear Name: Jarrow Slake No.1 Operator Location: Bewick Street, Newcastle-Upon-Tyne Boundary Accuracy: As Supplied Provider Reference: EAHLD06290 First Input Date: 20th February 1987 Last Input Date: 31st March 1994 Specified Waste: Deposited Waste included Inert, Industrial, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: YO1/L/POR002 WRC Ref: 4500/0107 BGS Ref: Not Supplied Other Ref: ST 043, TW 154 ST, TW 020 ST, ST 015</p>	A12SW (W)	582	2	434828 565699
80	<p>Historical Landfill Sites</p> <p>Licence Holder: Not Supplied Location: South Shields, Tyne and Wear Name: Port of Tyne Authority Operator Location: Bewick Street, Newcastle-Upon-Tyne Boundary Accuracy: As Supplied Provider Reference: EAHLD31785 First Input Date: 30th November 1969 Last Input Date: 31st January 1972 Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 305 Other Ref: Not Supplied</p>	A8NW (S)	646	2	435384 565165
81	<p>Historical Landfill Sites</p> <p>Licence Holder: Not Supplied Location: Olive Street, West Harton Name: Olive Street Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06271 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: ST 033</p>	A9SW (SE)	792	2	436028 565043
82	<p>Historical Landfill Sites</p> <p>Licence Holder: Not Supplied Location: Hayhole Road, North Tyneside Name: Albert Dock Junction Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD35225 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4500/0204 BGS Ref: Not Supplied Other Ref: NT 039, NT 038, TW 183 NT</p>	A17NW (NW)	970	2	434520 566641
83	<p>Integrated Pollution Control Registered Waste Sites</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Site, Hayhole Road, Northumberland Dock, NORTH SHIELDS, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: BD1733 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 5.2 A Recovery processes within the Waste Disposal Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned within the geographical locality</p>	A17SW (NW)	855	2	434567 566365

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
84	<p>Integrated Pollution Control Registered Waste Sites</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Site, Hayhole Road, Northumberland Dock, NORTH SHIELDS, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: AG8128 Dated: 28th May 1993 Process Type: IPC new application Description: 5.2 A Recovery processes within the Waste Disposal Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned within the geographical locality</p>	A16SE (NW)	954	2	434456 566359
84	<p>Integrated Pollution Control Registered Waste Sites</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Site, Hayhole Road, Northumberland Dock, NORTH SHIELDS, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: AR9524 Dated: 7th July 1995 Process Type: IPC minor (non-substantial) variation to previous variation Description: 5.2 A Recovery processes within the Waste Disposal Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned within the geographical locality</p>	A16SE (NW)	956	2	434456 566364
84	<p>Integrated Pollution Control Registered Waste Sites</p> <p>Name: Chemical Manufacture & Refining Ltd Location: North Tyne Site, Hayhole Road, NORTH SHIELDS, Tyne And Wear, NE296DY Authority: Environment Agency, North East Region Permit Reference: AV4253 Dated: 2nd April 1996 Process Type: IPC minor (non-substantial) variation to previous variation Description: 5.2 A Recovery processes within the Waste Disposal Industry Status: Application has met the requirements for authorisation (but not yet authorised)Not Yet Authorised Positional Accuracy: Manually positioned within the geographical locality</p>	A16SE (NW)	958	2	434456 566369
84	<p>Integrated Pollution Control Registered Waste Sites</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Site, Hayhole Road, Northumberland Dock, NORTH SHIELDS, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: AJ6475 Dated: 2nd September 1993 Process Type: IPC minor (non-substantial) variation to previous variation Description: 5.2 A (A) Recovery processes within the Waste Disposal Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned within the geographical locality</p>	A16SE (NW)	959	2	434451 566359
84	<p>Integrated Pollution Control Registered Waste Sites</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Site, Hayhole Road, Northumberland Dock, NORTH SHIELDS, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: Bi4306 Dated: 27th June 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 5.2 A (A) Recovery processes within the Waste Disposal Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned within the geographical locality</p>	A16SE (NW)	961	2	434451 566364
84	<p>Integrated Pollution Control Registered Waste Sites</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Site, Hayhole Road, Northumberland Dock, NORTH SHIELDS, Tyne And Wear, NE29 6DY Authority: Environment Agency, North East Region Permit Reference: AK2491 Dated: 1st November 1993 Process Type: IPC minor (non-substantial) variation to previous variation Description: 5.2 A (A) Recovery processes within the Waste Disposal Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned within the geographical locality</p>	A16SE (NW)	961	2	434451 566364

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
84	<p>Integrated Pollution Control Registered Waste Sites</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Site , Hayhole Road, North Shields, Tyne And Wear, Ne29 6dy Authority: Environment Agency, North East Region Permit Reference: Bu0656 Dated: 30th April 2003 Process Type: IPC minor (non-substantial) variation to previous variation Description: 5.2 A (A) Recovery processes within the Waste Disposal Industry Status: Revoked - Now IPPC Positional Accuracy: Manually positioned to the address or location</p>	A16SE (NW)	965	2	434448 566369
85	<p>Integrated Pollution Control Registered Waste Sites</p> <p>Name: Solvent Resource Management Ltd Location: North Tyne Site ,Hayhole Road,, North Shields, Tyne And Wear, Ne29 6dy Authority: Environment Agency, North East Region Permit Reference: Br5884 Dated: 22nd February 2002 Process Type: IPC minor (non-substantial) variation to previous variation Description: 5.2 A (A) Recovery processes within the Waste Disposal Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned to the address or location</p>	A16SE (W)	1000	2	434384 566297
86	<p>Licensed Waste Management Facilities (Landfill Boundaries)</p> <p>Name: Aker Mc Nulty Ltd Licence Number: 67611 Location: West Dock, Commercial Road, Costerphine Town, South Shields, Tyne & Wear, NE33 1RZ Licence Holder: Aker Mc Nulty Ltd Authority: Environment Agency - North East Region, North East Area Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) Max Input Rate: Not Supplied Licence Status: Inactive Issued: 25th July 1997 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied</p>	A13NE (N)	0	2	435540 566104
87	<p>Licensed Waste Management Facilities (Landfill Boundaries)</p> <p>Name: Tyne Dock Landfill Site Licence Number: 67586 Location: Tyne Dock, South Shields, Tyne & Wear, NE1 5HS Licence Holder: Port Of Tyne Authority Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) Max Input Rate: Large (Equal to or greater than 75,000 tonnes per year) Licence Status: Inactive Issued: 3rd June 1994 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied</p>	A13SW (SW)	214	2	435308 565723
88	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67611 Location: West Dock, Commercial Road, Costerphine Town, South Shields, Tyne & Wear, NE33 1RZ Operator Name: Aker Mc Nulty Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) Licence Status: Expired Issued: 25th July 1997 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A18SW (N)	0	2	435500 566200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
89	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67499 Location: Cumberland House, Mitre Place, Templetown, South Shields, Tyne & Wear, NE33 5BX Operator Name: G D Metal Recycling Ltd Operator Location: Albert Works, Kenninghall Road, Edmonton, London, N18 2PD Authority: Environment Agency - North East Region, Northumbria Area Site Category: Metal Recycling Sites (Mixed) Licence Status: Transferred Issued: 29th March 1992 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	161	2	435600 565600
89	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67499 Location: Cumberland House, Mitre Place, Templetown, South Shields, Tyne & Wear, NE33 5TB Operator Name: Van Dalen U K Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Metal Recycling Sites (Mixed) Licence Status: Surrendered Issued: 29th March 1992 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 20th September 2013 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	161	2	435600 565600
90	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67516 Location: 3 Mitre Place , Templetown, South Shields, Tyne & Wear, NE33 5TB Operator Name: Birbeck James Operator Location: 6 , Cleadon Village, Sunderland, Tyne & Wear, SR6 7PW Authority: Environment Agency - North East Region, Northumbria Area Site Category: Metal Recycling Sites (Vehicle Dismantlers) Licence Status: Modified Issued: 21st April 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	258	2	435600 565500
90	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67516 Location: Land/premises At, Mitre Place, Templetown, South Shields, Tyne & Wear, NE33 5TB Operator Name: Sweeting Neil Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Metal Recycling Sites (Vehicle Dismantlers) Licence Status: Transferred Issued: 21st April 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	258	2	435600 565500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67552 Location: 3 Cone Street , South Shields, Tyne & Wear, NE33 1RE Operator Name: K J Baker & P Baker Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Metal Recycling Sites (Mixed) Licence Status: Surrendered Issued: 27th January 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 29th March 2006 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A18NE (N)	286	2	435800 566700
92	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 0 Location: Unit 4, Evans Road, Templetown, South Shields, Tyne & Wear, NE33 5SH Operator Name: Partco Autoparts Ltd Operator Location: Lea Francis House, Station Road, Balsall Common, Coventry, West Midlands, CV7 7FD Authority: Environment Agency - North East Region, Northumbria Area Site Category: Special Waste Transfer Stations Licence Status: Surrendered Issued: 3rd August 1992 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A13SE (S)	306	2	435610 565450
92	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 64425 Location: Unit 4, Evans Road, Templetown, South Shields, Tyne & Wear, NE33 5SH Operator Name: Partco Autoparts Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Special Waste Transfer Stations Licence Status: Surrendered Issued: 3rd August 1992 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A13SE (S)	306	2	435610 565450
93	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67602 Location: Royal Quays - Ballast Hill, Dock Road, North Shields, Tyne & Wear, NE29 6EH Operator Name: Edmund Nuttall Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Transfer Stations Taking Non-biodegradable Wastes Licence Status: Surrendered Issued: 7th June 1996 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 4th June 1998 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	367	2	435300 566700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 103106 Location: Tyne Dock, South Shields, Tyne & Wear, NE34 9PT Operator Name: Port Of Tyne Authority Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Use of waste in construction <100,000 tps Licence Status: Issued Issued: 27th February 2012 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A13SW (SW)	400	2	435262 565551
95	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67586 Location: Tyne Dock, South Shields, Tyne & Wear, NE1 5HS Operator Name: Port of Tyne Authority Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Landfills Taking Non-biodegradable Wastes (Not Construction) Licence Status: Surrendered Issued: 3rd June 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 14th June 2005 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A13SW (SW)	428	2	435300 565500
96	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 300004 Location: Navigation House, Tyne Dock, South Shields, Tyne & Wear, NE34 0AB Operator Name: Sivex Engineering Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Mobile Plant Licence Status: Issued Issued: 8th January 2008 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Manually positioned to the address or location</p>	A8SE (S)	681	2	435608 565073
96	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 20094 Location: Mobile Plant, Navigation House, Port Of Tyne, South Shields, Tyne & Wear, NE34 0AB Operator Name: Sivex Engineering Limited Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Mobile Plant Licence Status: Expired Issued: 28th September 2005 Last Modified: 30th June 2006 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Not Supplied</p>	A8SE (S)	681	2	435608 565073

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 0 Location: Phase 3, South Shields, Tyne & Wear Operator Name: Port Of Tyne Authority Operator Location: Bewick Street, Newcastle Upon Tyne, Tyne & Wear, NE Authority: Environment Agency - North East Region, Northumbria Area Site Category: Household, Commercial And Industrial Waste Landfills Licence Status: Surrendered Issued: 22nd June 1983 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 30th April 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A8SW (SW)	794	2	435200 565100
97	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 64502 Location: Phase 3, South Shields, Tyne & Wear Operator Name: Port of Tyne Authority Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Household, Commercial And Industrial Waste Landfills Licence Status: Surrendered Issued: 22nd June 1983 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 30th April 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A8SW (SW)	794	2	435200 565100
97	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 0 Location: South Shields, Tyne & Wear, NE33 Operator Name: Port Of Tyne Authority Operator Location: Bewick Street, Newcastle Upon Tyne, Tyne & Wear, NE1 5HS Authority: Environment Agency - North East Region, Northumbria Area Site Category: Household, Commercial And Industrial Waste Landfills Licence Status: Surrendered Issued: 2nd June 1981 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A8SW (SW)	794	2	435200 565100
97	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 64467 Location: South Shields, Tyne & Wear, NE33 Operator Name: Port of Tyne Authority Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Household, Commercial And Industrial Waste Landfills Licence Status: Surrendered Issued: 2nd June 1981 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A8SW (SW)	794	2	435200 565100
97	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 0 Location: Tyne Dock, South Shields, Tyne & Wear Operator Name: Port Of Tyne Authority Operator Location: Bewick Street, Newcastle Upon Tyne, Tyne & Wear, NE1 5HS Authority: Environment Agency - North East Region, Northumbria Area Site Category: Household, Commercial And Industrial Waste Landfills Licence Status: Surrendered Issued: 21st July 1977 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A8SW (SW)	794	2	435200 565100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 64437 Location: Tyne Dock, South Shields, Tyne & Wear Operator Name: Port of Tyne Authority Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Household, Commercial And Industrial Waste Landfills Licence Status: Surrendered Issued: 21st July 1977 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A8SW (SW)	794	2	435200 565100
98	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67498 Location: 111 Chichester Road , South Shields, Tyne & Wear, NE33 4HE Operator Name: Arthurs Raymond Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Metal Recycling Sites (Mixed) Licence Status: Surrendered Issued: 23rd February 1992 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 23rd December 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A14NE (E)	804	2	436500 566100
99	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 64021 Location: Hayhole Road, Northumberland Dock, North Shields, Tyne & Wear, NE29 6DY Operator Name: Durham County Waste Management Co Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, Yorkshire Area Site Category: Treatment - Biological Licence Status: Surrendered Issued: 9th December 1999 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 26th August 2004 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A16SE (W)	862	2	434500 566200
99	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67589 Location: Hayhole Road, Northumberland Dock, North Shields, Tyne & Wear, NE29 6DY Operator Name: Durham County Waste Management Co Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Treatment - Biological Licence Status: Surrendered Issued: 26th January 1995 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 26th August 2004 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A16SE (W)	862	2	434500 566200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
100	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 102509 Location: Windmill Waste Management M R F, Middlefields Depot, Heddon Way, South Shields, Tyne & Wear, NE34 0NT Operator Name: Windmill Sustainable Business Solutions Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Materials Recycling Facility Licence Status: Surrendered Issued: 16th May 2011 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 4th August 2015 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A8SW (S)	962	2	435492 564804
101	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 0 Location: C/o Velva Liquids, Hayhole Road, Northumbria Dock, North Shields, Tyne & Wear Operator Name: Chemical Manufacture & Refining Ltd Operator Location: Hendon Dock, Sunderland, Tyne & Wear, SR1 2ES Authority: Environment Agency - North East Region, Northumbria Area Site Category: Physical Treatment Facilities Licence Status: Surrendered Issued: 22nd July 1991 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A16SE (W)	986	2	434400 566300
101	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 64555 Location: C/o Velva Liquids, Hayhole Road, Northumbria Dock, North Shields, Tyne & Wear Operator Name: Chemical Manufacture & Refining Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Physical Treatment Facilities Licence Status: Surrendered Issued: 22nd July 1991 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A16SE (W)	986	2	434400 566300
101	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67439 Location: Northumberland Dock, Hayhole Road, North Shields, Tyne & Wear, NE29 6DY Operator Name: Inter Terminals Tyneside Limited Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Special Waste Transfer Stations Licence Status: Modified Issued: 21st July 1977 Last Modified: 20th October 2015 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A16SE (W)	986	2	434400 566300
	<p>Local Authority Landfill Coverage</p> <p>Name: South Tyneside Metropolitan Borough Council - Has no landfill data to supply</p>		0	5	435567 565869
	<p>Local Authority Landfill Coverage</p> <p>Name: North Tyneside Metropolitan District Council - Has supplied landfill data</p>		164	4	435253 566235

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
102	<p>Registered Landfill Sites</p> <p>Licence Holder: Aber Mc Nulty Ltd Licence Reference: TW 470 ST Site Location: West Dock, Commercial Road, Corstophine, Sunderland, Tyne And Wear Licence Easting: 435500 Licence Northing: 566200 Operator Location: Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill - with treatment Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Site Closed Dated: 25th July 1997 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Brick, Rock, Broken Concrete, Plaster Constr'N/Demol./Excav. Waste Comprisin Slate, Tiles Sub/Topsoil, Sand, Clay, Shale Total Waste Permitted By Licence Prohibited Waste: Biodegradable Waste Contaminated Waste Spec.Waste (Epa'90:S62/1996 Regs) Steel Timber, Board Waste N.O.S.</p>	A18SW (N)	0	2	435500 566200
103	<p>Registered Landfill Sites</p> <p>Licence Holder: South Tyneside Borough Council Licence Reference: TW 104 ST Site Location: Old Electricity Works, West Holburn, Laygate, South Shields, Tyne And Wear Licence Easting: 435650 Licence Northing: 566400 Operator Location: Town Hall, South Shields, Tyne And Wear Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 23rd February 1983 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Max.Waste Permitted By Licence Rock From Clay Substratum Tyne And Wear C -Rubble Tyne And Wear Di -Coh.Inorg Tyne And Wear Dii -Coh.Inorg Tyne And Wear E -Fricl.Inorg</p>	A18SE (N)	0	2	435650 566400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
104	<p>Registered Landfill Sites</p> <p>Licence Holder: Edmund Nuttall Ltd Licence Reference: TW 459 NT Site Location: Albert Edward Dock, Royal Quays Development, North Shields, Tyne And Wear Licence Easting: 435300 Licence Northing: 566700 Operator Location: 1 Eagle House, Newcastle Business Park, NEWCASTLE UPON TYNE, Tyne and Wear, NE4 7LN Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 7th June 1996 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Approximate location provided by supplier Boundary Accuracy: Not Applicable Authorised Waste: Clean Concrete, Brick Hardcore, Stone Max.Waste Permitted By Licence Prohibited Waste: Biodegradable Waste Combustible Waste Potentially Polluting Waste Spec.Waste (Epa'90:S62/1996 Regs) Waste N.O.S.</p>	A18NW (N)	267	2	435331 566605
105	<p>Registered Landfill Sites</p> <p>Licence Holder: Port Of Tyne Authority Licence Reference: TW 428 ST Site Location: Tyne Dock Landfill Site, South Shields, Tyne And Wear Licence Easting: 435300 Licence Northing: 565500 Operator Location: Bewick Street, NEWCASTLE UPON TYNE, Tyne and Wear, NE1 5HS Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Site not yet started Dated: 3rd June 1994 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Brick,Broken Conc',Plaster,Slate,Tile Max.Waste Permitted By Licence Sub/Topsoil,Sand,Clay,Shale,Rock Prohibited Waste: Asbestos Oils & Tars At > 0.1% W/W Readily Biodegradable Waste Spec.Waste (Epa'90:S62/1996 Regs) Steel Timber, Board Toxic Metal Compounds Waste Cont. Phenols At > 1 Ppm Waste Cont. Sulphate At > 0.2%W/W Waste Cont. Sulphide At > 10 Ppm Waste Cont. Total Cyanide At > 5 Ppm</p>	A13SW (SW)	428	2	435300 565500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
106	<p>Registered Landfill Sites</p> <p>Licence Holder: Borough Of South Tyneside Licence Reference: TW 106 ST Site Location: West Way / Woodside Way, South Shields, Tyne And Wear Licence Easting: 435850 Licence Northing: 565150 Operator Location: As Site Address Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 23rd February 1983 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Max.Waste Permitted By Licence-Stated Rock Tyne And Wear C -Rubble * Tyne And Wear Di -Coh.Inorg * Tyne And Wear Dii -Coh.Inorg * Tyne And Wear E -FRICT.Inorg *</p>	A8NE (S)	626	2	435850 565150
107	<p>Registered Landfill Sites</p> <p>Licence Holder: Port Of Tyne Authority Licence Reference: TW 24 ST Site Location: Tyne Dock, South Shields, Tyne And Wear Licence Easting: 435250 Licence Northing: 565200 Operator Location: As Site Address Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: Waste produced/controlled by licence holder Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 21st July 1977 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Max.Waste Permitted By Licence-Stated Tyne & Wear B.-Dom/Com/Ind. * Tyne And Wear C -Rubble * Tyne And Wear Di -Coh.Inorg * Tyne And Wear Dii -Coh.Inorg * Tyne And Wear E -FRICT.Inorg * Tyne And Wear F -Incin.Res * Prohibited Waste: Paper Plastics Putrescible Waste</p>	A8NW (SW)	684	2	435250 565200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
107	<p>Registered Landfill Sites</p> <p>Licence Holder: Port Of Tyne Auth Licence Reference: TW 107 ST Site Location: Tyne Dock (Phase 3), South Shields, Tyne And Wear Licence Easting: 435200 Licence Northing: 565200 Operator Location: Bewick Street, NEWCASTLE UPON TYNE, Tyne and Wear, NE1 5HS Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 22nd June 1983 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Rock From Excavated Clay Stratum Tyne & Wear A, Renfrew A. * Tyne And Wear C, Renfrew C * Tyne And Wear D I, Renfrew D I, * Tyne And Wear D li, Renfrew D li, * Tyne And Wear E, Renfrew E, * Tyne And Wear F, Renfrew F * Prohibited Waste: Biodegradable/Putrescible Waste Paper/Cardboard Waste Plastic/Polythene (Including Sacks)</p>	A8NW (SW)	714	2	435200 565200
108	<p>Registered Landfill Sites</p> <p>Licence Holder: Port Of Tyne Authority Licence Reference: TW 62 ST Site Location: Tyne Dock Ext. (Phase 5 & 6), South Shields, Tyne And Wear Licence Easting: 435200 Licence Northing: 565100 Operator Location: Bewick Street, NEWCASTLE UPON TYNE, Tyne and Wear, NE1 5HS Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 2nd June 1981 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Inert Non-Soluble Waste Tyne & Wear A, Renfrew A. * Tyne & Wear B, Renfrew B. * Tyne And Wear C, Renfrew C * Tyne And Wear D I, Renfrew D I, * Tyne And Wear D li, Renfrew D li, * Prohibited Waste: Biodegradable/Putrescible Waste Paper/Cardboard Waste Plastic/Polythene (Including Sacks)</p>	A8SW (SW)	794	2	435200 565100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	<p>Registered Landfill Sites</p> <p>Licence Holder: Port Of Tyne Authority Licence Reference: TW 20 ST Site Location: Jarrow Slake, Jarrow, Tyne And Wear Licence Easting: 434500 Licence Northing: 565500 Operator Location: As Site Address Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 14th June 1977 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Tyne & Wear B.-Dom/Com/Ind. * Tyne And Wear C.-Rubble * Tyne And Wear Di.-Coh.Inorg * Tyne And Wear Dii.-Coh.Inorg * Tyne And Wear E.-Fric.Inorg * Tyne And Wear F.-Incin.Res * Prohibited Waste: Paper Plastics Putrescible Waste</p>	A11SE (W)	966	2	434500 565500
110	<p>Registered Waste Transfer Sites</p> <p>Licence Holder: Partco Autoparts Ltd Licence Reference: TW 300 SL Site Location: Unit 4 Evans Road, Templeton, SOUTH SHIELDS, Tyne and Wear, NE33 5SH Operator Location: Lea Francis House, Station Road, Balsall Common, COVENTRY, West Midlands, CV7 7FD Authority: Environment Agency - North East Region, Northumbria Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Licence known to be surrenderedSurrendered Dated: 3rd August 1992 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: And Thinners Max.Storage In Licence Waste Cellulose Paint Prohibited Waste: Waste N.O.S.</p>	A13SE (S)	258	2	435600 565500
111	<p>Registered Waste Transfer Sites</p> <p>Licence Holder: South Tyneside M.B.C. Licence Reference: TW9 32 ST Site Location: Middlefields C.A. Site, Middlefields, South Shields, Tyne And Wear Operator Location: Middlefields, South Shields, Tyne And Wear Authority: Environment Agency - North East Region, Northumbria Area Site Category: Civic Amenity Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 1st August 1990 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Civic Amenity/Refuse Amenity Waste Licenced Wastes Not To Hand</p>	A8SW (S)	965	2	435500 564800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	<p>Registered Waste Transfer Sites</p> <p>Licence Holder: Velva Liquids (North Shields) Ltd Licence Reference: TW 26 NT Site Location: Tank Farm; River Drive, Whitehill Point, North Shields, Tyne And Wear Operator Location: Tyne Terminal, Northumberland Dock, NORTH SHIELDS, Tyne and Wear, NE29 6DY Authority: Environment Agency - North East Region, Northumbria Area Site Category: Transfer Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 1st March 1998 Preceded By: TW 26 NT Licence: Superseded By: Not Given Licence: Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: Aqueous Waste Chlorinated Phenols/Analogues Fuel Oil Halogenated Cleaning Cmpds Halogenated Cmpds(Not Cleaning Cmpds) Hydrocarbons Inorganic Acids In Solution Inorganic Bases In Solution Inorganic Salts In Solution Kerosene And Derv. Max.Waste Permitted By Licence Mineral Oils Mixed Organic Compounds Oil/Water Mixtures Organic Acids + Related Cmpds Organic Bases/Related Cpds Organic Cmpds Containing N,S Or P Oxygen Containing Organic Compounds Para Amino Phenol Aqueous Waste Sol'N Terpene Hydrocarbons/Related Cpds Vegetable Oils & By-Products Prohibited Waste: Spec.Waste (Epa'90:S62/1996 Regs)N.O.S Waste N.O.S.</p>	A16SE (W)	984	2	434400 566295
112	<p>Registered Waste Transfer Sites</p> <p>Licence Holder: Velva Liquids (North Shields) Ltd Licence Reference: TW 26 NT Site Location: Tank Farm River Drive, Whitehall Point, North Shields, Tyne And Wear Operator Location: Tyne Terminal, Northumberland Dock, NORTH SHIELDS, Tyne and Wear, NE29 6DY Authority: Environment Agency - North East Region, Northumbria Area Site Category: Transfer Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 21st July 1977 Preceded By: Not Given Licence: Superseded By: TW 26 NT Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Liquid Wastes Environment Agency Notifiable Wastes requires prior notification before waste can be acceptedWaste requires approval</p>	A16SE (W)	986	2	434400 566300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
113	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: Charles Newton Ltd Charles Newton Scrapmetals Licence Reference: TW 275 ST Site Location: Cumberland House, Mitre Place, Templetown, SOUTH SHIELDS, Tyne and Wear, NE33 5BX</p> <p>Operator Location: As Site Address Authority: Environment Agency - North East Region, Northumbria Area Site Category: Scrapyard Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Site Closed Dated: 23rd March 1992 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Asbestos Haz.Items Normally Assoc.With Vehicles Normally Less Than Oils Petrol Scrap Metal As In S.M.Dealers Act '64 Such As Batteries</p> <p>Prohibited Waste: Asbestos Capac'Rs/Transformers Cont. Pcb/Pct'S Clinical Wastes Flammable Solvents Liable To Cause Environmental Hazards Medical (Misuse Of Drugs Act) Percussive/Explosive Waste Radioactive Wastes Spec.Waste (Epa'90:S62/1996 Regs)</p>	A13SE (S)	171	2	435600 565590
114	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: J Birbeck Licence Reference: TW 299 ST Site Location: Plot 3 Mitre Place, Templetown, SOUTH SHIELDS, Tyne and Wear, NE33 5TB Operator Location: 6 Heather Close, Cleadon Village, SUNDERLAND, Tyne and Wear, SR6 7PW Authority: Environment Agency - North East Region, Northumbria Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 21st April 1994 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: Motor Vehicles & Assoc.Parts Prohibited Waste: Spec.Waste (Epa'90:S62/1996 Regs)N.O.S Waste N.O.S.</p>	A13SE (S)	258	2	435600 565500
115	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: K J & P Baker t/a Baker Bros Licence Reference: TW 362 ST Site Location: 3 Cone Street, SOUTH SHIELDS, Tyne and Wear, NE33 1RE Operator Location: As Site Address Authority: Environment Agency - North East Region, Northumbria Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 20th December 2000 Preceded By: TW 362 ST Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Maximum Waste Permitted By Licence Metal Waste/Scrap Metal (As In Post'98 E.A.Lics And Equivalent To 23.00.00) Motor Vehicle Batteries</p> <p>Prohibited Waste: Degradable Household/Commercial/Industrial Waste (As In Post'98 E.A.Lics And Equivalent To 22.09.00) Inert Materials (As In Post'98 E.A.Lics And Equivalent To 21.00.00) Other Waste/Waste Not Otherwise Specified Special Waste (As In Epa 1990:S62 Of 1996 Regs) Not Otherwise Specified</p>	A19NW (N)	325	2	435900 566680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: K J & P Baker t/a Baker Bros Licence Reference: TW 362 ST Site Location: 3 Cone Street, SOUTH SHIELDS, Tyne and Wear, NE33 1RE Operator Location: As Site Address Authority: Environment Agency - North East Region, Northumbria Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 27th January 1994 Preceded By: Not Given Licence: Superseded By: TW 362 ST Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Scrap Metal As In S.M.Dealers Act'64 Prohibited Waste: Asbestos Clinical Wastes Flammable Solvents Liable To Cause Environmental Hazards Medical (Misuse Of Drugs Act '71) Percussive/Explosive/Similar Waste Poisonous, Noxious, Polluting Wastes Spec.Waste (Epa'90:S62/1996 Regs) Transf./Capacitors Assumed/Cont. Pcb's Waste N.O.S.</p>	A19NW (N)	325	2	435900 566680
116	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: Biolytic Systems Ltd Licence Reference: TW 435 NT Site Location: Northumberland Dock, Hayhole Road, NORTH SHIELDS, Tyne and Wear, NE29 6DY Operator Location: 12 Bridgewater Road, Hertburn Industrial Estate, WASHINGTON, Tyne and Wear, NE37 2SG Authority: Environment Agency - North East Region, Northumbria Area Site Category: Treatment Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 26th January 1995 Preceded By: Not Given Licence: Superseded By: EAWML64021 Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Alcohols Aldehydes And Ketones Aliphatic Acids Aliphatic Hydrocarbons Aluminium Oxides Ammonium Salts Aromatic Acids Aromatic Hydrocarbons Chlorides Esters Ethers Fats, Waxes And Greases Fuel Oil Iron Compounds Iron Oxides Lubricating Oils Mineral Oils Nitrates Nitrites Soaps & Detergents Sodium/Potassium Carbonates Sulphonic Acids Thiosulphates, Sulphates, Sulphites Titanium Compounds Vegetable Oils White Spirit Prohibited Waste: Spec.Waste (Epa'90:S62/1996 Regs)N.O.S Waste N.O.S.</p>	A17SW (NW)	809	2	434580 566280

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
117	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: R Arthurs Licence Reference: TW 273 ST Site Location: Chichester Metals, 111 Chichester Road, SOUTH SHIELDS, Tyne and Wear, NE33 4HE</p> <p>Operator Location: 2 Dunnock Drive, Ayton, Washington, Tyne And Wear Authority: Environment Agency - North East Region, Northumbria Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Licence known to be surrenderedSurrendered Dated: 23rd January 1992 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Asbestos Haz.Items Normally Assoc.With Vehicles Normally Less Than Oils Petrol Scrap Metal As In S.M.Dealers Act '64 Such As Batteries</p> <p>Prohibited Waste: Asbestos Capac'Rs/Transformers Cont. Pcb/Pct'S Clinical Wastes Flammable Solvents Liable To Cause Environmental Hazards Liquid/Sludge Wastes Medical (Misuse Of Drugs Act) Percussive/Explosive Waste Radioactive Wastes Special Wastes</p>	A19SE (E)	823	2	436500 566170
118	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: Durham County Waste Management Co Ltd Licence Reference: EAWML64021 Site Location: Hayhole Road, Northumbria Dock, NORTH SHIELDS, Tyne and Wear, NE29 6DY</p> <p>Operator Location: Aykley Heads Business Centre, Aykley Heads, DURHAM, County Durham, DH1 5TS</p> <p>Authority: Environment Agency - North East Region, Northumbria Area Site Category: Transfer - with treatment Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 9th December 1999 Preceded By: TW 435 NT Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Degradable Commercialwaste (As In Post'98 E.A.Lics & Equivalent To 22.09.02) Degradable Household Waste (As In Post'98 E.A.Lics & Equivalent To 22.09.01) Degradable Industrial Waste (As In Post'98 E.A.Lics & Equivalent To 22.09.03) Inert Materials (As In Post'98 E.A.Lics And Equivalent To 21.00.00) Maximum Waste Permitted By Licence Metal Waste/Scrap Metal (As In Post'98 E.A.Lics And Equivalent To 23.00.00) Special Waste (As In Epa 1990:S62 Of 1996 Regs)</p> <p>Prohibited Waste: Bulk (Loose) Wastes Other Than Bulk Liquids In Tankers Material With Haz.Code H 1 - Explosive Material With Haz.Code H 9 - Infectious Other Waste/Waste Not Otherwise Specified Skip Waste</p>	A16SE (W)	872	2	434510 566270

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
119	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: Durham County Waste Management Co Ltd Licence Reference: TW 346 ST Site Location: Middlefields Transfer Station, Hudson Street, SOUTH SHIELDS, Tyne and Wear, NE34 Operator Location: Aykley Heads Business Centre, Aykley Heads, DURHAM, County Durham, DH1 5TS Authority: Environment Agency - North East Region, Northumbria Area Site Category: Transfer - with Baling(compaction) Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 25th March 1993 Preceded By: TW9 30 ST Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Animal Carcasses Bonded Asbestos-Cement Waste Cans For Recycling Clinical Wastes House, Com + Ind.Waste Max.Waste Permitted By Licence Prohibited Waste: Carcass Contam.With Infectious Disease Spec.Waste (Epa'90:S62/1996 Regs)N.O.S Waste N.O.S.</p>	A8SW (S)	965	2	435500 564800
119	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: South Tyneside M.B.C. Licence Reference: TW9 30 ST Site Location: Middlefields Baling Plant, Middlefields, South Shields, Tyne And Wear Operator Location: Library Buildings, Prince George Square, SOUTH SHIELDS, Tyne and Wear, NE34 0NL Authority: Environment Agency - North East Region, Northumbria Area Site Category: Baling - Compaction Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 1st August 1990 Preceded By: Not Given Licence: Superseded By: TW 346 ST Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Licenced Wastes Not To Hand Local Authority Collected Waste</p>	A8SW (S)	965	2	435500 564800
119	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: Borough Of South Tyneside Licence Reference: TW9 9 ST Site Location: Middlefields, South Shields, Tyne And Wear Operator Location: Hudson Street, Tyne Dock, SOUTH SHIELDS, Tyne and Wear, NE34 0NL Authority: Environment Agency - North East Region, Northumbria Area Site Category: Incineration Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: Not Supplied Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: House, Com + Ind.Waste</p>	A8SW (S)	965	2	435500 564800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
120	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: C.M.R. Ltd Licence Reference: TW 189 NS Site Location: Velva Liquids At Hayhole Road, Northumbria Dock, North Shields, Tyne And Wear</p> <p>Operator Location: Hendon Dock, SUNDERLAND, Tyne and Wear, SR1 2ES Authority: Environment Agency - North East Region, Northumbria Area Site Category: Treatment Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Licence Status: Site now IPC authorised Dated: 22nd July 1991 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: Fuel Oil Halogenated Cleaning Cmpds Halogenated Cmpds(Not Cleaning Cmpds) Hydrocarbons (Not Fuels/Oils/Greases) Kerosene And Derv. Mineral Oils Mixed Organic Compounds Oil/Water Mixtures Organic Acids Organic Cmpds Containing N,S Or P Oxygen Containing Organic Compounds Phenols, Analogues/Derivatives</p> <p>Prohibited Waste: Waste N.O.S.</p>	A16SE (W)	986	2	434400 566300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
121	<p>Control of Major Accident Hazards Sites (COMAH)</p> <p>Name: Inter Terminals Tyneside Limited Location: Northumberland Dock, Hayhole Road, North Shields, Tyne and Wear, NE29 6DY Reference: Not Supplied Type: Upper Tier Status: Active Positional Accuracy: Automatically positioned to the address</p>	A16SE (NW)	961	6	434454 566373
121	<p>Control of Major Accident Hazards Sites (COMAH)</p> <p>Name: Velva Liquids (North Shields) Ltd Location: Northumberland Dock, Whitehill Point, NORTH SHIELDS, Tyne and Wear, NE29 6DY Reference: Not Supplied Type: Upper Tier Status: Record Ceased To Be Supplied Under COMAH Regulations Positional Accuracy: Automatically positioned to the address</p>	A16SE (NW)	961	6	434454 566373
122	<p>Explosive Sites</p> <p>Name: Tyne And Wear/Port Of Tyne Authority Location: , , , T&W, ,Gbr Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A7NE (SW)	623	6	435061 565417
123	<p>Notification of Installations Handling Hazardous Substances (NIHHS)</p> <p>Name: Velva Liquids (North Shields) Limited Location: Northumberland Dock, NORTH SHIELDS, Tyne and Wear, NE29 6DY Status: Not Active Positional Accuracy: Automatically positioned to the address</p>	A16SE (NW)	959	6	434454 566368
124	<p>Planning Hazardous Substance Consents</p> <p>Name: F Lakes & Son Location: Havelock Street, South Shields, Tyne & Wear, Ne33 5dz Authority: South Tyneside Metropolitan Borough Council, Planning Department Application Ref: St/Sc/92/04/Dm Hazardous: Unknown at time of report Substance: Maximum Quantity: 25 Application date: 20th November 1992 Decision: New application refusedRefused Positional Accuracy: Manually positioned to the road within the address or location</p>	A18SE (NE)	260	5	435829 566185
125	<p>Planning Hazardous Substance Consents</p> <p>Name: Velva Liquids (North Shields) Location: Northumberland Dock, NORTH SHIELDS, Tyne and Wear, NE29 6DY Authority: North Tyneside Metropolitan Borough Council, Development Function Application Ref: 99/01681/HAZDEM Hazardous: Combination of Dangerous Substances Substance: Maximum Quantity: 253000 Application date: 20th September 1999 Decision: Deemed Consent GrantedGranted Positional Accuracy: Manually positioned to the address or location</p>	A16SE (NW)	960	7	434456 566375
125	<p>Planning Hazardous Substance Consents</p> <p>Name: Velva Liquids Ltd Location: Hayhole Road, Northumberland Docks, NORTH SHIELDS, Tyne & Wear, NE30 Authority: North Tyneside Metropolitan Borough Council, Development Function Application Ref: 92/00974/Hazsub Hazardous: Unknown at time of report Substance: Maximum Quantity: 100000 Application date: 30th June 1992 Decision: Deemed Consent GrantedGranted Positional Accuracy: Manually positioned to the address or location</p>	A16SE (NW)	962	7	434454 566375

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Middle Coal Measures Formation And South Wales Middle Coal Measures Formation (Undifferentiated)	A13NE (N)	0	1	435567 565869
126	BGS Recorded Mineral Sites Site Name: Ballast Hills Brick Field Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 120996 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	351	1	436030 566450
127	BGS Recorded Mineral Sites Site Name: Jarrow Chemical, Brick & Tile Works Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95997 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A8NE (S)	447	1	435614 565307
128	BGS Recorded Mineral Sites Site Name: Corny Hill Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95996 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	519	1	436098 565448
129	BGS Recorded Mineral Sites Site Name: Corny Hill Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95995 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14SE (SE)	634	1	436245 565469
130	BGS Recorded Mineral Sites Site Name: West House Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95994 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grindstone Post Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14NE (E)	641	1	436355 565818

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
131	BGS Recorded Mineral Sites Site Name: Westoe Location: , Westoe, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95988 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grindstone Post Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	656	1	436310 566262
132	BGS Recorded Mineral Sites Site Name: Anderson'S Brick Field Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 120995 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciolacustrine Deposits, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A19NE (NE)	835	1	436455 566750
133	BGS Recorded Mineral Sites Site Name: Westoe Location: , Westoe, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99018 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	908	1	436519 565408
134	BGS Recorded Mineral Sites Site Name: Carston Quarry Location: , Westoe, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95989 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Permian Geology: Raisby Formation (Lower Magnesian Limestone) Commodity: Dolomite Positional Accuracy: Located by supplier to within 10m	A15NW (E)	977	1	436688 566037
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NE (N)	0	8	435567 565869
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NE (N)	0	-	435567 565869
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435567 565869
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435567 565869
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435541 565935
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435582 565911

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	435472 566084
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	0	1	435520 566189
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	0	1	435486 566258
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18SE (N)	24	1	435614 566158
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	24	1	435558 565777
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	40	1	435619 566040
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18NE (NE)	133	1	435831 566479
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	155	1	435281 565823
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18SE (NE)	168	1	435849 566368
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	187	1	435645 565560
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	212	1	435288 565760
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435567 565869
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	0	1	435489 566227
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435567 565869
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A18NE (N)	122	1	435748 566543
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435582 565911
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435567 565869
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435541 565935
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	435472 566084
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	0	1	435520 566189
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18SE (N)	24	1	435614 566158

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	24	1	435558 565777
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	40	1	435619 566040
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18NE (NE)	133	1	435831 566479
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	155	1	435281 565823
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18SE (NE)	168	1	435849 566368
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	187	1	435645 565560
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	212	1	435288 565760
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435582 565911
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435567 565869
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	435359 565980
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	155	1	435281 565823
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	212	1	435288 565760
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435567 565869
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	0	1	435567 565869

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
135	<p>Contemporary Trade Directory Entries</p> <p>Name: McNulty Offshore Construction Ltd Location: 16-17, Corstorphine Town, South Shields, Tyne and Wear, NE33 1RZ Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	0	-	435540 566164
135	<p>Contemporary Trade Directory Entries</p> <p>Name: Foremost Auto Centre Ltd Location: Pan Bank, Commercial Road, South Shields, Tyne and Wear, NE33 1RT Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	33	-	435572 566193
135	<p>Contemporary Trade Directory Entries</p> <p>Name: Foremost Tyres & Exhausts Location: Pan Bank, Commercial Road, South Shields, Tyne and Wear, NE33 1RT Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	33	-	435572 566193
136	<p>Contemporary Trade Directory Entries</p> <p>Name: Baldwins Industrial Services Plc Location: Corstorphine Town, South Shields, Tyne & Wear, NE33 1RZ Classification: Crane Hire, Sales & Service Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NE (N)	5	-	435558 566080
137	<p>Contemporary Trade Directory Entries</p> <p>Name: Kompass Plastics Location: Unit 8A, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: PVC-U Products - Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	29	-	435697 565941
137	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyneside Fabrications Location: Unit 8a, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Door Manufacturers - Industrial Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	29	-	435697 565941
137	<p>Contemporary Trade Directory Entries</p> <p>Name: Mitre Joinery Location: Portberry House, Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Joinery Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	30	-	435660 565941
137	<p>Contemporary Trade Directory Entries</p> <p>Name: Sutherlands Location: Portberry House, Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Tyre Dealers Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A13NE (NE)	30	-	435660 565941
137	<p>Contemporary Trade Directory Entries</p> <p>Name: Ken Oates Location: Unit 8C, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	56	-	435697 565968
137	<p>Contemporary Trade Directory Entries</p> <p>Name: Ken Oates Location: Unit 8c, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	56	-	435697 565968
138	<p>Contemporary Trade Directory Entries</p> <p>Name: Doyle Bros Location: 5-7, Corstorphine Town, South Shields, Tyne and Wear, NE33 1RZ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	38	-	435593 566013

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
138	<p>Contemporary Trade Directory Entries</p> <p>Name: C C C Manufacturing Location: 7, Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	38	-	435593 566013
138	<p>Contemporary Trade Directory Entries</p> <p>Name: South Tyne Building Supplies Ltd Location: Portberry Street, South Shields, NE33 1QX Classification: Builders' Merchants Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	49	-	435604 566030
139	<p>Contemporary Trade Directory Entries</p> <p>Name: Charles W Taylor & Son Ltd Location: Templetown, South Shields, Tyne and Wear, NE33 5SE Classification: Foundries Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	59	-	435591 565772
140	<p>Contemporary Trade Directory Entries</p> <p>Name: Paint Right Car Care Ltd Location: Unit 8d, Rekendyke Industrial Estate, SOUTH SHIELDS, Tyne and Wear, NE33 5BZ Classification: Car Body Repairs Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	69	-	435697 565980
141	<p>Contemporary Trade Directory Entries</p> <p>Name: Millway Location: Unit 4 Portberry St, South Shields, Tyne & Wear, NE33 1QX Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NE (NE)	81	-	435641 565990
141	<p>Contemporary Trade Directory Entries</p> <p>Name: South Tyne Building Supplies Location: Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Builders' Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	112	-	435669 566024
141	<p>Contemporary Trade Directory Entries</p> <p>Name: T G S Direct Location: Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Gas Suppliers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	113	-	435669 566024
141	<p>Contemporary Trade Directory Entries</p> <p>Name: Tgs Industrial Supplies Ltd Location: Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Gas Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	113	-	435669 566024
141	<p>Contemporary Trade Directory Entries</p> <p>Name: Denz Performance Location: Unit B, Portberry St, South Shields, Tyne and Wear, NE33 1QX Classification: Car Engine Tuning & Diagnostic Services Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A13NE (NE)	129	-	435684 566062
141	<p>Contemporary Trade Directory Entries</p> <p>Name: Sutherlands Tyres Location: Unit A, Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	135	-	435689 566070
142	<p>Contemporary Trade Directory Entries</p> <p>Name: Ford Components Location: East Side, Tyne Dock, South Shields, Tyne and Wear, NE33 5ST Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NW (SW)	85	-	435493 565783

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
143	<p>Contemporary Trade Directory Entries</p> <p>Name: Architectural Entrance Systems Location: Unit 41, Portberry Street, SOUTH SHIELDS, Tyne and Wear, NE33 1QX Classification: Machine Shops Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	97	-	435647 566119
143	<p>Contemporary Trade Directory Entries</p> <p>Name: Ford & Vauxhall Spares Location: Portberry St, South Shields, Tyne & Wear, NE33 1QX Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NE (NE)	115	-	435666 566102
143	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyne & Wear Access Location: Plot C Portberry Way, South Shields, Tyne and Wear, NE33 1SB Classification: Scaffolding & Work Platforms Status: Active Positional Accuracy: Manually positioned to the road within the address or location</p>	A18SE (NE)	140	-	435690 566132
144	<p>Contemporary Trade Directory Entries</p> <p>Name: Cammell Laird Location: Hill St, South Shields, Tyne & Wear, NE33 1RN Classification: Ship Builders, Repairs & Fittings Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A18NE (N)	99	-	435765 566490
144	<p>Contemporary Trade Directory Entries</p> <p>Name: Baps Location: Hill Street, South Shields, Tyne and Wear, NE33 1RN Classification: Packaging & Wrapping Equipment & Supplies Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	A18NE (N)	109	-	435763 566512
144	<p>Contemporary Trade Directory Entries</p> <p>Name: Charles W Taylor & Son Ltd Location: 30 Hill St, South Shields, Tyne & Wear, NE33 1RN Classification: Foundries Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A18NE (N)	109	-	435781 566480
145	<p>Contemporary Trade Directory Entries</p> <p>Name: T M B Electronics Location: Unit 11f, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Electronic Component Manufacturers & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (E)	109	-	435814 565962
145	<p>Contemporary Trade Directory Entries</p> <p>Name: Box Clever Location: Unit 11A, Rekendyke Ind Est, South Shields, Tyne and Wear, NE33 5BZ Classification: Boxes & Cartons Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A13NE (E)	117	-	435822 565964
145	<p>Contemporary Trade Directory Entries</p> <p>Name: Mike Jermy Motors Location: Unit 10A, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	125	-	435802 566004
145	<p>Contemporary Trade Directory Entries</p> <p>Name: Ian'S Location: Unit 10B, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	130	-	435809 566004
145	<p>Contemporary Trade Directory Entries</p> <p>Name: Ian'S Auto Repairs Location: Unit 10b, Rekendyke Industrial Estate, South Shields, NE33 5BZ Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	133	-	435812 566005

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
145	<p>Contemporary Trade Directory Entries</p> <p>Name: Colin Sinclair Motors Location: Unit 10d, Rekendyke Industrial Estate, South Shields, NE33 5BZ Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	133	-	435812 566005
145	<p>Contemporary Trade Directory Entries</p> <p>Name: Dinamic Enterprise Location: Rekendyke Ind Est, South Shields, Tyne And Wear, NE33 5BZ Classification: Manufacturers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A13NE (NE)	142	-	435824 566005
145	<p>Contemporary Trade Directory Entries</p> <p>Name: W Bertram & Sons Ltd Location: Rekendyke Industrial Estate, South Shields, Tyne And Wear, NE33 5BZ Classification: Tank Cleaning & Repairing Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A13NE (NE)	142	-	435824 566005
145	<p>Contemporary Trade Directory Entries</p> <p>Name: Lister Mouldings Ltd Location: Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Plastics - Injection Moulding Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	154	-	435810 566035
146	<p>Contemporary Trade Directory Entries</p> <p>Name: Jennings Of South Shields Location: Commercial Road, South Shields, Tyne and Wear, NE33 1RW Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	112	-	435790 566421
146	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyne Auto Location: Hill Street, South Shields, Tyne and Wear, NE33 1RN Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	132	-	435811 566436
147	<p>Contemporary Trade Directory Entries</p> <p>Name: Westoe Signs & Graphics Location: Unit 3 Ex Charles Taylor Foundry, South Shields, Tyne And Wear, NE33 5TE Classification: T-Shirts Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A13SE (S)	117	-	435564 565677
147	<p>Contemporary Trade Directory Entries</p> <p>Name: D S M Fabrications Location: Progress House, Templetown, South Shields, Tyne and Wear, NE33 5TE Classification: Sheet Metal Work Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	117	-	435564 565677
148	<p>Contemporary Trade Directory Entries</p> <p>Name: Select Car Centre N E Ltd Location: Commercial Road, South Shields, NE33 1RW Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	118	-	435657 566198
149	<p>Contemporary Trade Directory Entries</p> <p>Name: Blades Location: Unit 8, 12, Nile Street, South Shields, Tyne and Wear, NE33 1RH Classification: Tool Sharpening, Repairing & Servicing Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18NE (N)	164	-	435801 566551
149	<p>Contemporary Trade Directory Entries</p> <p>Name: Bm Screen Location: Unit 8, 12, Nile Street, South Shields, Tyne and Wear, NE33 1RH Classification: Screen Process Printers Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A18NE (N)	164	-	435801 566551
149	<p>Contemporary Trade Directory Entries</p> <p>Name: I T C Location: Nile Street, South Shields, Tyne and Wear, NE33 1RH Classification: Waste Disposal Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18NE (N)	179	-	435798 566575

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
150	<p>Contemporary Trade Directory Entries</p> <p>Name: Van Dalen (Uk) Ltd Location: Mitre Pl, South Shields, Tyne and Wear, NE33 5TB Classification: Recycling Centres Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A13SE (S)	168	-	435633 565586
150	<p>Contemporary Trade Directory Entries</p> <p>Name: Alpha Paints Ltd & Bodyshop Location: Unit 23, Mitre Place, South Shields, NE33 5TB Classification: Car Paint & Lacquer Manufacturers & Suppliers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	192	-	435605 565567
151	<p>Contemporary Trade Directory Entries</p> <p>Name: John Nicol Fabrications Location: 4, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Metal Products - Fabricated Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	183	-	435829 566325
151	<p>Contemporary Trade Directory Entries</p> <p>Name: Garage & Recovery Location: 6, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	189	-	435835 566323
151	<p>Contemporary Trade Directory Entries</p> <p>Name: Mvh Motors Location: 6, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	189	-	435835 566323
151	<p>Contemporary Trade Directory Entries</p> <p>Name: D M Auto Services Location: 6, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Mechanical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	189	-	435835 566323
151	<p>Contemporary Trade Directory Entries</p> <p>Name: Premier Motor Co Location: 6, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A18SE (NE)	189	-	435835 566323
152	<p>Contemporary Trade Directory Entries</p> <p>Name: Cast Tec Location: East Side, Tyne Dock, South Shields, Tyne and Wear, NE33 5SP Classification: Fireplaces & Mantelpieces Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SW (SW)	184	-	435357 565746
153	<p>Contemporary Trade Directory Entries</p> <p>Name: P M C Cars Location: Unit 3, Nicholson Buildings, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	185	-	435542 565605
154	<p>Contemporary Trade Directory Entries</p> <p>Name: C J Print Location: Riverside Ho, Commercial Rd, South Shields, Tyne & Wear, NE33 1RW Classification: Printers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A18NE (NE)	187	-	435862 566480
155	<p>Contemporary Trade Directory Entries</p> <p>Name: Pizza Pack Location: Tyne View House, Templetown, South Shields, Tyne and Wear, NE33 5SH Classification: Boxes & Cartons Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A13SE (S)	199	-	435579 565568

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
156	<p>Contemporary Trade Directory Entries</p> <p>Name: Hi Spec Location: West Walpole St, South Shields, Tyne And Wear, NE33 5BY Classification: Mould Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NE (NE)	202	-	435830 566079
156	<p>Contemporary Trade Directory Entries</p> <p>Name: C-Tech North East Location: Unit 2, Rekenyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A13NE (NE)	213	-	435802 566107
156	<p>Contemporary Trade Directory Entries</p> <p>Name: Hi - Spec Composites Location: West Walpole Street, South Shields, Tyne and Wear, NE33 5BY Classification: Glass Fibre Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	221	-	435842 566094
156	<p>Contemporary Trade Directory Entries</p> <p>Name: East Coast Fibreglass Supplies Location: East Coast Fibreglass Supplies Ltd, West Walpole Street, South Shields, NE33 5BY Classification: Glass Fibre Moulding, Materials & Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	228	-	435841 566103
156	<p>Contemporary Trade Directory Entries</p> <p>Name: Hedley (Engineering Services) Ltd Location: Havelock Street, South Shields, Tyne and Wear, NE33 5DZ Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	232	-	435816 566122
156	<p>Contemporary Trade Directory Entries</p> <p>Name: Eldon Street Factory The Location: Eldon Street, South Shields, Tyne and Wear, NE33 5BU Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	232	-	435816 566122
156	<p>Contemporary Trade Directory Entries</p> <p>Name: Circatex Location: Eldon Street, South Shields, Tyne and Wear, NE33 5BU Classification: Printed Circuit Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	232	-	435816 566122
156	<p>Contemporary Trade Directory Entries</p> <p>Name: Punjab Kitchen Location: Eldon Street, South Shields, Tyne and Wear, NE33 5BU Classification: Food Products - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	232	-	435816 566122
156	<p>Contemporary Trade Directory Entries</p> <p>Name: Hi-Spec Fabrication Ltd Location: Havelock Street, South Shields, Tyne and Wear, NE33 5DZ Classification: Window Frames - Sales & Service Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	264	-	435832 566149
157	<p>Contemporary Trade Directory Entries</p> <p>Name: General Laboratory Services Location: Unit 1b, Rekenyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Sheet Metal Work Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14NW (NE)	211	-	435887 566038
158	<p>Contemporary Trade Directory Entries</p> <p>Name: Trinity Motors Location: A, 140, Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	235	-	435899 566523

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
158	<p>Contemporary Trade Directory Entries</p> <p>Name: Stan'S Car Sales Location: A, 140, Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	235	-	435899 566523
158	<p>Contemporary Trade Directory Entries</p> <p>Name: J R Selby Coachworks Ltd Location: Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Commercial Vehicle Bodybuilders & Repairers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	237	-	435913 566481
158	<p>Contemporary Trade Directory Entries</p> <p>Name: J R Selby Engineering Ltd Location: Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Sheet Metal Work Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	237	-	435913 566481
158	<p>Contemporary Trade Directory Entries</p> <p>Name: Stans Auto Services Location: Commercial Road, South Shields, NE33 1RQ Classification: Mechanical Engineers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	251	-	435925 566492
159	<p>Contemporary Trade Directory Entries</p> <p>Name: Peterson Printers Location: 12, Laygate, South Shields, Tyne and Wear, NE33 5RP Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	246	-	435883 566293
160	<p>Contemporary Trade Directory Entries</p> <p>Name: Direct Timber Sales Location: Evans Yard, Templetown, South Shields, Tyne and Wear, NE33 5SH Classification: Builders' Merchants Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	A13SE (S)	251	-	435616 565504
160	<p>Contemporary Trade Directory Entries</p> <p>Name: Garden Lane Garage Location: Evans Yard, Templetown, South Shields, Tyne and Wear, NE33 5SH Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	A13SE (S)	251	-	435616 565504
161	<p>Contemporary Trade Directory Entries</p> <p>Name: Tiptop Tyres Location: 4a, Evans Yard, Templetown, South Shields, Tyne and Wear, NE33 5SH Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	272	-	435635 565481
161	<p>Contemporary Trade Directory Entries</p> <p>Name: Garden Lane Garage Location: 4 Evans Yard, Templetown, South Shields, NE33 5SH Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	283	-	435638 565470
161	<p>Contemporary Trade Directory Entries</p> <p>Name: G L Motors Location: Unit 4, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Car Body Repairs Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	304	-	435629 565449
161	<p>Contemporary Trade Directory Entries</p> <p>Name: W S Newham & Sons Location: South Shields, Tyne And Wear, Ne33 5tb Classification: Coal & Smokeless Fuel Merchants & Distributors Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A13SE (S)	305	-	435629 565449
161	<p>Contemporary Trade Directory Entries</p> <p>Name: Dennis Parker Location: Mitre Pl, South Shields, Tyne and Wear, NE33 5TB Classification: Road Haulage Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A8NE (S)	322	-	435638 565430

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
161	<p>Contemporary Trade Directory Entries</p> <p>Name: Tlc Cars Location: 2 Mitre Pl, South Shields, Tyne & Wear, NE33 5TB Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A8NE (S)	323	-	435629 565430
161	<p>Contemporary Trade Directory Entries</p> <p>Name: Mitre Breakers Location: 2 Mitre Pl, South Shields, Tyne & Wear, NE33 5TB Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A8NE (S)	324	-	435622 565430
161	<p>Contemporary Trade Directory Entries</p> <p>Name: Lamb International Ltd Location: Unit 2, Mitre Place, South Shields, NE33 5TB Classification: Road Haulage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A8NE (S)	353	-	435617 565401
162	<p>Contemporary Trade Directory Entries</p> <p>Name: Falcon Engineering Location: 4, Cone Street, South Shields, Tyne and Wear, NE33 1RE Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NW (N)	278	-	435876 566639
162	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyne Slipway & Engineering Location: Commercial Rd, South Shields, Tyne and Wear, NE33 1RP Classification: Ship Builders, Repairs & Fittings Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A19NW (N)	308	-	435880 566675
163	<p>Contemporary Trade Directory Entries</p> <p>Name: Temple Town Autos Location: Unit 3, Mitre Place, South Shields, NE33 5TB Classification: Car Breakers & Dismantlers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	294	-	435680 565457
163	<p>Contemporary Trade Directory Entries</p> <p>Name: Mountain Metals Location: Unit 10, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Metal Products - Fabricated Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A8NE (S)	341	-	435668 565410
164	<p>Contemporary Trade Directory Entries</p> <p>Name: Scrap Cars Vans Caravans Buyer Location: Eldon House, Rekenyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	295	-	435877 566159
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Saddle Craft Seating Location: 2 Evans Yard, Templetown, South Shields, NE33 5SH Classification: Motor Cycle & Component Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	296	-	435585 565465
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyne View Garage Location: Unit 2, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Mot Testing Centres Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A13SE (S)	307	-	435603 565450
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Travis Perkins Plc Location: Unit 1, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Builders' Merchants Status: Active Positional Accuracy: Automatically positioned to the address</p>	A8NE (S)	332	-	435572 565430

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Peters Coachworks Location: Unit 1, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8NE (S)	332	-	435572 565430
165	<p>Contemporary Trade Directory Entries</p> <p>Name: D & E Autos Location: Unit 1, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A8NE (S)	332	-	435572 565430
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Motorway Tyres & Accessories Ltd Location: 2, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	A8NE (S)	367	-	435589 565391
166	<p>Contemporary Trade Directory Entries</p> <p>Name: Osborne Motor Transport Ltd Location: Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Road Haulage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	305	-	435968 566541
167	<p>Contemporary Trade Directory Entries</p> <p>Name: Riverview Cars Location: 1a The Foundry, Commercial Road, South Shields, Tyne And Wear, NE33 5TE Classification: Car Dealers Status: Active Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NW (NE)	327	-	435944 566633
167	<p>Contemporary Trade Directory Entries</p> <p>Name: Malac Trading Ltd Location: Commercial Rd, South Shields, Tyne and Wear, NE33 1RP Classification: Marine Engineers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NW (NE)	350	-	435956 566656
168	<p>Contemporary Trade Directory Entries</p> <p>Name: Team Hawk Location: Tyne Dock, South Shields, Tyne & Wear, NE34 9PL Classification: Road Haulage Services Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A13SW (S)	329	-	435472 565478
169	<p>Contemporary Trade Directory Entries</p> <p>Name: Team Hawk International Ltd Location: International Ferry Terminal, Royal Quays, North Shields, Tyne & Wear, NE29 6EE Classification: Freight Forwarders Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A18NW (NW)	348	-	435252 566586
170	<p>Contemporary Trade Directory Entries</p> <p>Name: Crash Magic Location: Unit 20, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8NE (S)	366	-	435683 565385
170	<p>Contemporary Trade Directory Entries</p> <p>Name: Mitre Motors Location: Unit 12, Mitre Place, South Shields, Tyne and Wear, NE33 5TB Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8NE (S)	366	-	435684 565385
171	<p>Contemporary Trade Directory Entries</p> <p>Name: New Coates Location: 77 Frederick St, South Shields, Tyne And Wear, NE33 5ED Classification: Plaster Manufacturers & Suppliers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A14NW (E)	382	-	436092 565992

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
171	<p>Contemporary Trade Directory Entries</p> <p>Name: The Creations Workshop Location: 89, Frederick Street, SOUTH SHIELDS, Tyne and Wear, NE33 5ED Classification: Wrought Ironwork Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	382	-	436092 565992
171	<p>Contemporary Trade Directory Entries</p> <p>Name: Newcoats Location: 77, Frederick Street, South Shields, Tyne and Wear, NE33 5ED Classification: Plaster Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	392	-	436097 566013
172	<p>Contemporary Trade Directory Entries</p> <p>Name: D F D S Seaways Newcastle Ltd Location: Albert Edward Dock, North Shields, Tyne And Wear, NE29 6EE Classification: Freight Forwarders Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A17NE (NW)	404	-	435181 566578
172	<p>Contemporary Trade Directory Entries</p> <p>Name: Applied Mechanical Scotland Ltd Location: Albert Edward Dock, North Shields, Tyne and Wear, NE29 6EE Classification: Engineering Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A17NE (NW)	404	-	435181 566579
172	<p>Contemporary Trade Directory Entries</p> <p>Name: Port Of Tyne Authority Location: Ferry Terminal, Albert Edward Dock, NORTH SHIELDS, Tyne and Wear, NE29 6EA Classification: Ports, Docks & Harbours Status: Active Positional Accuracy: Automatically positioned to the address</p>	A17NE (NW)	404	-	435181 566578
172	<p>Contemporary Trade Directory Entries</p> <p>Name: Dfids Transport Location: Albert Edward Dock, North Shields, Tyne and Wear, NE29 6EE Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A17NE (NW)	405	-	435181 566579
172	<p>Contemporary Trade Directory Entries</p> <p>Name: D S D F Transport (Uk) Ltd Location: Albert Edward Dock, North Shields, Tyne and Wear, NE29 6EE Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A17NE (NW)	405	-	435181 566579
173	<p>Contemporary Trade Directory Entries</p> <p>Name: Timber Line (Diy) Ltd Location: 38, Frederick Street, South Shields, Tyne and Wear, NE33 5EA Classification: Fencing Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	415	-	436070 566132
174	<p>Contemporary Trade Directory Entries</p> <p>Name: Plastic Cladding Centre Location: 45, Frederick Street, South Shields, NE33 5DY Classification: Builders' Merchants Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	416	-	436097 566083
175	<p>Contemporary Trade Directory Entries</p> <p>Name: Tudor Road Garage Location: Tudor Rd, South Shields, Tyne & Wear, NE33 4PQ Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NW (NE)	420	-	436092 566522
175	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyneside Car Sales Ltd Location: Tudor Road, South Shields, Tyne and Wear, NE33 5RD Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	450	-	436126 566496

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
175	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyneside Car Sales Location: Tudor Road, South Shields, Tyne and Wear, NE33 5RD Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	450	-	436126 566496
175	<p>Contemporary Trade Directory Entries</p> <p>Name: Harkers M O T Location: Tudor Road, SOUTH SHIELDS, Tyne and Wear, NE33 4PQ Classification: Mot Testing Centres Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	455	-	436128 566519
176	<p>Contemporary Trade Directory Entries</p> <p>Name: Buyproducts Location: 17, Frederick Street, South Shields, Tyne and Wear, NE33 5DY Classification: Hardware Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	469	-	436117 566159
176	<p>Contemporary Trade Directory Entries</p> <p>Name: Community Design & Print Location: 9-13, Frederick Street, South Shields, Tyne and Wear, NE33 5DY Classification: Photocopiers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	490	-	436123 566186
177	<p>Contemporary Trade Directory Entries</p> <p>Name: Tandem Beck Location: Amne Buildings, Tudor Rd, South Shields, Tyne and Wear, NE33 5RD Classification: Textile Manufacturing Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A19SW (NE)	473	-	436152 566448
177	<p>Contemporary Trade Directory Entries</p> <p>Name: North Eastern Distribution Location: Western Approach, South Shields, Tyne and Wear, NE33 5QZ Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NW (NE)	506	-	436184 566472
178	<p>Contemporary Trade Directory Entries</p> <p>Name: Decorative Shades 2 Location: 14, New Green Street, SOUTH SHIELDS, Tyne and Wear, NE33 5DL Classification: Painting & Decorating Supplies Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	504	-	436168 566318
179	<p>Contemporary Trade Directory Entries</p> <p>Name: A S Autosalvage Location: Charles Taylor Foundry, South Shields, Tyne and Wear, NE33 5SE Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A8NW (S)	557	-	435449 565234
180	<p>Contemporary Trade Directory Entries</p> <p>Name: Kwik Fit Location: 132, Laygate, South Shields, Tyne and Wear, NE33 4JD Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14NE (E)	571	-	436262 566087
181	<p>Contemporary Trade Directory Entries</p> <p>Name: Crown Location: Crown House, 4 Western Approach, South Shields, Tyne and Wear, NE33 5QU Classification: PVC-U Products - Manufacturers & Suppliers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NE (NE)	580	-	436249 566548
181	<p>Contemporary Trade Directory Entries</p> <p>Name: The Arndale Group Location: Unit D-e, Western Approach, South Shields, Tyne and Wear, NE33 5NN Classification: Nuts, Bolts & Fixings Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	610	-	436285 566519

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
181	<p>Contemporary Trade Directory Entries</p> <p>Name: Arndale Engineering Location: D-E, Unit, Western Approach, South Shields, Tyne and Wear, NE33 5NN Classification: Nuts, Bolts & Fixings Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	610	-	436285 566519
181	<p>Contemporary Trade Directory Entries</p> <p>Name: J W Rae Location: Unit A, Western Approach, SOUTH SHIELDS, Tyne and Wear, NE33 5QU Classification: Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	629	-	436300 566548
182	<p>Contemporary Trade Directory Entries</p> <p>Name: Solar Solve Ltd Location: 3a, Tyne Dock East Side, South Shields, Tyne and Wear, NE33 5SQ Classification: Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8NE (S)	594	-	435572 565164
182	<p>Contemporary Trade Directory Entries</p> <p>Name: Sun Shade Systems Location: Unit 3A Tyne Dock East Side, Port Of Tyne, South Shields, Tyne and Wear, NE33 5SQ Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A8NE (S)	595	-	435619 565158
183	<p>Contemporary Trade Directory Entries</p> <p>Name: Dean Garages (South Shields) Ltd Location: Dean Road, South Shields, Tyne and Wear, NE33 5PY Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SE (E)	598	-	436275 565663
184	<p>Contemporary Trade Directory Entries</p> <p>Name: Ats Euromaster Ltd Location: Western Approach, South Shields, Tyne and Wear, NE33 5QU Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	609	-	436274 566572
185	<p>Contemporary Trade Directory Entries</p> <p>Name: Marias Location: 76, Dacre Street, South Shields, Tyne and Wear, NE33 5QB Classification: Ironing & Home Laundry Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14NE (E)	614	-	436329 565828
186	<p>Contemporary Trade Directory Entries</p> <p>Name: Aquila Systems Location: Aquila House, 283, Laygate, SOUTH SHIELDS, Tyne and Wear, NE33 4QN Classification: Computer Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14NE (E)	639	-	436333 566086
187	<p>Contemporary Trade Directory Entries</p> <p>Name: Stagecoach Location: Dean Road, South Shields, Tyne and Wear, NE33 4HZ Classification: Bus & Coach Operators & Stations Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SE (E)	647	-	436350 565756
187	<p>Contemporary Trade Directory Entries</p> <p>Name: Stagecoach Location: Dean Road, South Shields, Tyne and Wear, NE33 4HZ Classification: Bus & Coach Operators & Stations Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SE (E)	647	-	436350 565756
188	<p>Contemporary Trade Directory Entries</p> <p>Name: C V N Print Location: 42, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19SE (NE)	652	-	436331 566436

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
188	<p>Contemporary Trade Directory Entries</p> <p>Name: Gary Tuck Workshops Ltd Location: 38, Maxwell Street, South Shields, NE33 4PU Classification: Car Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	662	-	436341 566460
188	<p>Contemporary Trade Directory Entries</p> <p>Name: G & N'S Location: Maxwell St, South Shields, Tyne & Wear, NE33 4PU Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NE (NE)	675	-	436354 566454
188	<p>Contemporary Trade Directory Entries</p> <p>Name: Henderson Motors Location: Maxwell St, South Shields, Tyne and Wear, NE33 4PU Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NE (NE)	675	-	436354 566464
188	<p>Contemporary Trade Directory Entries</p> <p>Name: Beacon Safety Showers Location: Beacon House, Maxwell St, South Shields, Tyne and Wear, NE33 4PU Classification: Glass Fibre Moulding, Materials & Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A19SE (NE)	676	-	436355 566446
188	<p>Contemporary Trade Directory Entries</p> <p>Name: Lees Cleaning Location: 43 Maxwell st, South Shields, Tyne And Wear, NE33 4PU Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A19SE (NE)	685	-	436364 566418
188	<p>Contemporary Trade Directory Entries</p> <p>Name: Lees Premier Cleaning Ltd Location: 43, Maxwell Street, South Shields, NE33 4PU Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SE (NE)	686	-	436365 566419
188	<p>Contemporary Trade Directory Entries</p> <p>Name: Carmeleon Concepts Location: 39, Maxwell Street, South Shields, NE33 4PU Classification: Car Customisation & Conversion Specialists Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	696	-	436375 566455
189	<p>Contemporary Trade Directory Entries</p> <p>Name: South Tyneside Auto Electrics Location: 1 Maxwell St, South Shields, Tyne and Wear, NE33 4PU Classification: Electronic Engineers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NE (NE)	659	-	436314 566620
189	<p>Contemporary Trade Directory Entries</p> <p>Name: Harlow Printing Ltd Location: 7-21, Maxwell Street, South Shields, NE33 4PU Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	702	-	436354 566635
190	<p>Contemporary Trade Directory Entries</p> <p>Name: Maxwell Street Motors Location: 32-36, Maxwell Street, South Shields, NE33 4PU Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	663	-	436341 566490
190	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyneside Tyre Services Location: 28-30, Maxwell Street, South Shields, NE33 4PU Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	664	-	436339 566516
190	<p>Contemporary Trade Directory Entries</p> <p>Name: Performance Cars Location: 29-35, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	695	-	436371 566513

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
190	<p>Contemporary Trade Directory Entries</p> <p>Name: S M H Products Ltd Location: 29-35, Maxwell Street, South Shields, NE33 4PU Classification: Glass Fibre Moulding, Materials & Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	697	-	436373 566505
191	<p>Contemporary Trade Directory Entries</p> <p>Name: M A P Engineering (Ne) Ltd Location: Maxwell St, South Shields, Tyne & Wear, NE33 4PU Classification: Mechanical Engineers Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A19NE (NE)	664	-	436336 566540
191	<p>Contemporary Trade Directory Entries</p> <p>Name: Toney Minchella Location: 18-20, Maxwell Street, South Shields, NE33 4PU Classification: Ice Cream Manufacturers & Suppliers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	671	-	436339 566562
191	<p>Contemporary Trade Directory Entries</p> <p>Name: N P S Services Location: 14, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Wrought Ironwork Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	671	-	436334 566589
191	<p>Contemporary Trade Directory Entries</p> <p>Name: Euro Hire & Sales Ltd Location: Maxwell St, South Shields, Tyne and Wear, NE33 4PU Classification: Corrosion Prevention & Control Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NE (NE)	686	-	436352 566576
192	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyne & Wear Marine Ltd Location: East Side, Tyne Dock, South Shields, Tyne and Wear, NE33 5SP Classification: Marine Engineering Equipment Manufacturers Status: Active Positional Accuracy: Automatically positioned in the proximity of the address</p>	A8SE (S)	680	-	435609 565073
192	<p>Contemporary Trade Directory Entries</p> <p>Name: Denholm Wilhelmsen Ltd Location: Navigation House, Tyne Dock, South Shields, Tyne and Wear, NE34 0AB Classification: Freight Forwarders Status: Active Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	681	-	435608 565073
192	<p>Contemporary Trade Directory Entries</p> <p>Name: Adams Location: Navigation House, Tyne Dock, South Shields, Tyne and Wear, NE34 0AB Classification: Road Haulage Services Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A8SE (S)	681	-	435608 565073
192	<p>Contemporary Trade Directory Entries</p> <p>Name: Djv Transport Ltd Location: Navigation House, Tyne Dock, South Shields, Tyne & Wear, NE34 9PT Classification: Road Haulage Services Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A8SE (S)	682	-	435608 565072
193	<p>Contemporary Trade Directory Entries</p> <p>Name: A J Edge Ltd Location: Navigation House, Tyne Dock, South Shields, Tyne and Wear, NE34 0AB Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	A8SW (S)	682	-	435517 565085
194	<p>Contemporary Trade Directory Entries</p> <p>Name: Tool Repair Centre Location: Unit 4/6, Holman Court, Henry Robson Way, South Shields, Tyne and Wear, NE33 1RL Classification: Tool Sharpening, Repairing & Servicing Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	695	-	436312 566729

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
194	<p>Contemporary Trade Directory Entries</p> <p>Name: Plastics Centre South Shields Ltd Location: Unit 4, Holman Court, Henry Robson Way, South Shields, NE33 1RL Classification: PVC-U Products - Manufacturers & Suppliers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19NE (NE)	698	-	436320 566718
195	<p>Contemporary Trade Directory Entries</p> <p>Name: Pressit Location: Unit 306, Tedco Business Works, Henry Robson Way, South Shields, Tyne and Wear, NE33 1RF Classification: Ironing & Home Laundry Services Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A19NE (NE)	700	-	436296 566772
196	<p>Contemporary Trade Directory Entries</p> <p>Name: Lynch Motors Ltd Location: West Way, South Shields, Tyne and Wear, NE33 4SP Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	741	-	436106 565148
196	<p>Contemporary Trade Directory Entries</p> <p>Name: Lynch Motors Of Parkside Ltd Location: West Way, South Shields, Tyne and Wear, NE33 4SP Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	741	-	436106 565148
197	<p>Contemporary Trade Directory Entries</p> <p>Name: T J Thomson & Son Ltd Location: Maritime House, Tyne Dock, South Shields, Tyne & Wear, NE34 9PT Classification: Scrap Metal Merchants Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A8SW (S)	788	-	435389 565010
197	<p>Contemporary Trade Directory Entries</p> <p>Name: Cemex UK Location: Jarrow Road, Tyne Dock, South Shields, Tyne And Wear, NE34 9PT Classification: Concrete & Mortar Ready Mixed Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A8SW (S)	817	-	435382 564982
198	<p>Contemporary Trade Directory Entries</p> <p>Name: Harle Peel Bottled Gas Supplies Location: Hudson Street, South Shields, NE34 0AD Classification: Gas Suppliers - Bottled Status: Active Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	791	-	435562 564967
198	<p>Contemporary Trade Directory Entries</p> <p>Name: Freeway Tyres Location: Hudson Street, South Shields, Tyne and Wear, NE34 0AD Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	810	-	435581 564946
198	<p>Contemporary Trade Directory Entries</p> <p>Name: One Stop Tyres Location: Hudson Street, SOUTH SHIELDS, Tyne and Wear, NE34 0AD Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	810	-	435581 564946
199	<p>Contemporary Trade Directory Entries</p> <p>Name: Maritime Transport Location: West Side, Tyne Dock, South Shields, Tyne and Wear, NE34 9PL Classification: Freight Forwarders Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	798	-	435150 565133
200	<p>Contemporary Trade Directory Entries</p> <p>Name: Steward Site Engineering Ltd Location: 28, Frost Mews, South Shields, Tyne and Wear, NE33 4AL Classification: Agricultural Engineers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19SE (NE)	803	-	436463 566267

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
201	<p>Contemporary Trade Directory Entries</p> <p>Name: Harlepul Bottle Location: Hudson Street, South Shields, Tyne And Wear, NE34 0AD Classification: Gas Suppliers - Bottled Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A8SE (S)	807	-	435637 564944
201	<p>Contemporary Trade Directory Entries</p> <p>Name: Premier Waste Management Co Location: South Shields, Tyne And Wear, Ne34 0ad Classification: Waste Disposal Services Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A8SE (S)	807	-	435637 564944
202	<p>Contemporary Trade Directory Entries</p> <p>Name: E M R Location: West Side, Tyne Dock, South Shields, Tyne and Wear, NE34 9PL Classification: Scrap Metal Merchants Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A12SW (W)	809	-	434621 565605
203	<p>Contemporary Trade Directory Entries</p> <p>Name: Dean Clean Location: 174, Dean Road, South Shields, Tyne and Wear, NE33 4AQ Classification: Laundries & Launderettes Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14NE (E)	819	-	436539 565916
203	<p>Contemporary Trade Directory Entries</p> <p>Name: Country Apparel Location: 172, Dean Road, South Shields, NE33 4AQ Classification: Clothing & Fabrics - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A15NW (E)	829	-	436549 565910
204	<p>Contemporary Trade Directory Entries</p> <p>Name: Bizzy (Uk) Location: 129, Victoria Road, South Shields, Tyne and Wear, NE33 4LP Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SE (NE)	826	-	436506 566419
204	<p>Contemporary Trade Directory Entries</p> <p>Name: Bizzy Location: 129, Victoria Road, South Shields, Tyne and Wear, NE33 4LP Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SE (NE)	826	-	436506 566419
205	<p>Contemporary Trade Directory Entries</p> <p>Name: Port Of Tyne Logistics Location: Merchant House, Tyne Dock, South Shields, Tyne and Wear, NE34 9PY Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8SW (S)	831	-	435229 565038
205	<p>Contemporary Trade Directory Entries</p> <p>Name: Port Of Tyne Location: Merchant House, Tyne Dock, South Shields, Tyne and Wear, NE34 9PY Classification: Road Haulage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A8SW (S)	831	-	435229 565038
205	<p>Contemporary Trade Directory Entries</p> <p>Name: Port Of Tyne Logistics Location: Merchant House, Tyne Dock, South Shields, Tyne and Wear, NE34 9PY Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8SW (S)	831	-	435229 565038
206	<p>Contemporary Trade Directory Entries</p> <p>Name: Mill-Dam Portland Location: 25-27, Shrewsbury Terrace, South Shields, Tyne and Wear, NE33 4LF Classification: Bus & Coach Operators & Stations Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SE (SE)	856	-	436484 565462
207	<p>Contemporary Trade Directory Entries</p> <p>Name: Plastic Cladding Centre Location: 60, Stanhope Road, South Shields, Tyne and Wear, NE33 4BS Classification: Cladding Suppliers & Installers Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A14SE (E)	862	-	436529 565590

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
207	<p>Contemporary Trade Directory Entries</p> <p>Name: Stanhope Electricals Location: 60, Stanhope Road, South Shields, Tyne and Wear, NE33 4BS Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SE (E)	862	-	436529 565590
208	<p>Contemporary Trade Directory Entries</p> <p>Name: 3d Location: 51, Newmarket Walk, South Shields, Tyne and Wear, NE33 4NP Classification: Breakdown and Recovery Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A20SW (NE)	884	-	436564 566449
209	<p>Contemporary Trade Directory Entries</p> <p>Name: Mitie Cleaning Environmental Services Ltd Location: Sextant House, Tyne Dock, South Shields, Tyne and Wear, NE34 9PY Classification: Cleaning Materials & Equipment Status: Active Positional Accuracy: Automatically positioned to the address</p>	A8SW (S)	886	-	435344 564922
210	<p>Contemporary Trade Directory Entries</p> <p>Name: Fires & Fenders Location: South Shields, NE34 0AE Classification: Fireplaces & Mantelpieces Status: Active Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	889	-	435694 564862
211	<p>Contemporary Trade Directory Entries</p> <p>Name: Tarmac Ltd Location: West Side, Tyne Dock, SOUTH SHIELDS, Tyne and Wear, NE34 9PL Classification: Asphalt & Coated Macadam Laying Contractors Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A8SW (S)	894	-	435224 564968
212	<p>Contemporary Trade Directory Entries</p> <p>Name: S & G Cleaning Location: 67, Stanhope Road, South Shields, Tyne and Wear, NE33 4BQ Classification: Carpet, Curtain & Upholstery Cleaners Status: Active Positional Accuracy: Automatically positioned to the address</p>	A15SW (E)	913	-	436571 565551
213	<p>Contemporary Trade Directory Entries</p> <p>Name: R G Motors Location: 4, Albany Street West, South Shields, Tyne and Wear, NE33 4BE Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A15SW (E)	913	-	436593 565634
214	<p>Contemporary Trade Directory Entries</p> <p>Name: Cemex South Shields Plant Location: Wilsons Yard, Jarrow Road, South Shields, Tyne And Wear, NE34 9PL Classification: Sand, Gravel & Other Aggregates Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A7SE (SW)	937	-	435037 565046
215	<p>Contemporary Trade Directory Entries</p> <p>Name: Tradebe Location: Northumberland Dock, Hayhole Road, North Shields, Tyne And Wear, NE29 6DY Classification: Chemical Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A16SE (W)	940	-	434453 566313
216	<p>Contemporary Trade Directory Entries</p> <p>Name: T W Holdsworth Location: 134, Dean Road, South Shields, Tyne and Wear, NE33 4AP Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A15NW (E)	943	-	436662 565935
216	<p>Contemporary Trade Directory Entries</p> <p>Name: Laundrymat Laundry Location: 126, Dean Road, South Shields, Tyne and Wear, NE33 4AW Classification: Laundries & Launderettes Status: Active Positional Accuracy: Automatically positioned to the address</p>	A15NW (E)	954	-	436674 565934

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
217	<p>Contemporary Trade Directory Entries</p> <p>Name: M A C Electronics Location: 8, Derby Terrace, South Shields, NE33 4PN Classification: Electronic Engineers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A20NW (NE)	945	-	436605 566630
218	<p>Contemporary Trade Directory Entries</p> <p>Name: Capitol Systems Location: Northumberland Dock, Hayhole Road, North Shields, Tyne and Wear, NE29 6DY Classification: Waste Disposal Services Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	A16SE (NW)	961	-	434454 566373
219	<p>Contemporary Trade Directory Entries</p> <p>Name: Ironing Maids Location: 26 Westoe Rd, South Shields, Tyne and Wear, NE33 4LZ Classification: Ironing & Home Laundry Services Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A20NW (NE)	968	-	436629 566629
219	<p>Contemporary Trade Directory Entries</p> <p>Name: Gas Trade Centre Location: 48-50, Westoe Road, South Shields, Tyne and Wear, NE33 4NA Classification: Boilers - Servicing, Replacements & Repairs Status: Active Positional Accuracy: Automatically positioned to the address</p>	A20NW (NE)	978	-	436646 566587
219	<p>Contemporary Trade Directory Entries</p> <p>Name: D D'S Print Shop Location: 64, Westoe Road, South Shields, Tyne and Wear, NE33 4NA Classification: T-Shirts Status: Active Positional Accuracy: Automatically positioned to the address</p>	A20NW (NE)	987	-	436661 566544
220	<p>Fuel Station Entries</p> <p>Name: Lynch Motors Of Parkside Location: West Way, West Park, South Shields, Tyne & Wear, NE33 4SP Brand: Unbranded Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	740	-	436105 565148
221	<p>Fuel Station Entries</p> <p>Name: Reef Service Station Location: Hudson Street, West Harton,, SOUTH SHIELDS, Tyne & Wear, NE34 0AG Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Manually positioned to the address or location</p>	A8SE (S)	840	-	435600 564914

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices South Tyneside Metropolitan Borough Council - Neighbourhood Services North Tyneside Metropolitan Borough Council - Environmental Health Department	December 2014 March 2015	Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - North East Region	April 2016	Quarterly
Enforcement and Prohibition Notices Environment Agency - North East Region	March 2013	As notified
Integrated Pollution Controls Environment Agency - North East Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - North East Region	July 2016	Quarterly
Local Authority Integrated Pollution Prevention And Control North Tyneside Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Environmental Health Department	April 2014 September 2012	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Controls North Tyneside Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Environmental Health Department	April 2014 September 2012	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements North Tyneside Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Environmental Health Department	April 2014 September 2012	Annual Rolling Update Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - North East Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - North East Region	March 2013	As notified
Prosecutions Relating to Controlled Waters Environment Agency - North East Region	March 2013	As notified
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	July 2016 July 2016	Quarterly Quarterly
Water Abstractions Environment Agency - North East Region	July 2016	Quarterly
Water Industry Act Referrals Environment Agency - North East Region	July 2016	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	April 2016	Quarterly

Agency & Hydrological	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2016	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2016	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2016	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	February 2016	Quarterly
Flood Defences Environment Agency - Head Office	February 2016	Quarterly
Detailed River Network Lines Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually
Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	May 2016	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North East Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	May 2016 May 2016	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area Environment Agency - North East Region - Yorkshire Area	April 2016 April 2016 April 2016	Quarterly Quarterly Quarterly
Local Authority Landfill Coverage North Tyneside Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Planning Department	May 2000 May 2000	Not Applicable Not Applicable
Local Authority Recorded Landfill Sites North Tyneside Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Planning Department	May 2000 May 2000	Not Applicable Not Applicable
Registered Landfill Sites Environment Agency - North East Region - Northumbria Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency - North East Region - Northumbria Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - North East Region - Northumbria Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	July 2016	Bi-Annually
Explosive Sites Health and Safety Executive	February 2016	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements North Tyneside Metropolitan Borough Council - Development Function South Tyneside Metropolitan Borough Council - Planning Department	February 2016 February 2016	Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents North Tyneside Metropolitan Borough Council - Development Function South Tyneside Metropolitan Borough Council - Planning Department	February 2016 February 2016	Annual Rolling Update Annual Rolling Update
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2016	Bi-Annually
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	June 2016	Quarterly
Fuel Station Entries Catalist Ltd - Experian	July 2016	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Underground Electrical Cables National Grid	January 2016	Bi-Annually
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	June 2015	Bi-Annually
Areas of Adopted Green Belt North Tyneside Metropolitan Borough Council South Tyneside Metropolitan Borough Council - Planning Department	May 2016 May 2016	As notified As notified
Areas of Unadopted Green Belt North Tyneside Metropolitan Borough Council South Tyneside Metropolitan Borough Council - Planning Department	November 2015 November 2015	As notified As notified
Areas of Outstanding Natural Beauty Natural England	April 2016	Bi-Annually
Environmentally Sensitive Areas Natural England	April 2016	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	April 2016	Bi-Annually
Marine Nature Reserves Natural England	April 2016	Bi-Annually
National Nature Reserves Natural England	April 2016	Bi-Annually
National Parks Natural England	August 2016	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Annually
Ramsar Sites Natural England	April 2016	Bi-Annually
Sites of Special Scientific Interest Natural England	April 2016	Bi-Annually
Special Areas of Conservation Natural England	April 2016	Bi-Annually
Special Protection Areas Natural England	April 2016	Bi-Annually
World Heritage Sites English Heritage - National Monument Record Centre	September 2015	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 <p>British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL</p>
Centre for Ecology and Hydrology	 <p>Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL</p>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	South Tyneside Metropolitan Borough Council - Environmental Health Department Central Library Building, Prince George Square, South Shields, Tyne And Wear, NE33 2PE	Telephone: 0191 427 1717 Fax: 0191 427 7171 Website: www.s-tyneside-mbc.gov.uk
4	North Tyneside Metropolitan Borough Council - Environmental Health Department D1 Quadrant 1L, Quadrant East, Silverlink North,, Cobalt Business Park, North Tyneside, North Shields, NE27 0BY	Telephone: 0345 2000 101 Email: contact.us@northtyneside.gov.uk Website: www.northtyneside.gov.uk
5	South Tyneside Metropolitan Borough Council - Planning Department Town Hall & Civic Offices, Westoe Road, South Shields, Tyne & Wear, NE33 2RL	Telephone: 0191 427 1717 Fax: 0191 427 7171 Website: www.s-tyneside-mbc.gov.uk
6	Health and Safety Executive 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
7	North Tyneside Metropolitan Borough Council - Development Function Floor 1L Qaudrant East, Silverlink North, Cobalt Business Park, Newcastle-Upon-Tyne, North Tyneside, NE27 0BY	Telephone: 0191 200 5000 Fax: 0191 270 1127 Website: www.northtyneside.gov.uk
8	The Coal Authority - Property Searches 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk
9	English Heritage - National Monument Record Centre Kemble Drive, Swindon, Wiltshire, SN2 2GZ	Telephone: 01793 414600 Fax: 01793 414606 Email: nmrinfo@english-heritage.org.uk Website: www.english-heritage.org.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Appendix E

Coal Mining Information

The COAL AUTHORITY

Issued by:

The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG

Website: www.groundstability.com Phone: 0845 762 6848 DX 716176 MANSFIELD 5

**LANDMARK INFORMATION GROUP
LIMITED
SOWTON INDUSTRIAL ESTATE
ABBAY COURT
UNIT 5/7 EAGLE WAY
EXETER
DEVON
EX2 7HY**

Our reference: **51000159572001**
Your reference: **41689911**
Date of your enquiry: **02 October 2012**
Date we received your enquiry: **02 October 2012**
Date of issue: **02 October 2012**

This report is for the property described in the address below and the attached plan.

Non-Residential Coal Authority Mining Report

**SITE AT: MCNULTY OFFSHORE CONSTRUCTION LTD, 16-17 CORSTORPHINE TOWN,
SOUTH SHIELDS, TYNE & WEAR,**

This report is based on and limited to the records held by, the Coal Authority, and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Coal mining	See comments below
Brine Compensation District	No

Information from the Coal Authority

Underground coal mining

Past

The property is in the likely zone of influence from workings in 3 seams of coal at 100m to 340m depth, and last worked in 1947.

Any ground movement from these coal workings should have stopped by now.

In addition the property is in an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past.

Present

The property is not in the likely zone of influence of any present underground coal workings.

Future

The property is not in an area for which the Coal Authority is determining whether to grant a licence to remove coal using underground methods.

The property is not in an area for which a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area that is likely to be affected at the surface from any planned future workings.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notice of the risk of the land being affected by subsidence has been given under section 46 of the Coal Mining Subsidence Act 1991.

Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

Records may be incomplete. Consequently, there may exist in the local area mine entries of which the Coal Authority has no knowledge.

Coal mining geology

The Authority is not aware of any evidence of damage arising due to geological faults or other lines of weakness that have been affected by coal mining.

Opencast coal mining

Past

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

Present

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

Future

The property is not within 800 metres of the boundary of an opencast site for which the Coal Authority is determining whether to grant a licence to remove coal by opencast methods.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres, since 31st October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

Withdrawal of support

The property is not in an area for which a notice of entitlement to withdraw support has been published.

The property is not in an area for which a notice has been given under section 41 of the Coal Industry Act 1994, revoking the entitlement to withdraw support.

Working facilities orders

The property is not in an area for which an Order has been made under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

Payments to owners of former copyhold land

The property is not in an area for which a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Comments on Coal Authority information

In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

A site investigation was carried out in June 2008 by South Tyneside Council. Town Hall and Civic Offices, Westoe Road, South Shields, Tyne and Wear, NE33 2RL.

Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

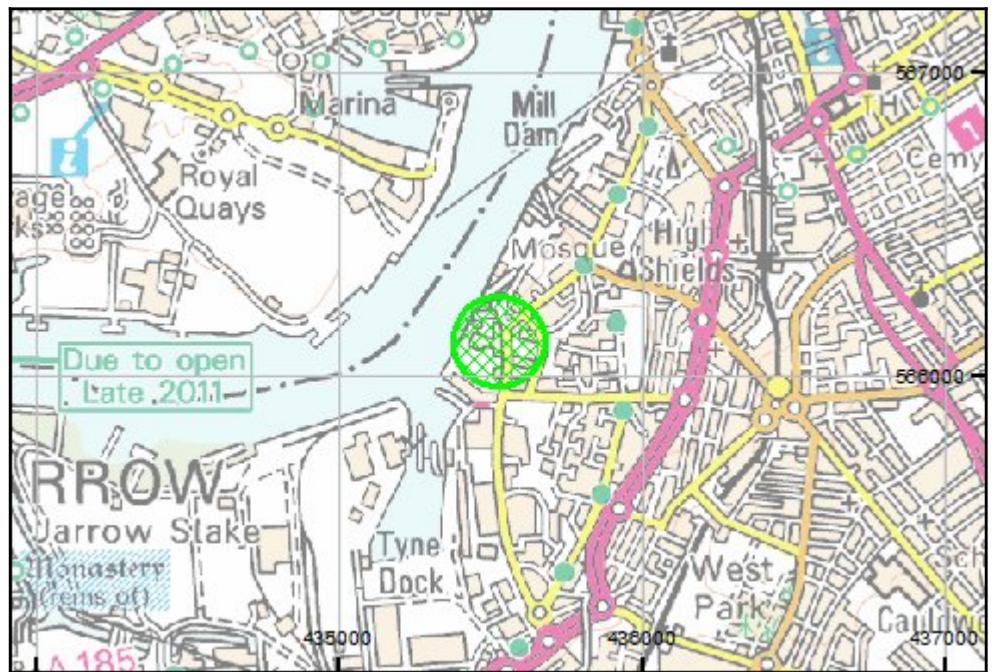
Additional Remarks

This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions 2006. The Coal Authority owns the copyright in this report. The information we have used to write this report is protected by our database right. All rights are reserved and unauthorised use is prohibited. If we provide a report for you, this does not mean that copyright and any other rights will pass to you. However, you can use the report for your own purposes.

Location map



Approximate position of property

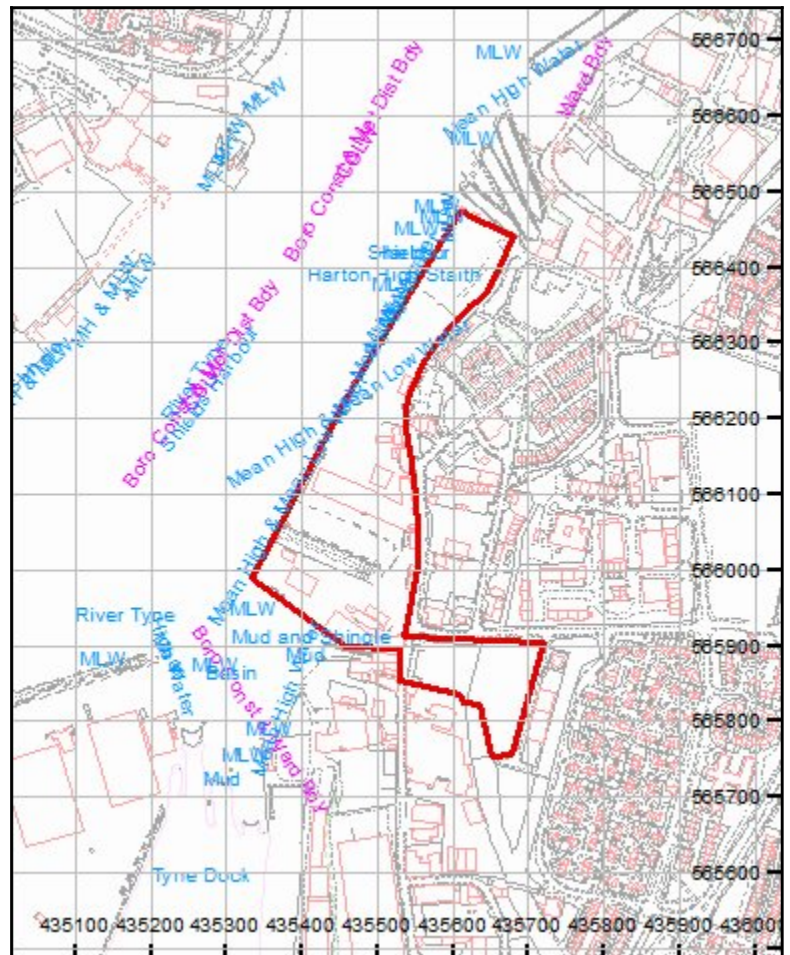


Enquiry boundary

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Key

Approximate position of enquiry boundary shown



Appendix F

Previous Ground Investigation Data

SITE INVESTIGATION REPORT
of land at
ALLSEAS PROJECT
McNulty Offshore, South Shields
Client: McNulty Offshore

REPORT NO. M0754/Phase 2
February 2011

Solmek
PO Box 464
Durham
DH1 9AD
Tel: +44 (0) 191 378 3310

SITE INVESTIGATION
of land at
MCNULTY OFFSHORE
ALL SEAS PROJECT
prepared for
DTA CONSULTING ENGINEERS
on behalf of
McNulty Offshore
CONTENTS

1.0 INTRODUCTION	1
2.0 SITE DESCRIPTION	1
2.1 Site Location & Features	1
3.0 FIELDWORK	1
3.1 Introduction	1
3.2 Strata Description	2
3.3 Sampling and In-situ Testing	2
3.4 Exploratory Hole Locations	2
4.0 LABORATORY TESTING	2
4.1 Geotechnical	2
5.0 GROUNDWATER MONITORING	3
5.1 Monitoring Procedure	3
6.0 GROUND CONDITIONS	3
7.0 SETTLEMENTS	4

Appendix A - Drawings

Appendix B - Exploratory Hole Records

Appendix C - Geotechnical Laboratory Results

Appendix D - Plate Load Tests

Appendix E – Notes on Limitations

1.0 INTRODUCTION

Solmek Ltd were commissioned by DTA Consulting Engineers, acting on behalf of McNulty Offshore, to carry out a site investigation of land at McNulty Offshore, South Shields as part of the Allseas Project.

The objectives of the investigation were as follows:

- To determine the typical nature, thickness and engineering parameters of the made ground and natural soils.
- To recover disturbed samples of made ground and natural strata for and geotechnical laboratory testing.

Fieldwork, as specified by DTA Consulting Engineers, comprised the drilling of five cable percussive boreholes. The fieldwork was carried out between 31st January and 8th February 2011.

Following the completion of the fieldwork selected soil samples were scheduled by Solmek for a range of geotechnical testing.

The information contained in this report is limited to the boreholes drilled on site.

This report is based on the data obtained from the exploratory holes and from the subsequent tests carried out. There is always a possibility of variation in the ground conditions between boreholes. Responsibility cannot be accepted for conditions not revealed by the investigation. Any diagram or opinion of the possible configuration of the findings is conjectural and given for guidance only, and confirmation of intermediate ground conditions should be considered if deemed necessary.

This report is for the exclusive use of McNulty Offshore and their agents. No third party may rely upon, or reproduce, the contents of this report without the written approval of Solmek.

2.0 SITE DESCRIPTION

2.1 Site Location & Features

The site is located 2km west of South Shields town centre. The approximate centre of the site is at National Grid Reference 435697,565919.

A site location plan is presented as Drawing No. M0754/1 in Appendix A to this report.

The site comprises a relatively flat irregular parcel of land adjacent to the River Tyne and presently covered by gravel and forms part of the construction and storage yard for the production of offshore equipment.

3.0 FIELDWORK

3.1 Introduction

The fieldwork comprised the following:

- Five cable percussive boreholes to a maximum depth of 9.00mbgl.
- Falling head tests within the boreholes

BH5 was terminated on an obstruction at 1.50m bgl. Due to access constraints and underground services this borehole was not re-drilled.

On completion, a groundwater monitoring wells was installed in BH04. The well consisted of a lower slotted section of 50mm diameter HDPE casing surrounded by single size non-calcareous gravel. The upper section of the well was constructed from plain HDPE casing surrounded by a bentonite cement seal. A flush-fitting lockable security cover completed the well.

3.2 Strata Description

Depths and descriptions of strata and groundwater together with details of the samples recovered are presented on the exploratory hole record sheets in Appendix B to this report and summarised in Section 6 below.

Strata descriptions are based on an examination of the strata encountered together with consideration of the in-situ and laboratory test data. Procedures and principles contained in BS5930 (1999), BS10175 (2001) and BS1377 (1990) have been followed.

3.3 Sampling and In-situ Testing

Samples were selected by a representative of Solmek during the investigation works. Samples of soil for chemical analysis were placed into amber glass jars and plastic tubs as appropriate. Groundwater samples were collected in 1 litre amber glass bottles. Glass jars/bottles were stored at approximately 4°C until delivery to the laboratory.

In-situ testing of the strata encountered was undertaken at a frequency and at depths determined by Solmek. In-situ standard penetration tests (SPTs) were carried out throughout the depth of the borehole using a split spoon sampler or 60° apex solid cone, in order to give an indication of the relative density of the granular soils and an indication of the undrained shear strength of cohesive soils. The results of these tests are shown as 'N' values and can be found adjacent to the appropriate sample level on the Solmek exploratory records in Appendix B.

Falling head tests were carried out in the boreholes in accordance with BS5930. The results are included in Appendix D and discussed in Section 6.

3.4 Exploratory Hole Locations

The exploratory hole locations, as determined by DTA, are shown on Drawing No. M0754/03 in Appendix A.

4.0 LABORATORY TESTING

4.1 Geotechnical

Geotechnical laboratory testing, as scheduled by Solmek, was carried out on selected samples in accordance with techniques outlined in BS 1377:1990.

5.0 GROUNDWATER MONITORING

5.1 Monitoring Procedure

The groundwater monitoring well installed by Solmek was monitored on one occasion with a standing water level of 4.14mbgl, recorded at 0745hrs on 15.0.2011, during monitoring the river level was recorded as 4.6m below dock wall level. It is considered that the groundwater is likely to be in hydraulic conductivity with the River Tyne and therefore will fluctuate with tidal levels.

6.0 GROUND CONDITIONS

Three boreholes were drilled between the infilled dock and the quay wall (BH02,03 and 04) with one within the infilled dock (BH01) and one to the south of it (BH05).

Ground conditions within the infilled dock comprised predominantly granular made ground with gravel of brick, concrete, clinker, sandstone and flint. Occasional wood, metal and wire fragments were also encountered. A thin layer of cohesive made ground was encountered at between 3.90m and 4.30m bgl. SPT'VN' values were recorded between 15 and >50 indicating that the deposit could be classed as medium dense to very dense.

Ground conditions between the infilled dock and the quay wall comprised made ground between 4.10 and 5.30m thick consisting of granular deposits with varying quantities of slag, sandstone, clinker, brick, flint, metal, wood and wire. A thin layer of cohesive made ground was encountered at between 3.0m and 3.50m bgl in BH02 only. With the exception of BH03, SPT'N' values of between 25 and >50 were recorded in the top layer (2m) indicating that the upper layer of made ground had a higher density than the lower levels where SPT'N' values reduced to between 3 and 11 were recorded indicating a generally loose to medium dense deposit.

In BH03, in the west of the site, Made ground deposits were similar in composition to BH03 and BH04 however, the made ground was found to be loose with SPT'N' values of between 3 and 9.

Directly underlying the made ground a discontinuous layer of firm becoming stiff glacial clay was encountered directly underlain by dense gravelly sand (considered to be rock head).

SPT'N' values within the glacial clay varied from 10 to 36 confirming the generally firm to stiff nature of the deposit.

Moisture content testing within the clays recorded values of 14% and 18% with plasticity indices of 8 and 11 indicating low plasticity clay with low volume change potential.

To enable buried concrete to be designed to resist sulfate attack, samples of made ground and natural strata from depths corresponding to the anticipated foundation depth have been tested for water-soluble sulfate and pH.

The maximum water-soluble sulfate concentration is 486mg/l and the lowest recorded pH value is 8.3.

Based on the above results, Design Sulfate Class DS-1 and ACEC Classification AC-1 would be appropriate for buried concrete at the site.

Results of the falling head tests carried out within the made ground indicate that the made ground varies in permeability with k values of between $6.9 \times 10^{-5} \text{ms}^{-1}$ and $7.9 \times 10^{-8} \text{ms}^{-1}$, dependant on the gravel content of the deposit. In two instances, in BH02 and BH04 the water within the borehole initially fell quickly and then more slowly giving a higher initial permeability of the deposit, prior to decreasing in permeability. A single shallow falling head test within BH05 failed to show any drop in water level during the one hour monitored.

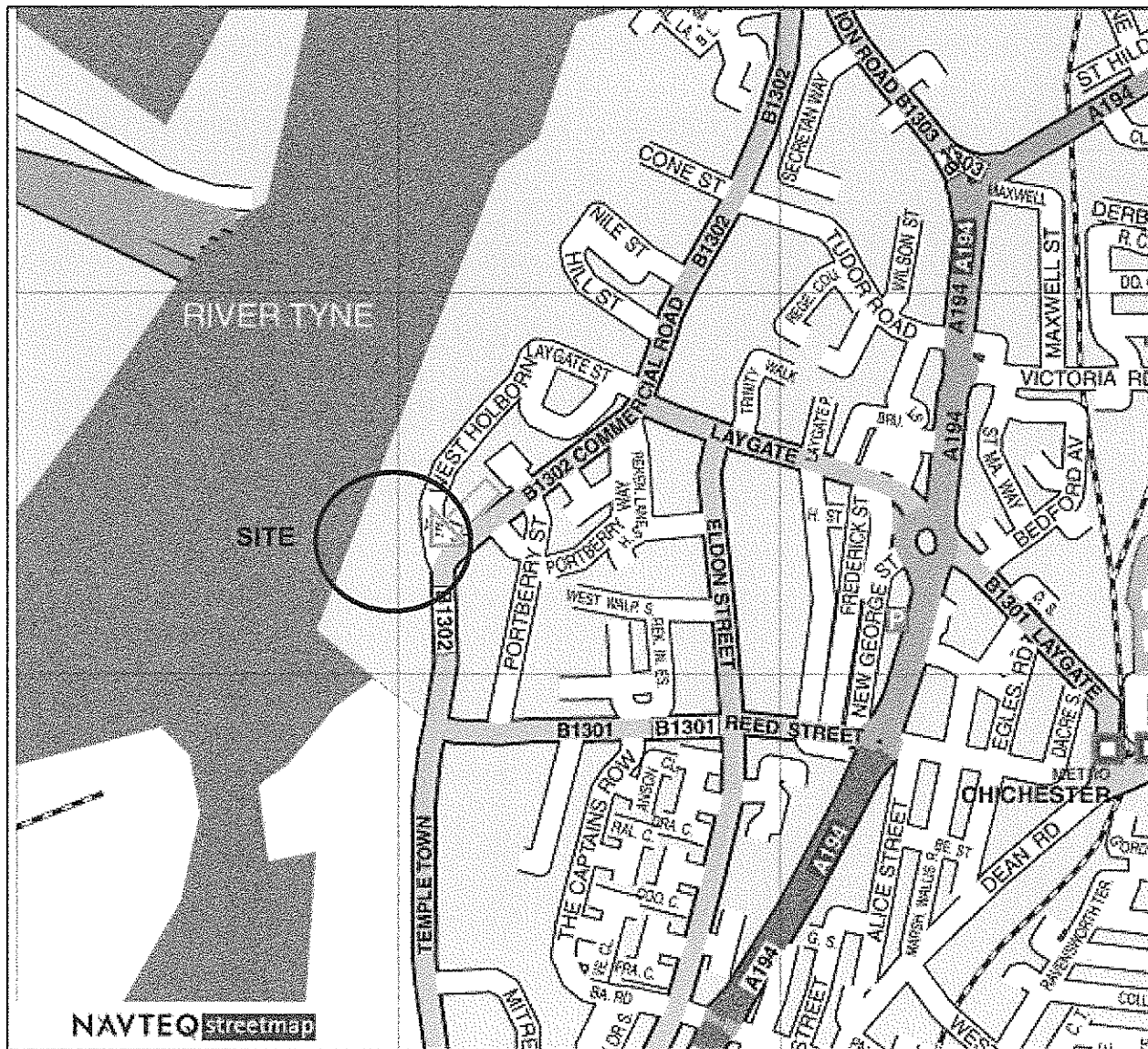
7.0 SETTLEMENTS

Information supplied indicates that pad sizes of up to 4.0m x 3.0m are to be considered with loads of up to 50kN/m².

Settlement calculations carried out at each of the four areas, indicated that for a 4m x 3m pad with a load of 50 kN/m² settlements of less than 25mm should be expected at BH01, BH02 and BH04. However, at BH03 settlements of up to 35mm have been calculated.

Settlement calculations have also been carried out for pad sizes of 4.00m x 3.00m with a load of 150 kN/m² and 200kN/m² within the infilled dock area. One borehole was carried out in this area (BH01) and based on the ground conditions encountered here then total settlements of up to 30mm have been calculated for the size of the pads and the extra loads anticipated.

Appendix A
Drawings



Contract:
McNulty Offshore, South Shields

Contract No:
M0754

Client:
McNulty Offshore

TEL: 0191 378 3310
FAX: 01670 515013

Drawing Title:
Site Location Plan

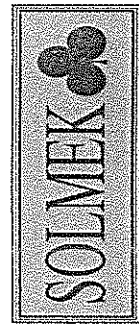
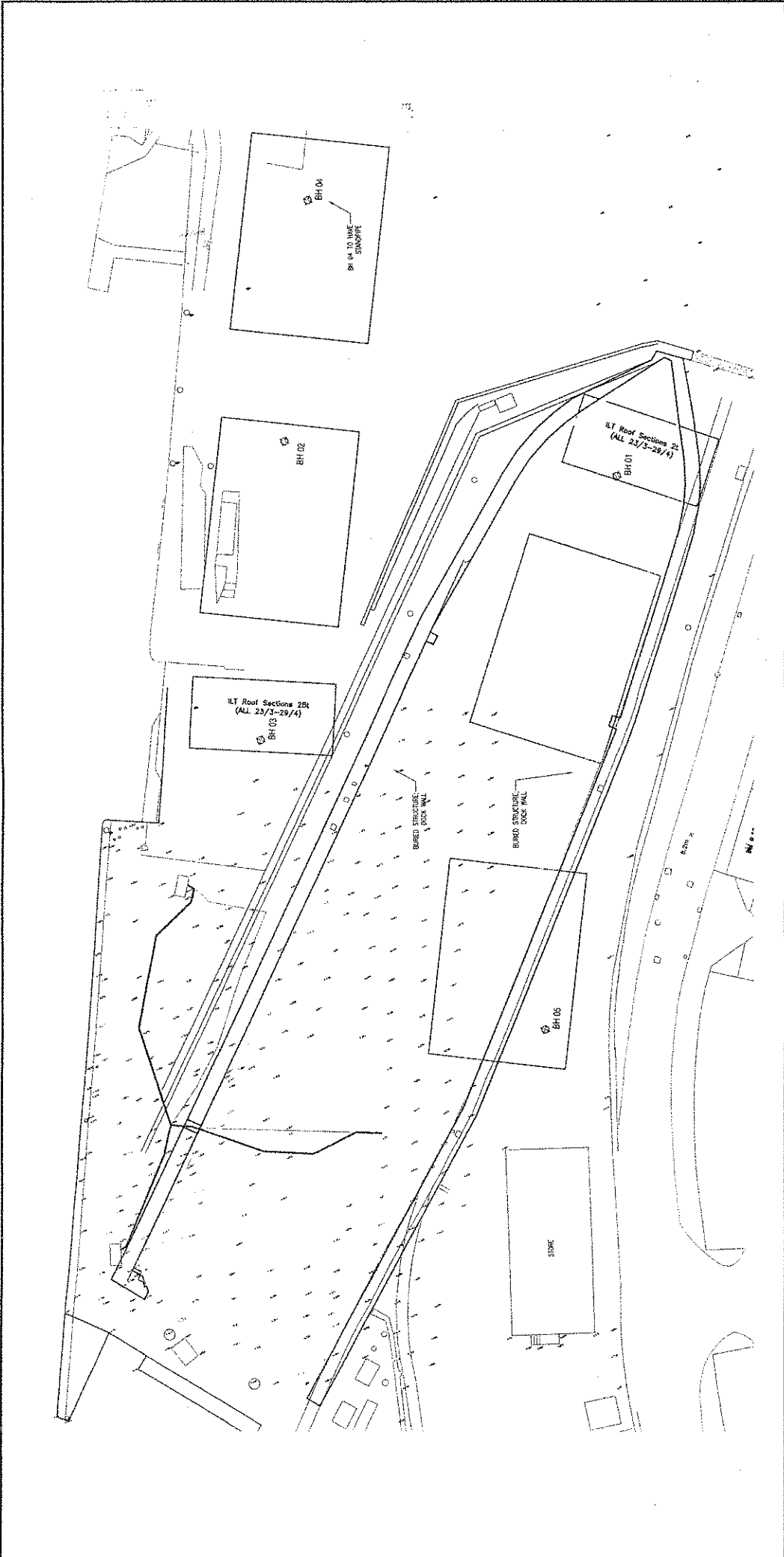
Drawing No:
M0754r/01

Date:
January 2011

Scale:
NTS

Status:
Final

Drawn by:
AIL



Contract:
McNulty Offshore, South Shields, Allseas Project

Contract No:
M0754

Client:
McNulty Offshore

TEL: 0191 378 3310
FAX: 01670 515013

Drawing Title:
Exploratory Hole Location Plan

Drawing No:
M0754/03

Date:
January 2011

Scale:
NTS

Status:
Final

Drawn by:
AIL

Appendix B
Exploratory Hole Records

BOREHOLE RECORD

BH No. **BH01**
Sheet 1 of 1



Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
31/01/2011

Method: Cable Percussive Boring

Scale 1:50

Driller: LS

Logged By: IN

SAMPLE DETAILS

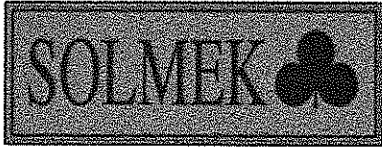
STRATA RECORD

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)	Description	Depth (m)	Level (m AOD)	Legend	Well
D B	0.10			MADE GROUND: Brown black gravelly sand . Sand is fine to coarse with ash. Gravel is angular to subangular fine to coarse of sandstone, slag, clinker and coal. Occasional metal, wood and wire pieces noted.				
D B	0.50							
D B	1.00 - 1.45 1.00	N=37 (2,6,7,9,10,11)	1	MADE GROUND: Brown black silty gravelly sand. Sand is fine to coarse with some ash. Gravel is angular to subangular fine to coarse brick, concrete, clinker, sandstone and flint.	1.20			
D B	1.50 - 1.74 1.50	50/85mm (10,15,37,13)						
D B	2.00		2					
D B	2.50 - 2.95 2.50	N=31 (5,9,9,11,6,5)		MADE GROUND: Black sandy gravelly silt. Sand is fine to coarse with some ash. Gravel is angular to subangular fine to coarse flint, sandstone and clinker.	2.40			
D B	3.00 - 3.45 3.00	N=26 (9,11,10,5,5,6)	3					
D B	3.50 - 3.95 3.50	N=15 (2,5,4,4,4,3)		MADE GROUND: Firm brown black very sandy slightly gravelly silty clay. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of flint and sandstone.	3.90			
B D	4.00 - 4.45 4.00	N=15 (2,3,3,4,4,4)	4					
B D	4.50 - 4.95 4.50	N=31 (1,2,6,7,9,9)		MADE GROUND: Medium dense brown black clayey gravelly sand. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint, sandstone and brick.	4.30			
B D	5.00 - 5.45 5.00	N=42 (4,9,10,10,10,12)	5					
D	6.00		6					
B D	6.50 - 6.95 6.50	N=27 (4,5,5,7,7,8)						
D	7.50		7					
B D	8.00 - 8.45 8.00	N=24 (1,1,2,7,8,7)						
D	9.00 - 9.02	50/10mm (25,50)	8					
End of Borehole at 9.00 m					9.00			

Remarks and Water Observations
 1. No groundwater encountered.
 2. Borehole terminated on base of dock.

GL (m AOD)
 -
 Easting:
 -
 Northing:
 -

Fig. No.



BOREHOLE RECORD

BH No. **BH02**
Sheet 1 of 1

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
31/01/2011

Method: Cable Percussive Boring

Scale **1:50**

Driller: LS

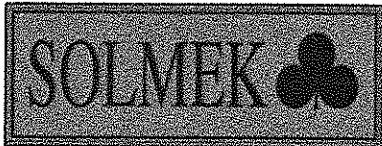
Logged By: JN

SAMPLE DETAILS

STRATA RECORD

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)	Description	Depth (m)	Level (m AOD)	Legend	Well
B	0.00			MADE GROUND: Brown black gravelly sand. Sand is fine to coarse with much ash. Gravel is angular to subangular fine to coarse of slag, sandstone, clinker and brick. Occasional metal, wood and wire pieces noted.				
D B	1.00 - 1.45 1.00	N=25 (7,7,7,8,6,4)	1	MADE GROUND: Brown sand and gravel. Sand is fine to coarse. Gravel is angular to rounded fine to coarse of flint and sandstone.	1.20			
D B	1.50 - 1.89 1.50	50/240mm (7,9,11,15,17,7)		MADE GROUND: Brown black gravelly silty sand. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of flint, sandstone and brick.	2.00			
D B	2.00 - 2.45 2.00	N=27 (4,6,6,7,7,7)	2	MADE GROUND: Brown sandy gravelly clay. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint, sandstone and brick.	3.00			
D B	2.50 - 2.95 2.50	N=11 (2,3,3,3,3,2)		MADE GROUND: Brown clayey gravelly sand. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of sandstone and flint.	3.50			
D B	3.00 - 3.45 3.00	N=4 (1,1,0,1,1,2)	3	MADE GROUND: Brown sandy gravelly clay. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint, sandstone and brick.	3.50			
D B	3.50 - 3.95 3.50	N=5 (1,1,1,1,1,2)		MADE GROUND: Brown sandy gravelly clay. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint, sandstone and brick.	3.50			
B	4.00	N=3 (1,0,1,0,1,1)	4	MADE GROUND: Brown sandy gravelly clay. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint, sandstone and brick.	3.50			
B	4.50			MADE GROUND: Brown sandy gravelly clay. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint, sandstone and brick.	3.50			
D B	5.00 - 5.45 5.00	N=9 (1,2,2,2,2,3)	5	Very stiff brown sandy CLAY. Sand is fine to medium. Possible completely disintegrated sandstone.	5.30			
D B	6.50 - 6.59 6.60 - 6.65	75/90mm - Abandoned 75/46mm - Abandoned	6 7	Dense brown gravelly SAND. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of sandstone. (Possible rockhead).	6.00			
				End of Borehole at 6.60 m	6.60			
			8					

Remarks and Water Observations 1. No groundwater encountered.	GL (m AOD) - Easting: - Northing: -	Fig. No.
--	--	----------



BOREHOLE RECORD

BH No. **BH03**
Sheet 1 of 1

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates: **02/02/2011**

Method: Cable Percussive Boring

Scale **1:50**

SAMPLE DETAILS

Groundwater
(Casing)

STRATA RECORD

Driller: LS

Logged By: IN

Type	Depth From - To(m)	N (cu)		Description	Depth (m)	Level (m AOD)	Legend	Well
D	0.10			MADE GROUND: Highly compacted brown black gravelly sand. Sand is fine to coarse. Sand is fine to coarse with much ash. Gravel is angular to subangular fine to coarse of sandstone, birch, clinker and slag. Occasional metal and timber fragments noted.				
B	0.10 - 0.50							
D	0.50			MADE GROUND: Brown gravelly sand. Gravel is angular to subangular fine to coarse of coal. No evidence of made ground noted.				
B	0.50 - 0.95							
D	1.00 - 1.45	N=4	1					
B	1.00	(4,5,1,1,1,1)				1.10		
D	1.00 - 1.45							
B	1.50 - 1.95	N=5						
D	2.00 - 2.45	(1,1,0,2,1,2)						
B	2.00		2					
D	2.50 - 2.95	N=3						
D	2.50	(1,0,0,1,1,1)						
B	2.50 - 2.95	N=9						
D	2.50	(1,1,2,3,2,2)						
B	3.00 - 3.45	N=14	3					
D	3.00	(1,2,2,3,5,4)						
D	3.50	N=9		MADE GROUND: Brown black silty gravelly sand. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of flint.				
B	3.50 - 3.95	(1,2,2,3,2,2)				3.60		
D	4.00	N=10	4	Firm brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular of sandstone and coal.				
B	4.00 - 4.45	(1,1,2,2,2,4)				4.10		
D	4.50	N=11						
B	4.50 - 4.95	(1,1,1,2,3,5)						
UF	5.00		5					
D	5.50	N=12						
B	5.50 - 5.95	(4,2,2,3,3,4)						
B	6.00 - 6.40		6					
UF	6.50			Stiff reddish brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of sandstone.				
D	7.00	N=36	7					
B	7.00 - 7.45	(4,5,7,9,9,11)		Dense gravelly SAND. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of sandstone.				
D	7.50	50/175mm				7.40		
B	7.50 - 7.95	(8,11,16,24,10)						
D	8.00	50/105mm	8					
				End of Borehole at 8.50 m				

Remarks and Water Observations

1. No groundwater encountered.
2. Chiselled from 7.40mbgl to 7.50mbgl for 1 Hour.
3. Falling head tests performed at 1.50mbgl - 2.0mbgl and 2.50mbgl to 3.0mbgl.

GL (m AOD)

Eastings:

Northings:

Fig. No.



BOREHOLE RECORD

BH No. **BH04**
Sheet 1 of 1

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
04/02/2011

Method: Cable Percussive Rig

Scale 1:50

Driller: LS

Logged By: IN

SAMPLE DETAILS

STRATA RECORD

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)	Description	Depth (m)	Level (m AOD)	Legend	Well
D	0.10			MADE GROUND: Brown black gravelly sand. Sand is fine to coarse much ash. Gravel angular to sub-angular fine to coarse of clinker, sandstone, brick and slag.				
B	0.10 - 0.50							
D	0.50							
B	0.50 - 0.95							
B	1.00 - 1.45	N=27 (2,4,5,7,7,8)	1					
D	1.50 - 1.95	N=25 (14,12,6,6,6,7)						
D	2.00 - 2.45	N=8 (4,2,2,2,2,2)	2	MADE GROUND: Brown sandy gravel. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of flint.	1.80			
D	2.50 - 2.95	N=9 (4,3,3,2,2,2)						
D	3.00 - 3.45	N=8 (2,3,2,2,2,2)	3	MADE GROUND: Black silty gravelly sand. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of sandstone, flint, brick and timber throughout.	3.00			
B	3.50 - 3.95	N=8 (1,0,1,3,2,2)						
D	3.50 - 3.88							
B	4.00 - 4.45	N=9 (1,1,2,1,3,3)	4					
D	4.50 - 4.95	N=10 (2,2,1,3,3,3)						
B	5.00 - 5.45	59/260mm (5,3,9,13,2,1,16)	5					
D	5.00 - 5.41			Very dense orange brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-angular of sandstone (suspected rockhead).	5.20			
B	5.50 - 5.95	60/170mm (7,14,19,26,15)						
D	5.50 - 5.82			End of Borehole at 6.00 m	6.00			
D	6.00 - 6.17	50/90mm (27,29,21)	6					
			7					
			8					

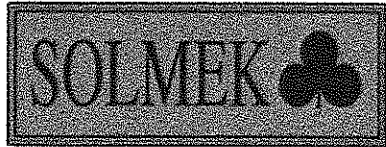
Remarks and Water Observations

GL (m AOD)
-
Easting:
-
Northing:
-

Fig. No.

BOREHOLE RECORD

BH No. **BH05**
Sheet 1 of 1



Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates: **08/02/2011**

Method: Cable Percussive Rig

Scale **1:50**

Driller: **LS**

Logged By: **IN**

SAMPLE DETAILS

STRATA RECORD

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)
D	0.10		
B	0.10 - 0.50		
D	0.50		
B	0.50 - 0.95		
B	1.00 - 1.45	N=8 (4,3,2,2,2,2)	1
			2
			3
			4
			5
			6
			7
			8

MADE GROUND: Brown black gravelly sand. Sand is fine to coarse with much ash. Gravel is angular to sub-angular fine to coarse of sandstone, clinker and coal and brick. Occasional metal and timber noted. Cobbles and / or boulders of brick and concrete noted.

End of Borehole at 1.50 m

Depth (m)	Level (m AOD)	Legend	Well
1.50			

Remarks and Water Observations
1. Water strike at 0.50m, rising to 0.25m after 20 mins.

GL (m AOD)
-
Easting:
-
Northing:
-

Fig. No.

Appendix C
Geotechnical Laboratory Results

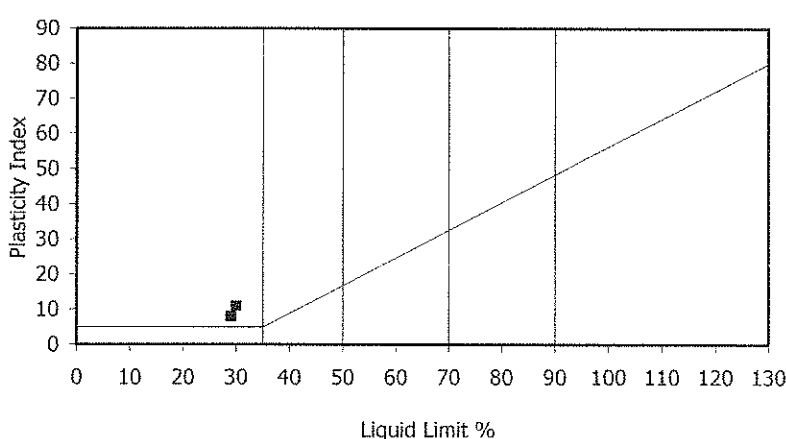
SUMMARY OF SOIL CLASSIFICATION TESTS
(B.S. 1377 : PART 2 : 1990)

MCNULTY PHASE 2
M745



Page 1 of 1

Hole	Depth m	Type	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Plasticity	% Passing 425µm	pH	SO ₄ Content mg/L	Chloride Content mg/L	Organic Matter Content %
BH1	0.50	D	20						10.6	486		
BH1	1.50	D	17						11.8	296		
BH1	2.50	D	25						11.9	251		
BH1	4.50	D	35						11.6	251		
BH2	1.00	D	15						9.3	74		
BH2	1.50	D	8.3						9.0	62		
BH2	6.50	D	11						8.6	132		
BH3	4.50	D	18	29	21	8	CL	73.0	8.3	276		
BH3	5.50	D	14	30	19	11	CL	78.5	8.8	119		
BH4	0.50	D	11						9.7	165		
BH5	0.10	D	9.3						11.2	169		
BH5	0.50	D	11						10.4	173		



		Liquid Limit
CE	Extremely high plasticity CLAY	>90%
ME	Extremely high plasticity SILT	
CV	Very high plasticity CLAY	70 - 90%
MV	Very high plasticity SILT	
CH	High plasticity CLAY	50 - 70%
MH	High plasticity SILT	
CI	Intermediate plasticity CLAY	35 - 50%
MI	Intermediate plasticity SILT	
CL	Low plasticity CLAY	<35%
ML	Low plasticity SILT	

Prepared: _____ Date: _____

Checked: _____ Date: _____

Approved: _____ Date: _____

Comments

Appendix D
Falling Head Test Results

Permeability Test based on BS 5930:1999

Client: Mc Nulty

Site: McNulty, South Shields

Job No: M0754

Pit No:

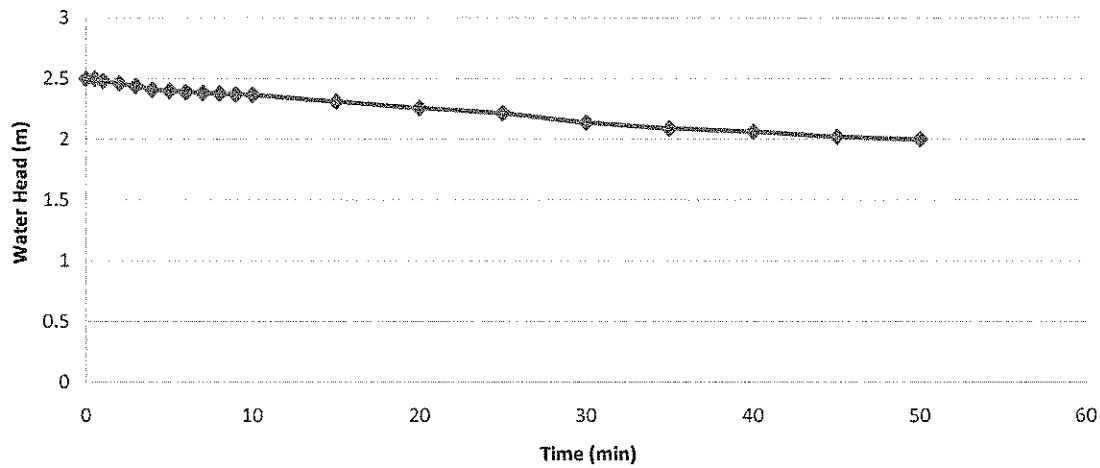
BH03

Test No:

1 (Falling head at 1.50-2.00m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	L (m) =	0.50
(a)	(b)	(c)	(d) = (c) - (b)		D (m) =	0.15
0	0	2.50	2.50	Groundwater	Test depth (m) =	1.50-2.00
0.5	0	2.50	2.50		A (m2) =	0.018
1	0.02	2.50	2.48	Water strike:	DRY	
2	0.04	2.50	2.46	SWL before test:	DRY	
3	0.06	2.50	2.44			
4	0.09	2.50	2.41			
5	0.1	2.50	2.40			
6	0.11	2.50	2.39	Calculation of Permeability		
7	0.118	2.50	2.38	F is calculated based on Model d Figure 6 BS5930		
8	0.124	2.50	2.38	$F = \frac{2 \pi L}{\log_e [(2L/D) + \sqrt{1 + \{(2L)^2/D\}}]}$		
9	0.129	2.50	2.37	F = 1.21		
10	0.133	2.50	2.37	K is calculated based on Section 25.4.6.1 BS5930		
15	0.189	2.50	2.31	$k = \frac{A}{F (t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$		
20	0.241	2.50	2.26	t1 (min) = 1		
25	0.284	2.50	2.22	t2 (min) = 35		
30	0.362	2.50	2.14	H1 (m) = 2.48		
35	0.411	2.50	2.09	H2 (m) = 2.09		
40	0.437	2.50	2.06	K (m/s) = 1.2E-06		
45	0.479	2.50	2.02			
50	0.501	2.50	2.00			
55	0.524	2.50	1.98			
60	0.537	2.50	1.96			



Notes:

Height of casing 0.50m AGL

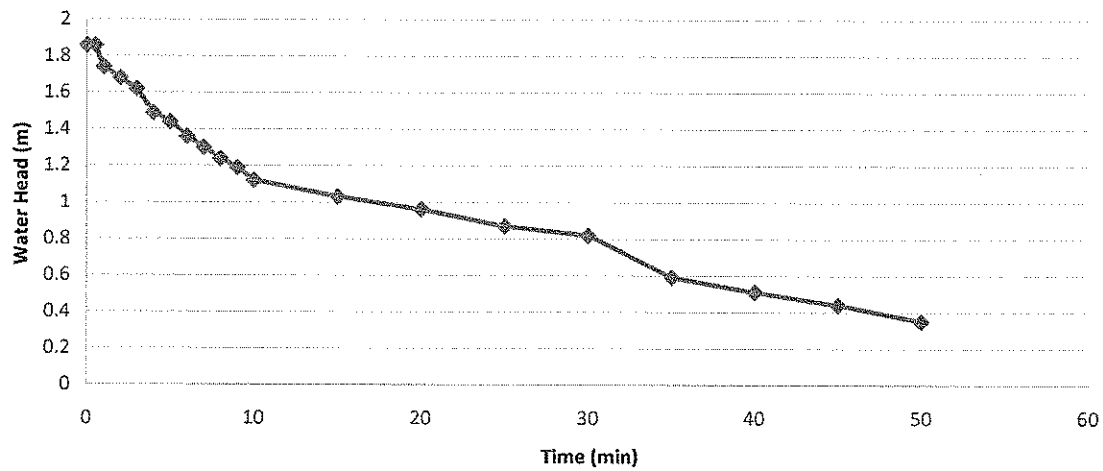
Permeability Test based on BS 5930:1999

Client: Mc Nulty
Site: McNulty, South Shields
Job No: M0754

Pit No: BH03 **Test No:** 1 (Falling head at 2.50-3.00m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	L (m) =	0.50
(a)	(b)	(c)	(d) = (c) - (b)			D (m) =
0	0	1.86	1.86		Test depth (m) =	2.50-3.00
0.5	0	1.86	1.86		A (m ²) =	0.018
1	0.12	1.86	1.74	Groundwater	Water strike:	DRY
2	0.18	1.86	1.68		SWL before test:	DRY
3	0.24	1.86	1.62			
4	0.37	1.86	1.49			
5	0.42	1.86	1.44			
6	0.499	1.86	1.36	Calculation of Permeability		
7	0.56	1.86	1.30	F is calculated based on Model d Figure 6 BS5930		
8	0.62	1.86	1.24	$F = \frac{2 \pi L}{\log_e [(2L/D) + \sqrt{1 + \{(2L)^2/D\}}]}$		
9	0.67	1.86	1.19	F = 1.21		
10	0.74	1.86	1.12	K is calculated based on Section 25.4.6.1 BS5930		
15	0.83	1.86	1.03	$k = \frac{A}{F (t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$		
20	0.9	1.86	0.96	t1 (min) = 10		
25	0.99	1.86	0.87	t2 (min) = 35		
30	1.04	1.86	0.82	H1 (m) = 1.12		
35	1.27	1.86	0.59	H2 (m) = 0.59		
40	1.35	1.86	0.51	K (m/s) = 6.2E-06		
45	1.42	1.86	0.44			
50	1.51	1.86	0.35			
55	1.65	1.86	0.21			
60	1.86	1.86	0.00			



Notes:
 Permeability calculated for 13.6m to 15.0m below water strike. It is assumed in this calculation that the strata above 13.6m is relatively impermeable.

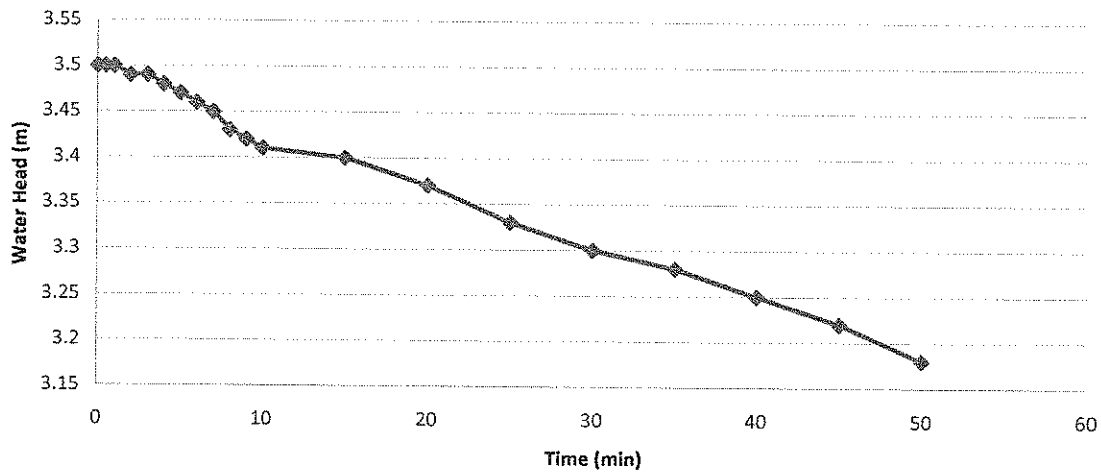
Permeability Test based on BS 5930:1999

Client: McNulty
Site: McNulty, South Shields
Job No: M0754
Pit No: BH01

Test No: 1 (Falling head at 1.9-2.50m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	Groundwater
(a)	(b)	(c)	(d) = (c) - (b)		
0	0	3.50	3.50	L (m) = 0.60 D (m) = 0.15 Test depth (m) = 2.50-3.00 A (m ²) = 0.018	Water strike: DRY SWL before test: DRY
0.5	0	3.50	3.50		
1	0	3.50	3.50		
2	0.01	3.50	3.49	Calculation of Permeability F is calculated based on Model d Figure 6 BS5930 $F = \frac{2 \pi L}{\log_e [2L/D + \sqrt{1 + \{(2L)^2/D\}}]}$ F = 1.31 K is calculated based on Section 25.4.6.1 BS5930 $k = \frac{A}{F (t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$ t1 (min) = 10 t2 (min) = 40 H1 (m) = 3.41 H2 (m) = 3.25 K (m/s) = 3.6E-07	
3	0.01	3.50	3.49		
4	0.02	3.50	3.48		
5	0.03	3.50	3.47		
6	0.04	3.50	3.46		
7	0.05	3.50	3.45		
8	0.07	3.50	3.43		
9	0.08	3.50	3.42		
10	0.09	3.50	3.41		
15	0.1	3.50	3.40		
20	0.13	3.50	3.37		
25	0.17	3.50	3.33		
30	0.2	3.50	3.30		
35	0.22	3.50	3.28		
40	0.25	3.50	3.25		
45	0.28	3.50	3.22		
50	0.32	3.50	3.18		
55	0.35	3.50	3.15		
60	0.37	3.50	3.13		



Notes:
 Casing level 1m AGL. Water level to top of casing at start of test.

Permeability Test based on BS 5930:1999

Client: Mc Nulty

Site: McNulty, South Shields

Job No: M0754

Pit No:

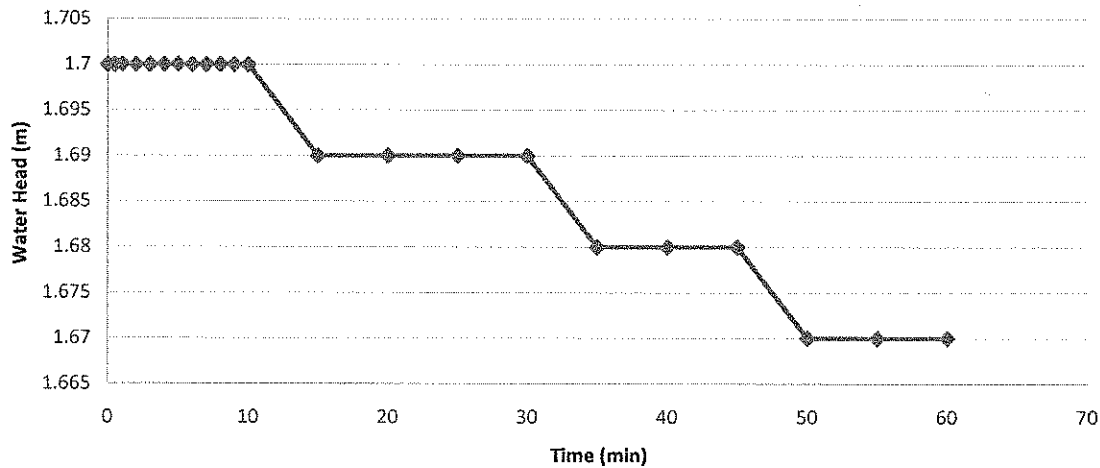
BH01

Test No:

1 (Falling head at 0.70-1.00m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	L (m) =	0.30
(a)	(b)	(c)	(d) = (c) - (b)		D (m) =	0.15
0	0	1.70	1.70	Groundwater	Test depth (m) =	0.7-1.0
0.5	0	1.70	1.70		A (m ²) =	0.018
1	0	1.70	1.70		Water strike:	DRY
2	0	1.70	1.70		SWL before test:	DRY
3	0	1.70	1.70			
4	0	1.70	1.70			
5	0	1.70	1.70			
6	0	1.70	1.70		Calculation of Permeability	
7	0	1.70	1.70		F is calculated based on Model d Figure 6 BS5930	
8	0	1.70	1.70		$F = \frac{2\pi L}{\log_e [(2L/D) + \sqrt{1 + ((2L)^2/D)}}]$	
9	0	1.70	1.70	F = 1.00		
10	0	1.70	1.70	K is calculated based on Section 25.4.6.1 BS5930		
15	0.01	1.70	1.69	$k = \frac{A}{F(t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$		
20	0.01	1.70	1.69	t1 (min) = 10		
25	0.01	1.70	1.69	t2 (min) = 35		
30	0.01	1.70	1.69	H1 (m) = 1.7		
35	0.02	1.70	1.68	H2 (m) = 1.68		
40	0.02	1.70	1.68	K (m/s) = 1.4E-07		
45	0.02	1.70	1.68			
50	0.03	1.70	1.67			
55	0.03	1.70	1.67			
60	0.03	1.70	1.67			



Notes:

Permeability calculated for 13.6m to 15.0m below water strike. It is assumed in this calculation that the strata above 13.6m is relatively impermeable.

Permeability Test based on BS 5930:1999

Client: McNulty

Site: McNulty, South Shields

Job No: M0754

Pit No:

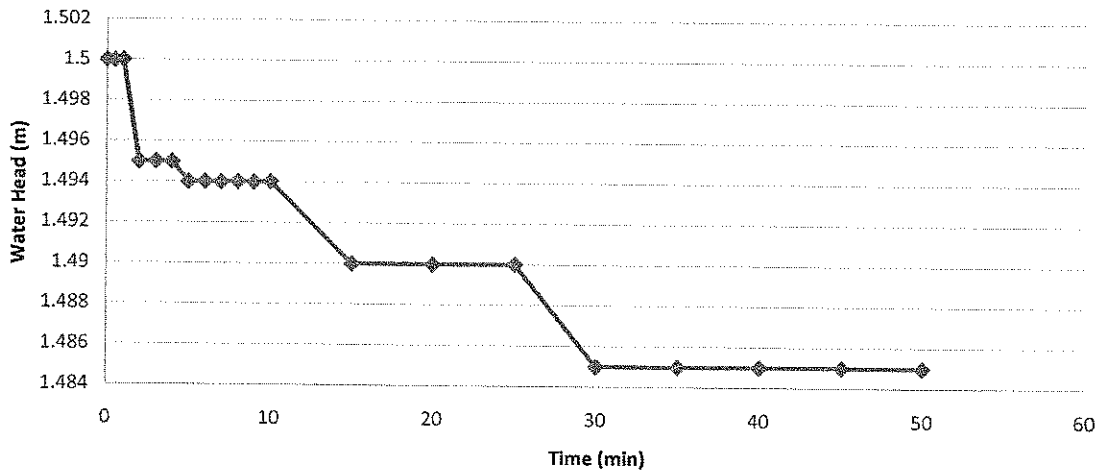
BH04

Test No:

1 (Falling head at 1.3-1.50m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	L (m) =	0.20
(a)	(b)	(c)	(d) = (c) - (b)		D (m) =	0.15
0	0	1.50	1.50	Groundwater	Test depth (m) =	1.30-1.50
0.5	0	1.50	1.50		A (m2) =	0.018
1	0	1.50	1.50	Water strike:	DRY	
2	0.005	1.50	1.50	SWL before test:	DRY	
3	0.005	1.50	1.50			
4	0.005	1.50	1.50			
5	0.006	1.50	1.49	Calculation of Permeability		
6	0.006	1.50	1.49	F is calculated based on Model d Figure 6 BS5930		
7	0.006	1.50	1.49	$F = \frac{2\pi L}{\log_e [(2L/D) + \sqrt{1 + \{(2L)^2/D\}}]}$		
8	0.006	1.50	1.49	F = 0.89		
9	0.006	1.50	1.49	K is calculated based on Section 25.4.6.1 BS5930		
10	0.006	1.50	1.49	$k = \frac{A}{F(t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$		
15	0.01	1.50	1.49	t1 (min) = 2		
20	0.01	1.50	1.49	t2 (min) = 30		
25	0.01	1.50	1.49	H1 (m) = 1.5		
30	0.015	1.50	1.49	H2 (m) = 1.49		
35	0.015	1.50	1.49	K (m/s) = 7.9E-08		
40	0.015	1.50	1.49			
45	0.015	1.50	1.49			
50	0.015	1.50	1.49			
55	0.015	1.50	1.49			
60	0.015	1.50	1.49			



Notes:

Permeability Test based on BS 5930:1999

Client: McNulty

Site: McNulty, South Shields

Job No: M0754

Pit No:

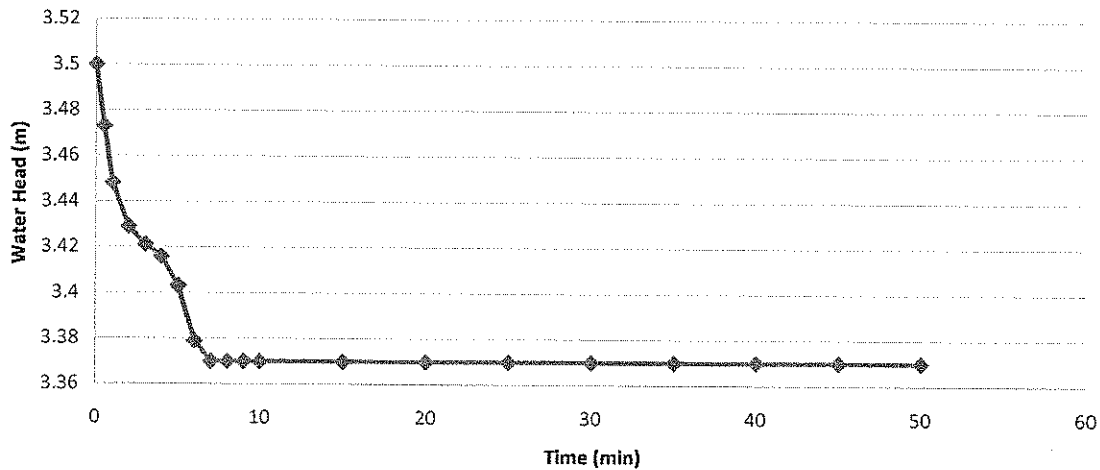
BH04

Test No:

1 (Falling head at 2.00-2.50m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	L (m) =	0.20
(a)	(b)	(c)	(d) = (c) - (b)		D (m) =	0.15
0	0	3.50	3.50	Groundwater	Test depth (m) =	1.30-1.50
0.5	0.027	3.50	3.47		A (m ²) =	0.018
1	0.052	3.50	3.45	Water strike:	DRY	
2	0.071	3.50	3.43	SWL before test:	DRY	
3	0.079	3.50	3.42			
4	0.084	3.50	3.42			
5	0.097	3.50	3.40	Calculation of Permeability		
6	0.121	3.50	3.38	F is calculated based on Model d Figure 6 BS5930		
7	0.13	3.50	3.37	$F = \frac{2\pi L}{\log_e \left[\frac{2L}{D} + \sqrt{1 + \left\{ \frac{2L}{D} \right\}^2} \right]}$		
8	0.13	3.50	3.37	F = 0.89		
9	0.13	3.50	3.37	K is calculated based on Section 25.4.6.1 BS5930		
10	0.13	3.50	3.37	$k = \frac{A}{F(t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$		
15	0.13	3.50	3.37	t1 (min) = 0.5		
20	0.13	3.50	3.37	t2 (min) = 6		
25	0.13	3.50	3.37	H1 (m) = 3.47		
30	0.13	3.50	3.37	H2 (m) = 3.38		
35	0.13	3.50	3.37	K (m/s) = 1.6E-06		
40	0.13	3.50	3.37			
45	0.13	3.50	3.37			
50	0.13	3.50	3.37			
55	0.13	3.50	3.37			
60	0.13	3.50	3.37			



Notes:

Height of casing 1.00m AGL

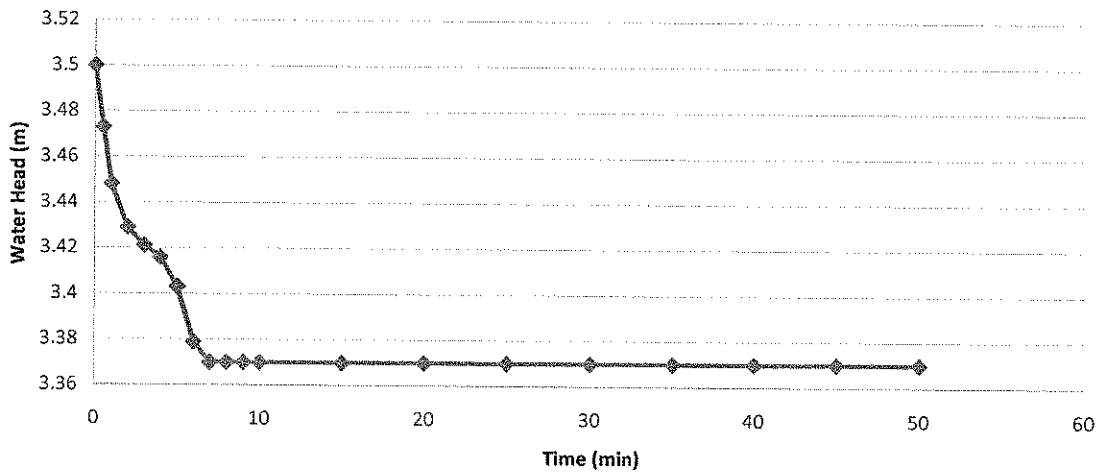
Permeability Test based on BS 5930:1999

Client: McNulty
Site: McNulty, South Shields
Job No: M0754
Pit No: BH04

Test No: 1 (Falling head at 2.00-2.50m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	Groundwater
(a)	(b)	(c)	(d) = (c) - (b)		
0	0	3.50	3.50	L (m) = 0.20	D (m) = 0.15
0.5	0.027	3.50	3.47		
1	0.052	3.50	3.45	Test depth (m) = 1.30-1.50	A (m ²) = 0.018
2	0.071	3.50	3.43		
3	0.079	3.50	3.42	Water strike: DRY	SWL before test: DRY
4	0.084	3.50	3.42		
5	0.097	3.50	3.40	Calculation of Permeability	
6	0.121	3.50	3.38	F is calculated based on Model d Figure 6 BS5930	
7	0.13	3.50	3.37	$F = \frac{2\pi L}{\log_e [(2L/D) + \sqrt{1 + \{(2L)^2/D\}}]}$	
8	0.13	3.50	3.37		
9	0.13	3.50	3.37	F = 0.89	
10	0.13	3.50	3.37	K is calculated based on Section 25.4.6.1 BS5930	
15	0.13	3.50	3.37	$k = \frac{A}{F(t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$	
20	0.13	3.50	3.37		
25	0.13	3.50	3.37	t1 (min) = 6	
30	0.13	3.50	3.37	t2 (min) = 60	
35	0.13	3.50	3.37	H1 (m) = 3.38	
40	0.13	3.50	3.37	H2 (m) = 3.37	
45	0.13	3.50	3.37	K (m/s) = 1.8E-08	
50	0.13	3.50	3.37		
55	0.13	3.50	3.37		
60	0.13	3.50	3.37		



Notes:
 Height of casing 1.00m AGL

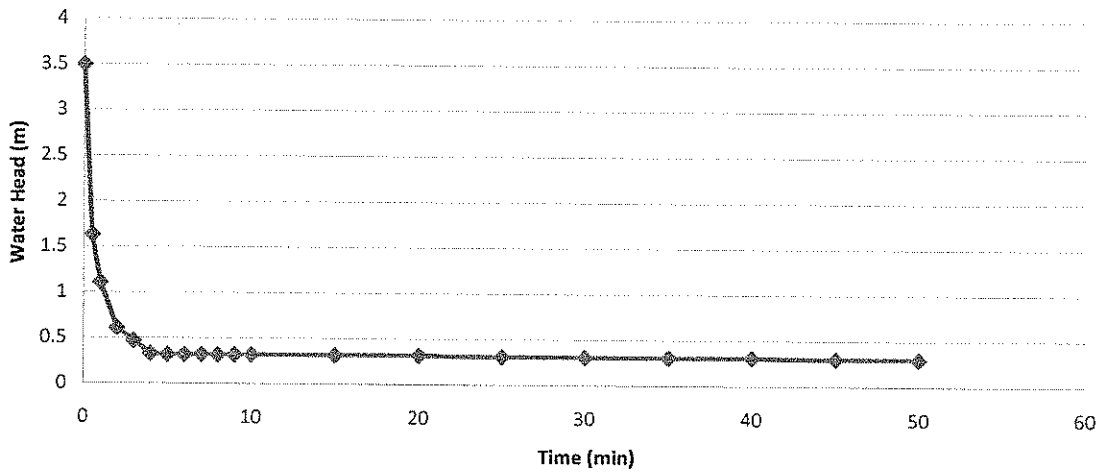
Permeability Test based on BS 5930:1999

Client: McNulty
Site: McNulty, South Shields
Job No: M0754
Pit No: BH02

Test No: 1 (Falling head at 2.00-2.50m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	L (m) =	0.20
(a)	(b)	(c)	(d) = (c) - (b)		D (m) =	0.15
0	0	3.50	3.50	Groundwater	Test depth (m) =	1.30-1.50
0.5	1.87	3.50	1.63		A (m ²) =	0.018
1	2.39	3.50	1.11	Water strike:	DRY	
2	2.89	3.50	0.61	SWL before test:	DRY	
3	3.03	3.50	0.47			
4	3.17	3.50	0.33			
5	3.18	3.50	0.32	Calculation of Permeability		
6	3.18	3.50	0.32	F is calculated based on Model d Figure 6 BS5930		
7	3.18	3.50	0.32	$F = \frac{2\pi L}{\log_e [(2L/D) + \sqrt{1 + \{(2L)^2/D\}}]}$		
8	3.18	3.50	0.32	F = 0.89		
9	3.18	3.50	0.32	K is calculated based on Section 25.4.6.1 BS5930		
10	3.18	3.50	0.32	$k = \frac{A}{F(t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$		
15	3.18	3.50	0.32	t1 (min) = 1 t2 (min) = 7 H1 (m) = 1.11 H2 (m) = 0.32		
20	3.18	3.50	0.32	K (m/s) = 6.9E-05		
25	3.19	3.50	0.31			
30	3.19	3.50	0.31			
35	3.19	3.50	0.31			
40	3.19	3.50	0.31			
45	3.2	3.50	0.30			
50	3.2	3.50	0.30			
55	3.2	3.50	0.30			
60	3.2	3.50	0.30			



Notes:
 Height of casing 1.00m AGL

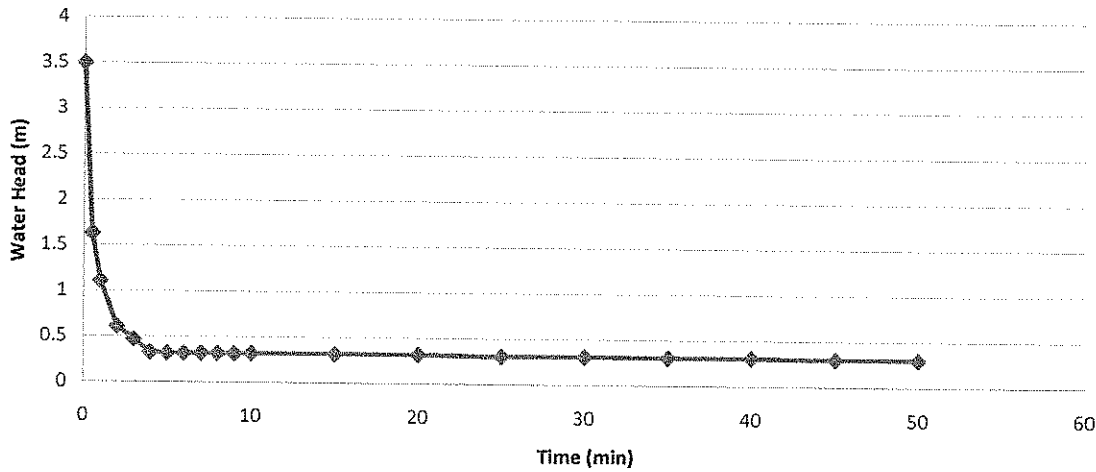
Permeability Test based on BS 5930:1999

Client: McNulty
Site: McNulty, South Shields
Job No: M0754
Pit No: BH02

Test No: 1 (Falling head at 2.00-2.50m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	L (m) = 0.20
(a)	(b)	(c)	(d) = (c) - (b)		
0	0	3.50	3.50	Test depth (m) = 1.30-1.50	A (m ²) = 0.018
0.5	1.87	3.50	1.63		
1	2.39	3.50	1.11	Groundwater	Water strike: DRY
2	2.89	3.50	0.61		
3	3.03	3.50	0.47	SWL before test: DRY	
4	3.17	3.50	0.33		
5	3.18	3.50	0.32	Calculation of Permeability	
6	3.18	3.50	0.32	F is calculated based on Model d Figure 6 BS5930	
7	3.18	3.50	0.32	$F = \frac{2 \pi L}{\log_e [(2L/D) + \sqrt{1 + \{(2L)^2/D\}}]}$	
8	3.18	3.50	0.32		
9	3.18	3.50	0.32	F = 0.89	
10	3.18	3.50	0.32	K is calculated based on Section 25.4.6.1 BS5930	
15	3.18	3.50	0.32	$k = \frac{A}{F (t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$	
20	3.18	3.50	0.32		
25	3.19	3.50	0.31	t1 (min) = 4	
30	3.19	3.50	0.31	t2 (min) = 60	
35	3.19	3.50	0.31	H1 (m) = 0.33	
40	3.19	3.50	0.31	H2 (m) = 0.30	
45	3.2	3.50	0.30	K (m/s) = 5.7E-07	
50	3.2	3.50	0.30		
55	3.2	3.50	0.30		
60	3.2	3.50	0.30		



Notes:
 Height of casing 1.00m AGL.

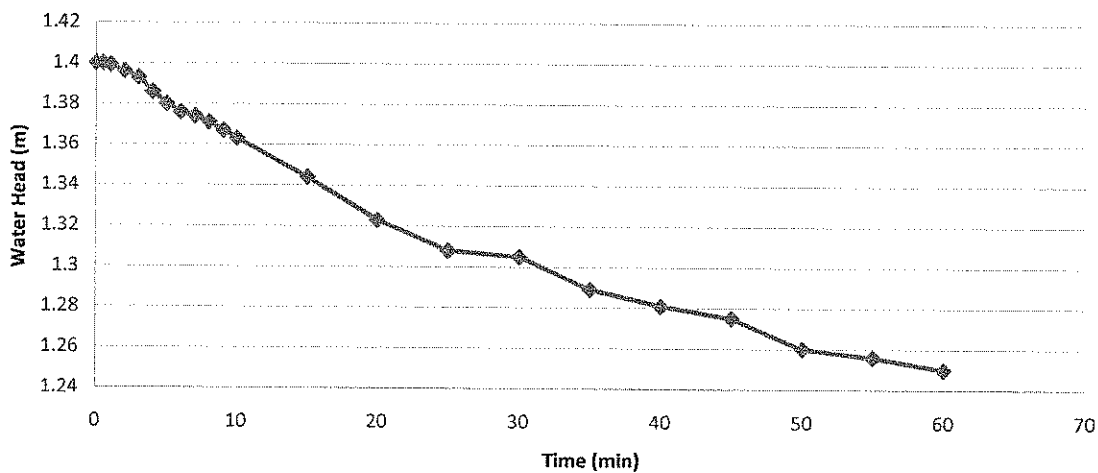
Permeability Test based on BS 5930:1999

Client: McNulty
Site: McNulty, South Shields
Job No: M0754
Pit No: BH02

Test No: 1 (Falling head at 0.80-1.10m depth)

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)	Groundwater (m)	Water head (m)	Borehole Parameter	L (m) =	0.20
(a)	(b)	(c)	(d) = (c) - (b)		D (m) =	0.15
0	0	1.40	1.40	Groundwater	Test depth (m) =	1.30-1.50
0.5	0	1.40	1.40		A (m ²) =	0.018
1	0.001	1.40	1.40		Water strike:	DRY
2	0.004	1.40	1.40		SWL before test:	DRY
3	0.007	1.40	1.39			
4	0.014	1.40	1.39			
5	0.02	1.40	1.38	Calculation of Permeability		
6	0.024	1.40	1.38	F is calculated based on Model d Figure 6 BS5930		
7	0.026	1.40	1.37	$F = \frac{2\pi L}{\log_e [(2L/D) + \sqrt{1 + \{(2L)^2/D\}}]}$		
8	0.029	1.40	1.37	F = 0.89		
9	0.033	1.40	1.37	K is calculated based on Section 25.4.6.1 BS5930		
10	0.037	1.40	1.36	$k = \frac{A}{F(t_2 - t_1)} \log_e \left(\frac{H_1}{H_2} \right)$		
15	0.056	1.40	1.34	t1 (min) = 2 t2 (min) = 60 H1 (m) = 1.4 H2 (m) = 1.25		
20	0.077	1.40	1.32	K (m/s) = 6.5E-07		
25	0.092	1.40	1.31			
30	0.095	1.40	1.31			
35	0.111	1.40	1.29			
40	0.119	1.40	1.28			
45	0.125	1.40	1.28			
50	0.14	1.40	1.26			
55	0.144	1.40	1.26			
60	0.15	1.40	1.25			



Notes:
 Height of casing 0.30m AGL

Appendix E
Notes on Limitations

☛Solmek conditions of offer, notes on limitations & basis for contract (ref: version1/2008)

These conditions accompany our tender and supercede any previous conditions issued. Solmek will prepare a report solely for the use of the Client (the party invoiced) and its agent(s). No reliance should be placed on the contents of this report, in whole or in part by 3rd parties. The report, its content and format and associated data are copyright, and the property of Solmek. Photocopying of part or all of the contents, transfer or reproduction of any kind is forbidden without written permission from Solmek. A charge may be levied against such approval, the same to be made at the discretion of Solmek. Solmek is a trading name of Hymas Geoenvironmental Ltd.

Solmek cannot be held liable and do not warrant, or otherwise guarantee the validity of information provided by third parties and subsequently used in our reports. Solmek are not responsible for the action negligent of otherwise of subcontractors or third parties.

Site investigation is a process of sampling. The scope and size of an investigation may be considered proportional to levels of confidence regarding the ground and groundwater conditions. The exploratory holes undertaken investigate only a small volume of the ground in relation to the overall size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions as encountered within each of the exploratory holes. There may be different ground conditions elsewhere on the site which have not been identified by this investigation and which therefore have not been taken into account in this report. Reports are generally subject to the comments of the local authority and Environment Agency. The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that mobile contamination, ground gas levels and groundwater levels may vary owing to seasonal, tidal and/or weather related effects. Solmek cannot be held liable for any unrecorded or unforeseen obstructions between exploratory boreholes and trial pits. This includes instances where previous structures on the site (buried man made structures) or the presence of boulder clay (cobbles and/or boulder obstructions) have been anticipated. All types of piling operations should make allowance for obstructions within the construction budget to accommodate this. Unrecorded ancient mining may occur anywhere where seams that have been worked and influence the rock and soil above. Dissolution cavities can occur where gypsum or chalk is present. Rotary drilling is the recommended technique to prove the integrity of the rock.

Where the scope of the investigation is limited via access to information, time constraints, equipment limitations, testing, interpretation or by the client or his agents budgetary constraints, elements not set out in the proposal and excluded from the report are deemed to be omitted from the scope of the investigation.

Desk studies are generally prepared in accordance with RICS guidelines. Environmental site investigations are generally undertaken as 'exploratory investigations' in accordance with the definitions provided in paragraph 5.4 of BS 10175:2001 in order to confirm the conceptual assumptions. You are advised to familiarize yourself with the typical scope of such an investigation. No pumping of water will be undertaken unless a licence or facilities/equipment have been arranged by others.

Where the type, number or/and depth of exploratory hole is specified by others, Solmek cannot and will not be responsible for any subsequent shortfall or inadequacy in data, and any consequent shortfall in interpretation of environmental and geotechnical aspects which may be required at a later date in order to facilitate the design of permanent or temporary works.

All information acquired by Solmek in the course of investigation is the property of Solmek, and, only also becomes the joint property of the Client only on the complete settlement of all invoices relating to the project. Solmek reserve the right to use the information in commercial tendering and marketing, unless the Client expressly wishes otherwise in writing. The quoted rates do not include VAT, and payment terms are 30 days from dispatch of invoice from our offices. Quotes are subject to a site visit.

We have allowed for 1 mobilisation and normal working hours unless otherwise stated. The scope of the investigation may be reviewed following the desk study and/or fieldwork. The presence or otherwise of Japanese Knotweed or other invasive plants can be difficult to identify especially during winter months. If Japanese Knotweed or other invasive species are suspect, it should be confirmed by an ecologist. We have not allowed for acquiring services information, and cannot be responsible for damage to underground services or pipes not shown to us or not clearly shown on plans. Costs incurred will be passed on to you, and in commissioning Solmek you understand and accept that you/your agent have a contractual relationship with Solmek & you accept this. Our rates assume unobstructed, reasonably level and firm access to the exploratory positions and adequate clear working areas and headroom. We have priced on the basis that you or your client have the necessary permissions, wayleaves and approvals to access land. All boreholes and pits are backfilled with arisings except where gas monitoring pipes are installed with stopcock covers. Solmek are not responsible for any uneven surfaces as a result of siteworks and rutting and backfilled excavations may require re-levelling and/or making good by others after fieldwork is complete, and Solmek has not allowed for this. No price has been provided or requested for a return visit to remove pipework and covers. Hourly rates apply to consultancy only and do not include expenses unless otherwise shown. If warranties are required, legal costs incurred will be passed on to you assuming Solmek agree to complete such warranties, modified or otherwise and you understand and agree to pay all costs.

We reserve the right to pursue full payment of the invoice prior to release of any information including reports. We advise you/your client that we may elect to pursue our statutory rights under late payment legislation, and will apply 8% to the base rate for unreasonably late payments. Solmek are exempt from the CIS Scheme. Solmek offer to undertake work only in strict accordance with conditions covered by our current insurances, which are available for inspection. Solmek are not responsible for acts, negligent or otherwise of subcontractors and as a matter of policy cannot indemnify any other parties. Professional indemnity Insurance is limited to ten times the invoice net total except where stated otherwise by Solmek. Solmek give notice that consequential loss as a direct or indirect result of Solmek's activities or omission of the same are excluded.



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Ground Investigation Report

**GROUND INVESTIGATION:
MCNULTY'S YARD, SOUTH SHIELDS**

for

South Tyneside Council

represented by

Parsons Brinkerhoff Limited

August 2008

Contract No: 3676



Head Office:

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GROUND INVESTIGATION: MCNULTY'S YARD, SOUTH SHIELDS

CONTENTS	PAGE No
1. INTRODUCTION	1
2. THE SITE	1
2.1 Location	1
2.2 Site Description and Topography	2
3. SITE OPERATIONS	2
3.1 General	2
3.2 Exploratory Holes	2
3.3 Samples	2
3.4 Groundwater	3
3.5 Instrumentation	3
4. <i>IN-SITU</i> TESTING	3
4.1 General	3
4.2 Photo Ionisation Detector (PID)	3
5. LABORATORY TESTING	3
5.1 General	3
5.2 Specialist Chemical Testing	3

FIELD DATA ENCLOSURES:

Site Location Plan	Figure 1
Exploratory Hole Location Plan	Figure 2
Key Sheets	Figure 3
Borehole/Drillhole Records	Figure 4
Window Sample Hole Records	Figure 5
Groundwater Observations Made at the Time of Siteworks	Table 1

IN-SITU ENCLOSURES:

Test Report Certificate	0
Standard Penetration Test (SPT)	1

LABORATORY ENCLOSURES:

Laboratory Report Certificate	0
Sample Description Sheets	1
Moisture Content/Plastic Index and Moisture Content	2
Particle Size Distribution Sieving and Sedimentation	3
Determination of One Dimensional Consolidation Properties	4
Determination of Point Load Index	5

Appendix I: Specialist Chemical Testing (Tested Externally)

Appendix II: Rock Core Photographs



GROUND INVESTIGATION: MCNULTY'S YARD, SOUTH SHIELDS

1. INTRODUCTION

The purpose of the site investigation was to determine the ground conditions and to establish the extent of possible contamination that may impact the future redevelopment of the site.

Allied Exploration & Geotechnics Limited (AEG) were contracted by South Tyneside Council with Parsons Brinkerhoff Limited acting in the capacity of Consulting Engineer to perform a ground investigation at this site in order to provide information on subsurface ground and groundwater conditions and to obtain samples for geotechnical and chemical testing.

The site works consisted of the following exploratory holes, all with associated sampling:

- Fifteen cable percussion boreholes, where four were advanced further utilising rotary coring/openhole techniques
- One rotary drillhole was advanced utilising rotary openhole/coring techniques
- Seven window sample holes.

In-situ testing was carried out in all exploratory holes in accordance with the relevant British Standards.

Site work was carried out between the 22nd May and 6th June 2008. A factual report only was requested.

The comments and opinions expressed in this report are based on the ground conditions encountered during the site work and on the results of tests carried out in the field and in the laboratory. There may, however, be special conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report.

2. THE SITE

2.1 Location

The National Grid Reference of the approximate centre of the site is NZ 356 665. This can be found on Ordnance Survey 1:50,000 Sheet Number 88 (Newcastle upon Tyne, Durham & Sunderland). Part of this sheet is reproduced as Figure 1, the Site Location Plan.

The site on the eastern bank of the River Tyne in South Shields, located approximately 12km east of Newcastle upon Tyne city centre.

2.2 Site Description and Topography

The site is part of an existing ship yard generally used for storage and construction and comprises warehouses and containers. The site is relatively flat lying within the vicinity of the exploratory holes and is bounded to the west by the River Tyne, to the east by West Holburn, to the north by further docking areas.

3. SITE OPERATIONS

3.1 General

All exploratory hole work, associated sampling, *in-situ* testing and logging was carried out in accordance with techniques outlined in BS 5930:1999 or BS 1377:1990 as appropriate, at positions as near as practicable to those supplied by the Consulting Engineer. These are shown on the Exploratory Hole Location Plan, Figure 2.

The depths of all exploratory holes, descriptions of the material encountered, details of any groundwater encountered, samples taken and *in-situ* testing carried out together with any other relevant information can be found on the Borehole/Drillhole and Window Sample Hole Records, Figures 4 and 5 respectively. A key to all symbols and abbreviations used throughout the report is included in the Key Sheets, Figure 3.

3.2 Exploratory Holes

Fifteen boreholes were sunk using a Pilcon Wayfarer 1500 drilling rig, utilising cable percussive techniques, to depths of between 5.30m (BH-08/08) and 15.15m BGL (BH-08/10). Four of the boreholes were continued by rotary openhole/coring techniques, using a Boart Longyear DB520 to depths of between 13.20m (BH-08/01) and 17.80m BGL (BH-08/18). Photographs were taken of the recovered core and are presented as Appendix II.

One drillhole was advanced using a Boart Longyear DB520, utilising rotary openhole/coring techniques to a depth of 21.50m BGL. Photographs were taken of the recovered core and are presented as Appendix II.

Seven window sample holes were sunk using a Premier Compact 110 Series tracked rig to maximum depth of 5.00m BGL.

All exploratory holes were CAT scanned and commenced by a hand excavated inspection pit to confirm the absence of underground public utility services. On completion, the exploratory holes were either backfilled or installed with instrumentation (Section 3.5) in accordance to the requirements of the Consulting Engineer.

3.3 Samples

Representative samples of soil and rock were obtained from the exploratory holes and were taken to the laboratory for selected geotechnical and chemical testing.

3.4 Groundwater

The comments on groundwater conditions are based on the observations made at the time of investigation. It should be noted that groundwater levels may vary due to seasonal and other effects.

Groundwater was encountered in the exploratory holes during the site works operation. Details are given on the relevant Exploratory Hole Records and in greater detail as Table 1.

3.5 Instrumentation

Nominally 19mm diameter piezometers or 50mm diameter gas/groundwater standpipes were installed in the boreholes in accordance with the requirements of the Consulting Engineer. Details of the installations are shown on the relevant Exploratory Hole Records.

Allied Exploration & Geotechnics Limited were not required to monitor the instrumentation.

4. *IN-SITU* TESTING

4.1 General

In-situ testing as specified by the Consulting Engineer was carried out in selected exploratory holes in accordance with techniques outlined in the relevant British Standard and/or AEG Quality Procedure. The results are presented in the *In-situ* Testing Enclosures with a number of the test results summarised at the relevant depth on the exploratory hole records.

4.2 Photo Ionisation Detector (PID)

In-situ screening of soil samples using a Photo Ionisation Detector (PID) were carried during the advancement of the boreholes. The results are presented on the relevant exploratory hole record

5. LABORATORY TESTING

5.1 General

Laboratory testing as scheduled by the Consulting Engineer was carried out on selected samples in accordance with techniques outlined in BS 1377:1990, AEG Laboratory Quality Procedures or other appropriate standard as quoted. The results are presented in the Laboratory Enclosures.

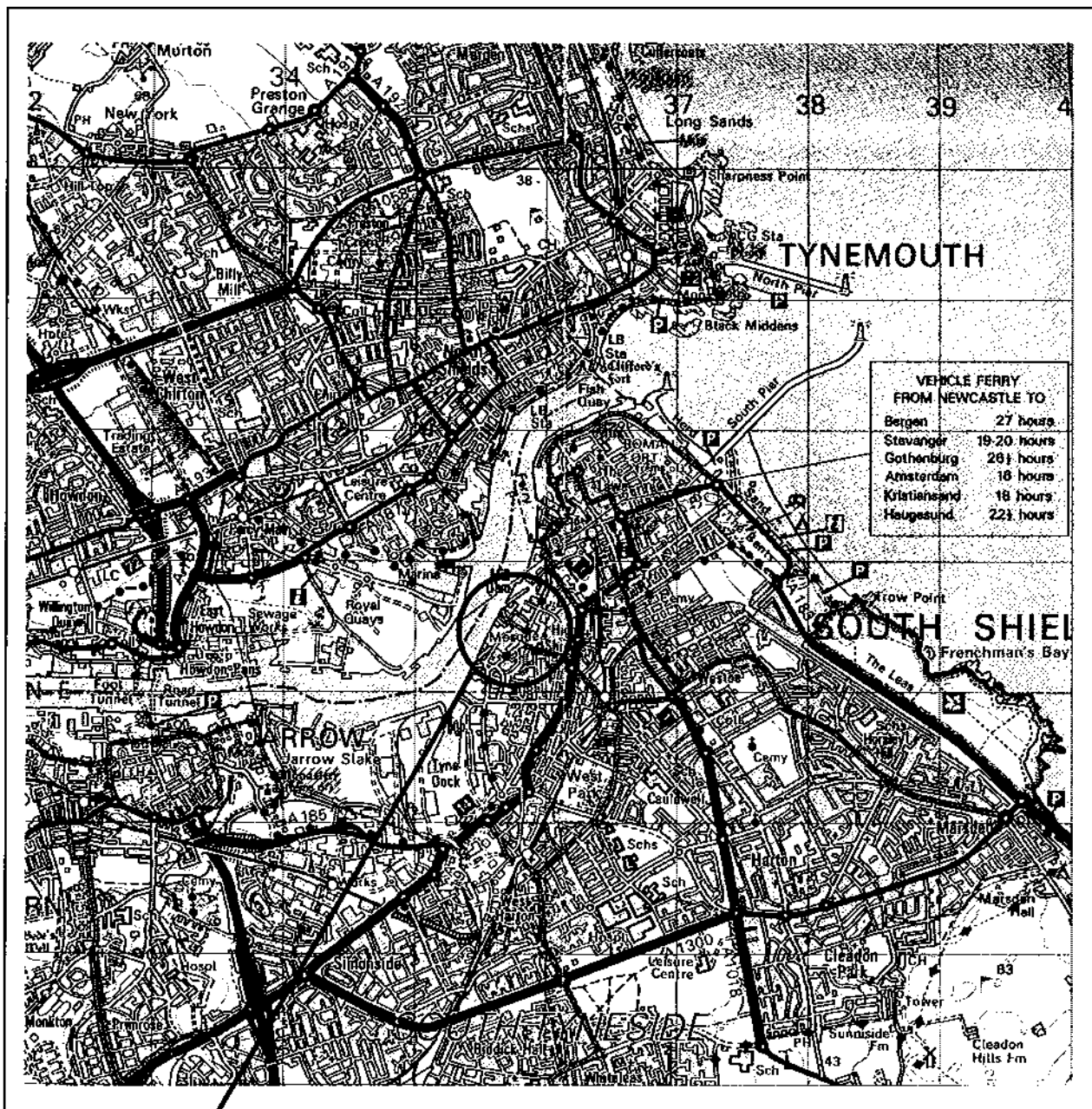
5.2 Specialist Chemical Testing

Selected samples have been screened for a range of contaminants specified by the Consulting Engineer. The results of these analyses, conducted under a subcontract arrangement with Scientific Analysis Laboratories, are presented as Appendix I.

FIELD DATA ENCLOSURES

FIGURE 1

Site Location Plan



THE SITE

GROUND INVESTIGATION: MCNULTY'S YARD, SOUTH SHIELDS

Reproduced from the Ordnance Survey 1:50,000 scale Landranger map by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, Crown Copyright. All rights reserved. Licence number AL 100002282.

Contract No: 3676

Figure 1

FIGURE 2

Exploratory Hole Location Plan



Allied Exploration and Geotechnics Limited
 Unit 25 Stella GIM Industrial Estate
 Pelton Fall
 Chester - Le - Street
 Co Durham
 DL12 2RG
 (Tel): 0191 387 4700
 (Fax): 0191 387 4710
 (Email): enquiries@aeguk.net

KEY:



BOREHOLE LOCATIONS



WINDOW SAMPLE LOCATIONS

Drawing Title:

FIGURE 2: Exploratory Hole Location Plan

Drawing No.:

AEG/3676/01

Contract Title:

Ground Investigation: McNulty's Yard, South Shields

Client:

**South Tyneside Council
 Town Hall and Civic Offices, Westoe Road
 South Shields, Tyne and Wear, NE33 2RL**

Consultant:

**Parsons Brinkerhoff Limited
 Amber Court, William Armstrong Drive
 Newcastle upon Tyne, NE4 7YQ**

Contract No.:

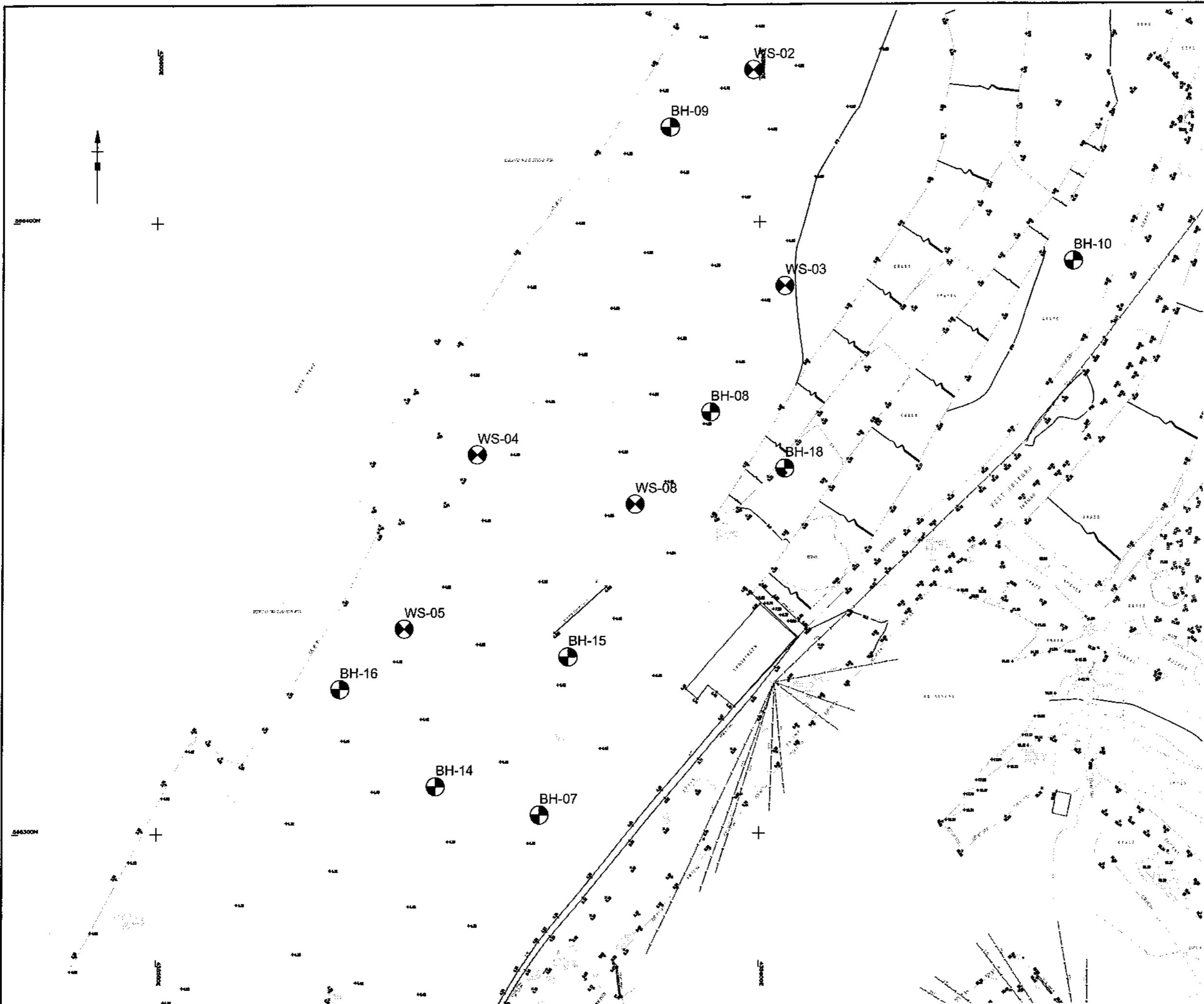
3676

Scale:

Not to Scale



Date:

11/06/2008



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 Unit 25 Stella Hill Industrial Estate
 Pelton Fall
 Chester - La - Street
 Co Durham
 DH2 2RG
 (Tel): 0191 387 4700
 (Fax): 0191 387 4710
 (Email): enquiries@aeg.uk.net

KEY:

 BOREHOLE LOCATIONS
 WINDOW SAMPLE LOCATIONS

Drawing Title:
FIGURE 2: Exploratory Hole Location Plan

Drawing No.:
AEG/3676/02

Contract Title:
Ground Investigation: McNulty's Yard, South Shields

Client:
**South Tyneside Council
 Town Hall and Civic Offices, Westoe Road
 South Shields, Tyne and Wear, NE33 2RL**

Consultant:
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 Amber Court, William Armstrong Drive
 Newcastle upon Tyne, NE4 7YQ**

Contract No.:
3676

Scale:
Not to Scale

Date:
11/06/2008



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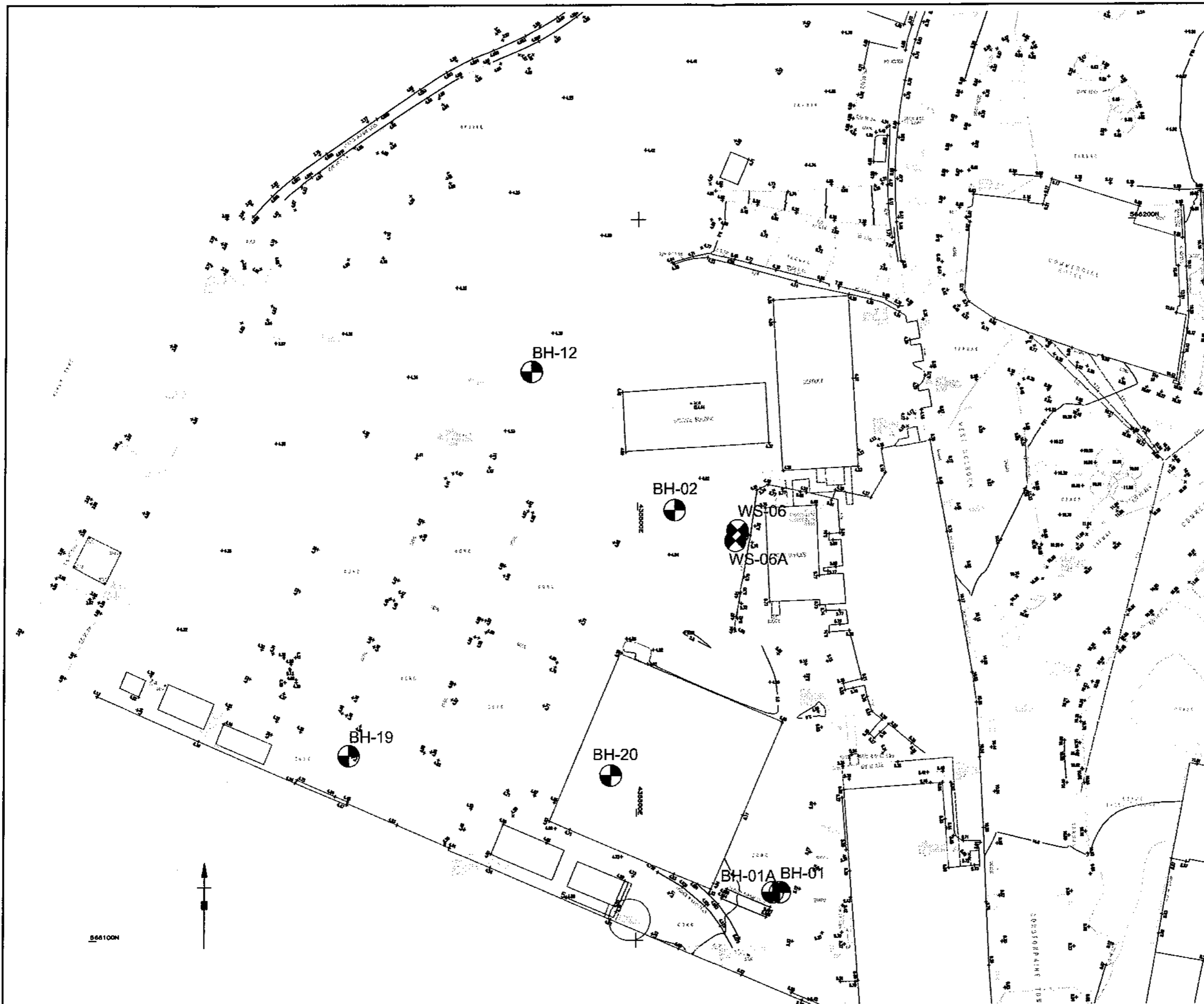
KEY:



BOREHOLE LOCATIONS



WINDOW SAMPLE LOCATIONS



Drawing Title:	FIGURE 2: Exploratory Hole Location Plan
Drawing No.:	AEG/3676/03
Contract Title:	Ground Investigation: McNulty's Yard, South Shields
Client:	South Tyneside Council Town Hall and Civic Offices, Westoe Road South Shields, Tyne and Wear, NE33 2RL
Consultant:	Parsons Brinkerhoff Limited Amber Court, William Armstrong Drive Newcastle upon Tyne, NE4 7YQ
Contract No.:	3676
Scale:	Not to Scale
Date:	11/06/2008

FIGURE 3

Key Sheets



Allied Exploration & Geotechnics Limited



Key Sheet

INTRODUCTION

The following explanatory notes define the terminologies, abbreviations and symbols pertaining to each individual column or section of the Exploratory Hole records. 'Exploratory Hole' is used as a general term in this report to comprise borehole, drillhole, and trial pit. All exploratory hole records have been produced using 'gINT', which is an integrated software environment for the storage and manipulation of subsurface data.

The primary purpose of ground investigation exploratory holes is to probe the stratified sequences of soil and/or rock. From the results of these probings no conclusion should be drawn concerning the presence of size, lithological nature and numbers per unit volume of ground of cobbles and boulders in soil types such as glacial till (boulder clay).

INFORMATION COMMON TO ALL EXPLORATORY HOLE RECORDS

Status Box

The status box in the top right hand corner of each exploratory hole record gives the status of each individual record i.e. PRELIM1, PRELIM2, FINAL etc. The date shown relates to the last instance the data was revised. This information is for AEG Quality Assurance only.

Borehole/Trial Pit/Drillhole No

The exploratory hole identity number used throughout the report.

Project

The ground investigation project name. Occasionally the project name may be shortened or abbreviated due to string length restraints imposed by the gINT computer programme.

Client

Client's name responsible for funding the ground investigation project. The Client's name may be shortened or abbreviated due to string length restraints imposed by the gINT computer programme.

Location

The exploratory hole position given as either national grid co-ordinates, local grid if specified, or a reference name normally pertaining to the area of investigation.

Method & Equipment

Represents the drilling, excavation or boring method(s) or equipment used.

Ground Level (m(AOD))

The precise ground level in metres above Ordnance Datum at the exploratory hole location from which the reduced level for each stratigraphic boundary is calculated.

Date

The date relating to the start of the exploratory hole excavation.

Sheet

The sheet number and total number of sheets for the particular record.

Checked By

Signature of the person who has carried out the technical quality check on the log.

Logged By

The name of the engineer who has carried out the logging of the exploratory hole.

Contract No.

The Allied Exploration & Geotechnics Limited reference number for the project.



Key Sheet

INFORMATION RELEVANT TO BOREHOLE RECORDS

Sample & Tests Columns

<i>Depth</i>	The depth over which a sample or test is taken is shown in depth column of the exploratory hole record in a "from...to" format.
<i>Type No</i>	Indicates the type of sample/test and number given by the driller.
<i>Test Result</i>	Result of the test given in the applicable units.

Water Column

<i>Water Strike</i>	Level of groundwater strike within an exploratory hole. The symbol \downarrow denotes a water strike and is suffixed with a number, which indicates the strike order. The corresponding unfilled symbol \downarrow is the depth the strike rose to.
<i>Seepage</i>	Level of groundwater seepage within an exploratory hole. The symbol ∇ denotes a seepage.

Strata Columns

<i>Reduced Level</i>	The corresponding reduced level of each soil or rock boundary in metres Ordnance Datum.
<i>Legend</i>	A graphical representation of the materials encountered using BS 5930:1999 recommended symbols for soil and rock.
<i>Depth (Thickness)</i>	The depth below ground level of each soil or rock boundary in metres and the thickness of each individual stratigraphic unit (given in brackets).
<i>Description</i>	Engineering description of each individual soil or rock type following recommendations outlined in Section 6 of BS 5930:1999 with the following AEG in-house revisions. (1) Where both sand and gravel are present as secondary constituents in a fine grained soil the combined percentage of both sand and gravel is considered in defining the appropriate quantitative descriptive terms as follows (Ref.: 41.4.4.5, p121, BS 5930:1999): <ul style="list-style-type: none">• 'slightly sandy and gravelly CLAY' means that the soil contains up to 35% 'sand and gravel'.• 'sandy and gravelly CLAY' means that the soil contains between 35% and 65% 'sand and gravel'.• 'very sandy and gravelly CLAY' means that the soil contains more than 65% 'sand and gravel'. (2) Where 'rock weathering classification' can be applied it is 'Approach 2' which is generally used. If any other approach is used the factual text of the report will provide details of the applicable specific approach. (Ref.: Figure 19, p132, BS 5930:1999).

Instrument/Backfill Column

A graphical representation of backfill material or instrumentation detail using graphic legends. Its placement in the column is relative to depth in metres and corresponds to the exploratory hole in scale.

Boring Progress and Water Observations Columns

This section provides information on each days production as a daily log.

<i>Date</i>	Date of shift.
<i>Depth</i>	Depth of hole at the start of the shift.
<i>Casing</i>	Casing's depth at the start of the shift.
<i>Casing Dia</i>	Casing's diameter at the start of the shift.
<i>Water Depth</i>	Water level within the borehole at the start and end of shift.

Chiselling Columns

Indicates where hard strata occurred in the borehole and breaking out was carried out to advance the borehole.

<i>From</i>	The depth commenced.
<i>To</i>	The depth finished.
<i>Hours</i>	The time spent for breaking out.



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Key Sheet

Water Added Columns

Indicates the depth range where water was added to the borehole to facilitate boring or to prevent stress relief disturbance "blowing/boiling" in granular soils.

From Depth in metres from where water was added.
To Depth in metres to where water was added.

General Remarks

Any remarks believed to be relevant to the exploratory hole.

INFORMATION RELEVANT TO TRIAL PIT RECORDS

The trial pit records follow the same format as the borehole records for the Samples & Tests, Water and Strata columns. However, in addition to these there are the following:

Plan Column

A schematic plan view of the trial pit showing its excavated dimensions together with its orientation, given as a compass bearing to magnetic north.

Groundwater Column

Notes on water bearing horizons.

Remarks Column

The engineer's comments outlining the stability of the sides during trial pit excavation together with any other information relevant to construction of the exploratory hole.

INFORMATION RELEVANT TO DRILLHOLE RECORDS

Run Details Columns

Depth Each drill run is highlighted by a horizontal line with the top and bottom depths shown in metres.

TCR(SCR)RQD Information provided on the total core recovery, solid core recovery and rock quality designation. Refer to Abbreviations for further details.

(SPT)Fracture Index Information given relating to any SPT test carried out and/or a value for the fracture index of the rock.

Strata Columns

As the strata columns for borehole records except for description which is as follows:

Discontinuities/Detail Information on core discontinuities, localised variations in weathering, lithology, strength and structure following recommendations outlined in Section 6 BS 5930:1999:Clause 44.

Main Engineering description of each individual soil or rock type following recommendations outlined in Section 6 of BS 5930:1999 with the AEG in-house revisions as detailed for the 'Borehole Records' above.

Instrument/Backfill Column

A graphical representation of backfill material or instrumentation detail using graphic legends. Its placement in the column is relative to depth in metres and corresponds to the exploratory hole in scale.



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Key Sheet

Drilling Progress and Water Observations Columns

<i>Date</i>	Date of shift.
<i>Depth</i>	Depth of hole at the start of the shift.
<i>Casing</i>	Casing's depth at the start of the shift.
<i>Core Dia</i>	Diameter of core.
<i>Water Strike</i>	Depth at which water was encountered.
<i>Water Standing</i>	Depth at which water in the borehole levelled off.
<i>Flush Type</i>	Details of the type of flush used.
<i>Flush returns</i>	An indication of the percentage of the returned flush material



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Key Sheet

Abbreviations

SAMPLES

- B** Bulk disturbed sample generally representative of the soil type for cohesive and fine granular soils.
- G** Gas sample.
- J** Small disturbed jar sample normally taken at intermediate depth between other sampling or testing operations. The sample is stored in an airtight container.
- Ch** Sample of potentially contaminated materials. If prefixed by G, the sample is contained in a glass jar, if prefixed by a J, the sample is contained in a plastic air-tight container and if prefixed with a W the sample is a potentially contaminated water sample (ie GCh, JCh, WCh).
- P** Undisturbed piston sample normally used in low strength fine grained soils to reduce the level of disturbance.
- P*** An attempted but failed undisturbed piston sample.
- U** General purpose 102mm diameter undisturbed sample.
- U*** An attempted but failed general purpose undisturbed sample.
- W** Water sample.

IN-SITU TESTS

- CBR** California Bearing Ratio mould sample or test.
- HSV** In-situ hand shear vane.
- HP** Hand penetrometer test.
- K (F)** Falling head permeability test.
- K (R)** Rising head permeability test.
- K (C)** Constant head permeability test.
- K (P)** Packer permeability test.
- PT** Pressuremeter test.
- S** Standard Penetration Test (SPT) using the split barrel sampler (shoc). The corresponding 'N' value is given in the test result column.
- C** Denotes SPT test using a solid cone in preference to the split barrel sampler (generally in coarse granular soil).
- S*/C*** Denotes where full penetration has not been achieved in an SPT test. In such cases the number of blows against the amount of penetration is reported in the test result column.
- SV** In-situ down the hole shear vane test. The remoulded shear strength is given in brackets.



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Key Sheet

ROCK QUALITY & CORE RECOVERY

TCR	Total Core Recovery - the length of the recovered core expressed as a percentage of the length of core run.
SCR	Solid Core Recovery - the sum length of all core pieces that are recovered with at least one full diameter, expressed as a percentage of the length of core run.
RQD	Rock Quality Designation - The sum length of all core pieces that are 100mm or longer (measured along the centre of the core), expressed as a percentage of the length of core run.
FI	Fracture Index - The number of fractures per 1000mm length of solid core.
NI	Non-intact - The material recovered in a non-intact state.
NR	No recovery from the core run.

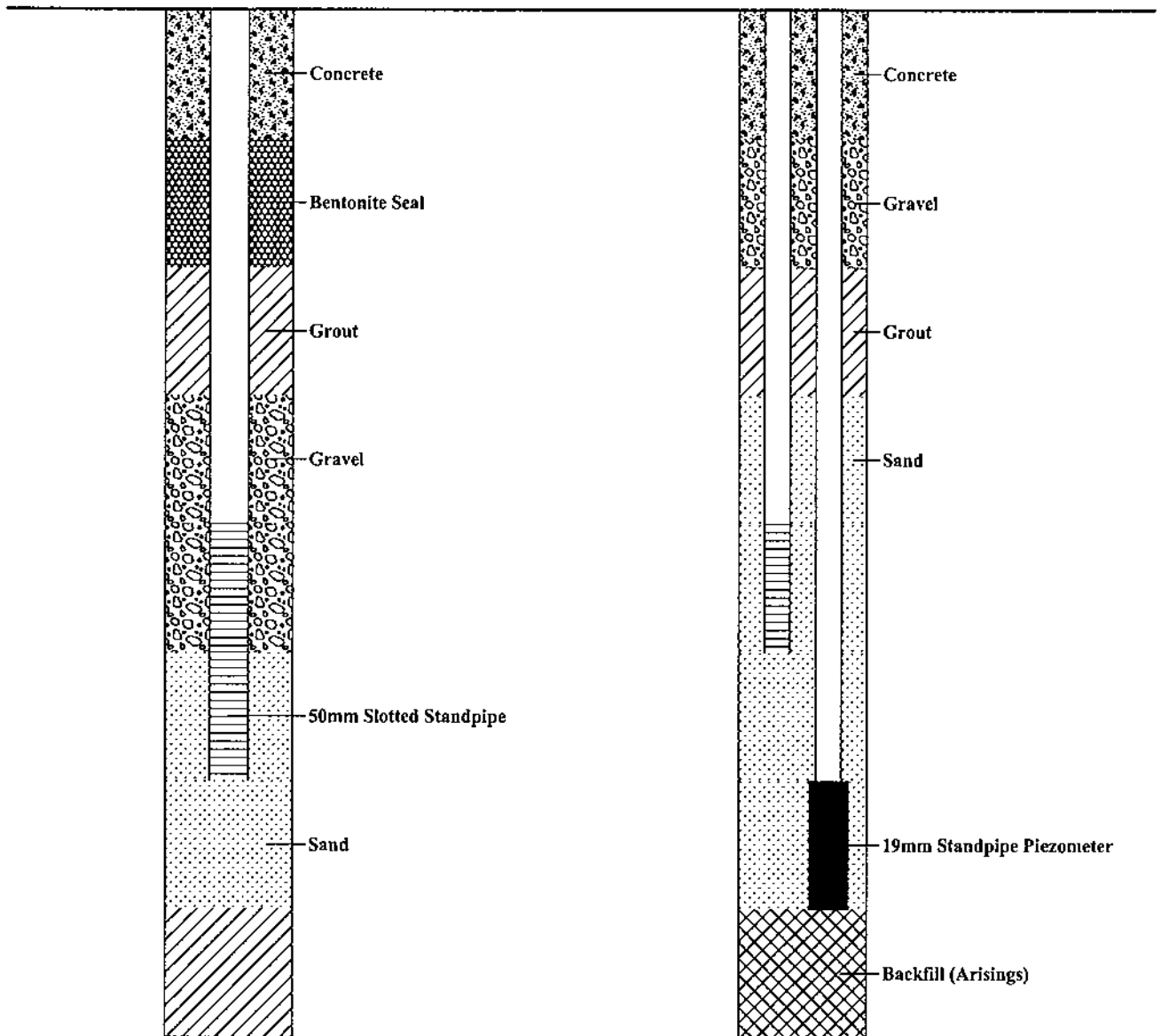
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Key Sheet

Symbols and Abbreviations : Explanation Of Instrumentation Legends Used

Single Instrument

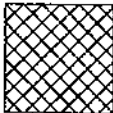
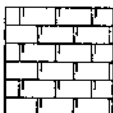
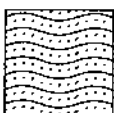
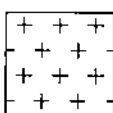

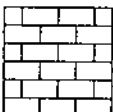
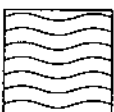
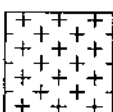
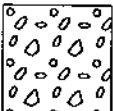
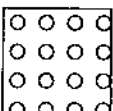
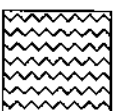

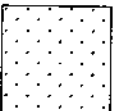
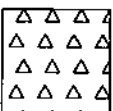
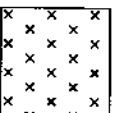
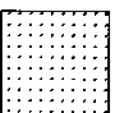

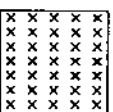
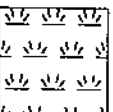
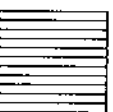
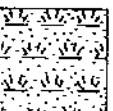


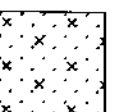

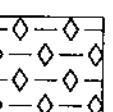
Double Instrument



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Key Sheet

Symbols and Abbreviations : Explanation Of Legends Used

<i>Soils</i>	<i>Rocks</i>		
	<i>Sedimentary</i>	<i>Metamorphic</i>	<i>Igneous</i>
 Made Ground	 Chalk	 Coarse Grained	 Coarse Grained
 Boulders & Cobbles	 Limestone	 Medium Grained	 Medium Grained
 Gravel	 Conglomerate	 Fine Grained	 Fine Grained
 Sand	 Breccia		
 Silt	 Sandstone		
 Clay	 Siltstone		
 Peat	 Mudstone		
 Topsoil	 Shale		
	 Coal		
 Silty Sand	 Pyroclastic (Volcanic Ash)		
	 Gypsum		

Note: Composite soil types will be signified by combined symbols e.g.



FIGURE 4
Borehole/Drillhole Records



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/01	
Client: South Tyneside Council		Location: South Shields E:435520.149 N:566106.603	
Method & Equipment: Percussion/Coring using a Wayfarer 1500/Boart Longyear DB520		Ground Level (m(AOD)): 5.029	Date: 02/06/2008 Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
0.40	JCh1		4.829		(0.20) 0.20	(1) MADE GROUND (Concrete).	
1.00	PID B2	0.0ppm			(1.20)	MADE GROUND (Black sandy gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular to subrounded and consists of brick, cement and sandstone).	
1.00	B3						
1.20			3.629		1.40	Firm brown/grey sandy CLAY.	
1.50-1.95	SB4	N13					
2.00	PID JCh5	0.0ppm			(1.70)		
2.00							
2.50-2.95	SB6	N8				at c.2.50m BGL ... soft and firm	
3.00	PID	0.0ppm	1.929		3.10		
3.50-3.95	U7	(100)				Stiff and very stiff grey sandy slightly gravelly CLAY of low plasticity with occasional cobbles. Gravel is fine to medium subangular to subrounded and consists of mudstone and sandstone. Cobbles are mainly subangular and consist of sandstone).	
4.00	PID J8	0.0ppm					
4.00	B9						
4.20							
4.30-4.80	B10						
5.00	PID SJ11	0.0ppm N34					
5.00-5.45							
5.50	B12						
6.00	PID	0.0ppm					
6.50	U*13	(96)					
7.00	PID J14	0.0ppm N39			(7.90)		
7.00-7.45							
7.50	B15						

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
02/06/2008	0.00	0.00				4.30	4.60	0.50			(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) BH-08/01 redrilled to provide rock strata information. (Refer to BH-08/01A).
02/06/2008	1.20	0.00				4.60	4.80	0.50			
03/06/2008	1.20	0.00		Dry		6.50	6.70	0.50			

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: 	Logged by: GT/MA	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/01
Client: South Tyneside Council	Location: South Shields E:435520.149 N:566106.603	
Method & Equipment: Percussion/Coring using a Wayfarer 1500/Boart Longyear DB520	Ground Level (m(AOD)): 5.029	Date: 02/06/2008
		Sheet: 2 of 2

SAMPLES & TESTS			STRATA				Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	
8.00	PID	0.0ppm					(As sheet 1 of 2) Stiff to very stiff grey slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded and consists of mudstone.
8.50-8.95	U16	(110)					
8.85	J17						
9.00	PID	0.0ppm					
10.00	PID	0.0ppm					
10.00-10.45	SJ18	N50					
10.50	BCh19						
11.00	PID	0.0ppm		-5.971		11.00	Weak grey MUDSTONE moderately to highly weathered.
11.00	S*J20	100 for 71mm				(0.50)	
11.30	B21			-6.471		11.50	Boring complete at 11.50m BGL - continued by rotary coring.
11.50	S*J22	100 for 17mm					

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
03/06/2008	11.50	11.00	200mm	Dry		11.20	11.50	0.75			(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) BH-08/01 redrilled to provide rock strata information. (Refer to BH-08/01A).

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>aw/nv</i>	Logged by: GT/MA	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/01
Client: South Tyneside Council	Location: South Shields E:435520.149 N:566106.603	
Method & Equipment: Percussion/Coring using a Wayfarer 1500/Boart Longyear DB520	Ground Level (m(AOD)): 5.029	Date: 02/06/2008
		Sheet: 1 of 1

RUN DETAILS			STRATA					Instrument/ Backfill
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thickness)	DESCRIPTION		
						Discontinuities	Detail	
11.50	75 (4) 0	NR	- 6.471	xxxxx	11.50	11.50-11.75m ... possible zone of no recovery.	Boring complete at 11.50m BGL - continued by rotary coring. Very weak grey SILTSTONE highly weathered.	
		NI		xxxxx	(0.54)	11.75-12.38m ... non-intact.		
			- 7.011	xxxxx	12.04		Weak grey fine grained SANDSTONE slightly to moderately weathered. NOTE: Driller notes loosing flush - attempted to advance casing to compensate.	
12.50	100 (61) 14	16		xxxxx	(1.16)	12.38-13.20m ... closely and very closely spaced horizontal subvertical planar rough discontinuities.		
13.20			- 8.171	xxxxx	13.20	12.93-13.05m ... vertical planar rough discontinuity.		
							Rotary coring terminated at 13.20m BGL - due to drilling difficulties.	

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water		Flush		
				Strike	Standing	Type	Returns	
04/06/2008	11.50	11.50			Dry			(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) BH-08/01 redrilled to provide rock strata information. (Refer to BH-08/01A).
04/06/2008	13.20	12.50	92mm			Water	50%	



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DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/01A	
Client: South Tyneside Council		Location: South Shields E:435519.167 N:566106.642	
Method & Equipment: Rotary Coring using a Boart Longyear DB520		Ground Level (m(AOD)): 5.029	Date: 05/06/2008
			Sheet: 1 of 6

RUN DETAILS			STRATA				Instrument/ Backfill		
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thickness)	DESCRIPTION			
						Discontinuities		Detail	Main
0.00						0.00-11.50m ... Rotary Openhole Drilling.			
			4.829		(0.20) 0.20			(1) MADE GROUND (Concrete).	
					(1.20)			(1) MADE GROUND (Black sandy gravel).	
			3.629		1.40			(1) Brown/grey sandy CLAY	
					(1.70)				
			1.929		3.10			Grey sandy slightly gravelly CLAY with occasional cobbles.	

Drilling Progress and Water Observations								GENERAL REMARKS	
Date	Depth	Casing	Core Dia mm	Water		Flush			
				Strike	Standing	Type	Returns		
05/06/2008	0.00	0.00							

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RW/NV</i>	Logged by: M. Amanze	Contract No. 3676
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DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/01A	
Client: South Tyneside Council	Location: South Shields E:435519.167 N:566106.642		
Method & Equipment: Rotary Coring using a Boart Longyear DB520	Ground Level (m(AOD)): 5.029	Date: 05/06/2008	Sheet: 2 of 6

RUN DETAILS			STRATA				Instrument/ Backfill		
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thickness)	DESCRIPTION			
						Discontinuities		Detail	Main
					(8.20)			(As sheet 1 of 6) Grey sandy slightly gravelly CLAY with occasional cobbles.	

Drilling Progress and Water Observations									GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Strike	Water Standing	Flush Type	Returns		
									(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) 19mm piezometer and 50mm gas/ground water standpipe installed.



ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/01A
Client: South Tyneside Council	Location: South Shields E:435519.167 N:566106.642	
Method & Equipment: Rotary Coring using a Boart Longyear DB520	Ground Level (at AOD): 5.029	Date: 05/06/2008
		Sheet: 3 of 6

RUN DETAILS			STRATA				Instrument/ Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'd Level	Legend	Depth (Thickness)	DESCRIPTION		
						Discontinuities		Detail
							(As sheet 2 of 6) Grey sandy slightly gravelly CLAY with occasional cobbles.	
			- 6.271		11.30			
11.50			- 6.471		(0.20) 11.50		(1) MUDSTONE.	
	100 (33) 0	17				11.50-12.26m ... very closely and closely spaced subhorizontal to subvertical planar rough open discontinuities.	Very weak and weak yellow grey fine grained SANDSTONE moderately weathered with many thin interbeds of weak grey siltstone.	

Drilling Progress and Water Observations								GENERAL REMARKS	
Date	Depth	Casing	Core Dia mm	Water		Flush			
				Strike	Standing	Type	Returns		

(1) Description derived from drillers daily report.
(2) Inspection pit dug to 1.20m BGL prior to drilling.
(3) 19mm piezometer and 50mm gas/ground water standpipe installed.

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KW/INV</i>	Logged by: M. Amanze	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/01A	
Client: South Tyneside Council		Location: South Shields E:435519.167 N:566106.642	
Method & Equipment: Rotary Coring using a Boart Longyear DB520		Ground Level (m(AOD)): 5.029	Date: 05/06/2008 Sheet: 4 of 6

RUN DETAILS				STRATA			Instrument/ Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thickness)	DESCRIPTION		
						Discontinuities		Detail
12.50		NI 15				12.26-12.36m ... non-intact. 12.36-14.00m ... closely and very closely spaced subhorizontal to subvertical planar smooth open discontinuities.	(As sheet 3 of 6) Very weak and weak yellow grey fine grained SANDSTONE moderately weathered with many thin interbeds of weak grey siltstone.	
13.50	100 (57) 0							
14.50	100 (25) 20	NI 22				14.00-14.30m ... non-intact. 14.30-14.80m ... very closely spaced horizontal to subvertical planar smooth open discontinuities.		
	100 (51) 28	NI 10			(6.00)	14.80-14.90m ... non-intact. 14.90-17.50m ... closely and very closely spaced subhorizontal to subvertical planar smooth discontinuities. 14.98-15.12m ... vertical planar rough discontinuity.		

Drilling Progress and Water Observations								GENERAL REMARKS	
Date	Depth	Casing	Core Dia mm	Water		Flush		Type	Returns
				Strike	Standing	Type	Returns		

(1) Description derived from drillers daily report.
 (2) Inspection pit dug to 1.20m BGL prior to drilling.
 (3) 19mm piezometer and 50mm gas/ground water standpipe installed.

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KW/NV</i>	Logged by: M. Amanze	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/01A	
Client: South Tyneside Council	Location: South Shields E:435519.167 N:566106.642		
Method & Equipment: Rotary Coring using a Boart Longyear DB520	Ground Level (m(AOD)): 5.029	Date: 05/06/2008	Sheet: 5 of 6

RUN DETAILS			STRATA				Instrument/ Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION		
						Discontinuities		Detail
17.50			- 12.47)		17.50		(As sheet 4 of 6) Very weak and weak yellow grey fine grained SANDSTONE moderately weathered with many thin interbeds of weak grey siltstone.	
	97 (81) 61	NR 7				17.50-17.60m ... possible zone of no recovery. 17.60-19.05m ... non-intact.	Weak and moderately weak brown grey fine to medium grained SANDSTONE slightly weathered.	
		19				19.05-19.31m ... closely and medium spaced subhorizontal planar rough open discontinuities.		
		7			(4.00)	19.31-20.84m ... closely and medium spaced subhorizontal planar rough discontinuities.		

Drilling Progress and Water Observations								GENERAL REMARKS
Date		Depth	Casing	Core Dia mm	Water		Flush	
					Strike	Standing	Type	Returns
05/06/2008		17.50	11.50	92mm		14.10	Air/Water	100%
06/05/2008		17.50	11.50	92mm				

(1) Description derived from drillers daily report.
(2) Inspection pit dug to 1.20m BGL prior to drilling.
(3) 19mm piezometer and 50mm gas/ground water standpipe installed.

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KW/NV</i>	Logged by: M. Amanze	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435519.167 N:566106.642	
Method & Equipment: Rotary Coring using a Boart Longyear DB520		Ground Level (m(AOD)): 5.029	Date: 05/06/2008
		Sheet: 6 of 6	

RUN DETAILS			STRATA					Instrument/ Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION			
						Discontinuities	Detail		Main
20.50								(As sheet 5 of 6) Weak and moderately weak brown grey fine to medium grained SANDSTONE slightly weathered.	
	100 (84) 55					20.84-21.20m ... closely and very closely spaced subhorizontal planar rough open discontinuities.			
		14							
		3				21.20-21.50m ... medium spaced subhorizontal planar rough discontinuities.			
21.50			- 16.471		21.50			Rotary openhole/coring complete at 21.50m BGL.	

Drilling Progress and Water Observations								GENERAL REMARKS	
Date	Depth	Casing	Core Dia mm	Water		Flush		Type	Returns
				Strike	Standing	Type	Returns		
06/05/2008	21.50	11.50	92mm			Air/Water	100%		

(1) Description derived from drillers daily report.
 (2) Inspection pit dug to 1.20m BGL prior to drilling.
 (3) 19mm piezometer and 50mm gas/ground water standpipe installed.

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RWIN</i>	Logged by: M. Amanze	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/02
Client: South Tyneside Council	Location: South Shields E:435505.226 N:566159.711	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.720	Date: 04/06/2008 Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	
0.20	JCh1			[Cross-hatched pattern]	(3.40)	MADE GROUND (Very loose and loose brown grey very clayey very sandy gravel. Sand is fine to coarse. Gravel is fine to medium subangular to subrounded and consists of cement, brick and sandstone).	[Pattern]
0.50	B2						
1.00	PID	0.0ppm					
1.00	JCh3						
1.50-1.95	CB4	N5					
2.00	PID	0.0ppm					
2.00	JCh5						
3.00	PID	0.0ppm					
3.00-3.45	CB6	N14					
3.50	B7		1.320				
3.50	JCh8						
4.00	PID	0.0ppm (91)					
4.00	U*B9						
4.50-4.95	SB10	N18					
5.00	PID	0.0ppm					
6.00	PID	0.0ppm					
6.00-6.45	SJ11	N28					
6.50	B12						
7.00	PID	0.0ppm					
7.50-7.95	U13	(120)					
7.75	J14						

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
04/06/2008	0.00	0.00				3.90	4.00	0.50			(1) Inspection pit dug to 1.20m BGL prior to drilling. (2) 19mm piezometer and 50mm gas/groundwater stand pipe installed.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RW/NV</i>	Logged by: G. Teasdale	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/02	
Client: South Tyneside Council	Location: South Shields E:435505.226 N:566159.711		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.720	Date: 04/06/2008	Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			DESCRIPTION	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		
8.00	PID	0.0ppm				(As sheet 1 of 2) Stiff and very stiff brown slightly gravelly CLAY of low plasticity with occasional cobbles and boulders. Gravel is fine to medium subrounded and consists of mudstone and sandstone. Cobbles and boulders are mainly subangular sandstone.		
9.00-9.45	SJ15	N38						
9.50	BCh16							
			5.280		10.00	Borehole complete at 10.00m BGL.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
04/06/2008	10.00	6.00	200mm	Dry		9.90	10.00	0.50			(1) Inspection pit dug to 1.20m BGL prior to drilling. (2) 19mm piezometer and 50mm gas/groundwater stand pipe installed.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KLW/NV</i>	Logged by: G. Teasdale	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/07	
Client: South Tyneside Council		Location: South Shields E:435563.765 N:566303.019	
Method & Equipment: Cable Percussion using a Dando 2000		Ground Level (m(AOD)): 4.393	Date: 22/05/2008 Sheet: 1 of 1

SAMPLES & TESTS			STRATA				Instrument/ Backfill	
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		DESCRIPTION
0.40 0.60 0.70-0.90	JCh1x5 J2 B3			4.293		(0.10) 0.10	(1) MADE GROUND (Hardcore). MADE GROUND (Medium dense and dense brown clayey/silty very sandy gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to coarse subangular and consists of sandstone, brick, concrete, clinker and ash. Occasional wood and metal fragments).	
1.00 1.00	PID JCh4x5	0.0ppm						
1.50-1.95	CB5	N30					(3.35)	
2.00 2.00	PID JCh6x5	0.0ppm						
2.50-2.95	CB7	N37						at c.2.50m BGL ... dense.
3.00 3.00	PID JCh8x5	0.0ppm						
3.50-3.55	C*9	50 for 28mm		0.943			3.45	(1) MADE GROUND (Brick/concrete).
4.00 4.00	PID JCh10x5	0.0ppm		0.493			(0.45) 3.90	
4.50-4.95	CB11	N19						
5.00 5.00	PID JCh12x5	0.0ppm						
5.50-5.95	CB13	N29				(3.60)		
6.00 6.00	PID JCh14x5	0.0ppm						
6.50-6.95	CB15	N37					at c.6.50m BGL ... dense.	
7.00 7.00 7.00-7.45	PID JCh16x5 CB17	0.0ppm N23						
				-3.107		7.50	Borehole terminated at 7.50m BGL - due to concrete base.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
22/05/2008	0.00	0.00				3.50	3.70	0.50			(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Borehole damp at 6.10m BGL. (4) 50mm gas/groundwater standpipe installed.
22/05/2008	7.50	7.50	200mm	Damp							

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>AWJ/NV</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/08	
Client: South Tyneside Council	Location: South Shields E:435591.956 N:566368.928		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.572	Date: 22/05/2008 Sheet: 1 of 1

SAMPLES & TESTS			STRATA				Instrument/ Backfill	
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		DESCRIPTION
0.20	JCh1						MADE GROUND (Very loose and loose black/brown very sandy gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, brick and clinker).	
0.50	B2							
0.80	JCh3							
1.00	PID	0.0ppm						
1.00	B4							
1.50-1.95	C*B5	2 for 450mm*				(3.80)		
2.00	PID	0.0ppm						
2.00	JCh6							
2.50-2.95	CB7	N5						at 2.50m BGL ... loose.
3.00	PID	0.0ppm						
3.00	JCh8							
3.50-3.95	CB9	N12		0.772		3.80		
4.00	PID	0.0ppm	↓			(0.60)	Stiff brown sandy gravelly CLAY. Gravel is fine to medium subangular and consists of sandstone, mudstone and dolerite.	
4.00	JCh10		↓	0.172		4.40		
4.50-4.95	CB11	N52				(0.80)	Moderately weak red/brown fine to medium grained SANDSTONE slightly to moderately weathered. (Recovered as fine to medium angular gravel).	
5.00	J12							
5.20-5.65	S*J13	61 for 100mm		0.628		5.20	Borehole complete at 5.20m BGL.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
22/05/2008	0.00	0.00				5.00	5.20	1.00			(1) Inspection pit dug to 1.20m BGL prior to drilling. (2) Water strike at 4.40 - rose to 4.10m BGL (20mins). (3) 50mm gas/groundwater standpipe installed.
22/05/2008	3.00	3.00	200mm	Dry							
23/05/2008	3.00	3.00	200mm	Dry							
23/05/2008	5.20	5.20	200mm	4.61							

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KW/NV</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435585.16 N:566415.455	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.652	Date: 22/05/2008 Sheet: 1 of 1

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
0.20	JCh1			[Cross-hatched pattern]		MADE GROUND (Very loose brown clayey sandy gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, clinker and brick. Sand includes ash fines).	[Cross-hatched pattern]
0.50	B2						
1.00	PID	0.0ppm					
1.00	JCh3						
1.20	B4						
1.50-1.95	C*B5	N3			(3.20)		
2.00	PID	0.0ppm					
2.00	JCh6						
2.50-2.95	C*B7	N2					
3.00	PID	0.0ppm	1.452				
3.50-3.95	C*B9	2 for 450mm*		[Cross-hatched pattern]	(1.30)	MADE GROUND (Very loose yellow clayey very gravelly sand. Sand is fine to coarse. Gravel is fine to medium subangular and consists of sandstone, flint and brick).	[Cross-hatched pattern]
4.00	PID	0.0ppm					
4.00	JCh10						
4.50	B11		0.152	[Cross-hatched pattern]	4.50	MADE GROUND (Brown/black clayey very sandy gravel with occasional cobbles. Sand is fine to coarse and includes ash fines. Gravel is fine to medium angular and consists of clinker and brick).	[Cross-hatched pattern]
5.00	PID	0.0ppm					
5.00	JCh12				(1.40)		
6.00-6.45	S*J13	16 for 100mm	1.248	[Dotted pattern]	5.90	Moderately weak red/yellow fine to medium grained SANDSTONE slightly weathered. (Recovered as fine to medium angular gravel).	[Dotted pattern]
6.40-6.85	S*J14	17 for 100mm	1.848		6.50		
Borehole complete at 6.50m BGL.							

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
22/05/2008	0.00	0.00				6.20	6.40	1.00			
22/05/2008	6.50	6.50	200mm	4.96							

(1) Inspection pit dug to 1.20m BGL prior to drilling.
(2) Water strike at 4.50 - rose to 4.11m BGL (20mins).
(3) 19mm piezometer installed.



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/10	
Client: South Tyneside Council		Location: South Shields E:435651.795 N:566393.538	
Method & Equipment: Cable Percussion using a Dando 2000		Ground Level (m(AOD)): 10.156	Date: 22/05/2008 Sheet: 1 of 2

SAMPLES & TESTS			STRATA				Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	
0.40 0.60	JCh1x5 J2						MADE GROUND (Black/brown sandy gravel with some cobbles/boulders. Sand is fine to coarse and includes ash fines. Gravel is fine to coarse subangular and consists of brick, concrete, sandstone and clinker. Some fragments of wood). (Driller notes some concrete cobbles/boulder size obstructions)
1.00 1.00	PID JCh3x5	0.0ppm					
1.50-1.55	C*4	50 for 91mm					
2.00	PID	0.0ppm					
2.50-2.60 2.70	C*5 J6	50 for 151mm				(5.00)	
3.00	PID	0.0ppm					
3.50-3.55	C*7	50 for 22mm					from c.3.30m BGL ... with much brick and concrete.
4.00	PID	0.0ppm					
4.50-4.55	C*8	50 for 36mm					
5.00	PID	0.0ppm		5.156			5.00
5.50-5.60	C*B9	50 for 87mm					
6.00	PID	0.0ppm					
6.50-6.95	C*B10	91 for 50mm					
7.00 7.00	PID JCh11x5	0.0ppm					
7.50-7.95	C*B12	50 for 153mm				(5.30)	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
22/05/2008	0.00	0.00				1.50	1.60	0.25			
22/05/2008	3.30	3.30	200mm	Dry		1.95	2.30	0.75			
23/05/2008	3.30	3.30	200mm	Dry		3.10	3.30	0.50			
						3.30	5.00	4.00			

(1) Inspection pit dug to 1.20m BGL prior to drilling.
(2) Borehole damp at 10.30m BGL.
(3) 50mm gas/groundwater standpipe installed.



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/10
Client: South Tyneside Council	Location: South Shields E:435651.795 N:566393.538	
Method & Equipment: Cable Percussion using a Dando 2000	Ground Level (m(AOD)): 10.156	Date: 22/05/2008 Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			DESCRIPTION	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		
8.00 8.00	PID JCh13x5	0.0ppm				(As sheet 1 of 2) MADE GROUND (Black brown clayey/silty sandy gravel with some cobbles. Sand is fine to coarse and includes ash fines. Gravel is fine to coarse subangular and consists of ash, brick and sandstone).		
9.00 9.00 9.00-9.45	PID JCh14x5 CB15	0.0ppm N17						
10.00 10.00	PID JCh16x5	0.0ppm	0.144			10.30		
10.50-10.95	CB17	N8						MADE GROUND (Soft brown sandy gravelly clay. Gravel is fine to medium subangular and consists of brick and concrete. Occasional fragments of wood).
11.00 11.00	PID JCh18x5	0.0ppm				(1.70)		
11.50	J19							at c.11.50m BGL ... clay of intermediate plasticity.
12.00 12.00-12.45	PID CB20	0.0ppm N27	1.844			12.00		
13.00 13.00	PID J21	0.0ppm				(2.00)		
13.50-13.95	CB22	N42						
14.00 14.15 14.30	JCh23x5 J24 J25		3.844 4.044			(0.20) 14.20		Stiff red/brown sandy gravelly CLAY. Gravel is fine to medium subangular and consists of sandstone, mudstone and dolerite.
14.60-14.80	B26				(0.95)	Moderately weak red/brown fine to medium grained SANDSTONE slightly to moderately weathered. (Recovered as fine to medium angular gravel).		
15.00-15.15	C*27	50 for 29mm	4.994		15.15	Borehole complete at 15.15m BGL.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
23/05/2008	15.15	14.40	200mm	13.20							(1) Inspection pit dug to 1.20m BGL prior to drilling. (2) Borehole damp at 10.30m BGL. (3) 50mm gas/groundwater standpipe installed.



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435656.785 N:566437.28	
Method & Equipment: Cable Percussion using a Dando 3000		Ground Level (m(AOD)): 9.995	Date: 23/05/2008
			Sheet: 1 of 2

SAMPLES & TESTS			STRATA				Instrument/ Backfill	
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		DESCRIPTION
0.00-0.50	B1						MADE GROUND (Medium dense black/brown clayey/silty very sandy gravel with some cobbles. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, clinker, brick and concrete).	
0.40	JCh2x5							
1.00	PID	0.0ppm						
1.00	JCh3x5							
1.50-1.95	CB4	N13						
2.00	PID	0.0ppm				(4.00)		
2.00	JCh5x5							
2.50-2.95	CB6	N14						
3.00	PID	0.0ppm						
3.00	JCh7x5							
3.50-3.95	CB8	N12						
4.00	PID	0.0ppm		5.995		4.00	Stiff and very stiff grey/brown sandy gravelly CLAY of low to intermediate plasticity with occasional cobbles. Gravel is fine to medium subangular and consists of sandstone, mudstone and dolerite. Cobbles consist mainly of subangular sandstone.	
4.00	JCh9x5							
4.00	J10							
4.00-4.50	B11	(150)						
4.50-4.95	U12							
5.00	PID	0.0ppm						
5.00	J13							
5.50-5.95	SJ14	N28						
5.50-6.00	B15							
6.00	PID	0.0ppm						
6.50-6.95	U16	(150)			(5.20)			
7.00	PID	0.0ppm						
7.00	J17							
7.50	J18							

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
23/05/2008	0.00	0.00									(1) Inspection pit dug prior to drilling. (2) Water strike at 10.00 - rose to 9.00m BGL (20mins). (3) 50mm gas/groundwater standpipe installed.

All dimensions in metres Scale 1:50 For explanation of symbols and abbreviations see Key Sheets Checked by: *KW/nv* Logged by: D. Portsmouth Contract No. 3676



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/11	
Client: South Tyneside Council		Location: South Shields E:435656.785 N:566437.28	
Method & Equipment: Cable Percussion using a Dando 3000		Ground Level (m(AOD)): 9.995	Date: 23/05/2008 Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
8.00 8.00-8.45 8.00-8.50	PID SJ19 B20	0.0ppm N33	↓	0.795		9.20	(As sheet 1 of 2) Stiff and very stiff grey/brown sandy gravelly CLAY of low to intermediate plasticity with occasional cobbles. Gravel is fine to medium subangular and consists of sandstone, mudstone and dolerite. Cobbles consist mainly of subangular sandstone.
9.00 9.00 9.20	PID J21 J22	0.0ppm					
9.50-9.95 9.50-10.00	S*J23 B24	50 for 10mm	↓	-0.005		(0.80) 10.00	Moderately weak red fine to medium grained SANDSTONE slightly weathered. (Recovered as fine to medium angular gravel).
Borehole complete at 10.00m BGL.							

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
23/05/2008		7.60	200mm	Dry							(1) Inspection pit dug prior to drilling. (2) Water strike at 10.00 - rose to 9.00m BGL (20mins). (3) 50mm gas/groundwater standpipe installed.
23/05/2008	8.50 10.00	7.60 9.10	200mm 200mm	Dry 9.00							

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RW/NV</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435485.269 N:566178.938	
Method & Equipment: Cable Percussion using a Dando 2000		Ground Level (m(AOD)): 4.341	Date: 28/05/2008
			Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
0.20 0.30 0.40 0.60-0.80	JCh1x5 J2 JCh3x5 B4		4.191	(0.15)	1.15	(1.25)	
1.00 1.00	PID JCh5x5	0.0ppm	2.941	1.40		1.40	
1.50-1.90	C*B6	50 for 262mm					
2.00 2.00 2.20	PID JCh7x5 J8	0.0ppm					
2.50-2.95	CB9	N26			(2.60)		
3.00 3.00	PID JCh10x5	0.0ppm					
3.50-3.95	CB11	N29					
4.00	PID	0.0ppm	0.341		4.00		
4.50-4.95	CB13	N21			(1.00)		
5.00 5.20 5.30-5.75	PID J14 C*B15	0.0ppm 50 for 196mm	-0.659		5.00	(0.70)	
5.70-6.15	CB16	N30			5.70		
6.00	PID	0.0ppm					
7.00 7.00 7.00-7.45	PID JCh17x5 CB18	0.0ppm N39	-1.359		5.70	(3.30)	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth	From	To	Hours	From	To		
28/05/2008 28/05/2008 29/05/2008	0.00 4.00 4.00	0.00 4.00 4.00	200mm 200mm	Dry Dry	5.00	5.70	1.50				

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: 	Logged by: M. Amanze	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED


BOREHOLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/12	
Client: South Tyneside Council		Location: South Shields E:435485.269 N:566178.938	
Method & Equipment: Cable Percussion using a Dando 2000		Ground Level (m(AOD)): 4.341	Date: 28/05/2008 Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	
8.00 8.00	PID JCh19x5	0.0ppm					 (As sheet 1 of 2) MADE GROUND (Firm and stiff grey brown sandy very gravelly clay with occasional cobbles and organic odour. Gravel is fine to coarse angular to subrounded and consists of sandstone, siltstone, coal, flint, brick and occasional metal fragments . Cobble is subangular and consists of sandstone).
8.50-8.95	CB20	N30	-4.659		9.00	Borehole complete at 9.00m BGL.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
29/05/2008	9.00	9.00	200mm	8.10							(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) 50mm gas/groundwater standpipe installed.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: 	Logged by: M. Amanze	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No
Client: South Tyneside Council	Location: South Shields E:435546.632 N:566307.738	BH-08/14
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.382	Date: 27/05/2008 Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
0.30	JCh1			(8.50)	(8.50)	(8.50)	(8.50)
0.90	B2						
1.00	PID	0.0ppm					
1.30	JCh3						
1.50-1.95	CB4	N38					
2.00	PID	0.0ppm					
2.00	JCh5						
2.50-2.95	CB6	N21					
3.00	PID	0.0ppm					
3.00	JCh7						
3.50-3.95	CB8	N20					
4.00	PID	0.0ppm					
4.00	JCh9						
4.20-5.00	B10						
5.00	PID	0.0ppm					
6.00	PID	0.0ppm					
6.00-6.45	CB11	N5					
7.00	PID	0.0ppm					
7.50-7.95	CB12	N6					

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
27/05/2008	0.00	0.00				2.10	2.20	0.50			
27/05/2008	5.00	5.00	200mm	Dry		3.30	3.50	0.50			
28/05/2008	5.00	5.00	200mm	3.16		4.00	4.20	1.00			

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>[Signature]</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/14	
Client: South Tyneside Council	Location: South Shields E:435546.632 N:566307.738		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.382	Date: 27/05/2008	Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
8.00	PID	0.0ppm					
8.50-9.00	B13		4.118		8.50 (0.50)	(As sheet 1 of 2) MADE GROUND (Medium dense black clayey sandy gravel with occasional cobble to boulder sized concrete fragments. Sand is fine to coarse. Gravel is fine to coarse subangular and consists of sandstone, brick, concrete, clinker and occasional wood fragments). at c.8.50m BGL ... very clayey/silty.	
			4.618		9.00	MADE GROUND (Brown/yellow sandy very gravelly sand. Gravel is fine to medium subangular and consists of sandstone and flint). Borehole complete at 9.00m BGL.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
28/05/2008	9.00	9.00	200mm	4.19		9.00	9.00	0.50			(1) Inspection pit dug to 1.20m BGL prior to drilling. (2) 50mm gas/groundwater standpipe installed.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KW/V</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/15	
Client: South Tyneside Council	Location: South Shields E:435568.487 N:566328.853		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.463	Date: 23/05/2008	Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA			DESCRIPTION	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		
0.20	JCh1					MADE GROUND (Medium dense black/brown sandy gravel with some cobble to boulder sized concrete fragments. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, clinker, brick and concrete. Occasional wood fragments).		
0.90 1.00	B2 PID	0.0ppm						
1.40 1.45 1.50-1.95	B3 JCh4 CB5	N17						
2.00 2.00	PID JCh6	0.0ppm						
2.50-2.95	CB7	N12						
3.00 3.00	PID B8	0.0ppm						at 3.10 to 3.60m BGL ... chiselling on concrete tool dropped to 4.60m BGL - probable void.
3.60	B9							at c3.60m BGL ... concrete cobbles.
4.00	PID	0.0ppm				(8.30)		
4.50	B10							
5.00 5.00-5.45	PID CB11	0.0ppm N15						
6.00 6.00-6.45	PID CB12	0.0ppm N16						
7.00	PID	0.0ppm						
7.50-7.95	CB13	N14						

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
23/05/2008	0.00	0.00				0.80	1.10	0.75			(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Water strike at 5.50 - rose to 4.91m BGL (20mins). (4) 50mm gas/groundwater standpipe installed.
23/05/2008	5.30	5.50	200mm	4.91		1.10	1.30	0.50			
27/05/2008	5.50	5.50	200mm	5.19		3.10	3.30	0.75			
						3.30	3.60	0.50			

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: 	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435568.487 N:566328.853	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.463	Date: 23/05/2008 Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			DESCRIPTION	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		
8.00	PID	0.0ppm		3.837		8.30	(As sheet 1 of 2) MADE GROUND (Medium dense black/brown sandy gravel with some cobble to boulder sized concrete fragments. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, clinker, brick, concrete and occasional wood fragments). Borehole terminated at 8.30m BGL - due to concrete base.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
27/05/2008	8.30	8.30	200mm	6.91		8.30	8.30	0.50			(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Water strike at 5.50 - rose to 4.91m BGL (20mins). (4) 50mm gas/groundwater standpipe installed.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>kw/nv</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No
Client: South Tyneside Council	Location: South Shields E:435530.687 N:566323.646	BH-08/16
Method & Equipment: Cable Percussion/Rotary Openhole using a Dando 2000/Boart Longyear DB520	Ground Level (m(AOD)): 4.449	Date: 27/05/2008 Sheet: 1 of 2

SAMPLES & TESTS			STRATA				Instrument/ Backfill	
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		DESCRIPTION
0.20 0.30 0.40 0.60-0.80	JCh1x5 J2 JCh3x5 B4			4.299		(0.15) 1.15	(1) MADE GROUND (Hardcore). MADE GROUND (Medium dense black/brown clayey sandy gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, brick and sandstone. Occasional wood fragments).	
1.00 1.00	PID JCh5x5	0.0ppm				(2.75)		
1.50-1.95	CB6	N18						
2.00 2.00	PID JCh7x5	0.0ppm						
2.50-2.95	CB8	N18						
3.50 3.50-3.95	PID C*B9	0.0ppm 50 for 198mm		1.549			2.90	MADE GROUND (Brown sandy gravel and cobbles. Sand is fine to coarse. Gravel is fine to medium angular and consists of sandstone. Cobbles are mainly angular sandstone).
4.50 4.50-4.90	PID C*B10	0.0ppm 50 for 276mm		0.249			4.20	MADE GROUND (Brown very clayey gravel with occasional/some wood fragments and cobbles. Sand is fine to coarse. Gravel is fine to coarse angular and consists of sandstone and brick).
5.50 5.50-5.70	PID C*B11	0.0ppm 50 for 116mm		1.451			5.90	
6.10 6.10 6.20 6.40-6.60	PID J12 JCh13x5 B14	0.0ppm					(1.70)	Firm brown sandy gravelly CLAY of low plasticity. Gravel is fine to medium subangular and consists of sandstone and mudstone. (Driller notes cobbles). at c.6.40m BGL ... clay/silt.
7.00 7.00 7.00-7.45	PID JCh15 CB16	0.0ppm N21						
7.70	J17			3.151		7.60		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
27/05/2008	0.00	0.00				3.00	3.10	0.25			(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) 19mm piezometer and 50mm gas/groundwater standpipe installed.
						4.00	4.20	0.50			
						5.00	5.10	0.25			

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: 	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/16	
Client: South Tyneside Council		Location: South Shields E:435530.687 N:566323.646	
Method & Equipment: Cable Percussion/Rotary Openhole using a Dando 2000/Boart Longyear DB520		Ground Level (m(AOD)): 4.449	Date: 27/05/2008 Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
8.00 8.00	PID JCh18x5	0.0ppm			(1.00)	Very weak red/yellow fine to medium grained SANDSTONE slightly to moderately weathered. (Recovered as red/yellow clayey sandy gravel).	0.0:0.0
8.50 8.60-16.00	S*J19	50 for 23mm	-4.151		8.60		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
27/05/2008	8.65	7.60	200mm	8.10							(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) 19mm piezometer and 50mm gas/groundwater standpipe installed.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>[Signature]</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/16
Client: South Tyneside Council	Location: South Shields E:435530.687 N:566323.646	
Method & Equipment: Cable Percussion/Rotary Openhole using a Dando 2000/Boart Longyear DB520	Ground Level (m(AOD)): 4.449	Date: 27/05/2008
		Sheet: 1 of 2

RUN DETAILS				STRATA				Instrument/ Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'ed Level	Legend	Depth (Thick-ness)	DESCRIPTION			
						Discontinuities	Detail		Main
8.60		OH	- 4.15		8.60	8.60-16.00m ... rotary openhole.	Borehole complete at 8.60m BGL - continued by rotary openhole. (1) SANDSTONE soft bands.		
					(7.40)				

Drilling Progress and Water Observations								GENERAL REMARKS	
Date	Depth	Casing	Core Dia mm	Strike	Water Standing	Flush Type	Returns		
03/06/2008	8.60	8.60							(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) 19mm piezometer and 50mm gas/groundwater standpipe installed.



ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/16
Client: South Tyneside Council	Location: South Shields E:435530.687 N:566323.646	
Method & Equipment: Cable Percussion/Rotary Openhole using a Dando 2000/Boart Longyear DB520	Ground Level (m(AOD)): 4.449	Date: 27/05/2008
		Sheet: 2 of 2

RUN DETAILS			STRATA					Instrument/ Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'ed Level	Legend	Depth (Thick-ness)	DESCRIPTION			
						Discontinuities	Detail		Main
16.00			- 11.551		16.00			(As sheet 1 of 2) (1) SANDSTONE soft bands.	
								Rotary openhole complete at 16.00m BGL.	

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water Strike	Water Standing	Type	Flush Returns	
03/06/2008	16.00	8.60				Air	100%	(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) 19mm piezometer and 50mm gas/groundwater standpipe installed.

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>[Signature]</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/17
Client: South Tyneside Council	Location: South Shields E:435604.682 N:566456.876	
Method & Equipment: Percussion/Coring using a Dando 3000/Boart Longyear DB520	Ground Level (mAOD): 4.627	Date: 22/05/2008 Sheet: 1 of 1

SAMPLES & TESTS			Water	STRATA			DESCRIPTION	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)		
0.00-1.50	B1							
0.40	JCh2x5					MADE GROUND (Brown/black sandy gravel with occasional sandstone and concrete cobbles. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, clinker, brick and concrete).		
1.00	PID	0.0ppm						
1.00	JCh3x5							
1.50-1.95	CB4	N44			(3.60)	at c.1.50m BGL ... dense.		
2.00	PID	0.0ppm						
2.00	JCh5x5							
2.50-2.95	C*B6	50 for 75mm						
3.00	PID	0.0ppm						
3.00-3.50	B7					at c.3.00m BGL ... gravel and cobbles.		
			1.027		3.60			
4.00	PID	0.0ppm				(1) MADE GROUND (Cobbles and boulders). (Recovered as medium angular gravel consisting of sandstone).		
4.00	JCh8x5							
4.50-4.95	S*J9	50 for 75mm			(2.40)			
4.50-5.00	B9							
5.00	PID	0.0ppm						
			1.373		6.00			
6.00	PID	0.0ppm				Dense red very clayey very gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse angular and consists of sandstone. (Possible highly weathered sandstone bedrock).		
6.00	JCh10x5				(1.00)			
6.50-6.95	CB11	N30						
			2.373		7.00			
7.00-7.50	B12				(0.50)	Moderately weak red fine to medium grained SANDSTONE slightly to moderately weathered.		
			2.873		7.50	(Recovered as medium angular gravel).		
7.50	S*J13	50 for 30mm				Boring complete at 7.50m BGL - continued by rotary coring.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
22/05/2008	0.00	0.00				3.80	4.00	0.50			(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Water strike at 7.00 - rose to 6.20m BGL (20mins). (4) 19mm piezometer and 50mm gas/groundwater standpipe installed.
22/05/2008	7.50	7.30	200mm	6.20		5.60	5.80	0.50			
						7.30	7.50	1.00			

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KLW/AV</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435604.682 N:566456.876	
Method & Equipment: Percussion/Coring using a Dando 3000/Boart Longyear DB520		Ground Level (m(AOD)): 4.627	Date: 22/05/2008
			Sheet: 1 of 2

RUN DETAILS				STRATA				Instrument/ Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thickness)	DESCRIPTION			
						Discontinuities	Detail		Main
7.50	95 (55) 0	NI 16	-2.873	(3.35)	7.50	7.50-7.55m ... no recovery. 7.55-7.70m ... non-intact. 7.70-8.30m ... very closely spaced subhorizontal irregular rough open discontinuities.	Boring complete at 7.50m BGL - continued by rotary coring. Weak to moderately weak red yellow fine to medium grained SANDSTONE.	(3.35)	
8.50	100 (60) 27	NI 12	8.30-8.60m ... non-intact.		8.60-8.95m ... very closely spaced subhorizontal irregular rough open discontinuities.	8.95-9.10m ... non-intact.	9.10-10.50m ... closely spaced subhorizontal irregular rough open discontinuities.		
9.50	100 (85) 60	NI 25	-6.223		10.50-10.60m ... non-intact.	10.60-10.85m ... very closely spaced subhorizontal irregular rough open discontinuities.	10.85-11.70m ... closely spaced subhorizontal irregular rough open discontinuities.		Weak to moderately weak black grey sandy MUDSTONE slightly to moderately weathered.
10.50	100 (80) 40	NI 9							
11.50									

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water		Flush		
				Strike	Standing	Type	Returns	
28/05/2008	7.50	7.50			3.70			(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Water strike at 7.00 - rose to 6.20m BGL (20mins). (4) 19mm piezometer and 50mm gas/groundwater standpipe installed.

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RW/NV</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/17
Client: South Tyneside Council	Location: South Shields E:435604.682 N:566456.876	
Method & Equipment: Percussion/Coring using a Dando 3000/Boart Longyear DB520	Ground Level (m(AOD)): 4.627	Date: 22/05/2008 Sheet: 2 of 2

RUN DETAILS			STRATA				Instrument/ Backfill		
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities		Detail	Main
12.50	100 (79) 33	NI				11.70-11.90m ... non-intact.		(As sheet 1 of 2) Weak to moderately weak black grey sandy MUDSTONE slightly to moderately weathered.	
						11.90-13.32m ... closely spaced subhorizontal irregular rough open discontinuities.			
						13.32-13.50m ... non-intact.			
13.50	100 (80) 70	NI			(4.15)	13.50-13.75m ... closely spaced subhorizontal irregular rough open discontinuities.			
						13.75-13.85m ... non-intact.			
						13.85-14.10m ... very closely spaced subhorizontal irregular rough open discontinuities.			
14.50	100 (60) 25	NI				14.10-14.27m ... non-intact.			
						14.27-14.40m ... closely spaced subhorizontal irregular rough open discontinuities.			
						14.40-14.90m ... non-intact.			
15.00	100 (20) 0	20	- 10.373		15.00	14.90-15.00m ... very closely spaced subhorizontal irregular rough open discontinuities.		Rotary coring complete at 15.00m BGL.	

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water Strike	Water Standing	Flush Type	Returns	
28/05/2008	15.00	8.80	92mm		3.70	Water	100%	(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Water strike at 7.00 - rose to 6.20m BGL (20mins). (4) 19mm piezometer and 50mm gas/groundwater standpipe installed.

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>PW/NV</i>	Logged by: D. Portsmouth	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/18
Client: South Tyneside Council	Location: South Shields E:435604.216 N:566359.679	
Method & Equipment: Percussion/Boring using a Dando 3000/Boart Longyear DB520	Ground Level (m(AOD)): 5.468	Date: 22/05/2008 Sheet: 1 of 1

SAMPLES & TESTS			STRATA				Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	
0.00-0.50	B1					(1.60)	MADE GROUND (Brown sandy gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, clinker, brick and concrete).
0.40	JCh2x5						
1.00	PID	0.0ppm					
1.00	JCh3x5						
1.50-1.95	CB4	N15		3.868		1.60	MADE GROUND (Medium dense brown/black very silty very sandy gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, clinker and brick).
2.00	PID	0.0ppm					
2.00	JCh5x5						
2.50-2.95	SJ6	N11				3.00	MADE GROUND (Medium dense brown/black very silty very sandy gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to medium subangular and consists of sandstone, clinker and brick).
2.50-3.00	B7						
3.00	PID	0.0ppm		2.468			
3.00	JCh8x5					(2.90)	Stiff brown sandy gravelly CLAY of low plasticity. Gravel is fine to medium subangular and consists of sandstone, mudstone and dolerite.
3.00	J9						
3.00-3.50	B10	(150)					
3.50-3.95	U11						Stiff brown sandy gravelly CLAY of low plasticity. Gravel is fine to medium subangular and consists of sandstone, mudstone and dolerite.
4.00	PID	0.0ppm					
4.00	J12						
4.00	JCh13x5						Stiff brown sandy gravelly CLAY of low plasticity. Gravel is fine to medium subangular and consists of sandstone, mudstone and dolerite.
4.50-4.95	SJ14	N29					
4.50-5.00	B15						
5.00	PID	0.0ppm					Stiff brown sandy gravelly CLAY of low plasticity. Gravel is fine to medium subangular and consists of sandstone, mudstone and dolerite.
5.00	JCh16						
5.50-5.95	U17	(150)					
6.00	PID	0.0ppm		0.432		5.90	Dense red slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to medium subangular and consists of sandstone. (Probable highly weathered sandstone bedrock).
6.00	J18						
6.00	JCh19						
6.50-6.95	CB20	N30				(1.10)	Dense red slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to medium subangular and consists of sandstone. (Probable highly weathered sandstone bedrock).
7.00-7.50	B21			1.532			
7.00-7.50							
7.00-7.50						7.00	Moderately weak red fine to medium grained SANDSTONE slightly weathered.
7.00-7.50							
7.00-7.50							
7.50	S*J22	50 for 75mm		2.032		7.50	Boring complete at 7.50m BGL - continued by rotary coring.
7.50							
7.50							

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
22/05/2008	0.00	0.00				7.30	7.50	1.00			(1) Inspection pit dug to 1.20m BGL prior to drilling. (2) Water strike at 7.00 - rose to 6.00m BGL (20mins). (3) 19mm piezometer and 50mm gas/groundwater standpipe installed. (4) Driller notes loosening flush after core runs.
22/05/2008	4.00	3.10	200mm	Dry							
23/05/2008	4.00	3.10	200mm	Dry							
23/05/2008	7.50	3.10	200mm	6.00							

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RWV</i>	Logged by: DP/MA	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/18
Client: South Tyneside Council	Location: South Shields E:435604.216 N:566359.679	
Method & Equipment: Percussion/Boring using a Dando 3000/Boart Longyear DB520	Ground Level (m(AOD)): 5.468	Date: 22/05/2008
		Sheet: 1 of 3

RUN DETAILS			STRATA				Instrument/ Backfill		
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thickness)	DESCRIPTION			
						Discontinuities		Detail	Main
7.50	80 (6) 0	NR	- 2.032	[Pattern]	7.50	7.50-7.70m ... possible zone of no recovery.	Boring complete at 7.50m BGL - continued by rotary coring. Weak and moderately weak yellow red fine and medium grained SANDSTONE moderately weathered.	[Pattern]	
		NI				7.70-7.93m ... non-intact.			
		17				7.93-8.17m ... very closely and closely spaced subhorizontal to subvertical irregular rough discontinuities.			
		NI				7.98-8.08m ... vertical irregular rough discontinuity.			
8.50	63 (19) 0	NR	- 2.032	[Pattern]	8.50	8.17-8.50m ... non-intact.	[Pattern]		
		NI				8.50-8.80m ... possible zone of no recovery.			
		8				8.80-8.90m ... non-intact.			
9.30	70 (10) 0	NR	- 2.032	[Pattern]	9.30	8.90-9.30m ... closely spaced subhorizontal to subvertical planar rough open discontinuities.	[Pattern]		
		NI				9.30-9.60m ... possible zone of no recovery.			
		18				9.60-9.92m ... non intact.			
10.30	100 (2) 0	20	- 5.232	[Pattern]	10.30	9.92-10.30m ... very closely and closely spaced subhorizontal to subvertical planar rough open discontinuities.	[Pattern]		
		NI				10.30-10.45m ... very closely spaced subhorizontal planar rough discontinuities.			
		25				10.45-10.53m ... non-intact.			
		NI				10.53-10.61m ... very closely spaced subhorizontal irregular rough open discontinuities.			
11.30	100 (6) 0	NI	- 5.832	[Pattern]	11.30	10.61-11.64m ... non-intact.	[Pattern]		
		NI				Very weak and weak red fine and medium grained SANDSTONE slightly to moderately weathered.			
		NI				(As sheet 1 of 2)			

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water Strike	Water Standing	Flush Type	Flush Returns	
29/05/2008	7.50	7.50			4.90			(1) Inspection pit dug to 1.20m BGL prior to drilling. (2) Water strike at 7.00 - rose to 6.00m BGL (20mins). (3) 19mm piezometer and 50mm gas/groundwater standpipe installed. (4) Driller notes losing flush after core runs.
29/05/2008	11.30	11.80	92mm		0.00	Water	100%	
02/06/2008	11.30	11.80	92mm		4.90			

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KWJ/NV</i>	Logged by: DP/MA	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No
Client: South Tyneside Council	Location: South Shields E:435604.216 N:566359.679	BH-08/18
Method & Equipment: Percussion/Boring using a Dando 3000/Boart Longyear DB520	Ground Level (m(AOD)): 5.468	Date: 22/05/2008
		Sheet: 2 of 3

RUN DETAILS			STRATA					Instrument/ Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thickness)	DESCRIPTION			
						Discontinuities	Detail		Main
12.30		29				11.64-11.78m ... very closely spaced subhorizontal planar rough discontinuities. 11.78-12.48m ... non-intact.		Very weak and weak red fine and medium grained SANDSTONE slightly to moderately weathered.	
		NI							
13.30	100 (3) 0	11				12.48-13.10m ... closely and very closely spaced subhorizontal subvertical planar rough discontinuities.			
		NI							
14.30	100 (9) 0	14				13.10-13.20m ... non-intact. 13.20-13.48m ... closely spaced horizontal to subhorizontal planar rough discontinuities. 13.48-14.30m ... non-intact.			
		NI							
14.30	93 (19) 0	NR			(6.50)	14.30-14.44m ... possible zone of no recovery. 14.44-14.57m ... closely and very closely spaced subhorizontal to subvertical irregular rough open discontinuities. 14.57-14.69m ... non-intact. 14.69-17.80m ... very closely and closely spaced subhorizontal to subvertical irregular rough open discontinuities.			
		15							
		NI							
		19							

Drilling Progress and Water Observations								GENERAL REMARKS	
Date	Depth	Casing	Core Dia mm	Water	Flush	Strike	Standing	Type	Returns

(1) Inspection pit dug to 1.20m BGL prior to drilling.
 (2) Water strike at 7.00 - rose to 6.00m BGL (20mins).
 (3) 19mm piezometer and 50mm gas/groundwater standpipe installed.
 (4) Driller notes loosing flush after core runs.

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KWIN</i>	Logged by: DP/MA	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

DRILLHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No
Client: South Tyneside Council	Location: South Shields E:435604.216 N:566359.679	BH-08/18
Method & Equipment: Percussion/Boring using a Dando 3000/Boart Longyear DB520	Ground Level (m(AOD)): 5.468	Date: 22/05/2008 Sheet: 3 of 3

RUN DETAILS			STRATA					Instrument/ Backfill	
Depth	TCR (SCR) ROD	(SPT) Fracture Index	Red'ed Level	Legend	Depth (Thick-ness)	DESCRIPTION			
						Discontinuities	Detail		Main
16.30								(As sheet 2 of 3) Very weak and weak red fine and medium grained SANDSTONE slightly to moderately weathered.	
17.80	100 (26) 7		- 12.332		17.80				
								Rotary coring complete at 17.80m bGL.	

Drilling Progress and Water Observations								GENERAL REMARKS	
Date	Depth	Casing	Core Dia mm	Water		Flush			
				Strike	Standing	Type	Returns		
02/06/2008	17.80	13.80	92mm			Water	100%	(1) Inspection pit dug to 1.20m BGL prior to drilling. (2) Water strike at 7.00 - rose to 6.00m BGL (20mins). (3) 19mm piezometer and 50mm gas/groundwater standpipe installed. (4) Driller notes losing flush after core runs.	

All dimensions in metres Scale 1:25	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RW/NV</i>	Logged by: DP/MA	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/19	
Client: South Tyneside Council		Location: South Shields E:435459.656 N:566125.598	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.444	Date: 28/05/2008
			Sheet: 1 of 1

SAMPLES & TESTS			STRATA					Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
0.40	J1			4.244	[Cross-hatched pattern]	(0.10) 0.10	(1) MADE GROUND (Reinforced concrete).	[Vertical pattern]
0.60	JCh2			4.044		(0.30) 0.40	(1) MADE GROUND (Heavily reinforced concrete).	
1.00	B3						MADE GROUND (Very loose and loose red very silty/clayey sandy gravel. Sand is fine to coarse and includes burnt shale/brick and ash fines. Gravel is fine to coarse angular to subangular and consists of brick, sandstone, siltstone, coal concrete, burnt shale and slag).	
1.40	JCh4	N3						
1.50-1.95	CB5							
2.00	PID	0.0ppm						
2.00	JCh6							
2.50-2.95	CB7	N4					at c.2.50m BGL ... fines clay of high plasticity.	
3.00	PID	0.0ppm				(5.80)		
3.00	JCh8							
3.50-3.95	CB9	N3						
4.00	PID	0.0ppm						
4.00	JCh10							
5.00	PID	0.0ppm						
5.00-5.45	CB11	N5						
6.00	PID	0.0ppm		1.756		6.20		
6.50-6.95	CB12	N8				(1.30)	MADE GROUND (Loose black brown red clayey very sandy gravel with some cobbles. Sand is fine to coarse and includes ash fines. Gravel is fine to coarse angular to subrounded and consists of sandstone, siltstone, coal, shale, slag, brick and glass. Cobbles are angular to subangular and consist of sandstone, brick and slag).	
7.20	B13							
7.50	S*J14	100 for 0mm*		3.056		7.50	at c.7.50m BGL (1) CONCRETE. Borehole complete at 7.50m BGL.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
28/05/2008	0.00	0.00				7.20	7.40	0.50			(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling using hydraulic breaker. (3) Water strike at 4.60 - rose to 4.12m BGL (20 mins). (4) 19mm piezometer and 50mm gas/groundwater standpipe installed.
28/05/2008	0.10	0.00				7.40	7.50	1.00			
29/05/2008	0.10	0.00		Dry							
29/05/2008	7.50	7.50	200mm	6.91							

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>[Signature]</i>	Logged by: M. Amanze	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No BH-08/20
Client: South Tyneside Council	Location: South Shields E:435496.483 N:566122.888	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.750	Date: 30/05/2008 Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
				4.650		(0.10) to (0.70)	(1) MADE GROUND (Gravelly ash fill). (1) MADE GROUND (Reinforced concrete).
1.00	JCh1			3.950		0.80	
1.50-1.95	CB2	N6				(1.10)	MADE GROUND (Loose black slightly silty very sandy gravel. Sand is fine to coarse and includes burnt shale/brick and ash fines. Gravel is fine to medium subangular and consists of brick, cinder and burnt shale).
2.00	PID	0.0ppm		2.850		1.90	
2.00	B3						Stiff and very stiff brown sandy gravelly grey CLAY with occasional cobbles and boulders. Gravel is fine to coarse angular to subangular and consists of sandstone, mudstone and occasional coal. Cobbles and boulders mainly comprise angular to subangular sandstone. (Driller notes boulders).
2.10	JCh4						
2.50-2.95	CB5	N33					
3.00	PID	0.0ppm					
3.00	B6						
3.50-3.95	SJ7	N18					
4.00	PID	0.0ppm					
4.00	B8						
4.50-4.95	SJ9	N51					
5.00	B10						
5.50	U*11	(112)					
6.00-6.45	SJ12	N27					
6.50	B13					(9.50)	
7.50-7.95	SJ14	N33					

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
30/05/2008	0.00	0.00				1.20	1.40	0.50			(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling using hydraulic hammer.
30/05/2008	5.00	3.00	200mm	Dry		3.00	3.20	0.50			
02/06/2008	5.00	3.00	200mm	4.36		5.60	5.70	0.50			

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RW/NV</i>	Logged by: G. Teasdale	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435496.483 N:566122.888	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.750	Date: 30/05/2008
			Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
8.00	B15						
9.00-9.45	SJ16	N38				(As sheet 1 of 2) Stiff brown/ sandy gravelly grey CLAY with occasional cobbles and boulders. Gravel is fine to coarse angular to subangular and consists of sandstone, mudstone and occasional coal. Cobbles and boulders mainly comprise angular to subangular sandstone. (Driller notes boulders).	
9.50	B17						
10.50	U*18	(96)					
11.50	S*J19	100 for 69mm	-6.650		11.40	Weak grey MUDSTONE highly weathered.	
12.00	S*J20	100 for 43mm	-7.250		12.00	Borehole complete at 12.00m BGL.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
02/06/2008	12.00	9.00	200mm	Dry		11.70	12.00	0.75			(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling using hydraulic hammer.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>SW/NN</i>	Logged by: G. Teasdale	Contract No. 3676
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FIGURE 5

Window Sample Hole Records



ALLIED EXPLORATION & GEOTECHNICS LIMITED

WINDOW SAMPLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No WS-08/01
Client: South Tyneside Council	Location: South Shields E:435613.417 N:566449.323	
Method & Equipment: Dynamic Sampling using a PC Tracker S110	Ground Level (m(AOD)): 4.731	Date: 27/05/2008
		Sheet: 1 of 1

SAMPLES & TESTS			STRATA				Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	
0.20-1.00 0.25 0.30	B3 J1 JCh2x5			4.331		(0.40) 0.40	MADE GROUND (Brown silty sand and gravel with some plant rootlets and fibres. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and consists of sandstone, limestone, dolomite, chalk, flint, glass and brick. Occasional textile fragments).
1.20-2.10	U4	(85)		3.731		(0.60) 1.00	MADE GROUND (Brown silty very gravelly sand with occasional plant rootlets. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and consists of sandstone, limestone, dolomite, brick, concrete and flint).
2.10-3.10	U5	(42)				(3.10)	MADE GROUND (Black red slightly silty sand and gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to coarse, angular to subangular and consists of coal, brick, sandstone slag and ash).
3.10-4.10	U6	(67)					
4.10-5.00	U*7	(121)		0.631		4.10	(1) No recovery.
						(0.90)	
				0.269		5.00	Window sample complete at 5.00m BGL.

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
27/05/2008	0.00	0.00									(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling.
27/05/2008	5.00	2.00	101mm	Dry							



ALLIED EXPLORATION & GEOTECHNICS LIMITED

WINDOW SAMPLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No
Client: South Tyneside Council	Location: South Shields E:435598.911 N:566424.859	WS-08/02
Method & Equipment: Dynamic Sampling using a PC Tracker S100	Ground Level (m(AOD)): 4.745	Date: 28/05/2008 Sheet: 1 of 1

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
0.10-0.30	J1		4.645		(0.10)	(1) MADE GROUND (Grey sandy gravel). (1) MADE GROUND (Brown black very gravelly sand with ash, brick and concrete).	
0.30	JCh2x5				(2.95)		
0.50-1.00	B3						
1.20-2.10	U4	(76)					
2.10-3.10	U5	(40)					
3.10-4.10	U6	(32)	1.695		3.05	(1) MADE GROUND (Brown clayey sandy gravel with brick).	
4.10-5.00	U7	(112)	↓		(1.95)		
					0.255	5.00	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
28/05/2008	0.00	0.00									(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Water strike at 4.15m BGL - no rise.
28/05/2008	5.00	0.00									

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>kw/m</i>	Logged by: N/A	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

WINDOW SAMPLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No
Client: South Tyneside Council	Location: South Shields E:435604.192 N:566389.586	WS-08/03
Method & Equipment: Dynamic Sampling using a PC Tracker S100	Ground Level (m(AOD)): 4.900	Date: 27/05/2008
		Sheet: 1 of 1

SAMPLES & TESTS			STRATA					Instrument/ Backfill	
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.20 0.20-1.00 0.30	J1 B3 JCh2x5		↓	4.500		(0.40) 0.40	(1) MADE GROUND (Tarmac and ash).		
						(0.80)	(1) MADE GROUND (Black sandy gravel with ash, brick and concrete).		
1.20-2.10	U4	(52)		3.700		1.20	(1) MADE GROUND (Black gravelly sand with ash and brick).		
				3.200		(0.50)	1.70		(1) MADE GROUND (Firm brown sandy gravelly clay with brick).
2.10-3.10	U5	(41)							
3.10-4.10	U6	(60)					(3.10)		
4.10-5.00	U7	(58)							
				0.100		4.80			
				-0.100		(0.20) 5.00	(1) SANDSTONE.		
Window sample complete at 5.00m BGL.									

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
27/05/2008	0.00	0.00									(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Water strike at 4.05m BGL - no rise.
27/05/2008	1.20	0.00									
28/05/2008	1.20	0.00									
28/05/2008	5.00	0.00									

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KW/MV</i>	Logged by: N/A	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

WINDOW SAMPLE RECORD

Status:- **FINAL**
Date:- 21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No WS-08/04
Client: South Tyneside Council	Location: South Shields E:435553.523 N:566362.036	
Method & Equipment: Dynamic Sampling using a PC Tracker S110	Ground Level (m(AOD)): 4.441	Date: 28/05/2008 Sheet: 1 of 1

SAMPLES & TESTS			STRATA					Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
0.10-0.30	J1			4.341		(0.10) 0.10	(1) MADE GROUND (Grey sandy gravel).	
0.30-0.50	JCh2x5			4.141		(0.20) 0.30	MADE GROUND (Grey brown silty very gravelly sand with occasional plant rootlets. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and consists of sandstone, limestone, tarmac, dolomite and brick).	
0.70-1.00	B3			3.791		(0.35) 0.65	(1) MADE GROUND (Brown black very gravelly sand with brick and ash).	
1.20-2.10	U4	(65)		3.241		(0.55)	MADE GROUND (Yellow brown gravelly sand. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and consists of sandstone, chalk and flint).	
2.10-3.10	U5	(51)		2.941		(0.30) 1.50	(1) MADE GROUND (Brown yellow sand and gravel). MADE GROUND (Brown black sand and gravel. Sand is fine to coarse and includes ash fines. Gravel is fine to coarse angular to subrounded and consists of sandstone, coal, slag, brick and flint).	
3.10-4.10	U6	(34)				(2.30)		
4.10-5.00	U7	(30)	↓	0.641			3.80	
				-0.559		5.00	Window sample complete at 5.00m BGL.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
28/05/2008	0.00	0.00									(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Water strike at 4.00m BGL - no rise.
28/05/2008	1.20	0.00									
29/05/2008	1.20	0.00									
29/05/2008	5.00	0.00									

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>AW/W</i>	Logged by: M. Amanze	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

WINDOW SAMPLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435541.376 N:566333.542	
Method & Equipment: Dynamic Sampling using a PC Tracker S110		Ground Level (m(AOD)): 4.402	Date: 29/05/2008
			Sheet: 1 of 1

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
0.20	J1		4.002		(0.40)	(1) MADE GROUND (Tarmac with sand and gravel).	
0.30	JCh2x5				0.40		
0.60-1.20	B3		3.802		(0.20)	(1) MADE GROUND (Grey sand and gravel with white chalk).	
1.20-2.10	J*JCh4x5	(47)			(1.80)	(1) MADE GROUND (Brown yellow sand and gravel with brick).	
2.10-3.10	J*JCh5x5	(30)	2.002		2.40		
3.10-4.10	J*JCh6x5	(37)			(2.60)	(1) MADE GROUND (Brown black sand and gravel with ash).	
4.10-5.00	J*JCh7x5	(40)	0.598	5.00		Window sample complete at 5.00m BGL.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
29/05/2008	0.00	0.00									(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Water strike at 3.60m BGL - no rise.
29/05/2008	5.00	0.00									

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RW/INV</i>	Logged by: N/A	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

WINDOW SAMPLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		South Shields E:435514.04 N:566156.847	
Method & Equipment: Dynamic Sampling using a PC Tracker S110		Ground Level (m(AOD)): 4.716	Date: 29/05/2008
			Sheet: 1 of 1

SAMPLES & TESTS			STRATA					Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				4.466		(0.25) 0.25	(1) MADE GROUND (Black very sandy gravel with tarmac).	
				4.066		(0.40) 0.65	(1) MADE GROUND (Brown very gravelly sand with brick).	
							Window sample terminated at 0.65m BGL - due to an obstruction.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth	From	To	Hours	From	To		
29/05/2008	0.00	0.00								(1) Description derived from drillers daily report. (2) Inspection pit dug to 1.20m BGL prior to drilling. (3) Position moved but encountered same obstruction - window sample hole cancelled by engineer.	
29/05/2008	0.65	0.00									

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: 	Logged by: N/A	Contract No. 3676
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

WINDOW SAMPLE RECORD

Status:-	FINAL
Date:-	21/08/2008

Project: Ground Investigation: McNulty's Yard, South Shields		Exploratory Hole No WS-08/08	
Client: South Tyneside Council		Location: South Shields E:435579.566 N:566353.842	
Method & Equipment: Dynamic Sampling using a PC Tracker S100		Ground Level (m(AOD)): 4.558	Date: 28/05/2008
			Sheet: 1 of 1

SAMPLES & TESTS			STRATA					
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Instrument/ Backfill
0.20-0.40	J1		↓	4.458	[Cross-hatch pattern]	(0.10)	(1) MADE GROUND (Grey sandy gravel).	[Patterned column]
0.30	JCh2x5			4.358		(0.10)	(1) MADE GROUND (Brown sandy gravel with brick).	
0.50-1.00	B3					(0.85)	MADE GROUND (Brown yellow silty very gravelly sand with occasional plant fibres. Sand is fine to coarse angular to subrounded and consists of sandstone, coal, clinker, brick, flint and chalk).	
1.20-2.10	U4	(56)		3.508		1.05	MADE GROUND (Black brown silty very gravelly sand. Sand is fine to coarse and includes ash fines. Gravel is fine to coarse angular to subrounded and consists of sandstone, coal, slag, clinker and brick).	
2.10-3.10	U5	(37)				(2.95)		
3.10-4.10	U6	(94)						
4.10-5.00	U7	(178)		0.558		4.00	Very stiff brown grey slightly sandy slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded and consists of sandstone, mudstone and coal.	
				-0.442	5.00	Window sample complete at 5.00m BGL.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
28/05/2008	0.00	0.00									
28/05/2008	5.00	0.00									

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KWJ/W</i>	Logged by: M. Amanze	Contract No. 3676
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TABLE 1

Groundwater Observations Made at the Time of Siteworks



ALLIED EXPLORATION & GEOTECHNICS LIMITED

GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITEWORKS

Checked by : *[Signature]*

Exploratory Hole	Date	Time (24hrs)	Depth of Water (m)	Depth of Casing (m)	Depth Sealed (m)	Final Depth (m)	Total Time (mins)	Depth After 5 mins	Depth After 10 mins	Depth After 15 mins	Depth After 20 mins	Remarks
BH-08/07	22/05/2008		6.10									Damp
BH-08/08	23/05/2008		4.40			4.10	20	4.40			4.10	Water Strike
BH-08/09	22/05/2008		4.50			4.11	20	4.50			4.11	Water Strike
BH-08/10	23/05/2008		10.30									Damp
BH-08/11	23/05/2008		10.00	9.10		9.00	20	9.00	9.00	9.00	9.00	Water Strike
BH-08/15	23/05/2008		5.50			4.91	20	5.50			4.91	Water Strike
BH-08/17	22/05/2008		7.00	6.10		6.20	20	6.20	6.20	6.20	6.20	Water Strike
BH-08/18	23/05/2008		7.00	3.10		6.00	20	7.00	6.00	6.00	6.00	Water Strike
BH-08/19	29/05/2008		4.60			4.12	20	4.60			4.12	Water Strike
WS-08/02	28/05/2008		4.15									Water Strike
WS-08/03	28/05/2008		4.05									Water Strike
WS-08/04	29/05/2008		4.00									Water Strike
WS-08/05	29/05/2008		3.60									Water Strike
WS-08/08	28/05/2008		4.00									Water Strike

Client:-	South Tyneside Council	Contract Title:-	Ground Investigation: McNulty's Yard, South Shields
		Page 1 of 1	AEG Contract No. 3676
		Issued 10/07/2008	

NOTE: All depths are quoted in metres Below Ground Level

IN-SITU ENCLOSURES

ENCLOSURE 0

Test Report Certificate

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate

Pelton Fell

Chester-le-Street

Co. Durham

DH2 2RG

Tel: 0191 3874700

Fax: 0191 3874710



1367

IN-SITU TEST REPORT CERTIFICATE

Contract Title	Ground Investigation: McNulty's Yard, South Shields	AEG Reference No.	3676
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Client Address	South Tyneside Council Town Hall and Civic Offices Westoe Road South Shields Tyne and Wear NE33 2RL	Client Reference	
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I certify that *In-situ* testing was carried out on the above contract in accordance with techniques outlined in BS 1377: 1990: Part 9 or other appropriate standards as quoted, and the following results, given on the attached enclosures, were obtained.

The tests carried out are indicated in the attached table showing the enclosure number and the total number of pages.

For and on behalf of Allied Exploration & Geotechnics Limited

Signed.....*N Vater*.....

Date: 08 July 2008

Nick Vater (BSc (Hons), MSc, C.GEOL, EurGEOL, FGS)
Technical Director

Tests marked not UKAS accredited in this certificate are not included in the UKAS accreditation schedule for our laboratory. Any opinions and interpretations expressed herein are outside the scope of the laboratory's UKAS accreditation.

***IN-SITU* TEST REPORT CERTIFICATE**

ENCLOSURES

Enclosure Number	Description	UKAS Accredited	Reference	No. of Pages
0	Test Report Certificate	N/A		2
1	Standard Penetration Test (SPT)	No	BS 1377 Part 9 1990	4
	Hand Shear Vane Test (HSV)	No		
	Variable Head Permeability Test	No	BS 5930 1999:Section 4	
	Water Monitoring Test	No		
	Density by Sand Replacement Method	Yes	BS 1377 Part 9 1990	
	Density by Core Cutter Method	Yes	BS 1377 Part 9 1990	
	Determination of the Vane Shear Strength (Down the Hole)	Yes	BS 1377 Part 9 1990	
	Shallow Pad (skip) Load Tests	No	BS 1377 Part 9 1990	
	Determination of the California Bearing Ratio	Yes	BS 1377 Part 9 1990	
	Plate Loading Test	No	BS 1377 Part 9 1990	
	Apparent Resistivity of Soil	No	BS 1377 Part 9 1990	
	Redox Potential of Soil	No	BS 1377 Part 9 1990	
	Determination of the Soil Infiltration Rate for Soakaway Design	No	BRE Digest 365:1991	

ENCLOSURE 1

Standard Penetration Test (SPT)

Standard Penetration Test Results (BS 1377:Part 9:Clause 3.3:1990)

Checked By: 

BH No.	Depth (mBGL)	Seating Drive				Test Drive										Shoe or Cone		
		Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Total Pen (mm)	Total Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)		Total Pen (mm)	Total Blows (No.)
BH-08/01	1.50	150	4			150	4	75	3	75	3	75	4	75	3	300	13	S
BH-08/01	2.50	150	3			150	3	75	2	75	2	75	2	75	2	300	8	S
BH-08/01	5.00	150	10			150	10	75	9	75	8	75	8	75	9	300	34	S
BH-08/01	7.00	150	14			150	14	75	11	75	9	75	8	75	11	300	39	S
BH-08/01	10.00	150	9			150	9	75	14	75	13	75	11	75	12	300	50	S
BH-08/01	11.00	16	25			16	25	71	100						71	100	-	S
BH-08/01	11.50	11	25			11	25	17	100						17	100	-	S
BH-08/02	1.50	150	2			150	2	75	1	75	1	75	1	75	2	300	5	S
BH-08/02	3.00	150	3			150	3	75	2	75	4	75	4	75	4	300	14	C
BH-08/02	4.50	150	6			150	6	75	5	75	4	75	4	75	5	300	18	S
BH-08/02	6.00	150	9			150	9	75	8	75	7	75	7	75	6	300	28	S
BH-08/02	9.00	150	8			150	8	75	9	75	9	75	11	75	9	300	38	S
BH-08/07	1.50	75	6	75	7	150	13	75	5	75	7	75	9	75	9	300	30	C
BH-08/07	2.50	75	8	75	9	150	17	75	10	75	9	75	10	75	8	300	37	C
BH-08/07	3.50	36	25			36	25	28	50						28	50	-	C
BH-08/07	4.50	75	7	75	6	150	13	75	7	75	5	75	7	75	7	300	26	C
BH-08/07	5.50	75	5	75	6	150	11	75	6	75	7	75	8	75	8	300	29	C
BH-08/07	6.50	75	7	75	8	150	15	75	9	75	10	75	10	75	8	300	37	C
BH-08/07	7.00	75	5	75	6	150	11	75	6	75	5	75	5	75	7	300	23	C
BH-08/08	1.50	300	1			300	1								75	1	-	C
BH-08/08	2.50	150	2			150	2	75	2	75	1	75	1	75	1	300	5	C
BH-08/08	3.50	150	2			150	2	75	1	75	2	75	4	75	5	300	12	C
BH-08/08	4.50	150	9			150	9	75	11	75	14	75	13	75	14	300	52	S
BH-08/08	5.20	25	14			25	14	61	100						61	100	-	S
BH-08/09	1.50	150	2			150	2	75	1	150	1			75	1	300	3	C
BH-08/09	2.50	150	1			150	1	225	1					75	1	300	2	C

Standard Penetration Test Results (BS 1377:Part 9:Clause 3.3:1990)

Checked By: *KLW*

BH No.	Depth (mBGL)	Seafing Drive						Test Drive										Shoe or Cone						
		Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Total Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Total Blows (No.)		SPT 'N' Value					
BH-08/09	3.50	375	1			375	1											75	1	75	1	-	C	
BH-08/09	6.00	25	11			25	11	16	100												16	100	-	S
BH-08/09	6.40	25	9			25	9	17	100												17	100	-	S
BH-08/10	1.50	75	10			75	10	75	39	11											91	50	-	C
BH-08/10	2.50	75	9			75	9	75	21	28	1										151	50	-	C
BH-08/10	3.50	19	25			19	25	22	50												22	50	-	C
BH-08/10	4.50	23	25			23	25	36	50												36	50	-	C
BH-08/10	5.50	75	23			75	23	1	37	13											87	50	-	C
BH-08/10	6.50	75	20			75	20	9	33	17											91	50	-	C
BH-08/10	7.50	75	12			75	12	75	21	27	3										153	50	-	C
BH-08/10	9.00	75	2			75	2	75	4	5	75	4									300	17	17	C
BH-08/10	10.50	150	1			150	1		1	3	75	3									300	8	8	C
BH-08/10	12.00	75	7			75	7	75	4	7	75	7									300	27	27	C
BH-08/10	13.50	75	9			75	9	75	10	11	75	11									300	42	42	C
BH-08/10	15.00	36	25			36	25	29	50												29	50	-	C
BH-08/11	1.50	150	5			150	5		3	75	3											13	13	C
BH-08/11	2.50	150	3			150	3	75	3	3	75	3									300	14	14	C
BH-08/11	3.50	150	4			150	4	75	2	3	75	3									300	12	12	C
BH-08/11	5.50	150	7			150	7	75	4	6	75	6									300	28	28	C
BH-08/11	8.00	150	8			150	8	75	5	6	75	6									300	33	33	C
BH-08/11	9.50	25	30			25	30	10	50												10	50	-	S
BH-08/12	1.50	75	6			75	6	75	7	10	75	10										16	16	C
BH-08/12	2.50	75	5			75	5	75	6	6	75	6									300	26	26	C
BH-08/12	3.50	75	5			75	5	75	9	7	75	7									300	29	29	C
BH-08/12	4.50	75	4			75	4	75	5	6	75	6									300	21	21	C
BH-08/12	5.30	75	12			75	12	75	13	15	75	15									196	50	-	C
BH-08/12	5.70	75	7			75	7	75	9	8	75	8									300	30	30	C

Standard Penetration Test Results (BS 1377:Part 9:Clause 3.3:1990)

Checked By: *KW*

BH No.	Depth (mBGL)	Seating Drive					Test Drive										Shoe or Cone		
		Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Total Pen (mm)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)		Total Pen (mm)	Total Blows (No.)
BH-08/12	7.00	75	4	75	7	150	11	75	5	75	10	75	16	75	8	300	39	39	C
BH-08/12	8.50	75	5	75	6	150	11	75	7	75	7	75	8	75	8	300	30	30	C
BH-08/14	1.50	150	6			150	6	75	9	75	11	75	9	75	9	300	38	38	C
BH-08/14	2.50	150	1			150	1	75	3	75	5	75	7	75	6	300	21	21	C
BH-08/14	3.50	150	5			150	5	75	6	75	5	75	5	75	4	300	20	20	C
BH-08/14	6.00	150	1			150	1	75	2	75	1	75	1	75	1	300	5	5	C
BH-08/14	7.50	150	1			150	1	75	2	75	1	75	2	75	1	300	6	6	C
BH-08/15	1.50	150	8			150	8	75	4	75	4	75	5	75	4	300	17	17	C
BH-08/15	2.50	150	9			150	9	75	3	75	3	75	3	75	3	300	12	12	C
BH-08/15	5.00	150	4			150	4	75	3	75	4	75	4	75	4	300	15	15	C
BH-08/15	6.00	150	4			150	4	75	3	75	4	75	5	75	4	300	16	16	C
BH-08/15	7.50	150	5			150	5	75	3	75	3	75	6	75	2	300	14	14	C
BH-08/18	1.50	150	3			150	3	75	2	75	3	75	4	75	6	300	15	15	C
BH-08/18	2.50	150	4			150	4	75	2	75	3	75	3	75	3	300	11	11	S
BH-08/18	4.50	150	6			150	6	75	4	75	7	75	8	75	10	300	29	29	S
BH-08/18	6.50	150	7			150	7	75	4	75	7	75	8	75	11	300	30	30	S
BH-08/18	7.50	150	25			150	25	75	50						75	50	-	-	S
BH-08/16	1.50	75	4	75	3	150	7	75	4	75	5	75	5	75	4	300	18	18	C
BH-08/16	2.50	75	4	75	3	150	7	75	4	75	3	75	3	75	8	300	18	18	C
BH-08/16	3.50	75	6	75	7	150	13	75	7	75	9	48	34		198	50	-	-	C
BH-08/16	4.50	75	8	75	10	150	18	75	9	75	12	75	15	51	14	276	50	-	C
BH-08/16	5.50	75	12	75	13	150	25	75	26	41	24				116	50	-	-	C
BH-08/16	7.00	75	4	75	5	150	9	75	5	75	6	75	5	75	5	300	21	21	C
BH-08/16	8.50	75	12	31	13	106	25	23	50						23	50	-	-	S
BH-08/17	1.50	150	4			150	4	75	3	75	6	75	10	75	25	300	44	44	C

Standard Penetration Test Results (BS 1377:Part 9:Clause 3.3:1990)

Checked By: 

BH No.	Depth (mBGL)	Seating Drive						Test Drive										Shoe or Cone		
		Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Total Pen (mm)	Total Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Blows (No.)	Pen (mm)	Blows (No.)	Total Pen (mm)		Total Blows (No.)	SPT 'N' Value
BH-08/17	2.50	150	25			150	25	75	50								75	50	-	C
BH-08/17	4.50	150	25			150	25	75	50								75	50	-	C
BH-08/17	6.50	150	7			150	7	75	6	75	6	75	7	75	11	300	30	30		C
BH-08/17	7.50	25	70			25	70	50	30							50	30	-		C
			75																	
BH-08/18	1.50	150	3			150	3	75	2	75	3	75	4	75	6	300	15	15		C
BH-08/18	2.50	150	4			150	4	75	2	75	3	75	3	75	3	300	11	11		C
BH-08/18	4.50	150	6			150	6	75	4	75	7	75	8	75	10	300	29	29		C
BH-08/18	6.50	150	7			150	7	75	4	75	7	75	8	75	11	300	30	30		C
BH-08/18	7.00	150	25			150	25	75	50							75	50	-		C
BH-08/19	1.50	225	1			225	1			75	1	75	1	75	1	225	3	-		C
BH-08/19	2.50	150	2			150	2	75	1	75	1	75	1	75	1	300	4	4		C
BH-08/19	3.50	225	1			225	1			75	1	75	1	75	1	225	3	-		C
BH-08/19	5.00	150	1			150	1	75	2	75	1	75	1	75	1	300	5	5		C
BH-08/19	6.50	150	3			150	3	75	2	75	2	75	2	75	2	300	8	8		C
BH-08/19	7.50					0	0	100	0							100	0	-		S
BH-08/20	1.50	150	9			150	9	75	2	75	1	75	1	75	2	300	6	6		C
BH-08/20	2.50	150	2			150	2	75	4	75	9	75	11	75	9	300	33	33		S
BH-08/20	3.50	150	9			150	9	75	6	75	5	75	4	75	3	300	18	18		S
BH-08/20	4.50	150	9			150	9	75	11	75	14	75	13	75	13	300	51	51		S
BH-08/20	6.00	150	6			150	6	75	9	75	5	75	9	75	4	300	27	27		S
BH-08/20	7.50	150	9			150	9	75	8	75	7	75	9	75	9	300	33	33		S
BH-08/20	9.00	150	9			150	9	75	10	75	11	75	9	75	8	300	38	38		S
BH-08/20	11.50	46	25			46	25	69	100							69	100	-		S
BH-08/20	12.00	47	25			47	25	43	100							43	100	-		S

LABORATORY ENCLOSURES

ENCLOSURE 0

Laboratory Report Certificate



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate

Pelton Fell

Chester-le-Street

Co. Durham

DH2 2RG

Tel: 0191 3874700

Fax: 0191 3874710



1367


LABORATORY REPORT CERTIFICATE

Contract Title	Ground Investigation : McNulty's Yard, South Shields	AEG Reference No.	3676
Client	South Tyneside Council	Client Reference	
Address	Town Hall and Civic Offices Westoe Road South Shields Tyne and Wear NE33 2RL		

We certify that Laboratory testing was carried out on samples from the above contract in accordance with techniques outlined in BS 1377: 1990 or other appropriate standards as quoted. The samples were received from May 2008 and the following results, given on the attached enclosures, were obtained.

The tests carried out are indicated in the attached table showing the enclosure number and the total number of pages.

For and on behalf of Allied Exploration & Geotechnics Limited

Signed  Date - 24 June 2008
Michelle Selkirk
Laboratory Manager

Tests marked not UKAS accredited in this certificate are not included in the UKAS accreditation schedule for our laboratory. Any opinions and interpretations expressed herein are outside the scope of the laboratory's UKAS accreditation.

Please note the material was derived from samples taken outside the control of the laboratory.

LABORATORY REPORT CERTIFICATE

ENCLOSURES

Enclosure Number	Description	UKAS Accredited	Reference	No. of Pages
0	Laboratory Report Certificate	N/A		3
1	Sample Description Sheets	N/A		3
2	Moisture Content	Yes	BS 1377 Part 2 1990 and ISRM 1981	3
2	Plasticity Index and Moisture Content	Yes	BS 1377 Part 2 1990	2
-	Determination of Density by Linear Measurement	Yes	BS 1377 Part 2 1990	-
-	Determination of Particle Density	Yes	BS 1377 Part 2 1990	-
3	Particle Size Distribution Sieving	Yes	BS 1377 Part 2 1990 * See comment below	34
3	Particle Size Distribution Sedimentation	No	BS 1377 Part 2 1990	27
-	Determination of Sulphate and pH (Tested externally)	No	BS 1377 Part 3 1990	-
-	Determination of Dry Density/Moisture Content Relationship	Yes	BS 1377 Part 4 1990	-
-	Determination of Dry Density/Moisture/CBR Relationship	Yes	BS 1377 Part 4 1990	-
-	Determination of Moisture Condition Value	Yes	BS 1377 Part 4 1990	-
-	Determination of MCV / Moisture Relationship	Yes	BS 1377 Part 4 1990	-
-	Determination of California Bearing Ratio	Yes	BS 1377 Part 4 1990	-
4	Determination of One Dimensional Consolidation Properties	Yes	BS 1377 Part 5 1990	8
-	Determination of Permeability (Falling Head)	Yes	<i>In-house Method</i>	-
-	Determination of Permeability in a Triaxial Cell	Yes	BS 1377 Part 6 1990	-
-	Shear Strength by Hand Vane	No		-
-	Shear Strength by Direct Shear	Yes	BS 1377 Part 7 1990	-
-	Determination of Residual Strength using Ring Shear Apparatus	No	BS 1377 Part 7 1990	-
-	Undrained Shear Strength in Triaxial Cell without Pore Water Pressure Measurement	Yes	BS 1377 Part 7 1990	-
-	Consolidated Undrained Shear Strength in Triaxial Cell with Measurement of Pore Pressure	No	BS 1377 Part 8 1990	-
5	Determination of Point Load Index	Yes	ISRM 1985	2
-	Determination of Unconfined Compressive Strength (Tested externally)	No	ISRM 1985	-

* - In some cases the test method on the certificate states "Not to BS1377". BS1377 was followed with a slight deviation from the standard. Due to the presence of a high percentage of coarse material, and the sample size restraints, the mass of sample used was less than the BS recommended amount.

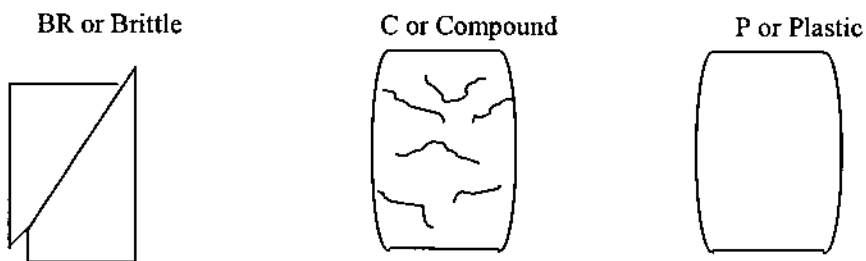
LABORATORY REPORT CERTIFICATE

ABBREVIATIONS

All the abbreviations used on the laboratory certificates are given below:

Dens	Density	PSD	Particle Size Distribution by sieve analysis
C	Compound	SB	Shear Box
CBR	California Bearing Ratio	SED	Sedimentation Analysis
CDT	Consolidated Drained Triaxial	SO3	Sulphate (total, water extract, groundwater)
CL	Chloride content (water or soil)	CP2	Dry Density/Moisture Content 2.5kg rammer
US	Unsuitable sample for scheduled test	CP4	As above using 4.5kg rammer
UUT	Undrained Unconsolidated Triaxial	CPV	As above using vibrating hammer
HSV	Vane Test	CUT	Consolidated Undrained Triaxial
IS	Insufficient sample for scheduled test	R	Remoulded
LOI	Loss On Ignition	U	Undisturbed
M	Multi-stage testing	MC	Moisture Content
MCV	Moisture Content Value	PL	Point Load
NAT	Natural preparation method	NMC	Natural (or as received) moisture content
NP	Non Plastic	LL	Liquid Limit
PCH	Permeability Constant Head Method	PFH	Permeability Falling Head Method
OED	Oedometer	PTXL	Permeability in Triaxial Cell
OMC	Optimum Moisture Content	ORG	Organic content
B	Large disturbed (bulk) sample	PD	Particle Density (SG)
J	Small disturbed (jar) sample	PI	Liquid limit, plastic limit and plasticity index

Typical Mode of Failure for Triaxial Testing



ENCLOSURE 1

Sample Description Sheets



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG
Tel No. : 0191 3874700 Fax No. : 0191 3874710

LABORATORY SAMPLE DESCRIPTION SHEET

Exploratory Hole No.	Sample Depth	ID	Description	Laboratory Tests/Remarks
BH-08/01	2.50	B6	Brown sandy gravelly CLAY.	PSD SED
BH-08/01	3.50	U7	Stiff brown sandy gravelly CLAY of low plasticity.	MC PI OED
BH-08/01	7.50	B15	Grey/brown sandy gravelly CLAY.	PSD SED
BH-08/01	8.50	U16	Very stiff brown sandy gravelly CLAY of low plasticity.	MC PI US for UUT
BH-08/02	1.50	B4	Grey/brown very clayey very sandy GRAVEL.	PSD SED
BH-08/02	3.50	B7	Brown sandy gravelly CLAY.	PSD SED
BH-08/02	6.50	B12	Grey sandy gravelly CLAY.	PSD SED
BH-08/02	7.50	U13	Very stiff brown sandy gravelly CLAY of low plasticity.	MC PI OED
BH-08/07	2.50	B7	MADE GROUND(Dark grey very clayey/silty very sandy gravel including metal and brick fragments).	MC PSD SED
BH-08/07	5.00	B13	Dark grey clayey very sandy GRAVEL.	MC PSD
BH-08/08	4.50	B11	Brown clayey sandy GRAVEL.	PSD SED
BH-08/08	5.00	J12	Brown slightly sandy GRAVEL.	MC US for PI
BH-08/09	1.20	B4	MADE GROUND(Grey clayey very sandy gravel including ceramic and brick fragments).	PSD SED
BH-08/09	4.50	B11	MADE GROUND(Dark grey clayey very sandy gravel with occasional cobbles including brick fragments).	MC PSD US for PI
BH-08/10	6.50	B10	MADE GROUND(Dark grey very clayey/silty sandy gravel including slag, ash and brick fragments).	PSD SED
BH-08/10	10.50	B17	Grey/brown sandy gravelly CLAY.	PSD SED
BH-08/10	11.50	J19	Brown sandy gravelly CLAY of intermediate plasticity.	MC PI
BH-08/10	13.00	J21	Brown slightly sandy GRAVEL.	MC US for PI
BH-08/10	14.60	B26	Brown slightly clayey sandy GRAVEL.	PSD
BH-08/11	1.50	B4	MADE GROUND(Grey clayey/silty very sandy gravel with some cobbles including chalk and brick fragments).	PSD SED
BH-08/11	4.50	U12	Stiff brown sandy gravelly CLAY of intermediate plasticity with occasional cobbles.	MC PI OED

Contract Title :- Ground Investigation: Mcully's Yard, South Shields	Client :- South Tyneside Council
--	--

	Signed :- 	Name :- M. SELKIRK	Page 1 of 3
	Date of issue :- 24/06/2008	Certificate No :- SD/3676/1	AEG Contract No. :- 3676






ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG
Tel No. : 0191 3874700 Fax No. : 0191 3874710

LABORATORY SAMPLE DESCRIPTION SHEET

Exploratory Hole No.	Sample Depth	ID	Description	Laboratory Tests/Remarks
BH-08/11	6.50	U16	Stiff brown sandy gravelly CLAY of low plasticity.	MC PI US for UUT
BH-08/12	0.60	B4	MADE GROUND(Dark brown clayey very sandy gravel including ash and brick fragments). (Chemical odour).	PSD
BH-08/12	2.50	B9	MADE GROUND(Grey clayey very sandy gravel including ash with some cobbles).	PSD SED
BH-08/12	4.50	B13	MADE GROUND(Grey/brown very clayey sand and gravel).	PSD SED
BH-08/12	7.00	B18	MADE GROUND(Grey/brown clayey/silty very sandy gravel including rubber fragments).	PSD SED
BH-08/14	2.50	B6	MADE GROUND(Dark grey clayey sand and gravel including metal and brick fragments).	PSD SED
BH-08/14	6.00	B11	MADE GROUND(Grey clayey very sandy gravel including brick and glass fragments).	PSD SED
BH-08/14	8.50	B13	MADE GROUND(Dark brown very clayey/silty sandy gravel including glass and brick fragments).	PSD SED
BH-08/15	3.60	B9	MADE GROUND(Grey/brown cobbles including concrete).	MC PSD
BH-08/16	1.50	B6	MADE GROUND(Dark grey clayey very sandy gravel including slag and ash).	PSD SED
BH-08/16	4.50	B10	Dark grey/brown clayey very sandy GRAVEL with some cobbles including wood fragments. (Possibly made ground).	MC PSD SED
BH-08/16	6.10	J12	Brown sandy gravelly CLAY of low plasticity.	MC PI
BH-08/16	6.40	B14	Dark brown sandy gravelly CLAY/SILT.	MC PSD SED
BH-08/17	3.00	B7	Grey/brown GRAVEL and COBBLES.	PSD
BH-08/17	6.50	B11	Brown/grey very clayey very gravelly SAND.	PSD SED
BH-08/18	2.50	J6	MADE GROUND(Grey sandy gravel including brick fragments).	MC US for PI
BH-08/18	2.50	B7	MADE GROUND(Dark brown very silty very sandy gravel including brick fragments).	PSD SED
BH-08/18	3.00	U11	Stiff brown sandy gravelly CLAY of low plasticity.	MC PI US for UUT
BH-08/18	5.50	U17	Stiff brown sandy gravelly CLAY of low plasticity	MC PI OED
BH-08/18	6.50	B20	Brown slightly clayey sandy GRAVEL.	PSD
BH-08/19	1.50	B5	MADE GROUND(Brown very clayey very sandy gravel including brick fragments).	PSD SED

Contract Title :- Ground Investigation: McNulty's Yard, South Shields	Client :- South Tyneside Council
---	--

	Signed :- 	Name :- M. SELKIRK	Page 2 of 3	
	Date of issue :- 24/06/2008	Certificate No :- SD/3676/2	AEG Contract No. :- 3676	

ALLIED EXPLORATION & GEOTECHNICS LIMITED



Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG

Tel No. : 0191 3874700 Fax No. : 0191 3874710

LABORATORY SAMPLE DESCRIPTION SHEET

Exploratory Hole No.	Sample Depth	ID	Description	Laboratory Tests/Remarks
BH-08/19	2.50	B7	MADE GROUND(Brown very clayey sandy gravel including brick fragments. (Clay of high plasticity)).	MC PI
BH-08/19	6.50	B12	MADE GROUND(Brown clayey very sandy gravel including ceramic and brick fragments).	PSD SED
BH-08/20	1.50	B2	MADE GROUND(Dark brown silty very sandy gravel including ash and brick fragments).	PSD SED
BH-08/20	3.50	J7	Brown sandy gravelly CLAY	MC PI(IS for LL)
BH-08/20	4.00	B8	Brown sandy gravelly CLAY.	PSD SED
BH-08/20	9.00	J16	Brown sandy gravelly CLAY	MC PI(IS for LL)
BH-08/20	9.50	B17	Grey/brown sandy gravelly CLAY.	PSD SED

Contract Title :- Ground Investigation: McNulty's Yard, South Shields	Client :- South Tyneside Council
---	--

	Signed :- <i>M. Selkirk</i>	Name :- M. SELKIRK	Page 3 of 3	
	Date of issue :- 24/06/2008	Certificate No. :- SD/3676/3	AEG Contract No. :- 3676	

ENCLOSURE 2

Moisture Content/Plastic Index and Moisture Content



ALLIED EXPLORATION & GEOTECHNICS LIMITEDUnit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG
Tel No. 0191 3784700 Fax No. 0191 3874710**MOISTURE CONTENT CERTIFICATE**

BS 1377 : Part 2 : Clause 3.2

Exploratory Hole No.	Sample Depth (m)	Sample ID	Moisture Content %	Date Tested	Remarks
BH-08/07	2.50	B7	28.0	04/06/2008	
BH-08/07	5.00	B13	15.5	03/06/2008	
BH-08/08	5.00	J12	6.5	03/06/2008	
BH-08/09	4.50	B11	33.2	04/06/2008	
BH-08/10	13.00	J21	12.3	03/06/2008	
BH-08/15	3.60	B9	6.4	03/06/2008	
BH-08/16	4.50	B10	33.8	03/06/2008	
BH-08/16	6.40	B14	12.9	03/06/2008	
BH-08/18	2.50	J6	15.6	03/06/2008	

For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Ground Investigation: McNulty's Yard, South Shields	Client :- South Tyneside Council
---	--

	Signed :- <i>m. selkirk</i>	Name :- M. SELKIRK	Page 1 of 1	
	Date of issue :- 19/06/2008	Certificate No :- MC/3676/1	AEG Contract No. :- 3676	



ALLIED EXPLORATION & GEOTECHNICS LIMITEDUnit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG
Tel No. 0191 3784700 Fax No. 0191 3874710**MOISTURE CONTENT CERTIFICATE**


ISRM : 1981

Exploratory Hole No.	Sample Depth (m)	Sample ID	Moisture Content %	Date Tested	Remarks
BH-08/01	12.55	Core	5.3	12/06/2008	
BH-08/01	12.65	Core	6.2	12/06/2008	
BH-08/01	12.80	Core	5.7	12/06/2008	
BH-08/01	12.90	Core	5.1	12/06/2008	
BH-08/01	13.00	Core	5.7	12/06/2008	
BH-08/17	9.60	Core	6.2	12/06/2008	
BH-08/17	9.80	Core	5.7	12/06/2008	
BH-08/17	10.10	Core	6.3	12/06/2008	

For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-
Ground Investigation: McNulty's Yard, South ShieldsClient :-
South Tyneside Council

	Signed :- 	Name :- M. SELKIRK	Page 1 of 1
	Date of issue :- 16/06/2008	Certificate No :- MC/3676/1	AEG Contract No. :- 3676






ALLIED EXPLORATION & GEOTECHNICS LIMITEDUnit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG
Tel No. 0191 3784700 Fax No. 0191 3874710**MOISTURE CONTENT CERTIFICATE**

ISRM : 1981

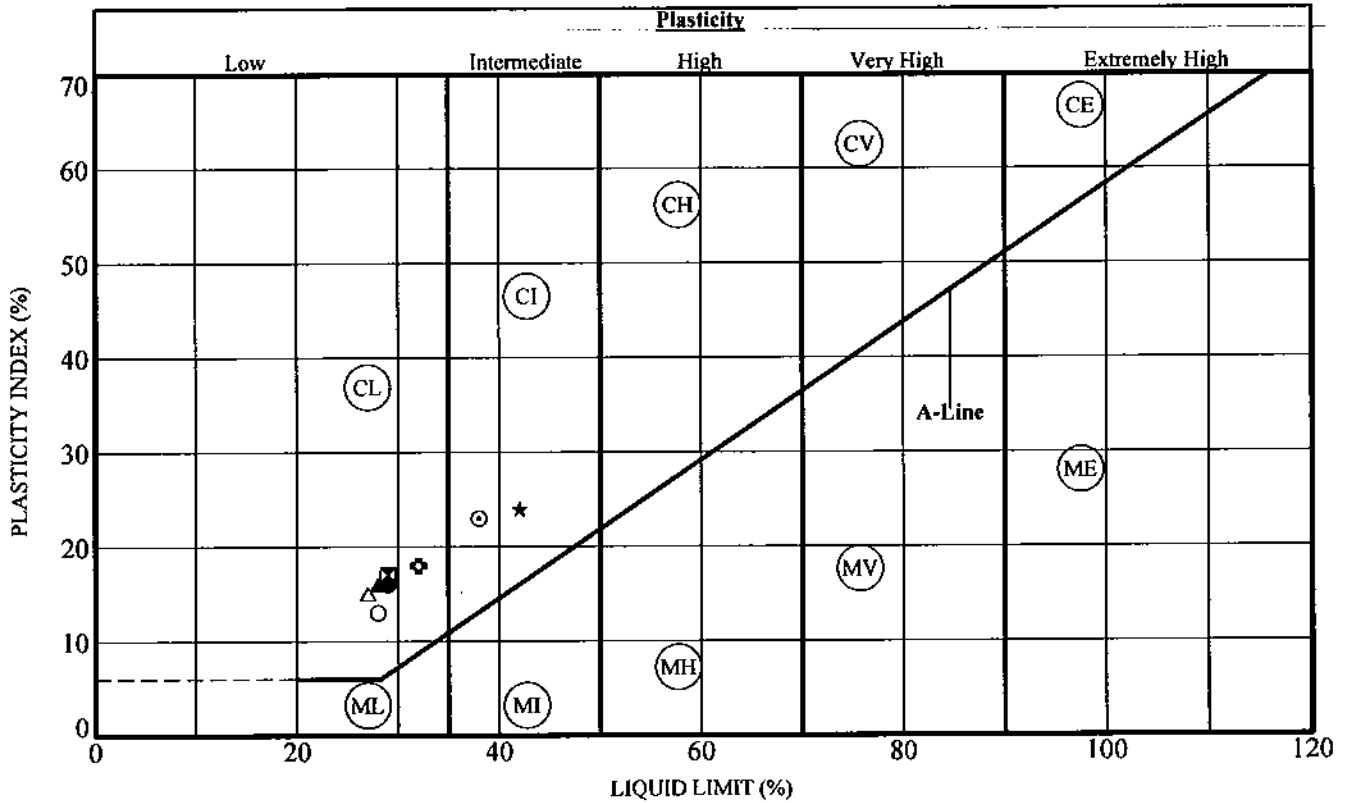
Exploratory Hole No.	Sample Depth (m)	Sample ID	Moisture Content %	Date Tested	Remarks
BH-08/18	9.60	Core	6.5	19/06/2008	
BH-08/18	13.10	Core	6.4	19/06/2008	
BH-08/18	15.20	Core	3.1	19/06/2008	
BH-08/18	16.50	Core	6.6	19/06/2008	
BH-08/18	17.70	Core	5.5	19/06/2008	

For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-
Ground Investigation: McNulty's Yard, South ShieldsClient :-
South Tyneside Council

	Signed :- 	Name :- M. SELKIRK	Page 1 of 1	
	Date of issue :- 24/06/2008	Certificate No :- MC/3676/1	AEG Contract No. :- 3676	

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT
Test Method :- BS 1377 : Part 2 : Clause 3.2, 4.1, 4.3, 4.4 & 5.3 : 1990



Specimen Identification	LL	PL	PI	<0.425mm (%)	m/c (%)	Date Tested
●BH-08/01 3.50 U7	29	13	16	NAT	8.4	09/06/2008
⊗BH-08/01 8.50 U16	29	12	17	NAT	11	09/06/2008
▲BH-08/02 7.50 U13	28	12	16	NAT	10.8	09/06/2008
★BH-08/10 11.50 J19	42	18	24	NAT	36	03/06/2008 #
⊙BH-08/11 4.50 U12	38	15	23	NAT	15.6	03/06/2008
◆BH-08/11 6.50 U16	32	14	18	NAT	10.7	03/06/2008
⊙BH-08/16 6.10 J12	28	15	13	NAT	15.5	03/06/2008 #
△BH-08/18 3.00 U11	27	12	15	NAT	10.6	03/06/2008
⊗BH-08/18 5.50 U17	29	13	16	NAT	10.8	03/06/2008

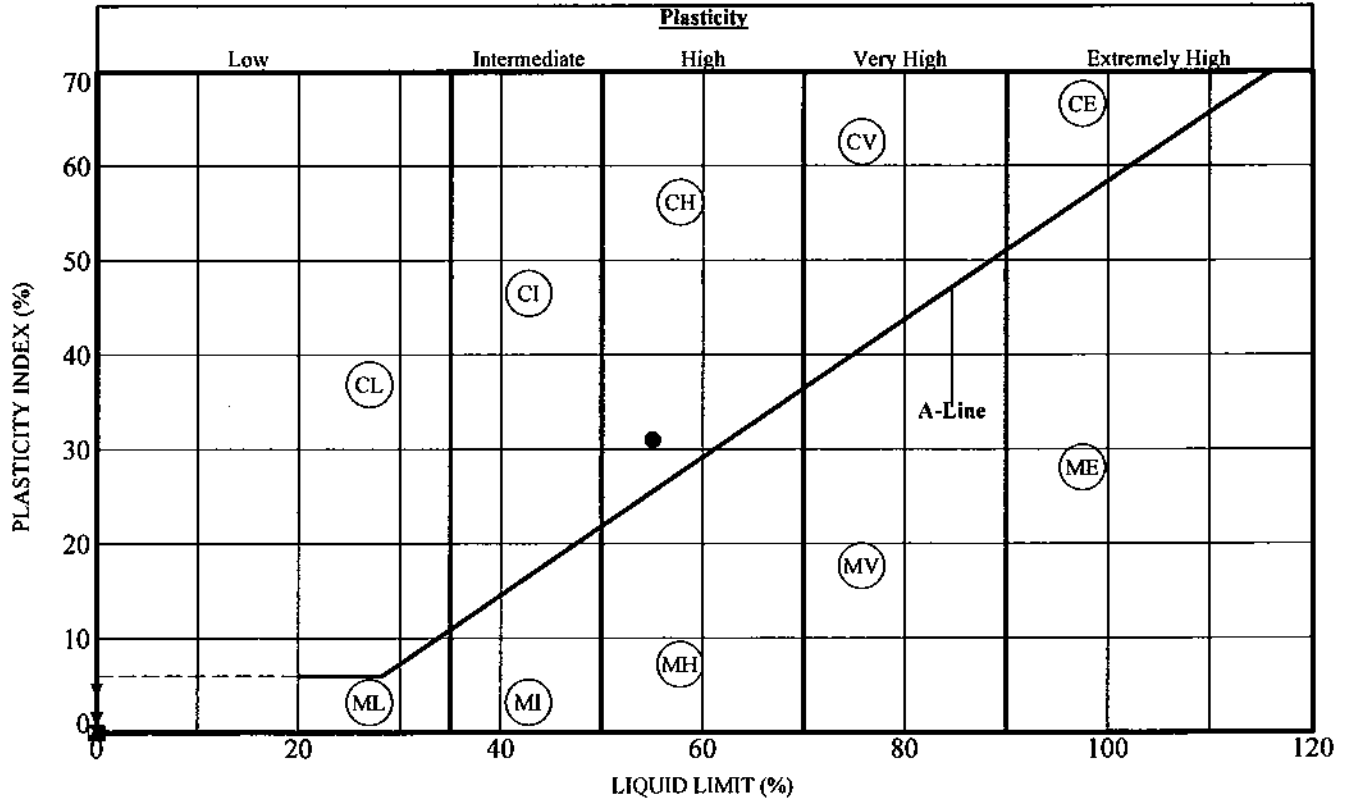
For description of sample please refer to the Laboratory Sample Description Sheet. # = Insufficient for 4 point PI

Contract Title :- Ground Investigation: Mcully's Yard, South Shields	Client :- South Tyneside Council
--	--

	Signed :- <i>M. Selkirk</i>	Name :- M. SELKIRK	Page 1 of 2	
	Date of issue :- 24/06/2008	Certificate No :- PI/3676/1	AEG Contract No :- 3676	

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method :- BS 1377 : Part 2 : Clause 3.2, 4.1, 4.3, 4.4 & 5.3 : 1990



Specimen Identification	LL	PL	PI	<0.425mm (%)	m/c (%)	Date Tested
●BH-08/19 2.50 B7	55	24	31	58	35.7	03/06/2008
▣BH-08/20 3.50 J7		13		NAT	11.7	09/06/2008 #
▲BH-08/20 9.00 J16		13		NAT	10.2	09/06/2008 #

For description of sample please refer to the Laboratory Sample Description Sheet. # = Insufficient for 4 point PI

Contract Title :- Ground Investigation: Mcultry's Yard, South Shields	Client :- South Tyneside Council
---	--

	Signed :- <i>M. Selkirk</i>	Name :- M. SELKIRK	Page 2 of 2	
	Date of issue :- 19/06/2008	Certificate No :- PI/3676/2	AEG Contract No :- 3676	

ENCLOSURE 3

Particle Size Distribution Sieving and Sedimentation

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG

Test Method :- BSI377 : Part 2 : 1990

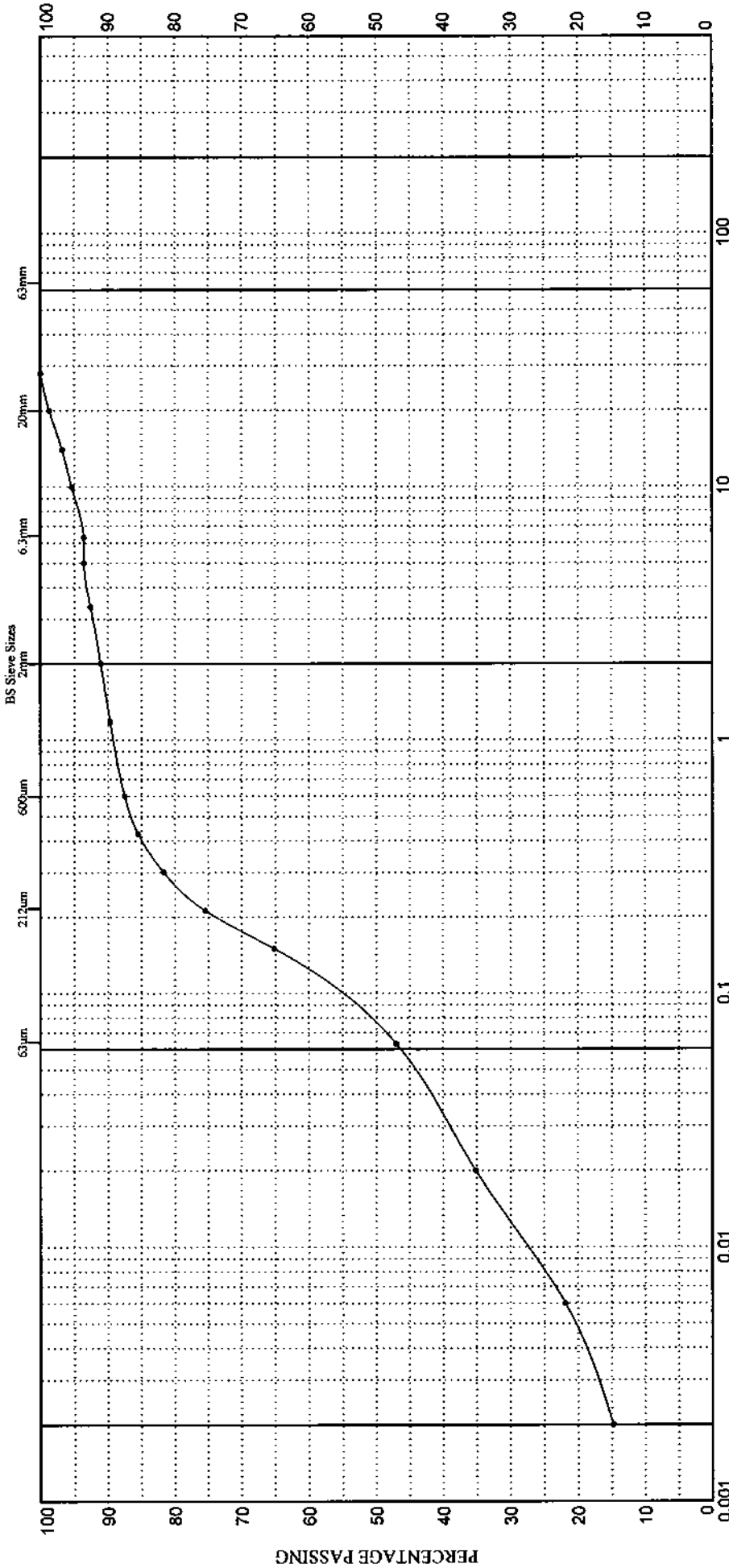
Exploratory Hole No :- BH-08/01

Depth :- 2.50

Sample Type & No :- B6

Date Tested :- 10/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/01/B6/2.50			Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: Mcnulty's Yard, South Shields			AEG Contract No :- 3676



Test Method :- BS1377 : Part 2 : 1990

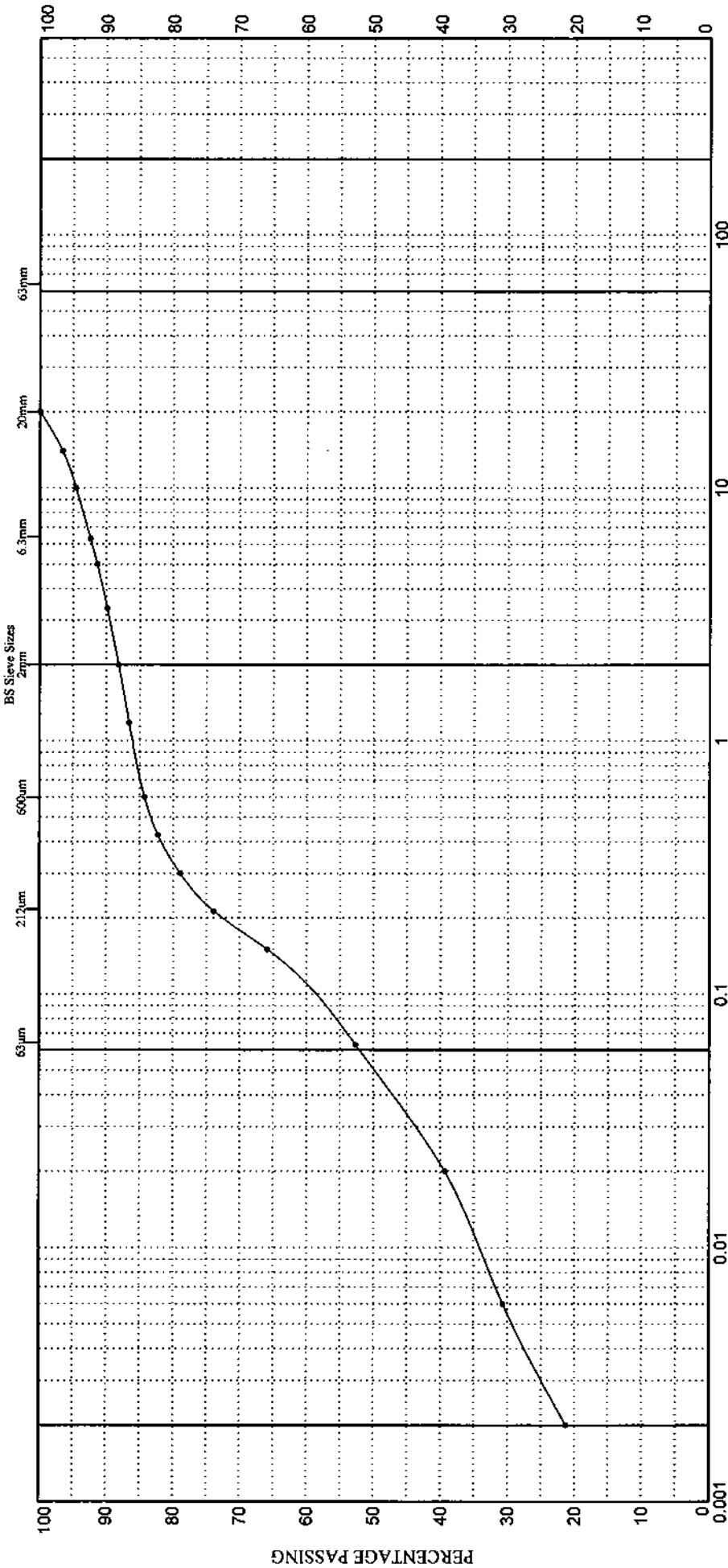
Exploratory Hole No :- BH-08/01

Depth :- 7.50

Sample Type & No :- B15

Date Tested :- 10/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet



Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/01/B15/7.50

Signed *MSD*

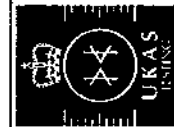
Name

M. SELKIRK

Page 1 of 1

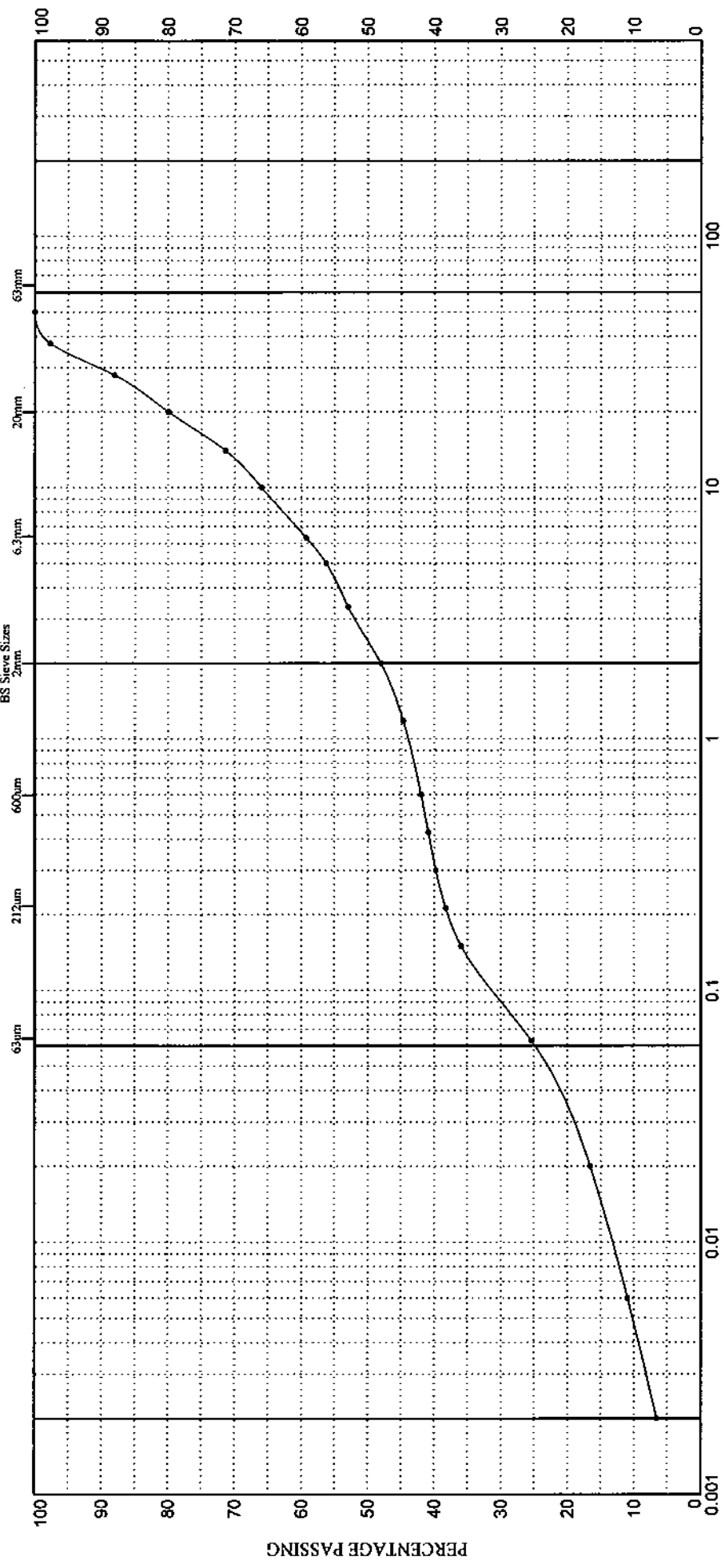
Contract Title :- Ground Investigation: Menuly's Yard, South Shields

AEG Contract No :- 3676



Test Method :- Not To BS 1377	Exploratory Hole No :- BH-08/02	Depth :- 1.50	Sample Type & No :- B4	Date Tested :- 10/06/2008
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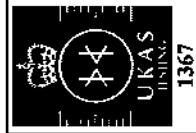
PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

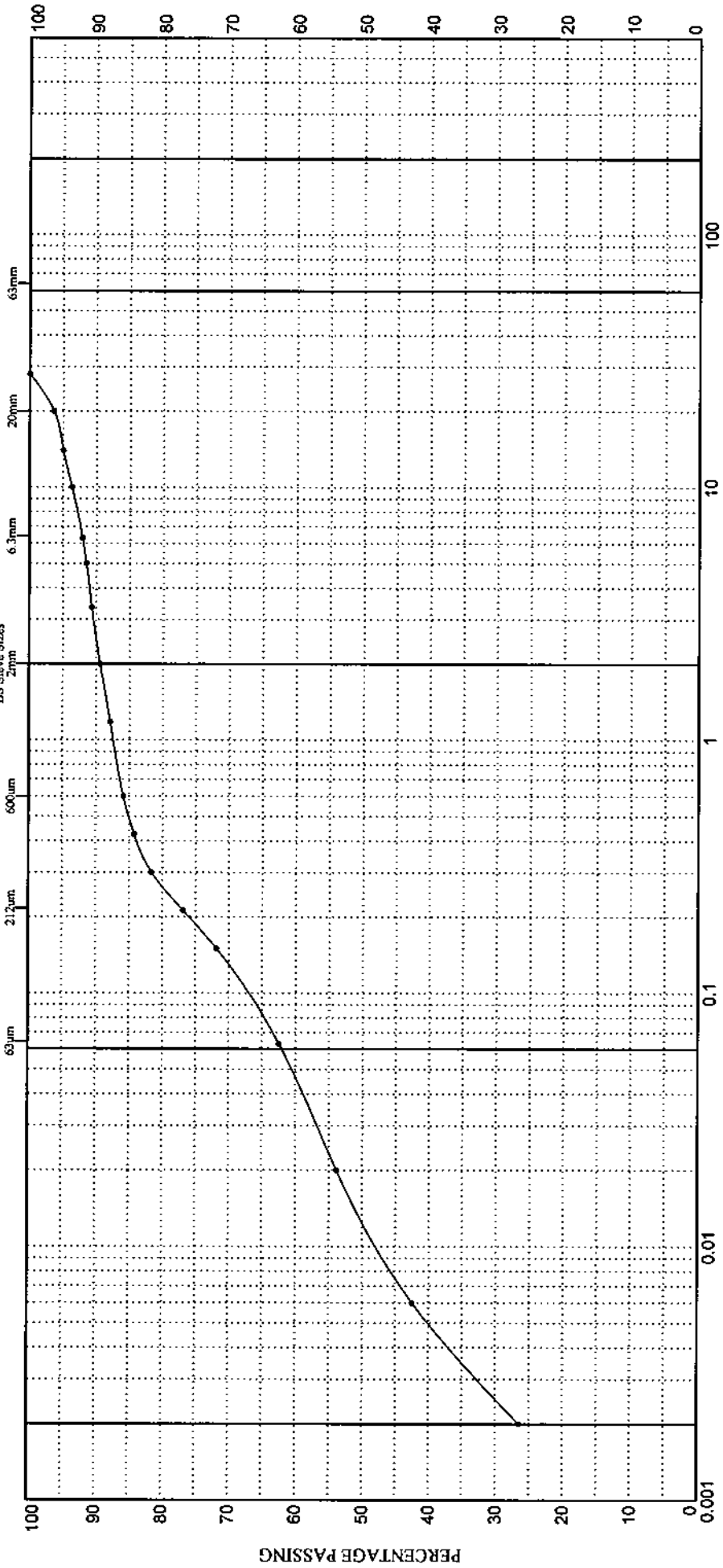
For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/02/B4/1.50	<div style="border: 2px solid black; padding: 5px; display: inline-block;"> M. SELKIRK </div>	Page 1 of 1	AEG Contract No :- 3676
Client :- South Tyneside Council		Contract Title :- Ground Investigation: Mennuly's Yard, South Shields		



Test Method :- BS1377 : Part 2 : 1990 Exploratory Hole No :- BH-08/02 Depth :- 3.50 Sample Type & No :- B7 Date Tested :- 10/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Medium	Coarse	COBBLES	BOULDERS
SAND				GRAVEL					
SILT									

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/02/B7/3.50	Signed <i>M. Selkirk</i> Name M. SELKIRK	Page 1 of 1
	Client :- South Tyneside Council			Contract Title :- Ground Investigation: Menulty's Yard, South Shields



Test Method :- BS1377 : Part 2 : 1990

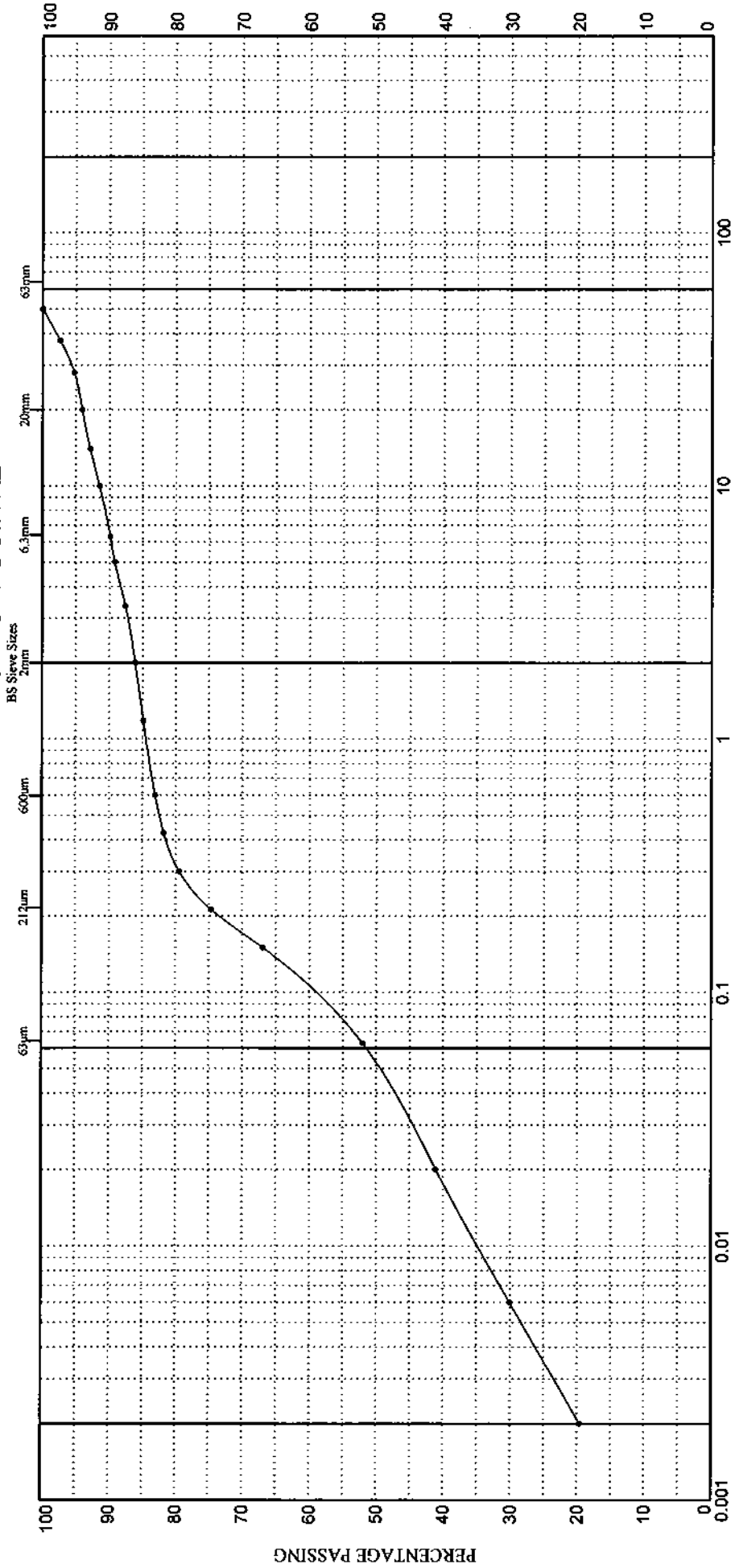
Exploratory Hole No :- BH-08/02

Depth :- 6.50

Sample Type & No :- B12

Date Tested :- 10/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/02/B12/6.50

Signed *M. Selkirk*

Name **M. SELKIRK**

Page 1 of 1

Client :-

South Tyneside Council

Contract Title :-

Ground Investigation: Menulty's Yard, South Shields

AEG Contract No :-

3676



Test Method :- Not To BS 1377

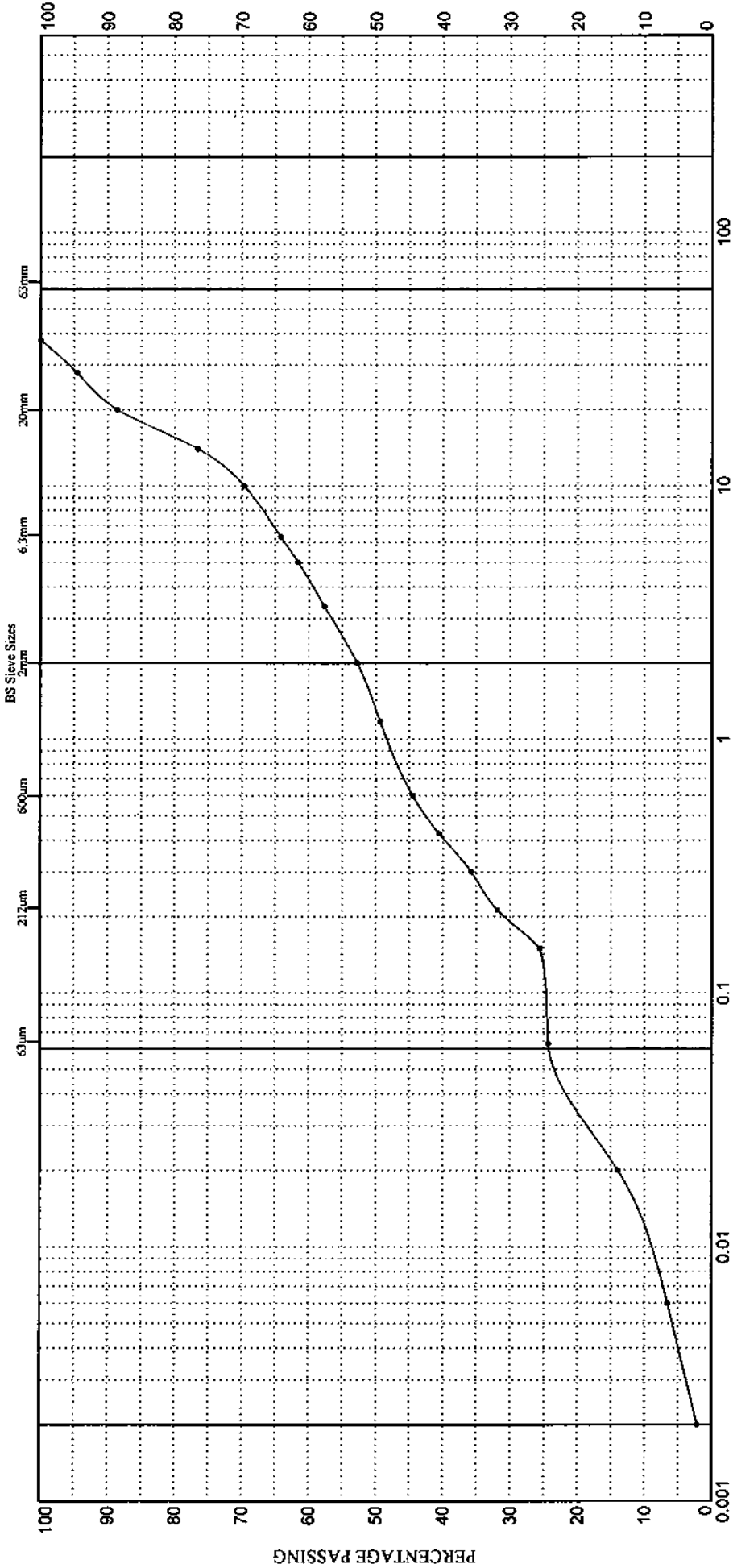
Exploratory Hole No :- BH-08/07

Depth :- 2.50

Sample Type & No :- B7

Date Tested :- 04/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

M. SELKIRK
 Name

Signed: *M. Selkirk*

Certificate No :- PSD/3676/BH-08/07/B7/2.50

Date of issue :- 19/06/2008

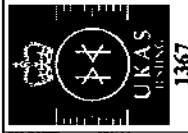
Contract Title :-

South Tyneside Council

AEG Contract No :-

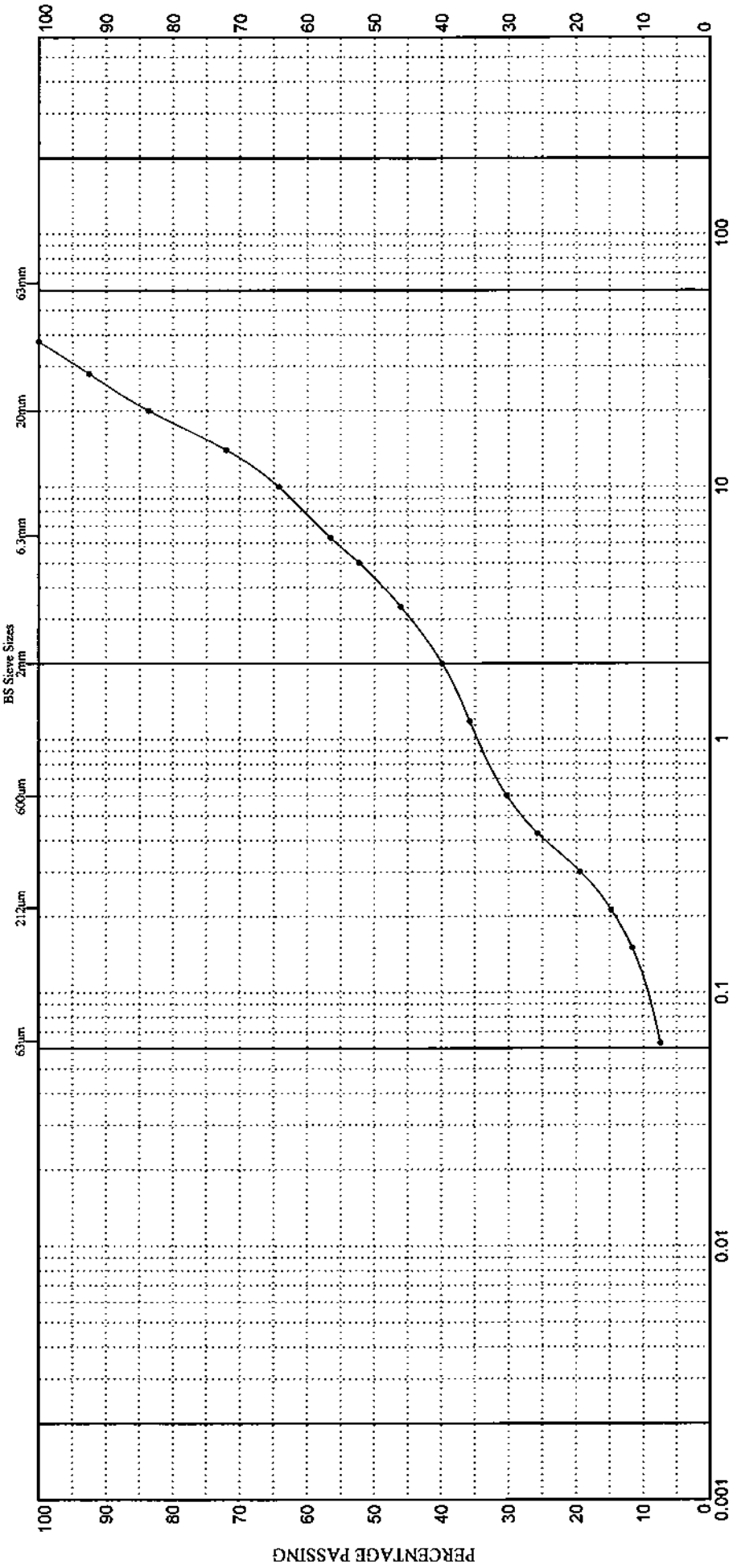
Ground Investigation: Mcnulty's Yard, South Shields

3676



Test Method :- BSI377 : Part 2 : 1990	Exploratory Hole No :- BH-08/07	Date Tested :- 03/06/2008
Depth :- 5.00		Sample Type & No :- B13

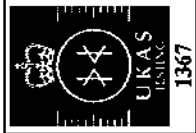
PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT	SAND	GRAVEL	COBBLES	BOULDERS
Fine	Medium	Coarse	Fine	Medium	Coarse

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/07/B13/5.00	Page 1 of 1	AEG Contract No :- 3676
		Signed <i>M. Selkirk</i> Name M. SELKIRK	AEG Contract No :- 3676
		Contract Title :- Ground Investigation: Mennuly's Yard, South Shields	
Client :- South Tyneside Council			



Test Method :- Not To BS 1377

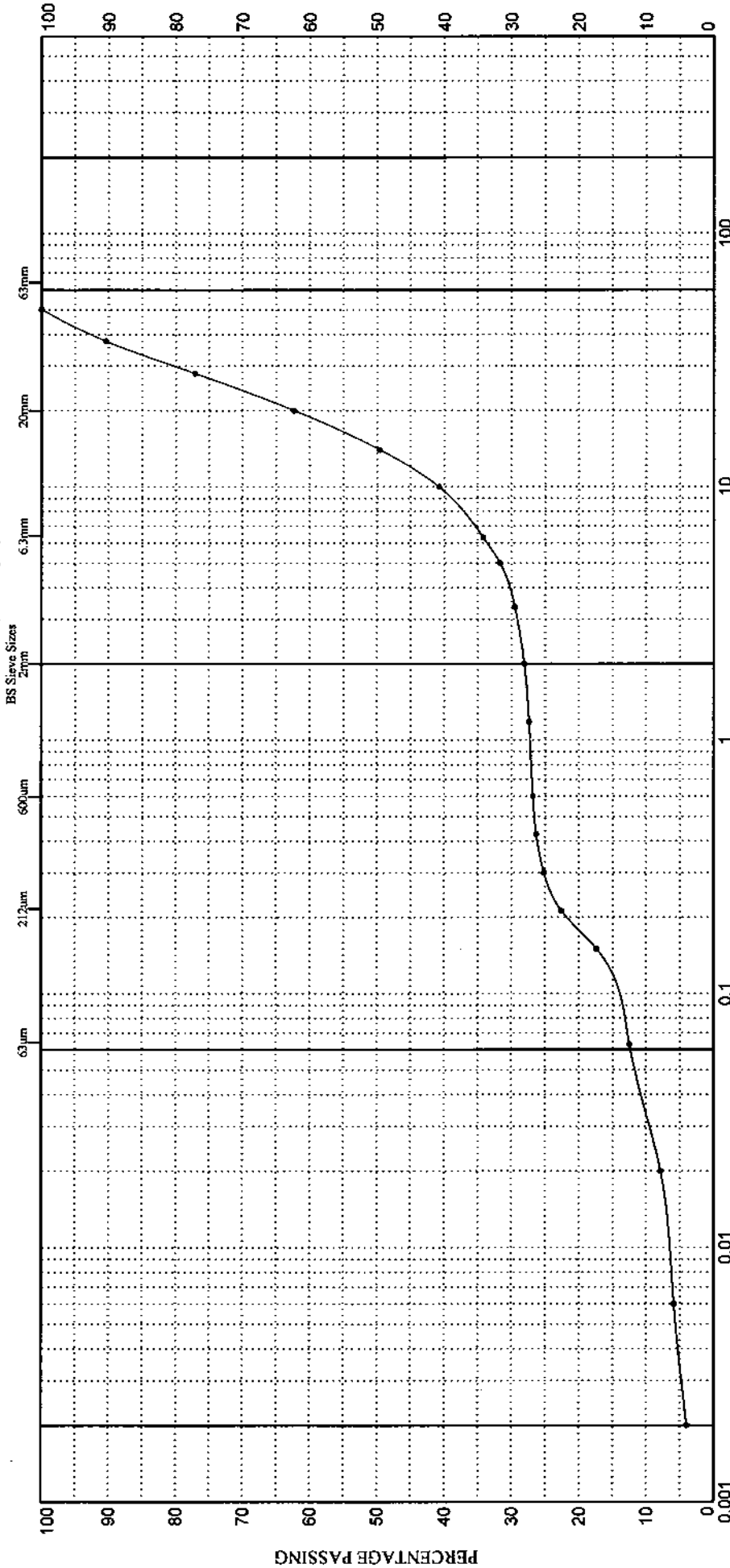
Exploratory Hole No :- BH-08/08

Depth :- 4.50

Sample Type & No :- B11

Date Tested :- 08/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

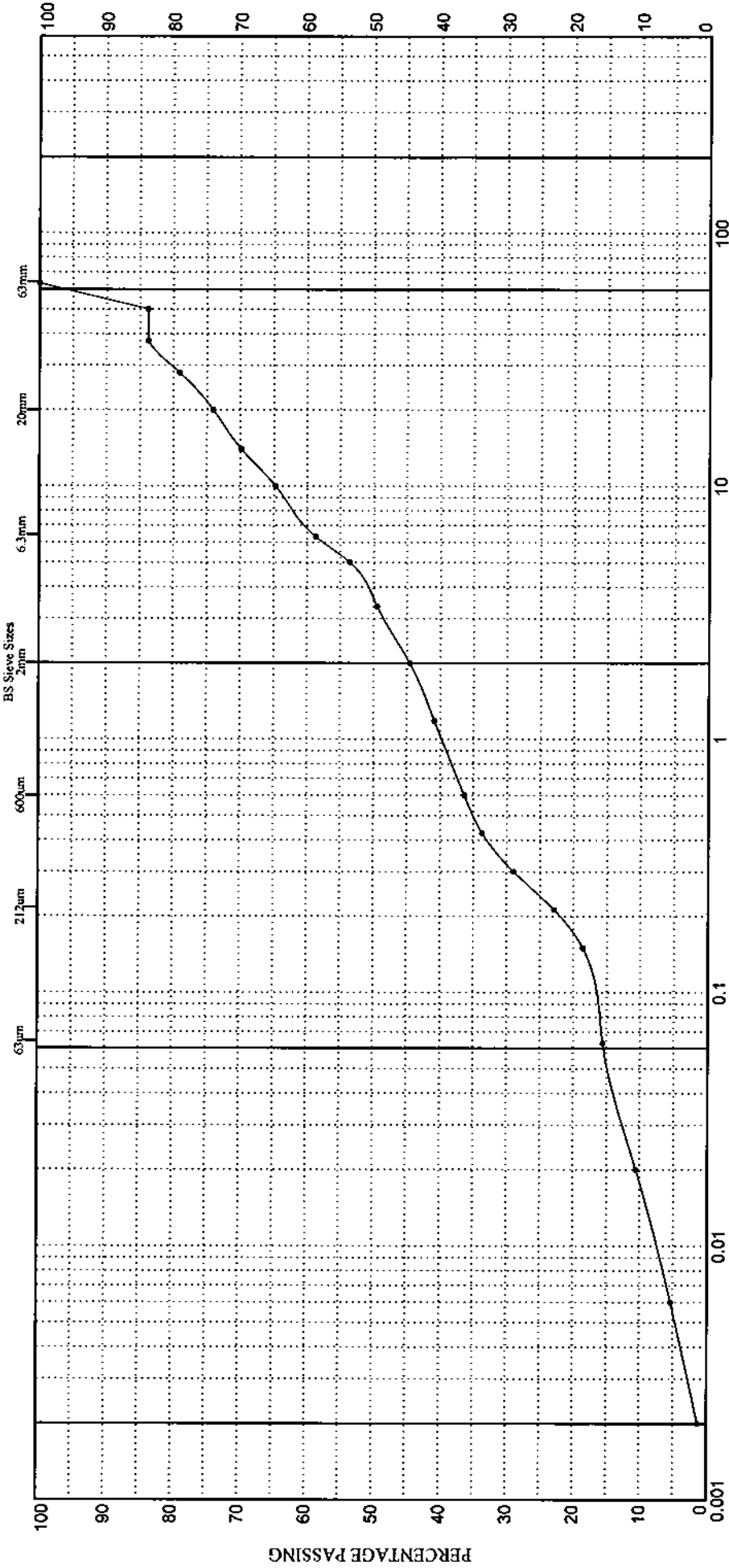
For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/08/B11/4.50	Signed :- <i>M. Selkirk</i>	Name :- M. SELKIRK	Page 1 of 1
Client :- South Tyneside Council	Contract Title :- Ground Investigation: McNulty's Yard, South Shields	AEG Contract No :- 3676		




Test Method :- Not To BS 1377	Exploratory Hole No :- BH-08/09	Date Tested :- 03/06/2008
	Depth :- 1.20	Sample Type & No :- B4

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/09/B4/1.20	 Signed	Name M. SELKIRK	Page 1 of 1
Client :- South Tyneside Council	Contract Title :- Ground Investigation: Menauly's Yard, South Shields			AEG Contract No :- 3676



Test Method :- BS1377 : Part 2 : 1990

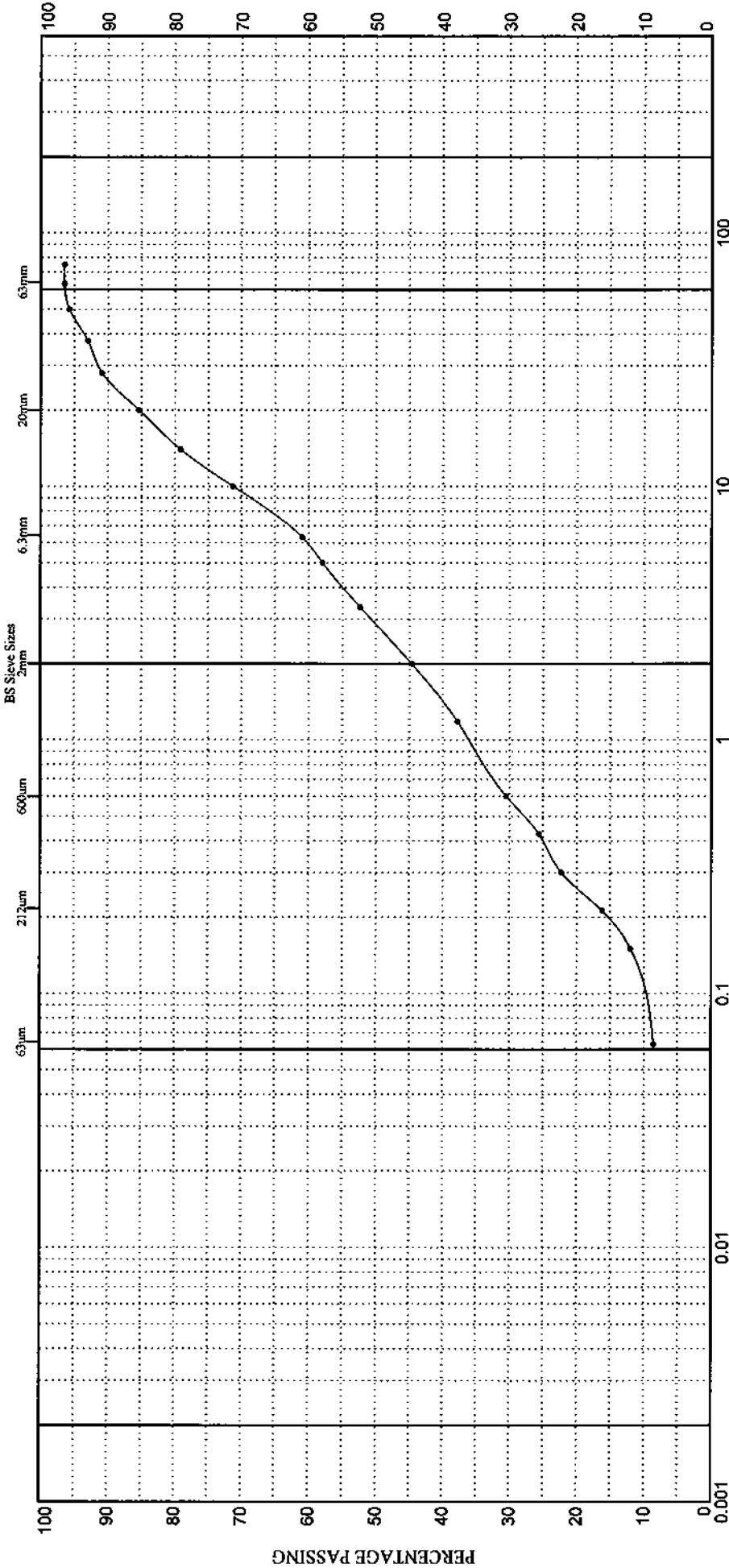
Exploratory Hole No :- BH-08/09

Depth :- 4.50

Sample Type & No :- B11

Date Tested :- 04/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL		

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/09/B11/4.50

Signed *M. Selkirk*

Name **M. SELKIRK**

Page 1 of 1

Client :-

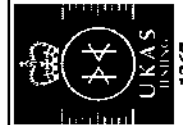
South Tyneside Council

Contract Title :-

Ground Investigation: Mculnly's Yard, South Shields

AEG Contract No :-

3676



Test Method :- Not To BS 1377	Exploratory Hole No :- BH-08/10	Depth :- 6.50	Sample Type & No :- B10	Date Tested :- 03/06/2008																																																
<h3 style="margin: 0;">PARTICLE SIZE DISTRIBUTION CURVE</h3>																																																				
<table border="1" style="margin: 10px auto; border-collapse: collapse;"> <caption>Approximate data points from the Particle Size Distribution Curve</caption> <thead> <tr> <th>Particle Size (mm)</th> <th>Percentage Passing (%)</th> </tr> </thead> <tbody> <tr><td>0.075</td><td>100</td></tr> <tr><td>0.15</td><td>100</td></tr> <tr><td>0.3</td><td>100</td></tr> <tr><td>0.6</td><td>100</td></tr> <tr><td>1.2</td><td>100</td></tr> <tr><td>2.5</td><td>100</td></tr> <tr><td>5</td><td>100</td></tr> <tr><td>10</td><td>100</td></tr> <tr><td>20</td><td>100</td></tr> <tr><td>40</td><td>100</td></tr> <tr><td>63</td><td>100</td></tr> <tr><td>75</td><td>95</td></tr> <tr><td>100</td><td>85</td></tr> <tr><td>150</td><td>75</td></tr> <tr><td>200</td><td>65</td></tr> <tr><td>300</td><td>55</td></tr> <tr><td>400</td><td>45</td></tr> <tr><td>600</td><td>35</td></tr> <tr><td>800</td><td>25</td></tr> <tr><td>1000</td><td>20</td></tr> <tr><td>2000</td><td>10</td></tr> <tr><td>4000</td><td>5</td></tr> <tr><td>63000</td><td>0</td></tr> </tbody> </table>					Particle Size (mm)	Percentage Passing (%)	0.075	100	0.15	100	0.3	100	0.6	100	1.2	100	2.5	100	5	100	10	100	20	100	40	100	63	100	75	95	100	85	150	75	200	65	300	55	400	45	600	35	800	25	1000	20	2000	10	4000	5	63000	0
Particle Size (mm)	Percentage Passing (%)																																																			
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For description of sample please refer to the Laboratory Sample Description Sheet																																																				
Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/10/B10/6.50	Signed: <i>M. Selkirk</i>	Name: M. SELKIRK	Page 1 of 1																																																
Client :- South Tyneside Council	Contract Title :- Ground Investigation: Menuily's Yard, South Shields		AEG Contract No :- 3676																																																	



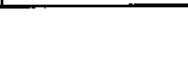


M. SELKIRK
 Name

Signed *M. Selkirk*
 Name

Contract Title :-
 Ground Investigation: Menulty's Yard, South Shields

Client :-
 South Tyneside Council



Test Method :- Not To BS 1377

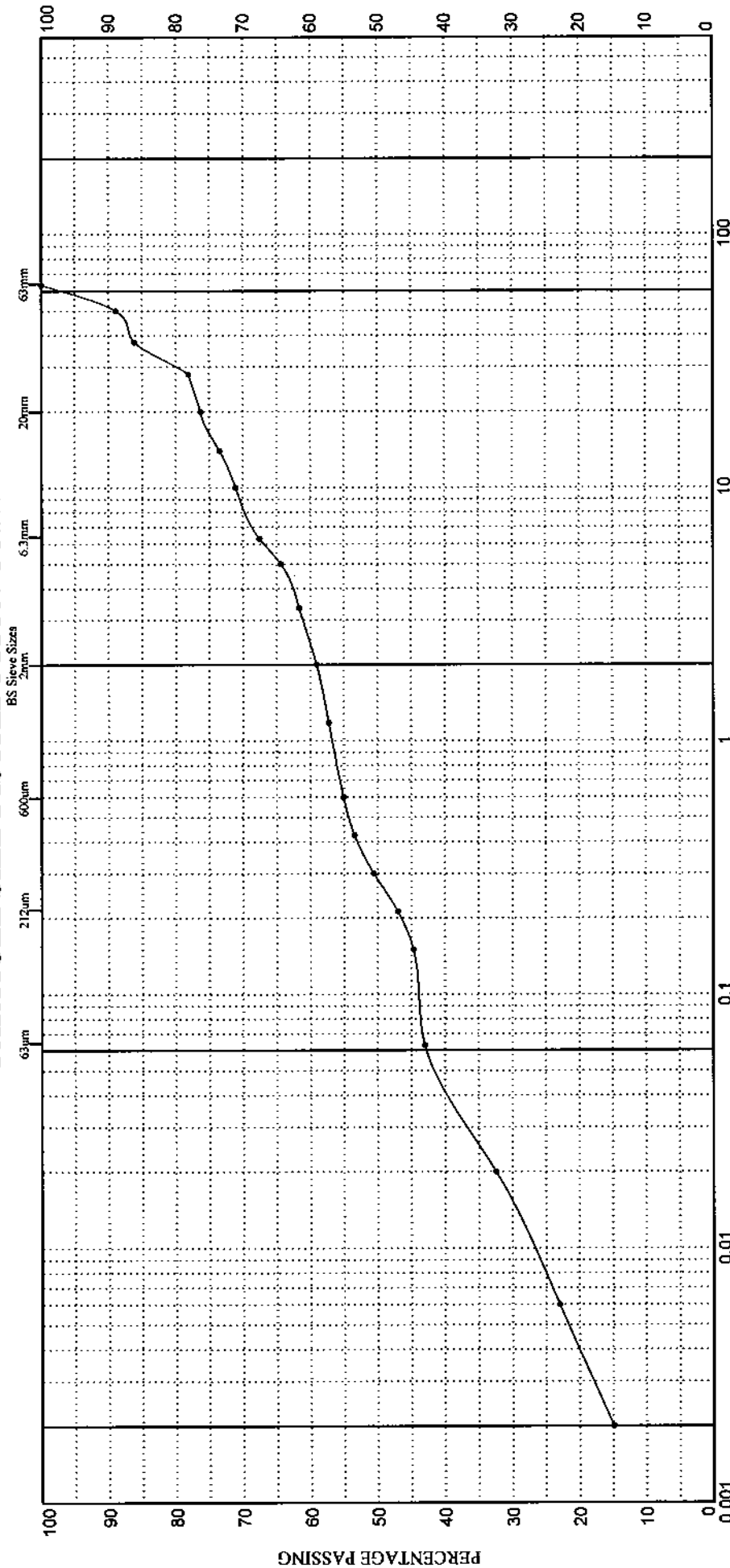
Exploratory Hole No :- BH-08/10

Depth :- 10.50

Sample Type & No :- B17

Date Tested :- 03/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/10/B17/10.50

Page 1 of 1

Test Method :- **Net To BS 1377**

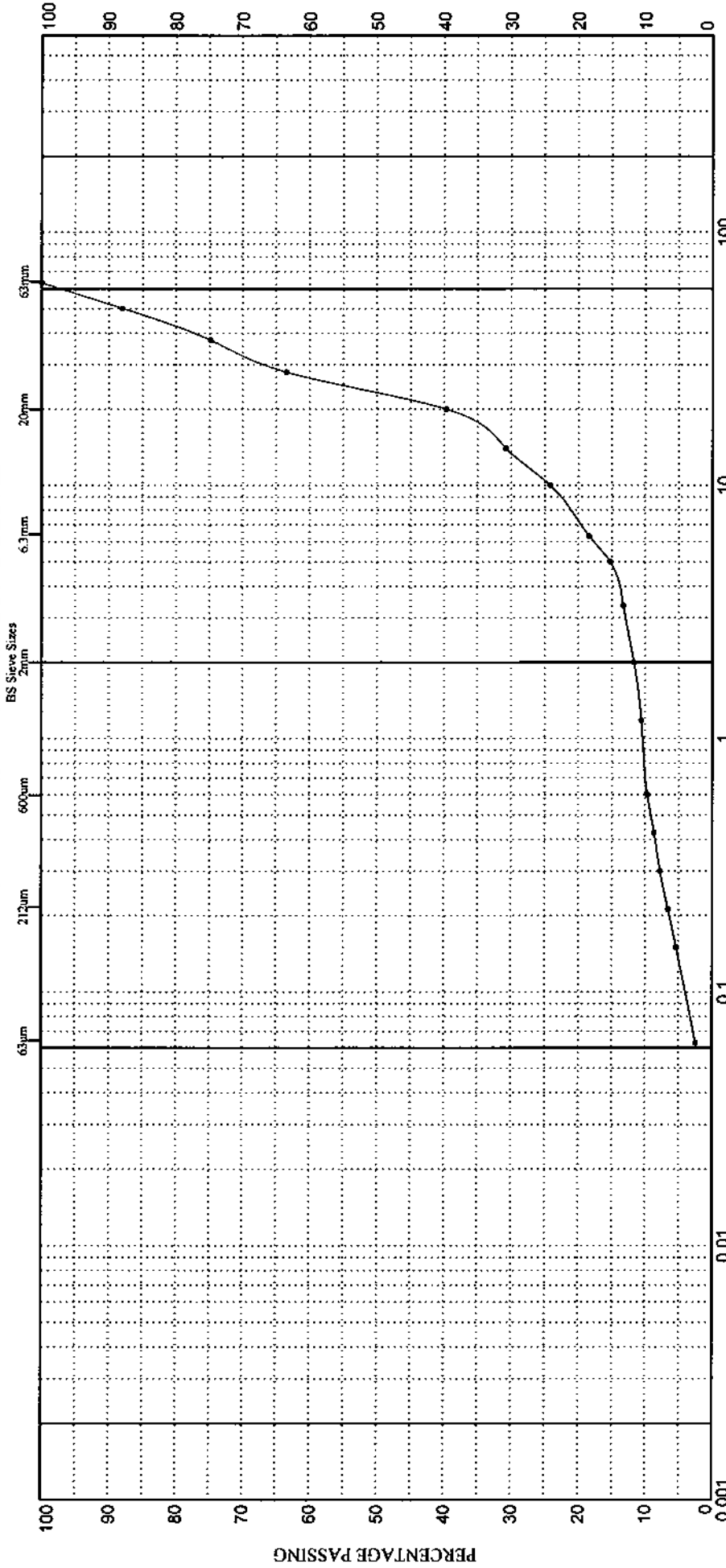
Exploratory Hole No :- **BH-08/10**

Depth :- **14.60**

Sample Type & No :- **B36**



Date Tested :- **03/06/2008**

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/10/B26/14.60	
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: Menulty's Yard, South Shields	

Test Method :- BS1377 : Part 2 : 1990

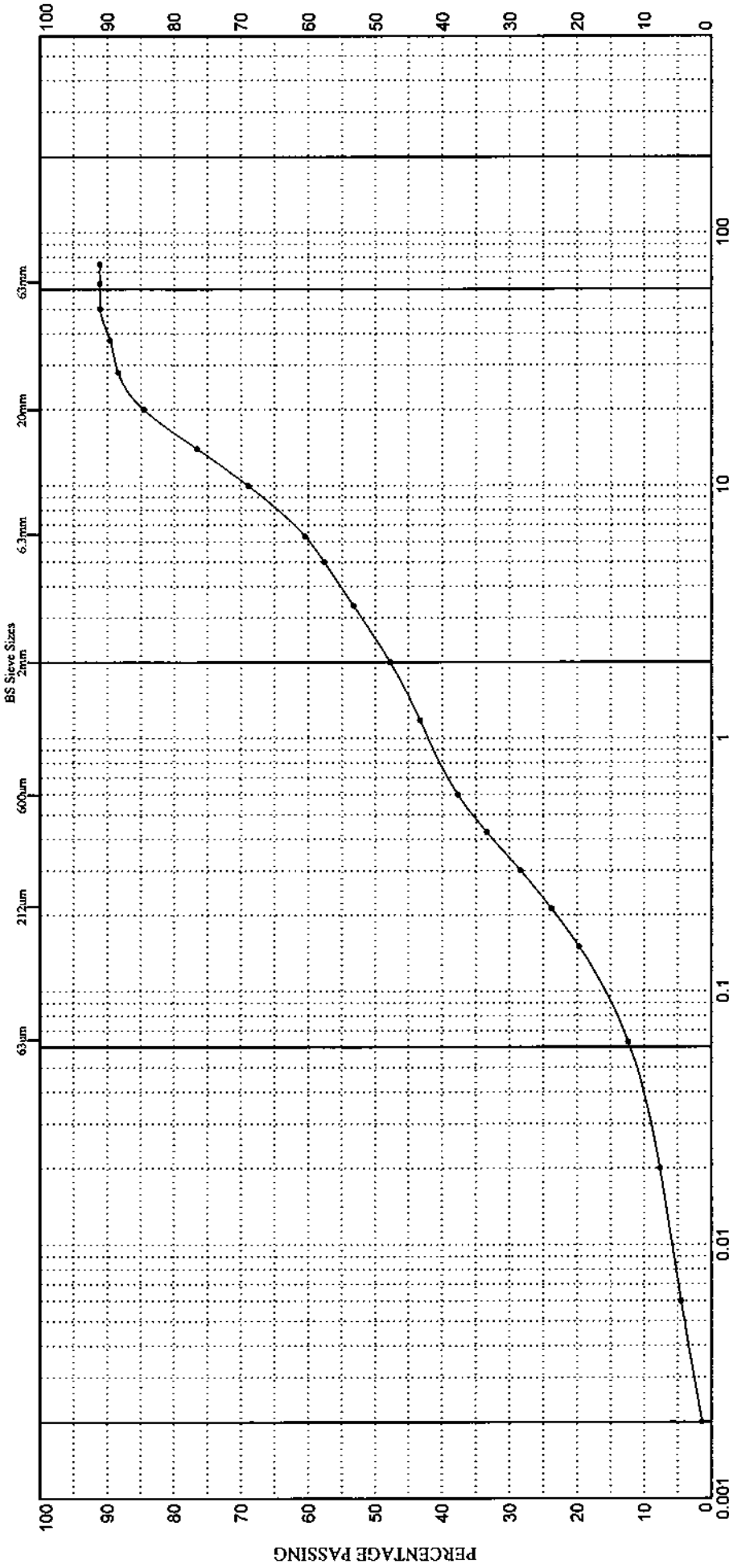
Exploratory Hole No :- BH-08/11

Depth :- 1.50

Sample Type & No :- B4

Date Tested :- 04/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT			SAND			GRAVEL			COBBLES	BOULDERS
Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse			

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/11/B4/1.50

Signed *M. Selkirk*

Name **M. SELKIRK**

Page 1 of 1



Client :- South Tyneside Council

Contract Title :- Ground Investigation: McNulty's Yard, South Shields

AEG Contract No :- 3676



Test Method :- **BS1377 : Part 2 : 1990**

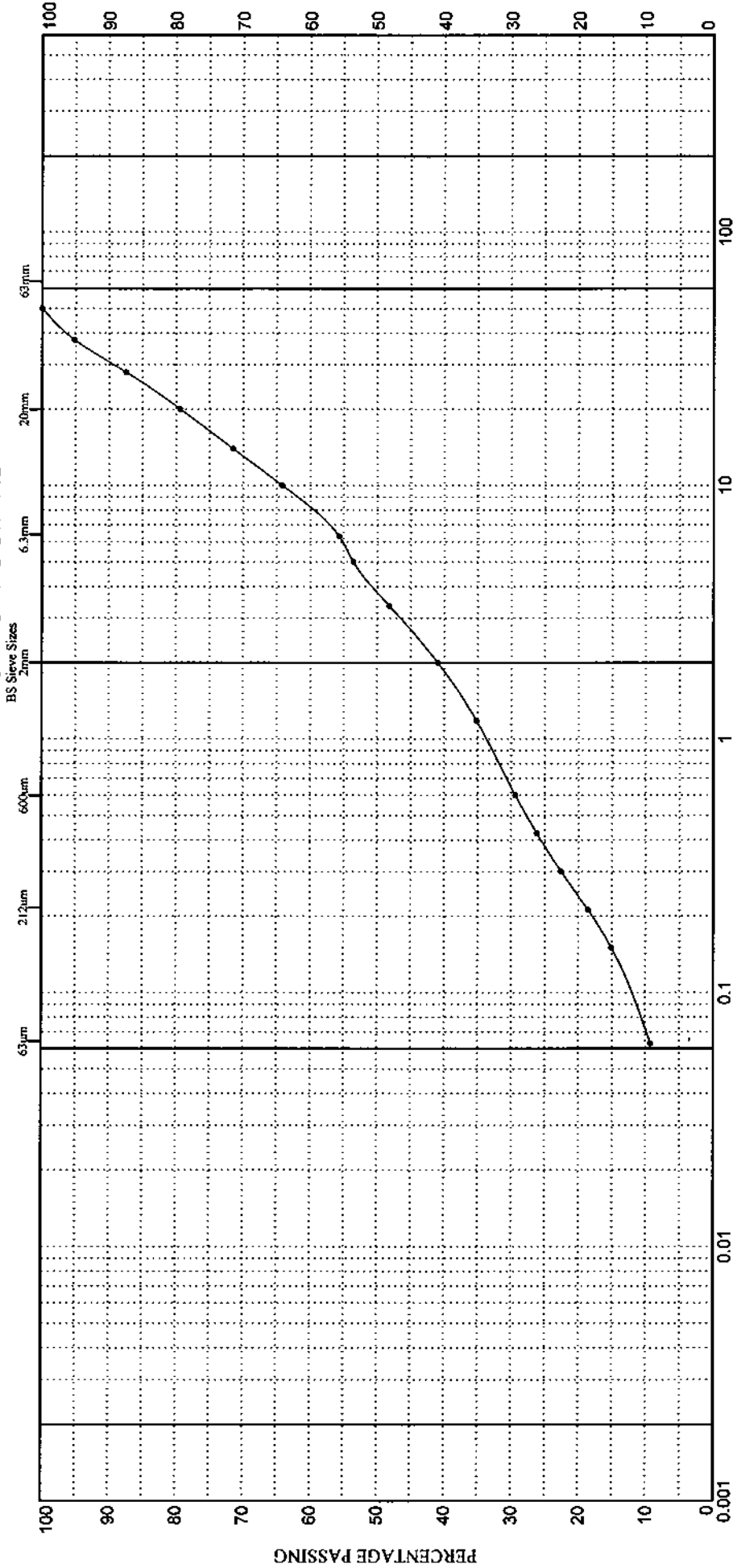
Exploratory Hole No :- **BH-08/12**

Depth :- **0.60**

Sample Type & No :- **B4**

Date Tested :- **10/06/2008**

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT				SAND				GRAVEL			

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/12/B4/0.60	
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: Menvly's Yard, South Shields	

Signed: *M. Selkirk*
 Name: **M. SELKIRK**

Test Method :- **BS1377 : Part 2 : 1990**

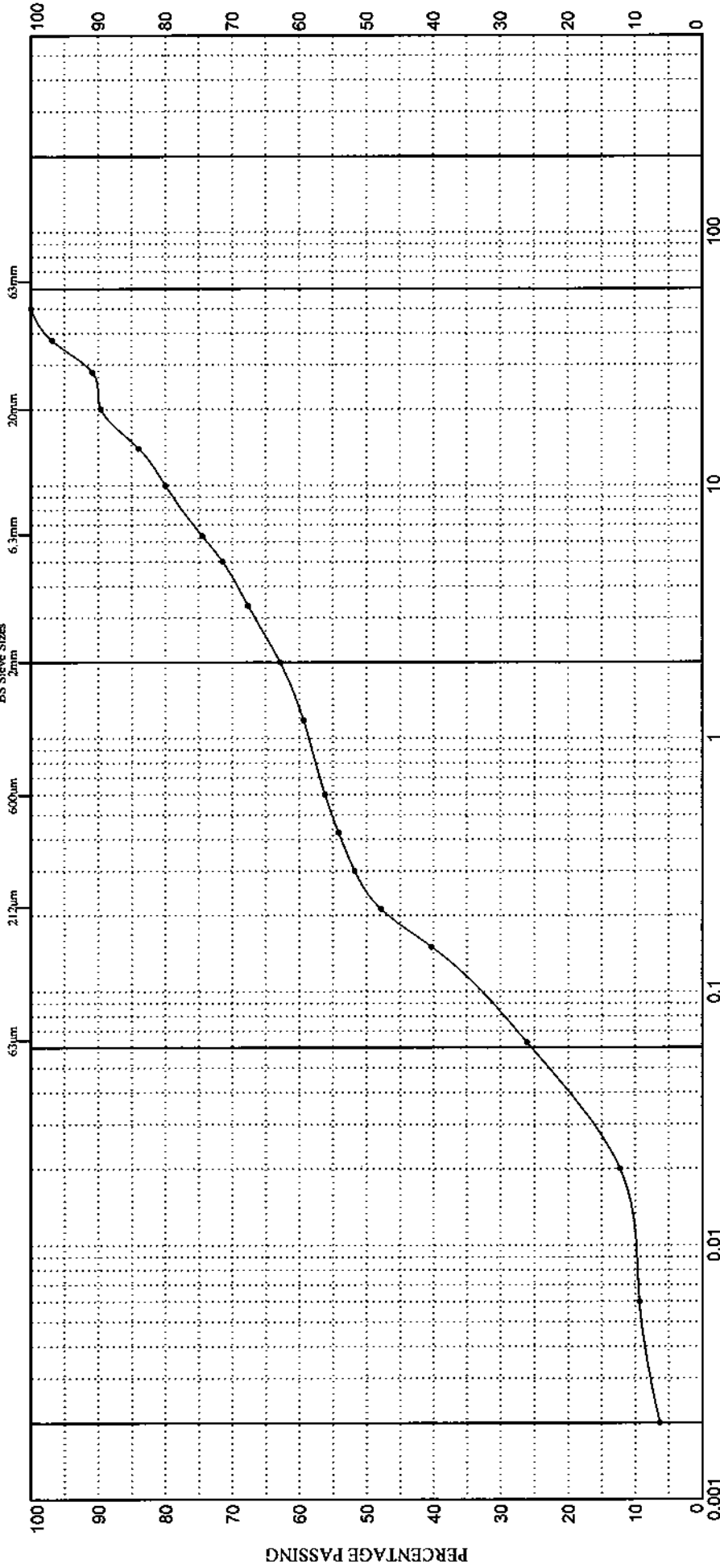
Exploratory Hole No :- **BH-08/12**

Depth :- **4.50**

Sample Type & No :- **B13**


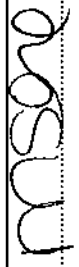

Date Tested :- **09/06/2008**

PARTICLE SIZE DISTRIBUTION CURVE



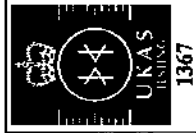
CLAY	SILT		SAND		GRAVEL		COBBLES	BOULDERS
Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/12/B13/4.50			Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: Menuity's Yard, South Shields			AEG Contract No :- 3676



Test Method :- BS1377 : Part 2 : 1990	Exploratory Hole No :- BH-08/12	Depth :- 7.00	Sample Type & No :- B18	Date Tested :- 10/06/2008
<h3 style="margin: 0;">PARTICLE SIZE DISTRIBUTION CURVE</h3>				
BS Sieve Sizes 2mm 6.3mm 20mm 63mm				
0.001 0.01 0.1 1 10 100				
PERCENTAGE PASSING				
CLAY SILT SAND GRAVEL COBBLES BOULDERS				
Fine Medium Coarse Fine Medium Coarse				
For description of sample please refer to the Laboratory Sample Description Sheet				
Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/12/B18/7.00	Signed <i>M. Selkirk</i> Name M. SELKIRK		Page 1 of 1 AEG Contract No :- 3676
Client :- South Tyneside Council		Contract Title :- Ground Investigation: Menuuly's Yard, South Shields		



Test Method :- **BS1377 : Part 2 : 1990**

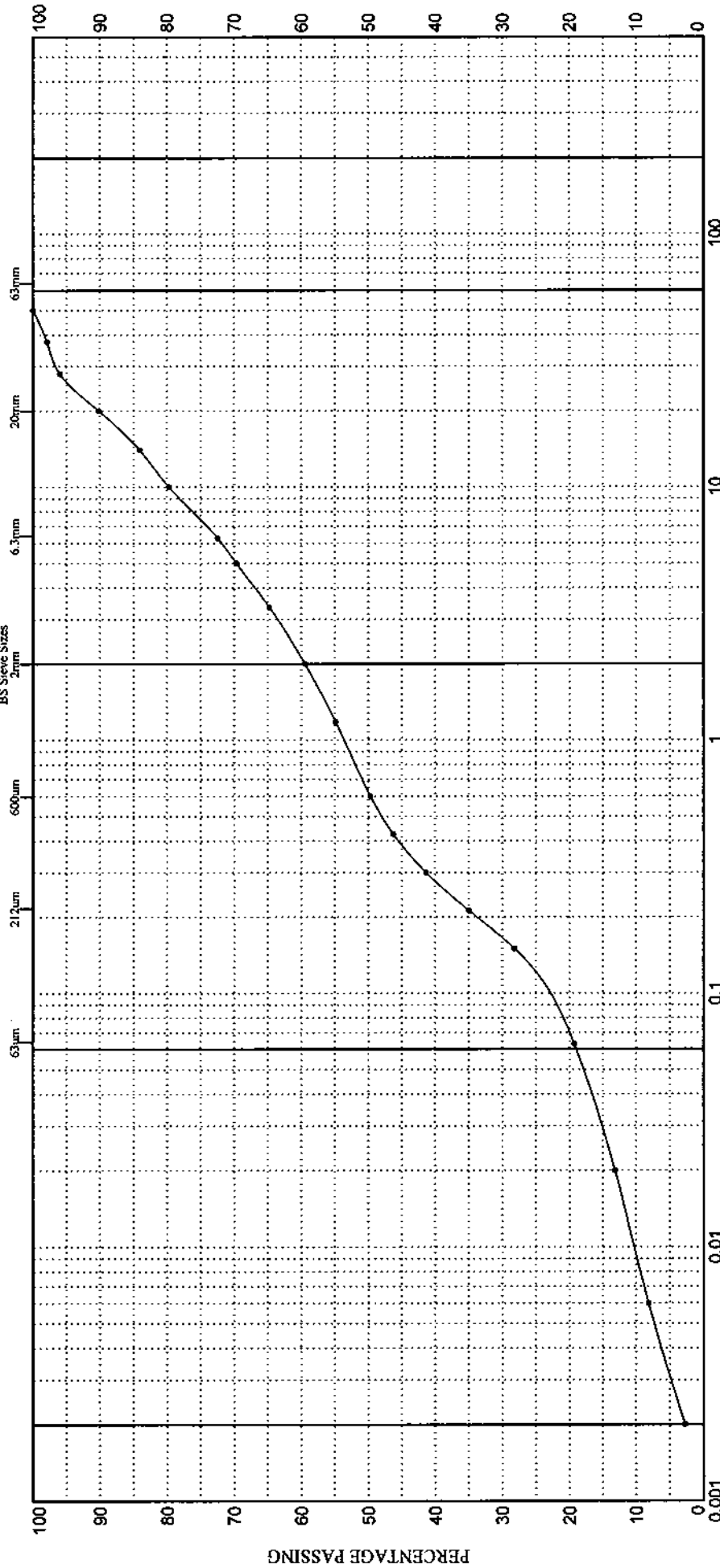
Exploratory Hole No :- **BH-08/14**

Depth :- **2.50**

Sample Type & No :- **B6**

Date Tested :- **04/06/2008**

PARTICLE SIZE DISTRIBUTION CURVE



Test Method :- **BS1377 : Part 2 : 1990**

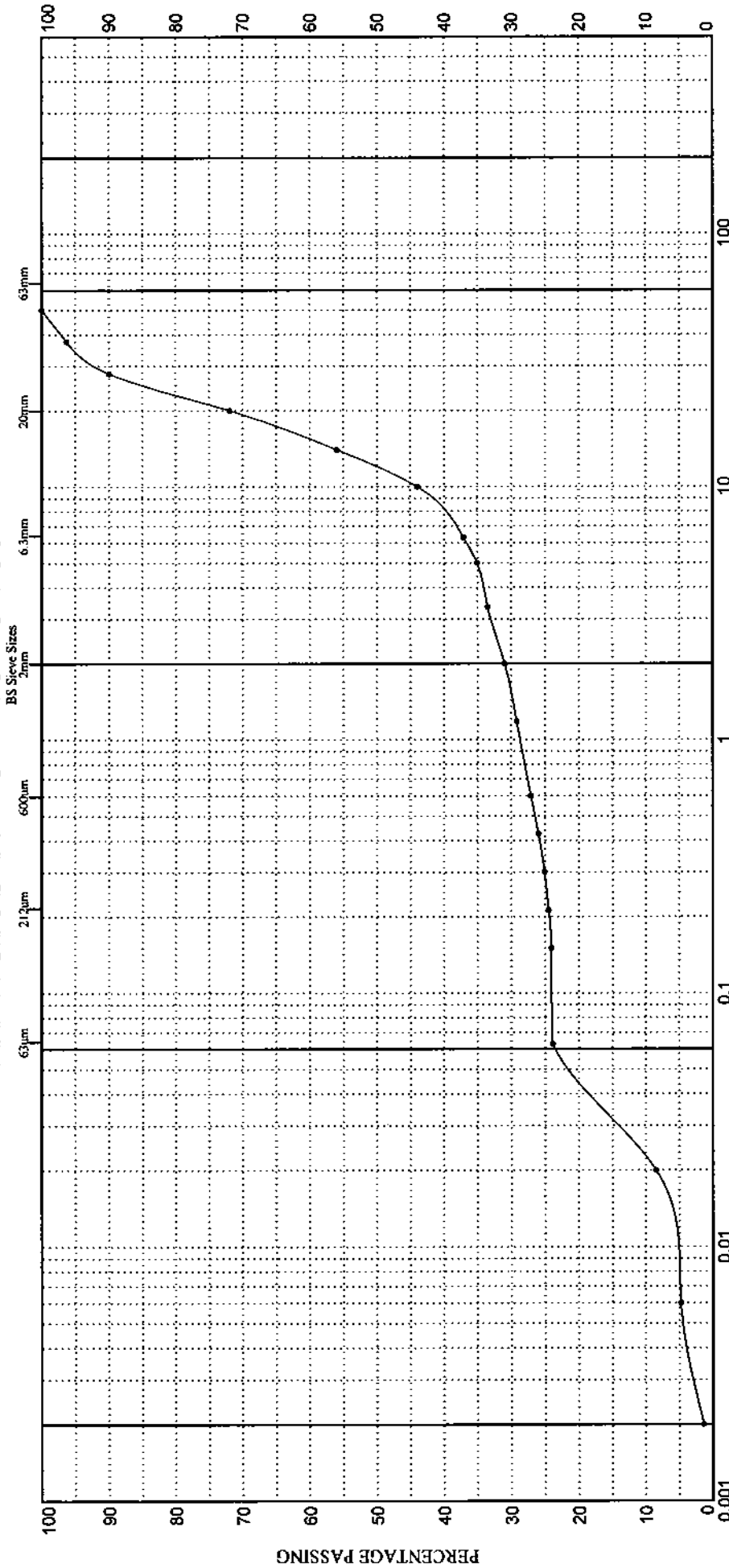
Exploratory Hole No :- **BH-08/14**

Depth :- **8.50**

Sample Type & No :- **B13**

Date Tested :- **03/06/2008**

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/14/B13/8.50	Signed <i>M. Selkirk</i>	Name M. SELKIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: Mcnulty's Yard, South Shields	AEG Contract No :- 3676		



Test Method :- Not To BS 1377

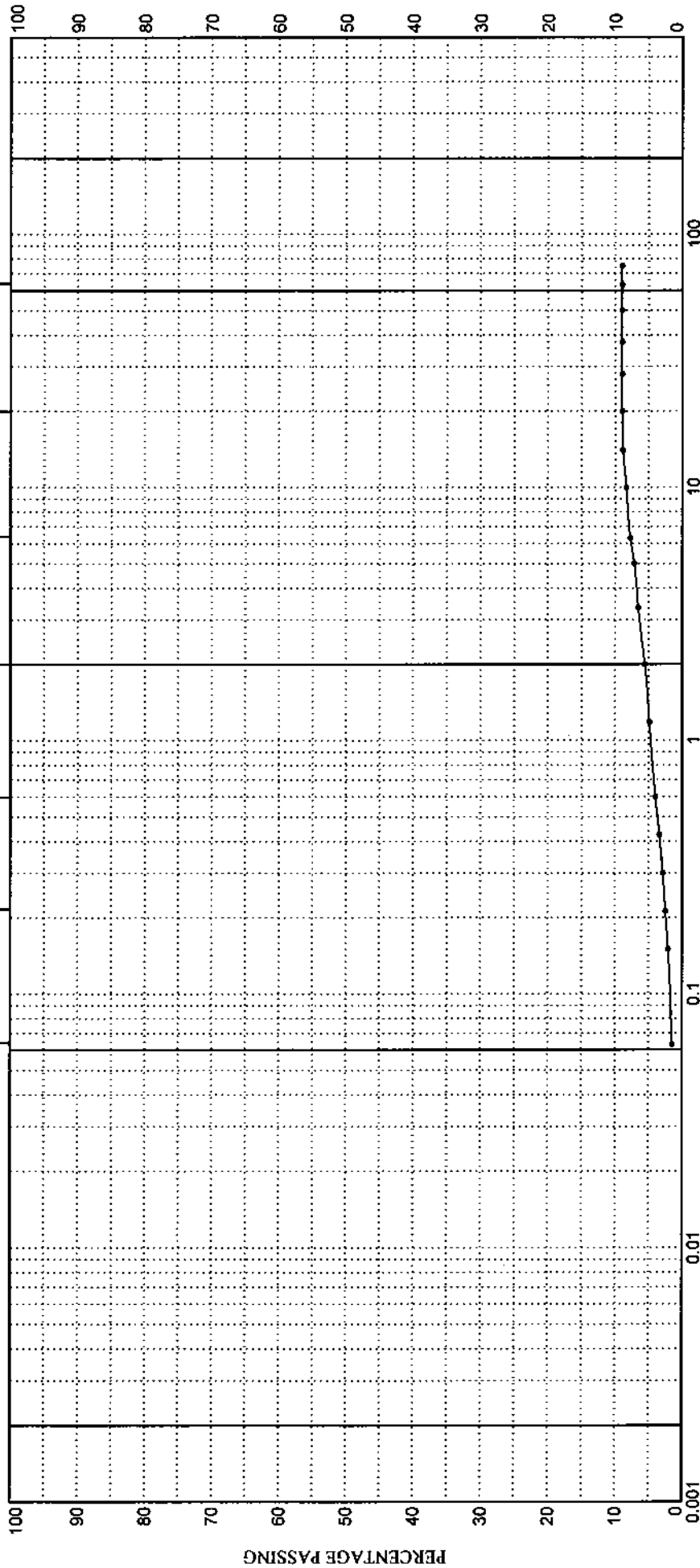
Exploratory Hole No :- BH-08/15

Depth :- 3.60

Sample Type & No :- B9



Date Tested :- 06/03/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet

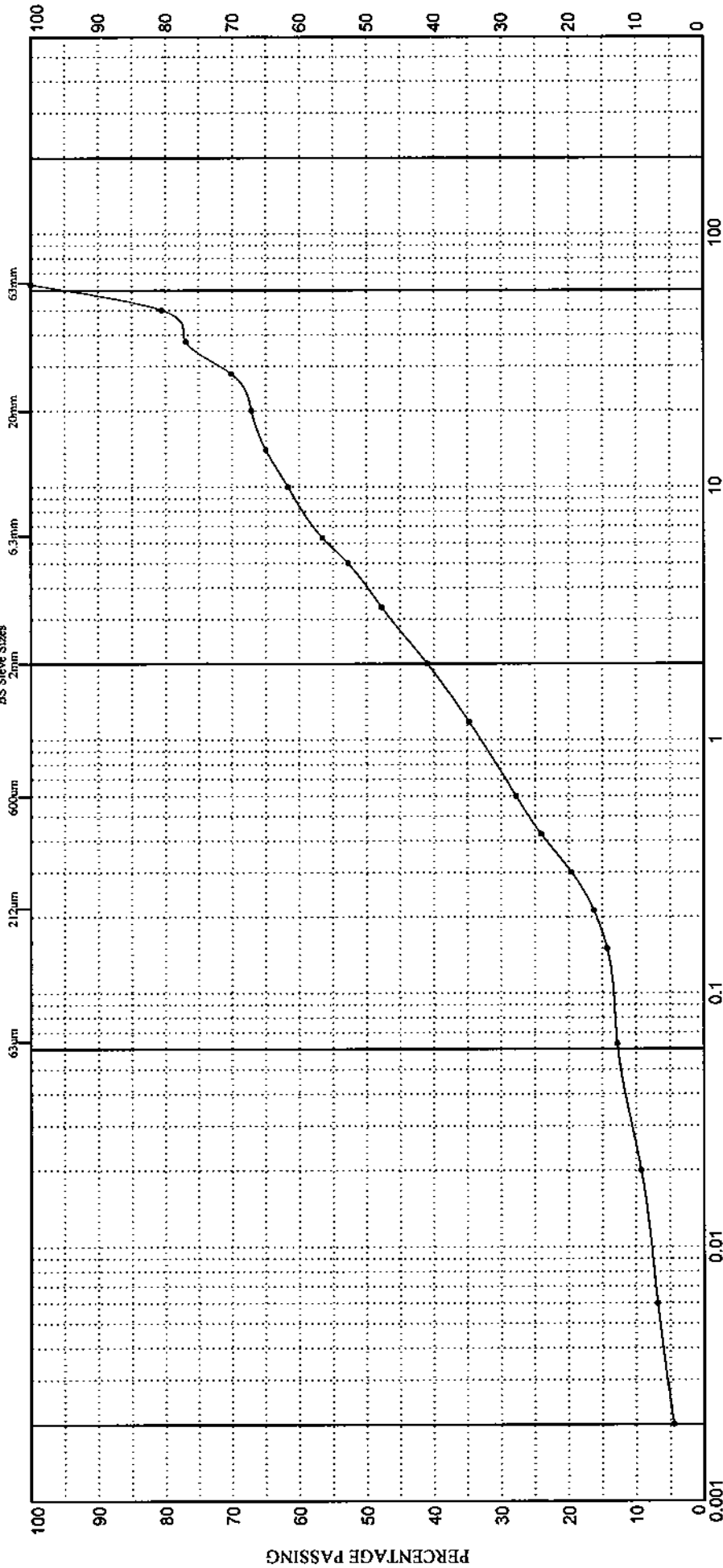
	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/15/B9/3.60		Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: Menulty's Yard, South Shields		AEG Contract No :- 3676

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG

Test Method :- Not To BS 1377	Exploratory Hole No :- BH-08/16	Date Tested :- 03/06/2008
	Depth :- 1.50	Sample Type & No :- B6

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/16/B6/1.50		Page 1 of 1	AEG Contract No :- 3676
Client :- South Tyneside Council	Contract Title :- Ground Investigation: McNulty's Yard, South Shields	Signed: <i>M. Selkirk</i>	Name: M. SELKIRK	



Test Method :- BS1377 : Part 2 : 1990

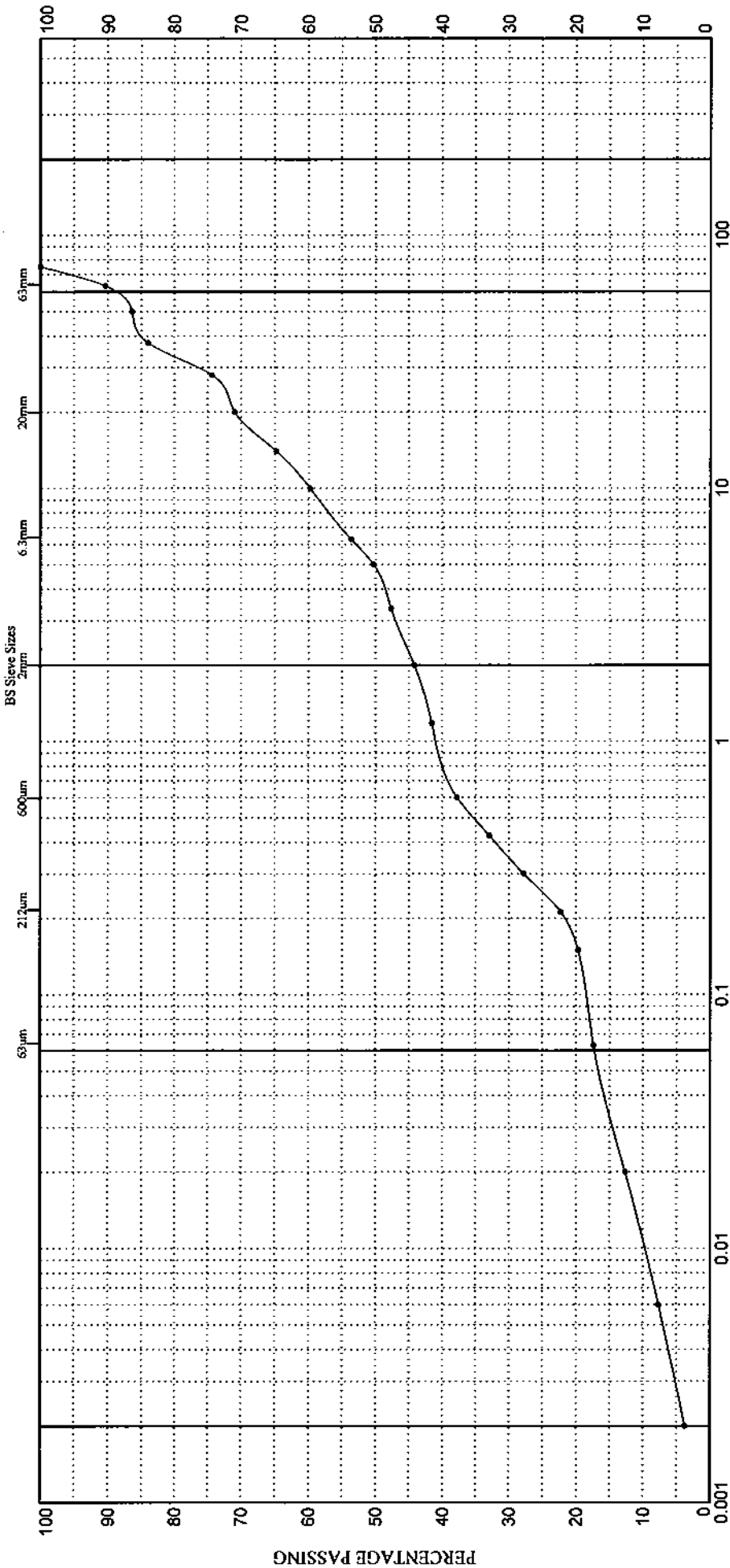
Exploratory Hole No :- BH-08/16

Depth :- 4.50

Sample Type & No :- B10

Date Tested :- 03/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/16/B10/4.50

Signed *M. Selkirk*

Name **M. SELKIRK**

Page 1 of 1

AEG Contract No :- 3676

Client :- South Tyneside Council

Contract Title :-

Ground Investigation: Menulty's Yard, South Shields



Test Method :- BS1377 : Part 2 : 1990

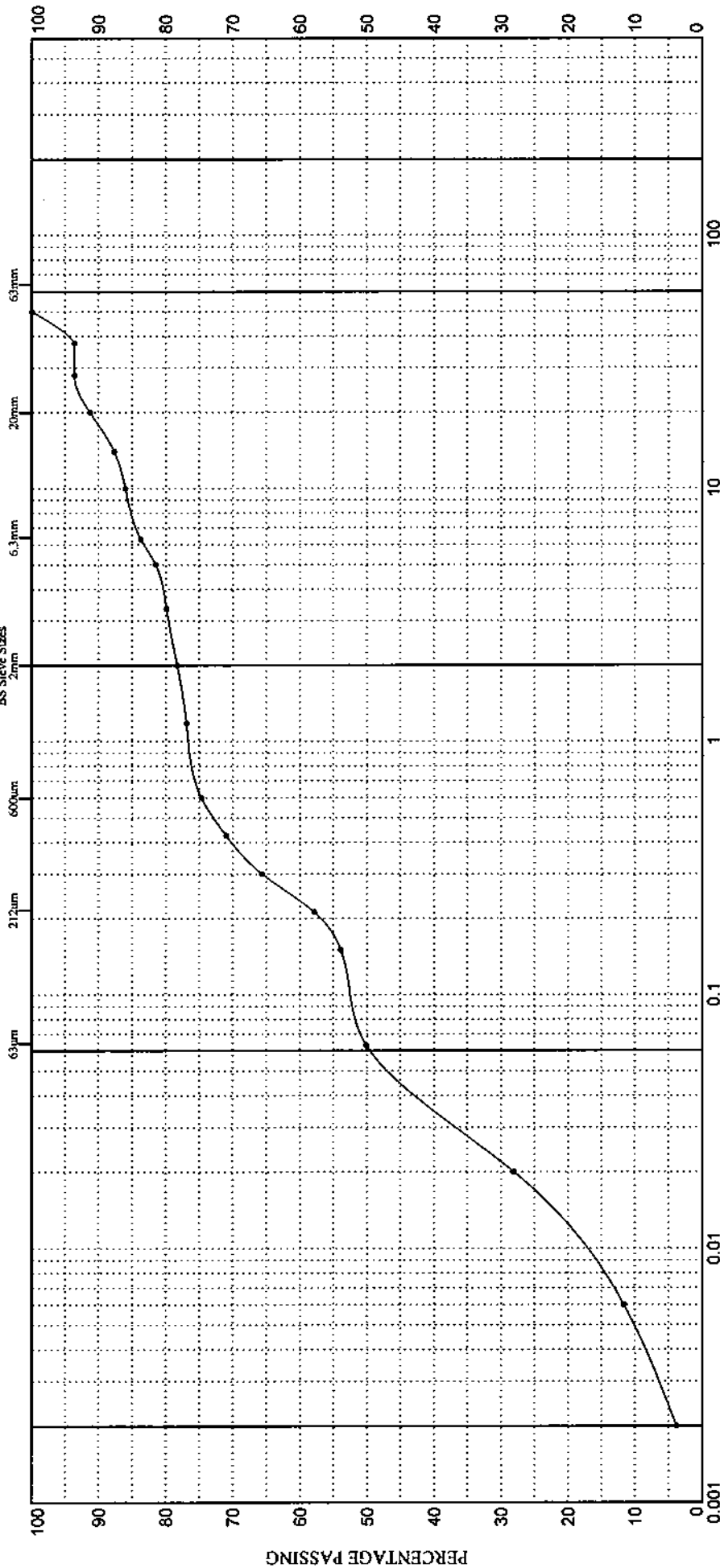
Exploratory Hole No :- BH-08/16

Depth :- 6.40

Sample Type & No :- B14

Date Tested :- 03/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet.

	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/16/B14/6.40	Signed : <i>M. Sore</i> Name : M. SELKIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: Menulty's Yard, South Shields		AEG Contract No :- 3676

Test Method :- Not To BS 1377

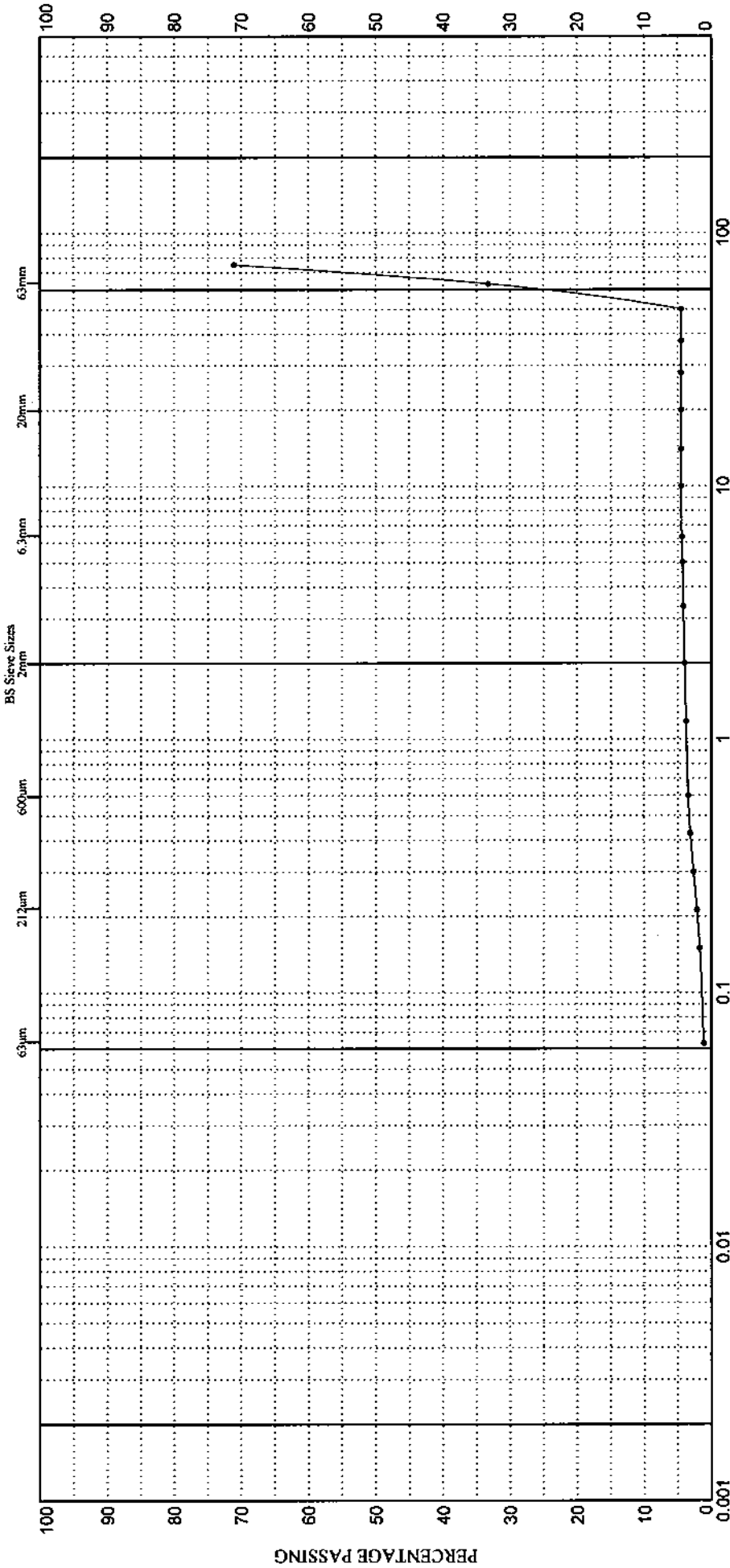
Exploratory Hole No :- BH-08/17

Depth :- 3.00

Sample Type & No :- B7

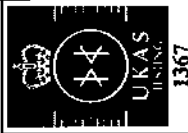
Date Tested :- 03/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT			SAND			GRAVEL			BOULDERS		
Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES			

For description of sample please refer to the Laboratory Sample Description Sheet



Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/17/B7/3.00

Signed: *M. Selkirk*

Name: **M. SELKIRK**

Page 1 of 1

Client :-

South Tyneside Council

Contract Title :-

Ground Investigation: Menulty's Yard, South Shields

AEG Contract No :-

3676



Test Method :- BS1377 : Part 2 : 1990

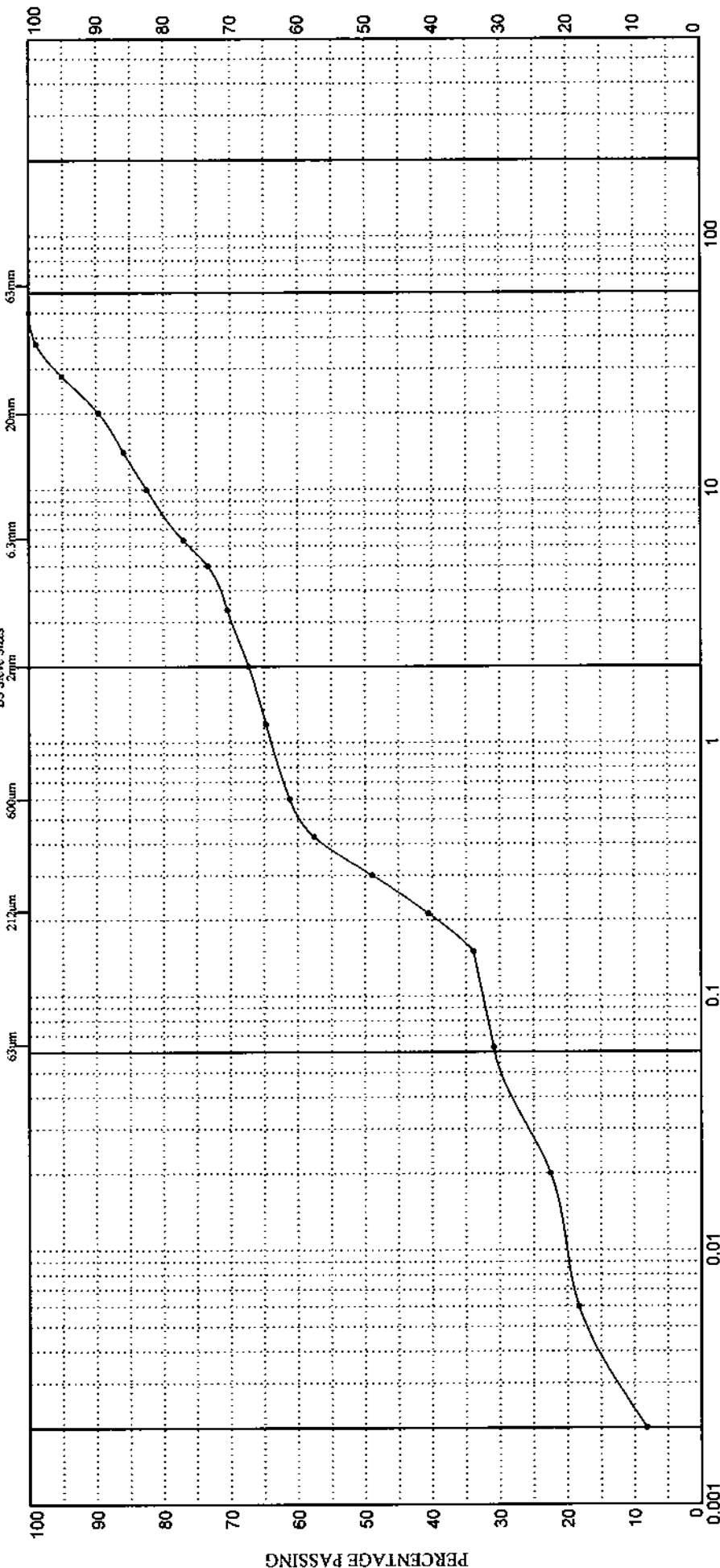
Exploratory Hole No :- BH-08/17

Depth :- 6.50

Sample Type & No :- B11

Date Tested :- 03/11/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Coarse	Coarse	COBBLES	BOULDERS
SILT			SAND		GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/17/B11/6.50	Signed <i>M. Selkirk</i> Name M. SELKIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: McNulty's Yard, South Shields		AEG Contract No :- 3676

Test Method :- Not To BS 1377

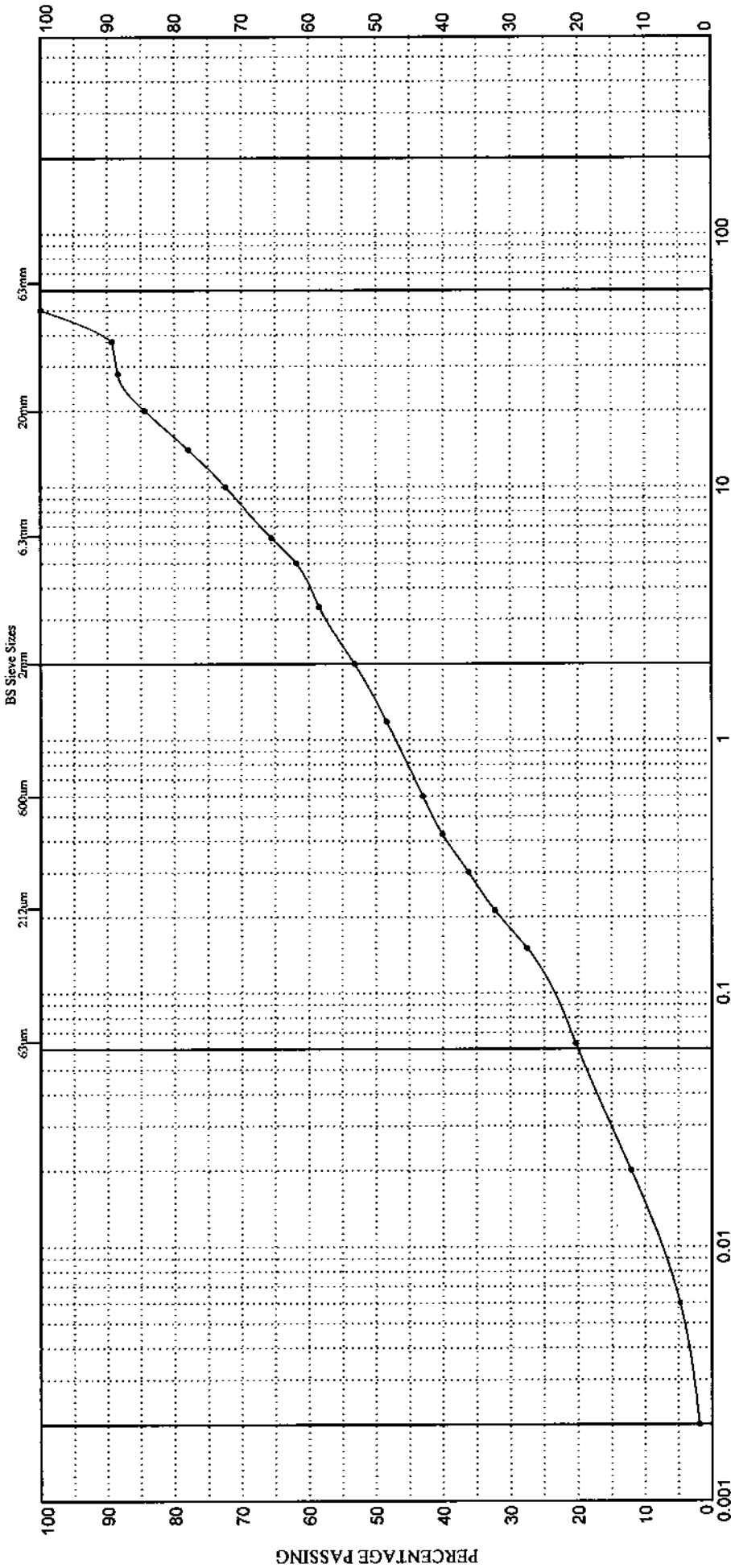
Exploratory Hole No :- BH-08/18

Depth :- 2.50

Sample Type & No :- B7

Date Tested :- 04/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT		SAND		GRAVEL			COBBLES	BOULDERS
Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/18/B7/2.50

Signed *M. Selkirk*

Name **M. SELKIRK**

Page 1 of 1

AEG Contract No :- 3676



Client :- South Tyneside Council

Contract Title :-

Ground Investigation: Mennuly's Yard, South Shields



1367

Test Method :- Not To BS 1377

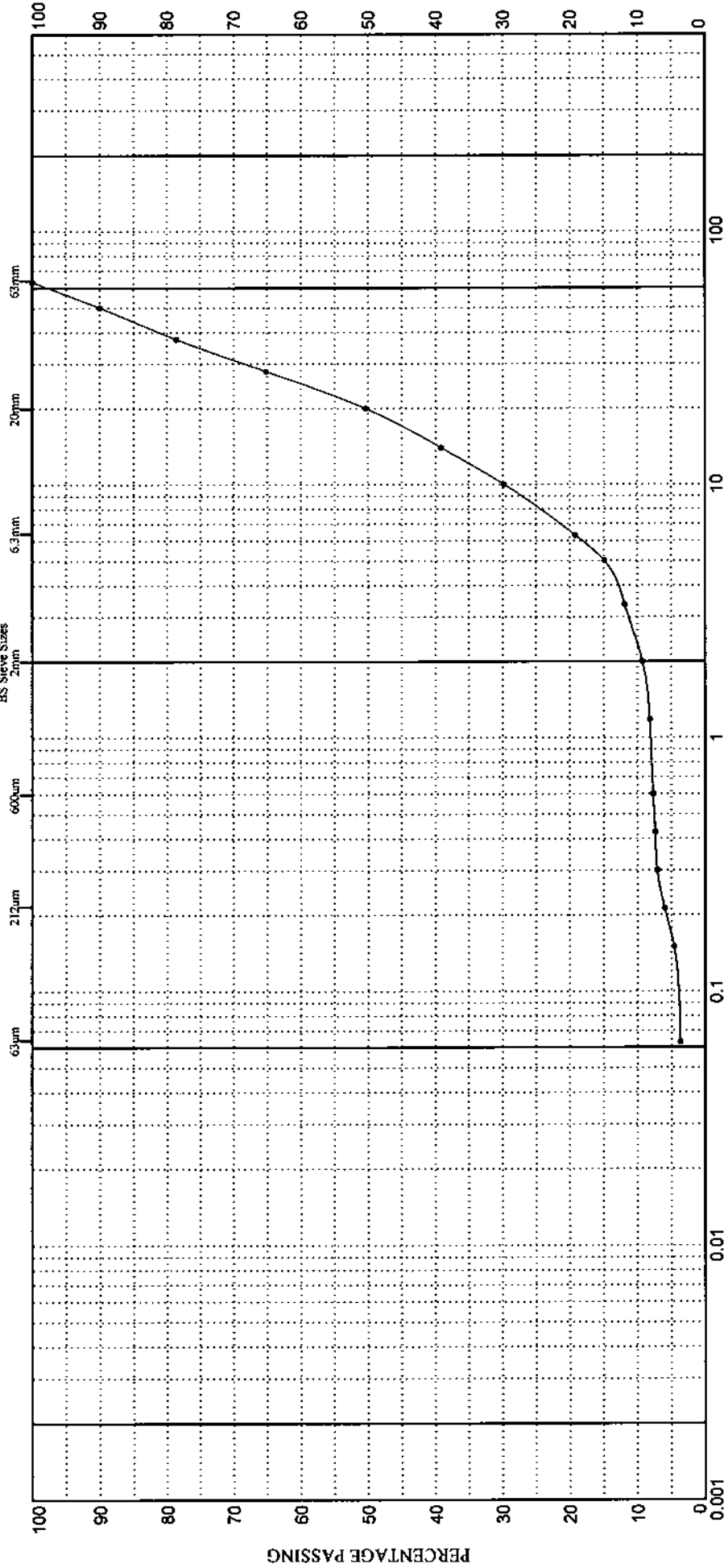
Exploratory Hole No :- BH-08/18

Depth :- 6.50

Sample Type & No :- B20

Date Tested :- 05/06/2008

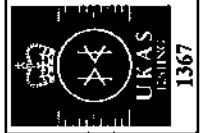
PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

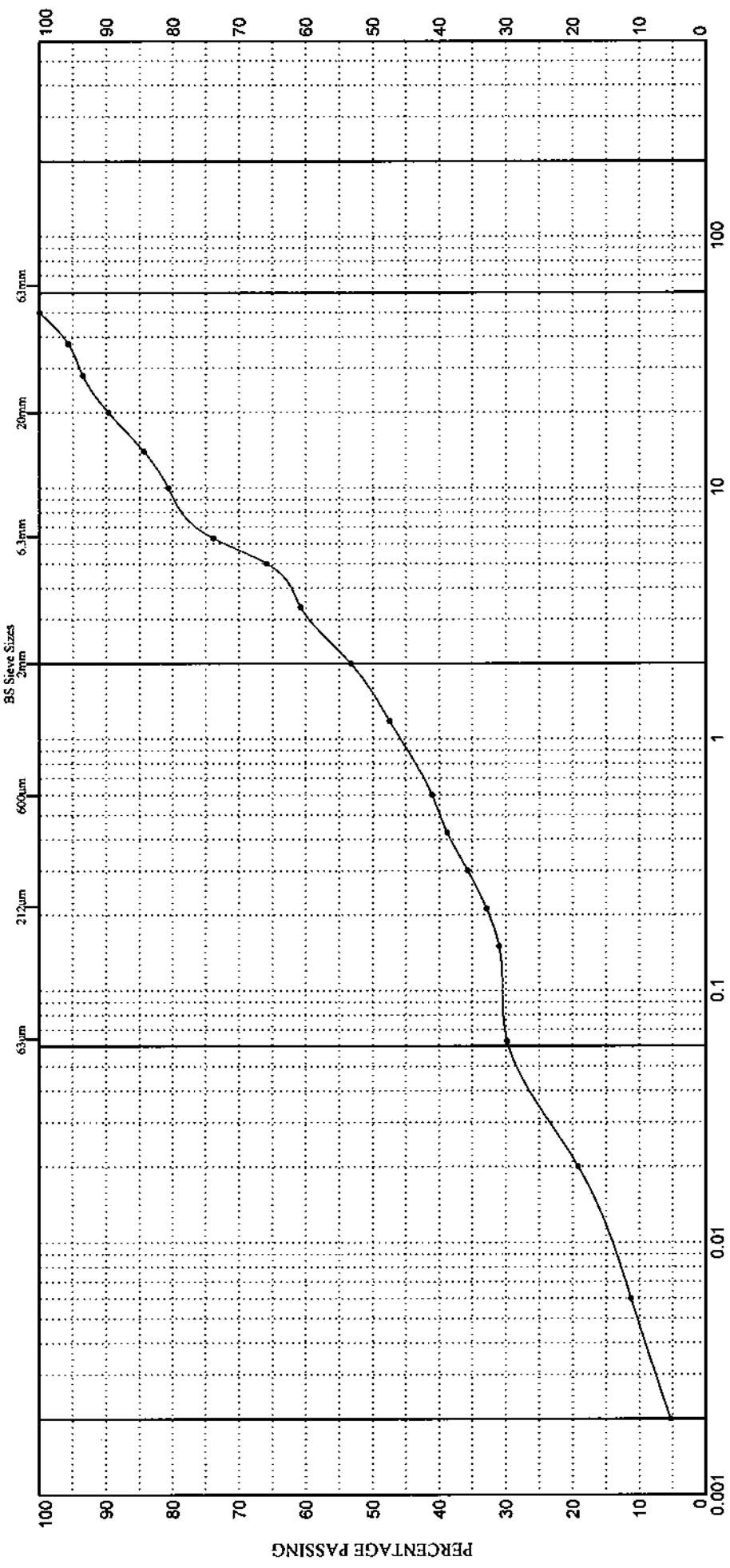
For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/18/B20/6.50	Signed <i>M. Selkirk</i> Name M. SELKIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: Menulty's Yard, South Shields		AEG Contract No :- 3676



Test Method :- Not To BS 1377 Exploratory Hole No :- BH-08/19 Depth :- 1.50 Sample Type & No :- B5 Date Tested :- 03/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/19/BS/1.50	Signed <i>M. Selkirk</i>	Name M. SELKIRK	Page 1 of 1
Client :- South Tyneside Council	Contract Title :- Ground Investigation: McNulty's Yard, South Shields	AEG Contract No :- 3676		



Test Method :- Not To BS 1377

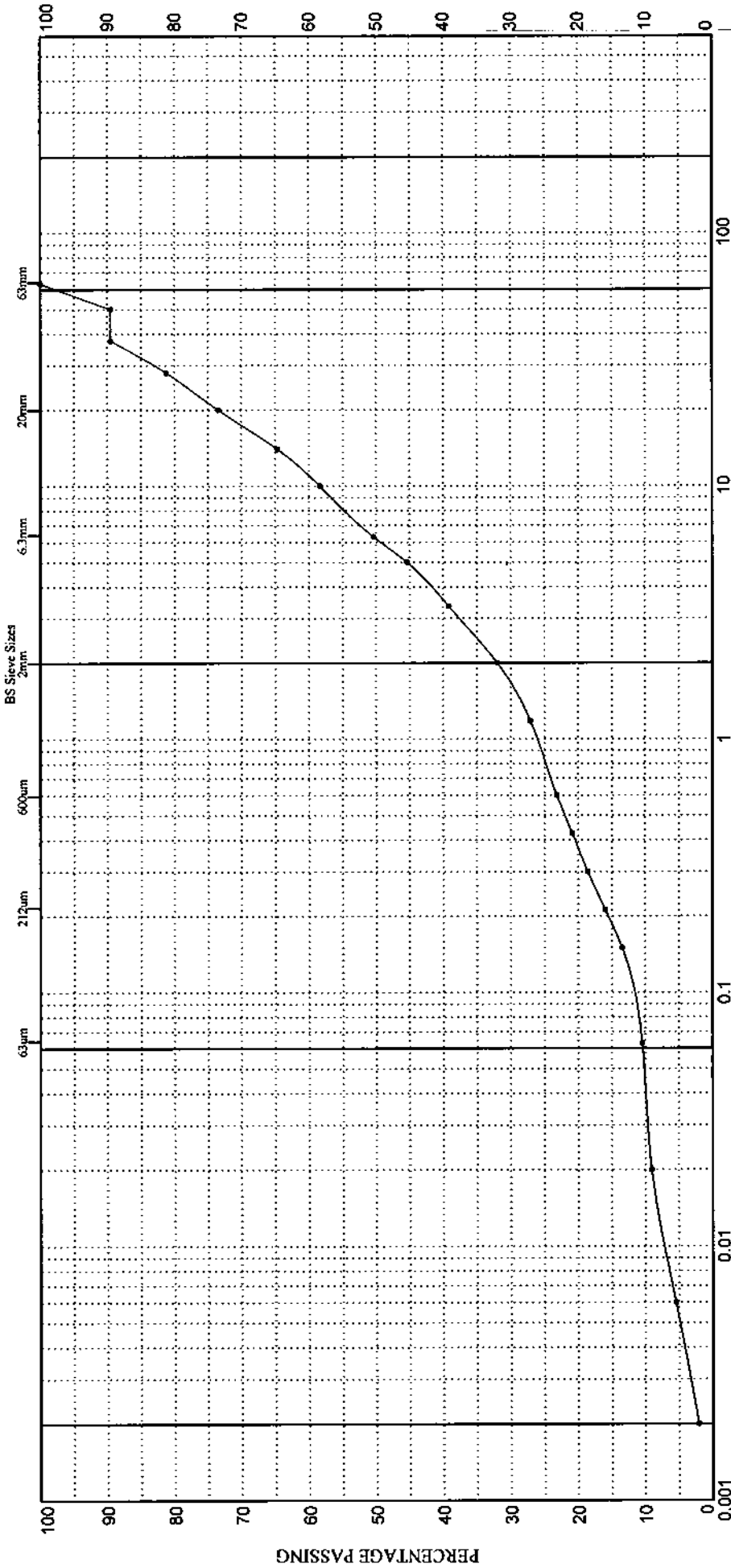
Exploratory Hole No :- BH-08/19

Depth :- 6.50

Sample Type & No :- B12

Date Tested :- 03/06/2008

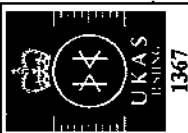
PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Coarse	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 24/06/2008	Certificate No :- PSD/3676/BH-08/19/B12/6.50	Signed <i>M. Sear</i>	Name M. SELKIRK	Page 1 of 1
Client :- South Tyneside Council	Contract Title :-	Ground Investigation: McNulty's Yard, South Shields		AEG Contract No :- 3676



Test Method :- BS1377 : Part 2 : 1990

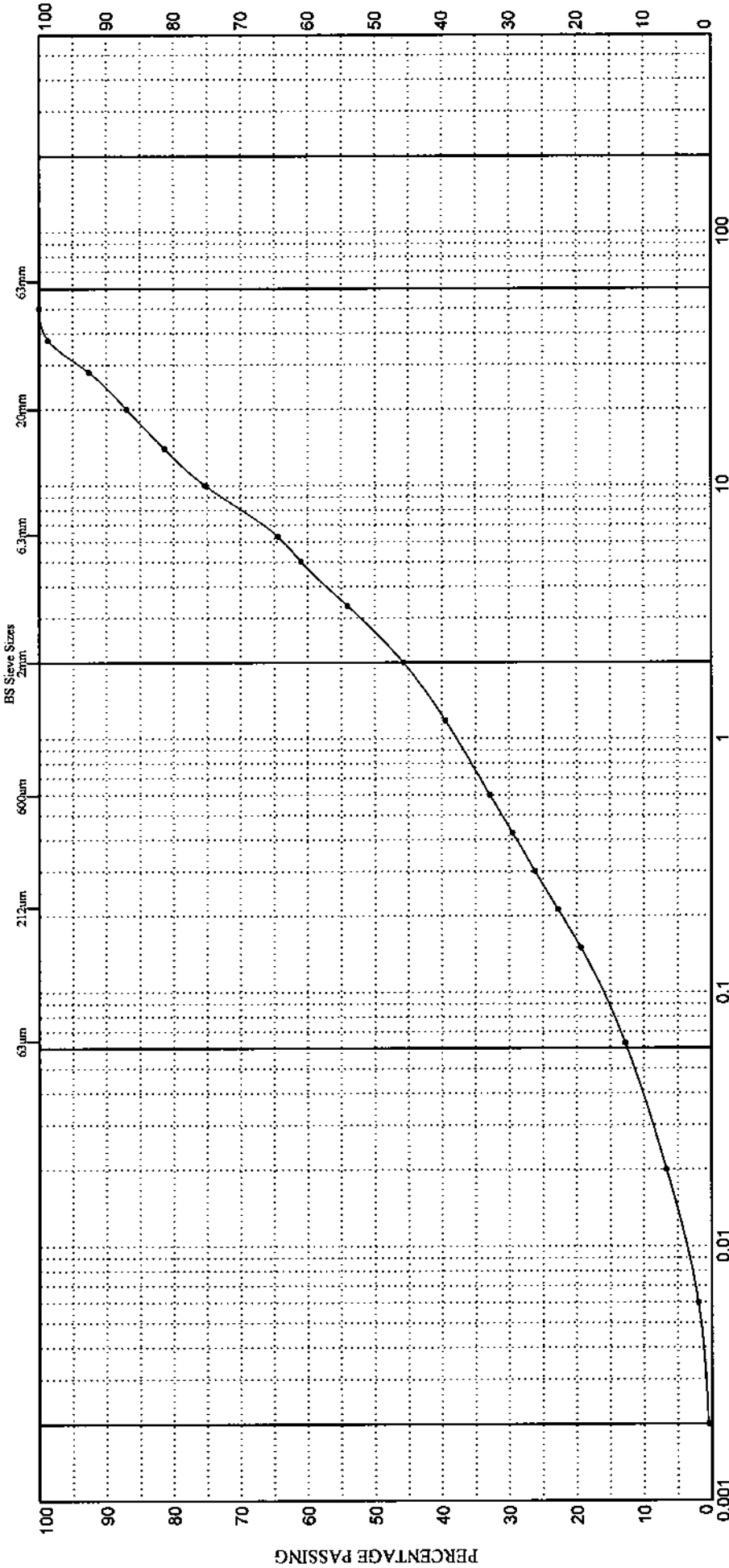
Exploratory Hole No :- BH-08/20

Depth :- 1.50

Sample Type & No :- B2

Date Tested :- 09/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/20/B2/1.50

Signed *[Signature]*

Name **M. SELKIRK**

Page 1 of 1



Client :-

South Tyneside Council

Contract Title :-

Ground Investigation: Menuly's Yard, South Shields

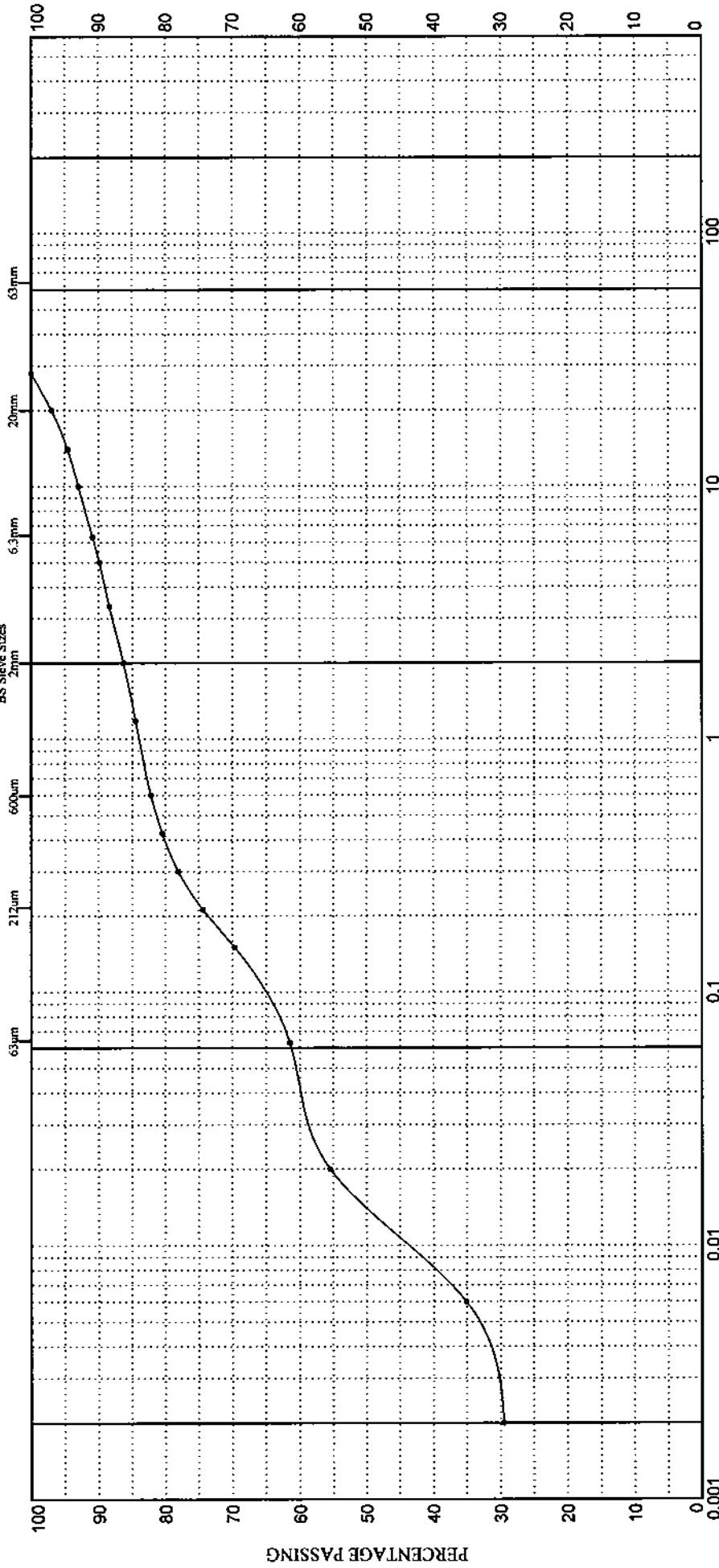
AEG Contract No :-

3676



Test Method :- BS1377 : Part 2 : 1990	Exploratory Hole No :- BH-08/20	Depth :- 4.00	Sample Type & No :- B8
Date Tested :- 10/06/2008			

PARTICLE SIZE DISTRIBUTION CURVE



For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 19/06/2008	Certificate No :- PSD/3676/BH-08/20/B8/4.00	Signed <i>M. Selkirk</i>	Name M. SELKIRK	Page 1 of 1
Client :- South Tyneside Council	Contract Title :- Ground Investigation: McNulty's Yard, South Shields			AEG Contract No :- 3676



Test Method :- Not To BS 1377

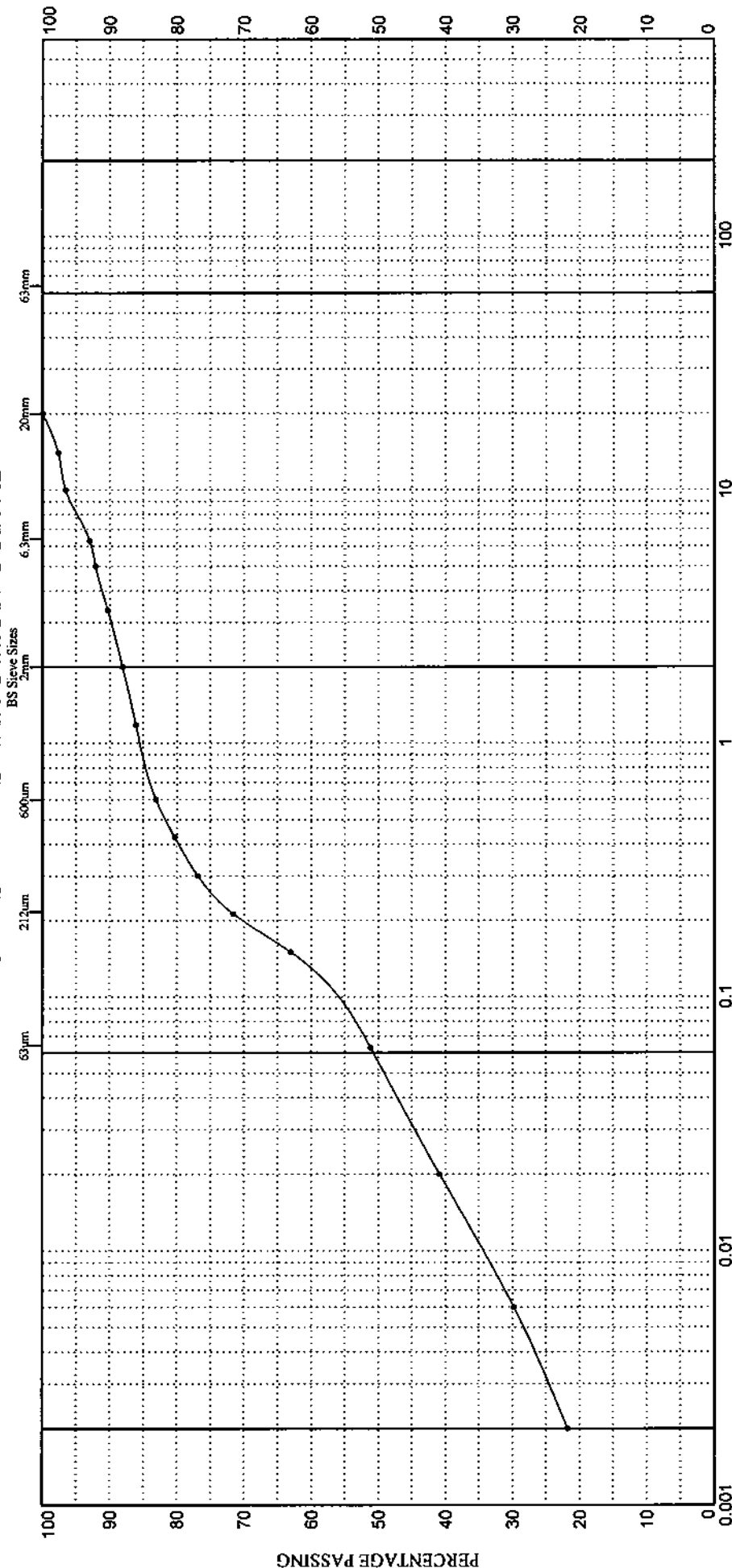
Exploratory Hole No :- BH-08/20

Depth :- 9.50

Sample Type & No :- B17

Date Tested :- 10/06/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY		SILT		SAND		GRAVEL		BOULDERS	
Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES

For description of sample please refer to the Laboratory Sample Description Sheet



Date of issue :- 19/06/2008

Certificate No :- PSD/3676/BH-08/20/B17/9.50

Signed: *M. Selkirk*

Name: **M. SELKIRK**

Page 1 of 1

Client :-

South Tyneside Council

Contract Title :-

Ground Investigation: Menulty's Yard, South Shields

AEG Contract No :- 3676



ENCLOSURE 4

Determination of One Dimensional Consolidation Properties

ALLIED EXPLORATION & GEOTECHNICS LIMITED
 Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, DH2 2RJ




ONE DIMENSIONAL CONSOLIDATION PROPERTIES
 BS 1377 : PART 5 : 1990 : CLAUSE 3

Exploratory Hole No	BH-08/01	Sample	U7	Depth	3.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	3.73m
Height	INITIAL 18.6	FINAL 17.1	mm	Particle Density (Assumed)	2.70
Diameter	75	75	mm	Degree of Saturation (%)	96.6
Moisture Content	14	13	%	Test Duration (Days)	10
Wet Density	2.21	2.38	Mg/m ³	Date Tested	10/06/2008
Dry Density	1.94	2.11	Mg/m ³		

Square Root of Time Fitting Method				
Pressure Range kN/m ²	Mv m ² /MN	Cv m ² /yr	Temp C	Voids Ratio
Initial				0.391
0 - 50	0.198	.	25	0.378
50 - 100	0.111	1.46	25	0.370
100 - 200	0.102	1.60	25	0.356
200 - 100	0.024	Swelling	24	0.359
100 - 50	0.080	Swelling	23	0.365
50 - 100	0.044	1.39	23	0.362
100 - 200	0.046	1.53	23	0.356
200 - 400	0.070	1.35	23	0.337
400 - 800	0.047	1.37	24	0.311
800 - 1600	0.032	1.43	24	0.278

For sample description please refer to the Laboratory Sample Description Sheet.

Contract Title **Ground Investigation: McNulty's Yard, South Shields**
 Client **South Tyneside Council**

	Signed 	Name M. SELKIRK	Page 1 of 2	
	Date of Issue 23/06/2008	Certificate No 3676D	AEG Contract No 3676	

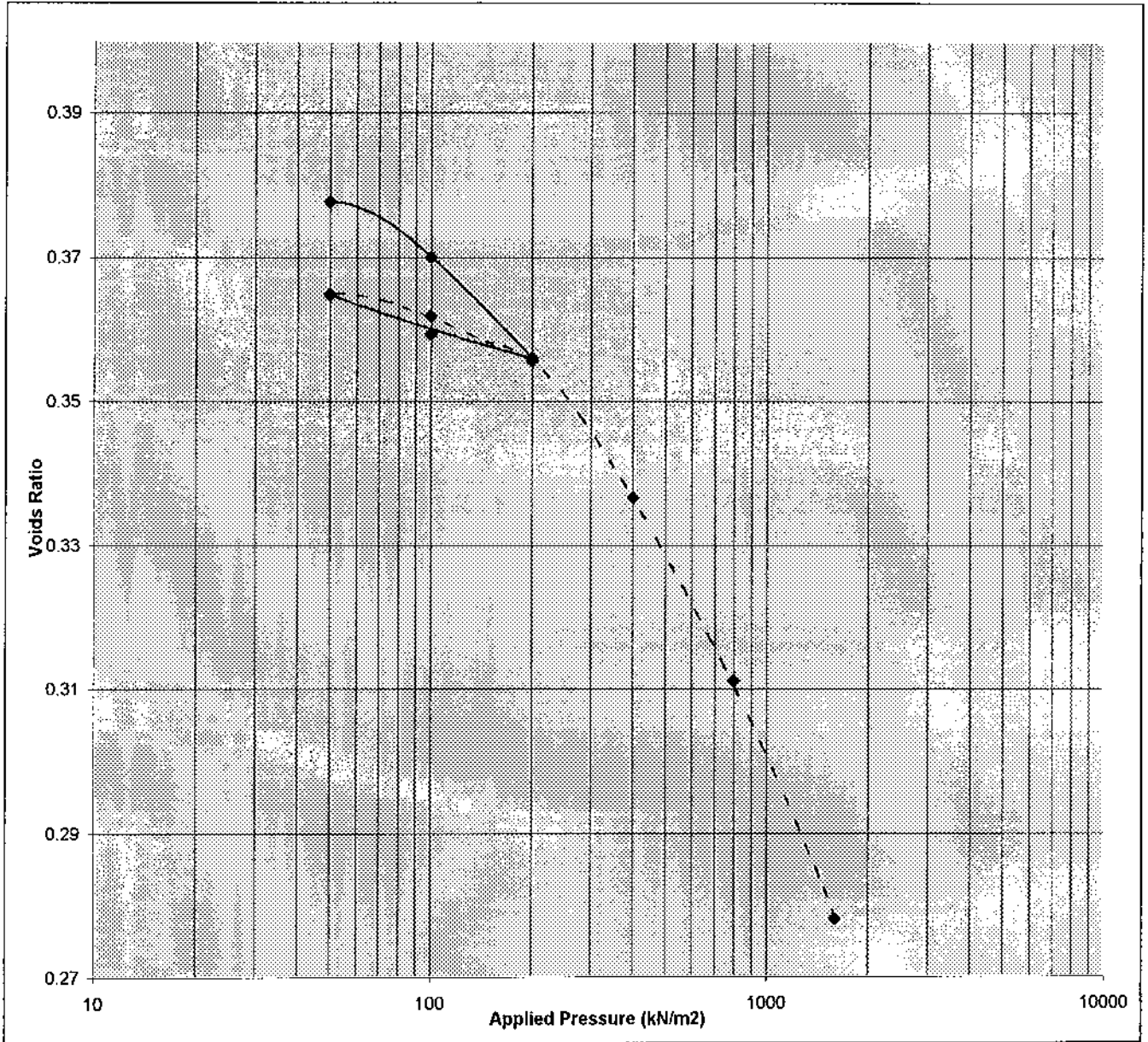
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, DH2 2RJ

ONE DIMENSIONAL CONSOLIDATION PROPERTIES



BS 1377 : PART 5 : 1990 : CLAUSE 3

Exploratory Hole No	BH-08/01	Sample	U7	Depth	3.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	3.73m



Contract Title **Ground Investigation: McNulty's Yard, South Shields**

Client **South Tyneside Council**

	Signed <i>M. Selkirk</i>	Name M. SELKIRK	Page 2 of 2	
	Date of Issue 23/06/2008	Certificate No 3676D	AEG Contract No 3676	

ONE DIMENSIONAL CONSOLIDATION PROPERTIES
BS 1377 : PART 5 : 1990 : CLAUSE 3




Exploratory Hole No	BH-08/02	Sample	U13	Depth	7.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	7.50m
Height	INITIAL 18.5	FINAL 17.3	mm	Particle Density (Assumed)	2.70
Diameter	75	75	mm	Degree of Saturation (%)	98.8
Moisture Content	11	11	%	Test Duration (Days)	9
Wet Density	2.31	2.47	Mg/m ³	Date Tested	09/06/2008
Dry Density	2.09	2.23	Mg/m ³		

Square Root of Time Fitting Method				
Pressure Range kN/m ²	Mv m ² /MN	Cv m ² /yr	Temp C	Voids Ratio
Initial				0.291
0 - 100	0.135	.	20	0.273
100 - 200	0.067	5.88	20	0.265
200 - 400	0.058	1.15	20	0.250
400 - 200	0.014	Swelling	20	0.253
200 - 100	0.051	Swelling	20	0.260
100 - 200	0.023	1.50	19	0.257
200 - 400	0.026	3.04	19	0.250
400 - 800	0.035	0.75	19	0.233
800 - 1600	0.024	0.72	19	0.209

For sample description please refer to the Laboratory Sample Description Sheet.

Contract Title **Ground Investigation: McNulty's Yard, South Shields**

Client **South Tyneside Council**

	Signed 	Name M. SELKIRK	Page 1 of 2	
	Date of Issue 19/06/2008	Certificate No 3676C	AEG Contract No 3676	

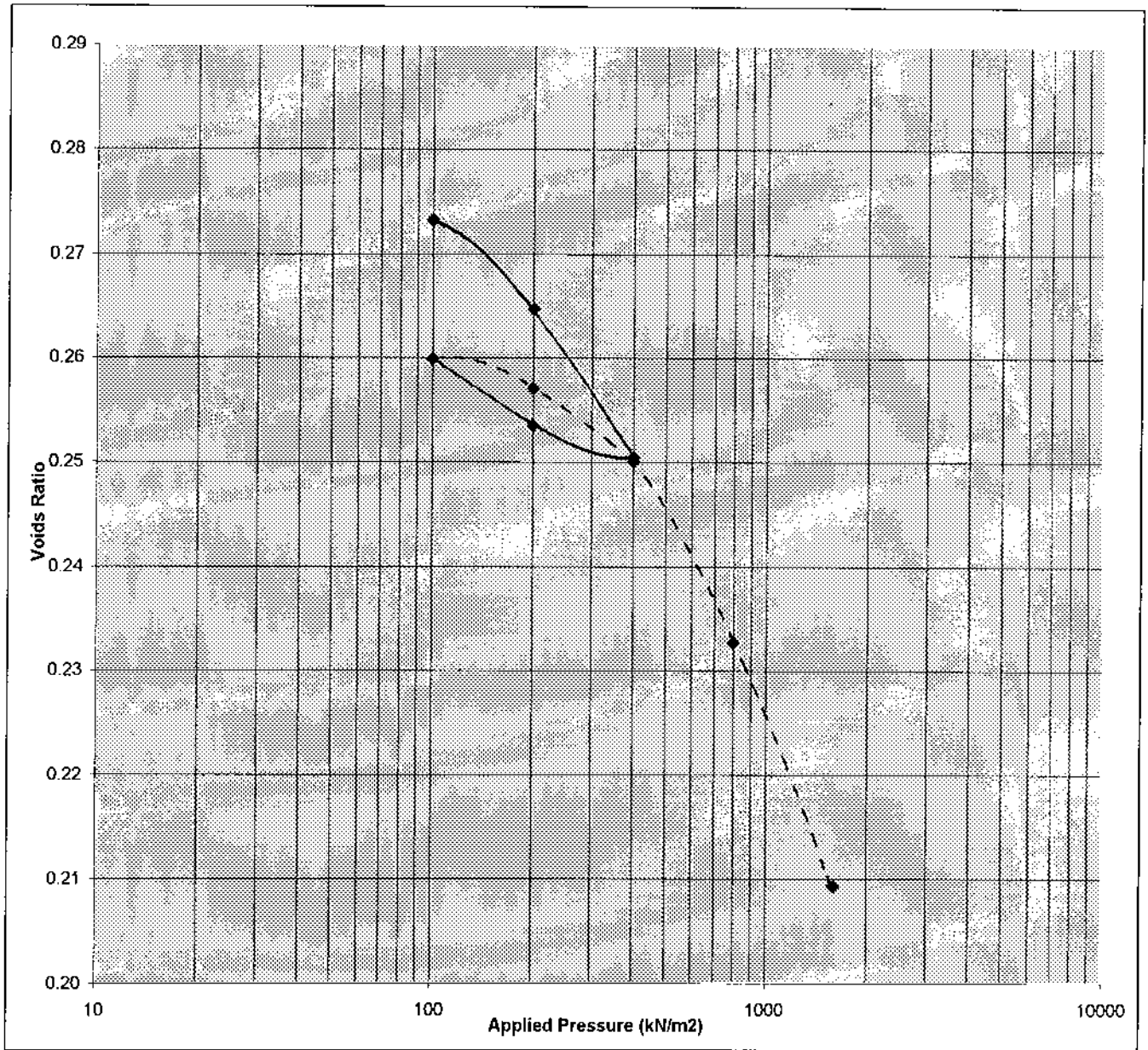
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, DH2 2RJ

ONE DIMENSIONAL CONSOLIDATION PROPERTIES

BS 1377 : PART 5 : 1990 : CLAUSE 3

Exploratory Hole No	BH-08/02	Sample	U13	Depth	7.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	7.50m



Contract Title **Ground Investigation: McNulty's Yard, South Shields**

Client **South Tyneside Council**

	Signed 	Name M. SELKIRK	Page 2 of 2	
	Date of Issue 19/06/2008	Certificate No 3676C		

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, DH2 2RJ

ONE DIMENSIONAL CONSOLIDATION PROPERTIES

BS 1377 : PART 5 : 1990 : CLAUSE 3




Exploratory Hole No	BH-08/11	Sample	U12	Depth	4.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	4.50m
	INITIAL	FINAL			
Height	18.8	17.2	mm	Particle Density (Assumed)	2.70
Diameter	75	75	mm	Degree of Saturation (%)	98.5
Moisture Content	17	16	%	Test Duration (Days)	9
Wet Density	2.15	2.33	Mg/m ³	Date Tested	04/06/2008
Dry Density	1.84	2.00	Mg/m ³		

Square Root of Time Fitting Method				
Pressure Range kN/m ²	Mv m ² /MN	Cv m ² /yr	Temp C	Voids Ratio
Initial				0.470
0 - 100	0.138	.	23	0.450
100 - 200	0.088	2.22	23	0.437
200 - 400	0.079	2.17	23	0.415
400 - 200	0.016	Swelling	24	0.419
200 - 100	0.042	Swelling	24	0.425
100 - 200	0.025	2.09	24	0.422
200 - 400	0.031	2.28	25	0.413
400 - 800	0.049	1.38	25	0.385
800 - 1600	0.033	1.54	25	0.348

For sample description please refer to the Laboratory Sample Description Sheet.

Contract Title **Ground Investigation: McNulty's Yard, South Shields**

Client **South Tyneside Council**

	Signed	Name	Page 1 of 2
		M. SELKIRK	
	Date of Issue	Certificate No	AEG Contract No
	16/06/2008	3676A	3676
			 1367

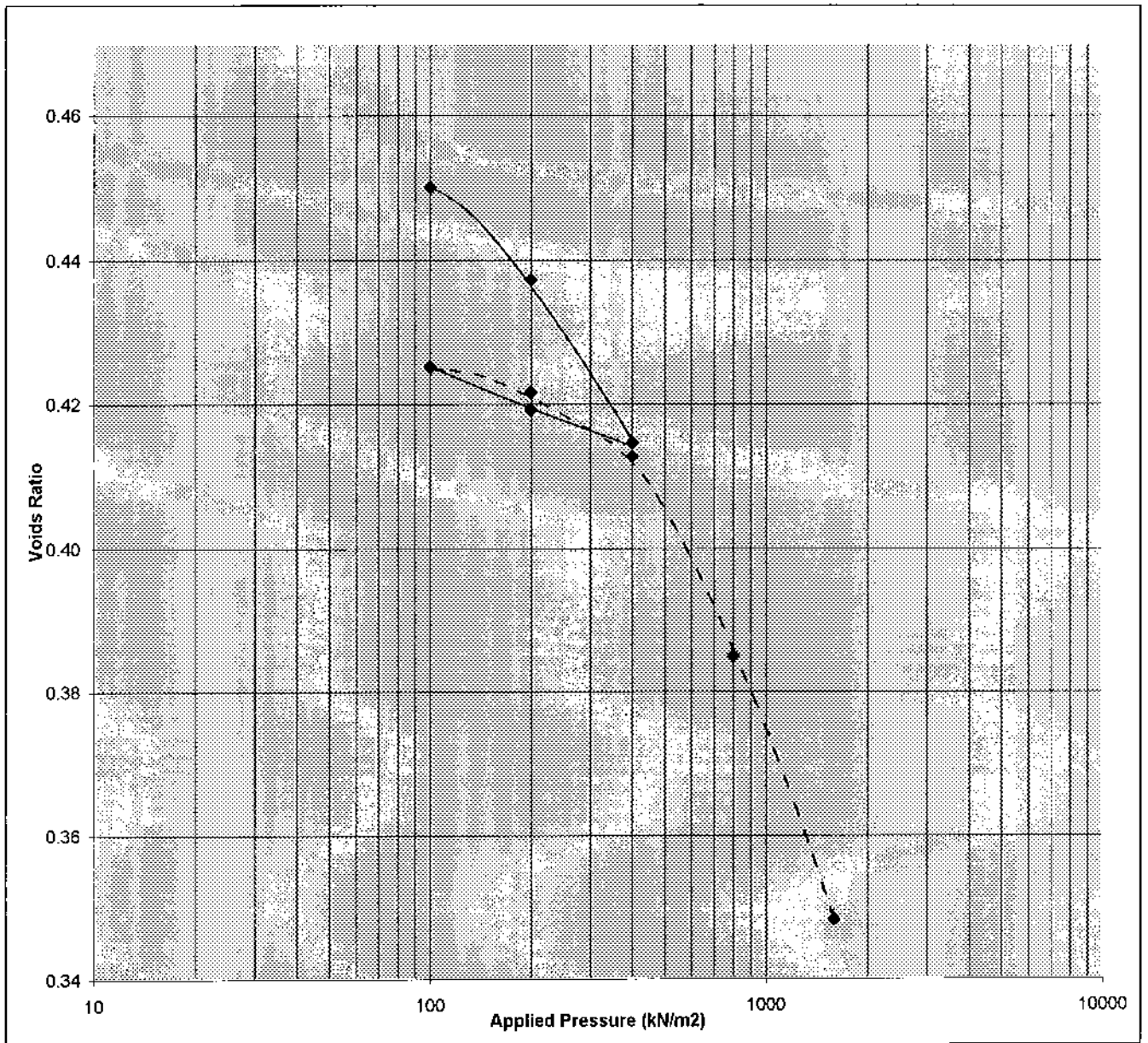
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, DH2 2RJ

ONE DIMENSIONAL CONSOLIDATION PROPERTIES

BS 1377 : PART 5 : 1990 : CLAUSE 3

Exploratory Hole No	BH-08/11	Sample	U12	Depth	4.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	4.50m



Contract Title **Ground Investigation: McNulty's Yard, South Shields**

Client **South Tyneside Council**



Signed

Name

M. SELKIRK

Page 2 of 2

Date of Issue

16/06/2008

Certificate No

3676A

AEG Contract No

3676



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, DH2 2RJ

ONE DIMENSIONAL CONSOLIDATION PROPERTIES

BS 1377 : PART 5 : 1990 : CLAUSE 3

Exploratory Hole No **BH-08/18** Sample **U17** Depth **5.50m**

Specimen Type **Undisturbed** Orientation **Vertical** Specific Depth **5.90m**


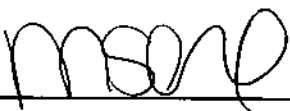

	INITIAL	FINAL			
Height	18.8	17.4	mm	Particle Density (Assumed)	2.70
Diameter	75	75	mm	Degree of Saturation (%)	94.6
Moisture Content	13	14	%	Test Duration (Days)	9
Wet Density	2.21	2.39	Mg/m ³	Date Tested	04/06/2008
Dry Density	1.95	2.11	Mg/m ³		

Square Root of Time Fitting Method				
Pressure Range kN/m ²	Mv m ² /MN	Cv m ² /yr	Temp C	Voids Ratio
Initial				0.383
0 - 100	0.137	.	23	0.364
100 - 200	0.100	3.36	23	0.350
200 - 400	0.069	3.85	23	0.331
400 - 200	0.010	Swelling	24	0.334
200 - 100	0.034	Swelling	24	0.339
100 - 200	0.020	14.08	24	0.336
200 - 400	0.024	3.56	25	0.330
400 - 800	0.041	3.14	25	0.308
800 - 1600	0.025	3.36	25	0.282

For sample description please refer to the Laboratory Sample Description Sheet.

Contract Title **Ground Investigation: McNulty's Yard, South Shields**

Client **South Tyneside Council**

	Signed	Name	Page 1 of 2
		M. SELKIRK	
Date of Issue	Certificate No	AEG Contract No	
16/06/2008	3676B	3676	

1367

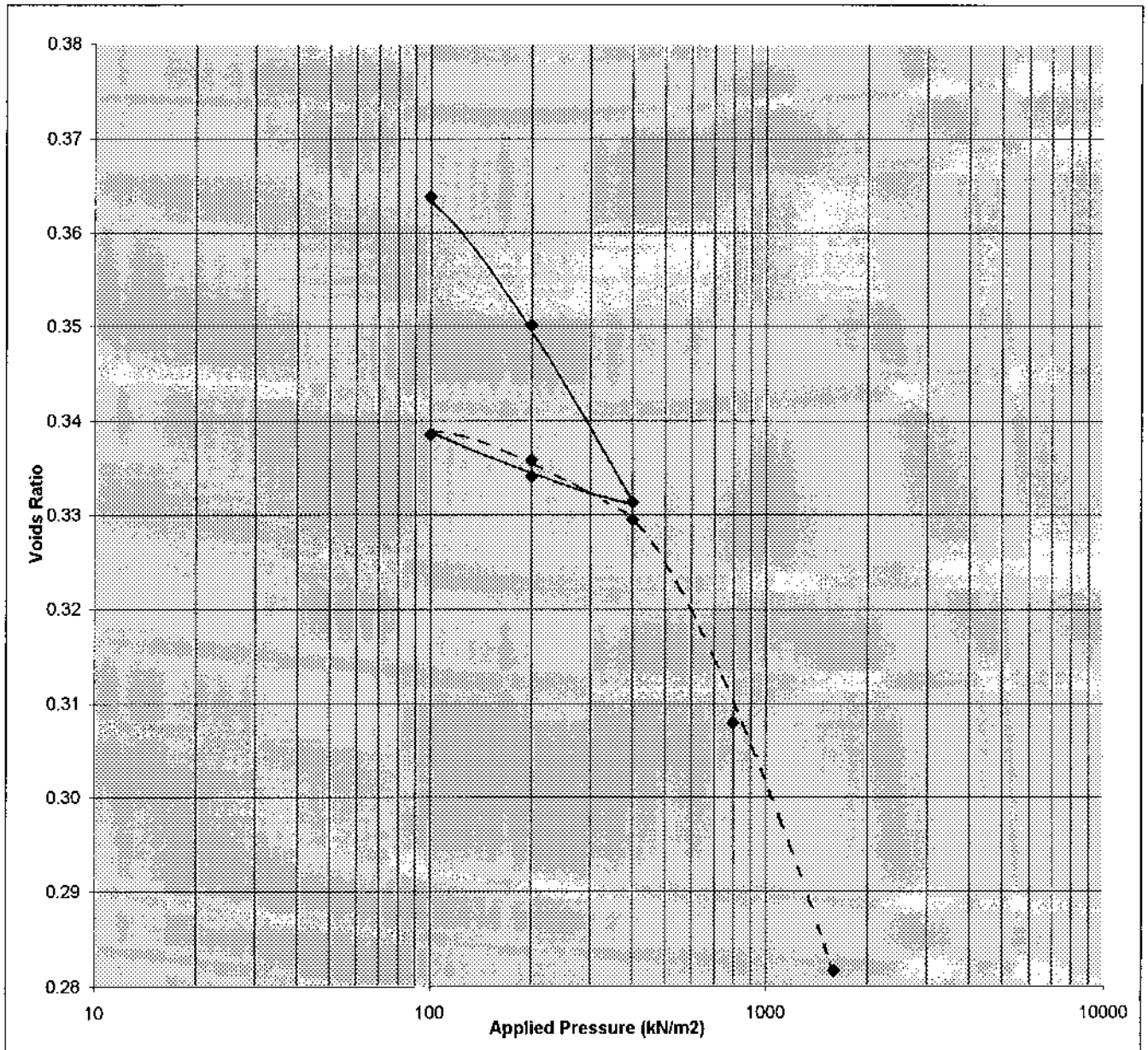
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, DH2 2RJ

ONE DIMENSIONAL CONSOLIDATION PROPERTIES


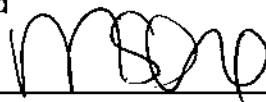
BS 1377 : PART 5 : 1990 : CLAUSE 3

Exploratory Hole No	BH-08/18	Sample	U17	Depth	5.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	5.90m



Contract Title **Ground Investigation: McNulty's Yard, South Shields**

Client **South Tyneside Council**

	Signed 	Name M. SELKIRK	Page 2 of 2
	Date of Issue 16/06/2008	Certificate No 3676B	AEG Contract No 3676



ENCLOSURE 5

Determination of Point Load Index

ALLIED EXPLORATION & GEOTECHNICS LIMITED



Unit 25 Stella Gill Ind. Est. Peilton Fell, Chester-le-Street, DH2 2RG

POINT LOAD STRENGTH INDEX

ISRM : 1985

Exploratory Hole No	Depth (m)	Type/Orientation	Width (mm)	Platen Separation (mm)	Failure Load (kN)	De ² (mm ²)	Point Load (IS) (MN/m ²)	Size Factor	Point Load Index (IS50) (MN/m ²)	Type	Date Tested
BH-08/01	12.55	Axial	83.1	75.1	1.0	7946.0	0.13	1.30	0.163	Sandstone* #	12/06/2008
BH-08/01	12.65	Axial	82.3	52.6	0.0	5511.8	0.00	1.19	0.000	Sandstone* #	12/06/2008
BH-08/01	12.80	Diametrical	106.9	79.1	3.2	6256.8	0.51	1.23	0.629	Sandstone*	12/06/2008
BH-08/01	12.90	Axial	86.4	73.1	4.9	8041.6	0.61	1.30	0.793	Sandstone*	12/06/2008
BH-08/01	13.00	Axial	81.6	33.7	0.5	3501.3	0.14	1.08	0.154	Sandstone	12/06/2008
BH-08/17	9.60	Diametrical	134.7	84.6	0.0	7157.2	0.00	1.27	0.000	Sandstone*	12/06/2008
BH-08/17	9.80	Diametrical	136.6	72.4	8.1	5241.8	1.55	1.18	1.825	Sandstone	12/06/2008
BH-08/17	10.10	Axial	86.1	58.1	4.9	6369.3	0.77	1.23	0.949	Sandstone	12/06/2008

NOTE - Loads of less than 5Kn Outside of UKAS accreditation * - Did not pass through both points # - Invalid Failure

	Date of issue :- 16/06/2008	Certificate No :- PL/3676/1	Signed :- <i>Mason</i>	Name :- M. SELKIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: Mennulty's Yard, South Shields	AEG Contract No :- 3676		

ALLIED EXPLORATION & GEOTECHNICS LIMITED



Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG

POINT LOAD STRENGTH INDEX

ISRM : 1985

Exploratory Hole No	Depth (m)	Type/Orientation	Width (mm)	Platen Separation (mm)	Failure Load (kN)	De ² (mm ²)	Point Load (IS) (MN/m ²)	Size Factor	Point Load Index (IS50) (MN/m ²)	Type	Date Tested
BH-08/18	9.60	Axial	86.7	51.1	7.0	5640.9	1.24	1.20	1.490	Sandstone	19/06/2008
BH-08/18	13.10	Axial	85.5	40.1	6.0	4365.4	1.37	1.13	1.558	Sandstone	19/06/2008
BH-08/18	15.20	Axial	86.9	41.1	5.3	4547.5	1.17	1.14	1.333	Sandstone	19/06/2008
BH-08/18	16.50	Diametrical	133.6	75.4	8.1	5685.2	1.42	1.20	1.714	Sandstone	19/06/2008
BH-08/18	17.70	Axial	86.8	44.3	2.6	4895.9	0.53	1.16	0.618	Sandstone #	19/06/2008

NOTE - Loads of less than 5Kn Outside of UKAS accreditation * - Did not pass through both points # - Invalid Failure

	Date of issue :- 24/06/2008	Certificate No :- PL/3676/1	Signed <i>M. Selkirk</i>	Name M. SELKIRK	Page 1 of 1	
	Client :- South Tyneside Council	Contract Title :- Ground Investigation: McNulty's Yard, South Shields			AEG Contract No :- 3676	

APPENDIX I

Specialist Chemical Testing

Scientific Analysis Laboratories

Certificate of Analysis

Report Number: 135846-1

Date of Report: 07-Jul-2008

Client: Allied Exploration & Geotechnics Ltd,
Unit 25,
Stella Gill Industrial Estate,
Pelton Fell,
Chester le Street,
Co Durham.
DH2 2RJ

Client Contact: Ms Jill Fishwick
Client Job Reference: 3676
Client Site Reference: McNulty's Yard, South Shields
Client Purchase Order: CH-0056

Date Job Received at SAL: 24-Jun-2008
Date Analysis Started: 25-Jun-2008
Date Analysis Completed: 04-Jul-2008

The results reported relate to samples received at the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS or MCERTS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

Key to symbols used in this report:

W: Analysis was sub-contracted and performed at another SAL Laboratory

S: Analysis was sub-contracted

N: Analysis is not UKAS accredited

U: Analysis is UKAS accredited

M: Analysis is MCERTS accredited

Report checked
and authorised by:

Mr Ross Walker
Assistant Customer Services Manager



1549
Group

Index to caveats used in this report

Value	Description
AR	As Received
13	Results have been blank corrected.
36	LOD Raised due to low Matrix spike recovery
62	LOD was raised due to the method performance of the analytical procedure used
110	LOD raised due to low internal standard recovery.
147	Result has been Recovery corrected.

SAL Reference: 135846										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Water		Analysed as Water								
Physico Chemical										
SAL Reference					135846	135846	135846	135846	135846	
					001	002	003	004	005	
Customer Sample Reference					BH01	BH01 (P)	BH02	BH02 (P)	BH07	
Test Sample					AR	AR	AR	AR	AR	
Determinand	Technique	LOD	Units	Symbol						
Ammonia expressed as NH ₄	Colorimetry	0.06	mg/l	N	0.14	<0.06	0.37	0.34	0.54	
Cyanide (Total)	Colorimetry	0.05	mg/l	U	<0.05	<0.05	<0.05	<0.05	<0.05	
Chloride	IC (D)	0.1	mg/l	WU	1600	1600	1600	2000	190	
Magnesium	ICP/OES	1000	µg/l	N	270000	250000	250000	290000	11000	
Nitrate	IC (D)	0.2	mg/l	WU	<2.0	<2.0	<4.0	<4.0	<2.0	
pH	Probe			U	7.3	7.2	7.4	7.3	9.2	
Sulphate ion	IC (D)	0.1	mg/l	WU	690	690	820	1200	560	
Sulphur (Total)	ICP/OES	50000	µg/l	N	230000	230000	380000	400000	200000	

SAL Reference: 135846										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Water		Analysed as Water								
Physico Chemical										
SAL Reference					135846	135846	135846	135846	135846	
					006	007	008	009	010	
Customer Sample Reference					BH09 (P)	BH10	BH12	BH14	BH15	
Test Sample					AR	AR	AR	AR	AR	
Determinand	Technique	LOD	Units	Symbol						
Ammonia expressed as NH ₄	Colorimetry	0.06	mg/l	N	0.23	<0.06	0.20	1.6	15	
Cyanide (Total)	Colorimetry	0.05	mg/l	U	<0.05	<0.05	<0.05	<0.05	<0.05	
Chloride	IC (D)	0.1	mg/l	WU	17000	350	1300	250	340	
Magnesium	ICP/OES	1000	µg/l	N	860000	57000	75000	23000	<1000	
Nitrate	IC (D)	0.2	mg/l	WU	<20	30	<4.0	<2.0	<2.0	
pH	Probe			U	7.3	7.5	7.8	7.9	9.6	
Sulphate ion	IC (D)	0.1	mg/l	WU	2200	400	420	780	350	
Sulphur (Total)	ICP/OES	50000	µg/l	N	670000	140000	150000	290000	130000	

SAL Reference: 135846										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Water		Analysed as Water								
Physcio Chemical										
SAL Reference					135846	135846	135846	135846	135846	
					011	012	013	014	015	
Customer Sample Reference					BH16	BH16 (P)	BH17	BH17 (P)	BH18	
Test Sample					AR	AR	AR	AR	AR	
Determinand	Technique	LOD	Units	Symbol						
Ammonia expressed as NH4	Colorimetry	0.06	mg/l	N	0.07	<0.06	0.10	0.32	<0.06	
Cyanide (Total)	Colorimetry	0.05	mg/l	U	<0.05	<0.05	<0.05	<0.05	<0.05	
Chloride	IC (D)	0.1	mg/l	WU	16000	17000	16000	16000	370	
Magnesium	ICP/OES	1000	µg/l	N	940000	940000	890000	920000	65000	
Nitrate	IC (D)	0.2	mg/l	WU	<20	<20	<20	<20	28	
pH	Probe			U	7.5	7.5	7.4	7.4	7.6	
Sulphate ion	IC (D)	0.1	mg/l	WU	2200	2200	2100	2100	380	
Sulphur (Total)	ICP/OES	50000	µg/l	N	740000	760000	740000	740000	140000	

SAL Reference: 135846					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Water		Analysed as Water			
Physcio Chemical					
SAL Reference					135846 016
Customer Sample Reference					River Tyne 1
Test Sample					AR
Determinand	Technique	LOD	Units	Symbol	
Ammonia expressed as NH4	Colorimetry	0.06	mg/l	N	0.70
Cyanide (Total)	Colorimetry	0.05	mg/l	U	<0.05
Chloride	IC (D)	0.1	mg/l	WU	10000
Magnesium	ICP/OES	1000	µg/l	N	590000
Nitrate	IC (D)	0.2	mg/l	WU	<20
pH	Probe			U	7.6
Sulphate ion	IC (D)	0.1	mg/l	WU	1400
Sulphur (Total)	ICP/OES	50000	µg/l	N	490000

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
Metals

SAL Reference	135846 001	135846 002	135846 003	135846 004	135846 005
Customer Sample Reference	BH01	BH01 (P)	BH02	BH02 (P)	BH07
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
Arsenic (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	N	16	20	18	24	29
Barium (Dissolved)	ICP/MS (Filtered)	1.0	µg/l	N	110	120	120	120	110
Beryllium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	N	<0.02	<0.02	<0.02	<0.02	<0.02
Boron	ICP/OES	10	µg/l	N	180	190	520	530	280
Cadmium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	N	0.23	0.27	0.21	0.21	0.21
Chromium (Dissolved)	ICP/MS (Filtered)	1	µg/l	N	23	34	26	28	4
Copper (Dissolved)	ICP/MS (Filtered)	0.5	µg/l	N	5.3	6.4	10	12	7.2
Lead (Dissolved)	ICP/MS (Filtered)	0.3	µg/l	N	<0.3	<0.3	2.0	0.7	0.9
Mercury (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	N	0.16	0.10	0.99	2.9	1.0
Nickel (Dissolved)	ICP/MS (Filtered)	1	µg/l	N	51	60	57	71	15
Selenium (Dissolved)	ICP/MS (Filtered)	0.2	µg/l	N	56	65	110	170	13
Vanadium	ICP/OES (Preconc.)	0.001	mg/l	N	12	16	14	18	47
Zinc (Dissolved)	ICP/MS (Filtered)	2	µg/l	N	6	8	11	11	3

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
Metals

SAL Reference	135846 006	135846 007	135846 008	135846 009	135846 010
Customer Sample Reference	BH09 (P)	BH10	BH12	BH14	BH15
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
Arsenic (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	N	110	7.4	8.9	16	19
Barium (Dissolved)	ICP/MS (Filtered)	1.0	µg/l	N	180	110	120	95	62
Beryllium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	N	<0.02	<0.02	<0.02	<0.02	<0.02
Boron	ICP/OES	10	µg/l	N	2700	270	370	370	150
Cadmium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	N	1.0	0.03	0.20	0.39	0.46
Chromium (Dissolved)	ICP/MS (Filtered)	1	µg/l	N	11	22	12	9	4
Copper (Dissolved)	ICP/MS (Filtered)	0.5	µg/l	N	140	3.8	10	5.0	16
Lead (Dissolved)	ICP/MS (Filtered)	0.3	µg/l	N	0.5	1.7	0.4	0.7	<0.3
Mercury (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	N	0.17	<0.05	<0.05	0.35	0.89
Nickel (Dissolved)	ICP/MS (Filtered)	1	µg/l	N	37	17	20	24	30
Selenium (Dissolved)	ICP/MS (Filtered)	0.2	µg/l	N	210	16	37	14	18
Vanadium	ICP/OES (Preconc.)	0.001	mg/l	N	120	9.0	13	18	25
Zinc (Dissolved)	ICP/MS (Filtered)	2	µg/l	N	18	8	8	9	4

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
Metals

SAL Reference	135846 011	135846 012	135846 013	135846 014	135846 015
Customer Sample Reference	BH16	BH16 (P)	BH17	BH17 (P)	BH18
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
Arsenic (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	N	100	110	100	100	7.7
Barium (Dissolved)	ICP/MS (Filtered)	1.0	µg/l	N	100	92	120	120	110
Beryllium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	N	<0.02	<0.02	<0.02	<0.02	<0.02
Boron	ICP/OES	10	µg/l	N	3200	3200	3000	3100	300
Cadmium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	N	0.31	0.29	0.63	0.59	0.04
Chromium (Dissolved)	ICP/MS (Filtered)	1	µg/l	N	9	9	10	9	20
Copper (Dissolved)	ICP/MS (Filtered)	0.5	µg/l	N	130	140	150	160	4.3
Lead (Dissolved)	ICP/MS (Filtered)	0.3	µg/l	N	0.3	0.3	<0.3	<0.3	1.9
Mercury (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	N	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel (Dissolved)	ICP/MS (Filtered)	1	µg/l	N	30	30	31	32	16
Selenium (Dissolved)	ICP/MS (Filtered)	0.2	µg/l	N	190	220	210	190	16
Vanadium	ICP/OES (Preconc.)	0.001	mg/l	N	120	130	130	120	9.5
Zinc (Dissolved)	ICP/MS (Filtered)	2	µg/l	N	17	16	34	21	8

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water **Analysed as Water**
Metals

SAL Reference **135846 016**

Customer Sample Reference **River Tyne 1**

Test Sample **AR**

Determinand	Technique	LOD	Units	Symbol	
Arsenic (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	N	55
Barium (Dissolved)	ICP/MS (Filtered)	1.0	µg/l	N	53
Beryllium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	N	<0.02
Boron	ICP/OES	10	µg/l	N	2100
Cadmium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	N	0.04
Chromium (Dissolved)	ICP/MS (Filtered)	1	µg/l	N	8
Copper (Dissolved)	ICP/MS (Filtered)	0.5	µg/l	N	84
Lead (Dissolved)	ICP/MS (Filtered)	0.3	µg/l	N	0.4
Mercury (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	N	<0.05
Nickel (Dissolved)	ICP/MS (Filtered)	1	µg/l	N	18
Selenium (Dissolved)	ICP/MS (Filtered)	0.2	µg/l	N	190
Vanadium	ICP/OES (Preconc.)	0.001	mg/l	N	74
Zinc (Dissolved)	ICP/MS (Filtered)	2	µg/l	N	14

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water **Analysed as Water**
TPH

SAL Reference	135846	135846	135846
	001	002	003
Customer Sample Reference	BH01	BH01 (P)	BH02
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Methyl-tert-Butyl Ether	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)2	(13)<1
Xylene (Total)	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1

Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aliphatic)	GC/FID (LV)	10	µg/l	N	10	20	<10
Total Petroleum Hydrocarbons DW(C12-C16 aliphatic)	GC/FID (LV)	10	µg/l	N	110	110	(13)<10
Total Petroleum Hydrocarbons DW(C16-C21 aliphatic)	GC/FID (LV)	10	µg/l	N	130	80	(13)<10
Total Petroleum Hydrocarbons DW(C21-C35 aliphatic)	GC/FID (LV)	10	µg/l	N	140	40	<10

Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C12-C16 aromatic)	GC/FID (LV)	10	µg/l	N	20	30	(13)<10
Total Petroleum Hydrocarbons DW(C16-C21 aromatic)	GC/FID (LV)	10	µg/l	N	20	20	(13)<10
Total Petroleum Hydrocarbons DW(C21-C35 aromatic)	GC/FID (LV)	10	µg/l	N	10	<10	<10

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
TPH

SAL Reference	135846	135846	135846
	004	005	006
Customer Sample Reference	BH02 (P)	BH07	BH09 (P)
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Methyl-tert-Butyl Ether	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
Xylene (Total)	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1

Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	10
Total Petroleum Hydrocarbons DW(C12-C16 aliphatic)	GC/FID (LV)	10	µg/l	N	(13)<10	50	70
Total Petroleum Hydrocarbons DW(C16-C21 aliphatic)	GC/FID (LV)	10	µg/l	N	(13)<10	60	40
Total Petroleum Hydrocarbons DW(C21-C35 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10

Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C12-C16 aromatic)	GC/FID (LV)	10	µg/l	N	(13)<10	(13)<10	(13)<10
Total Petroleum Hydrocarbons DW(C16-C21 aromatic)	GC/FID (LV)	10	µg/l	N	20	(13)<10	(13)<10
Total Petroleum Hydrocarbons DW(C21-C35 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
TPH

SAL Reference	135846 007	135846 008	135846 009
Customer Sample Reference	BH10	BH12	BH14
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Methyl-tert-Butyl Ether	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
Xylene (Total)	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1

Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C12-C16 aliphatic)	GC/FID (LV)	10	µg/l	N	(13)<10	20	40
Total Petroleum Hydrocarbons DW(C16-C21 aliphatic)	GC/FID (LV)	10	µg/l	N	(13)<10	50	40
Total Petroleum Hydrocarbons DW(C21-C35 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	20	<10

Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C12-C16 aromatic)	GC/FID (LV)	10	µg/l	N	(13)<10	10	10
Total Petroleum Hydrocarbons DW(C16-C21 aromatic)	GC/FID (LV)	10	µg/l	N	(13)<10	20	20
Total Petroleum Hydrocarbons DW(C21-C35 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	20

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
TPH

SAL Reference	135846	135846	135846
	010	011	012
Customer Sample Reference	BH15	BH16	BH16 (P)
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Methyl-tert-Butyl Ether	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
Xylene (Total)	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1

Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C12-C16 aliphatic)	GC/FID (LV)	10	µg/l	N	(13)<10	(13)<10	<10
Total Petroleum Hydrocarbons DW(C16-C21 aliphatic)	GC/FID (LV)	10	µg/l	N	(13)<10	(13)<10	<10
Total Petroleum Hydrocarbons DW(C21-C35 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10

Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C12-C16 aromatic)	GC/FID (LV)	10	µg/l	N	40	<10	<10
Total Petroleum Hydrocarbons DW(C16-C21 aromatic)	GC/FID (LV)	10	µg/l	N	20	<10	<10
Total Petroleum Hydrocarbons DW(C21-C35 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
TPH

SAL Reference	135846 013	135846 014	135846 015
Customer Sample Reference	BH17	BH17 (P)	BH18
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Methyl-tert-Butyl Ether	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
Xylene (Total)	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1

Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C12-C16 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C16-C21 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C21-C35 aliphatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10

Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C8-C10 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C10-C12 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C12-C16 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C16-C21 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10
Total Petroleum Hydrocarbons DW(C21-C35 aromatic)	GC/FID (LV)	10	µg/l	N	<10	<10	<10

SAL Reference: 135846
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Water Analysed as Water
TPH

SAL Reference 135846 016
Customer Sample Reference River Tyne
1
Test Sample AR

Determinand	Technique	LOD	Units	Symbol	
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1
Methyl-tert-Butyl Ether	GC/MS (Headspace)	1	µg/l	U	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1
Xylene (Total)	GC/MS (Headspace)	1	µg/l	U	<1
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C8-C10 aliphatic)	GC/FID (LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C10-C12 aliphatic)	GC/FID (LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C12-C16 aliphatic)	GC/FID (LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C16-C21 aliphatic)	GC/FID (LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C21-C35 aliphatic)	GC/FID (LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS (Headspace)(LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C8-C10 aromatic)	GC/FID (LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C10-C12 aromatic)	GC/FID (LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C12-C16 aromatic)	GC/FID (LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C16-C21 aromatic)	GC/FID (LV)	10	µg/l	N	<10
Total Petroleum Hydrocarbons DW(C21-C35 aromatic)	GC/FID (LV)	10	µg/l	N	<10

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
PAH

SAL Reference	135846	135846	135846	135846	135846
	001	002	003	004	005
Customer Sample Reference	BH01	BH01 (P)	BH02	BH02 (P)	BH07
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
Naphthalene	GC/MS (SIR)	0.01	µg/l	U	(13)<0.01	(13)<0.01	(13)0.06	(13)0.09	(13)0.27
Acenaphthylene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.01	0.01	0.09
Acenaphthene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.01	0.02	0.14
Fluorene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	<0.01	0.02	0.10
Phenanthrene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.04	0.07	0.29
Anthracene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.02	0.03	0.13
Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.05	0.09	0.38
Pyrene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.06	0.09	0.30
Benzo(a)Anthracene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.03	0.06	0.19
Chrysene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.06	0.09	0.24
Benzo(b/k)Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.14	0.20	0.49
Benzo(a)Pyrene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.06	0.08	0.24
Indeno(123-cd)Pyrene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.05	0.06	0.16
Dibenzo(ah)Anthracene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	<0.01	<0.01	0.05
Benzo(ghi)Perylene	GC/MS (SIR)	0.01	µg/l	U	<0.01	<0.01	0.07	0.09	0.21
Polyaromatic Hydrocarbons (Total)	GC/MS (SIR)	0.01	µg/l	U	(13)<0.01	(13)<0.01	(13)0.66	(13)1.0	(13)3.3

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
PAH

SAL Reference	135846	135846	135846	135846	135846
	006	007	008	009	010
Customer Sample Reference	BH09 (P)	BH10	BH12	BH14	BH15
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
Naphthalene	GC/MS (SIR)	0.01	µg/l	U	(13)0.62	(13)0.08	(13)0.09	(13)1.5	(13)0.87
Acenaphthylene	GC/MS (SIR)	0.01	µg/l	U	0.04	<0.01	0.02	0.20	0.03
Acenaphthene	GC/MS (SIR)	0.01	µg/l	U	0.13	<0.01	0.06	0.76	0.12
Fluorene	GC/MS (SIR)	0.01	µg/l	U	0.13	<0.01	0.05	0.78	0.05
Phenanthrene	GC/MS (SIR)	0.01	µg/l	U	2.4	0.04	0.12	2.9	0.09
Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.22	<0.01	0.07	0.86	0.07
Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.95	0.05	0.21	3.6	0.09
Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.76	0.05	0.17	2.7	0.07
Benzo(a)Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.54	0.04	0.13	2.5	0.06
Chrysene	GC/MS (SIR)	0.01	µg/l	U	0.73	0.05	0.16	2.5	0.07
Benzo(b/k)Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	1.1	0.10	0.34	5.8	0.16
Benzo(a)Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.69	0.05	0.15	3.1	0.08
Indeno(123-cd)Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.36	0.04	0.10	2.2	0.06
Dibenzo(ah)Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.12	<0.01	0.03	0.59	<0.01
Benzo(ghi)Perylene	GC/MS (SIR)	0.01	µg/l	U	0.64	0.05	0.13	2.4	0.08
Polyaromatic Hydrocarbons (Total)	GC/MS (SIR)	0.01	µg/l	U	(13)9.4	(13)0.55	(13)1.8	(13)32	(13)1.9

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
PAH

SAL Reference	135846 011	135846 012	135846 013	135846 014	135846 015
Customer Sample Reference	BH16	BH16 (P)	BH17	BH17 (P)	BH18
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
Naphthalene	GC/MS (SIR)	0.01	µg/l	U	(13)0.06	(13)0.05	(13)0.05	(13)0.01	(13)0.06
Acenaphthylene	GC/MS (SIR)	0.01	µg/l	U	<0.01	0.01	<0.01	<0.01	<0.01
Acenaphthene	GC/MS (SIR)	0.01	µg/l	U	0.02	0.02	0.02	<0.01	<0.01
Fluorene	GC/MS (SIR)	0.01	µg/l	U	0.02	0.02	0.02	<0.01	<0.01
Phenanthrene	GC/MS (SIR)	0.01	µg/l	U	0.16	0.12	0.11	0.04	0.03
Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.03	0.02	0.02	<0.01	<0.01
Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.22	0.13	0.06	0.02	0.04
Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.18	0.11	0.05	0.02	0.04
Benzo(a)Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.15	0.08	0.04	0.03	0.03
Chrysene	GC/MS (SIR)	0.01	µg/l	U	0.19	0.11	0.06	0.03	0.05
Benzo(b/k)Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.40	0.21	0.09	0.04	0.13
Benzo(a)Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.18	0.10	0.04	<0.01	0.06
Indeno(123-cd)Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.13	0.07	0.04	<0.01	0.05
Dibenzo(ah)Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.04	0.02	<0.01	<0.01	<0.01
Benzo(ghi)Perylene	GC/MS (SIR)	0.01	µg/l	U	0.16	0.10	0.05	0.03	0.07
Polyaromatic Hydrocarbons (Total)	GC/MS (SIR)	0.01	µg/l	U	(13)1.9	(13)1.2	(13)0.65	(13)0.22	(13)0.56

SAL Reference: 135846					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Water		Analysed as Water			
PAH					
SAL Reference					135846 016
Customer Sample Reference					River Tyne 1
Test Sample					AR
Determinand	Technique	LOD	Units	Symbol	
Naphthalene	GC/MS (SIR)	0.01	µg/l	U	⁽¹³⁾ 0.06
Acenaphthylene	GC/MS (SIR)	0.01	µg/l	U	<0.01
Acenaphthene	GC/MS (SIR)	0.01	µg/l	U	0.01
Fluorene	GC/MS (SIR)	0.01	µg/l	U	<0.01
Phenanthrene	GC/MS (SIR)	0.01	µg/l	U	0.02
Anthracene	GC/MS (SIR)	0.01	µg/l	U	<0.01
Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.02
Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.02
Benzo(a)Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.01
Chrysene	GC/MS (SIR)	0.01	µg/l	U	0.03
Benzo(b/k)Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.04
Benzo(a)Pyrene	GC/MS (SIR)	0.01	µg/l	U	<0.01
Indeno(123-cd)Pyrene	GC/MS (SIR)	0.01	µg/l	U	<0.01
Dibenzo(ah)Anthracene	GC/MS (SIR)	0.01	µg/l	U	<0.01
Benzo(ghi)Perylene	GC/MS (SIR)	0.01	µg/l	U	0.03
Polyaromatic Hydrocarbons (Total)	GC/MS (SIR)	0.01	µg/l	U	⁽¹³⁾ 0.24

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
VOC

SAL Reference	135846 001	135846 002	135846 003	135846 004	135846 005
Customer Sample Reference	BH01	BH01 (P)	BH02	BH02 (P)	BH07
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
1,1,1,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,2-Trichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-dibromoethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,3-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
2,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
2-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
4-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
VOC

SAL Reference	135846	135846	135846	135846	135846
	001	002	003	004	005
Customer Sample Reference	BH01	BH01	BH02	BH02	BH07
		(P)		(P)	
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1	(13)<1	(13)<1
Bromobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromochloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromodichloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromoform	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Carbon tetrachloride	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chlorodibromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chloroform	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Cis-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Cis-1,3-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Dibromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Styrene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Tetrachloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)2	(13)<1	(13)<1	(13)<1

SAL Reference: 135846									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Water		Analysed as Water							
VOC									
SAL Reference					135846	135846	135846	135846	135846
					001	002	003	004	005
Customer Sample Reference					BH01	BH01	BH02	BH02	BH07
					(P)		(P)		
Test Sample					AR	AR	AR	AR	AR
Determinand									
Technique									
LOD									
Units									
Symbol									
Trans-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Trichlorofluoromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Vinyl chloride monomer	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Volatile Organic Compounds (Top 10 Screen)	GC/MS (Headspace)	10	µg/l	N	<10	<10	<10	<10	<10

SAL Reference: 135846									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Water		Analysed as Water							
VOC									
SAL Reference					135846	135846	135846	135846	135846
					006	007	008	009	010
Customer Sample Reference					BH09	BH10	BH12	BH14	BH15
					(P)				
Test Sample					AR	AR	AR	AR	AR
Determinand									
Technique									
LOD									
Units									
Symbol									
1,1,1,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,2-Trichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water
VOC

Analysed as Water

SAL Reference	135846	135846	135846	135846	135846
	006	007	008	009	010
Customer Sample Reference	BH09	BH10	BH12	BH14	BH15
	(P)				
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
1,2-dibromoethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,3-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
2,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
2-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
4-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1	(13)<1	(13)<1
Bromobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromochloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromodichloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromoform	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Carbon tetrachloride	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chlorodibromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water **Analysed as Water**
VOC

SAL Reference	135846	135846	135846	135846	135846
	006	007	008	009	010
Customer Sample Reference	BH09	BH10	BH12	BH14	BH15
	(P)				
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
Chloroform	GC/MS (Headspace)	1	µg/l	U	3	<1	<1	<1	<1
Chloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Cis-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Cis-1,3-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Dibromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Styrene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Tetrachloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1	(13)<1	(13)<1
Trans-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Trichlorofluoromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Vinyl chloride monomer	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Volatile Organic Compounds (Top 10 Screen)	GC/MS (Headspace)	10	µg/l	N	<10	<10	<10	<10	<10

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water **Analysed as Water**
VOC

SAL Reference	135846	135846	135846	135846	135846
	011	012	013	014	015
Customer Sample Reference	BH16	BH16	BH17	BH17	BH18
		(P)		(P)	
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
1,1,1,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1,2-Trichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,1-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-dibromoethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,3-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
2,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
2-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
4-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water **Analysed as Water**
VOC

SAL Reference	135846	135846	135846	135846	135846
	011	012	013	014	015
Customer Sample Reference	BH16	BH16	BH17	BH17	BH18
		(P)		(P)	
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1	(13)<1	(13)<1
Bromobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromochloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromodichloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromoform	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Bromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Carbon tetrachloride	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chlorodibromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chloroform	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Chloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Cis-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Cis-1,3-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Dibromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Styrene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Tetrachloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1	(13)<1	(13)<1

SAL Reference: 135846									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Water		Analysed as Water							
VOC									
SAL Reference					135846	135846	135846	135846	135846
					011	012	013	014	015
Customer Sample Reference					BH16	BH16	BH17	BH17	BH18
						(P)		(P)	
Test Sample					AR	AR	AR	AR	AR
Determinand	Technique	LOD	Units	Symbol					
Trans-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Trichlorofluoromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Vinyl chloride monomer	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	<1	<1
Volatile Organic Compounds (Top 10 Screen)	GC/MS (Headspace)	10	µg/l	N	<10	<10	<10	<10	<10

SAL Reference: 135846						
Project Site: McNulty's Yard, South Shields						
Customer Reference: 3676						
Water		Analysed as Water				
VOC						
SAL Reference						135846 016
Customer Sample Reference						River Tyne 1
Test Sample						AR
Determinand	Technique	LOD	Units	Symbol		
1,1,1,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	
1,1,1-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	
1,1,2,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	
1,1,2-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	
1,1,2-Trichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	
1,1-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	
1,1-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	
1,1-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1	
1,2,3-Trichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	
1,2,4-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	
1,2-dibromoethane	GC/MS (Headspace)	1	µg/l	U	<1	
1,2-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	
1,2-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	
1,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	
1,3,5-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	
1,3-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	
1,3-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	
1,4-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	
2,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	
2-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	
4-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
VOC

SAL Reference 135846 016

Customer Sample Reference River Tyne 1

Test Sample AR

Determinand	Technique	LOD	Units	Symbol	
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1
Bromobenzene	GC/MS (Headspace)	1	µg/l	U	<1
Bromochloromethane	GC/MS (Headspace)	1	µg/l	U	<1
Bromodichloromethane	GC/MS (Headspace)	1	µg/l	U	<1
Bromoform	GC/MS (Headspace)	1	µg/l	U	<1
Bromomethane	GC/MS (Headspace)	1	µg/l	U	<1
Carbon tetrachloride	GC/MS (Headspace)	1	µg/l	U	<1
Chlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1
Chlorodibromomethane	GC/MS (Headspace)	1	µg/l	U	<1
Chloroethane	GC/MS (Headspace)	1	µg/l	U	<1
Chloroform	GC/MS (Headspace)	1	µg/l	U	<1
Chloromethane	GC/MS (Headspace)	1	µg/l	U	<1
Cis-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1
Cis-1,3-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1
Dibromomethane	GC/MS (Headspace)	1	µg/l	U	<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1
Styrene	GC/MS (Headspace)	1	µg/l	U	<1
Tetrachloroethylene	GC/MS (Headspace)	1	µg/l	U	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1
Trans-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1
Trichlorofluoromethane	GC/MS (Headspace)	1	µg/l	U	<1
Vinyl chloride monomer	GC/MS (Headspace)	1	µg/l	U	<1
Volatile Organic Compounds (Top 10 Screen)	GC/MS (Headspace)	10	µg/l	N	<10

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
SVOC

SAL Reference	135846 001	135846 002	135846 003	135846 004	135846 005
Customer Sample Reference	BH01	BH01 (P)	BH02	BH02 (P)	BH07
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
1,2,4-Trichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dimethylphenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dinitrophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Chloronaphthalene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Chlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-methyl phenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Methylnaphthalene	GC/MS	10	µg/l	U	14	<10	<10	<10	<10
2-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Nitrophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
3-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
3/4-Methylphenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Bromophenyl phenylether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Chloroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Chlorophenyl phenylether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Nitrophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Acenaphthene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Acenaphthylene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Anthracene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Azobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Benzo(a)Anthracene	GC/MS	10	µg/l	U	<10	<10	<10	<10	22
Benzo(a)Pyrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	15
Benzo(b/k)Fluoranthene	GC/MS	10	µg/l	U	<10	<10	<10	<10	32
Benzo(ghi)Perylene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-chloroethoxy) methane	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-chloroethyl) ether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-chloroisopropyl) ether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-ethylhexyl)phthalate	GC/MS	10	µg/l	U	71	28	<10	11	30
Butyl benzylphthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Carbazole	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Chrysene	GC/MS	10	µg/l	U	<10	<10	<10	<10	21
Di-n-butylphthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Di-n-octylphthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Dibenzo(ah)Anthracene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10

SAL Reference: 135846									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Water		Analysed as Water							
SVOC									
SAL Reference		135846 001	135846 002	135846 003	135846 004	135846 005			
Customer Sample Reference		BH01	BH01 (P)	BH02	BH02 (P)	BH07			
Test Sample		AR	AR	AR	AR	AR			
Determinand	Technique	LOD	Units	Symbol					
Dibenzofuran	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Diethyl phthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Dimethyl phthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Fluoranthene	GC/MS	10	µg/l	U	<10	<10	<10	<10	39
Fluorene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachlorobutadiene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachloroethane	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Indeno(123-cd)Pyrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Isophorone	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Naphthalene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Nitrobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Pentachlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Phenanthrene	GC/MS	10	µg/l	U	12	<10	<10	<10	25
Phenol	GC/MS	10	µg/l	U	(36) <50	(36) <50	(36) <50	(36) <50	(36) <50
Pyrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	31
Semi-Volatile Organic Compounds Screen	GC/MS	10	µg/l	N	Unidentified Aliphatic Alcohol circa C8 30	<10	<10	<10	Unidentified Aliphatic Alcohol circa C8 15
					Unidentified Carboxylic Acid circa C16 22				Unidentified Carboxylic Acid circa C16 25

SAL Reference: 135846									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Water		Analysed as Water							
SVOC									
SAL Reference		135846 006	135846 007	135846 008	135846 009		135846 010		
Customer Sample Reference		BH09 (P)	BH10	BH12	BH14		BH15		
Test Sample		AR	AR	AR	AR		AR		
Determinand	Technique	LOD	Units	Symbol					
1,2,4-Trichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
SVOC

SAL Reference	135846 006	135846 007	135846 008	135846 009	135846 010
Customer Sample Reference	BH09 (P)	BH10	BH12	BH14	BH15
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
1,3-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dimethylphenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dinitrophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Chloronaphthalene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Chlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-methyl phenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Methylnaphthalene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Nitrophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
3-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
3/4-Methylphenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Bromophenyl phenylether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Chloroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Chlorophenyl phenylether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Nitrophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Acenaphthene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Acenaphthylene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Anthracene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Azobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Benzo(a)Anthracene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Benzo(a)Pyrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Benzo(b/k)Fluoranthene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Benzo(ghi)Perylene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-chloroethoxy) methane	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-chloroethyl) ether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-chloroisopropyl) ether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-ethylhexyl)phthalate	GC/MS	10	µg/l	U	63	<10	<10	<10	30
Butyl benzylphthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Carbazole	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Chrysene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Di-n-butylphthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Di-n-octylphthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Dibenzo(ah)Anthracene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water
SVOC

Analysed as Water

SAL Reference					135846 006	135846 007	135846 008	135846 009	135846 010
Customer Sample Reference					BH09 (P)	BH10	BH12	BH14	BH15
Test Sample					AR	AR	AR	AR	AR
Determinand	Technique	LOD	Units	Symbol					
Dibenzofuran	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Diethyl phthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Dimethyl phthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Fluoranthene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Fluorene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachlorobutadiene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachloroethane	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Indeno(123-cd)Pyrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Isophorone	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Naphthalene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Nitrobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Pentachlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Phenanthrene	GC/MS	10	µg/l	U	16	<10	<10	<10	<10
Phenol	GC/MS	10	µg/l	U	(36)<50	(36)<50	(36)<50	(36)<50	(147)290
Pyrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Semi-Volatile Organic Compounds Screen	GC/MS	10	µg/l	N	Unidentified Aliphatic Alcohol circa C8 16	<10	<10	Unidentified Carboxylic Acid circa C16 15	<10
					Unidentified Carboxylic Acid circa C16 22				

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
SVOC

SAL Reference	135846 011	135846 012	135846 013	135846 014	135846 015
Customer Sample Reference	BH16	BH16 (P)	BH17	BH17 (P)	BH18
Test Sample	AR	AR	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol					
1,2,4-Trichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dimethylphenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dinitrophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,4-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Chloronaphthalene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Chlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-methyl phenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Methylnaphthalene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
2-Nitrophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
3-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
3/4-Methylphenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Bromophenyl phenylether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Chloroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Chlorophenyl phenylether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
4-Nitrophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Acenaphthene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Acenaphthylene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Anthracene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Azobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Benzo(a)Anthracene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Benzo(a)Pyrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Benzo(b/k)Fluoranthene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Benzo(ghi)Perylene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-chloroethoxy) methane	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-chloroethyl) ether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-chloroisopropyl) ether	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Bis (2-ethylhexyl)phthalate	GC/MS	10	µg/l	U	19	<10	<10	<10	<10
Butyl benzylphthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Carbazole	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Chrysene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Di-n-butylphthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10

SAL Reference: 135846									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Water SVOC		Analysed as Water							
SAL Reference					135846 011	135846 012	135846 013	135846 014	135846 015
Customer Sample Reference					BH16	BH16 (P)	BH17	BH17 (P)	BH18
Test Sample					AR	AR	AR	AR	AR
Determinand	Technique	LOD	Units	Symbol					
Di-n-octylphthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Dibenzo(ah)Anthracene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Dibenzofuran	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Diethyl phthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Dimethyl phthalate	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Fluoranthene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Fluorene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachlorobutadiene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Hexachloroethane	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Indeno(123-cd)Pyrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Isophorone	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Naphthalene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Nitrobenzene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Pentachlorophenol	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Phenanthrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Phenol	GC/MS	10	µg/l	U	(36) <50	(36) <50	(36) <50	(36) <50	(36) <50
Pyrene	GC/MS	10	µg/l	U	<10	<10	<10	<10	<10
Semi-Volatile Organic Compounds Screen	GC/MS	10	µg/l	N	Unidentified Carboxylic Acid circa C16	<10	<10	<10	<10

SAL Reference: 135846									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Water SVOC		Analysed as Water							
SAL Reference					135846 016				
Customer Sample Reference					River Tyne 1				
Test Sample					AR				
Determinand	Technique	LOD	Units	Symbol					
1,2,4-Trichlorobenzene	GC/MS	10	µg/l	U	<10				
1,2-Dichlorobenzene	GC/MS	10	µg/l	U	<10				
1,3-Dichlorobenzene	GC/MS	10	µg/l	U	<10				
1,4-Dichlorobenzene	GC/MS	10	µg/l	U	<10				
2,4,5-Trichlorophenol	GC/MS	10	µg/l	U	<10				
2,4,6-Trichlorophenol	GC/MS	10	µg/l	U	<10				

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
SVOC

SAL Reference 135846 016

Customer Sample Reference River Tyne 1

Test Sample AR

Determinand	Technique	LOD	Units	Symbol	
2,4-Dichlorophenol	GC/MS	10	µg/l	U	<10
2,4-Dimethylphenol	GC/MS	10	µg/l	U	<10
2,4-Dinitrophenol	GC/MS	10	µg/l	U	<10
2,4-Dinitrotoluene	GC/MS	10	µg/l	U	<10
2,6-Dinitrotoluene	GC/MS	10	µg/l	U	<10
2-Chloronaphthalene	GC/MS	10	µg/l	U	<10
2-Chlorophenol	GC/MS	10	µg/l	U	<10
2-methyl phenol	GC/MS	10	µg/l	U	<10
2-Methylnaphthalene	GC/MS	10	µg/l	U	<10
2-Nitroaniline	GC/MS	10	µg/l	U	<10
2-Nitrophenol	GC/MS	10	µg/l	U	<10
3-Nitroaniline	GC/MS	10	µg/l	U	<10
3/4-Methylphenol	GC/MS	10	µg/l	U	<10
4-Bromophenyl phenylether	GC/MS	10	µg/l	U	<10
4-Chloro-3-methylphenol	GC/MS	10	µg/l	U	<10
4-Chloroaniline	GC/MS	10	µg/l	U	<10
4-Chlorophenyl phenylether	GC/MS	10	µg/l	U	<10
4-Nitroaniline	GC/MS	10	µg/l	U	<10
4-Nitrophenol	GC/MS	10	µg/l	U	<10
Acenaphthene	GC/MS	10	µg/l	U	<10
Acenaphthylene	GC/MS	10	µg/l	U	<10
Anthracene	GC/MS	10	µg/l	U	<10
Azobenzene	GC/MS	10	µg/l	U	<10
Benzo(a)Anthracene	GC/MS	10	µg/l	U	<10
Benzo(a)Pyrene	GC/MS	10	µg/l	U	<10
Benzo(b/k)Fluoranthene	GC/MS	10	µg/l	U	<10
Benzo(ghi)Perylene	GC/MS	10	µg/l	U	<10
Bis (2-chloroethoxy) methane	GC/MS	10	µg/l	U	<10
Bis (2-chloroethyl) ether	GC/MS	10	µg/l	U	<10
Bis (2-chloroisopropyl) ether	GC/MS	10	µg/l	U	<10
Bis (2-ethylhexyl)phthalate	GC/MS	10	µg/l	U	<10
Butyl benzylphthalate	GC/MS	10	µg/l	U	<10
Carbazole	GC/MS	10	µg/l	U	<10
Chrysene	GC/MS	10	µg/l	U	<10
Di-n-butylphthalate	GC/MS	10	µg/l	U	<10
Di-n-octylphthalate	GC/MS	10	µg/l	U	<10
Dibenzo(ah)Anthracene	GC/MS	10	µg/l	U	<10
Dibenzofuran	GC/MS	10	µg/l	U	<10
Diethyl phthalate	GC/MS	10	µg/l	U	<10
Dimethyl phthalate	GC/MS	10	µg/l	U	<10
Fluoranthene	GC/MS	10	µg/l	U	<10
Fluorene	GC/MS	10	µg/l	U	<10
Hexachlorobenzene	GC/MS	10	µg/l	U	<10
Hexachlorobutadiene	GC/MS	10	µg/l	U	<10

SAL Reference: 135846					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Water		Analysed as Water			
SVOC					
SAL Reference					135846 016
Customer Sample Reference					River Tyne 1
Test Sample					AR
Determinand	Technique	LOD	Units	Symbol	
Hexachlorocyclopentadiene	GC/MS	10	µg/l	U	<10
Hexachloroethane	GC/MS	10	µg/l	U	<10
Indeno(123-cd)Pyrene	GC/MS	10	µg/l	U	<10
Isophorone	GC/MS	10	µg/l	U	<10
Naphthalene	GC/MS	10	µg/l	U	<10
Nitrobenzene	GC/MS	10	µg/l	U	<10
Pentachlorophenol	GC/MS	10	µg/l	U	<10
Phenanthrene	GC/MS	10	µg/l	U	<10
Phenol	GC/MS	10	µg/l	U	(36)<50
Pyrene	GC/MS	10	µg/l	U	<10
Semi-Volatile Organic Compounds Screen	GC/MS	10	µg/l	N	<10

SAL Reference: 135846										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Water Analysed as Water										
Other Organics										
SAL Reference					135846	135846	135846	135846	135846	135846
					001	002	003	004	005	
Customer Sample Reference					BH01	BH01 (P)	BH02	BH02 (P)	BH07	
Test Sample					AR	AR	AR	AR	AR	
Determinand	Technique	LOD	Units	Symbol						
Dibutyl tin	GC/MS (Deriv.)	0.01	µg/l	N	(110)<0.10	0.02	0.14	0.06	0.17	
Tetrabutyl tin	GC/MS	0.10	µg/l	N	(62)<1.0	(62)<1.0	(62)<1.0	(62)<1.0	(62)<1.0	
Tributyl tin	GC/MS	0.01	µg/l	N	(110)<0.10	0.05	0.06	0.04	0.51	
Triphenyl Tin	GC/MS	0.01	µg/l	N	(110)<0.10	<0.01	<0.01	<0.01	<0.01	
Cresols	GC/MS	0.5	µg/l	U	<0.5	<0.5	<0.5	<0.5	<0.5	
Phenol	GC/MS (HR)	0.5	µg/l	U	(13)<0.5	(13)<0.5	(13)<0.5	(13)<0.5	(13)<0.5	
Xylenols	GC/MS	0.5	µg/l	U	<0.5	<0.5	<0.5	<0.5	<0.5	

SAL Reference: 135846										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Water Analysed as Water										
Other Organics										
SAL Reference					135846	135846	135846	135846	135846	135846
					006	007	008	009	010	
Customer Sample Reference					BH09 (P)	BH10	BH12	BH14	BH15	
Test Sample					AR	AR	AR	AR	AR	
Determinand	Technique	LOD	Units	Symbol						
Dibutyl tin	GC/MS (Deriv.)	0.01	µg/l	N	(110)<4.0	0.54	0.72	0.06	0.55	
Tetrabutyl tin	GC/MS	0.10	µg/l	N	(62)<1.0	(62)<1.0	(62)<1.0	(62)<1.0	(62)<1.0	
Tributyl tin	GC/MS	0.01	µg/l	N	(110)<4.0	0.04	0.96	0.13	1.6	
Triphenyl Tin	GC/MS	0.01	µg/l	N	(110)<4.0	<0.01	<0.01	<0.01	0.38	
Cresols	GC/MS	0.5	µg/l	U	<0.5	<0.5	<0.5	<0.5	5.0	
Phenol	GC/MS (HR)	0.5	µg/l	U	(13)<0.5	(13)<0.5	(13)<0.5	(13)<0.5	(13)270	
Xylenols	GC/MS	0.5	µg/l	U	<0.5	<0.5	<0.5	<0.5	<0.5	

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
Other Organics

SAL Reference					135846	135846	135846	135846	135846
Customer Sample Reference					BH16	BH16 (P)	BH17	BH17 (P)	BH18
Test Sample					AR	AR	AR	AR	AR
Determinand	Technique	LOD	Units	Symbol					
Dibutyl tin	GC/MS (Deriv.)	0.01	µg/l	N	0.08	0.09	0.87	0.49	0.75
Tetrabutyl tin	GC/MS	0.10	µg/l	N	(62)<1.0	(62)<1.0	(62)<1.0	(62)<1.0	(62)<1.0
Tributyl tin	GC/MS	0.01	µg/l	N	0.06	0.04	0.06	0.06	0.03
Triphenyl Tin	GC/MS	0.01	µg/l	N	<0.01	<0.01	<0.01	<0.01	<0.01
Cresols	GC/MS	0.5	µg/l	U	<0.5	<0.5	<0.5	<0.5	<0.5
Phenol	GC/MS (HR)	0.5	µg/l	U	(13)<0.5	(13)<0.5	(13)<0.5	(13)<0.5	(13)<0.5
Xylenols	GC/MS	0.5	µg/l	U	<0.5	<0.5	<0.5	<0.5	<0.5

SAL Reference: 135846

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Water Analysed as Water
Other Organics

SAL Reference					135846	016
Customer Sample Reference					River Tyne	1
Test Sample					AR	
Determinand	Technique	LOD	Units	Symbol		
Dibutyl tin	GC/MS (Deriv.)	0.01	µg/l	N	0.29	
Tetrabutyl tin	GC/MS	0.10	µg/l	N	(62)<1.0	
Tributyl tin	GC/MS	0.01	µg/l	N	0.03	
Triphenyl Tin	GC/MS	0.01	µg/l	N	<0.01	
Cresols	GC/MS	0.5	µg/l	U	<0.5	
Phenol	GC/MS (HR)	0.5	µg/l	U	(13)<0.5	
Xylenols	GC/MS	0.5	µg/l	U	<0.5	

Scientific Analysis Laboratories

Certificate of Analysis

Report Number: 134442-1

Date of Report: 18-Jun-2008

Client: Allied Exploration & Geotechnics Ltd,
Unit 25,
Stella Gill Industrial Estate,
Pelton Fell,
Chester le Street,
Co Durham.
DH2 2RJ

Client Contact: Ms Jill Fishwick
Client Job Reference: 3676
Client Site Reference: McNulty's Yard, South Shields
Client Purchase Order: CH-0056

Date Job Received at SAL: 06-Jun-2008

Date Analysis Started: 10-Jun-2008

Date Analysis Completed: 17-Jun-2008

The results reported relate to samples received at the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS or MCERTS
accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

Key to symbols used in this report:

W: Analysis was sub-contracted and performed at another SAL Laboratory

S: Analysis was sub-contracted

N: Analysis is not UKAS accredited

U: Analysis is UKAS accredited

M: Analysis is MCERTS accredited

Report checked
and authorised by:

Mr Ross Walker
Assistant Customer Services Manager



1549
Group



1549

Index to caveats used in this report

Value	Description
ND	Not Detected
AR	As Received
A40	Assisted dried < 40C
A105	Assisted dried at 105C
9	LOD raised due to dilution of sample
13	Results have been blank corrected.

Notes:

"Fill" samples are outside the scope of our accreditation. Results are UKAS only

SAL Reference: 134442						
Project Site: McNulty's Yard, South Shields						
Customer Reference: 3676						
Soil		Analysed as Soil				
BTEX						
SAL Reference			134442 001	134442 004		
Customer Sample Reference			BH08/02 0.20	BH08/01 0.40		
Test Sample			A105	A105		
Type			Sand	Sand		
Date Sampled						
Depth			0.20	0.40		
Determinand	Technique	LOD	Units	Symbol		
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13)<10	(13)<10

SAL Reference: 134442
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Soil Analysed as Soil
EPH

SAL Reference	134442 002	134442 003	134442 005	134442 006
Customer Sample Reference	BH08/02 1.00	BH08/02 3.60	BH08/01 2.00	BH08/01 10.50
Test Sample	AR	AR	AR	AR
Type	Clay	Clay	Fill	Clay
Date Sampled				
Depth	1.00	3.60	2.00	10.50

Determinand	Technique	LOD	Units	Symbol				
Total Petroleum Hydrocarbons (C10-C12)	GC/FID	1	mg/kg	U	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C12-C16)	GC/FID	1	mg/kg	U	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C16-C21)	GC/FID	1	mg/kg	U	1	<1	<1	<1
Total Petroleum Hydrocarbons (C21-C35)	GC/FID	1	mg/kg	U	5	<1	<1	2
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C10 - C40)	GC/FID	1	mg/kg	N	6	<1	<1	2

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
TPH Ali/Aro

SAL Reference	134442	134442	134442	134442
	001	001	004	004
Customer Sample Reference	BH08/02	BH08/02	BH08/01	BH08/01
	0.20	0.20	0.40	0.40
Test Sample	AR	A105	AR	A105
Type	Sand	Sand	Sand	Sand
Date Sampled				
Depth	0.20	0.20	0.40	0.40

Determinand	Technique	LOD	Units	Symbol				
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	16	-	2	-
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	70	-	5	-
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	370	-	14	-
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	⁽⁹⁾ <10	-	1	-
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	17	-	3	-

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
TPH All/Aro

SAL Reference	134442 001	134442 001	134442 004	134442 004
Customer Sample Reference	BH08/02 0.20	BH08/02 0.20	BH08/01 0.40	BH08/01 0.40
Test Sample	AR	A105	AR	A105
Type	Sand	Sand	Sand	Sand
Date Sampled				
Depth	0.20	0.20	0.40	0.40

Determinand	Technique	LOD	Units	Symbol				
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	120	-	13	-

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
PAH

SAL Reference	134442 001	134442 002	134442 003	134442 004
Customer Sample Reference	BH08/02 0.20	BH08/02 1.00	BH08/02 3.60	BH08/01 0.40
Test Sample	A105	A105	A105	A105
Type	Sand	Clay	Clay	Sand
Date Sampled				
Depth	0.20	1.00	3.60	0.40

Determinand	Technique	LOD	Units	Symbol				
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	<0.1	1.0
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	4.6
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	3.2
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.8	<0.1	<0.1	21
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.3	<0.1	<0.1	1.3
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	2.6	0.2	<0.1	17
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	2.7	0.1	<0.1	12
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	2.2	<0.1	<0.1	9.0
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	1.8	0.1	<0.1	8.0
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	4.9	0.1	<0.1	12
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.9	<0.1	<0.1	6.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.9	<0.1	<0.1	3.3
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1	<0.1	1.0
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	2.3	<0.1	<0.1	3.8
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	22	0.5	<0.1	100

SAL Reference: 134442					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Soil		Analysed as Soil			
PAH (Fill)					
SAL Reference					134442 005
Customer Sample Reference					BH08/01 2.00
Test Sample					A105
Type					Fill
Date Sampled					
Depth					2.00
Determinand	Technique	LOD	Units	Symbol	
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	U	0.1
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	0.1

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
SVOC 625 + TICs

SAL Reference	134442 001	134442 004
Customer Sample Reference	BH08/02 0.20	BH08/01 0.40
Test Sample	A105	A105
Type	Sand	Sand
Date Sampled		
Depth	0.20	0.40

Determinand	Technique	LOD	Units	Symbol		
Phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.1
Bis (2-chloroethyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2-Chlorophenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
1,3-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
1,4-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
1,2-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Bis (2-chloroisopropyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2-methyl phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
3/4-Methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.5
Hexachloroethane	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Nitrobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Isophorone	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,4-Dimethylphenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Bis (2-chloroethoxy) methane	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2,4-Dichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
1,2,4-Trichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	1.0
4-Chloroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Hexachlorobutadiene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
4-Chloro-3-methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2-Methylnaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	2.9
Hexachlorocyclopentadiene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,4,6-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,4,5-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2-Chloronaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Dimethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,6-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	4.6
3-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,4-Dinitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Dibenzofuran	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	4.1
2,4-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
4-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Diethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	3.2
4-Chlorophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
SVOC 625 + TICs

SAL Reference	134442 001	134442 004
Customer Sample Reference	BH08/02 0.20	BH08/01 0.40
Test Sample	A105	A105
Type	Sand	Sand
Date Sampled		
Depth	0.20	0.40

Determinand	Technique	LOD	Units	Symbol		
4-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Azobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
4-Bromophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Hexachlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Pentachlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.8	21
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.3	1.3
Carbazole	GC/MS(MCERTS)	0.1	mg/kg	U	0.4	0.1
Di-n-butylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	2.6	17
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	2.7	12
Butyl benzylphthalate	GC/MS(MCERTS)	0.1	mg/kg	U	0.3	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	2.2	9.0
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	1.8	8.0
Bis (2-ethylhexyl)phthalate	GC/MS(MCERTS)	0.1	mg/kg	M	2.5	0.5
Di-n-octylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	4.9	12
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.9	6.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.9	3.3
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	1.0
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	2.3	3.8
Semi-Volatile Organic Compounds Screen (additional peaks)	GC/MS(MCERTS)	1	mg/kg	N	<1	<1

SAL Reference: 134442**Project Site: McNulty's Yard, South Shields****Customer Reference: 3676****Soil** **Analysed as Soil**
VOC 624 + TICs

SAL Reference	134442 001	134442 004
Customer Sample Reference	BH08/02 0.20	BH08/01 0.40
Test Sample	A105	A105
Type	Sand	Sand
Date Sampled		
Depth	0.20	0.40

Determinand	Technique	LOD	Units	Symbol		
1,1,1,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1,1-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1,2,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
1,1,2-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2,3-Trichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
1,2,4-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2-dibromoethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,3,5-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,3-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,3-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,4-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
2,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
2-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
4-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
VOC 624 + TICs

SAL Reference	134442 001	134442 004
Customer Sample Reference	BH08/02 0.20	BH08/01 0.40
Test Sample	A105	A105
Type	Sand	Sand
Date Sampled		
Depth	0.20	0.40

Determinand	Technique	LOD	Units	Symbol		
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Bromobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Bromochloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Bromodichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Bromoform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Bromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
Carbon tetrachloride	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chlorodibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chloroform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
Cis-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Cis-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Dibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Dichlorodifluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Dichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(13)<50	(13)<50
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Isopropyl benzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
 VOC 624 + TICs

SAL Reference	134442 001	134442 004
Customer Sample Reference	BH08/02 0.20	BH08/01 0.40
Test Sample	A105	A105
Type	Sand	Sand
Date Sampled		
Depth	0.20	0.40

Determinand	Technique	LOD	Units	Symbol		
n-Propylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
p-Isopropyltoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Sec-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Styrene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
Tert-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Tetrachloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	⁽¹³⁾ <10	⁽¹³⁾ <10
Trans-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Trans-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Trichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Trichlorofluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Vinyl chloride monomer	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Volatile Organic Compounds (Top 10 Screen)	GC/MS(Head Space)(MCERTS)	10	µg/kg	N	<10	<10

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
 VOC 624 + TICs (Fill)

SAL Reference 134442 005

Customer Sample Reference BH08/01 2.00

Test Sample A105

Type Fill

Date Sampled

Depth 2.00

Determinand	Technique	LOD	Units	Symbol	
1,1,1,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,1,1-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,1,2,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,1,2-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,1-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,1-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,1-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,2,3-Trichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,2,4-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,2-dibromoethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,2-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,2-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,3,5-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,3-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,3-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,4-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
2,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
2-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
4-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	U	<10
Bromobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Bromochloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Bromodichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Bromoform	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Bromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Carbon tetrachloride	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Chlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Chlorodibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Chloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Chloroform	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Chloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Cis-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Cis-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Dibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Dichlorodifluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Dichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	⁽¹³⁾ <50
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	U	<10
Isopropyl benzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	U	<10

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
VOC 624 + TICs (Fill)

SAL Reference 134442 005

Customer Sample Reference BH08/01 2.00

Test Sample A105

Type Fill

Date Sampled

Depth 2.00

Determinand	Technique	LOD	Units	Symbol	
n-Propylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	U	<10
p-Isopropyltoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Sec-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Styrene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Tert-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Tetrachloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	U	⁽¹³⁾ <10
Trans-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Trans-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Trichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Trichlorofluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Vinyl chloride monomer	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Volatile Organic Compounds (Top 10 Screen)	GC/MS(Head Space)(MCERTS)	10	µg/kg	N	<10

SAL Reference: 134442					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Soil Analysed as Soil					
TBT - Organotins					
SAL Reference					134442 002
Customer Sample Reference					BH08/02 1.00
Test Sample					AR
Type					Clay
Date Sampled					
Depth					1.00
Determinand	Technique	LOD	Units	Symbol	
Dibutyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	<0.01
Tetrabutyl tin	GC/MS	0.01	mg/kg	N	<0.01
Tributyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	<0.01
Triphenyl Tin	GC/MS	0.01	mg/kg	N	<0.01

SAL Reference: 134442							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3676							
Soil		Analysed as Soil					
Metals							
SAL Reference		134442 003	134442 004	134442 004			
Customer Sample Reference		BH08/02 3.60	BH08/01 0.40	BH08/01 0.40			
Test Sample		A40	AR	A40			
Type		Clay	Sand	Sand			
Date Sampled							
Depth		3.60	0.40	0.40			
Determinand	Technique	LOD	Units	Symbol			
Arsenic	ICP/OES	2	mg/kg	M	5	-	95
Barium	ICP/OES	1	mg/kg	U	160	-	1100
Beryllium	ICP/OES	1	mg/kg	U	<1	-	3
Boron (water-soluble)	ICP/OES	1	mg/kg	N	-	<1	-
Cadmium	ICP/OES	1	mg/kg	M	<1	-	2
Chromium	ICP/OES	1	mg/kg	M	25	-	33
Copper	ICP/OES	1	mg/kg	M	37	-	330
Lead	ICP/OES	1	mg/kg	M	24	-	1100
Mercury	ICP/OES	1	mg/kg	M	<1	-	45
Nickel	ICP/OES	1	mg/kg	M	26	-	68
Selenium	ICP/OES	2	mg/kg	M	<2	-	<2
Vanadium	ICP/OES	1	mg/kg	M	22	-	110
Zinc	ICP/OES	1	mg/kg	M	100	-	660

SAL Reference: 134442						
Project Site: McNulty's Yard, South Shields						
Customer Reference: 3676						
Soil		Analysed as Soil				
Metals (Fill)						
SAL Reference			134442 005	134442 005		
Customer Sample Reference			BH08/01 2.00	BH08/01 2.00		
Test Sample			AR	A40		
Type			Fill	Fill		
Date Sampled						
Depth			2.00	2.00		
Determinand	Technique	LOD	Units	Symbol		
Arsenic	ICP/OES	2.0	mg/kg	U	-	7.6
Barium	ICP/OES	1	mg/kg	U	-	230
Beryllium	ICP/OES	1	mg/kg	U	-	<1
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-
Cadmium	ICP/OES	1.0	mg/kg	U	-	<1.0
Chromium	ICP/OES	1.0	mg/kg	U	-	26
Copper	ICP/OES	1.0	mg/kg	U	-	34
Lead	ICP/OES	1.0	mg/kg	U	-	51
Mercury	ICP/OES	1.0	mg/kg	U	-	2.0
Nickel	ICP/OES	1.0	mg/kg	U	-	29
Selenium	ICP/OES	2.0	mg/kg	U	-	<2.0
Vanadium	ICP/OES	1.0	mg/kg	U	-	27
Zinc	ICP/OES	1.0	mg/kg	U	-	81

SAL Reference: 134442

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
Miscellaneous

SAL Reference	134442	134442	134442	134442	134442	134442
	001	002	003	004	005	006
Customer Sample Reference	BH08/02	BH08/02	BH08/02	BH08/01	BH08/01	BH08/01
	0.20	1.00	3.60	0.40	2.00	10.50
Test Sample	AR	AR	AR	AR	AR	AR
Type	Sand	Clay	Clay	Sand	Fill	Clay
Date Sampled						
Depth	0.20	1.00	3.60	0.40	2.00	10.50

Determinand	Technique	LOD	Units	Symbol						
Asbestos (Screen Only)	Visual			N	ND	ND	-	ND	-	-
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	2.7	-	-	-	-	-
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	-	-	<1	<1	-
pH	Probe			U	-	-	-	-	8.6	-
pH	Probe			M	8.6	8.7	8.4	9.7	-	-
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	-	-	<1	-	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	-	0.3	0.2	-	-	0.1

SAL Reference: 134442							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3676							
Soil		Analysed as Soil					
TOC							
		SAL Reference		134442 001	134442 003	134442 004	
		Customer Sample Reference		BH08/02 0.20	BH08/02 3.60	BH08/01 0.40	
		Test Sample		A40	A40	A40	
		Type		Sand	Clay	Sand	
		Date Sampled					
		Depth		0.20	3.60	0.40	
Determinand	Technique	LOD	Units	Symbol			
Total Organic Carbon	OX/IR	0.1	%	N	6.3	1.2	10

Scientific Analysis Laboratories

Certificate of Analysis

Report Number: 134137-1

Date of Report: 17-Jun-2008

Client: Allied Exploration & Geotechnics Ltd,
Unit 25,
Stella Gill Industrial Estate,
Pelton Fell,
Chester le Street,
Co Durham.
DH2 2RJ

Client Contact: Ms Jill Fishwick
Client Job Reference: 3676
Client Site Reference: McNulty's Yard, South Shields
Client Purchase Order: CH-0056

Date Job Received at SAL: 05-Jun-2008

Date Analysis Started: 09-Jun-2008

Date Analysis Completed: 16-Jun-2008

The results reported relate to samples received at the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS or MCERTS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

Key to symbols used in this report:

W: Analysis was sub-contracted and performed at another SAL Laboratory

S: Analysis was sub-contracted

N: Analysis is not UKAS accredited

U: Analysis is UKAS accredited

M: Analysis is MCERTS accredited

Report checked
and authorised by:

Mr Ross Walker
Assistant Customer Services Manager



1549
Group



1549

Index to caveats used in this report

Value	Description
ND	Not Detected
AR	As Received
A40	Assisted dried < 40C
A105	Assisted dried at 105C
9	LOD raised due to dilution of sample
13	Results have been blank corrected.

SAL Reference: 134137								
Project Site: McNulty's Yard, South Shields								
Customer Reference: 3676								
Soil Analysed as Soil								
MCERTS Preparation								
SAL Reference					134137 001	134137 002	134137 003	134137 004
Customer Sample Reference					BH08/20 1.00	BH08/20 2.10	BH08/20 9.50	BH08/12 7.00
Test Sample					AR	AR	AR	AR
Type					Clay	Clay	Clay	Clay
Date Sampled								
Depth					1.00	2.10	9.50	7.00
Determinand	Technique	LOD	Units	Symbol				
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	16	24	12	21
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	19	19	11	13

SAL Reference: 134137						
Project Site: McNulty's Yard, South Shields						
Customer Reference: 3676						
Soil		Analysed as Soil				
BTEX						
SAL Reference						134137 001
Customer Sample Reference						BH08/20 1.00
Test Sample						A105
Type						Clay
Date Sampled						
Depth						1.00
Determinand	Technique	LOD	Units	Symbol		
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	21	
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	17	
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	⁽¹³⁾ <10	

SAL Reference: 134137

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
EPH

SAL Reference	134137 002	134137 003	134137 004
Customer Sample Reference	BH08/20 2.10	BH08/20 9.50	BH08/12 7.00
Test Sample	AR	AR	AR
Type	Clay	Clay	Clay
Date Sampled			
Depth	2.10	9.50	7.00

Determinand	Technique	LOD	Units	Symbol			
Total Petroleum Hydrocarbons (C10-C12)	GC/FID	1	mg/kg	U	<1	<1	<1
Total Petroleum Hydrocarbons (C12-C16)	GC/FID	1	mg/kg	U	1	<1	<1
Total Petroleum Hydrocarbons (C16-C21)	GC/FID	1	mg/kg	U	3	<1	2
Total Petroleum Hydrocarbons (C21-C35)	GC/FID	1	mg/kg	U	13	<1	8
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	2	<1	<1
Total Petroleum Hydrocarbons (C10 - C40)	GC/FID	1	mg/kg	N	19	<1	10

SAL Reference: 134137

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
TPH Al/Aro

SAL Reference	134137 001	134137 001
Customer Sample Reference	BH08/20 1.00	BH08/20 1.00
Test Sample	AR	A105
Type	Clay	Clay
Date Sampled		
Depth	1.00	1.00

Determinand	Technique	LOD	Units	Symbol		
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	4	-
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	12	-
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	71	-

Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	0.250
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	2	-
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	10	-
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	58	-

SAL Reference: 134137

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**

Total and Speciated USEPA16 PAH

		SAL Reference	134137 001	134137 002		
		Customer Sample Reference	BH08/20 1.00	BH08/20 2.10		
		Test Sample	A105	A105		
		Type	Clay	Clay		
		Date Sampled				
		Depth	1.00	2.10		
Determinand	Technique	LOD	Units	Symbol		
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	2.3	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.6	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	3.1	0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	2.5	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	1.0	<0.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	1.3	<0.1
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	0.1
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	14	0.2

SAL Reference: 134137**Project Site: McNulty's Yard, South Shields****Customer Reference: 3676****Soil** **Analysed as Soil**
Semi-Volatile Organic Compounds (USEPA 625)**SAL Reference** 134137 001**Customer Sample Reference** BH08/20
1.00**Test Sample** A105**Type** Clay**Date Sampled****Depth** 1.00

Determinand	Technique	LOD	Units	Symbol	
1,2,4-Trichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
1,2-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
1,3-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
1,4-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
2,4,5-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
2,4,6-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
2,4-Dichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
2,4-Dimethylphenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
2,4-Dinitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
2,4-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
2,6-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
2-Chloronaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
2-Chlorophenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
2-methyl phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
2-Methylnaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3
2-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
2-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
3-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
3/4-Methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
4-Bromophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
4-Chloro-3-methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
4-Chloroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
4-Chlorophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
4-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
4-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.6
Azobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	1.0
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4
Bis (2-chloroethoxy) methane	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Bis (2-chloroethyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Bis (2-chloroisopropyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Bis (2-ethylhexyl)phthalate	GC/MS(MCERTS)	0.1	mg/kg	M	0.7
Butyl benzylphthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Carbazole	GC/MS(MCERTS)	0.1	mg/kg	U	0.3
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	1.3

SAL Reference: 134137

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference 134137 001

Customer Sample Reference BH08/20
1.00

Test Sample A105

Type Clay

Date Sampled

Depth 1.00

Determinand	Technique	LOD	Units	Symbol	
Di-n-butylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Di-n-octylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Dibenzofuran	GC/MS(MCERTS)	0.1	mg/kg	M	0.2
Diethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Dimethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	3.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2
Hexachlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Hexachlorobutadiene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Hexachlorocyclopentadiene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Hexachloroethane	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3
Isophorone	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4
Nitrobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Pentachlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	2.3
Phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	2.5
Semi-Volatile Organic Compounds Screen (additional peaks)	GC/MS(MCERTS)	1	mg/kg	N	<1

SAL Reference: 134137**Project Site: McNulty's Yard, South Shields****Customer Reference: 3676****Soil** **Analysed as Soil**
Volatle Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	134137 001
Customer Sample Reference	BH08/20 1.00
Test Sample	A105
Type	Clay
Date Sampled	
Depth	1.00

Determinand	Technique	LOD	Units	Symbol	
1,1,1,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1,1-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1,2,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,1,2-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,2,3-Trichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,2,4-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	86
1,2-dibromoethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,2-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,2-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,3,5-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,3-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,3-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,4-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
2,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
2-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
4-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10

SAL Reference: 134137					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Soil		Analysed as Soil			
TBT - Organotins					
SAL Reference					134137 001
Customer Sample Reference					BH08/20 1.00
Test Sample					AR
Type					Clay
Date Sampled					
Depth					1.00
Determinand	Technique	LOD	Units	Symbol	
Dibutyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	⁽⁹⁾ <0.10
Tetrabutyl tin	GC/MS	0.01	mg/kg	N	<0.01
Tributyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	⁽⁹⁾ <0.10
Triphenyl Tin	GC/MS	0.01	mg/kg	N	⁽⁹⁾ <0.10

SAL Reference: 134137
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	134137 001	134137 001	134137 002	134137 002
Customer Sample Reference	BH08/20 1.00	BH08/20 1.00	BH08/20 2.10	BH08/20 2.10
Test Sample	AR	A40	AR	A40
Type	Clay	Clay	Clay	Clay
Date Sampled				
Depth	1.00	1.00	2.10	2.10

Determinand	Technique	LOD	Units	Symbol				
Arsenic	ICP/OES	2	mg/kg	M	-	34	-	15
Barium	ICP/OES	1	mg/kg	U	-	890	-	410
Beryllium	ICP/OES	1	mg/kg	U	-	4	-	2
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-	<1	-
Cadmium	ICP/OES	1	mg/kg	M	-	1	-	<1
Chromium	ICP/OES	1	mg/kg	M	-	50	-	34
Copper	ICP/OES	1	mg/kg	M	-	240	-	68
Lead	ICP/OES	1	mg/kg	M	-	240	-	68
Mercury	ICP/OES	1	mg/kg	M	-	5	-	3
Nickel	ICP/OES	1	mg/kg	M	-	47	-	42
Selenium	ICP/OES	2	mg/kg	M	-	<2	-	<2
Vanadium	ICP/OES	1	mg/kg	M	-	110	-	55
Zinc	ICP/OES	1	mg/kg	M	-	490	-	120

SAL Reference: 134137

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Miscellaneous

SAL Reference	134137 001	134137 002	134137 003	134137 004
Customer Sample Reference	BH08/20 1.00	BH08/20 2.10	BH08/20 9.50	BH08/12 7.00
Test Sample	AR	AR	AR	AR
Type	Clay	Clay	Clay	Clay
Date Sampled				
Depth	1.00	2.10	9.50	7.00

Determinand	Technique	LOD	Units	Symbol				
Asbestos (Screen Only)	Visual			N	ND	-	-	-
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	3.4	0.5	-	-
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	<1	-	-
pH	Probe			M	10.5	9.0	8.2	8.2
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	-	-	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	-	0.3	<0.1	0.2

SAL Reference: 134137					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Soil	Analysed as Soil				
TOC					
	SAL Reference	134137 001	134137 002	134137 003	134137 004
	Customer Sample Reference	BH08/20 1.00	BH08/20 2.10	BH08/20 9.50	BH08/12 7.00
	Test Sample	A40	A40	A40	A40
	Type	Clay	Clay	Clay	Clay
	Date Sampled				
	Depth	1.00	2.10	9.50	7.00
Determinand	Technique	LOD	Units	Symbol	
Total Organic Carbon	OX/IR	0.1	%	N	9.0 3.5 1.3 1.3

Scientific Analysis Laboratories

Certificate of Analysis

Report Number: 133843-1

Date of Report: 16-Jun-2008

Client: Allied Exploration & Geotechnics Ltd,
Unit 25,
Stella Gill Industrial Estate,
Pelton Fell,
Chester le Street,
Co Durham.
DH2 2RJ

Client Contact: Ms Jill Fishwick
Client Job Reference: 3676
Client Site Reference: McNulty's Yard, South Shields
Client Purchase Order: CH-0056

Date Job Received at SAL: 02-Jun-2008

Date Analysis Started: 09-Jun-2008

Date Analysis Completed: 16-Jun-2008

The results reported relate to samples received at the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS or MCERTS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

Key to symbols used in this report:

W: Analysis was sub-contracted and performed at another SAL Laboratory

S: Analysis was sub-contracted

N: Analysis is not UKAS accredited

U: Analysis is UKAS accredited

M: Analysis is MCERTS accredited

Report checked
and authorised by:

Mr Ross Walker
Assistant Customer Services Manager



1549
Group



1549

Index to caveats used in this report

Value	Description
ND	Not Detected
AR	As Received
A40	Assisted dried < 40C
A105	Assisted dried at 105C
2	LOD Raised Due to Matrix Interference
9	LOD raised due to dilution of sample
13	Results have been blank corrected.
26	LOD raised because the analysis was performed by an alternative technique

Notes:

"Fill" samples are outside the scope of our MCERTS accreditation. Results are UKAS only

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil Analysed as Soil									
MCERTS Preparation									
SAL Reference		133843	133843	133843	133843	133843			
		001	002	003	004	005			
Customer Sample Reference		BH08/19	BH08/19	WS08/01	WS08/01	WS08/02			
		1.40	4.00	0.30	2.10	1.20			
Test Sample		AR	AR	AR	AR	AR			
Type		Sand	Sand	Sand	Sand	Sand			
Date Sampled									
Top Depth									
Depth		1.40	4.00	0.30	2.10	1.20			
Determinand	Technique	LOD	Units	Symbol					
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	19	18	9.7	28	14
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	18	17	7.9	17	11

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil Analysed as Soil									
MCERTS Preparation									
SAL Reference		133843	133843	133843	133843	133843			
		006	007	008	009	010			
Customer Sample Reference		WS08/02	WS08/03	WS08/03	WS08/04	WS08/04			
		4.10	1.20	3.10	1.10	4.10			
Test Sample		AR	AR	AR	AR	AR			
Type		Sand	Sand	Clay	Sand	Fill			
Date Sampled									
Top Depth									
Depth		4.10	1.20	3.10	1.10	4.10			
Determinand	Technique	LOD	Units	Symbol					
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	17	19	17	17	4.1
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	17	13	18	17	14

SAL Reference: 133843								
Project Site: McNulty's Yard, South Shields								
Customer Reference: 3676								
Soil		Analysed as Soil						
MCERTS Preparation								
SAL Reference				133843 011	133843 012	133843 013	133843 014	
Customer Sample Reference				WS08/05 2.10-3.10	WS08/05 4.10-5.00	WS08/08 0.30	WS08/08 2.10	
Test Sample				AR	AR	AR	AR	
Type				Sand	Clay	Sand	Sand	
Date Sampled								
Top Depth				2.10	4.10			
Depth				3.10	5.00	0.30	2.10	
Determinand	Technique	LOD	Units	Symbol				
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	20	8.8	5.4	24
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	20	14	4.8	19

SAL Reference: 133843										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
BTEX										
SAL Reference					133843	133843	133843	133843	133843	
					001	002	003	007	009	
Customer Sample Reference					BH08/19	BH08/19	WS08/01	WS08/03	WS08/04	
					1.40	4.00	0.30	1.20	1.10	
Test Sample					A105	A105	A105	A105	A105	
Type					Sand	Sand	Sand	Sand	Sand	
Date Sampled										
Top Depth										
Depth					1.40	4.00	0.30	1.20	1.10	
Determinand										
Technique										
LOD										
Units										
Symbol										
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	(2)<50	<10	
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	(2)<50	<10	
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	(2)<50	<10	
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	(2)<50	<10	
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	(2)<50	<10	

SAL Reference: 133843										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
BTEX										
SAL Reference					133843 011		133843 014			
Customer Sample Reference					WS08/05 2.10-3.10			WS08/08 2.10		
Test Sample					A105		A105			
Type					Sand		Sand			
Date Sampled										
Top Depth					2.10					
Depth					3.10		2.10			
Determinand										
Technique										
LOD										
Units										
Symbol										
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10		(2)<20			
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10		(2)<20			
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10		(2)<20			
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10		(2)<20			
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10		(2)<20			

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil	Analysed as Soil								
EPH									
SAL Reference		133843	133843	133843	133843	133843			
		002	004	005	006	008			
Customer Sample Reference		BH08/19	WS08/01	WS08/02	WS08/02	WS08/03			
		4.00	2.10	1.20	4.10	3.10			
Test Sample		AR	AR	AR	AR	AR			
Type		Sand	Sand	Sand	Sand	Clay			
Date Sampled									
Top Depth									
Depth		4.00	2.10	1.20	4.10	3.10			
Determinand	Technique	LOD	Units	Symbol					
Total Petroleum Hydrocarbons (C10-C12)	GC/FID	1	mg/kg	U	<1	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C12-C16)	GC/FID	1	mg/kg	U	2	<1	<1	<1	1
Total Petroleum Hydrocarbons (C16-C21)	GC/FID	1	mg/kg	U	9	<1	<1	<1	2
Total Petroleum Hydrocarbons (C21-C35)	GC/FID	1	mg/kg	U	29	2	2	2	3
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	4	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C10 - C40)	GC/FID	1	mg/kg	N	44	2	2	2	6

SAL Reference: 133843

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
EPH

SAL Reference	133843 010	133843 011	133843 012	133843 013
Customer Sample Reference	WS08/04 4.10	WS08/05 2.10-3.10	WS08/05 4.10-5.00	WS08/08 0.30
Test Sample	AR	AR	AR	AR
Type	Fill	Sand	Clay	Sand
Date Sampled				
Top Depth		2.10	4.10	
Depth	4.10	3.10	5.00	0.30

Determinand	Technique	LOD	Units	Symbol				
Total Petroleum Hydrocarbons (C10-C12)	GC/FID	1	mg/kg	U	<1	1	⁽⁹⁾ <10	⁽⁹⁾ <10
Total Petroleum Hydrocarbons (C12-C16)	GC/FID	1	mg/kg	U	<1	4	⁽⁹⁾ <10	⁽⁹⁾ <10
Total Petroleum Hydrocarbons (C16-C21)	GC/FID	1	mg/kg	U	<1	4	15	⁽⁹⁾ <10
Total Petroleum Hydrocarbons (C21-C35)	GC/FID	1	mg/kg	U	<1	3	340	120
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	<1	<1	230	80
Total Petroleum Hydrocarbons (C10 - C40)	GC/FID	1	mg/kg	N	<1	12	590	200

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TPH Ali/Aro									
SAL Reference		133843	133843	133843	133843	133843			
		001	001	003	003	007			
Customer Sample Reference		BH08/19	BH08/19	WS08/01	WS08/01	WS08/03			
		1.40	1.40	0.30	0.30	1.20			
Test Sample		AR	A105	AR	A105	AR			
Type		Sand	Sand	Sand	Sand	Sand			
Date Sampled									
Top Depth									
Depth		1.40	1.40	0.30	0.30	1.20			
Determinand	Technique	LOD	Units	Symbol					
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	<1	-	3	-	19
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	(13)<1	-	12	-	18
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	(13)<1	-	32	-	13
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-

SAL Reference: 133843										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
TPH Ali/Aro										
SAL Reference					133843	133843	133843	133843	133843	
					001	001	003	003	007	
Customer Sample Reference					BH08/19	BH08/19	WS08/01	WS08/01	WS08/03	
					1.40	1.40	0.30	0.30	1.20	
Test Sample					AR	A105	AR	A105	AR	
Type					Sand	Sand	Sand	Sand	Sand	
Date Sampled										
Top Depth										
Depth					1.40	1.40	0.30	0.30	1.20	
Determinand	Technique	LOD	Units	Symbol						
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	<1	-	1	-	2	
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	<1	-	5	-	9	
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	⁽¹³⁾ <1	-	27	-	15	

SAL Reference: 133843										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
TPH Ali/Aro										
SAL Reference					133843	133843	133843	133843	133843	
					007	009	009	014	014	
Customer Sample Reference					WS08/03	WS08/04	WS08/04	WS08/08	WS08/08	
					1.20	1.10	1.10	2.10	2.10	
Test Sample					A105	AR	A105	AR	A105	
Type					Sand	Sand	Sand	Sand	Sand	
Date Sampled										
Top Depth										
Depth					1.20	1.10	1.10	2.10	2.10	
Determinand	Technique	LOD	Units	Symbol						
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	⁽²⁾ <0.500	-	<0.100	-	⁽²⁾ <0.200	
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	⁽²⁾ <0.500	-	<0.100	-	⁽²⁾ <0.200	

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TPH Ali/Aro									
SAL Reference		133843	133843	133843	133843	133843	133843	133843	133843
Customer Sample Reference		007	009	009	014	014	014	014	014
Test Sample		WS08/03	WS08/04	WS08/04	WS08/08	WS08/08	WS08/08	WS08/08	WS08/08
Type		1.20	1.10	1.10	2.10	2.10	2.10	2.10	2.10
Date Sampled		A105	AR	A105	AR	A105	AR	A105	A105
Top Depth		Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Depth									
Depth		1.20	1.10	1.10	2.10	2.10	2.10	2.10	2.10
Determinand	Technique	LOD	Units	Symbol					
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.500	-	<0.100	-	(2)<0.200
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.500	-	<0.100	-	(2)<0.200
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	-	(13)<1	-	(13)<1	-
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	-	(13)<1	-	(13)<1	-
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	-	(13)<1	-	(13)<1	-
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.500	-	<0.100	-	(2)<0.200
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.500	-	<0.100	-	(2)<0.200
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.500	-	<0.100	-	(2)<0.200
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.500	-	<0.100	-	(2)<0.200
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	-	<1	-	<1	-

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TPH Ali/Aro									
SAL Reference		133843	133843	133843	133843	133843			
		007	009	009	014	014			
Customer Sample Reference		WS08/03	WS08/04	WS08/04	WS08/08	WS08/08			
		1.20	1.10	1.10	2.10	2.10			
Test Sample		A105	AR	A105	AR	A105			
Type		Sand	Sand	Sand	Sand	Sand			
Date Sampled									
Top Depth									
Depth		1.20	1.10	1.10	2.10	2.10			
Determinand	Technique	LOD	Units	Symbol					
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	-	<1	-	(13)<1	-
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	-	<1	-	<1	-

SAL Reference: 133843

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**

Total and Speciated USEPA16 PAH

SAL Reference	133843	133843	133843	133843	133843
	006	007	008	009	011
Customer Sample Reference	WS08/02	WS08/03	WS08/03	WS08/04	WS08/05
	4.10	1.20	3.10	1.10	2.10-3.10
Test Sample	A105	A105	A105	A105	A105
Type	Sand	Sand	Clay	Sand	Sand
Date Sampled					
Top Depth					2.10
Depth	4.10	1.20	3.10	1.10	3.10

Determinand	Technique	LOD	Units	Symbol					
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.4	<0.1	<0.1	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	1.5	<0.1	0.1	0.9
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	0.3
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.2	<0.1	<0.1	0.3
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.2	<0.1	<0.1	0.2
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.1	<0.1	<0.1	<0.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	0.3	0.1	<0.1	0.1
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	0.1	<0.1	<0.1	<0.1
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	2.8	0.1	0.1	1.9

SAL Reference: 133843

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**

Total and Speciated USEPA16 PAH

SAL Reference	133843 012	133843 013	133843 014
Customer Sample Reference	WS08/05 4.10-5.00	WS08/08 0.30	WS08/08 2.10
Test Sample	A105	A105	A105
Type	Clay	Sand	Sand
Date Sampled			
Top Depth	4.10		
Depth	5.00	0.30	2.10

Determinand	Technique	LOD	Units	Symbol			
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	0.8	0.3
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	0.3	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	1.8	0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	1.5	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	1.0	<0.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	1.2	0.2
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.6	1.2	0.2
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	0.9	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	0.5	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.1	<0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	0.5	<0.1
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	2.7	9.8	0.8

SAL Reference: 133843

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
PAH (Fill)

SAL Reference	133843 010
Customer Sample Reference	WS08/04 4.10
Test Sample	A105
Type	Fill
Date Sampled	
Top Depth	
Depth	4.10

Determinand	Technique	LOD	Units	Symbol	
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	U	0.1
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	U	0.1
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	0.2

SAL Reference: 133843

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference	133843 002	133843 009	133843 011
Customer Sample Reference	BH08/19 4.00	WS08/04 1.10	WS08/05 2.10-3.10
Test Sample	A105	A105	A105
Type	Sand	Sand	Sand
Date Sampled			
Top Depth			2.10
Depth	4.00	1.10	3.10

Determinand	Technique	LOD	Units	Symbol			
Phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
Bis (2-chloroethyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
2-Chlorophenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
1,3-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
1,4-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
1,2-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
Bis (2-chloroisopropyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
2-methyl phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
3/4-Methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	<0.1
Hexachloroethane	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Nitrobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
Isophorone	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
2-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
2,4-Dimethylphenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Bis (2-chloroethoxy) methane	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
2,4-Dichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
1,2,4-Trichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.6	<0.1	<0.1
4-Chloroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Hexachlorobutadiene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
2-Methylnaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1	0.2
Hexachlorocyclopentadiene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
2,4,5-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
2-Chloronaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
2-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
Dimethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
2,6-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	<0.1	<0.1
3-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
2,4-Dinitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Dibenzofuran	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	<0.1	0.2
2,4-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1
4-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Diethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	<0.1	0.1

SAL Reference: 133843
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Soil Analysed as Soil
Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133843 002	133843 009	133843 011
Customer Sample Reference	BH08/19 4.00	WS08/04 1.10	WS08/05 2.10-3.10
Test Sample	A105	A105	A105
Type	Sand	Sand	Sand
Date Sampled			
Top Depth			2.10
Depth	4.00	1.10	3.10

Determinand	Technique	LOD	Units	Symbol			
1,1,1,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,1,1-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,1,2,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50
1,1,2-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,1-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,1-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,1-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,2,3-Trichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50
1,2,4-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,2-dibromoethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,2-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,2-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,3,5-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,3-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,3-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
1,4-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
2,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50
2-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50

SAL Reference: 133843

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133843 002	133843 009	133843 011
Customer Sample Reference	BH08/19 4.00	WS08/04 1.10	WS08/05 2.10-3.10
Test Sample	A105	A105	A105
Type	Sand	Sand	Sand
Date Sampled			
Top Depth			2.10
Depth	4.00	1.10	3.10

Determinand	Technique	LOD	Units	Symbol			
4-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10
Bromobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Bromochloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Bromodichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Bromoform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Bromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50
Carbon tetrachloride	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Chlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Chlorodibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Chloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Chloroform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Chloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50
Cis-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Cis-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Dibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Dichlorodifluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Dichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10

SAL Reference: 133843
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Soil Analysed as Soil
Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133843 002	133843 009	133843 011
Customer Sample Reference	BH08/19 4.00	WS08/04 1.10	WS08/05 2.10-3.10
Test Sample	A105	A105	A105
Type	Sand	Sand	Sand
Date Sampled			
Top Depth			2.10
Depth	4.00	1.10	3.10

Determinand	Technique	LOD	Units	Symbol			
Isopropyl benzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10
n-Propylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10
p-Isopropyltoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Sec-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Styrene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50
Tert-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Tetrachloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10
Trans-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Trans-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Trichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Trichlorofluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Vinyl chloride monomer	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50
Volatile Organic Compounds (Top 10 Screen)	GC/MS(Head Space)(MCERTS)	10	µg/kg	N	<10	<10	<10

SAL Reference: 133843						
Project Site: McNulty's Yard, South Shields						
Customer Reference: 3676						
Soil		Analysed as Soil				
TBT - Organotins						
SAL Reference		133843 010	133843 012			
Customer Sample Reference		WS08/04 4.10	WS08/05 4.10-5.00			
Test Sample		AR	AR			
Type		Fill	Clay			
Date Sampled						
Top Depth			4.10			
Depth		4.10	5.00			
Determinand	Technique	LOD	Units	Symbol		
Dibutyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	<0.01	⁽⁹⁾ <0.10
Tetrabutyl tin	GC/MS	0.01	mg/kg	N	<0.01	<0.01
Tributyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	<0.01	⁽⁹⁾ <0.10
Triphenyl Tin	GC/MS	0.01	mg/kg	N	<0.01	⁽⁹⁾ <0.10

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
BRE SD1									
SAL Reference		133843	133843	133843	133843	133843			
		001	001	006	006	008			
Customer Sample Reference		BH08/19	BH08/19	WS08/02	WS08/02	WS08/03			
		1.40	1.40	4.10	4.10	3.10			
Test Sample		AR	A40	AR	A40	AR			
Type		Sand	Sand	Sand	Sand	Clay			
Date Sampled									
Top Depth									
Depth		1.40	1.40	4.10	4.10	3.10			
Determinand	Technique	LOD	Units	Symbol					
Ammonia expressed as NH4	Titration	5	mg/kg	N	58	-	79	-	79
Chloride (2:1)	IC	0.5	mg/l	WN	70	-	5000	-	5100
Magnesium water soluble	ICP/OES	0.1	g/l	N	<0.1	-	<0.1	-	<0.1
Nitrate (2:1)	IC	0.5	mg/l	WN	68	-	(26)<4.0	-	(26)<4.0
pH	Probe			U	8.0	-	8.5	-	7.9
Sulphate (Total)	ICP/OES	0.01	%	N	-	3.2	-	0.26	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	1.3	-	0.2	-	0.3
Sulphur (Total)	OX/IR	0.01	%	N	-	1.5	-	0.18	-

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
BRE SD1									
SAL Reference		133843 008							
Customer Sample Reference		WS08/03 3.10							
Test Sample		A40							
Type		Clay							
Date Sampled									
Top Depth									
Depth		3.10							
Determinand	Technique	LOD	Units	Symbol					
Ammonia expressed as NH4	Titration	5	mg/kg	N	-				
Chloride (2:1)	IC	0.5	mg/l	WN	-				
Magnesium water soluble	ICP/OES	0.1	g/l	N	-				
Nitrate (2:1)	IC	0.5	mg/l	WN	-				
pH	Probe			U	-				
Sulphate (Total)	ICP/OES	0.01	%	N	0.28				
Sulphate(2:1)	ICP/OES	0.1	g/l	N	-				
Sulphur (Total)	OX/IR	0.01	%	N	0.31				

SAL Reference: 133843

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133843 001	133843 001	133843 002	133843 002	133843 003
Customer Sample Reference	BH08/19 1.40	BH08/19 1.40	BH08/19 4.00	BH08/19 4.00	WS08/01 0.30
Test Sample	AR	A40	AR	A40	AR
Type	Sand	Sand	Sand	Sand	Sand
Date Sampled					
Top Depth					
Depth	1.40	1.40	4.00	4.00	0.30

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	-	36	-	34	-
Barium	ICP/OES	1	mg/kg	U	-	380	-	780	-
Beryllium	ICP/OES	1	mg/kg	U	-	3	-	3	-
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-	<1	-	<1
Cadmium	ICP/OES	1	mg/kg	M	-	<1	-	<1	-
Chromium	ICP/OES	1	mg/kg	M	-	32	-	39	-
Copper	ICP/OES	1	mg/kg	M	-	130	-	140	-
Lead	ICP/OES	1	mg/kg	M	-	91	-	150	-
Mercury	ICP/OES	1	mg/kg	M	-	<1	-	<1	-
Nickel	ICP/OES	1	mg/kg	M	-	44	-	52	-
Selenium	ICP/OES	2	mg/kg	M	-	<2	-	<2	-
Vanadium	ICP/OES	1	mg/kg	M	-	120	-	120	-
Zinc	ICP/OES	1	mg/kg	M	-	39	-	97	-

SAL Reference: 133843**Project Site: McNulty's Yard, South Shields****Customer Reference: 3676****Soil** **Analysed as Soil**
Metals

SAL Reference	133843 006	133843 006	133843 007	133843 007	133843 008
Customer Sample Reference	WS08/02 4.10	WS08/02 4.10	WS08/03 1.20	WS08/03 1.20	WS08/03 3.10
Test Sample	AR	A40	AR	A40	AR
Type	Sand	Sand	Sand	Sand	Clay
Date Sampled					
Top Depth					
Depth	4.10	4.10	1.20	1.20	3.10

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	-	15	-	32	-
Barium	ICP/OES	1	mg/kg	U	-	220	-	370	-
Beryllium	ICP/OES	1	mg/kg	U	-	2	-	2	-
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-	<1	-	1
Cadmium	ICP/OES	1	mg/kg	M	-	<1	-	<1	-
Chromium	ICP/OES	1	mg/kg	M	-	24	-	15	-
Copper	ICP/OES	1	mg/kg	M	-	85	-	88	-
Lead	ICP/OES	1	mg/kg	M	-	92	-	83	-
Mercury	ICP/OES	1	mg/kg	M	-	<1	-	<1	-
Nickel	ICP/OES	1	mg/kg	M	-	31	-	32	-
Selenium	ICP/OES	2	mg/kg	M	-	<2	-	<2	-
Vanadium	ICP/OES	1	mg/kg	M	-	59	-	76	-
Zinc	ICP/OES	1	mg/kg	M	-	120	-	49	-

SAL Reference: 133843
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133843 008	133843 009	133843 009	133843 011	133843 011
Customer Sample Reference	WS08/03 3.10	WS08/04 1.10	WS08/04 1.10	WS08/05 2.10-3.10	WS08/05 2.10-3.10
Test Sample	A40	AR	A40	AR	A40
Type	Clay	Sand	Sand	Sand	Sand
Date Sampled					
Top Depth				2.10	2.10
Depth	3.10	1.10	1.10	3.10	3.10

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	20	-	7	-	100
Barium	ICP/OES	1	mg/kg	U	190	-	180	-	250
Beryllium	ICP/OES	1	mg/kg	U	2	-	<1	-	2
Boron (water-soluble)	ICP/OES	1	mg/kg	N	-	<1	-	<1	-
Cadmium	ICP/OES	1	mg/kg	M	<1	-	<1	-	2
Chromium	ICP/OES	1	mg/kg	M	21	-	20	-	22
Copper	ICP/OES	1	mg/kg	M	45	-	25	-	170
Lead	ICP/OES	1	mg/kg	M	48	-	26	-	91
Mercury	ICP/OES	1	mg/kg	M	<1	-	<1	-	<1
Nickel	ICP/OES	1	mg/kg	M	32	-	19	-	31
Selenium	ICP/OES	2	mg/kg	M	<2	-	<2	-	<2
Vanadium	ICP/OES	1	mg/kg	M	55	-	38	-	88
Zinc	ICP/OES	1	mg/kg	M	52	-	51	-	150

SAL Reference: 133843					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Soil		Analysed as Soil			
Metals					
SAL Reference					133843 014
Customer Sample Reference					WS08/08 2.10
Test Sample					A40
Type					Sand
Date Sampled					
Top Depth					
Depth					2.10
Determinand	Technique	LOD	Units	Symbol	
Arsenic	ICP/OES	2	mg/kg	M	20
Barium	ICP/OES	1	mg/kg	U	330
Beryllium	ICP/OES	1	mg/kg	U	2
Boron (water-soluble)	ICP/OES	1	mg/kg	N	-
Cadmium	ICP/OES	1	mg/kg	M	<1
Chromium	ICP/OES	1	mg/kg	M	18
Copper	ICP/OES	1	mg/kg	M	85
Lead	ICP/OES	1	mg/kg	M	84
Mercury	ICP/OES	1	mg/kg	M	<1
Nickel	ICP/OES	1	mg/kg	M	43
Selenium	ICP/OES	2	mg/kg	M	<2
Vanadium	ICP/OES	1	mg/kg	M	87
Zinc	ICP/OES	1	mg/kg	M	75

SAL Reference: 133843					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Soil		Analysed as Soil			
Metals (Fill)					
		SAL Reference	133843 010	133843 010	
		Customer Sample Reference	WS08/04 4.10	WS08/04 4.10	
		Test Sample	AR	A40	
		Type	Fill	Fill	
		Date Sampled			
		Top Depth			
		Depth	4.10	4.10	
Determinand	Technique	LOD	Units	Symbol	
Arsenic	ICP/OES	2.0	mg/kg	U	- 35
Barium	ICP/OES	1	mg/kg	U	- 140
Beryllium	ICP/OES	1	mg/kg	U	- 2
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1 -
Cadmium	ICP/OES	1.0	mg/kg	U	- <1.0
Chromium	ICP/OES	1.0	mg/kg	U	- 23
Copper	ICP/OES	1.0	mg/kg	U	- 54
Lead	ICP/OES	1.0	mg/kg	U	- 58
Mercury	ICP/OES	1.0	mg/kg	U	- <1.0
Nickel	ICP/OES	1.0	mg/kg	U	- 37
Selenium	ICP/OES	2.0	mg/kg	U	- <2.0
Vanadium	ICP/OES	1.0	mg/kg	U	- 59
Zinc	ICP/OES	1.0	mg/kg	U	- 130

SAL Reference: 133843									
Project Site: McNully's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference		133843	133843	133843	133843	133843	133843	133843	133843
		001	002	003	004	005	004	005	005
Customer Sample Reference		BH08/19	BH08/19	WS08/01	WS08/01	WS08/02	WS08/01	WS08/01	WS08/02
		1.40	4.00	0.30	2.10	1.20	2.10	2.10	1.20
Test Sample		AR	AR	AR	AR	AR	AR	AR	AR
Type		Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Date Sampled									
Top Depth									
Depth		1.40	4.00	0.30	2.10	1.20	2.10	2.10	1.20
Determinand	Technique	LOD	Units	Symbol					
Asbestos (Screen Only)	Visual			N	ND	ND	ND	ND	-
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	0.2	0.4	1.5	1.0	2.0
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	<1	<1	-	<1
pH	Probe			U	-	-	-	-	-
pH	Probe			M	8.0	9.6	10.2	8.1	9.0
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	-	-	-	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	1.3	0.4	0.2	0.2	0.1

SAL Reference: 133843

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil

Miscellaneous

SAL Reference	133843 006	133843 007	133843 008	133843 009	133843 010
Customer Sample Reference	WS08/02 4.10	WS08/03 1.20	WS08/03 3.10	WS08/04 1.10	WS08/04 4.10
Test Sample	AR	AR	AR	AR	AR
Type	Sand	Sand	Clay	Sand	Fill
Date Sampled					
Top Depth					
Depth	4.10	1.20	3.10	1.10	4.10

Determinand	Technique	LOD	Units	Symbol					
Asbestos (Screen Only)	Visual			N	ND	ND	ND	ND	ND
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	1.5	18	3.6	-	-
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	<1	-	<1	<1
pH	Probe			U	-	-	-	-	8.0
pH	Probe			M	8.5	8.1	7.9	8.2	-
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	-	<1	-	<1	<1
Sulphate(2:1)	ICP/OES	0.1	g/l	N	0.2	0.2	0.3	0.1	0.2

SAL Reference: 133843
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Soil Analysed as Soil
Miscellaneous

SAL Reference	133843 011	133843 012	133843 013	133843 014
Customer Sample Reference	WS08/05 2.10-3.10	WS08/05 4.10-5.00	WS08/08 0.30	WS08/08 2.10
Test Sample	AR	AR	AR	AR
Type	Sand	Clay	Sand	Sand
Date Sampled				
Top Depth	2.10	4.10		
Depth	3.10	5.00	0.30	2.10

Determinand	Technique	LOD	Units	Symbol				
Asbestos (Screen Only)	Visual			N	ND	ND	ND	ND
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	-	-	0.5	11
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	<1	<1	<1
pH	Probe			U	-	-	-	-
pH	Probe			M	8.0	7.9	8.5	7.3
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	<1	<1	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	0.1	0.2	<0.1	0.3

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TOC									
SAL Reference		133843	133843	133843	133843	133843			
		001	002	003	004	005			
Customer Sample Reference		BH08/19	BH08/19	WS08/01	WS08/01	WS08/02			
		1.40	4.00	0.30	2.10	1.20			
Test Sample		A40	A40	A40	A40	A40			
Type		Sand	Sand	Sand	Sand	Sand			
Date Sampled									
Top Depth									
Depth		1.40	4.00	0.30	2.10	1.20			
Determinand	Technique	LOD	Units	Symbol					
Total Organic Carbon	OX/IR	0.1	%	N	1.0	2.4	5.0	4.9	2.2

SAL Reference: 133843									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TOC									
SAL Reference		133843	133843	133843	133843	133843			
		006	007	008	009	010			
Customer Sample Reference		WS08/02	WS08/03	WS08/03	WS08/04	WS08/04			
		4.10	1.20	3.10	1.10	4.10			
Test Sample		A40	A40	A40	A40	A40			
Type		Sand	Sand	Clay	Sand	Fill			
Date Sampled									
Top Depth									
Depth		4.10	1.20	3.10	1.10	4.10			
Determinand	Technique	LOD	Units	Symbol					
Total Organic Carbon	OX/IR	0.1	%	N	4.9	49	11	4.8	13

SAL Reference: 133843

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
TOC

SAL Reference	133843 011	133843 012	133843 013	133843 014
Customer Sample Reference	WS08/05 2.10-3.10	WS08/05 4.10-5.00	WS08/08 0.30	WS08/08 2.10
Test Sample	A40	A40	A40	A40
Type	Sand	Clay	Sand	Sand
Date Sampled				
Top Depth	2.10	4.10		
Depth	3.10	5.00	0.30	2.10

Determinand	Technique	LOD	Units	Symbol				
Total Organic Carbon	OX/IR	0.1	%	N	26	12	1.5	33

Scientific Analysis Laboratories

Certificate of Analysis

Report Number: 133842-2

Date of Report: 16-Jun-2008

Client: Allied Exploration & Geotechnics Ltd,
Unit 25,
Stella Gill Industrial Estate,
Pelton Fell,
Chester le Street,
Co Durham.
DH2 2RJ

Client Contact: Ms Jill Fishwick
Client Job Reference: 3676
Client Site Reference: McNulty's Yard, South Shields
Client Purchase Order: CH-0056

Date Job Received at SAL: 30-May-2008

Date Analysis Started: 09-Jun-2008

Date Analysis Completed: 13-Jun-2008

The results reported relate to samples received at the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS or MCERTS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

Key to symbols used in this report:

W: Analysis was sub-contracted and performed at another SAL Laboratory

S: Analysis was sub-contracted

N: Analysis is not UKAS accredited

U: Analysis is UKAS accredited

M: Analysis is MCERTS accredited

Report checked
and authorised by:

Mr Ross Walker
Assistant Customer Services Manager



1549
Group

1549

Index to caveats used in this report

Value	Description
ND	Not Detected
AR	As Received
A40	Assisted dried < 40C
A105	Assisted dried at 105C
2	LOD Raised Due to Matrix Interference
9	LOD raised due to dilution of sample
13	Results have been blank corrected.
26	LOD raised because the analysis was performed by an alternative technique

SAL Reference: 133842										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
MCERTS Preparation										
SAL Reference					133842	133842	133842	133842	133842	
					001	002	003	004	005	
Customer Sample Reference					BH08/07	BH08/07	BH08/07	BH08/10	BH08/11	
					0.40	5.00	7.00	11.00	1.00	
Test Sample					AR	AR	AR	AR	AR	
Type					Clay	Clay	Clay	Clay	Clay	
Date Sampled										
Depth					0.40	5.00	7.00	11.00	1.00	
Determinand	Technique	LOD	Units	Symbol						
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	11	14	11	19	6.8	
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	9.4	9.6	10	15	7.8	

SAL Reference: 133842										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
MCERTS Preparation										
SAL Reference					133842	133842	133842	133842	133842	
					006	007	008	009	010	
Customer Sample Reference					BH08/11	BH08/14	BH08/14	BH08/14	BH08/15	
					4.00	0.30	1.30	3.00	0.20	
Test Sample					AR	AR	AR	AR	AR	
Type					Clay	Clay	Clay	Clay	Clay	
Date Sampled										
Depth					4.00	0.30	1.30	3.00	0.20	
Determinand	Technique	LOD	Units	Symbol						
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	12	17	17	15	11	
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	8.1	12	13	10	7.6	

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
MCERTS Preparation									
SAL Reference					133842 011	133842 012	133842 013	133842 014	133842 015
Customer Sample Reference					BH08/15 1.45	BH08/15 2.00	BH08/16 1.00	BH08/16 6.20	BH08/16 8.00
Test Sample					AR	AR	AR	AR	AR
Type					Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth					1.45	2.00	1.00	6.20	8.00
Determinand	Technique	LOD	Units	Symbol					
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	18	21	15	14	13
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	12	14	13	10	9.3

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
MCERTS Preparation									
SAL Reference					133842 016	133842 017	133842 018	133842 019	133842 020
Customer Sample Reference					BH08/17 0.40	BH08/17 6.00	BH08/18 0.40	BH08/18 2.00	BH08/18 4.00
Test Sample					AR	AR	AR	AR	AR
Type					Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth					0.40	6.00	0.40	2.00	4.00
Determinand	Technique	LOD	Units	Symbol					
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	16	9.4	12	23	8.4
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	12	9.3	8.5	15	6.7

SAL Reference: 133842					
Project Site: McNulty's Yard, South Shields					
Customer Reference: 3676					
Soil		Analysed as Soil			
MCERTS Preparation					
		SAL Reference		133842 021	133842 022
		Customer Sample Reference		BH08/12 1.00	BH08/12 3.00
		Test Sample		AR	AR
		Type		Clay	Clay
		Date Sampled			
		Depth		1.00	3.00
Determinand	Technique	LOD	Units	Symbol	
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	14
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	9.4
					16
					12

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil Analysed as Soil									
BTEX									
SAL Reference		133842	133842	133842	133842	133842			
		001	002	005	007	008			
Customer Sample Reference		BH08/07	BH08/07	BH08/11	BH08/14	BH08/14			
		0.40	5.00	1.00	0.30	1.30			
Test Sample		A105	A105	A105	A105	A105			
Type		Clay	Clay	Clay	Clay	Clay			
Date Sampled									
Depth		0.40	5.00	1.00	0.30	1.30			
Determinand	Technique	LOD	Units	Symbol					
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13,2)<30	(13)<10	(13)<10	(2)<20	(13)15
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2)<30	<10	<10	(2)<20	<10
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2)<30	<10	<10	27	17
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2)<30	<10	<10	25	14
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13,2)<30	(13)<10	(13)<10	(13)26	(13)20

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil Analysed as Soil									
BTEX									
SAL Reference		133842	133842	133842	133842	133842			
		010	011	012	013	016			
Customer Sample Reference		BH08/15	BH08/15	BH08/15	BH08/16	BH08/17			
		0.20	1.45	2.00	1.00	0.40			
Test Sample		A105	A105	A105	A105	A105			
Type		Clay	Clay	Clay	Clay	Clay			
Date Sampled									
Depth		0.20	1.45	2.00	1.00	0.40			
Determinand	Technique	LOD	Units	Symbol					
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2)<20	(13)<10	(13)<10	(13)<10	(13)<10
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2)<20	<10	<10	<10	<10
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2)<20	<10	17	<10	<10
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2)<20	<10	<10	<10	<10
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2)<20	(13)<10	(13)<10	(13)<10	(13)<10

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
BTEX

SAL Reference	133842 018	133842 019	133842 021	133842 022
Customer Sample Reference	BH08/18 0.40	BH08/18 2.00	BH08/12 1.00	BH08/12 3.00
Test Sample	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay
Date Sampled				
Depth	0.40	2.00	1.00	3.00

Determinand	Technique	LOD	Units	Symbol				
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13)<10	(13,2)<20	(13)<10	(13)<10
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	(2)<20	<10	<10
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	(2)<20	<10	<10
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	(2)<20	<10	<10
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13)<10	(13,2)<20	(13)<10	(13)<10

SAL Reference: 133842 Project Site: McNulty's Yard, South Shields Customer Reference: 3676										
Soil		Analysed as Soil								
EPH										
SAL Reference					133842	133842	133842	133842	133842	133842
					002	003	004	006	009	
Customer Sample Reference					BH08/07	BH08/07	BH08/10	BH08/11	BH08/14	
					5.00	7.00	11.00	4.00	3.00	
Test Sample					AR	AR	AR	AR	AR	AR
Type					Clay	Clay	Clay	Clay	Clay	Clay
Date Sampled										
Depth					5.00	7.00	11.00	4.00	3.00	
Determinand	Technique	LOD	Units	Symbol						
Total Petroleum Hydrocarbons (C10-C12)	GC/FID	1	mg/kg	U	<1	<1	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C12-C16)	GC/FID	1	mg/kg	U	1	2	<1	<1	<1	1
Total Petroleum Hydrocarbons (C16-C21)	GC/FID	1	mg/kg	U	2	10	<1	<1	<1	4
Total Petroleum Hydrocarbons (C21-C35)	GC/FID	1	mg/kg	U	7	34	3	<1	<1	17
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	<1	2	<1	<1	<1	1
Total Petroleum Hydrocarbons (C10 - C40)	GC/FID	1	mg/kg	N	10	48	3	<1	<1	23

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
EPH

SAL Reference	133842 014	133842 015	133842 017	133842 019	133842 020
Customer Sample Reference	BH08/16 6.20	BH08/16 8.00	BH08/17 6.00	BH08/18 2.00	BH08/18 4.00
Test Sample	AR	AR	AR	AR	AR
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	6.20	8.00	6.00	2.00	4.00

Determinand	Technique	LOD	Units	Symbol					
Total Petroleum Hydrocarbons (C10-C12)	GC/FID	1	mg/kg	U	<1	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C12-C16)	GC/FID	1	mg/kg	U	<1	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C16-C21)	GC/FID	1	mg/kg	U	<1	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C21-C35)	GC/FID	1	mg/kg	U	<1	<1	<1	3	<1
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	<1	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C10 - C40)	GC/FID	1	mg/kg	N	<1	<1	<1	3	<1

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
TPH All/Aro

SAL Reference	133842	133842	133842	133842	133842
	001	001	005	005	007
Customer Sample Reference	BH08/07	BH08/07	BH08/11	BH08/11	BH08/14
	0.40	0.40	1.00	1.00	0.30
Test Sample	AR	A105	AR	A105	AR
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.40	0.40	1.00	1.00	0.30

Determinand	Technique	LOD	Units	Symbol					
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(2) <0.300	-	<0.100	-
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(2) <0.300	-	<0.100	-
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(2) <0.300	-	<0.100	-
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(2) <0.300	-	<0.100	-
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	(9) <10	-	2	-	1
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	15	-	3	-	5
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	300	-	17	-	34
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(2) <0.300	-	<0.100	-
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(2) <0.300	-	<0.100	-
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(2) <0.300	-	<0.100	-
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(2) <0.300	-	<0.100	-
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	(9) <10	-	<1	-	<1

SAL Reference: 133842										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
TPH Ali/Aro										
SAL Reference					133842	133842	133842	133842	133842	
					001	001	005	005	007	
Customer Sample Reference					BH08/07	BH08/07	BH08/11	BH08/11	BH08/14	
					0.40	0.40	1.00	1.00	0.30	
Test Sample					AR	A105	AR	A105	AR	
Type					Clay	Clay	Clay	Clay	Clay	
Date Sampled										
Depth					0.40	0.40	1.00	1.00	0.30	
Determinand	Technique	LOD	Units	Symbol						
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	11	-	6	-	3	
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	130	-	27	-	16	

SAL Reference: 133842										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
TPH Ali/Aro										
SAL Reference					133842	133842	133842	133842	133842	
					007	008	008	010	010	
Customer Sample Reference					BH08/14	BH08/14	BH08/14	BH08/15	BH08/15	
					0.30	1.30	1.30	0.20	0.20	
Test Sample					A105	AR	A105	AR	A105	
Type					Clay	Clay	Clay	Clay	Clay	
Date Sampled										
Depth					0.30	1.30	1.30	0.20	0.20	
Determinand	Technique	LOD	Units	Symbol						
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.200	-	<0.100	-	(2)<0.200	
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.200	-	<0.100	-	(2)<0.200	
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.200	-	<0.100	-	(2)<0.200	
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(2)<0.200	-	<0.100	-	(2)<0.200	

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
TPH Ali/Aro

SAL Reference	133842 007	133842 008	133842 008	133842 010	133842 010
Customer Sample Reference	BH08/14 0.30	BH08/14 1.30	BH08/14 1.30	BH08/15 0.20	BH08/15 0.20
Test Sample	A105	AR	A105	AR	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.30	1.30	1.30	0.20	0.20

Determinand	Technique	LOD	Units	Symbol					
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	-	1	-	10	-
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	-	2	-	34	-
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	-	11	-	450	-

Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	⁽²⁾ <0.200	-	<0.100	-	⁽²⁾ <0.200
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	⁽²⁾ <0.200	-	<0.100	-	⁽²⁾ <0.200
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	⁽²⁾ <0.200	-	<0.100	-	⁽²⁾ <0.200
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	⁽²⁾ <0.200	-	<0.100	-	⁽²⁾ <0.200
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	-	<1	-	⁽⁹⁾ <10	-
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	-	2	-	32	-
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	-	12	-	290	-

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
TPH All/Aro

SAL Reference	133842	133842	133842	133842	133842
	011	011	012	012	013
Customer Sample Reference	BH08/15	BH08/15	BH08/15	BH08/15	BH08/16
	1.45	1.45	2.00	2.00	1.00
Test Sample	AR	A105	AR	A105	AR
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	1.45	1.45	2.00	2.00	1.00

Determindand	Technique	LOD	Units	Symbol					
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	5	-	2	-	2
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	12	-	4	-	6
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	76	-	23	-	14
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	0.101	-
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100	-
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	1	-	1	-	<1

SAL Reference: 133842										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
TPH Ali/Aro										
SAL Reference					133842	133842	133842	133842	133842	
					011	011	012	012	013	
Customer Sample Reference					BH08/15	BH08/15	BH08/15	BH08/15	BH08/16	
					1.45	1.45	2.00	2.00	1.00	
Test Sample					AR	A105	AR	A105	AR	
Type					Clay	Clay	Clay	Clay	Clay	
Date Sampled										
Depth					1.45	1.45	2.00	2.00	1.00	
Determinand	Technique	LOD	Units	Symbol						
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	5	-	3	-	7	
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	31	-	17	-	36	

SAL Reference: 133842										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3676										
Soil		Analysed as Soil								
TPH Ali/Aro										
SAL Reference					133842	133842	133842	133842	133842	
					013	016	016	018	018	
Customer Sample Reference					BH08/16	BH08/17	BH08/17	BH08/18	BH08/18	
					1.00	0.40	0.40	0.40	0.40	
Test Sample					A105	AR	A105	AR	A105	
Type					Clay	Clay	Clay	Clay	Clay	
Date Sampled										
Depth					1.00	0.40	0.40	0.40	0.40	
Determinand	Technique	LOD	Units	Symbol						
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	<0.100	-	<0.100	-	<0.100	
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	<0.100	-	<0.100	-	<0.100	
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	<0.100	-	<0.100	-	<0.100	
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	<0.100	-	<0.100	-	<0.100	

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
TPH All/Aro

SAL Reference	133842	133842	133842	133842	133842
	013	016	016	018	018
Customer Sample Reference	BH08/16	BH08/17	BH08/17	BH08/18	BH08/18
	1.00	0.40	0.40	0.40	0.40
Test Sample	A105	AR	A105	AR	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	1.00	0.40	0.40	0.40	0.40

Determinand	Technique	LOD	Units	Symbol					
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	-	4	-	(9)<10	-
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	-	6	-	16	-
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	-	18	-	340	-
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	<0.100	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	<0.100	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	<0.100	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	<0.100	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	-	1	-	(9)<10	-
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	-	5	-	15	-
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	-	26	-	200	-

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
TPH All/Aro

SAL Reference	133842 021	133842 021	133842 022	133842 022
Customer Sample Reference	BH08/12 1.00	BH08/12 1.00	BH08/12 3.00	BH08/12 3.00
Test Sample	AR	A105	AR	A105
Type	Clay	Clay	Clay	Clay
Date Sampled				
Depth	1.00	1.00	3.00	3.00

Determinand	Technique	LOD	Units	Symbol				
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	2	-	1	-
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	9	-	3	-
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	24	-	10	-
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	<1	-	<1	-
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	3	-	2	-

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
TPH Ali/Aro

SAL Reference	133842 021	133842 021	133842 022	133842 022
Customer Sample Reference	BH08/12 1.00	BH08/12 1.00	BH08/12 3.00	BH08/12 3.00
Test Sample	AR	A105	AR	A105
Type	Clay	Clay	Clay	Clay
Date Sampled				
Depth	1.00	1.00	3.00	3.00

Determinand	Technique	LOD	Units	Symbol				
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	15	-	8	-

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**

Total and Speciated USEPA16 PAH

SAL Reference	133842	133842	133842	133842	133842
	001	002	004	005	006
Customer Sample Reference	BH08/07	BH08/07	BH08/10	BH08/11	BH08/11
	0.40	5.00	11.00	1.00	4.00
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.40	5.00	11.00	1.00	4.00

Determinand	Technique	LOD	Units	Symbol					
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	<0.1	0.2	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	<0.1	<0.1	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	<0.1	<0.1	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.6	0.3	<0.1	0.6	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.4	<0.1	<0.1	0.1	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	2.5	0.5	<0.1	0.9	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.9	0.3	<0.1	0.7	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	1.5	0.2	<0.1	0.5	0.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	1.2	0.2	0.1	0.5	0.2
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	1.7	0.3	<0.1	0.6	<0.1
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	0.1	<0.1	0.3	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	<0.1	<0.1	0.2	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.6	<0.1	<0.1	0.2	<0.1
Polycyclic Aromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	13	1.9	0.1	4.8	0.3

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil

Total and Speciated USEPA16 PAH

SAL Reference	133842 007	133842 008	133842 009	133842 010	133842 011
Customer Sample Reference	BH08/14 0.30	BH08/14 1.30	BH08/14 3.00	BH08/15 0.20	BH08/15 1.45
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.30	1.30	3.00	0.20	1.45

Determinand	Technique	LOD	Units	Symbol					
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	0.3	2.5	0.4	0.5
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.4	1.3	0.9	0.4
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.4	1.4	0.8	0.5
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	2.4	8.8	6.6	3.9
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	0.6	2.3	2.2	1.0
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.9	2.3	11	16	6.3
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	1.6	8.0	13	5.0
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	1.2	4.3	6.0	3.0
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	1.0	4.9	6.0	2.8
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.6	1.4	6.4	9.1	3.2
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	0.5	3.0	4.4	1.5
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	0.3	1.5	2.2	0.9
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.1	0.5	0.7	0.3
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	0.3	1.8	2.6	1.1
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	4.8	13	58	71	30

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**

Total and Speciated USEPA16 PAH

SAL Reference	133842 012	133842 013	133842 014	133842 016	133842 017
Customer Sample Reference	BH08/15 2.00	BH08/16 1.00	BH08/16 6.20	BH08/17 0.40	BH08/17 6.00
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	2.00	1.00	6.20	0.40	6.00

Determinand	Technique	LOD	Units	Symbol					
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	0.2	<0.1	0.7	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	<0.1	0.1	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	1.2	<0.1	0.1	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.5	1.3	<0.1	1.5	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.4	1.2	<0.1	0.4	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	2.5	2.0	<0.1	2.0	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.9	1.6	<0.1	1.7	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	1.3	1.3	<0.1	1.3	0.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	1.1	1.2	0.1	1.1	0.2
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	1.3	1.3	<0.1	1.2	<0.1
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.6	0.6	<0.1	0.6	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	0.3	<0.1	0.3	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	0.3	<0.1	0.4	<0.1
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	12	12	0.1	12	0.3

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**

Total and Speciated USEPA16 PAH

SAL Reference	133842 018	133842 019	133842 020	133842 021	133842 022
Customer Sample Reference	BH08/18 0.40	BH08/18 2.00	BH08/18 4.00	BH08/12 1.00	BH08/12 3.00
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.40	2.00	4.00	1.00	3.00

Determinand	Technique	LOD	Units	Symbol					
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	<0.1	<0.1	1.1	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	0.2	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	<0.1	1.2	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	<0.1	1.5	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.0	<0.1	<0.1	10	0.4
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	<0.1	<0.1	3.0	0.2
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	1.6	<0.1	<0.1	14	1.0
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.4	<0.1	<0.1	11	0.8
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	1.1	<0.1	<0.1	7.4	0.7
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	0.9	<0.1	<0.1	6.6	0.7
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	1.3	<0.1	<0.1	8.3	0.9
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	<0.1	<0.1	3.6	0.3
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1	<0.1	2.1	0.2
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	<0.1	0.7	0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1	<0.1	2.3	0.3
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	9.0	<0.1	<0.1	73	5.6

SAL Reference: 133842

Project Site: McNully's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference	133842 001	133842 002	133842 005	133842 008	133842 011				
Customer Sample Reference	BH08/07 0.40	BH08/07 5.00	BH08/11 1.00	BH08/14 1.30	BH08/15 1.45				
Test Sample	A105	A105	A105	A105	A105				
Type	Clay	Clay	Clay	Clay	Clay				
Date Sampled									
Depth	0.40	5.00	1.00	1.30	1.45				
Determinand	Technique	LOD	Units	Symbol					
1,2,4-Trichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
1,4-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	0.7
2,4,5-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dimethylphenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2,6-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2-Chloronaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2-Chlorophenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2-methyl phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	0.3	0.2	0.3
2-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
3-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
3/4-Methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
4-Bromophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
4-Chloroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
4-Chlorophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
4-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
4-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	<0.1	0.4	0.4
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.4	<0.1	0.1	0.6	1.0
Azobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	1.5	0.2	0.5	1.2	3.0
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	0.1	0.3	0.5	1.5
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	1.7	0.3	0.6	1.4	3.2
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.6	<0.1	0.2	0.3	1.1
Bis (2-chloroethoxy) methane	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Bis (2-chloroethyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Bis (2-chloroisopropyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Bis (2-ethylhexyl)phthalate	GC/MS(MCERTS)	0.1	mg/kg	M	1.0	0.3	0.4	0.2	0.4
Butyl benzylphthalate	GC/MS(MCERTS)	0.1	mg/kg	U	0.1	<0.1	<0.1	1.3	<0.1

SAL Reference: 133842
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Soil **Analysed as Soil**
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference	133842 001	133842 002	133842 005	133842 008	133842 011
Customer Sample Reference	BH08/07 0.40	BH08/07 5.00	BH08/11 1.00	BH08/14 1.30	BH08/15 1.45
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.40	5.00	1.00	1.30	1.45

Determinand	Technique	LOD	Units	Symbol					
Carbazole	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	<0.1	<0.1	0.3	0.4
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	1.2	0.2	0.5	1.0	2.8
Di-n-butylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	<0.1	0.7	<0.1
Di-n-octylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	<0.1	0.1	0.3
Dibenzofuran	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	0.1	0.3	0.3
Diethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	<0.1	<0.1	<0.1	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	2.5	0.5	0.9	2.3	6.3
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	<0.1	0.4	0.5
Hexachlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobutadiene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorocyclopentadiene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachloroethane	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	<0.1	0.2	0.3	0.9
Isophorone	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	0.2	0.3	0.5
Nitrobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.6	0.3	0.6	2.4	3.9
Phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.9	0.3	0.7	1.6	5.0
Semi-Volatile Organic Compounds Screen (additional peaks)	GC/MS(MCERTS)	1	mg/kg	N	<1	<1	<1	<1	<1

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference	133842 012	133842 013	133842 016	133842 018	133842 019
Customer Sample Reference	BH08/15 2.00	BH08/16 1.00	BH08/17 0.40	BH08/18 0.40	BH08/18 2.00
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	2.00	1.00	0.40	0.40	2.00

Determinand	Technique	LOD	Units	Symbol					
1,2,4-Trichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
1,4-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	0.8	<0.1	<0.1	<0.1	<0.1
2,4,5-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dimethylphenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2,6-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
2-Chloronaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2-Chlorophenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2-methyl phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	0.2	0.7	0.2	<0.1
2-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
2-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
3-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
3/4-Methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1	<0.1	<0.1	<0.1
4-Bromophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
4-Chloroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
4-Chlorophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
4-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
4-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	0.1	0.1	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.4	1.2	0.4	0.2	<0.1
Azobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	1.3	1.3	1.3	1.1	<0.1
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.6	0.6	0.6	0.5	<0.1
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	1.3	1.3	1.2	1.3	<0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	0.3	0.4	0.4	<0.1
Bis (2-chloroethoxy) methane	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Bis (2-chloroethyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Bis (2-chloroisopropyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Bis (2-ethylhexyl)phtalate	GC/MS(MCERTS)	0.1	mg/kg	M	0.6	0.3	1.3	2.3	0.6

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference	133842	133842	133842	133842	133842
	012	013	016	018	019
Customer Sample Reference	BH08/15	BH08/16	BH08/17	BH08/18	BH08/18
	2.00	1.00	0.40	0.40	2.00
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	2.00	1.00	0.40	0.40	2.00

Determinand	Technique	LOD	Units	Symbol					
Butyl benzylphthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	0.2	0.4	<0.1
Carbazole	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	0.2	0.2	0.1	<0.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	1.1	1.2	1.1	0.9	<0.1
Di-n-butylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	0.1	<0.1
Di-n-octylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	0.2	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	0.1	0.1	<0.1
Dibenzofuran	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	0.1	0.3	0.1	<0.1
Diethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	2.5	2.0	2.0	1.6	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	1.2	0.1	0.1	<0.1
Hexachlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobutadiene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorocyclopentadiene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachloroethane	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	0.3	0.3	0.4	<0.1
Isophorone	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	0.2	0.7	0.3	<0.1
Nitrobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.5	1.3	1.5	1.0	<0.1
Phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.9	1.6	1.7	1.4	<0.1
Semi-Volatile Organic Compounds Screen (additional peaks)	GC/MS(MCERTS)	1	mg/kg	N	<1	<1	<1	<1	<1

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference	133842 021	133842 022
Customer Sample Reference	BH08/12 1.00	BH08/12 3.00
Test Sample Type	A105 Clay	A105 Clay
Date Sampled		
Depth	1.00	3.00

Determinand	Technique	LOD	Units	Symbol		
1,2,4-Trichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
1,2-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
1,3-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
1,4-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2,4,5-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,4,6-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,4-Dichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,4-Dimethylphenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,4-Dinitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2,4-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2,6-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
2-Chloronaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2-Chlorophenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2-methyl phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2-Methylnaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	<0.1
2-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
2-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
3-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
3/4-Methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
4-Bromophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
4-Chloro-3-methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
4-Chloroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
4-Chlorophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
4-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
4-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	1.2	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	3.0	0.2
Azobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	7.4	0.7
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	3.6	0.3
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	8.3	0.9
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	2.3	0.3
Bis (2-chloroethoxy) methane	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Bis (2-chloroethyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Bis (2-chloroisopropyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Bis (2-ethylhexyl)phthalate	GC/MS(MCERTS)	0.1	mg/kg	M	1.1	0.3
Butyl benzylphthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Carbazole	GC/MS(MCERTS)	0.1	mg/kg	U	1.6	<0.1

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference	133842 021	133842 022
Customer Sample Reference	BH08/12 1.00	BH08/12 3.00
Test Sample	A105	A105
Type	Clay	Clay
Date Sampled		
Depth	1.00	3.00

Determinand	Technique	LOD	Units	Symbol		
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	6.6	0.7
Di-n-butylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1
Di-n-octylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	0.1
Dibenzofuran	GC/MS(MCERTS)	0.1	mg/kg	M	1.2	<0.1
Diethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Dimethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	14	1.0
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	1.5	<0.1
Hexachlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Hexachlorobutadiene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Hexachlorocyclopentadiene	GC/MS(MCERTS)	0.1	mg/kg	U	0.5	<0.1
Hexachloroethane	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	2.1	0.2
Isophorone	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	1.1	<0.1
Nitrobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Pentachlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	10	0.4
Phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	11	0.8
Semi-Volatile Organic Compounds Screen (additional peaks)	GC/MS(MCERTS)	1	mg/kg	N	<1	<1

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
 Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133842 001	133842 002	133842 005	133842 008	133842 011
Customer Sample Reference	BH08/07 0.40	BH08/07 5.00	BH08/11 1.00	BH08/14 1.30	BH08/15 1.45
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.40	5.00	1.00	1.30	1.45

Determinand	Technique	LOD	Units	Symbol					
1,1,1,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,1,1-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,1,2,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(2) <150	<50	<50	<50	<50
1,1,2-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,1-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,1-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,1-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,2,3-Trichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(2) <150	<50	<50	<50	<50
1,2,4-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,2-dibromoethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,2-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	97
1,2-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,3,5-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,3-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,3-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
1,4-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	97
2,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(2) <150	<50	<50	<50	<50
2-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(2) <150	<50	<50	<50	<50
4-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(2) <150	<50	<50	<50	<50
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13,2) <30	(13) <10	(13) <10	(13) 15	(13) <10
Bromobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Bromochloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Bromodichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Bromoform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50

SAL Reference: 133842
 Project Site: McNulty's Yard, South Shields
 Customer Reference: 3676

Soil Analysed as Soil
 Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133842 001	133842 002	133842 005	133842 008	133842 011
Customer Sample Reference	BH08/07 0.40	BH08/07 5.00	BH08/11 1.00	BH08/14 1.30	BH08/15 1.45
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.40	5.00	1.00	1.30	1.45

Determinand	Technique	LOD	Units	Symbol					
Bromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(2) <150	<50	<50	<50	<50
Carbon tetrachloride	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Chlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Chlorodibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Chloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Chloroform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Chloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(2) <150	<50	<50	<50	<50
Cis-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Cis-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Dibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Dichlorodifluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Dichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(2) <150	<50	<50	<50	<50
Ethylbenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2) <30	<10	<10	<10	<10
Isopropyl benzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2) <30	<10	<10	17	<10
n-Propylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(2) <30	<10	<10	14	<10
p-Isopropyltoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Sec-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2) <150	<50	<50	<50	<50
Styrene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	(2) <150	<50	<50	<50	<50

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil Analysed as Soil									
Volatile Organic Compounds (USEPA 624) (MCERTS)									
SAL Reference		133842 001	133842 002	133842 005	133842 008	133842 011			
Customer Sample Reference		BH08/07 0.40	BH08/07 5.00	BH08/11 1.00	BH08/14 1.30	BH08/15 1.45			
Test Sample		A105				A105			
Type		Clay				Clay			
Date Sampled									
Depth		0.40	5.00	1.00	1.30	1.45			
Determinand	Technique	LOD	Units	Symbol					
Tert-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2)<150	<50	<50	<50	<50
Tetrachloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2)<150	<50	<50	<50	<50
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13.2)<30	(13)<10	(13)<10	(13)20	(13)<10
Trans-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2)<150	<50	<50	<50	<50
Trans-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2)<150	<50	<50	<50	<50
Trichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2)<150	<50	<50	<50	<50
Trichlorofluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2)<150	<50	<50	<50	<50
Vinyl chloride monomer	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	(2)<150	<50	<50	<50	<50
Volatile Organic Compounds (Top 10 Screen)	GC/MS(Head Space)(MCERTS)	10	µg/kg	N	<10	<10	<10	<10	1,2,4-Trimethylbenzene 16 1,4-Dichlorobenzene 98

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil Analysed as Soil									
Volatile Organic Compounds (USEPA 624) (MCERTS)									
SAL Reference		133842 012			133842 013	133842 016	133842 018	133842 019	
Customer Sample Reference		BH08/15 2.00			BH08/16 1.00	BH08/17 0.40	BH08/18 0.40	BH08/18 2.00	
Test Sample		A105			A105	A105	A105	A105	
Type		Clay			Clay	Clay	Clay	Clay	
Date Sampled									
Depth		2.00			1.00	0.40	0.40	2.00	
Determinand	Technique	LOD	Units	Symbol					
1,1,1,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
 Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133842 012	133842 013	133842 016	133842 018	133842 019
Customer Sample Reference	BH08/15 2.00	BH08/16 1.00	BH08/17 0.40	BH08/18 0.40	BH08/18 2.00
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	2.00	1.00	0.40	0.40	2.00

Determinand	Technique	LOD	Units	Symbol					
1,1,1-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,1,2,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2)<100
1,1,2-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,1-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,1-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,1-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,2,3-Trichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2)<100
1,2,4-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,2-dibromoethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,2-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	190	<50	<50	<50	(2)<100
1,2-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,3,5-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,3-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,3-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2)<100
1,4-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	190	<50	<50	<50	(2)<100
2,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2)<100
2-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2)<100
4-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2)<100
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13)<10	(13)<10	(13)<10	(13)<10	(13,2)<20

SAL Reference: 133842
Project Site: McNully's Yard, South Shields
Customer Reference: 3676

Soil Analysed as Soil
Volatlie Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133842 012	133842 013	133842 016	133842 018	133842 019
Customer Sample Reference	BH08/15 2.00	BH08/16 1.00	BH08/17 0.40	BH08/18 0.40	BH08/18 2.00
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	2.00	1.00	0.40	0.40	2.00

Determinand	Technique	LOD	Units	Symbol					
Bromobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Bromochloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Bromodichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Bromoform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Bromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2) <100
Carbon tetrachloride	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Chlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Chlorodibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Chloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Chloroform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Chloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2) <100
Cis-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Cis-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Dibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Dichlorodifluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Dichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2) <100
Ethylbenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10	(2) <20
Isopropyl benzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	17	<10	<10	<10	(2) <20
n-Propylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100

SAL Reference: 133842
 Project Site: McNulty's Yard, South Shields
 Customer Reference: 3676

Soil Analysed as Soil
 Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133842 012	133842 013	133842 016	133842 018	133842 019
Customer Sample Reference	BH08/15 2.00	BH08/16 1.00	BH08/17 0.40	BH08/18 0.40	BH08/18 2.00
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	2.00	1.00	0.40	0.40	2.00

Determinand	Technique	LOD	Units	Symbol					
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10	(2) <20
p-Isopropyltoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Sec-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Styrene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2) <100
Tert-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Tetrachloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13) <10	(13) <10	(13) <10	(13) <10	(13,2) <20
Trans-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Trans-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Trichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Trichlorofluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Vinyl chloride monomer	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Volatile Organic Compounds (Top 10 Screen)	GC/MS(Head Space)(MCERTS)	10	µg/kg	N	1,3,5-Trimethylbenzene 14 1,2,4-Trimethylbenzene 28 1,4-Dichlorobenzene 190 Unidentified Cyclic Alkene Circa C10 73 Unidentified Cyclic Alkene Circa C10 87	<10	<10	<10	<10

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
 Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133842 012	133842 013	133842 016	133842 018	133842 019
Customer Sample Reference	BH08/15 2.00	BH08/16 1.00	BH08/17 0.40	BH08/18 0.40	BH08/18 2.00
Test Sample	A105	A105	A105	A105	A105
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	2.00	1.00	0.40	0.40	2.00

Determinand	Technique	LOD	Units	Symbol					
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10	(2) <20
p-Isopropyltoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Sec-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Styrene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50	(2) <100
Tert-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Tetrachloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13) <10	(13) <10	(13) <10	(13) <10	(13,2) <20
Trans-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Trans-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Trichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Trichlorofluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Vinyl chloride monomer	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50	(2) <100
Volatile Organic Compounds (Top 10 Screen)	GC/MS(Head Space)(MCERTS)	10	µg/kg	N	1,3,5-Trimethylbenzene 14 1,2,4-Trimethylbenzene 28 1,4-Dichlorobenzene 190 Unidentified Cyclic Alkene Circa C10 73 Unidentified Cyclic Alkene Circa C10 87	<10	<10	<10	<10

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133842 021	133842 022
Customer Sample Reference	BH08/12 1.00	BH08/12 3.00
Test Sample	A105	A105
Type	Clay	Clay
Date Sampled		
Depth	1.00	3.00

Determinand	Technique	LOD	Units	Symbol		
1,1,1,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1,1-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1,2,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
1,1,2-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,1-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2,3-Trichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
1,2,4-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2-dibromoethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,3,5-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,3-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,3-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
1,4-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
2,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
2-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
4-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50

SAL Reference: 133842**Project Site:** McNulty's Yard, South Shields**Customer Reference:** 3676

Soil Analysed as Soil
Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133842 021	133842 022
Customer Sample Reference	BH08/12 1.00	BH08/12 3.00
Test Sample	A105	A105
Type	Clay	Clay
Date Sampled		
Depth	1.00	3.00

Determinand	Technique	LOD	Units	Symbol		
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13)<10	(13)<10
Bromobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Bromochloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Bromodichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Bromoform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Bromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
Carbon tetrachloride	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chlorodibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chloroform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Chloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
Cis-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Cis-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Dibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Dichlorodifluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Dichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Isopropyl benzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference	133842 021	133842 022
Customer Sample Reference	BH08/12 1.00	BH08/12 3.00
Test Sample Type	A105 Clay	A105 Clay
Date Sampled		
Depth	1.00	3.00

Determinand	Technique	LOD	Units	Symbol		
n-Propylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
p-Isopropyltoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Sec-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Styrene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50
Tert-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Tetrachloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	⁽¹³⁾ <10	⁽¹³⁾ <10
Trans-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Trans-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Trichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Trichlorofluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Vinyl chloride monomer	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50
Volatile Organic Compounds (Top 10 Screen)	GC/MS(Head Space)(MCERTS)	10	µg/kg	N	<10	<10

SAL Reference: 133842 Project Site: McNulty's Yard, South Shields Customer Reference: 3676									
Soil Analysed as Soil TBT - Organotins									
SAL Reference					133842 002	133842 008	133842 011	133842 012	133842 013
Customer Sample Reference					BH08/07 5.00	BH08/14 1.30	BH08/15 1.45	BH08/15 2.00	BH08/16 1.00
Test Sample					AR	AR	AR	AR	AR
Type					Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth					5.00	1.30	1.45	2.00	1.00
Determinand	Technique	LOD	Units	Symbol					
Dibutyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	<0.01	<0.01	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10
Tetrabutyl tin	GC/MS	0.01	mg/kg	N	<0.01	<0.01	<0.01	<0.01	<0.01
Tributyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	0.02	<0.01	1.8	3.4	⁽⁹⁾ <0.10
Triphenyl Tin	GC/MS	0.01	mg/kg	N	<0.01	<0.01	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10

SAL Reference: 133842 Project Site: McNulty's Yard, South Shields Customer Reference: 3676									
Soil Analysed as Soil TBT - Organotins									
SAL Reference					133842 018	133842 021	133842 022		
Customer Sample Reference					BH08/18 0.40	BH08/12 1.00	BH08/12 3.00		
Test Sample					AR	AR	AR		
Type					Clay	Clay	Clay		
Date Sampled									
Depth					0.40	1.00	3.00		
Determinand	Technique	LOD	Units	Symbol					
Dibutyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10	<0.01		
Tetrabutyl tin	GC/MS	0.01	mg/kg	N	<0.01	<0.01	<0.01		
Tributyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	⁽⁹⁾ <0.10	0.90	0.02		
Triphenyl Tin	GC/MS	0.01	mg/kg	N	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10	<0.01		

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
BRE SD1									
SAL Reference		133842	133842	133842	133842	133842	133842	133842	133842
		002	002	004	004	004	004	006	006
Customer Sample Reference		BH08/07	BH08/07	BH08/10	BH08/10	BH08/10	BH08/10	BH08/11	BH08/11
		5.00	5.00	11.00	11.00	11.00	11.00	4.00	4.00
Test Sample		AR	A40	AR	A40	AR	A40	AR	AR
Type		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth		5.00	5.00	11.00	11.00	11.00	11.00	4.00	4.00
Determinand	Technique	LOD	Units	Symbol					
Ammonia expressed as NH4	Titration	5	mg/kg	N	79	-	94	-	36
Chloride (2:1)	IC	0.5	mg/l	WN	82	-	220	-	26
Magnesium water soluble	ICP/OES	0.1	g/l	N	<0.1	-	<0.1	-	<0.1
Nitrate (2:1)	IC	0.5	mg/l	WN	(26)<4.0	-	(26)<4.0	-	26
pH	Probe			U	8.3	-	7.9	-	8.3
Sulphate (Total)	ICP/OES	0.01	%	N	-	0.46	-	0.20	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	0.8	-	<0.1	-	<0.1
Sulphur (Total)	OX/IR	0.01	%	N	-	<0.05	-	<0.05	-

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
BRE SD1									
SAL Reference		133842	133842	133842	133842	133842	133842	133842	133842
		006	009	009	013	013	013	013	013
Customer Sample Reference		BH08/11	BH08/14	BH08/14	BH08/16	BH08/16	BH08/16	BH08/16	BH08/16
		4.00	3.00	3.00	1.00	1.00	1.00	1.00	1.00
Test Sample		A40	AR	A40	AR	A40	AR	A40	A40
Type		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth		4.00	3.00	3.00	1.00	1.00	1.00	1.00	1.00
Determinand	Technique	LOD	Units	Symbol					
Ammonia expressed as NH4	Titration	5	mg/kg	N	-	<5	-	79	-
Chloride (2:1)	IC	0.5	mg/l	WN	-	180	-	240	-
Magnesium water soluble	ICP/OES	0.1	g/l	N	-	<0.1	-	<0.1	-
Nitrate (2:1)	IC	0.5	mg/l	WN	-	(26)<4.0	-	5.0	-
pH	Probe			U	-	8.9	-	8.3	-
Sulphate (Total)	ICP/OES	0.01	%	N	0.07	-	0.58	-	9.3
Sulphate(2:1)	ICP/OES	0.1	g/l	N	-	0.8	-	1.7	-
Sulphur (Total)	OX/IR	0.01	%	N	<0.05	-	0.09	-	0.08

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
BRE SD1									
SAL Reference		133842	133842	133842	133842	133842			
		014	014	015	015	017			
Customer Sample Reference		BH08/16	BH08/16	BH08/16	BH08/16	BH08/17			
		6.20	6.20	8.00	8.00	6.00			
Test Sample		AR	A40	AR	A40	AR			
Type		Clay	Clay	Clay	Clay	Clay			
Date Sampled									
Depth		6.20	6.20	8.00	8.00	6.00			
Determinand	Technique	LOD	Units	Symbol					
Ammonia expressed as NH4	Titration	5	mg/kg	N	94	-	72	-	<5
Chloride (2:1)	IC	0.5	mg/l	WN	2200	-	2000	-	2600
Magnesium water soluble	ICP/OES	0.1	g/l	N	<0.1	-	<0.1	-	<0.1
Nitrate (2:1)	IC	0.5	mg/l	WN	(26)<4.0	-	(26)<4.0	-	(26)<4.0
pH	Probe			U	8.7	-	8.2	-	8.4
Sulphate (Total)	ICP/OES	0.01	%	N	-	0.18	-	0.05	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	0.2	-	0.2	-	0.2
Sulphur (Total)	OX/IR	0.01	%	N	-	0.05	-	0.19	-

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
BRE SD1									
SAL Reference		133842	133842	133842	133842	133842			
		017	018	018	019	019			
Customer Sample Reference		BH08/17	BH08/18	BH08/18	BH08/18	BH08/18			
		6.00	0.40	0.40	2.00	2.00			
Test Sample		A40	AR	A40	AR	A40			
Type		Clay	Clay	Clay	Clay	Clay			
Date Sampled									
Depth		6.00	0.40	0.40	2.00	2.00			
Determinand	Technique	LOD	Units	Symbol					
Ammonia expressed as NH4	Titration	5	mg/kg	N	-	96	-	94	-
Chloride (2:1)	IC	0.5	mg/l	WN	-	220	-	68	-
Magnesium water soluble	ICP/OES	0.1	g/l	N	-	<0.1	-	<0.1	-
Nitrate (2:1)	IC	0.5	mg/l	WN	-	46	-	(26)<4.0	-
pH	Probe			U	-	10.2	-	8.4	-
Sulphate (Total)	ICP/OES	0.01	%	N	0.11	-	0.43	-	0.29
Sulphate(2:1)	ICP/OES	0.1	g/l	N	-	<0.1	-	0.1	-
Sulphur (Total)	OX/IR	0.01	%	N	4.6	-	0.10	-	<0.05

SAL Reference: 133842								
Project Site: McNulty's Yard, South Shields								
Customer Reference: 3676								
Soil		Analysed as Soil						
BRE SD1								
SAL Reference		133842 021	133842 021	133842 022	133842 022			
Customer Sample Reference		BH08/12	BH08/12	BH08/12	BH08/12			
		1.00	1.00	3.00	3.00			
Test Sample		AR	A40	AR	A40			
Type		Clay	Clay	Clay	Clay			
Date Sampled								
Depth		1.00	1.00	3.00	3.00			
Determinand	Technique	LOD	Units	Symbol				
Ammonia expressed as NH4	Titration	5	mg/kg	N	72	-	79	-
Chloride (2:1)	IC	0.5	mg/l	WN	320	-	1400	-
Magnesium water soluble	ICP/OES	0.1	g/l	N	<0.1	-	<0.1	-
Nitrate (2:1)	IC	0.5	mg/l	WN	⁽²⁶⁾ <4.0	-	⁽²⁶⁾ <4.0	-
pH	Probe			U	11.4	-	9.1	-
Sulphate (Total)	ICP/OES	0.01	%	N	-	0.74	-	0.26
Sulphate(2:1)	ICP/OES	0.1	g/l	N	<0.1	-	0.3	-
Sulphur (Total)	OX/IR	0.01	%	N	-	0.30	-	0.13

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133842 001	133842 001	133842 002	133842 002	133842 003
Customer Sample Reference	BH08/07 0.40	BH08/07 0.40	BH08/07 5.00	BH08/07 5.00	BH08/07 7.00
Test Sample	AR	A40	AR	A40	AR
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.40	0.40	5.00	5.00	7.00

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	-	10	-	17	-
Barium	ICP/OES	1	mg/kg	U	-	340	-	370	-
Beryllium	ICP/OES	1	mg/kg	U	-	2	-	2	-
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-	<1	-	<1
Cadmium	ICP/OES	1	mg/kg	M	-	1	-	2	-
Chromium	ICP/OES	1	mg/kg	M	-	83	-	24	-
Copper	ICP/OES	1	mg/kg	M	-	350	-	130	-
Lead	ICP/OES	1	mg/kg	M	-	170	-	220	-
Mercury	ICP/OES	1	mg/kg	M	-	<1	-	1	-
Nickel	ICP/OES	1	mg/kg	M	-	26	-	34	-
Selenium	ICP/OES	2	mg/kg	M	-	<2	-	<2	-
Vanadium	ICP/OES	1	mg/kg	M	-	66	-	42	-
Zinc	ICP/OES	1	mg/kg	M	-	1200	-	550	-

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133842 003	133842 004	133842 004	133842 005	133842 005
Customer Sample Reference	BH08/07 7.00	BH08/10 11.00	BH08/10 11.00	BH08/11 1.00	BH08/11 1.00
Test Sample	A40	AR	A40	AR	A40
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	7.00	11.00	11.00	1.00	1.00

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	13	-	6	-	18
Barium	ICP/OES	1	mg/kg	U	490	-	160	-	210
Beryllium	ICP/OES	1	mg/kg	U	1	-	1	-	1
Boron (water-soluble)	ICP/OES	1	mg/kg	N	-	<1	-	<1	-
Cadmium	ICP/OES	1	mg/kg	M	<1	-	<1	-	1
Chromium	ICP/OES	1	mg/kg	M	23	-	26	-	19
Copper	ICP/OES	1	mg/kg	M	100	-	22	-	86
Lead	ICP/OES	1	mg/kg	M	130	-	74	-	140
Mercury	ICP/OES	1	mg/kg	M	<1	-	<1	-	<1
Nickel	ICP/OES	1	mg/kg	M	26	-	30	-	29
Selenium	ICP/OES	2	mg/kg	M	<2	-	<2	-	<2
Vanadium	ICP/OES	1	mg/kg	M	38	-	29	-	52
Zinc	ICP/OES	1	mg/kg	M	230	-	63	-	110

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133842 006	133842 006	133842 007	133842 007	133842 008
Customer Sample Reference	BH08/11 4.00	BH08/11 4.00	BH08/14 0.30	BH08/14 0.30	BH08/14 1.30
Test Sample	AR	A40	AR	A40	AR
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	4.00	4.00	0.30	0.30	1.30

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	-	5	-	19	-
Barium	ICP/OES	1	mg/kg	U	-	180	-	330	-
Beryllium	ICP/OES	1	mg/kg	U	-	1	-	1	-
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-	<1	-	<1
Cadmium	ICP/OES	1	mg/kg	M	-	<1	-	1	-
Chromium	ICP/OES	1	mg/kg	M	-	28	-	23	-
Copper	ICP/OES	1	mg/kg	M	-	20	-	110	-
Lead	ICP/OES	1	mg/kg	M	-	17	-	230	-
Mercury	ICP/OES	1	mg/kg	M	-	<1	-	1	-
Nickel	ICP/OES	1	mg/kg	M	-	33	-	26	-
Selenium	ICP/OES	2	mg/kg	M	-	<2	-	<2	-
Vanadium	ICP/OES	1	mg/kg	M	-	27	-	35	-
Zinc	ICP/OES	1	mg/kg	M	-	56	-	420	-

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil
Metals Analysed as Soil

SAL Reference	133842 008	133842 009	133842 009	133842 010	133842 010
Customer Sample Reference	BH08/14 1.30	BH08/14 3.00	BH08/14 3.00	BH08/15 0.20	BH08/15 0.20
Test Sample	A40	AR	A40	AR	A40
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	1.30	3.00	3.00	0.20	0.20

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	20	-	22	-	12
Barium	ICP/OES	1	mg/kg	U	330	-	410	-	210
Beryllium	ICP/OES	1	mg/kg	U	1	-	1	-	1
Boron (water-soluble)	ICP/OES	1	mg/kg	N	-	<1	-	<1	-
Cadmium	ICP/OES	1	mg/kg	M	1	-	2	-	<1
Chromium	ICP/OES	1	mg/kg	M	23	-	23	-	29
Copper	ICP/OES	1	mg/kg	M	130	-	170	-	130
Lead	ICP/OES	1	mg/kg	M	230	-	430	-	68
Mercury	ICP/OES	1	mg/kg	M	1	-	1	-	<1
Nickel	ICP/OES	1	mg/kg	M	26	-	29	-	22
Selenium	ICP/OES	2	mg/kg	M	<2	-	<2	-	<2
Vanadium	ICP/OES	1	mg/kg	M	37	-	38	-	50
Zinc	ICP/OES	1	mg/kg	M	480	-	550	-	380

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133842 011	133842 011	133842 012	133842 012	133842 013
Customer Sample Reference	BH08/15 1.45	BH08/15 1.45	BH08/15 2.00	BH08/15 2.00	BH08/16 1.00
Test Sample	AR	A40	AR	A40	AR
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	1.45	1.45	2.00	2.00	1.00

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	-	16	-	19	-
Barium	ICP/OES	1	mg/kg	U	-	420	-	520	-
Beryllium	ICP/OES	1	mg/kg	U	-	1	-	1	-
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-	<1	-	<1
Cadmium	ICP/OES	1	mg/kg	M	-	1	-	1	-
Chromium	ICP/OES	1	mg/kg	M	-	31	-	34	-
Copper	ICP/OES	1	mg/kg	M	-	200	-	280	-
Lead	ICP/OES	1	mg/kg	M	-	190	-	240	-
Mercury	ICP/OES	1	mg/kg	M	-	1	-	2	-
Nickel	ICP/OES	1	mg/kg	M	-	25	-	27	-
Selenium	ICP/OES	2	mg/kg	M	-	<2	-	<2	-
Vanadium	ICP/OES	1	mg/kg	M	-	34	-	34	-
Zinc	ICP/OES	1	mg/kg	M	-	520	-	600	-

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133842 013	133842 014	133842 014	133842 015	133842 015
Customer Sample Reference	BH08/16 1.00	BH08/16 6.20	BH08/16 6.20	BH08/16 8.00	BH08/16 8.00
Test Sample	A40	AR	A40	AR	A40
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	1.00	6.20	6.20	8.00	8.00

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	25	-	5	-	2
Barium	ICP/OES	1	mg/kg	U	130	-	190	-	160
Beryllium	ICP/OES	1	mg/kg	U	3	-	1	-	2
Boron (water-soluble)	ICP/OES	1	mg/kg	N	-	2	-	<1	-
Cadmium	ICP/OES	1	mg/kg	M	1	-	<1	-	<1
Chromium	ICP/OES	1	mg/kg	M	29	-	23	-	19
Copper	ICP/OES	1	mg/kg	M	73	-	23	-	7
Lead	ICP/OES	1	mg/kg	M	220	-	24	-	7
Mercury	ICP/OES	1	mg/kg	M	<1	-	<1	-	<1
Nickel	ICP/OES	1	mg/kg	M	42	-	30	-	27
Selenium	ICP/OES	2	mg/kg	M	<2	-	<2	-	<2
Vanadium	ICP/OES	1	mg/kg	M	64	-	22	-	20
Zinc	ICP/OES	1	mg/kg	M	330	-	75	-	42

SAL Reference: 133842

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133842 016	133842 016	133842 017	133842 017	133842 018
Customer Sample Reference	BH08/17 0.40	BH08/17 0.40	BH08/17 6.00	BH08/17 6.00	BH08/18 0.40
Test Sample	AR	A40	AR	A40	AR
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.40	0.40	6.00	6.00	0.40

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	-	22	-	6	-
Barium	ICP/OES	1	mg/kg	U	-	250	-	390	-
Beryllium	ICP/OES	1	mg/kg	U	-	2	-	2	-
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-	<1	-	<1
Cadmium	ICP/OES	1	mg/kg	M	-	1	-	<1	-
Chromium	ICP/OES	1	mg/kg	M	-	27	-	20	-
Copper	ICP/OES	1	mg/kg	M	-	160	-	14	-
Lead	ICP/OES	1	mg/kg	M	-	210	-	26	-
Mercury	ICP/OES	1	mg/kg	M	-	<1	-	<1	-
Nickel	ICP/OES	1	mg/kg	M	-	36	-	25	-
Selenium	ICP/OES	2	mg/kg	M	-	<2	-	<2	-
Vanadium	ICP/OES	1	mg/kg	M	-	66	-	28	-
Zinc	ICP/OES	1	mg/kg	M	-	200	-	56	-

SAL Reference: 133842

Project Site: McNully's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133842 018	133842 019	133842 019	133842 020	133842 020
Customer Sample Reference	BH08/18 0.40	BH08/18 2.00	BH08/18 2.00	BH08/18 4.00	BH08/18 4.00
Test Sample	A40	AR	A40	AR	A40
Type	Clay	Clay	Clay	Clay	Clay
Date Sampled					
Depth	0.40	2.00	2.00	4.00	4.00

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	19	-	78	-	5
Barium	ICP/OES	1	mg/kg	U	230	-	500	-	180
Beryllium	ICP/OES	1	mg/kg	U	1	-	7	-	2
Boron (water-soluble)	ICP/OES	1	mg/kg	N	-	<1	-	<1	-
Cadmium	ICP/OES	1	mg/kg	M	<1	-	2	-	<1
Chromium	ICP/OES	1	mg/kg	M	20	-	40	-	23
Copper	ICP/OES	1	mg/kg	M	76	-	200	-	21
Lead	ICP/OES	1	mg/kg	M	120	-	170	-	16
Mercury	ICP/OES	1	mg/kg	M	<1	-	<1	-	<1
Nickel	ICP/OES	1	mg/kg	M	27	-	68	-	31
Selenium	ICP/OES	2	mg/kg	M	<2	-	<2	-	<2
Vanadium	ICP/OES	1	mg/kg	M	74	-	210	-	22
Zinc	ICP/OES	1	mg/kg	M	220	-	94	-	60

SAL Reference: 133842
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133842 021	133842 021	133842 022	133842 022
Customer Sample Reference	BH08/12 1.00	BH08/12 1.00	BH08/12 3.00	BH08/12 3.00
Test Sample	AR	A40	AR	A40
Type	Clay	Clay	Clay	Clay
Date Sampled				
Depth	1.00	1.00	3.00	3.00

Determinand	Technique	LOD	Units	Symbol				
Arsenic	ICP/OES	2	mg/kg	M	-	16	-	7
Barium	ICP/OES	1	mg/kg	U	-	720	-	220
Beryllium	ICP/OES	1	mg/kg	U	-	2	-	1
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-	<1	-
Cadmium	ICP/OES	1	mg/kg	M	-	<1	-	<1
Chromium	ICP/OES	1	mg/kg	M	-	37	-	22
Copper	ICP/OES	1	mg/kg	M	-	260	-	64
Lead	ICP/OES	1	mg/kg	M	-	450	-	91
Mercury	ICP/OES	1	mg/kg	M	-	3	-	2
Nickel	ICP/OES	1	mg/kg	M	-	26	-	22
Selenium	ICP/OES	2	mg/kg	M	-	<2	-	<2
Vanadium	ICP/OES	1	mg/kg	M	-	37	-	24
Zinc	ICP/OES	1	mg/kg	M	-	540	-	190

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference		133842	133842	133842	133842	133842			
		001	002	003	004	005			
Customer Sample Reference		BH08/07	BH08/07	BH08/07	BH08/10	BH08/11			
		0.40	5.00	7.00	11.00	1.00			
Test Sample		AR	AR	AR	AR	AR			
Type		Clay	Clay	Clay	Clay	Clay			
Date Sampled									
Depth		0.40	5.00	7.00	11.00	1.00			
Determinand	Technique	LOD	Units	Symbol					
Asbestos (Screen Only)	Visual			N	ND	ND	-	ND	ND
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	2.5	1.5	-	0.5	2.2
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	-	-	-	<1
pH	Probe			M	9.4	8.3	8.3	7.9	8.3
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	-	-	-	<1
Sulphate(2:1)	ICP/OES	0.1	g/l	N	<0.1	0.8	0.2	<0.1	<0.1

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference		133842	133842	133842	133842	133842			
		006	007	008	009	010			
Customer Sample Reference		BH08/11	BH08/14	BH08/14	BH08/14	BH08/15			
		4.00	0.30	1.30	3.00	0.20			
Test Sample		AR	AR	AR	AR	AR			
Type		Clay	Clay	Clay	Clay	Clay			
Date Sampled									
Depth		4.00	0.30	1.30	3.00	0.20			
Determinand	Technique	LOD	Units	Symbol					
Asbestos (Screen Only)	Visual			N	ND	ND	ND	-	ND
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	<0.1	0.8	<0.1	1.5	1.5
Cyanide (Total)	Colorimetry	1	mg/kg	U	-	<1	<1	-	<1
pH	Probe			M	8.3	11.0	10.9	8.9	11.1
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	-	<1	<1	-	<1
Sulphate(2:1)	ICP/OES	0.1	g/l	N	<0.1	0.1	0.2	0.8	<0.1

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference					133842	133842	133842	133842	133842
					011	012	013	014	015
Customer Sample Reference					BH08/15	BH08/15	BH08/16	BH08/16	BH08/16
					1.45	2.00	1.00	6.20	8.00
Test Sample					AR	AR	AR	AR	AR
Type					Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth					1.45	2.00	1.00	6.20	8.00
Determinand	Technique	LOD	Units	Symbol					
Asbestos (Screen Only)	Visual			N	ND	ND	ND	ND	-
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	6.0	2.6	0.5	-	-
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	-	<1	-	-
pH	Probe			M	12.2	12.4	8.3	8.7	8.2
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	-	<1	-	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	<0.1	0.2	1.7	0.2	0.2

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference					133842	133842	133842	133842	133842
					016	017	018	019	020
Customer Sample Reference					BH08/17	BH08/17	BH08/18	BH08/18	BH08/18
					0.40	6.00	0.40	2.00	4.00
Test Sample					AR	AR	AR	AR	AR
Type					Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth					0.40	6.00	0.40	2.00	4.00
Determinand	Technique	LOD	Units	Symbol					
Asbestos (Screen Only)	Visual			N	ND	ND	ND	ND	-
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	1.1	-	0.1	4.8	-
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	-	<1	<1	-
pH	Probe			M	8.6	8.4	10.2	8.4	8.0
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	-	-	-	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	0.3	0.2	<0.1	0.1	0.3

SAL Reference: 133842						
Project Site: McNulty's Yard, South Shields						
Customer Reference: 3676						
Soil		Analysed as Soil				
Miscellaneous						
SAL Reference			133842 021	133842 022		
Customer Sample Reference			BH08/12 1.00	BH08/12 3.00		
Test Sample			AR	AR		
Type			Clay	Clay		
Date Sampled						
Depth			1.00	3.00		
Determinand						
Technique						
LOD						
Units						
Symbol						
Asbestos (Screen Only)	Visual			N	ND	ND
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	6.1	3.5
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	<1
pH	Probe			M	11.4	9.1
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	<1
Sulphate(2:1)	ICP/OES	0.1	g/l	N	<0.1	0.3

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TOC									
SAL Reference		133842	133842	133842	133842	133842	133842	133842	133842
		001	002	003	004	004	004	004	005
Customer Sample Reference		BH08/07	BH08/07	BH08/07	BH08/10	BH08/10	BH08/10	BH08/10	BH08/11
		0.40	5.00	7.00	11.00	11.00	11.00	11.00	1.00
Test Sample		A40	A40	A40	A40	A40	A40	A40	A40
Type		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth		0.40	5.00	7.00	11.00	11.00	11.00	11.00	1.00
Determinand	Technique	LOD	Units	Symbol					
Total Organic Carbon	OX/IR	0.1	%	N	6.4	5.3	5.1	2.5	8.1

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TOC									
SAL Reference		133842	133842	133842	133842	133842	133842	133842	133842
		006	007	008	009	009	009	009	010
Customer Sample Reference		BH08/11	BH08/14	BH08/14	BH08/14	BH08/14	BH08/14	BH08/14	BH08/15
		4.00	0.30	1.30	3.00	3.00	3.00	3.00	0.20
Test Sample		A40	A40	A40	A40	A40	A40	A40	A40
Type		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth		4.00	0.30	1.30	3.00	3.00	3.00	3.00	0.20
Determinand	Technique	LOD	Units	Symbol					
Total Organic Carbon	OX/IR	0.1	%	N	1.2	4.8	5.2	6.0	5.1

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TOC									
SAL Reference					133842	133842	133842	133842	133842
					011	012	013	014	016
Customer Sample Reference					BH08/15	BH08/15	BH08/16	BH08/16	BH08/17
					1.45	2.00	1.00	6.20	0.40
Test Sample					A40	A40	A40	A40	A40
Type					Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth					1.45	2.00	1.00	6.20	0.40
Determinand	Technique	LOD	Units	Symbol					
Total Organic Carbon	OX/IR	0.1	%	N	4.3	6.7	3.9	1.3	6.7

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TOC									
SAL Reference					133842	133842	133842	133842	133842
					017	018	019	020	021
Customer Sample Reference					BH08/17	BH08/18	BH08/18	BH08/18	BH08/12
					6.00	0.40	2.00	4.00	1.00
Test Sample					A40	A40	A40	A40	A40
Type					Clay	Clay	Clay	Clay	Clay
Date Sampled									
Depth					6.00	0.40	2.00	4.00	1.00
Determinand	Technique	LOD	Units	Symbol					
Total Organic Carbon	OX/IR	0.1	%	N	1.4	4.7	13	1.6	3.0

SAL Reference: 133842									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
TOC									
SAL Reference					133842 022				
Customer Sample Reference					BH08/12 3.00				
Test Sample					A40				
Type					Clay				
Date Sampled									
Depth					3.00				
Determinand	Technique	LOD	Units	Symbol					
Total Organic Carbon	OX/IR	0.1	%	N	1.7				

Scientific Analysis Laboratories

Certificate of Analysis

Report Number: 133409-2

Date of Report: 09-Jun-2008

Client: Allied Exploration & Geotechnics Ltd,
Unit 25,
Stella Gill Industrial Estate,
Pelton Fell,
Chester le Street,
Co Durham.
DH2 2RJ

Client Contact: Ms Jill Fishwick
Client Job Reference: 3676
Client Site Reference: McNulty's Yard, South Shields
Client Purchase Order: CH-0056

Date Job Received at SAL: 23-May-2008

Date Analysis Started: 04-Jun-2008

Date Analysis Completed: 09-Jun-2008

The results reported relate to samples received at the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS or MCERTS
accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

Key to symbols used in this report:

W: Analysis was sub-contracted and performed at another SAL Laboratory

S: Analysis was sub-contracted

N: Analysis is not UKAS accredited

U: Analysis is UKAS accredited

M: Analysis is MCERTS accredited

Report checked
and authorised by:

Mr Ross Walker
Assistant Customer Services Manager



1549
Group



1549

Index to caveats used in this report

Value	Description
ND	Not Detected
AR	As Received
A40	Assisted dried < 40C
A105	Assisted dried at 105C
13	Results have been blank corrected.
62	LOD was raised due to the method performance of the analytical procedure used

SAL Reference: 133409

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil

MCERTS Preparation

SAL Reference		133409 001	133409 003	133409 004	133409 005			
Customer Sample Reference		BH08/09	BH08/09	BH08/08	BH08/10			
Test Sample		AR	AR	AR	AR			
Type		Sand	Sand	Sand	Sand			
Date Sampled								
Depth		0.20	4.00	0.80	0.40			
Determinand								
Technique	LOD	Units	Symbol					
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	18	22	18	23
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	16	16	17	22

SAL Reference: 133409

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
BTEX

SAL Reference	133409 001	133409 004
Customer Sample Reference	BH08/09	BH08/08
Test Sample	A105	A105
Type	Sand	Sand
Date Sampled		
Depth	0.20	0.80

Determinand	Technique	LOD	Units	Symbol		
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10

SAL Reference: 133409							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3676							
Soil	Analysed as Soil						
EPH							
					SAL Reference	133409 003	133409 005
					Customer Sample Reference	BH08/09	BH08/10
					Test Sample	AR	AR
					Type	Sand	Sand
					Date Sampled		
					Depth	4.00	0.40
Determinand	Technique	LOD	Units	Symbol			
Total Petroleum Hydrocarbons (C10-C12)	GC/FID	1	mg/kg	U	<1	<1	
Total Petroleum Hydrocarbons (C12-C16)	GC/FID	1	mg/kg	U	2	4	
Total Petroleum Hydrocarbons (C16-C21)	GC/FID	1	mg/kg	U	3	16	
Total Petroleum Hydrocarbons (C21-C35)	GC/FID	1	mg/kg	U	7	60	
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	<1	6	
Total Petroleum Hydrocarbons (C10 - C40)	GC/FID	1	mg/kg	N	12	86	

SAL Reference: 133409								
Project Site: McNulty's Yard, South Shields								
Customer Reference: 3676								
Soil		Analysed as Soil						
TPH Ali/Aro								
SAL Reference					133409	133409	133409	133409
					001	001	004	004
Customer Sample Reference					BH08/09	BH08/09	BH08/08	BH08/08
Test Sample					AR	A105	AR	A105
Type					Sand	Sand	Sand	Sand
Date Sampled								
Depth					0.20	0.20	0.80	0.80
Determinand	Technique	LOD	Units	Symbol				
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	(13) <1	-	2	-
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	6	-	2	-
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	21	-	5	-
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	<0.100	-	<0.100
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	<1	-	<1	-
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	4	-	(13) <1	-

SAL Reference: 133409 Project Site: McNulty's Yard, South Shields Customer Reference: 3676								
Soil TPH All/Aro		Analysed as Soil						
SAL Reference					133409	133409	133409	133409
					001	001	004	004
Customer Sample Reference					BH08/09	BH08/09	BH08/08	BH08/08
Test Sample					AR	A105	AR	A105
Type					Sand	Sand	Sand	Sand
Date Sampled								
Depth					0.20	0.20	0.80	0.80
Determinand								
Technique		LOD	Units	Symbol				
Total Petroleum Hydrocarbons (C21-C35 aromatic)		1	mg/kg	N	16	-	(13)<1	-

SAL Reference: 133409

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil **Analysed as Soil**

Total and Speciated USEPA16 PAH

SAL Reference	133409	133409	133409	133409
	001	003	004	005
Customer Sample Reference	BH08/09	BH08/09	BH08/08	BH08/10
Test Sample	A105	A105	A105	A105
Type	Sand	Sand	Sand	Sand
Date Sampled				
Depth	0.20	4.00	0.80	0.40

Determinand	Technique	LOD	Units	Symbol				
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	<0.1	0.3	0.4
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	0.4	0.3
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	0.2
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	0.4
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.3	0.1	1.2	4.5
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.4	<0.1	0.4	2.4
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	1.5	<0.1	3.5	9.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.1	<0.1	3.0	6.0
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	<0.1	2.1	4.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	<0.1	1.8	4.8
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	<0.1	1.6	3.7
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	1.3	3.0
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	0.5	1.7
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	0.3	1.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1	0.7	2.4
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	7.3	0.1	17	44

SAL Reference: 133409

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference	133409 001	133409 003	133409 004	133409 005
Customer Sample Reference	BH08/09	BH08/09	BH08/08	BH08/10
Test Sample	A105	A105	A105	A105
Type	Sand	Sand	Sand	Sand
Date Sampled				
Depth	0.20	4.00	0.80	0.40

Determinand	Technique	LOD	Units	Symbol				
1,2,4-Trichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
1,2-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
1,3-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
1,4-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2,4,5-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4-Dichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4-Dimethylphenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2,6-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2-Chloronaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2-Chlorophenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2-methyl phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	0.3	0.2
2-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
3-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
3/4-Methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
4-Bromophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
4-Chloroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
4-Chlorophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
4-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
4-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	0.2
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	0.4	0.3
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	0.4	<0.1	0.4	2.4
Azobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	<0.1	2.1	4.1
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	1.3	3.0
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	<0.1	1.6	3.7
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1	0.7	2.4
Bis (2-chloroethoxy) methane	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Bis (2-chloroethyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Bis (2-chloroisopropyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Bis (2-ethylhexyl)phthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Butyl benzylphthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Carbazole	GC/MS(MCERTS)	0.1	mg/kg	U	0.1	<0.1	<0.1	0.4
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	0.7	<0.1	1.8	4.8

SAL Reference: 133409**Project Site: McNulty's Yard, South Shields****Customer Reference: 3676****Soil** **Analysed as Soil**
Semi-Volatile Organic Compounds (USEPA 625)

SAL Reference	133409 001	133409 003	133409 004	133409 005
Customer Sample Reference	BH08/09	BH08/09	BH08/08	BH08/10
Test Sample	A105	A105	A105	A105
Type	Sand	Sand	Sand	Sand
Date Sampled				
Depth	0.20	4.00	0.80	0.40

Determinand	Technique	LOD	Units	Symbol				
Di-n-butylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	0.2	<0.1
Di-n-octylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	0.3	1.1
Dibenzofuran	GC/MS(MCERTS)	0.1	mg/kg	M	0.1	<0.1	0.1	<0.1
Diethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Dimethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	1.5	<0.1	3.5	9.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	0.4
Hexachlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Hexachlorobutadiene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Hexachlorocyclopentadiene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Hexachloroethane	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	0.5	1.7
Isophorone	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.3	<0.1	0.3	0.4
Nitrobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.3	0.1	1.2	4.5
Phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	1.1	<0.1	3.0	6.0
Semi-Volatile Organic Compounds Screen (additional peaks)	GC/MS(MCERTS)	1	mg/kg	N	<1	<1	<1	<1

SAL Reference: 133409

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference 133409 001

Customer Sample Reference BH08/09

Test Sample A105

Type Sand

Date Sampled

Depth 0.20

Determinand	Technique	LOD	Units	Symbol	
1,1,1,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1,1-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1,2,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,1,2-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,1-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,2,3-Trichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
1,2,4-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,2-dibromoethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,2-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,2-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,3,5-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,3-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,3-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
1,4-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
2,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
2-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
4-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10
Bromobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Bromochloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Bromodichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Bromoform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Bromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Carbon tetrachloride	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Chlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Chlorodibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Chloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Chloroform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Chloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Cis-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Cis-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Dibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Dichlorodifluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Dichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10
Isopropyl benzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10
n-Propylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50

SAL Reference: 133409

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil

Volatile Organic Compounds (USEPA 624) (MCERTS)

SAL Reference 133409 001

Customer Sample Reference BH08/09

Test Sample A105

Type Sand

Date Sampled

Depth 0.20

Determinand	Technique	LOD	Units	Symbol	
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10
p-Isopropyltoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Sec-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Styrene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50
Tert-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Tetrachloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10
Trans-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Trans-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Trichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Trichlorofluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Vinyl chloride monomer	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50
Volatile Organic Compounds (Top 10 Screen)	GC/MS(Head Space)(MCERTS)	10	µg/kg	N	<10

SAL Reference: 133409
Project Site: McNulty's Yard, South Shields
Customer Reference: 3676

Soil **Analysed as Soil**
TBT - Organotins

SAL Reference	133409 004
Customer Sample Reference	BH08/08
Test Sample	AR
Type	Sand
Date Sampled	
Depth	0.80

Determinand	Technique	LOD	Units	Symbol	
Dibutyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	<0.01
Tetrabutyl tin	GC/MS	0.01	mg/kg	N	⁽⁶²⁾ <0.10
Tributyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	<0.01
Triphenyl Tin	GC/MS	0.01	mg/kg	N	<0.01

SAL Reference: 133409

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133409 001	133409 001	133409 003	133409 003	133409 004
Customer Sample Reference	BH08/09	BH08/09	BH08/09	BH08/09	BH08/08
Test Sample	AR	A40	AR	A40	AR
Type	Sand	Sand	Sand	Sand	Sand
Date Sampled					
Depth	0.20	0.20	4.00	4.00	0.80

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	-	21	-	58	-
Barium	ICP/OES	1	mg/kg	U	-	200	-	150	-
Beryllium	ICP/OES	1	mg/kg	U	-	<1	-	<1	-
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	-	1	-	<1
Cadmium	ICP/OES	1	mg/kg	M	-	<1	-	<1	-
Chromium	ICP/OES	1	mg/kg	M	-	17	-	14	-
Copper	ICP/OES	1	mg/kg	M	-	68	-	32	-
Lead	ICP/OES	1	mg/kg	M	-	98	-	21	-
Mercury	ICP/OES	1	mg/kg	M	-	<1	-	<1	-
Nickel	ICP/OES	1	mg/kg	M	-	25	-	10	-
Selenium	ICP/OES	2	mg/kg	M	-	<2	-	<2	-
Vanadium	ICP/OES	1	mg/kg	M	-	42	-	40	-
Zinc	ICP/OES	1	mg/kg	M	-	200	-	24	-

SAL Reference: 133409

Project Site: McNulty's Yard, South Shields

Customer Reference: 3676

Soil Analysed as Soil
Metals

SAL Reference	133409 004	133409 005	133409 005
Customer Sample Reference	BH08/08	BH08/10	BH08/10
Test Sample	A40	AR	A40
Type	Sand	Sand	Sand
Date Sampled			
Depth	0.80	0.40	0.40

Determinand	Technique	LOD	Units	Symbol			
Arsenic	ICP/OES	2	mg/kg	M	57	-	12
Barium	ICP/OES	1	mg/kg	U	550	-	450
Beryllium	ICP/OES	1	mg/kg	U	3	-	<1
Boron (water-soluble)	ICP/OES	1	mg/kg	N	-	<1	-
Cadmium	ICP/OES	1	mg/kg	M	1	-	<1
Chromium	ICP/OES	1	mg/kg	M	29	-	24
Copper	ICP/OES	1	mg/kg	M	130	-	84
Lead	ICP/OES	1	mg/kg	M	180	-	110
Mercury	ICP/OES	1	mg/kg	M	<1	-	4
Nickel	ICP/OES	1	mg/kg	M	62	-	28
Selenium	ICP/OES	2	mg/kg	M	<2	-	<2
Vanadium	ICP/OES	1	mg/kg	M	150	-	42
Zinc	ICP/OES	1	mg/kg	M	110	-	180

SAL Reference: 133409									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3676									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference					133409 001	133409 002	133409 003	133409 004	133409 005
Customer Sample Reference					BH08/09	BH08/09	BH08/09	BH08/08	BH08/10
Test Sample					AR	AR	AR	AR	AR
Type					Sand	Sand	Sand	Sand	Sand
Date Sampled									
Depth					0.20	3.00	4.00	0.80	0.40
Determinand	Technique	LOD	Units	Symbol					
Asbestos (Screen Only)	Visual			N	ND	-	ND	ND	ND
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	1.2	-	0.3	6.6	1.7
Cyanide (Total)	Colorimetry	1	mg/kg	U	-	-	<1	<1	<1
pH	Probe			M	8.5	7.8	7.4	7.6	8.4
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	-	-	<1	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	0.2	-	-	1.0	0.1

SAL Reference: 133409								
Project Site: McNulty's Yard, South Shields								
Customer Reference: 3676								
Soil		Analysed as Soil						
TOC								
		SAL Reference	133409 001	133409 003	133409 004	133409 005		
		Customer Sample Reference	BH08/09	BH08/09	BH08/08	BH08/10		
		Test Sample	A40	A40	A40	A40		
		Type	Sand	Sand	Sand	Sand		
		Date Sampled						
		Depth	0.20	4.00	0.80	0.40		
Determinand	Technique	LOD	Units	Symbol				
Total Organic Carbon	OX/IR	0.1	%	N	3.9	1.9	21	6.4

APPENDIX II

Rock Core Photographs

ROCK CORE PHOTOGRAPHS BH-08/01 11.50-13.20m BGL



ROCK CORE PHOTOGRAPHS BH-08/01A 11.50-17.50m BGL



ROCK CORE PHOTOGRAPHS BH-08/01A 17.50-21.50m BGL



ROCK CORE PHOTOGRAPHS BH-08/17 7.50-13.50m BGL



ROCK CORE PHOTOGRAPHS BH-08/17 13.50-15.00m BGL



ROCK CORE PHOTOGRAPHS BH-08/18 7.50-13.30m BGL



ROCK CORE PHOTOGRAPHS BH-08/18 13.30-17.80m BGL





ALLIED EXPLORATION & GEOTECHNICS LIMITED

Ground Investigation Report

GROUND INVESTIGATION PHASE 2: MCNULTY'S YARD, SOUTH SHIELDS

for

South Tyneside Council

represented by

Parsons Brinkerhoff Limited

October 2008

Contract No: 3692

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GROUND INVESTIGATION PHASE 2: MCNULTY'S YARD, SOUTH SHIELDS

CONTENTS	PAGE No
1. INTRODUCTION	1
2. THE SITE	1
2.1 Location	1
2.2 Site Description and Topography	1
3. SITE OPERATIONS	2
3.1 General	2
3.2 Exploratory Holes	2
3.3 Samples	2
3.4 Groundwater	2
3.5 Instrumentation	2
4. <i>IN-SITU</i> TESTING	3
4.1 General	3
5. LABORATORY TESTING	3
5.1 General	3
5.2 Specialist Chemical Testing	3

FIELD DATA ENCLOSURES:

Site Location Plan	Figure 1
Exploratory Hole Location Plan	Figure 2
Key Sheets	Figure 3
Borehole Records	Figure 4
Groundwater Observation Made at the Time of Siteworks	Table 1

***IN-SITU* ENCLOSURES:**

Test Report Certificate	0
Standard Penetration Test (SPT)	1

LABORATORY ENCLOSURES:

Laboratory Report Certificate	0
Sample Description Sheets	1
Moisture Content/Plastic Index and Moisture Content	2
Particle Size Distribution Sieving and Sedimentation	3
Determination of One Dimensional Consolidation Properties	4
Undrained Shear Strength in Triaxial Cell without Pore Water Pressure Measurement	5

Appendix I: Specialist Chemical Testing



GROUND INVESTIGATION PHASE 2: MCNULTY'S YARD, SOUTH SHIELDS

1. INTRODUCTION

The purpose of the second phase of this site investigation was to gather further information on the ground conditions and extent of possible contamination that may impact the future redevelopment of the site at McNulty's Yard, South Shields.

Allied Exploration & Geotechnics Limited (AEG) were contracted by South Tyneside Council with Parsons Brinkerhoff Limited acting in the capacity of Consulting Engineer to perform a ground investigation at this site in order to provide information on subsurface ground and groundwater conditions and to obtain samples for geotechnical and chemical testing.

The site works consisted of eleven cable percussion boreholes, all with associated sampling.

In-situ testing was carried out in all exploratory holes in accordance with the relevant British Standards.

Site work was carried out between the 26th August and 1st September 2008. A factual report only was requested.

The comments and opinions expressed in this report are based on the ground conditions encountered during the site work and on the results of tests carried out in the field and in the laboratory. There may, however, be special conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report.

2. THE SITE

2.1 Location

The National Grid Reference of the approximate centre of the site is NZ 356 665. This can be found on Ordnance Survey 1:50,000 Sheet Number 88 (Newcastle upon Tyne, Durham & Sunderland). Part of this sheet is reproduced as Figure 1, the Site Location Plan.

The site on the eastern bank of the River Tyne in South Shields, located approximately 12km east of Newcastle upon Tyne city centre.

2.2 Site Description and Topography

The site is part of an existing ship yard generally used for storage and construction and comprises warehouses and containers. The site is relatively flat lying within the vicinity of the exploratory holes and is bounded to the west by the River Tyne, to the east by West Holborn, and to the north by further docking areas.

3. SITE OPERATIONS

3.1 General

All exploratory hole work, associated sampling, *in-situ* testing and logging was carried out in accordance with techniques outlined in BS 5930:1999 or BS 1377:1990 as appropriate, at positions as near as practicable to those supplied by the Consulting Engineer. These are shown on the Exploratory Hole Location Plan, Figure 2.

The depths of all exploratory holes, descriptions of the material encountered, details of any groundwater encountered, samples taken and *in-situ* testing carried out together with any other relevant information can be found on the Borehole Records, Figure 4. A key to all symbols and abbreviations used throughout the report is included in the Key Sheets, Figure 3.

3.2 Exploratory Holes

Eleven boreholes were sunk using either a Pilcon Wayfarer 1500 or a Dando 2000 drilling rig, utilising cable percussive techniques, to depths of between 0.30m (BH-08/06B) and 14.40m BGL (BH-08/03). Exploratory holes BH-08/06 to BH-08/06F were all terminated prematurely due to encountering varying obstructions (further details are provided on the relevant exploratory hole record). All boreholes were CAT scanned and commenced by a hand excavated inspection pit to confirm the absence of underground public utility services. On completion, the boreholes were either backfilled or installed with instrumentation (Section 3.5) in accordance to the requirements of the Consulting Engineer.

3.3 Samples

Representative samples of soil were obtained from the exploratory holes and were taken to the laboratory for selected geotechnical and chemical testing.

3.4 Groundwater

The comments on groundwater conditions are based on the observations made at the time of investigation. It should be noted that groundwater levels may vary due to seasonal and other effects.

Groundwater was encountered in the exploratory holes during the site works operation. Details are given on the relevant Exploratory Hole Records and in greater detail as Table 1.

3.5 Instrumentation

Nominally 19mm diameter piezometers and 50mm diameter gas/groundwater standpipes were installed selected boreholes in accordance with the requirements of the Consulting Engineer. Details of the installations are shown on the relevant Exploratory Hole Records.

AEG were not required to monitor the instrumentation post siteworks.

4. *IN-SITU* TESTING

4.1 General

In-situ testing as specified by the Consulting Engineer was carried out in selected exploratory holes in accordance with techniques outlined in the relevant British Standard and/or AEG Quality Procedure. The results are presented in the *In-situ* Testing Enclosures with a number of the test results summarised at the relevant depth on the exploratory hole records.

5. LABORATORY TESTING

5.1 General

Laboratory testing as scheduled by the Consulting Engineer was carried out on selected samples in accordance with techniques outlined in BS 1377:1990, AEG Laboratory Quality Procedures or other appropriate standard as quoted. The results are presented in the Laboratory Enclosures.

5.2 Specialist Chemical Testing

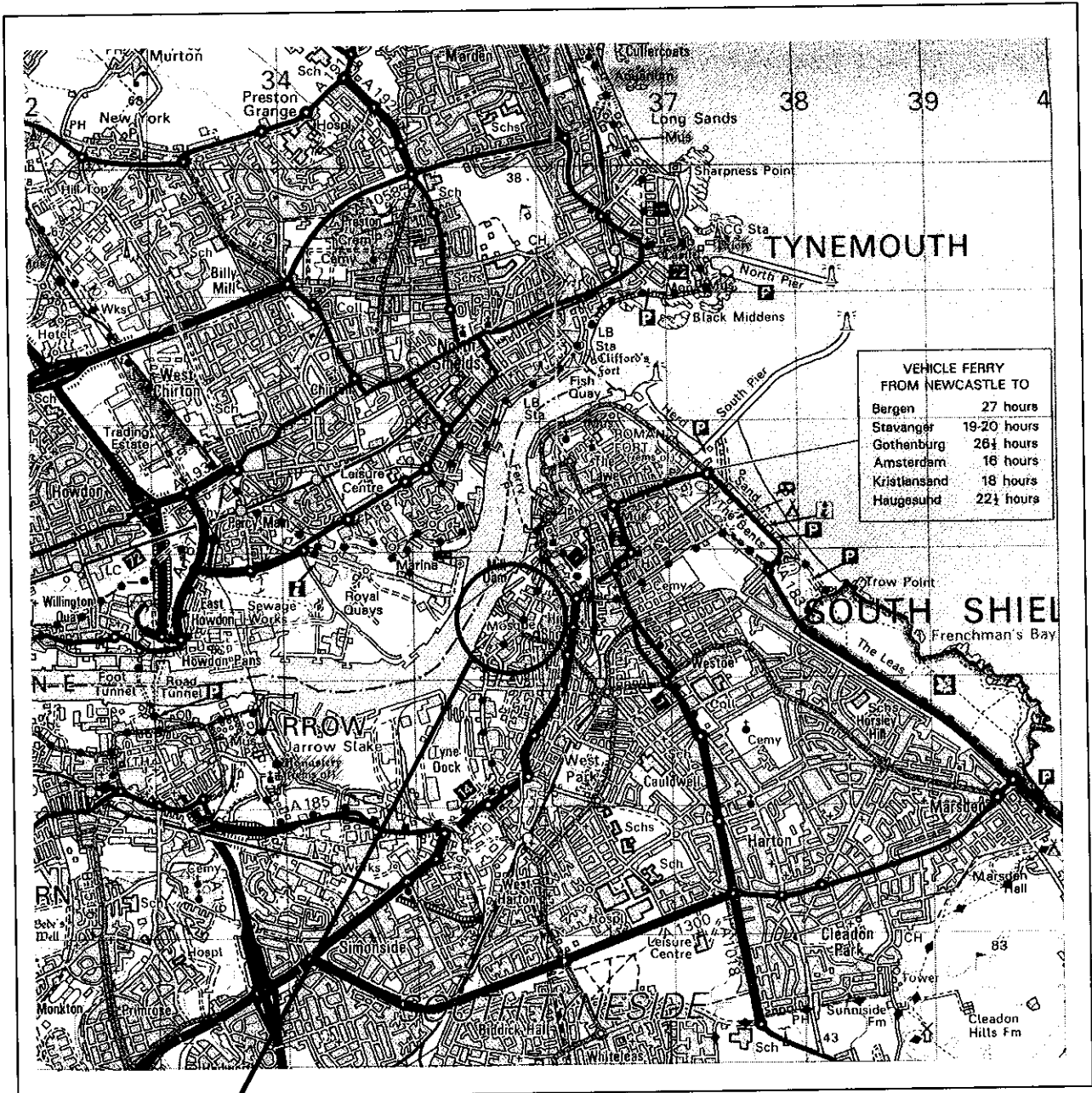
Selected samples have been screened for a range of contaminants specified by the Consulting Engineer. The results of these analyses, conducted under a subcontract arrangement with Scientific Analysis Laboratories Limited are presented as Appendix I.



FIELD DATA ENCLOSURES

FIGURE 1

Site Location Plan



SCALE: 1 square = 1km x 1km

THE SITE

GROUND INVESTIGATION PHASE 2: MCNULTY'S YARD, SOUTH SHIELDS

Reproduced from the Ordnance Survey 1:50,000 scale Landranger map by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, Crown Copyright. All rights reserved. Licence number AL 10002282.

Contract No:

Figure 1

FIGURE 2

Exploratory Hole Location Plan



Allied Exploration and Geotechnics Limited

Unit 25 Stella Gill Industrial Estate
Pelton Fell
Chester - Le - Street
Co Durham
DH2 2RG
(Tel): 0191 387 4700
(Fax): 0191 387 4710
(Email): enquiries@aeg.uk.net

KEY:



BOREHOLE LOCATIONS



Drawing Title:
FIGURE 2: Exploratory Hole Location Plan

Drawing No.:
AEG/3692/02

Contract Title:
GI Phase 2: McNulty's Yard, South Shields

Client:
**South Tyneside Council
Town Hall and Civic Offices, Westoe Road
South Shields, Tyne and Wear, NE33 2RL**

Consultant:
**Parsons Brinkerhoff Limited
Amber Court, William Armstrong Drive
Newcastle upon Tyne, NE4 7YQ**

Contract No.:
3692

Scale:
Not to Scale

Date:
10/10/2008

FIGURE 3

Key Sheets



Allied Exploration & Geotechnics Limited



Key Sheet

INTRODUCTION

The following explanatory notes define the terminologies, abbreviations and symbols pertaining to each individual column or section of the Exploratory Hole records. 'Exploratory Hole' is used as a general term in this report to comprise borehole, drillhole, and trial pit. All exploratory hole records have been produced using 'gINT', which is an integrated software environment for the storage and manipulation of subsurface data.

The primary purpose of ground investigation exploratory holes is to probe the stratified sequences of soil and/or rock. From the results of these probings no conclusion should be drawn concerning the presence of size, lithological nature and numbers per unit volume of ground of cobbles and boulders in soil types such as glacial till (boulder clay).

INFORMATION COMMON TO ALL EXPLORATORY HOLE RECORDS

Status Box

The status box in the top right hand corner of each exploratory hole record gives the status of each individual record i.e. PRELIM1, PRELIM2, FINAL etc. The date shown relates to the last instance the data was revised. This information is for AEG Quality Assurance only.

Borehole/Trial Pit/Drillhole No

The exploratory hole identity number used throughout the report.

Project

The ground investigation project name. Occasionally the project name may be shortened or abbreviated due to string length restraints imposed by the gINT computer programme.

Client

Client's name responsible for funding the ground investigation project. The Client's name may be shortened or abbreviated due to string length restraints imposed by the gINT computer programme.

Location

The exploratory hole position given as either national grid co-ordinates, local grid if specified, or a reference name normally pertaining to the area of investigation.

Method & Equipment

Represents the drilling, excavation or boring method(s) or equipment used.

Ground Level (m(AOD))

The precise ground level in metres above Ordnance Datum at the exploratory hole location from which the reduced level for each stratigraphic boundary is calculated.

Date

The date relating to the start of the exploratory hole excavation.

Sheet

The sheet number and total number of sheets for the particular record.

Checked By

Signature of the person who has carried out the technical quality check on the log.

Logged By

The name of the engineer who has carried out the logging of the exploratory hole.

Contract No.

The Allied Exploration & Geotechnics Limited reference number for the project.



Key Sheet

INFORMATION RELEVANT TO BOREHOLE RECORDS

Sample & Tests Columns

<i>Depth</i>	The depth over which a sample or test is taken is shown in depth column of the exploratory hole record in a "from...to" format.
<i>Type No</i>	Indicates the type of sample/test and number given by the driller.
<i>Test Result</i>	Result of the test given in the applicable units.

Water Column

<i>Water Strike</i>	Level of groundwater strike within an exploratory hole. The symbol \downarrow denotes a water strike and is suffixed with a number, which indicates the strike order. The corresponding unfilled symbol ∇ is the depth the strike rose to.
<i>Seepage</i>	Level of groundwater seepage within an exploratory hole. The symbol ∇ denotes a seepage.

Strata Columns

<i>Reduced Level Legend</i>	The corresponding reduced level of each soil or rock boundary in metres Ordnance Datum. A graphical representation of the materials encountered using BS 5930:1999 recommended symbols for soil and rock.
<i>Depth (Thickness)</i>	The depth below ground level of each soil or rock boundary in metres and the thickness of each individual stratigraphic unit (given in brackets).
<i>Description</i>	Engineering description of each individual soil or rock type following recommendations outlined in Section 6 of BS 5930:1999 with the following AEG in-house revisions. (1) Where both sand and gravel are present as secondary constituents in a fine grained soil the combined percentage of both sand and gravel is considered in defining the appropriate quantitative descriptive terms as follows (Ref.: 41.4.4.5, p121, BS 5930:1999): <ul style="list-style-type: none">'slightly sandy and gravelly CLAY' means that the soil contains up to 35% 'sand and gravel'.'sandy and gravelly CLAY' means that the soil contains between 35% and 65% 'sand and gravel'.'very sandy and gravelly CLAY' means that the soil contains more than 65% 'sand and gravel'. (2) Where 'rock weathering classification' can be applied it is 'Approach 2' which is generally used. If any other approach is used the factual text of the report will provide details of the applicable specific approach. (Ref.: Figure 19, p132, BS 5930:1999).

Instrument/Backfill Column

A graphical representation of backfill material or instrumentation detail using graphic legends. Its placement in the column is relative to depth in metres and corresponds to the exploratory hole in scale.

Boring Progress and Water Observations Columns

This section provides information on each days production as a daily log.

<i>Date</i>	Date of shift.
<i>Depth</i>	Depth of hole at the start of the shift.
<i>Casing</i>	Casing's depth at the start of the shift.
<i>Casing Dia</i>	Casing's diameter at the start of the shift.
<i>Water Depth</i>	Water level within the borehole at the start and end of shift.

Chiselling Columns

Indicates where hard strata occurred in the borehole and breaking out was carried out to advance the borehole.

<i>From</i>	The depth commenced.
<i>To</i>	The depth finished.
<i>Hours</i>	The time spent for breaking out.



Allied Exploration & Geotechnics Limited



Key Sheet

Water Added Columns

Indicates the depth range where water was added to the borehole to facilitate boring or to prevent stress relief disturbance "blowing/boiling" in granular soils.

From Depth in metres from where water was added.

To Depth in metres to where water was added.

General Remarks

Any remarks believed to be relevant to the exploratory hole.

INFORMATION RELEVANT TO TRIAL PIT RECORDS

The trial pit records follow the same format as the borehole records for the Samples & Tests, Water and Strata columns. However, in addition to these there are the following:

Plan Column

A schematic plan view of the trial pit showing its excavated dimensions together with its orientation, given as a compass bearing to magnetic north.

Groundwater Column

Notes on water bearing horizons.

Remarks Column

The engineer's comments outlining the stability of the sides during trial pit excavation together with any other information relevant to construction of the exploratory hole.

INFORMATION RELEVANT TO DRILLHOLE RECORDS

Run Details Columns

Depth Each drill run is highlighted by a horizontal line with the top and bottom depths shown in metres.

TCR(SCR)RQD Information provided on the total core recovery, solid core recovery and rock quality designation. Refer to Abbreviations for further details.

(SPT)Fracture Index Information given relating to any SPT test carried out and/or a value for the fracture index of the rock.

Strata Columns

As the strata columns for borehole records except for description which is as follows:

Discontinuities/Detail Information on core discontinuities, localised variations in weathering, lithology, strength and structure following recommendations outlined in Section 6 BS 5930:1999:Clause 44.

Main Engineering description of each individual soil or rock type following recommendations outlined in Section 6 of BS 5930:1999 with the AEG in-house revisions as detailed for the 'Borehole Records' above.

Instrument/Backfill Column

A graphical representation of backfill material or instrumentation detail using graphic legends. Its placement in the column is relative to depth in metres and corresponds to the exploratory hole in scale.



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Key Sheet

Drilling Progress and Water Observations Columns

<i>Date</i>	Date of shift.
<i>Depth</i>	Depth of hole at the start of the shift.
<i>Casing</i>	Casing's depth at the start of the shift.
<i>Core Dia</i>	Diameter of core.
<i>Water Strike</i>	Depth at which water was encountered.
<i>Water Standing</i>	Depth at which water in the borehole levelled off.
<i>Flush Type</i>	Details of the type of flush used.
<i>Flush returns</i>	An indication of the percentage of the returned flush material



Key Sheet

Abbreviations

SAMPLES

- B** Bulk disturbed sample generally representative of the soil type for cohesive and fine granular soils.
- G** Gas sample.
- J** Small disturbed jar sample normally taken at intermediate depth between other sampling or testing operations. The sample is stored in an airtight container.
- Ch** Sample of potentially contaminated materials. If prefixed by G, the sample is contained in a glass jar, if prefixed by a J, the sample is contained in a plastic air-tight container and if prefixed with a W the sample is a potentially contaminated water sample (ie GCh, JCh, WCh).
- P** Undisturbed piston sample normally used in low strength fine grained soils to reduce the level of disturbance.
- P*** An attempted but failed undisturbed piston sample.
- U** General purpose 102mm diameter undisturbed sample.
- U*** An attempted but failed general purpose undisturbed sample.
- W** Water sample.

IN-SITU TESTS

- CBR** California Bearing Ratio mould sample or test.
- HSV** In-situ hand shear vane.
- HP** Hand penetrometer test.
- K (F)** Falling head permeability test.
- K (R)** Rising head permeability test.
- K (C)** Constant head permeability test.
- K (P)** Packer permeability test.
- PT** Pressuremeter test.
- S** Standard Penetration Test (SPT) using the split barrel sampler (shoe). The corresponding 'N' value is given in the test result column.
- C** Denotes SPT test using a solid cone in preference to the split barrel sampler (generally in coarse granular soil).
- S*/C*** Denotes where full penetration has not been achieved in an SPT test. In such cases the number of blows against the amount of penetration is reported in the test result column.
- *** Denotes where penetration of the seating drive has only been undertaken within the SPT test or the seating and testing drives have been added together. In such cases the number of blows against the amount of penetration is reported in the test result column. (e.g. 50 for 25mm* or 1 for 450mm*).
- SV** In-situ down the hole shear vane test. The remoulded shear strength is given in brackets.



Key Sheet

ROCK QUALITY & CORE RECOVERY

TCR	Total Core Recovery - the length of the recovered core expressed as a percentage of the length of core run.
SCR	Solid Core Recovery - the sum length of all core pieces that are recovered with at least one full diameter, expressed as a percentage of the length of core run.
RQD	Rock Quality Designation - The sum length of all core pieces that are 100mm or longer (measured along the centre of the core), expressed as a percentage of the length of core run.
FI	Fracture Index - The number of fractures per 1000mm length of solid core.
NI	Non-intact - The material recovered in a non-intact state.
NR	No recovery from the core run.

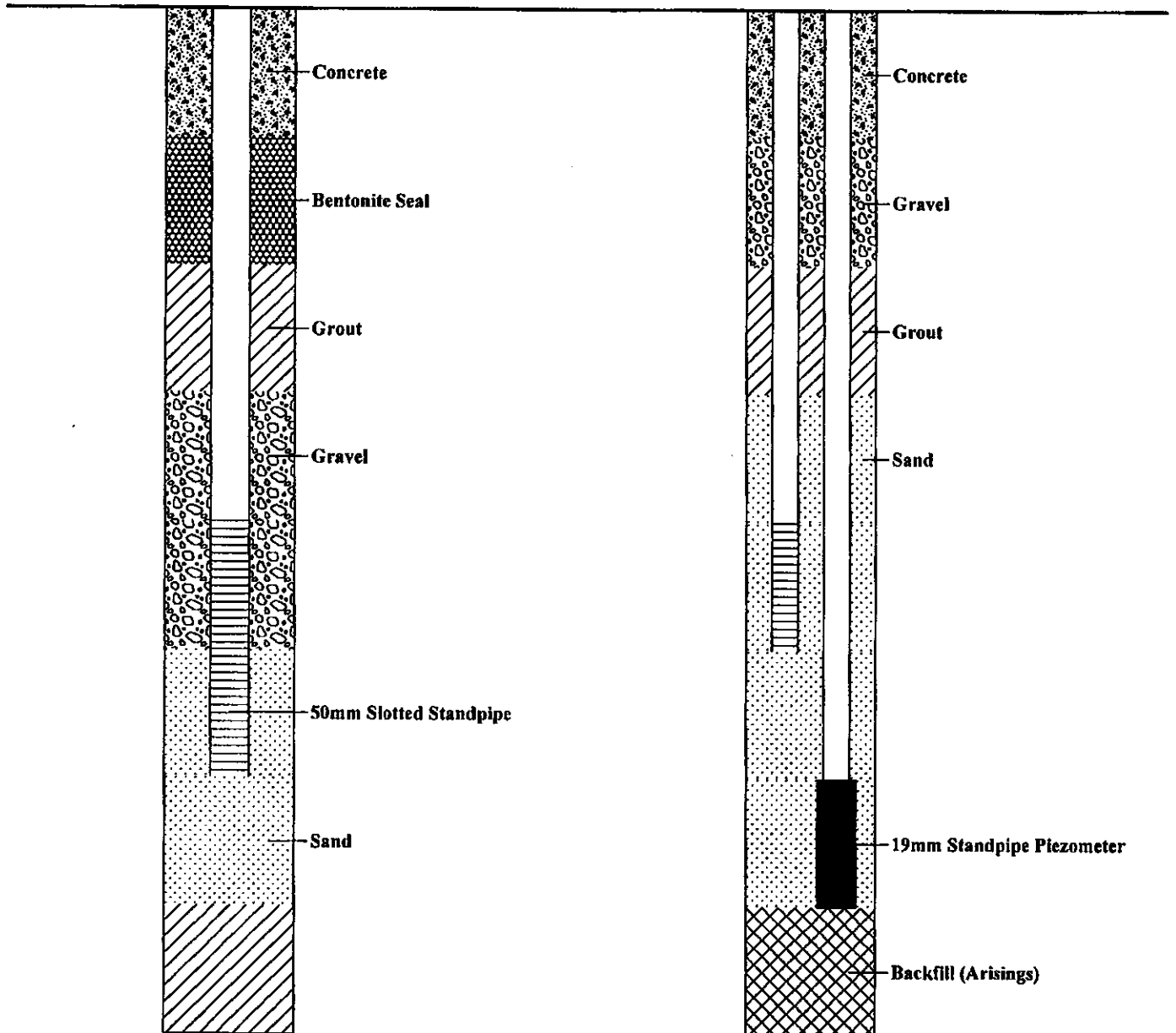
Allied Exploration & Geotechnics Limited

Key Sheet

Symbols and Abbreviations : Explanation Of Instrumentation Legends Used

Single Instrument

Double Instrument



Allied Exploration & Geotechnics Limited

Key Sheet

Symbols and Abbreviations : Explanation Of Legends Used

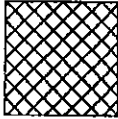
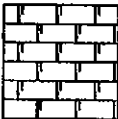
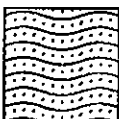
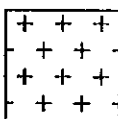

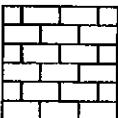
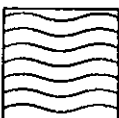
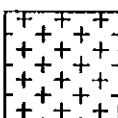
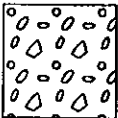
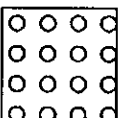
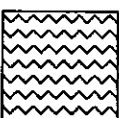

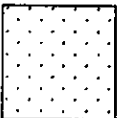
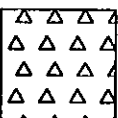
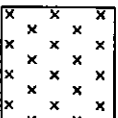
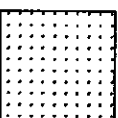


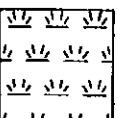

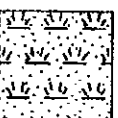


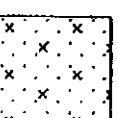
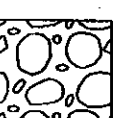
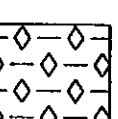
<i>Soils</i>	<i>Rocks</i>		
	<i>Sedimentary</i>	<i>Metamorphic</i>	<i>Igneous</i>
 Made Ground	 Chalk	 Coarse Grained	 Coarse Grained
 Boulders & Cobbles	 Limestone	 Medium Grained	 Medium Grained
 Gravel	 Conglomerate	 Fine Grained	 Fine Grained
 Sand	 Breccia		
 Silt	 Sandstone		
 Clay	 Siltstone		
 Peat	 Mudstone		
 Topsoil	 Shale		
Note: Composite soil types will be signified by combined symbols e.g.	 Coal		
 Silty Sand	 Pyroclastic (Volcanic Ash)		
	 Gypsum		



FIGURE 4

Borehole Records



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435522.988 N:566207.291	
Method & Equipment: Cable Percussion using a Dando 2000		Ground Level (m(AOD)): 4.725	Date: 27/08/2008
			Sheet: 1 of 2

SAMPLES & TESTS			STRATA				Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	
0.50	PID	8.5ppm		4.625		(0.10) 0.10	(1) MADE GROUND (Tarmac).
0.50	B1			4.525		(0.10) 0.20	(1) MADE GROUND (Ash fill).
0.55	JCh2x5			4.425		(0.10) 0.30	(1) MADE GROUND (Concrete).
0.90	J3						MADE GROUND (Firm dark brown sandy gravelly clay with occasional cobbles. Gravel is fine to coarse angular to subrounded and includes sandstone, flint and clinker. Cobbles are angular to subangular and include concrete).
1.00	JCh4x5			3.625		1.10	
1.20	J5						Stiff brown slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is fine to coarse angular to subrounded and includes sandstone, mudstone and coal. Cobbles are angular to subangular and include sandstone.
1.50	JCh6x5	(89)					
1.50-2.00	U7						
2.30	JCh8x5						
2.40	J9	44.2ppm				(3.00)	
2.50	PID	N22					
2.50-2.95	SJ10						
2.50-2.95	B21A						
3.10	PID	10.2ppm					
3.10-3.30	B11						
3.50-4.00	U12	(92)					at c.3.50m BGL ... of low plasticity
4.00	J13			0.625		4.10	
4.20	J14	8.0ppm					
4.30	PID	N27					
4.30-4.50	B15	17.9ppm					Stiff grey brown sandy gravelly CLAY of low plasticity with some cobbles. Gravel is fine to coarse angular to subrounded and includes sandstone, mudstone and coal.
4.50-4.95	SJ16						
4.50	PID						
4.50-4.95	B22A						
5.20	J17						
5.50-5.65	U*B18	(120)				(2.90)	
6.20	J19						
6.40-6.70	B20						
7.00	PID	23.1ppm		2.275		7.00	
7.00-7.45	SJ21	N32					Very stiff grey brown sandy gravelly CLAY of low plasticity. Gravel is fine to coarse angular to subrounded and includes sandstone, mudstone and coal.
7.00-7.45	B22						
7.70	J23						

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
27/08/2008	0.00	0.00				5.60	5.70	0.25	0.00	7.00	(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling. (3) Photo Ionisation Detector (PID) screening carried out.
27/08/2008	7.00	6.00	200mm	Dry					7.00	14.00	
28/08/2008	7.00	6.00	200mm	Dry							

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: KW	Logged by: R. Butler	Contract No. 3692
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435522.988 N:566207.291	
Method & Equipment: Cable Percussion using a Dando 2000		Ground Level (m(AOD)): 4.725	Date: 27/08/2008
			Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill	
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		DESCRIPTION
7.90 7.90-8.20 8.20	PID B24 J26	18.9ppm		○		(As sheet 1 of 2) Very stiff grey brown sandy gravelly CLAY of low plasticity. Gravel is fine to coarse angular to subrounded and includes sandstone, mudstone and coal. at c.8.50m BGL ... firm		
8.50-8.90	U25	(120)		○				
9.50 9.50-9.70	PID B27	8.3ppm		○				
10.00 10.00-10.45 10.00-10.45	PID SJ28 B29	6.4ppm N41		○	(6.55)			
10.70 10.90 10.90-11.20	J30 PID B31	4.9ppm		○				
11.50-11.80	U32	(120)		○				
12.00	J33			○				
12.40 12.60 12.60-12.80	J34 PID B35	11.9ppm		○				
13.00 13.00-13.45 13.00-13.45	PID SJ36 B37	4.5ppm N39	-8.825	○	13.55			
13.80 14.00-14.40	J38 S*J39	102 for 277mm	-9.675	○	(0.85) 14.40			
Very weak red brown yellow SANDSTONE moderately weathered. (Recovered as a very clayey very sandy gravel).								
Borehole complete at 14.40m BGL.								

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth	From	To	Hours	From	To		
28/08/2008	14.40	6.00	200mm	Dry						(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling. (3) Photo Ionisation Detector (PID) screening carried out.	



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435487.807 N:566218.239	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.120	Date: 26/08/2008
			Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
0.50 0.50 0.50	PID B1 JCh2	111.0ppm		[Cross-hatch pattern]	(2.00)	MADE GROUND (Medium dense grey black clayey very sandy gravel with occasional cobbles. Sand includes ash fines. Gravel is fine to coarse angular to subangular and includes flint, brick and sandstone. Cobbles are angular to subangular and include brick. Strong hydrocarbon odour noted).	[Pattern]
1.00 1.00 1.00 1.20-1.65 1.20 1.20-1.65	PID B3 JCh4 SJ5 PID B6	68.0ppm N17 79.0ppm		[Cross-hatch pattern]	2.00		
2.00 2.20-2.65 2.20 2.20-2.65	JCh7 SJ8 PID B9	N24 76.6ppm	1	[Cross-hatch pattern]	2.00		
3.00 3.20-3.65 3.20 3.20-3.65 3.60	JCh10 SJ11 PID B12 W32	N19 33.6ppm	2	[Cross-hatch pattern]	2.00		
4.00 4.20-4.65 4.20-4.65	JCh13 C14 B15	N16	1	[Cross-hatch pattern]	4.00		
5.00 5.20-5.65 5.20-5.65	JCh16 C17 B18	N14		[Cross-hatch pattern]	(2.00)		
6.00 6.50-6.95	JCh19 U20	(100)	1	[Horizontal lines pattern]	6.00		
6.95 7.00	J21 JCh22			[Horizontal lines pattern]			
7.50 7.50-8.00	PID B23	46.6ppm		[Horizontal lines pattern]			
			1	[Horizontal lines pattern]			
			2	[Horizontal lines pattern]		MADE GROUND (Medium dense grey brown slightly clayey sandy gravel with occasional cobbles. Gravel is fine to coarse angular to subangular and includes clinker, burnt shale, sandstone and coal. Strong hydrocarbon odour noted).	
				[Horizontal lines pattern]	at c.5.20m BGL ... very clayey very sandy		
			1	[Horizontal lines pattern]	at c.6.50m BGL .. of low plasticity		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth	From	To	Hours	From	To		
26/08/2008	0.00	0.00								(1) Inspection pit dug prior to drilling. (2) Water strike at 4.00 - rose to 2.80m BGL (20mins). (3) Water strike at 9.50 - rose to 3.60m BGL (20mins). (4) Photo Ionisation Detector (PID) screening carried out.	
26/08/2008	6.00	6.00	200mm	4.70							
27/08/2008	6.00	6.00	200mm	4.70							



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435487.807 N:566218.239	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.120	Date: 26/08/2008
		Sheet: 2 of 2	

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill	
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		DESCRIPTION
8.00-8.45 8.00 8.00-8.45	S*J24 PID B25	50 for 245mm 162.0ppm	↓		(6.20)		(As sheet 1 of 2) Stiff grey brown sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded and includes sandstone and coal. at c.8.00m BGL ... very stiff	
9.50-9.95 9.50 9.50-9.95	SJ26 PID B27	N7 0.0ppm					at c.9.50m BGL ... soft	
12.00-12.20 12.00-12.20 12.20-12.40 12.40-12.60	U*28 B29 S*J30 S*J31	(100) 50 for 125mm 100 for 160mm			8.080	12.20		Very weak orange grey SANDSTONE moderately weathered. (Recovered as fine to coarse gravel).
					8.480	(0.40) 12.60		Borehole complete at 12.60m BGL.

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
27/08/2008	12.60	12.60	150mm	6.30		12.00	12.20	1.00			(1) Inspection pit dug prior to drilling. (2) Water strike at 4.00 - rose to 2.80m BGL (20mins). (3) Water strike at 9.50 - rose to 3.60m BGL (20mins). (4) Photo Ionisation Detector (PID) screening carried out.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KW</i>	Logged by: R. Butler	Contract No. 3692
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No
Client: South Tyneside Council	Location: South Shields E:435519.933 N:566235.266	BH-08/05
Method & Equipment: Cable Percussion using a Dando 2000	Ground Level (m(AOD)): 4.462	Date: 28/08/2008 Sheet: 1 of 2

SAMPLES & TESTS			STRATA					Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				4.262		(0.20) 0.20	(1) MADE GROUND (Hardcore).	
0.50	PID	26.9ppm					MADE GROUND (Firm grey very gravelly sandy clay. Gravel is fine to medium subangular to angular and includes sandstone, flint and brick).	
0.50	B1							
0.55	JCh2x5							
0.90	J3							
1.00	JCh4x5							
1.50	PID	7.9ppm				(2.90)	at c.1.50m BGL ... very silty very sandy gravel	
1.50-1.95	CB5	N10						
2.00	JCh6x5							
2.30	J7							
2.50	PID	9.5ppm						
2.50-2.95	CB8	N8						
				1.362		3.10	Stiff dark grey sandy gravelly CLAY of low plasticity. Gravel is fine to medium subrounded to subangular and includes sandstone.	
3.50-4.00	U9	(102)						
4.10	JCh10x5							
4.20	PID	3.8ppm						
4.20	J11							
4.20-4.40	B12	6.2ppm						
4.50	PID	N25						
4.50-4.95	SJ13							
4.50-4.95	B14							
5.30	J15							
5.50-6.00	U16	(120)						
6.30	J17							
6.60	PID	10.4ppm				(7.15)		
6.60-6.80	B18							
7.00	PID	29.8ppm						
7.00-7.35	S*J19	50 for						
7.00-7.35	B20	197mm						
7.80	J21							

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
28/08/2008	0.00	0.00				7.30	7.50	0.50	0.00	7.00	(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling. (3) Water strike at 12.20m BGL - no rise. (4) Photo Ionisation Detector (PID) screening carried out.
28/08/2008	7.00	4.50	200mm	Dry							
29/08/2008	7.00	4.50	200mm	Dry							

All dimensions in metres Scale 1:50 For explanation of symbols and abbreviations see Key Sheets Checked by: *du* Logged by: G. Teasdale Contract No. 3692



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435519.933 N:566235.266	
Method & Equipment: Cable Percussion using a Dando 2000		Ground Level (m(AOD)): 4.462	Date: 28/08/2008
			Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
8.00-8.20 8.00	B22 PID	26.9ppm		○		(As sheet 1 of 2) Stiff dark grey slightly gravelly CLAY. Gravel is fine to medium subrounded to subangular and includes sandstone.	[Cross-hatched pattern]
8.50-8.80	U23	(120)		○			
9.10	J24			○			
9.50 9.50-9.70	PID B25	7.1ppm		○			
10.00 10.00-10.40 10.00-10.40	PID B27 S*J26	14.4ppm 50 for 184mm	-5.788	○	10.25	Firm friable yellow/grey slightly sandy CLAY/SILT.	[Dotted pattern]
10.60	J28			○			
10.90 10.90-11.20	PID B29	39.1ppm		○	(1.95)		
11.50-12.00	U30	(120)		○		at c.12.00m BGL ... of low plasticity Strong yellow SANDSTONE.	[Stippled pattern]
12.00	J31		-7.738	○	12.20		
12.25 12.30-12.45	J32 S*J33	50 for 56mm	-7.988	○	(0.25) 2.45		
Borehole complete at 12.45m BGL.							

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth	From	To	Hours	From	To		
29/08/2008	12.45	4.50	200mm	7.10						(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling. (3) Water strike at 12.20m BGL - no rise. (4) Photo Ionisation Detector (PID) screening carried out.	

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>KW</i>	Logged by: G. Teasdale	Contract No. 3692
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No BH-08/06	
Client: South Tyneside Council		Location: South Shields E:435504.533 N:566282.088	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.166	Date: 29/08/2008
			Sheet: 1 of 1

SAMPLES & TESTS			STRATA					Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
0.50	PID BI	17.7ppm		3.866	[Cross-hatched pattern]	(0.30) 0.30	(1) MADE GROUND (Tarmac over hardcore).	[Cross-hatched pattern]
0.50			3.566	(0.30) 0.60		MADE GROUND (Black very sandy gravel. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and includes cinder ash, brick and cement). Borehole terminated at 0.60m BGL - due to encountering electrical cable. Instructed to move to position BH-08/06A.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
29/08/2008	0.00										(1) Inspection pit dug prior to drilling. (2) Photo Ionisation Detector (PID) screening carried out.
29/08/2008	0.60										

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>RW</i>	Logged by: G. Teasdale	Contract No. 3692
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No BH-08/06A
Client: South Tyneside Council	Location: South Shields E:435504.374 N:566281.188	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.160	Date: 29/08/2008 Sheet: 1 of 1

SAMPLES & TESTS			STRATA					Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				3.860		(0.30) 0.30	(1) MADE GROUND (Tarmac over hardcore).	
				3.560		(0.30) 0.60	MADE GROUND (Black very sandy gravel. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and includes cinder ash, brick and cement). at c.0.60m BGL ... iron pipe. Borehole terminated at 0.60m BGL - due to encountering cast iron pipe. Instructed to move to position BH-08/06B.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
29/08/2008	0.00										(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling.
29/08/2008	0.60										

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: 	Logged by: G. Teasdale	Contract No. 3692
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435504.657 N:566280.511	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.213	Date: 29/08/2008
			Sheet: 1 of 1

SAMPLES & TESTS			STRATA				Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	
				3.913		(0.30) 0.30	(1) MADE GROUND (Tarmac over hardcore). at c.0.30m BGL ... dock wall. Borehole terminated at 0.30m BGL - due to encountering dock wall. Instructed to move to position BH-08/06C.

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
29/08/2008	0.00										(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling.
29/08/2008	0.30										



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No
Client: South Tyneside Council	Location: South Shields E:435501.222 N:566283.109	BH-08/06C
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.167	Date: 29/08/2008
		Sheet: 1 of 1

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	
0.50	PID B1	17.4ppm	3.967		(0.20)	0.20	(1) MADE GROUND (Tarmac over hardcore).
0.50			3.467		(0.50)	0.70	MADE GROUND (Black very sandy gravel with boulder noted. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and includes cinder ash, brick and cement. Boulder is subrounded and consists of cement).
1.00	J2	3.167	(0.30)		1.00	MADE GROUND (Black very sandy gravel. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and includes cinder ash, brick and cement). at c. 1.00m BGL ... flat concrete slab. Borehole terminated at 1.00m BGL - due to encountering concrete slab. Instructed to move to position BH-08/06D.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
29/08/2008	0.00										(1) Inspection pit dug prior to drilling.
29/08/2008	1.00										



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No BH-08/06D	
Client: South Tyneside Council	Location: South Shields E:435522.024 N:566298.206		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.401	Date: 29/08/2008	Sheet: 1 of 1

SAMPLES & TESTS			STRATA					Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				4.101		(0.30) 0.30	(1) MADE GROUND (Tarmac over hardcore).	
				3.901		(0.20) 0.50	MADE GROUND (Black very sandy gravel. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and includes cinder ash, brick and cement). at c.0.50m BGL ... concrete pipe. Borehole terminated at 0.50m BGL - due to encountering concrete pipe. Instructed to move to position BH-08/06E.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
29/08/2008	0.00										(1) Inspection pit dug prior to drilling.
29/08/2008	0.50										



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No BH-08/06E	
Client: South Tyneside Council	Location: South Shields E:435520.939 N:566295.949		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level (m(AOD)): 4.429	Date: 01/09/2008	Sheet: 1 of 1

SAMPLES & TESTS			STRATA					Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				4.129		(0.30) 0.30	(1) MADE GROUND (Tarmac/roadstone).	
				3.729		(0.40) 0.70	(1) MADE GROUND (Compacted black ash and brick fill).	
							at c.0.70m BGL ... steel cable under tension. Borehole terminated at 0.70m BGL - due to encountering steel cable. Instructed to move to position BH-08/06E.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
01/09/2008	0.00										(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling.
01/09/2008	0.70										



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435519.986 N:566296.853	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.443	Date: 01/09/2008
		Sheet: 1 of 1	

SAMPLES & TESTS			STRATA					Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				4.143		(0.30) 0.30	(1) MADE GROUND (Tarmac/roadstone).	
				3.743		(0.40) 0.70	(1) MADE GROUND (Compacted black ash and brick fill).	
							at c.0.70m BGL ... iron cast pipe. Borehole terminated at 0.70m BGL - due to encountering cast iron pipe.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
01/09/2008	0.00										(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling.
01/09/2008	0.70										



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:-	FINAL
Date:-	28/10/2008

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435530.444 N:566283.693	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.302	Date: 28/08/2008
			Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
			3.902	(0.40)	0.40	(1) MADE GROUND (Tarmac over hardcore).	
0.50	PID	20.9ppm				MADE GROUND (Dense dark brown very clayey very gravelly sand with occasional cobbles. Gravel is fine to coarse angular to subrounded and includes sandstone, coal, flint, concrete, brick, and clinker. Cobbles are angular to subangular and consist of concrete and sandstone).	
0.50	B1						
0.50	JCh2						
1.00	PID	10.5ppm					
1.00	B3						
1.00	JCh4	17.5ppm					
1.20	PID	N34					
1.20-1.65	SJ5						
1.20-1.65	B6						
2.00	JCh7						
2.20	PID	10.4ppm					
2.20-2.65	SJ8	N44					
2.20-2.65	B9						
3.00	JCh10						
3.20	PID	33.7ppm					
3.20-3.65	S*J11	50 for					
3.20-3.65	B12	200mm					
4.00	JCh13						
4.20	PID	17.2ppm					
4.20-4.65	S*J14	50 for					
4.20-4.65	B15	265mm					
5.00	JCh16			(9.10)			
5.20	PID	6.1ppm					
5.20-5.65	S*J17	50 for					
5.20-5.65	B18	245mm					
6.00	JCh19						
6.50	PID	18.7ppm					
6.50-6.95	SJ20	N24					
6.50-6.95	B21						
7.00	JCh22						
7.50	PID	0.5ppm					
7.50-8.00	B23						
at c.6.50m BGL ... medium dense							

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth	From	To	Hours	From	To		
28/08/2008	0.00	0.00			3.60	3.80	0.33			(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling. (3) Photo Ionisation Detector (PID) screening carried out.	
					5.50	5.80	0.50				



ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- **28/10/2008**

Project: Ground Investigation Phase 2: McNulty's Yard, South Shields		Exploratory Hole No	
Client: South Tyneside Council		Location: South Shields E:435530.444 N:566283.693	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 4.302	Date: 28/08/2008
		Sheet: 2 of 2	

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
8.00 8.00 8.00-8.45 8.00-8.45	PID JCh24 SJ25 B26	41.7ppm N62					(As sheet 1 of 2) MADE GROUND (Dense dark brown very clayey very gravelly sand with occasional cobbles. Gravel is fine to coarse angular to subrounded and includes sandstone, coal, flint, concrete, brick, and clinker. Cobbles are angular to subangular and consist of concrete and sandstone). at c.8.00m BGL ... very dense
9.00 9.00 9.00-9.50	PID JCh27 B28	23.0ppm					
9.50-9.55	S*J29	100 for 25mm	5.198 5.248		9.50 (0.03)9.55		MADE GROUND (Grey brown weak concrete). (Recovered as fine to medium gravel). Borehole complete at 9.55m BGL.

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
28/08/2008	9.55	9.50	200mm	Dry		8.60	8.80	0.50			(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling. (3) Photo Ionisation Detector (PID) screening carried out.


TABLE 1

Groundwater Observations Made at the Time of Siteworks



ALLIED EXPLORATION & GEOTECHNICS LIMITED

GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITEWORKS

Checked by: 

Exploratory Hole	Date	Time (24hrs)	Depth of Water (m)	Depth of Casing (m)	Depth Sealed (m)	Final Depth (m)	Total Time (mins)	Depth After 5 mins	Depth After 10 mins	Depth After 15 mins	Depth After 20 mins	Remarks
BH-08/04	26/08/2008		4.00	4.00	6.00	2.80	20	2.80	2.80	2.80	2.80	Water strike
BH-08/04	27/08/2008		9.50	9.50		3.60	20	3.60	3.60	3.60	3.60	Water strike
BH-08/05	29/08/2008		12.20	4.50		12.20	20				12.20	Water strike

Client:-	South Tyneside Council	Contract Title:-	Ground Investigation Phase 2: McNulty's Yard, South Shields	Page 1 of 1	AEG Contract No. 3692
				Issued 13/10/2008	

NOTE: All depths are quoted in metres Below Ground Level

IN-SITU ENCLOSURES

ENCLOSURE 0

Test Report Certificate

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate

Pelton Fell

Chester-le-Street

Co. Durham

DH2 2RG

Tel: 0191 3874700

Fax: 0191 3874710



1367

IN-SITU TEST REPORT CERTIFICATE

Contract Title	Ground Investigation Phase 2: McNulty's Yard, South Shields	AEG Reference No.	3692
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Client Address	South Tyneside Council Town Hall and Civic Offices Westoe Road South Shields Tyne and Wear NE33 2RL	Client Reference	
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I certify that *In-situ* testing was carried out on the above contract in accordance with techniques outlined in BS 1377: 1990: Part 9 or other appropriate standards as quoted, and the following results, given on the attached enclosures, were obtained.

The tests carried out are indicated in the attached table showing the enclosure number and the total number of pages.

For and on behalf of Allied Exploration & Geotechnics Limited

Signed..........

Date: 29 October 2008

Nick Vater (BSc (Hons), MSc, C.GEOL, EurGEOL, FGS)
Technical Director

Tests marked not UKAS accredited in this certificate are not included in the UKAS accreditation schedule for our laboratory. Any opinions and interpretations expressed herein are outside the scope of the laboratory's UKAS accreditation.

***IN-SITU* TEST REPORT CERTIFICATE**

ENCLOSURES

Enclosure Number	Description	UKAS Accredited	Reference	No. of Pages
0	Test Report Certificate	N/A		2
1	Standard Penetration Test (SPT)	No	BS 1377 Part 9 1990	2
	Hand Shear Vane Test (HSV)	No		
	Variable Head Permeability Test	No	BS 5930 1999:Section 4	
	Water Monitoring Test	No		
	Density by Sand Replacement Method	Yes	BS 1377 Part 9 1990	
	Density by Core Cutter Method	Yes	BS 1377 Part 9 1990	
	Determination of the Vane Shear Strength (Down the Hole)	Yes	BS 1377 Part 9 1990	
	Shallow Pad (skip) Load Tests	No	BS 1377 Part 9 1990	
	Determination of the California Bearing Ratio	Yes	BS 1377 Part 9 1990	
	Plate Loading Test	No	BS 1377 Part 9 1990	
	Apparent Resistivity of Soil	No	BS 1377 Part 9 1990	
	Redox Potential of Soil	No	BS 1377 Part 9 1990	
	Determination of the Soil Infiltration Rate for Soakaway Design	No	BRE Digest 365:1991	

ENCLOSURE 1

Standard Penetration Test (SPT)

SN

**Standard Penetration Test Results
(BS 1377:Part 9:Clause 3.3:1990)**

Checked By:

BH No.	Depth (mBGL)	Seating Drive						Test Drive										Shoe or Cone			
		Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)		Total Pen (mm)	Total Blows (No.)	SPT 'N' Value
BH-08/03	2.50	75	2	75	3	75	4	75	5	75	3	75	4	75	7	75	8	300	22	22	S
BH-08/03	4.50	75	4	75	7	75	11	75	5	75	5	75	7	75	7	75	8	300	27	27	S
BH-08/03	7.00	75	3	75	6	75	9	75	7	75	7	75	8	75	9	75	8	300	32	32	S
BH-08/03	10.00	75	5	75	8	75	13	75	9	75	9	75	10	75	10	75	12	300	41	41	S
BH-08/03	13.00	75	6	75	8	75	14	75	8	75	8	75	10	75	10	75	11	300	39	39	S
BH-08/03	14.00	75	9	75	10	75	19	75	21	75	32	75	36	75	36	75	13	277	102	-	S
BH-08/04	1.20	150	5	150	5	150	5	150	3	75	3	75	5	75	5	75	4	300	17	17	S
BH-08/04	2.20	150	6	150	6	150	6	150	5	75	5	75	7	75	7	75	5	300	24	24	S
BH-08/04	3.20	150	3	150	3	150	3	150	5	75	5	75	4	75	6	75	4	300	19	19	S
BH-08/04	4.20	150	5	150	5	150	5	150	3	75	3	75	3	75	5	75	5	300	16	16	C
BH-08/04	5.20	150	6	150	6	150	6	150	4	75	4	75	4	75	3	75	3	300	14	14	C
BH-08/04	8.00	150	20	150	20	150	20	150	12	75	12	75	12	75	21	75	5	245	50	-	S
BH-08/04	9.50	150	3	150	3	150	3	150	3	75	3	75	2	75	1	75	1	300	7	7	S
BH-08/04	12.20	150	21	150	21	150	21	150	28	50	22	50	22	50	22	50	125	50	-	-	S
BH-08/04	12.40	60	25	60	25	60	25	60	38	75	43	75	19	75	19	75	160	100	-	-	S
BH-08/05	1.50	75	5	75	4	150	9	75	2	75	2	75	3	75	2	75	3	300	10	10	C
BH-08/05	2.50	75	2	75	1	150	3	75	1	75	1	75	2	75	2	75	3	300	8	8	C
BH-08/05	4.50	75	4	75	5	150	9	75	5	75	6	75	6	75	7	75	7	300	25	25	S
BH-08/05	7.00	75	5	75	8	150	13	75	9	75	23	47	18	75	18	75	197	50	-	-	S
BH-08/05	10.00	75	8	75	2	150	10	75	17	75	13	34	20	75	20	75	184	50	-	-	S
BH-08/05	12.30	21	25	21	25	21	25	56	50	56	50	56	50	56	50	56	56	50	-	-	S
BH-08/13	1.20	150	8	150	8	150	8	150	7	75	7	75	7	75	9	75	11	300	34	34	S
BH-08/13	2.20	150	16	150	16	150	16	150	8	75	8	75	10	75	10	75	16	300	44	44	S
BH-08/13	3.20	150	25	150	25	150	25	150	18	75	21	50	11	75	11	75	200	50	-	-	S
BH-08/13	4.20	150	17	150	17	150	17	150	10	75	15	75	15	75	15	75	265	50	-	-	S
BH-08/13	5.20	150	9	150	9	150	9	150	6	75	6	75	19	75	20	75	245	50	-	-	S
BH-08/13	6.50	150	6	150	6	150	6	150	6	75	6	75	6	75	8	75	300	24	24	24	S

**Standard Penetration Test Results
(BS 1377:Part 9:Clause 3.3:1990)**

Checked By: *SN*

BH No.	Depth (mBGL)	Seating Drive						Test Drive										Shoe or Cone		
		Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Total Pen (mm)	Total Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Pen (mm)	Blows (No.)	Total Pen (mm)	Total Blows (No.)		SPT 'N' Value	
BH-08/13	8.00	150	19			150	19	75	14	75			75	16	75	18	300	62	62	S
BH-08/13	9.50	40	25			40	25	25	100								25	100	-	S

LABORATORY ENCLOSURES

ENCLOSURE 0

Laboratory Report Certificate



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate

Pelton Fell
Chester-le-Street
Co. Durham
DH2 2RG

Tel: 0191 3874700
Fax: 0191 3874710



1367

LABORATORY REPORT CERTIFICATE

Contract Title	Ground Investigation Phase 2 : McNulty's Yard, South Shields	AEG Reference No.	3692
Client	South Tyneside Council	Client Reference	
Address	Town Hall and Civic Offices Westoe Road South Shields Tyne and Wear NE33 2RL		

We certify that Laboratory testing was carried out on samples from the above contract in accordance with techniques outlined in BS 1377: 1990 or other appropriate standards as quoted. The samples were received from September 2008 and the following results, given on the attached enclosures, were obtained.

The tests carried out are indicated in the attached table showing the enclosure number and the total number of pages.

For and on behalf of Allied Exploration & Geotechnics Limited

Signed  Date - 28 October 2008
Michelle Selkirk
Laboratory Manager

Tests marked not UKAS accredited in this certificate are not included in the UKAS accreditation schedule for our laboratory. Any opinions and interpretations expressed herein are outside the scope of the laboratory's UKAS accreditation.

Please note the material was derived from samples taken outside the control of the laboratory.

LABORATORY REPORT CERTIFICATE

ENCLOSURES

Enclosure Number	Description	UKAS Accredited	Reference	No. of Pages
0	Laboratory Report Certificate	N/A		3
1	Sample Description Sheets	N/A		2
2	Moisture Content	Yes	BS 1377 Part 2 1990	1
2	Plasticity Index and Moisture Content	Yes	BS 1377 Part 2 1990	2
-	Determination of Density by Linear Measurement	Yes	BS 1377 Part 2 1990	-
-	Determination of Particle Density	Yes	BS 1377 Part 2 1990	-
3	Particle Size Distribution Sieving	Yes	BS 1377 Part 2 1990 * See comment below	13
3	Particle Size Distribution Sedimentation	No	BS 1377 Part 2 1990	11
-	Determination of Sulphate and pH (Tested externally)	No	BS 1377 Part 3 1990	-
-	Determination of Dry Density/Moisture Content Relationship	Yes	BS 1377 Part 4 1990	-
-	Determination of Dry Density/Moisture/CBR Relationship	Yes	BS 1377 Part 4 1990	-
-	Determination of Moisture Condition Value	Yes	BS 1377 Part 4 1990	-
-	Determination of MCV / Moisture Relationship	Yes	BS 1377 Part 4 1990	-
-	Determination of California Bearing Ratio	Yes	BS 1377 Part 4 1990	-
4	Determination of One Dimensional Consolidation Properties	Yes	BS 1377 Part 5 1990	4
-	Determination of Permeability (Falling Head)	Yes	<i>In-house</i> Method	-
-	Determination of Permeability in a Triaxial Cell	Yes	BS 1377 Part 6 1990	-
-	Shear Strength by Hand Vane	No		-
-	Shear Strength by Direct Shear	Yes	BS 1377 Part 7 1990	-
-	Determination of Residual Strength using Ring Shear Apparatus	No	BS 1377 Part 7 1990	-
5	Undrained Shear Strength in Triaxial Cell without Pore Water Pressure Measurement	Yes	BS 1377 Part 7 1990	1
-	Consolidated Undrained Shear Strength in Triaxial Cell with Measurement of Pore Pressure	No	BS 1377 Part 8 1990	-
-	Determination of Point Load Index	Yes	ISRM 1985	-
-	Determination of Unconfined Compressive Strength (Tested externally)	No	ISRM 1985	-

* - In some cases the test method on the certificate states "Not to BS1377". BS1377 was followed with a slight deviation from the standard. Due to the presence of a high percentage of coarse material, and the sample size restraints, the mass of sample used was less than the BS recommended amount.

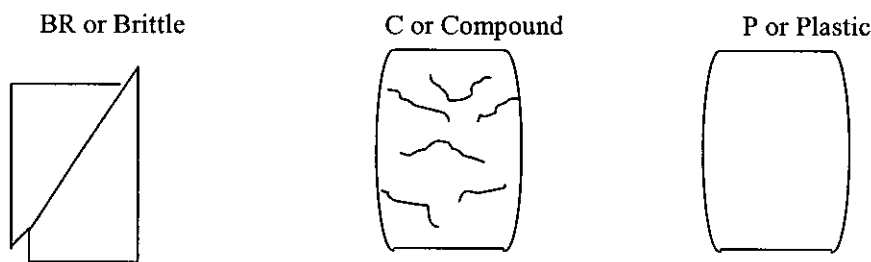
LABORATORY REPORT CERTIFICATE

ABBREVIATIONS

All the abbreviations used on the laboratory certificates are given below:

Dens	Density	PSD	Particle Size Distribution by sieve analysis
C	Compound	SB	Shear Box
CBR	California Bearing Ratio	SED	Sedimentation Analysis
CDT	Consolidated Drained Triaxial	SO3	Sulphate (total, water extract, groundwater)
CL	Chloride content (water or soil)	CP2	Dry Density/Moisture Content 2.5kg rammer
US	Unsuitable sample for scheduled test	CP4	As above using 4.5kg rammer
UUT	Undrained Unconsolidated Triaxial	CPV	As above using vibrating hammer
HSV	Vane Test	CUT	Consolidated Undrained Triaxial
IS	Insufficient sample for scheduled test	R	Remoulded
LOI	Loss On Ignition	U	Undisturbed
M	Multi-stage testing	MC	Moisture Content
MCV	Moisture Content Value	PL	Point Load
NAT	Natural preparation method	NMC	Natural (or as received) moisture content
NP	Non Plastic	LL	Liquid Limit
PCH	Permeability Constant Head Method	PFH	Permeability Falling Head Method
OED	Oedometer	PTXL	Permeability in Triaxial Cell
OMC	Optimum Moisture Content	ORG	Organic content
B	Large disturbed (bulk) sample	PD	Particle Density (SG)
J	Small disturbed (jar) sample	PI	Liquid limit, plastic limit and plasticity index

Typical Mode of Failure for Triaxial Testing



ENCLOSURE 1

Sample Description Sheets

ALLIED EXPLORATION & GEOTECHNICS LIMITED



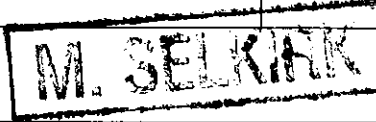

Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG

Tel No. : 0191 3874700 Fax No. : 0191 3874710

LABORATORY SAMPLE DESCRIPTION SHEET

Exploratory Hole No.	Sample Depth	ID	Description	Laboratory Tests/Remarks
BH08/03	2.20	B9	Brown slightly sandy slightly gravelly CLAY.	PSD SED
BH08/03	3.10	B11	Grey slightly sandy slightly gravelly CLAY.	PSD SED
BH08/03	3.50	U12	Stiff brown sandy gravelly CLAY of low plasticity.	MC PI UUT
BH08/03	4.20	J14	Grey sandy gravelly CLAY of low plasticity.	MC PI
BH08/03	5.20	J17	Grey sandy gravelly CLAY of low plasticity	MC PI
BH08/03	5.20	B18	Grey sandy gravelly CLAY.	PSD SED
BH08/03	6.70	B20	Grey sandy gravelly CLAY	PSD SED
BH08/03	7.50	B23	Grey sandy gravelly CLAY.	PSD SED
BH08/03	8.50	U25	Firm brown sandy gravelly CLAY of low plasticity.	MC PI UUT
BH08/03	10.70	J30	Grey sandy gravelly CLAY of low plasticity.	MC PI
BH08/03	11.50	U32	Very stiff grey sandy gravelly CLAY of low plasticity.	MC PI OED
BH08/04	1.20	B6	MADE GROUND(Grey clayey very sandy gravel including slag and brick fragments).	PSD SED
BH08/04	3.20	B12	MADE GROUND(Red/brown clayey very sandy gravel including shale and brick fragments).	PSD SED
BH08/04	4.20	J14	MADE GROUND(Brown slightly clayey sandy gravel).	MC US for PI
BH08/04	4.20	B15	MADE GROUND(Brown slightly clayey sandy gravel including slag and brick fragments).	PSD
BH08/04	5.20	J17	Grey very clayey very sandy GRAVEL including occasional cobbles.	MC US for PI
BH08/04	5.20	B18	Grey very clayey very sandy GRAVEL including occasional cobbles	PSD SED
BH08/04	6.50	U20	Stiff brown sandy gravelly CLAY of low plasticity.	MC PI US for UUT
BH08/04	8.00	J24	Grey sandy gravelly CLAY.	MC PI (IS for LL)
BH08/04	9.50	B27	Grey sandy gravelly CLAY	PSD SED
BH08/05	1.50	B5	MADE GROUND(Grey very silty very sandy gravel including slag and brick fragments).	PSD SED

Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields	Client :- South Tyneside Council
---	--

	Signed :- 	Name :- 	Page 1 of 2	
	Date of issue :- 28/10/2008	Certificate No :- SD/3692/1	AEG Contract No. :- 3692	

ALLIED EXPLORATION & GEOTECHNICS LIMITED



Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG

Tel No. : 0191 3874700 Fax No. : 0191 3874710

LABORATORY SAMPLE DESCRIPTION SHEET

Exploratory Hole No.	Sample Depth	ID	Description	Laboratory Tests/Remarks
BH08/05	3.50	U9	Stiff brown sandy gravelly CLAY of low plasticity.	MC PI UUT
BH08/05	4.20	J11	Grey sandy gravelly CLAY.	MC PI (IS for LL)
BH08/05	5.50	U16	Stiff grey sandy gravelly CLAY of low plasticity.	MC PI OED
BH08/05	7.00	B20	Grey sandy gravelly CLAY.	PSD SED
BH08/05	8.50	U23	Very stiff brown sandy gravelly CLAY of low plasticity.	MC PI US for UUT
BH08/05	10.90	B29	Brown slightly sandy CLAY/SILT.	PSD SED
BH08/05	12.00	J31	Brown sandy slightly gravelly CLAY of low plasticity.	MC PI

Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields	Client :- South Tyneside Council
---	--

	Signed :- <i>M. Selkirk</i>	Name :- M. SELKIRK	Page 2 of 2	
	Date of issue :- 30/09/2008	Certificate No :- SD/3692/2	AEG Contract No. :- 3692	

ENCLOSURE 2

Moisture Content/Plastic Index and Moisture Content




ALLIED EXPLORATION & GEOTECHNICS LIMITEDUnit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG
Tel No. 0191 3784700 Fax No. 0191 3874710**MOISTURE CONTENT CERTIFICATE**

BS 1377 : Part 2 : Clause 3.2

Exploratory Hole No.	Sample Depth (m)	Sample ID	Moisture Content %	Date Tested	Remarks
BH08/04	4.20	J14	21.4	16/09/2008	
BH08/04	5.20	J17	23.2	17/09/2008	

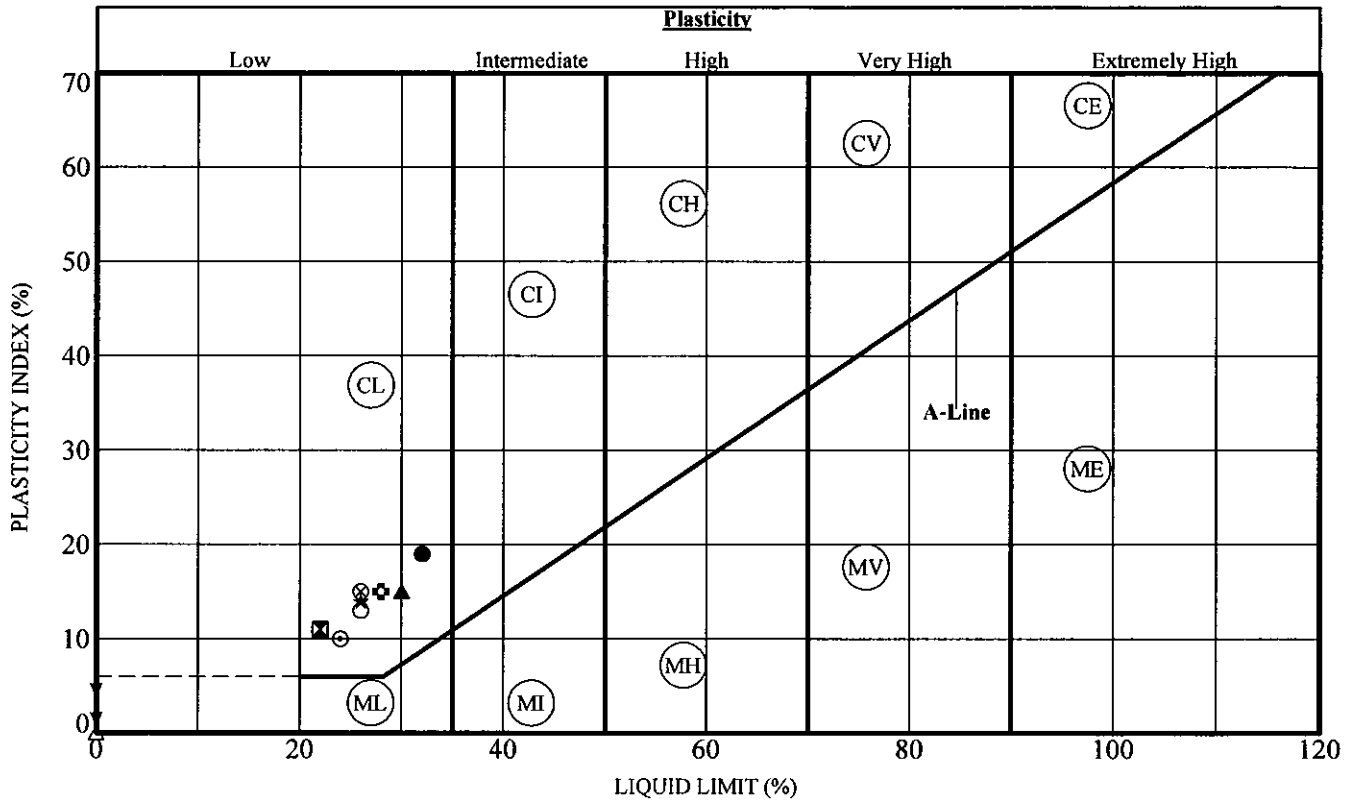
For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-
Ground Investigation Phase 2: McNulty's Yard, South ShieldsClient :-
South Tyneside Council

	Signed :- 	Name :- M. SELKIRK	Page 1 of 1	
	Date of issue :- 26/09/2008	Certificate No :- MC/3692/1	AEG Contract No. :- 3692	

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method :- BS 1377 : Part 2 : Clause 3.2, 4.1, 4.3, 4.4 & 5.3 : 1990



Specimen Identification	LL	PL	PI	<0.425mm (%)	m/c (%)	Date Tested
●BH08/03 3.50 U12	32	13	19	NAT	12.8	22/09/2008
▣BH08/03 4.20 J14	22	11	11	NAT	11.8	17/09/2008 #
▲BH08/03 5.20 J17	30	15	15	NAT	16.9	17/09/2008
★BH08/03 8.50 U25	26	12	14	NAT	10.9	23/09/2008
⊙BH08/03 10.70 J30	24	14	10	NAT	11.5	17/09/2008 #
◆BH08/03 11.50 U32	28	13	15	NAT	10.8	18/09/2008
○BH08/04 5.20 B18	26	13	13	NAT	14.6	22/09/2008
△BH08/04 8.00 J24		15		NAT	9.3	16/08/2008 #
⊗BH08/05 3.50 U9	26	11	15	NAT	11.4	23/09/2008

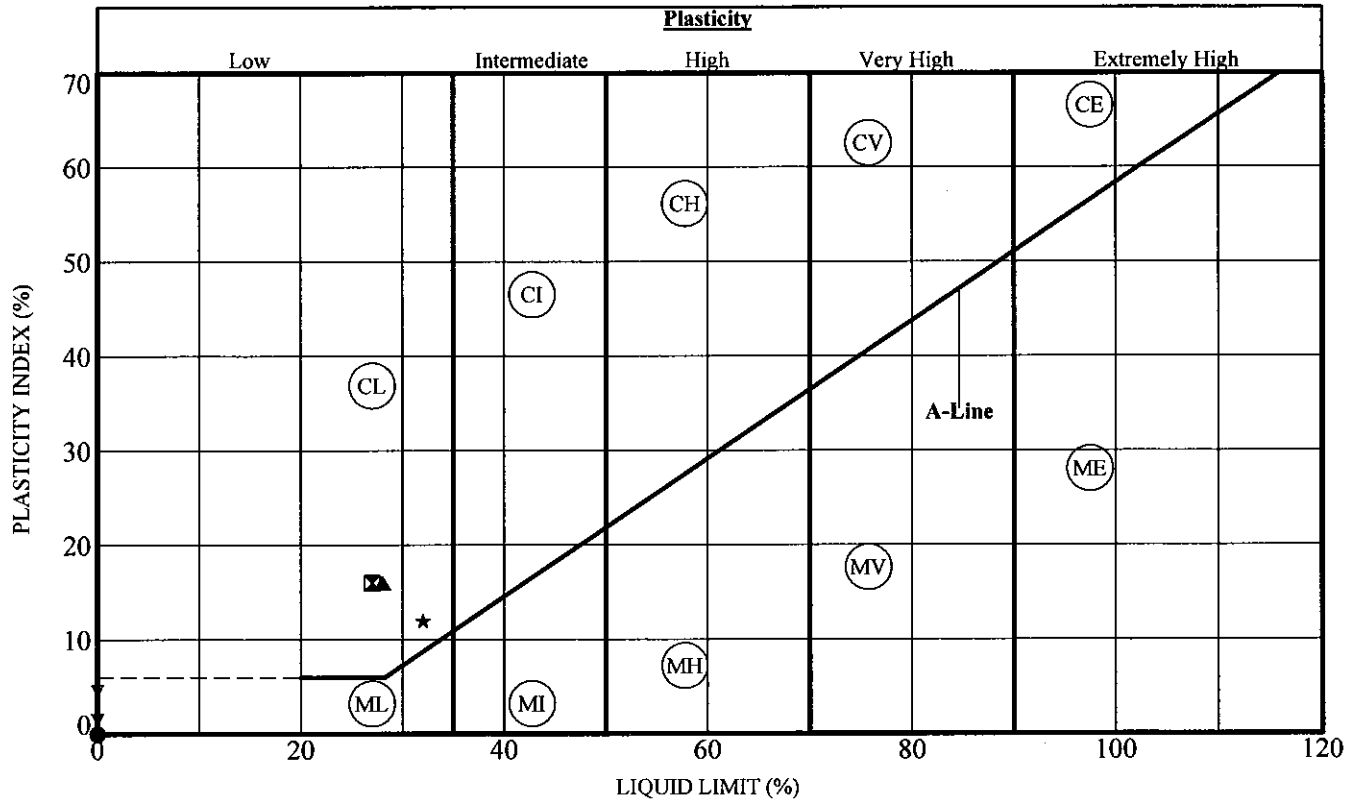
For description of sample please refer to the Laboratory Sample Description Sheet. # = Insufficient for 4 point PI

Contract Title :- Ground Investigation Phase 2: Mcnulty's Yard, South Shields	Client :- South Tyneside Council
---	--

	Signed :- <i>M. Selkirk</i>	Name :- M. SELKIRK	Page 1 of 2	
	Date of issue :- 30/09/2008	Certificate No :- PI/3692/1	AEG Contract No :- 3692	

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method :- BS 1377 : Part 2 : Clause 3.2, 4.1, 4.3, 4.4 & 5.3 : 1990



Specimen Identification	LL	PL	PI	<0.425mm (%)	m/c (%)	Date Tested
●BH08/05 4.20 J11	0	13	13	NAT	13.4	17/09/2008 #
▣BH08/05 5.50 U16	27	11	16	NAT	10.8	18/09/2008
▲BH08/05 8.50 U23	28	12	16	NAT	10.1	22/09/2008
*BH08/05 12.00 J31	32	20	12	NAT	17.4	16/09/2008 #

For description of sample please refer to the Laboratory Sample Description Sheet. # = Insufficient for 4 point PI

Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields	Client :- South Tyneside Council
---	--

	Signed :- <i>M. Selkirk</i>	Name :- M. SELKIRK	Page 2 of 2	
	Date of issue :- 26/09/2008	Certificate No :- PI/3692/2	AEG Contract No :- 3692	

ENCLOSURE 3

Particle Size Distribution Sieving and Sedimentation

Test Method :- BS1377 : Part 2 : 1990

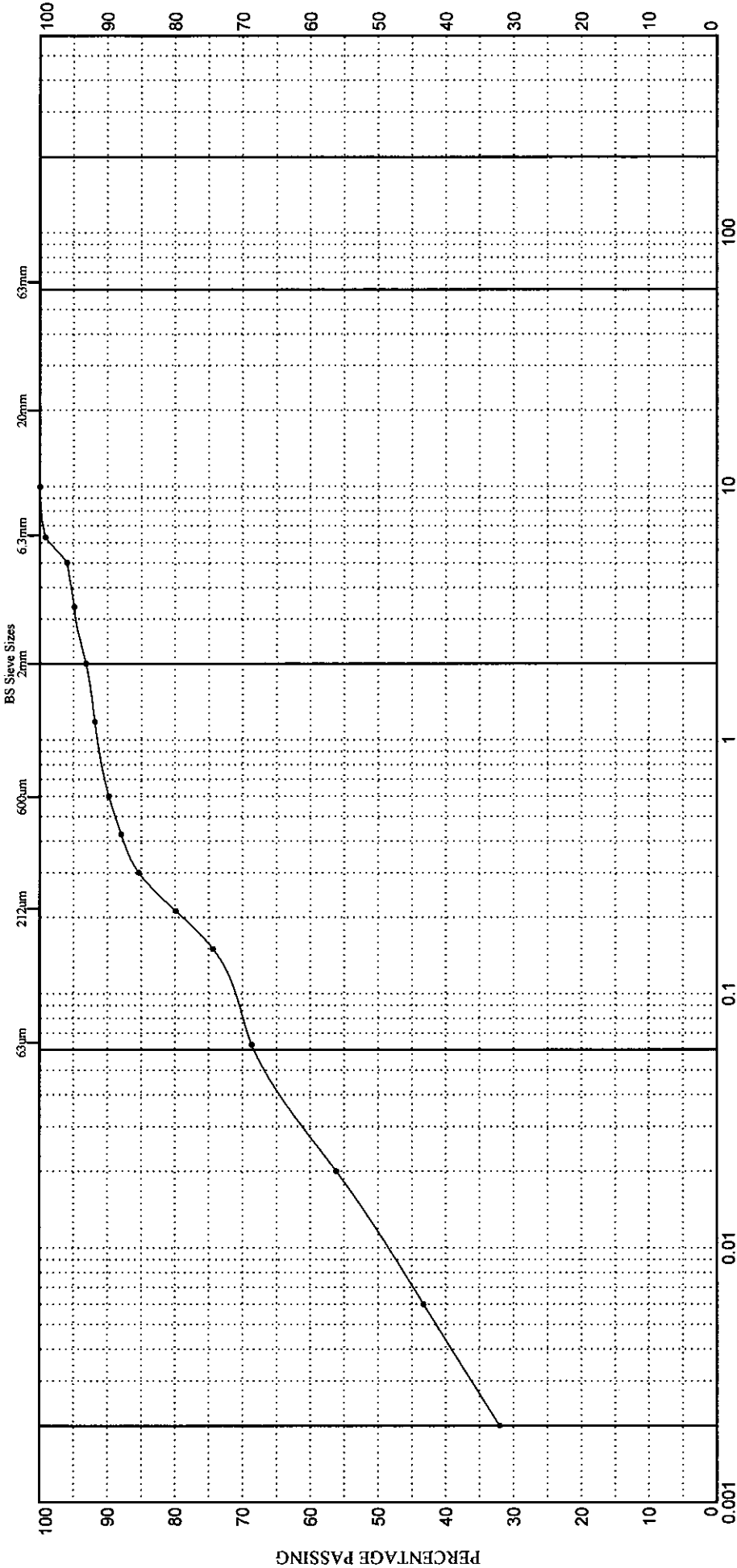
Exploratory Hole No :- BH08/03

Depth :- 2.20

Sample Type & No :- B9



Date Tested :- 18/05/2008

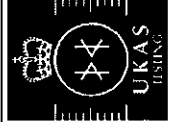
PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Coarse	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

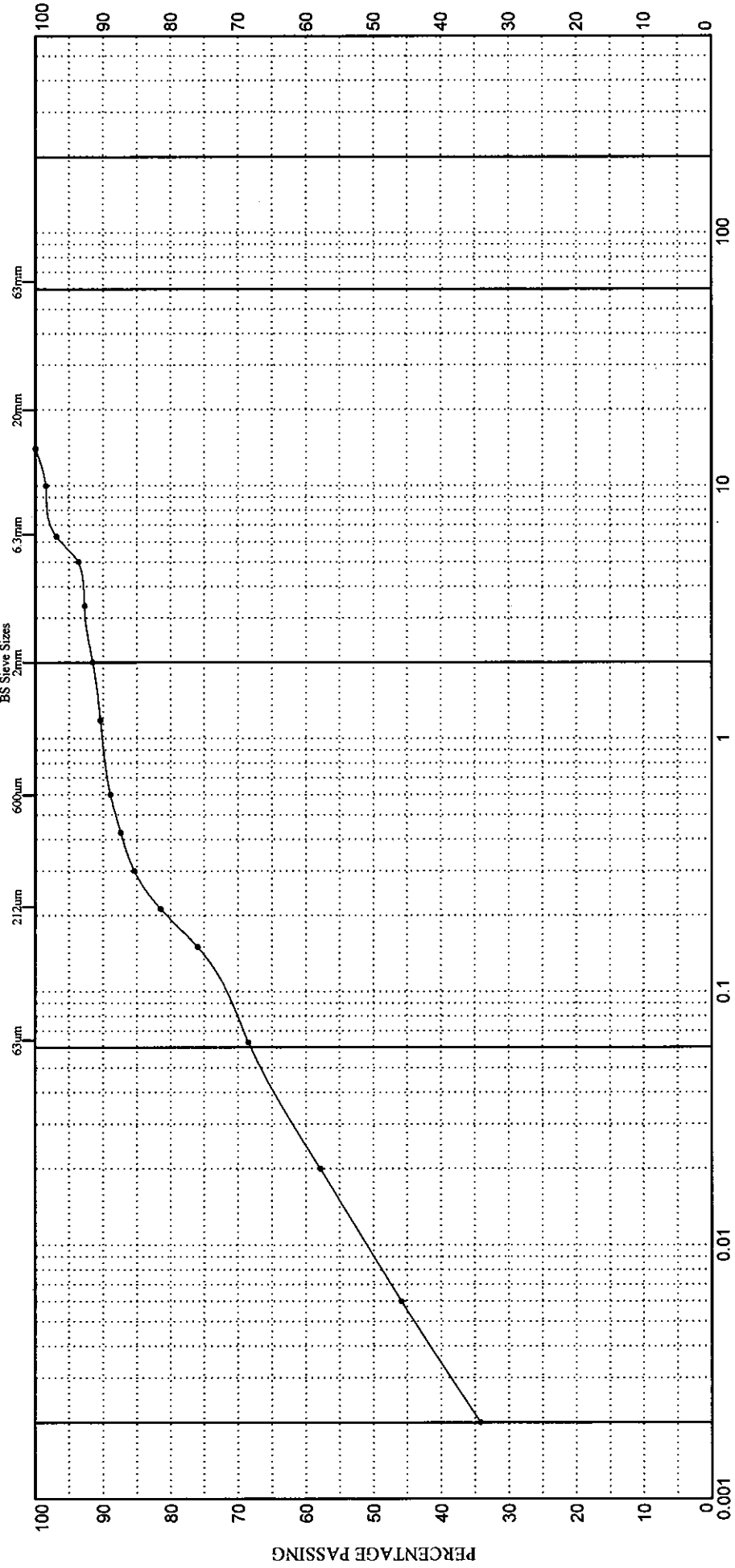
For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/03/B9/2.20	Signed 	Name M. SELKIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields			AEG Contract No :- 3692



Test Method :- BS1377 : Part 2 : 1990	Exploratory Hole No :- BH08/03	Date Tested :- 18/09/2008
	Depth :- 3.10	Sample Type & No :- B11

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT		SAND			GRAVEL			COBBLES	BOULDERS
Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse		

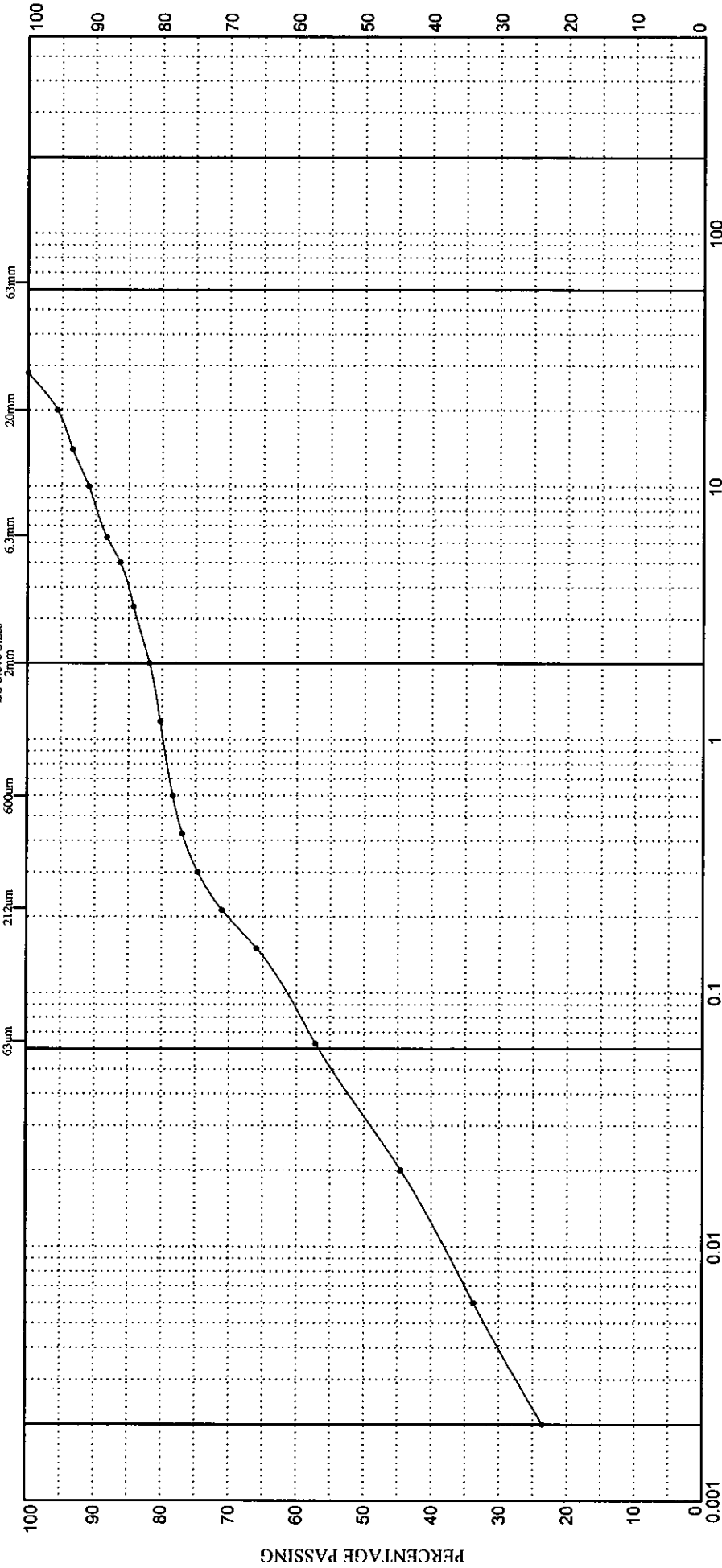
For description of sample please refer to the Laboratory Sample Description Sheet

AEG	Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/03/B11/3.10	Signed <i>M. Selkirk</i>	Name M. SELKIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields			AEG Contract No :- 3692



Test Method :- Not To BS 1377	Exploratory Hole No :- BH08/03	Date Tested :- 16/09/2008
	Depth :- 5.20	Sample Type & No :- B18

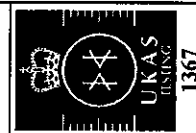
PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

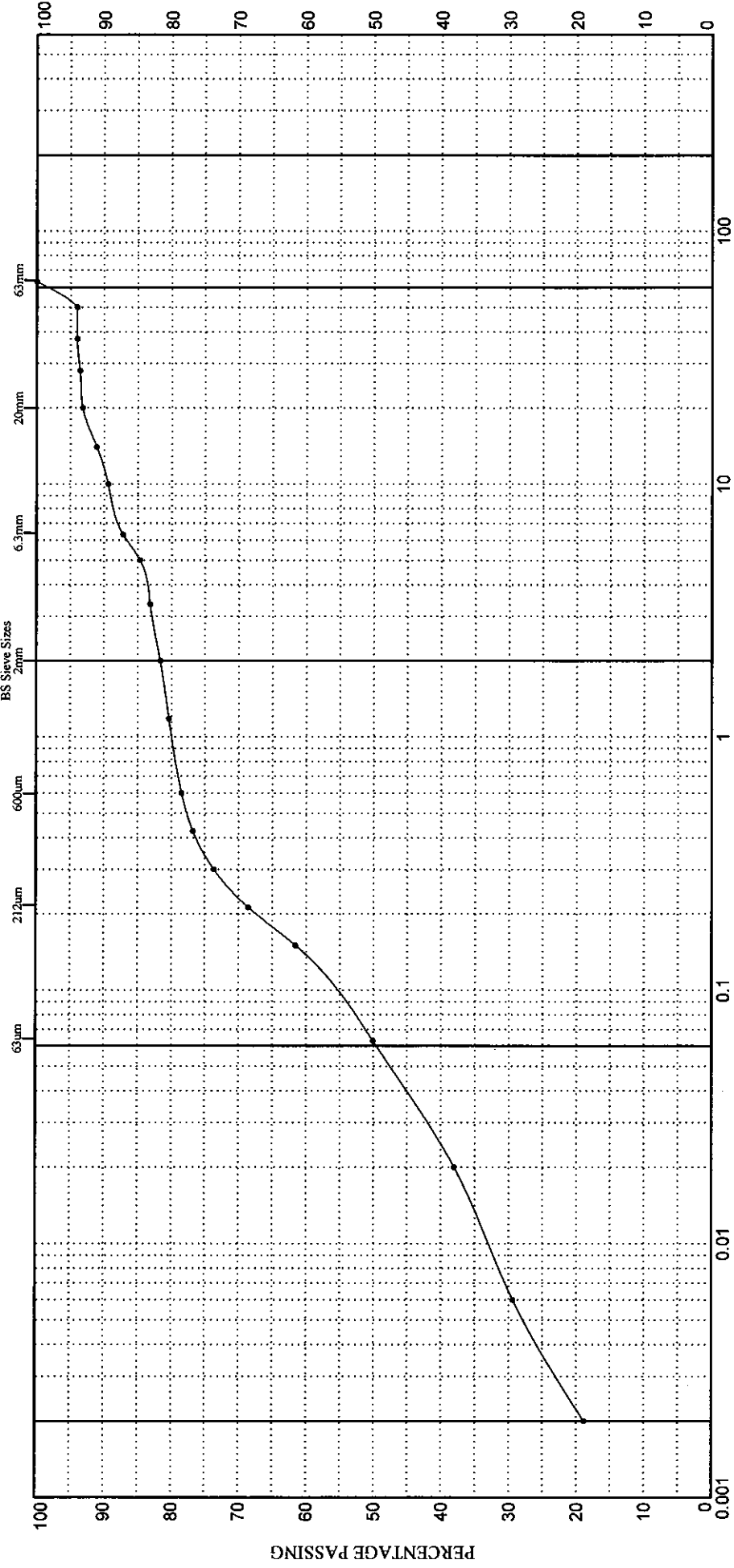
For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/03/B18/5.20	Signed <i>Mason</i>	Name M. SELKIRK	Page 1 of 1
Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields			AEG Contract No :- 3692



Test Method :- BS1377 : Part 2 : 1990 Exploratory Note No :- BH08/03 Depth :- 6.70 Sample Type & No :- B20 Date Tested :- 17/09/2008

PARTICLE SIZE DISTRIBUTION CURVE



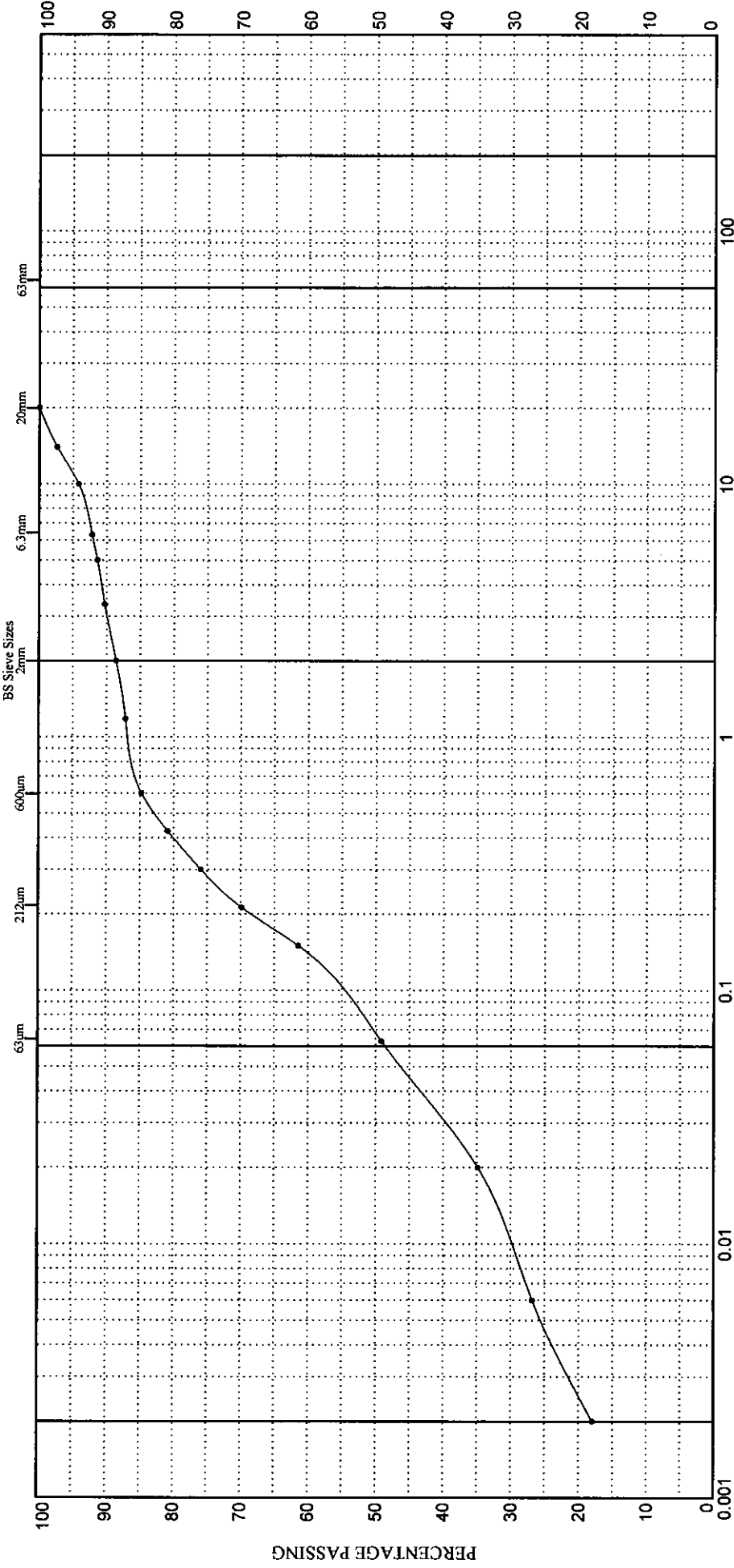
CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/03/B20/6.70		Name M. STURK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields			AEG Contract No :- 3692

Test Method :- BS1377 : Part 2 : 1990	Exploratory Hole No :- BH08/03	Date Tested :- 16/09/2008
	Depth :- 7.50	Sample Type & No :- B23

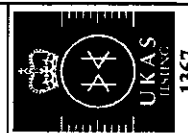
PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL			

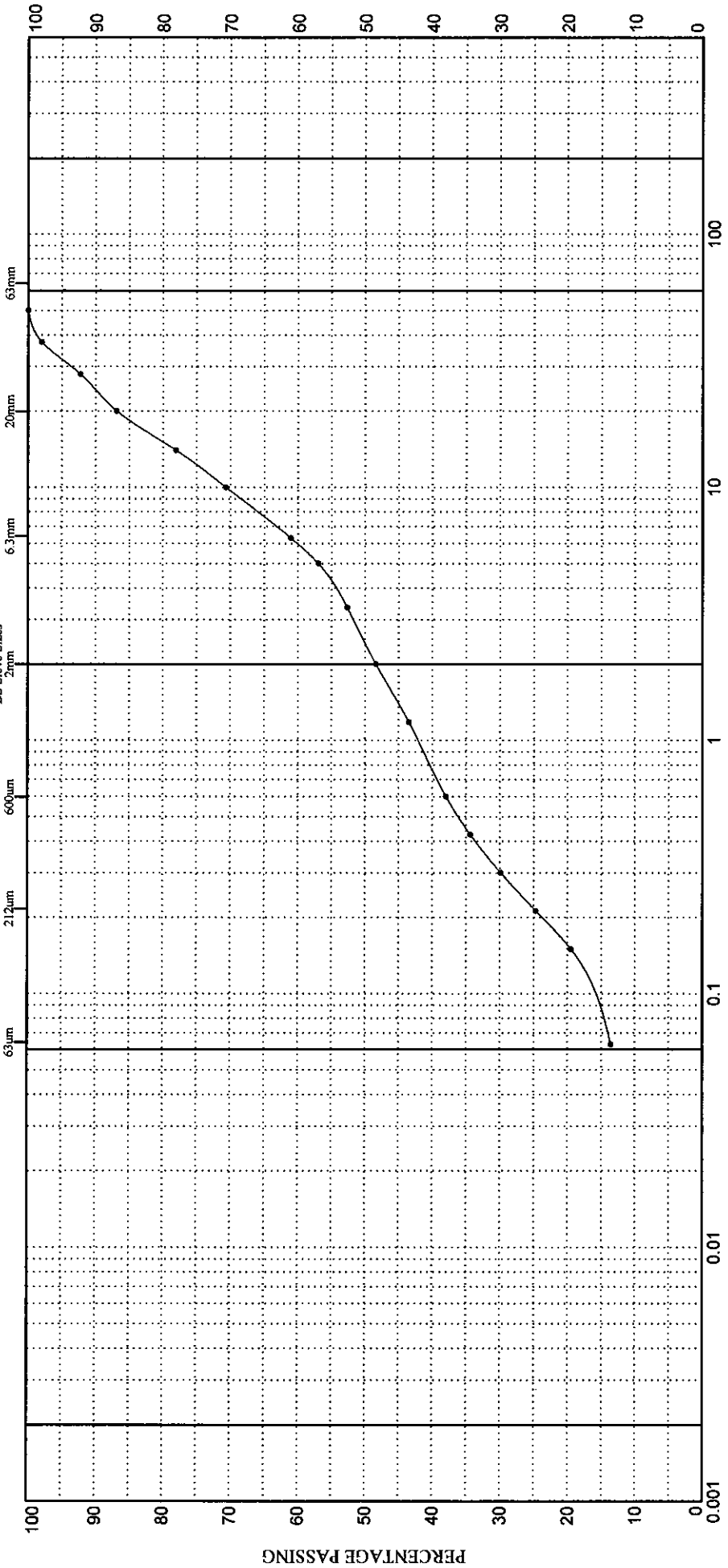
For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/03/B23/7.50	Signed <i>[Signature]</i>	Name <i>[Name]</i>	Page 1 of 1
Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields			AEG Contract No :- 3692



Test Method :- Not To BS 1377	Exploratory Hole No :- BH08/04	Depth :- 1.20
	Sample Type & No :- B6	Date Tested :- 17/08/2008

PARTICLE SIZE DISTRIBUTION CURVE



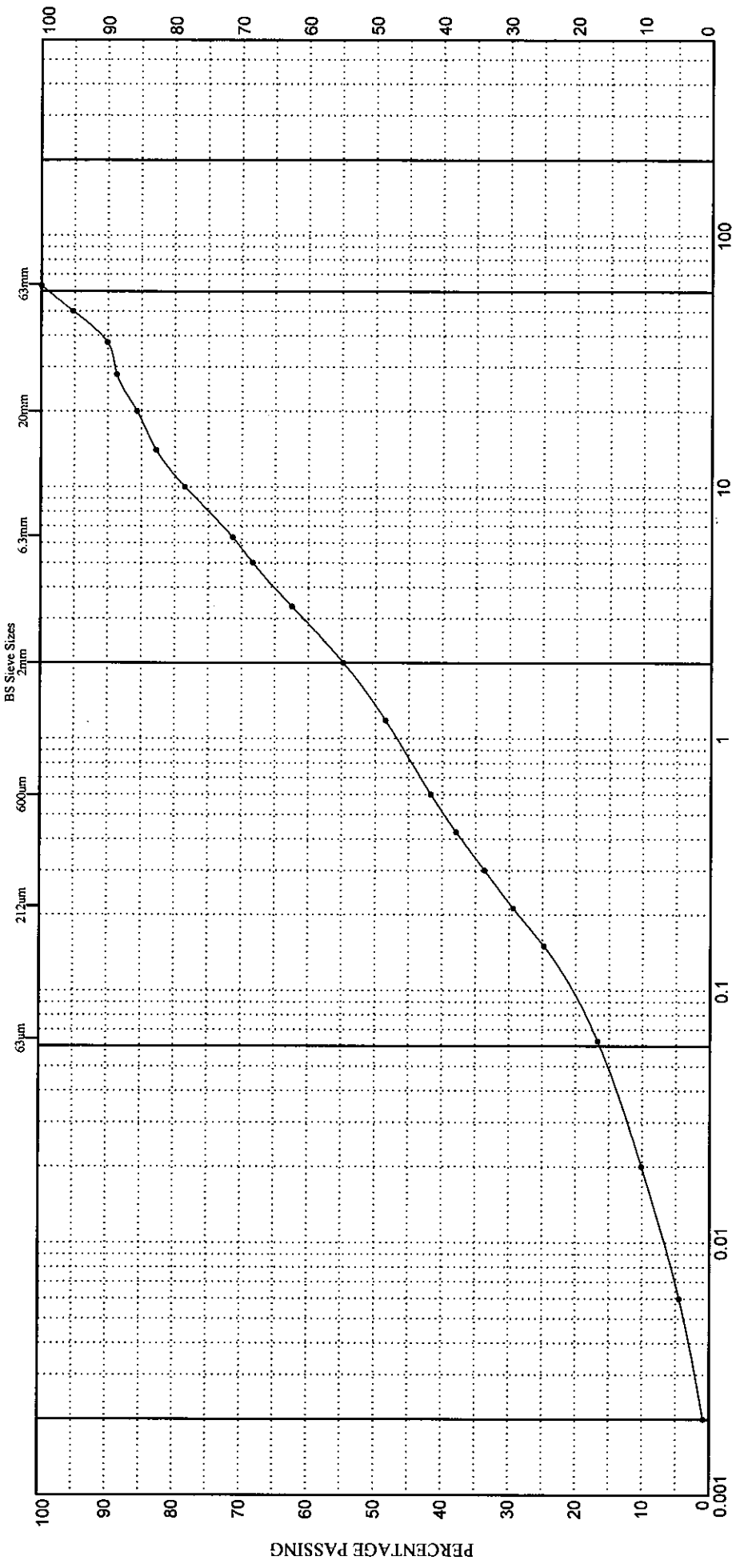
CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Coarse	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/04/B6/1.20	Signed: <i>M. Selkirk</i>	Name: M. SELKIRK
Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields		AEG Contract No :- 3692
Page 1 of 1			1367



Test Method :- **BS1377 : Part 2 : 1990** Exploratory Hole No :- **BH08/04** Depth :- **3.20** Sample Type & No :- **B12** Date Tested :- **17/08/2008**

PARTICLE SIZE DISTRIBUTION CURVE



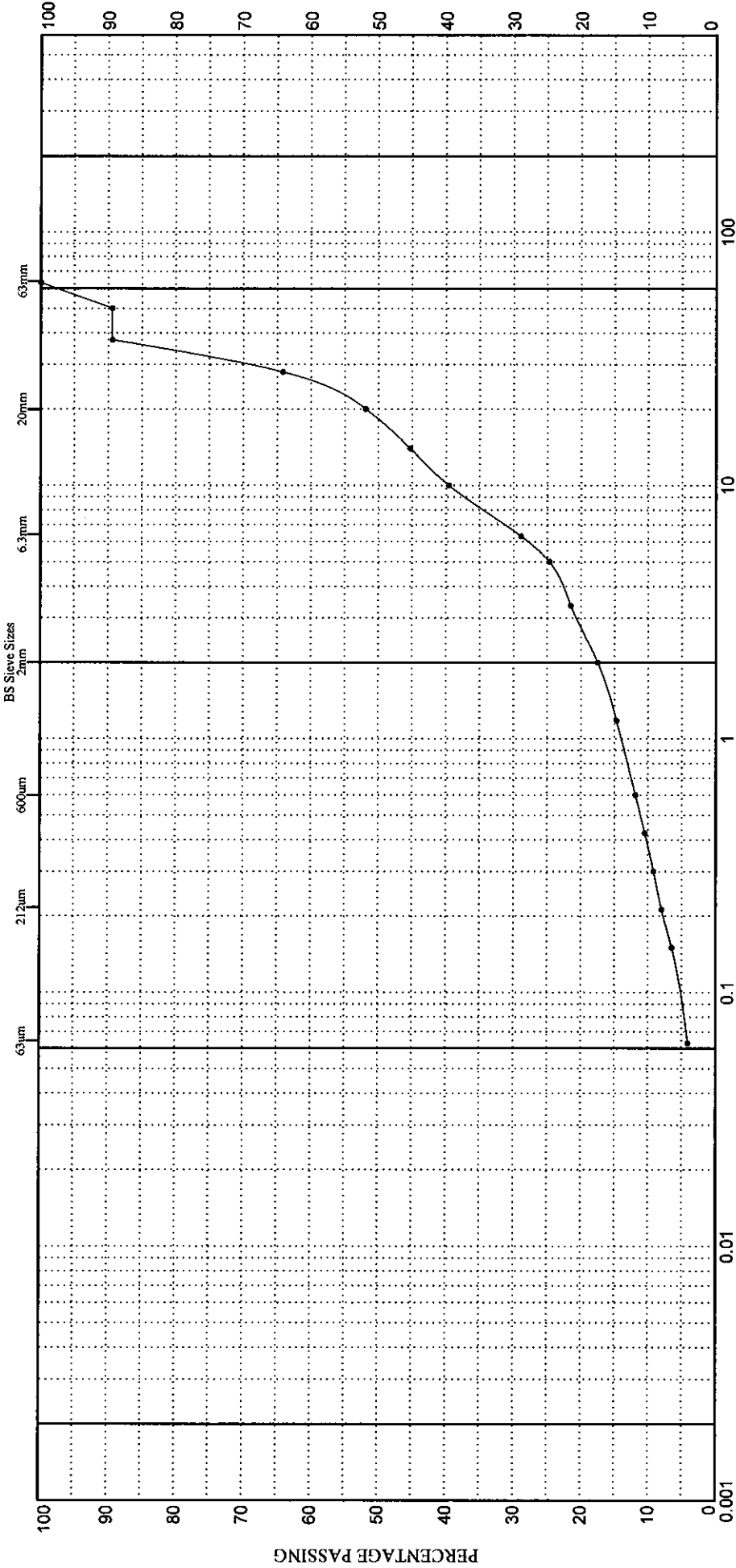
CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL			

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/04/B12/3.20	 Signed Name M. KIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields		AEG Contract No :- 3692

Test Method :- Not To BS 1377	Exploratory Hole No :- BH08/04	Date Tested :- 16/09/2008
	Depth :- 4.20	
	Sample Type & No :- B15	

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Coarse	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

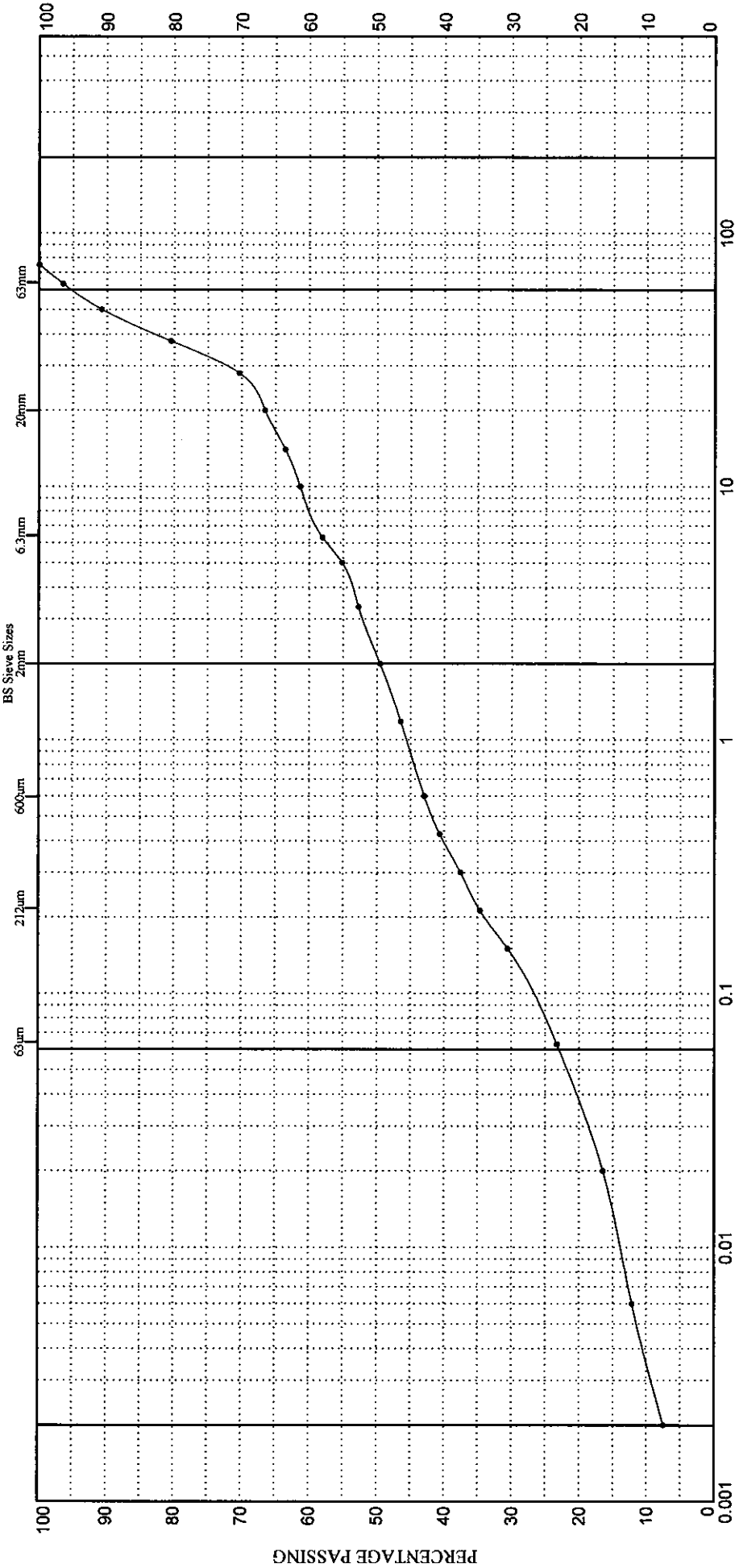
For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/04/B15/4.20	Signed <i>M. Sear</i>	Name M. SELLMINK	Page 1 of 1
Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields			REG Contract No :- 3692






Test Method :- BS1377 : Part 2 : 1990 Exploratory Hole No :- BH08/04 Depth :- 5.20 Sample Type & No :- B18 Date Tested :- 17/09/2008

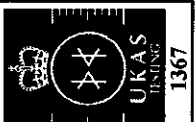
PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

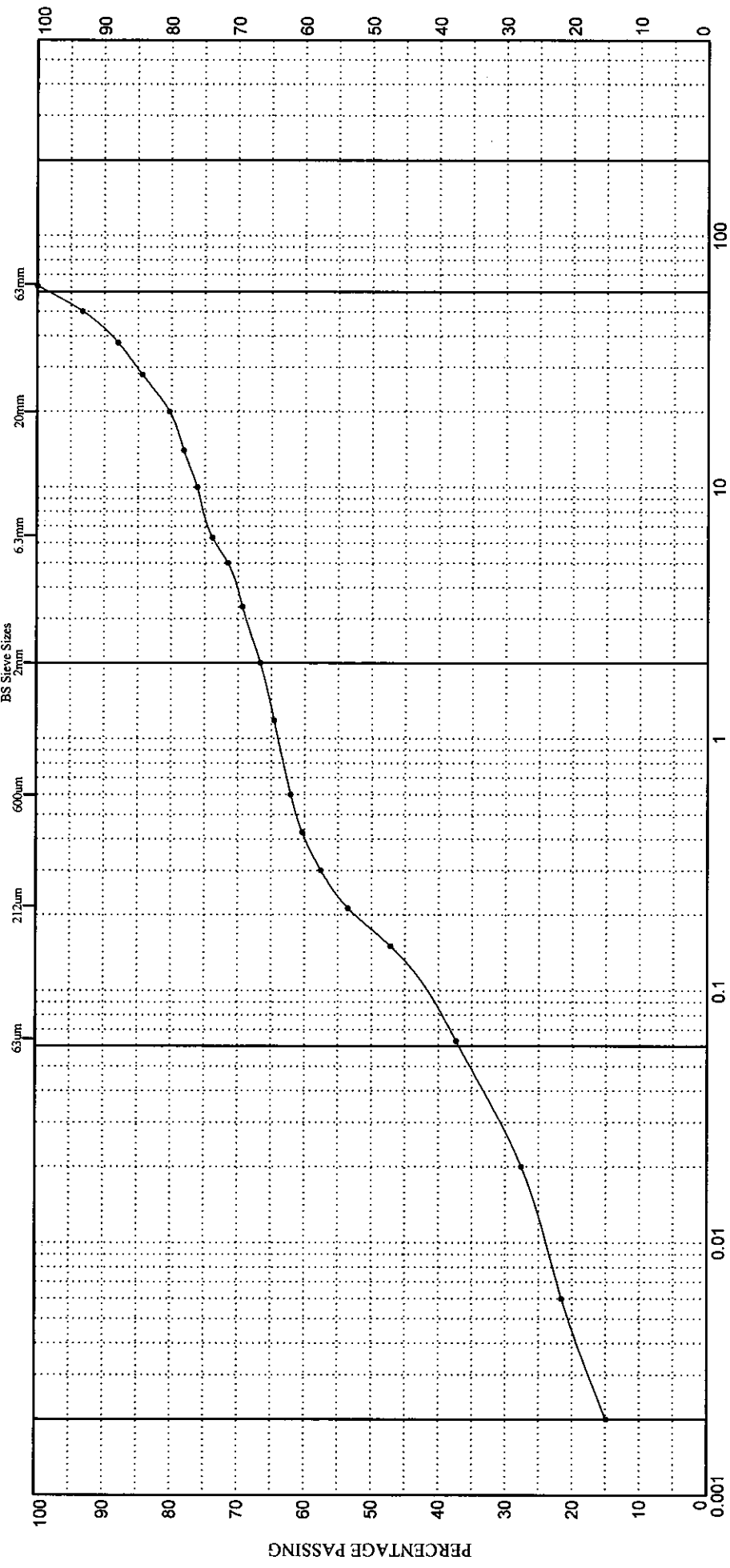
For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/04/B18/5.20			Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields			AEG Contract No :- 3692



Test Method :- BS1377 : Part 2 : 1990 Exploratory Hole No :- BH08/04 Depth :- 9.50 Sample Type & No :- B27 Date Tested :- 17/09/2008

PARTICLE SIZE DISTRIBUTION CURVE



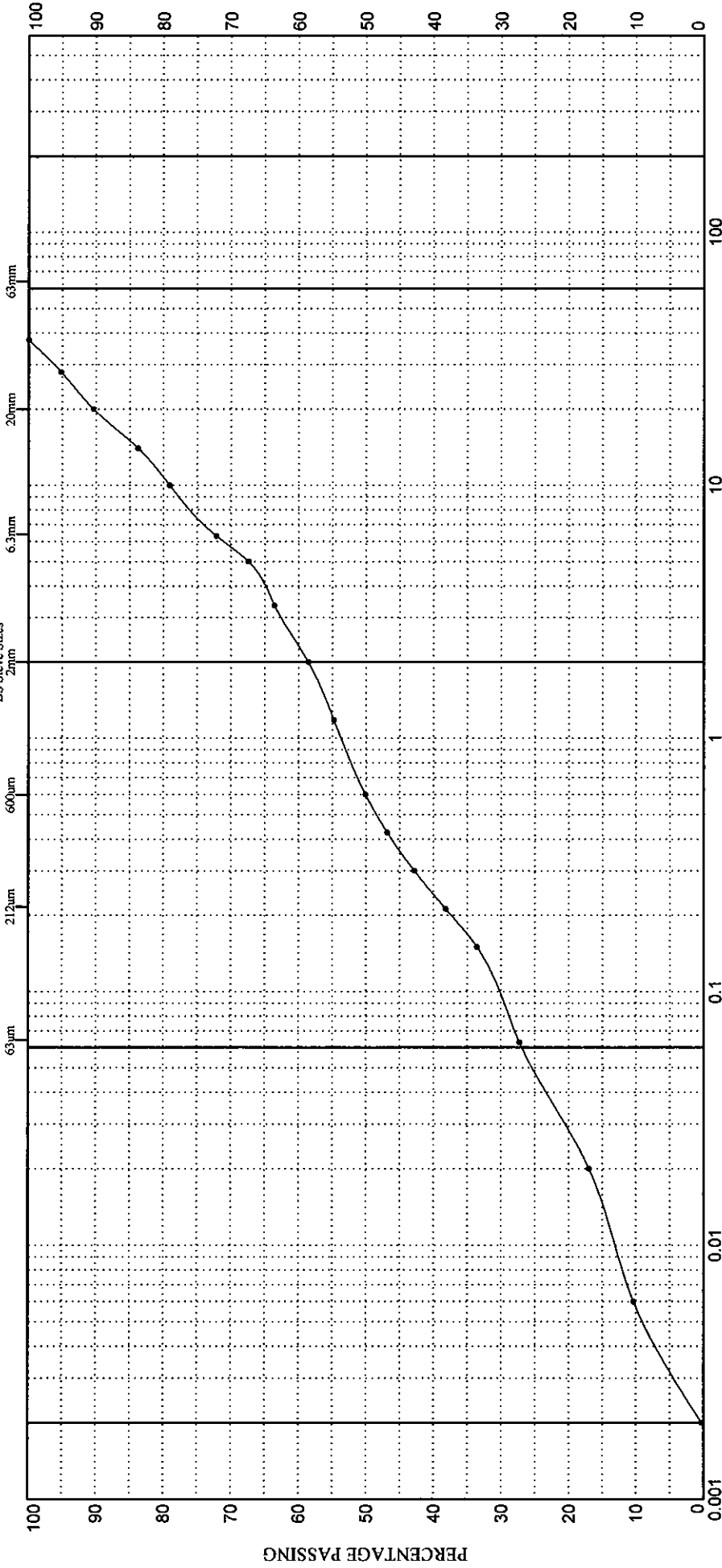
CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT			SAND			GRAVEL				

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/04/B27/9.50	Signed <i>Mason</i> Name M. SELKIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields		AEG Contract No :- 3692

Test Method :- **BS1377 : Part 2 : 1990** Exploratory Hole No :- **BH08/05** Depth :- **1.50** Sample Type & No :- **B5** Date Tested :- **16/09/2008**

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Coarse	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL			

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/05/B5/1.50	Signed <i>M. Selkirk</i>	Name M. SELKIRK	Page 1 of 1
				REG Contract No :- 3692
Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields			1367



Test Method :- BS1377 : Part 2 : 1990

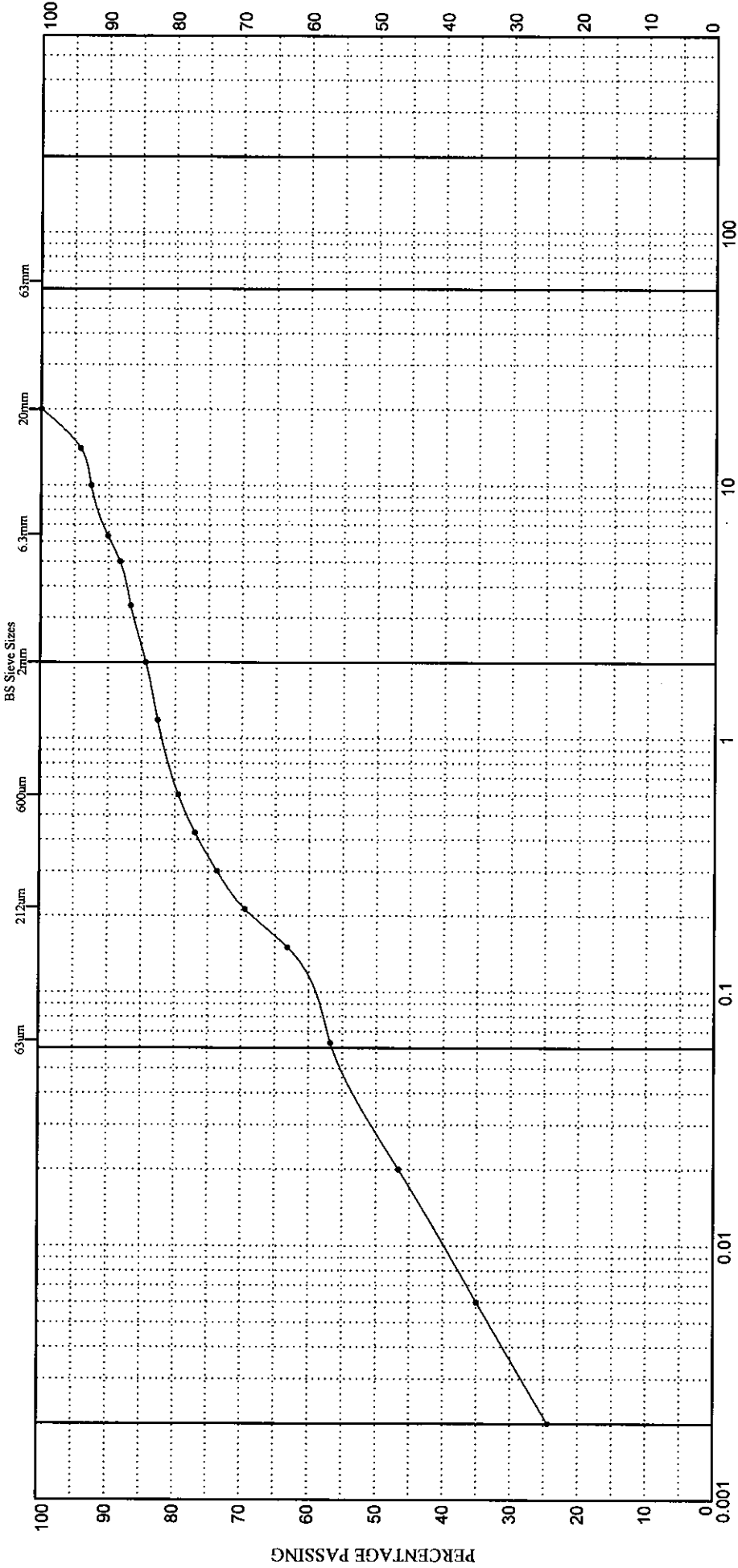
Exploratory Hole No :- BH08/05

Depth :- 7.00

Sample Type & No :- B20

Date Tested :- 18/09/2008

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL			

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/05/B20/7.00	Signed :- <i>M. Selkirk</i>	Name :- M. SELKIRK	Page 1 of 1
Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: McNulty's Yard, South Shields			AEG Contract No :- 3692

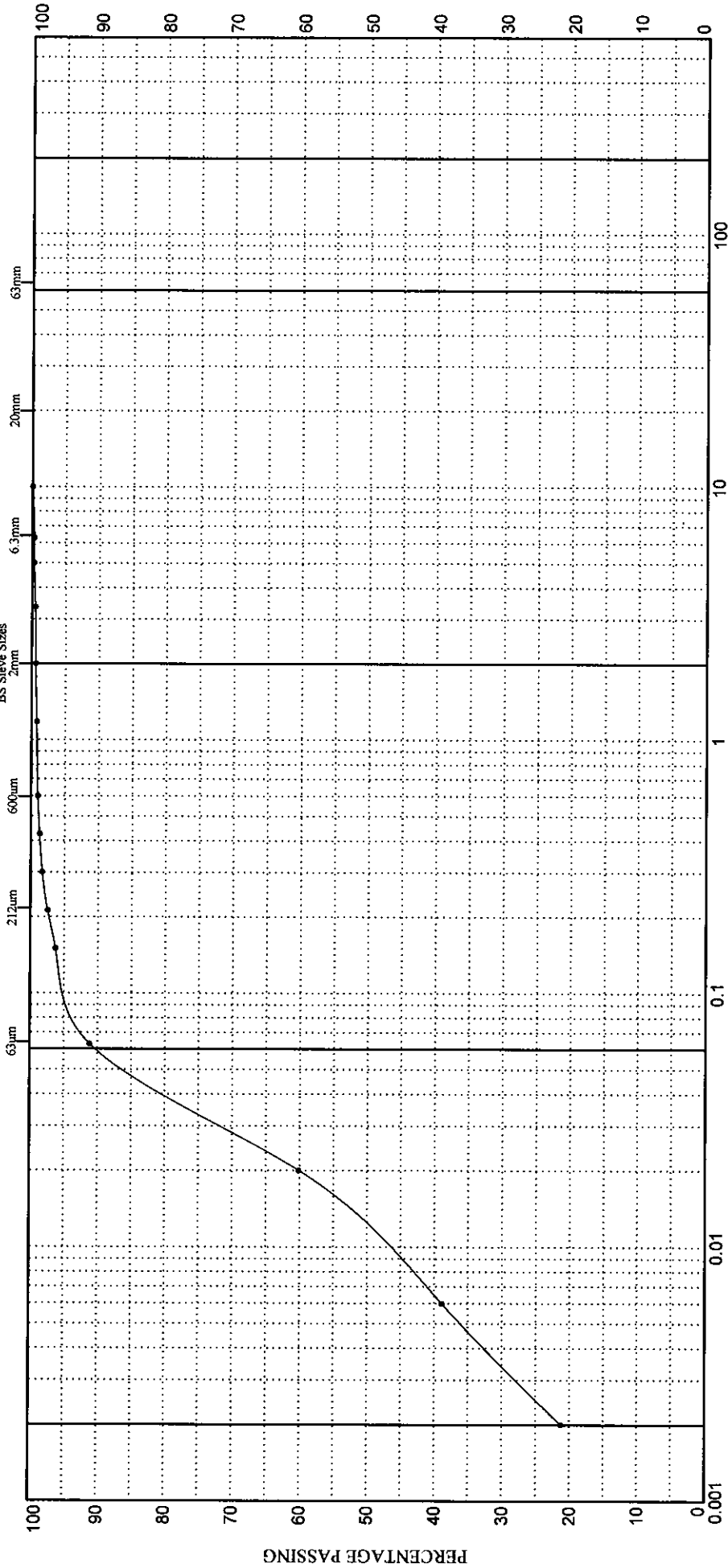


ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG



Test Method :- BS1377 : Part 2 : 1990	Exploratory Hole No :- BH08/05	Depth :- 10.90	Sample Type & No :- B29	Date Tested :- 16/09/2008
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PARTICLE SIZE DISTRIBUTION CURVE



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
SILT						GRAVEL					

For description of sample please refer to the Laboratory Sample Description Sheet

	Date of issue :- 26/09/2008	Certificate No :- PSD/3692/BH08/05/B29/10.90			Name M BELKIRK	Page 1 of 1
	Client :- South Tyneside Council	Contract Title :- Ground Investigation Phase 2: Menulty's Yard, South Shields				AEG Contract No :- 3692

ENCLOSURE 4

Determination of One Dimensional Consolidation Properties

ONE DIMENSIONAL CONSOLIDATION PROPERTIES
BS 1377 : PART 5 : 1990 : CLAUSE 3

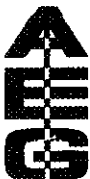


Exploratory Hole No	BH-08/03	Sample	U32	Depth	11.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	11.50m
	INITIAL	FINAL			
Height	19.2	17.7	mm	Particle Density (Assumed)	2.70
Diameter	75	75	mm		
Moisture Content	12	12	%	Degree of Saturation (%)	99.4
Wet Density	2.27	2.44	Mg/m ³		
Dry Density	2.02	2.18	Mg/m ³	Test Duration (Days)	9
				Date Tested	18/09/2008

Square Root of Time Fitting Method				
Pressure Range kN/m ²	Mv m ² /MN	Cv m ² /yr	Temp C	Voids Ratio
Initial				0.338
0 - 100	0.130	.	23	0.321
100 - 200	0.098	1.90	23	0.308
200 - 400	0.077	1.85	23	0.288
400 - 200	0.010	Swelling	23	0.290
200 - 100	0.044	Swelling	23	0.296
100 - 200	0.020	1.84	23	0.293
200 - 400	0.025	2.89	23	0.287
400 - 800	0.044	2.16	23	0.264
800 - 1600	0.028	1.88	23	0.236

For sample description please refer to the Laboratory Sample Description Sheet.

Contract Title **Ground Investigation Phase 2: McNulty's Yard, South Shields**

Client **South Tyneside Council**

	Signed	Name	Page 1 of 2	
		M. SELKIRK		
Date of Issue	Certificate No	AEG Contract No		
01/10/2008	3692A	3692		1367

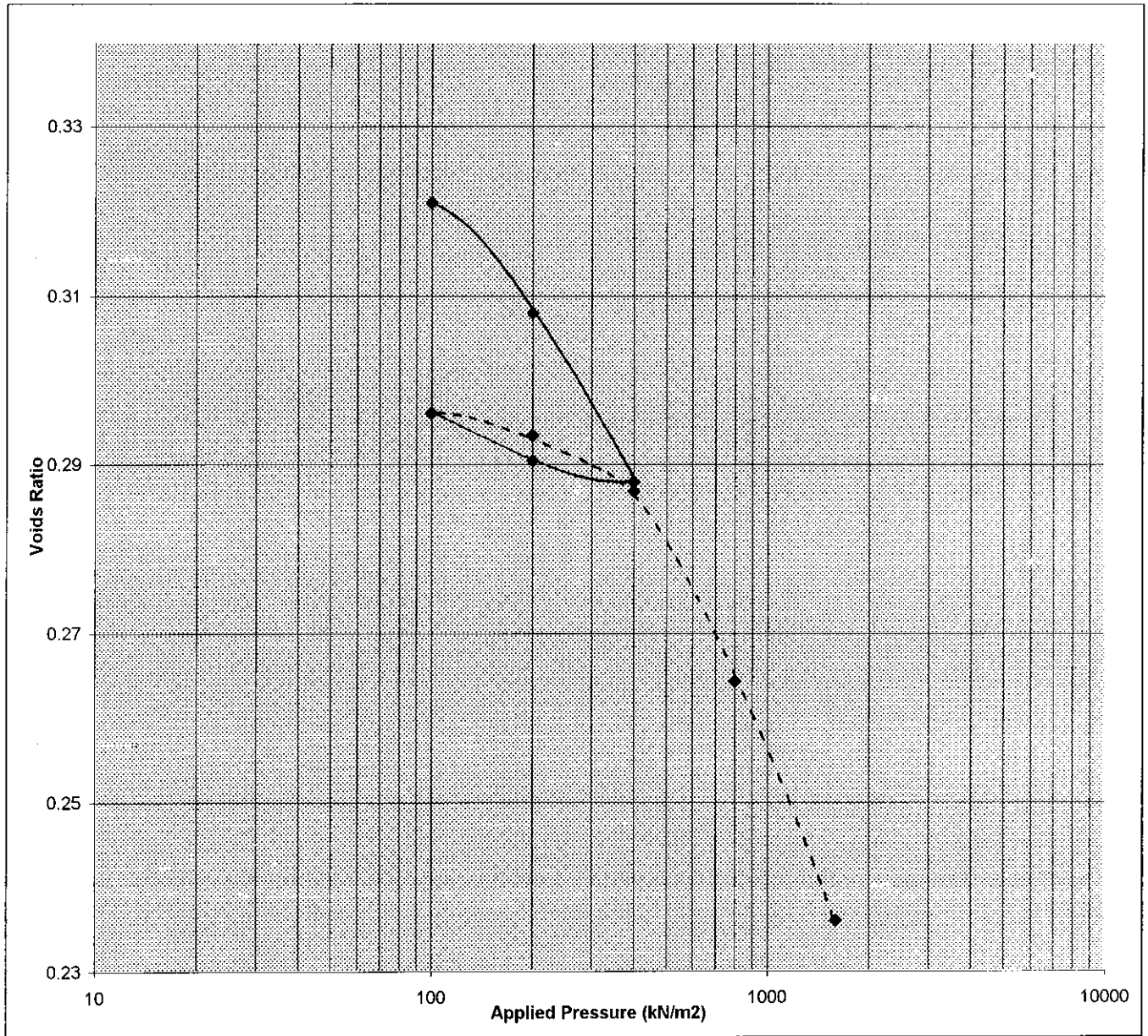
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, DH2 2RJ

ONE DIMENSIONAL CONSOLIDATION PROPERTIES




BS 1377 : PART 5 : 1990 : CLAUSE 3

Exploratory Hole No	BH-08/03	Sample	U32	Depth	11.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	11.50m



Contract Title **Ground Investigation Phase 2: McNulty's Yard, South Shields**

Client **South Tyneside Council**

	Signed 	Name M. SELKIRK	Page 2 of 2	
	Date of Issue 01/10/2008	Certificate No 3692A	AEG Contract No 3692	

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, DH2 2RJ

ONE DIMENSIONAL CONSOLIDATION PROPERTIES

BS 1377 : PART 5 : 1990 : CLAUSE 3




Exploratory Hole No	BH-08/05	Sample	U16	Depth	5.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	5.50m
	INITIAL	FINAL			
Height	18.7	16.9	mm	Particle Density (Assumed)	2.70
Diameter	75	75	mm		
Moisture Content	12	11	%	Degree of Saturation (%)	85.2
Wet Density	2.20	2.41	Mg/m ³		
Dry Density	1.96	2.17	Mg/m ³	Test Duration (Days)	9
				Date Tested	19/09/2008

Square Root of Time Fitting Method				
Pressure Range kN/m ²	Mv m ² /MN	Cv m ² /yr	Temp C	Voids Ratio
Initial				0.375
0 - 100	0.158	.	23	0.353
100 - 200	0.126	3.84	23	0.336
200 - 400	0.092	2.09	23	0.312
400 - 200	0.013	Swelling	23	0.315
200 - 100	0.050	Swelling	23	0.321
100 - 200	0.028	2.36	23	0.318
200 - 400	0.032	4.36	23	0.309
400 - 800	0.061	2.00	23	0.277
800 - 1600	0.033	0.47	23	0.244

For sample description please refer to the Laboratory Sample Description Sheet.

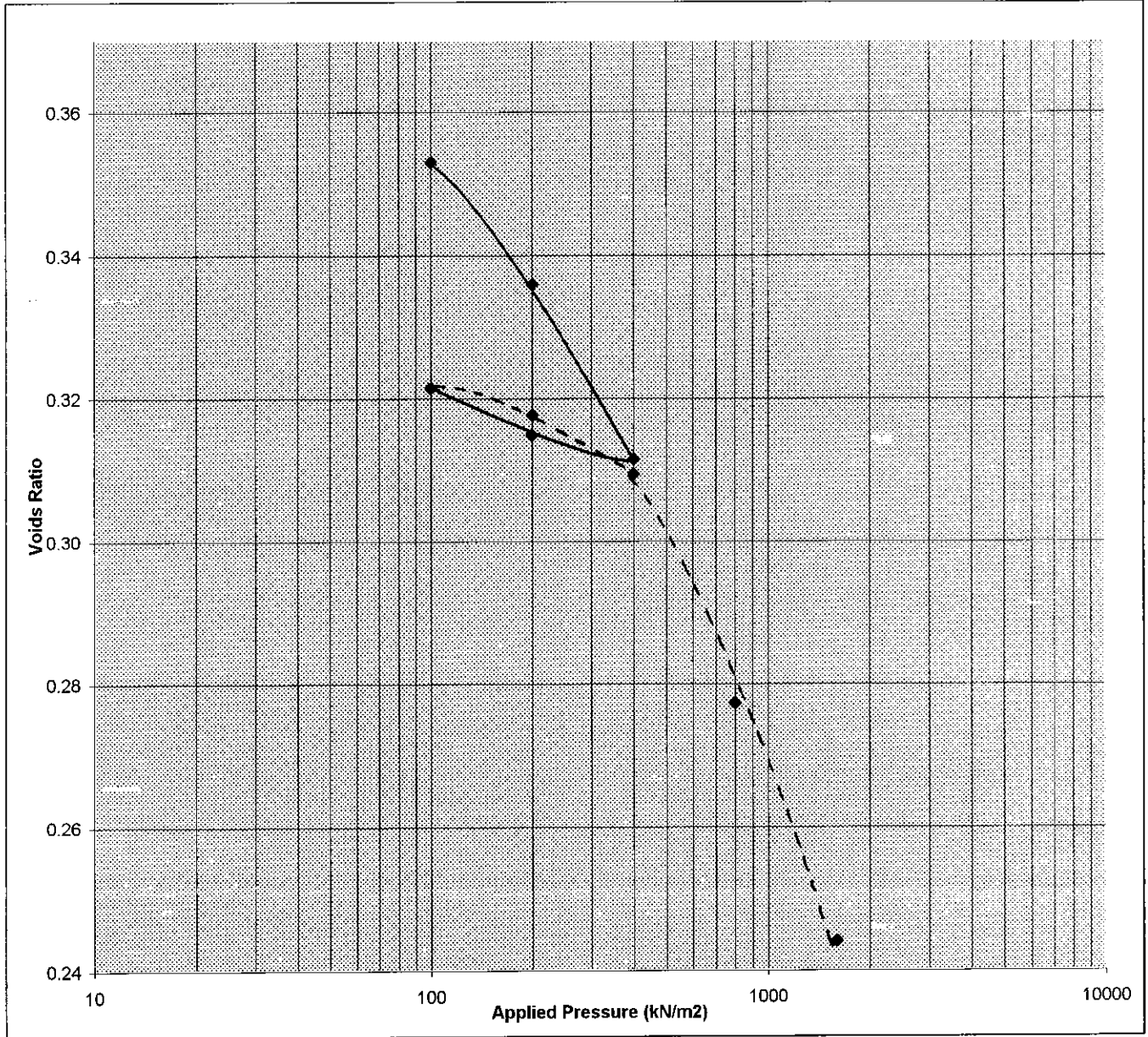
Contract Title **Ground Investigation Phase 2: McNulty's Yard, South Shields**

Client **South Tyneside Council**

	Signed	Name	M. SELKIRK	Page 1 of 2
				
	Date of Issue	Certificate No	AEG Contract No	
	01/10/2008	3692B	3692	1367

ONE DIMENSIONAL CONSOLIDATION PROPERTIES
 BS 1377 : PART 5 : 1990 : CLAUSE 3

Exploratory Hole No	BH-08/05	Sample	U16	Depth	5.50m
Specimen Type	Undisturbed	Orientation	Vertical	Specific Depth	5.50m



Contract Title **Ground Investigation Phase 2: McNulty's Yard, South Shields**
 Client **South Tyneside Council**

	Signed <i>M. Selkirk</i>	Name M. SELKIRK	Page 2 of 2	
	Date of Issue 01/10/2008	Certificate No 3692B	AEG Contract No 3692	

ENCLOSURE 5

Undrained Shear Strength in Triaxial Cell without
Pore Water Pressure Measurement

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 25 Stella Gill Ind. Est. Pelton Fell, Chester-le-Street, DH2 2RG

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

BS 1377 : Part 7 : Clauses 8 & 9 : 1990 Part 2 Clause 3.2

Exploratory Hole	Sample ID	Depth (m)	Type	Specific Depth (m)	Diameter (mm)	Length (mm)	Prep. Method	Stage No.	Initial Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Membrane Thickness (mm)	Membrane Correction (kPa)	Cell Pressure (kPa)	Corrected Deviator Stress (kPa)	Failure Strain (%)	Mode of Failure	cu (kPa)	Date Tested
BH08/03	U12	3.50	U12	3.80	104.7	196.2	U	1	17.2	2.07	1.77	0.40	0.99	70	291.4	12.0	C	146	22/09/2008
BH08/03	U25	8.50	U25	8.60	103.8	195.8	U	1	11.5	1.99	1.79	0.30	1.24	170	144.6	16.5	BR	73	23/09/2008
BH08/05	U9	3.50	U9	3.65	102.6	195.1	U	1	12.6	2.25	2.00	0.30	1.11	70	245.0	20.0	C	122	23/09/2008

For description of sample please refer to the Laboratory Sample Description Sheet. Please note the rate of strain was 2% per minute and the orientation of the test specimen was vertical. Latex membrane used.



Date of issue :-
26/09/2008

Certificate No :-
TXL/3692/1

Signed *M. Selkirk*

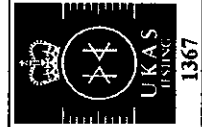
Name **M. SELKIRK**

Page 1 of 1

AEG Contract No :-
3692

Client :-
South Tyneside Council

Contract Title :-
Ground Investigation Phase 2: McNulty's Yard, South Shields



1367

APPENDIX I

Specialist Chemical Testing
(Tested Externally)

Scientific Analysis Laboratories

Certificate of Analysis

Report Number: 143662-1

Date of Report: 02-Oct-2008

Client: Allied Exploration & Geotechnics Ltd,
Unit 25,
Stella Gill Industrial Estate,
Pelton Fell,
Chester le Street,
Co Durham.
DH2 2RG

Client Contact: Ms Jill Fishwick
Client Job Reference: 3692
Client Site Reference: McNulty's Yard, South Shields
Client Purchase Order: CH-0136

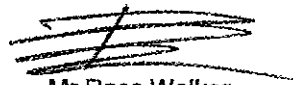
Date Job Received at SAL: 17-Sep-2008
Date Analysis Started: 19-Sep-2008
Date Analysis Completed: 02-Oct-2008

The results reported relate to samples received at the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS or MCERTS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

Key to symbols used in this report:

W: Analysis was sub-contracted and performed at another SAL Laboratory
S: Analysis was sub-contracted
N: Analysis is not UKAS accredited
U: Analysis is UKAS accredited
M: Analysis is MCERTS accredited

Report checked
and authorised by:



Mr Ross Walker
Customer Services Manager



1549
Group

Index to caveats used in this report

Value	Description
AR	As Received
2	LOD Raised Due to Matrix Interference
13	Results have been blank corrected.
36	LOD Raised due to low Matrix spike recovery

SAL Reference: 143662

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Water Analysed as Water
CLEA Metals

SAL Reference	143662 001	143662 002	143662 003
Customer Sample Reference	BH08/05P	BH08/04	BH08/13
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Arsenic (Dissolved)	ICP/MS (Filtered)	0.2	µg/l	U	11	22	7.5
Barium (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	110	46	210
Beryllium (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	U	<0.05	<0.05	<0.05
Boron	ICP/OES	0.01	mg/l	N	0.28	1.2	0.33
Cadmium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	U	0.06	0.09	0.25
Chromium (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	12	23	5
Copper (Dissolved)	ICP/MS (Filtered)	0.5	µg/l	U	4.7	9.3	7.5
Lead (Dissolved)	ICP/MS (Filtered)	0.3	µg/l	U	2.1	0.4	<0.3
Mercury (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	U	<0.05	<0.05	<0.05
Nickel (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	10	11	29
Selenium (Dissolved)	ICP/MS (Filtered)	0.5	µg/l	U	12	26	6.8
Vanadium (Dissolved)	ICP/MS (Filtered)	2	µg/l	U	14	33	11
Zinc (Dissolved)	ICP/MS (Filtered)	2	µg/l	U	7	5	10

SAL Reference: 143662							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3692							
Water		Analysed as Water					
BRE SD1							
SAL Reference				143662 001	143662 002	143662 003	
Customer Sample Reference				BH08/05P	BH08/04	BH08/13	
Test Sample				AR	AR	AR	
Determinand	Technique	LOD	Units	Symbol			
Ammonia expressed as NH ₄	Colorimetry	0.06	mg/l	N	0.44	<0.06	<0.06
Chloride	IC (D)	0.1	mg/l	WU	470	580	95
Magnesium	ICP/OES	1	mg/l	N	75	200	18
Nitrate	IC (D)	0.2	mg/l	WU	8.2	9.9	<2.0
pH	Probe			U	7.7	7.5	7.7
Sulphate ion	IC (D)	0.1	mg/l	WU	350	430	1200
Sulphur (Total)	ICP/OES	50	mg/l	N	140	170	490

SAL Reference: 143662

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Water Analysed as Water
BTEX, MTBE

SAL Reference	143662 001	143662 002	143662 003
Customer Sample Reference	BH08/05P	BH08/04	BH08/13
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Methyl-tert-Butyl Ether	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
Xylene (Total)	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1

SAL Reference: 143662

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Water Analysed as Water
TPH Ali/Aro

SAL Reference	143662 001	143662 002	143662 003
Customer Sample Reference	BH08/05P	BH08/04	BH08/13
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS (Headspace)(LV)	0.010	mg/l	N	<0.010	<0.010	<0.010
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS (Headspace)(LV)	0.010	mg/l	N	<0.010	<0.010	<0.010
Total Petroleum Hydrocarbons DW(C8-C10 aliphatic)	GC/FID (LV)	0.01	mg/l	N	<0.01	<0.01	<0.01
Total Petroleum Hydrocarbons DW(C10-C12 aliphatic)	GC/FID (LV)	0.01	mg/l	N	<0.01	0.04	<0.01
Total Petroleum Hydrocarbons DW(C12-C16 aliphatic)	GC/FID (LV)	0.01	mg/l	N	0.01	0.58	<0.01
Total Petroleum Hydrocarbons DW(C16-C21 aliphatic)	GC/FID (LV)	0.01	mg/l	N	0.04	0.83	⁽¹³⁾ <0.01
Total Petroleum Hydrocarbons DW(C21-C35 aliphatic)	GC/FID (LV)	0.01	mg/l	N	0.95	1.3	⁽¹³⁾ 0.03
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS (Headspace)(LV)	0.010	mg/l	N	<0.010	<0.010	<0.010
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS (Headspace)(LV)	0.010	mg/l	N	<0.010	<0.010	<0.010
Total Petroleum Hydrocarbons DW(C8-C10 aromatic)	GC/FID (LV)	0.01	mg/l	N	<0.01	<0.01	<0.01
Total Petroleum Hydrocarbons DW(C10-C12 aromatic)	GC/FID (LV)	0.01	mg/l	N	<0.01	<0.01	<0.01
Total Petroleum Hydrocarbons DW(C12-C16 aromatic)	GC/FID (LV)	0.01	mg/l	N	<0.01	<0.01	<0.01
Total Petroleum Hydrocarbons DW(C16-C21 aromatic)	GC/FID (LV)	0.01	mg/l	N	<0.01	0.05	<0.01
Total Petroleum Hydrocarbons DW(C21-C35 aromatic)	GC/FID (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	0.16	⁽¹³⁾ <0.01

SAL Reference: 143662

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Water Analysed as Water

Total and Speciated USEPA16 PAH

					SAL Reference	143662 001	143662 002	143662 003
					Customer Sample Reference	BH08/05P	BH08/04	BH08/13
					Test Sample	AR	AR	AR
Determinand	Technique	LOD	Units	Symbol				
Naphthalene	GC/MS (SIR)	0.01	µg/l	U	⁽¹³⁾ <0.01	^(2,13) <0.10	⁽¹³⁾ 0.04	
Acenaphthylene	GC/MS (SIR)	0.01	µg/l	U	<0.01	0.20	0.02	
Acenaphthene	GC/MS (SIR)	0.01	µg/l	U	<0.01	⁽²⁾ <0.10	0.02	
Fluorene	GC/MS (SIR)	0.01	µg/l	U	<0.01	⁽²⁾ <0.10	0.02	
Phenanthrene	GC/MS (SIR)	0.01	µg/l	U	0.03	⁽²⁾ <0.10	0.12	
Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.02	⁽²⁾ <0.10	0.12	
Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.05	1.3	0.18	
Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.05	2.0	0.17	
Benzo(a)Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.02	0.40	0.11	
Chrysene	GC/MS (SIR)	0.01	µg/l	U	0.02	0.40	0.12	
Benzo(b/k)Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.03	0.40	0.23	
Benzo(a)Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.02	0.30	0.10	
Indeno(123-cd)Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.02	⁽²⁾ <0.10	0.10	
Dibenzo(ah)Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.01	⁽²⁾ <0.10	0.03	
Benzo(ghi)Perylene	GC/MS (SIR)	0.01	µg/l	U	0.03	0.20	0.12	
Polyaromatic Hydrocarbons (Total)	GC/MS (SIR)	0.01	µg/l	U	⁽¹³⁾ 0.30	⁽¹³⁾ 5.3	⁽¹³⁾ 1.5	

SAL Reference: 143662

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Water Analysed as Water

Miscellaneous

					SAL Reference	143662 001	143662 002	143662 003
					Customer Sample Reference	BH08/05P	BH08/04	BH08/13
					Test Sample	AR	AR	AR
Determinand	Technique	LOD	Units	Symbol				
Cyanide (Total)	Colorimetry	0.05	mg/l	U	<0.05	<0.05	<0.05	<0.05
pH	Probe			U	7.7	7.5	7.7	7.7

SAL Reference: 143662							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3692							
Water		Analysed as Water					
Phenols (Speciated)							
SAL Reference				143662 001	143662 002	143662 003	
Customer Sample Reference				BH08/05P	BH08/04	BH08/13	
Test Sample				AR	AR	AR	
Determinand	Technique	LOD	Units	Symbol			
Cresols	GC/MS	0.5	µg/l	U	<0.5	<0.5	<0.5
Phenol	GC/MS (HR)	0.5	µg/l	U	⁽¹³⁾ <0.5	⁽¹³⁾ <0.5	⁽¹³⁾ <0.5
Xylenols	GC/MS	0.5	µg/l	U	<0.5	<0.5	<0.5

SAL Reference: 143662

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Water Analysed as Water
SVOC 625 + TICs

SAL Reference	143662 001	143662 002	143662 003
Customer Sample Reference	BH08/05P	BH08/04	BH08/13
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
1,2,4-Trichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10
1,2-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10
1,3-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10
1,4-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10
2,4,5-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10
2,4,6-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10
2,4-Dichlorophenol	GC/MS	10	µg/l	U	<10	<10	<10
2,4-Dimethylphenol	GC/MS	10	µg/l	U	<10	<10	<10
2,4-Dinitrophenol	GC/MS	10	µg/l	U	<10	<10	<10
2,4-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10	<10
2,6-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10	<10
2-Chloronaphthalene	GC/MS	10	µg/l	U	<10	<10	<10
2-Chlorophenol	GC/MS	10	µg/l	U	<10	<10	<10
2-methyl phenol	GC/MS	10	µg/l	U	<10	<10	<10
2-Methylnaphthalene	GC/MS	10	µg/l	U	<10	<10	<10
2-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10
2-Nitrophenol	GC/MS	10	µg/l	U	<10	<10	<10
3-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10
3/4-Methylphenol	GC/MS	10	µg/l	U	<10	<10	<10
4-Bromophenyl phenylether	GC/MS	10	µg/l	U	<10	<10	<10
4-Chloro-3-methylphenol	GC/MS	10	µg/l	U	<10	<10	<10
4-Chloroaniline	GC/MS	10	µg/l	U	<10	<10	<10
4-Chlorophenyl phenylether	GC/MS	10	µg/l	U	<10	<10	<10
4-Nitroaniline	GC/MS	10	µg/l	U	<10	<10	<10
4-Nitrophenol	GC/MS	10	µg/l	U	(36) <50	(36) <50	(36) <50
Acenaphthene	GC/MS	10	µg/l	U	<10	<10	<10
Acenaphthylene	GC/MS	10	µg/l	U	<10	<10	<10
Anthracene	GC/MS	10	µg/l	U	<10	<10	<10
Azobenzene	GC/MS	10	µg/l	U	<10	<10	<10
Benzo(a)Anthracene	GC/MS	10	µg/l	U	<10	<10	<10
Benzo(a)Pyrene	GC/MS	10	µg/l	U	<10	<10	<10
Benzo(b/k)Fluoranthene	GC/MS	10	µg/l	U	<10	<10	<10
Benzo(ghi)Perylene	GC/MS	10	µg/l	U	<10	<10	<10
Bis (2-chloroethoxy) methane	GC/MS	10	µg/l	U	<10	<10	<10
Bis (2-chloroethyl) ether	GC/MS	10	µg/l	U	<10	<10	<10
Bis (2-chloroisopropyl) ether	GC/MS	10	µg/l	U	<10	<10	<10
Bis (2-ethylhexyl)phthalate	GC/MS	10	µg/l	U	<10	<10	<10
Butyl benzylphthalate	GC/MS	10	µg/l	U	<10	<10	<10
Carbazole	GC/MS	10	µg/l	U	<10	<10	<10
Chrysene	GC/MS	10	µg/l	U	<10	<10	<10
Di-n-butylphthalate	GC/MS	10	µg/l	U	<10	<10	<10
Di-n-octylphthalate	GC/MS	10	µg/l	U	<10	<10	<10

SAL Reference: 143662

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Water Analysed as Water
SVOC 625 + TICs

SAL Reference					143662 001	143662 002	143662 003
Customer Sample Reference					BH08/05P	BH08/04	BH08/13
Test Sample					AR	AR	AR
Determinand	Technique	LOD	Units	Symbol			
Dibenzo(ah)Anthracene	GC/MS	10	µg/l	U	<10	<10	<10
Dibenzofuran	GC/MS	10	µg/l	U	<10	<10	<10
Diethyl phthalate	GC/MS	10	µg/l	U	<10	<10	<10
Dimethyl phthalate	GC/MS	10	µg/l	U	<10	<10	<10
Fluoranthene	GC/MS	10	µg/l	U	<10	<10	<10
Fluorene	GC/MS	10	µg/l	U	<10	<10	<10
Hexachlorobenzene	GC/MS	10	µg/l	U	<10	<10	<10
Hexachlorobutadiene	GC/MS	10	µg/l	U	<10	<10	<10
Hexachlorocyclopentadiene	GC/MS	10	µg/l	U	<10	<10	<10
Hexachloroethane	GC/MS	10	µg/l	U	<10	<10	<10
Indeno(123-cd)Pyrene	GC/MS	10	µg/l	U	<10	<10	<10
Isophorone	GC/MS	10	µg/l	U	<10	<10	<10
Naphthalene	GC/MS	10	µg/l	U	<10	<10	<10
Nitrobenzene	GC/MS	10	µg/l	U	<10	<10	<10
Pentachlorophenol	GC/MS	10	µg/l	U	<10	<10	<10
Phenanthrene	GC/MS	10	µg/l	U	<10	<10	<10
Phenol	GC/MS	10	µg/l	U	⁽³⁶⁾ <50	⁽³⁶⁾ <50	⁽³⁶⁾ <50
Pyrene	GC/MS	10	µg/l	U	<10	<10	<10
Semi-Volatile Organic Compounds Screen	GC/MS	10	µg/l	N	Series of aliphatic hydrocarbons circa C21-C44 2300	<10	Butylated Hydroxytoluene 13

SAL Reference: 143662								
Project Site: McNulty's Yard, South Shields								
Customer Reference: 3692								
Water		Analysed as Water						
VOC 624 + TICs								
					SAL Reference	143662	143662	143662
					001	002	003	
					Customer Sample Reference	BH08/05P	BH08/04	BH08/13
					Test Sample	AR	AR	AR
Determinand	Technique	LOD	Units	Symbol				
1,1,1,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,1,1-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,1,2,2-Tetrachloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,1,2-Trichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,1,2-Trichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,1-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,1-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,1-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,2,3-Trichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,2,4-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,2-dibromoethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,2-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,2-Dichloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,3,5-Trimethylbenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,3-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,3-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
1,4-Dichlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
2,2-Dichloropropane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
2-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
4-Chlorotoluene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1	
Benzene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1	

SAL Reference: 143662							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3692							
Water		Analysed as Water					
VOC 624 + TICs							
SAL Reference					143662	143662	143662
Customer Sample Reference					BH08/05P	BH08/04	BH08/13
Test Sample					AR	AR	AR
Determinand	Technique	LOD	Units	Symbol			
Bromobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Bromochloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Bromodichloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Bromoform	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Bromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Carbon tetrachloride	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Chlorobenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Chlorodibromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Chloroethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Chloroform	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Chloromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Cis-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Cis-1,3-Dichloropropene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Dibromomethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
EthylBenzene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Meta/Para-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Ortho-Xylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Styrene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Tetrachloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	3	<1
Toluene	GC/MS (Headspace)	1	µg/l	U	(13)<1	(13)<1	(13)<1
Trans-1,2-Dichloroethylene	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Trichlorofluoromethane	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1

SAL Reference: 143662

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Water Analysed as Water
VOC 624 + TICs

SAL Reference	143662 001	143662 002	143662 003
Customer Sample Reference	BH08/05P	BH08/04	BH08/13
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Vinyl chloride monomer	GC/MS (Headspace)	1	µg/l	U	<1	<1	<1
Volatile Organic Compounds (Top 10 Screen)	GC/MS (Headspace)	10	µg/l	N	<10	<10	<10

SAL Reference: 143662
Project Site: McNulty's Yard, South Shields
Customer Reference: 3692

Water Analysed as Water
TBT - Organotins

SAL Reference	143662 001	143662 002	143662 003
Customer Sample Reference	BH08/05P	BH08/04	BH08/13
Test Sample	AR	AR	AR

Determinand	Technique	LOD	Units	Symbol			
Dibutyl tin	GC/MS (Deriv.)	0.01	µg/l	N	<0.01	<0.01	<0.01
Tetrabutyl tin	GC/MS	0.10	µg/l	N	<0.10	<0.10	<0.10
Tributyl tin	GC/MS	0.01	µg/l	N	<0.01	<0.01	<0.01
Triphenyl Tin	GC/MS	0.01	µg/l	N	<0.01	<0.01	<0.01

Scientific Analysis Laboratories

Certificate of Analysis

Report Number: 143694-1

Date of Report: 01-Oct-2008

Client: Allied Exploration & Geotechnics Ltd,
Unit 25,
Stella Gill Industrial Estate,
Pelton Fell,
Chester le Street,
Co Durham.
DH2 2RJ

Client Contact: Ms Jill Fishwick
Client Job Reference: 3692
Client Site Reference: McNulty's Yard, South Shields
Client Purchase Order: CH-0136

Date Job Received at SAL: 17-Sep-2008

Date Analysis Started: 21-Sep-2008

Date Analysis Completed: 30-Sep-2008

The results reported relate to samples received at the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS or MCERTS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

Key to symbols used in this report:

W: Analysis was sub-contracted and performed at another SAL Laboratory

S: Analysis was sub-contracted

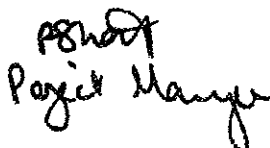
N: Analysis is not UKAS accredited

U: Analysis is UKAS accredited

M: Analysis is MCERTS accredited

Report checked
and authorised by:


Mr Ross Walker
Customer Services Manager


Project Manager



1549
Group

1549

Index to caveats used in this report

Value	Description
ND	Not Detected
AR	As Received
A40	Assisted dried < 40C
A105	Assisted dried at 105C
9	LOD raised due to dilution of sample
13	Results have been blank corrected.
26	LOD raised because the analysis was performed by an alternative technique
62	LOD was raised due to the method performance of the analytical procedure used
63	LOD was raised because an alternative analytical procedure was used

SAL Reference: 143694										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3692										
Soil		Analysed as Soil								
MCERTS Preparation										
SAL Reference					143694	143694	143694	143694	143694	
					001	002	003	004	005	
Customer Sample Reference					BH08/03	BH08/03	BH08/03	BH08/04	BH08/04	
Test Sample					AR	AR	AR	AR	AR	
Depth					0.55	1.00	2.30	0.50	2.00	
Date Sampled										
Type					Clay	Sand	Clay	Topsoil	Sand	
Determinand										
Technique		LOD	Units	Symbol						
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	12	9.8	9.8	7.7	15	
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	12	11	11	12	13	

SAL Reference: 143694										
Project Site: McNulty's Yard, South Shields										
Customer Reference: 3692										
Soil		Analysed as Soil								
MCERTS Preparation										
SAL Reference					143694	143694	143694	143694	143694	
					006	007	008	009	010	
Customer Sample Reference					BH08/04	BH08/05	BH08/05	BH08/05	BH08/13	
Test Sample					AR	AR	AR	AR	AR	
Depth					7.00	0.55	1.00	4.10	1.00	
Date Sampled										
Type					Clay	Sand	Clay	Clay	Clay	
Determinand										
Technique		LOD	Units	Symbol						
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	13	10	9.1	8.5	9.9	
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	13	8.8	14	9.2	13	

SAL Reference: 143694							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3692							
Soil Analysed as Soil							
MCERTS Preparation							
					SAL Reference	143694 011	143694 012
					Customer Sample Reference	BH08/13	BH08/13
					Test Sample	AR	AR
					Depth	2.00	9.00
					Date Sampled		
					Type	Sand	Sand
Determinand	Technique	LOD	Units	Symbol			
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	12	14	
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	9.6	13	

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil Analysed as Soil

Metals and TOC

SAL Reference	143694 001	143694 002	143694 003	143694 004	143694 005
Customer Sample Reference	BH08/03	BH08/03	BH08/03	BH08/04	BH08/04
Test Sample	A40	A40	A40	A40	A40
Depth	0.55	1.00	2.30	0.50	2.00
Date Sampled					
Type	Clay	Sand	Clay	Topsoil	Sand

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	25	16	6	100	27
Barium	ICP/OES	1	mg/kg	U	1100	220	220	1200	460
Beryllium	ICP/OES	1	mg/kg	U	2	<1	1	5	1
Cadmium	ICP/OES	1	mg/kg	M	1	<1	<1	3	1
Chromium	ICP/OES	1	mg/kg	M	42	18	37	40	27
Copper	ICP/OES	1	mg/kg	M	170	59	49	8600	350
Lead	ICP/OES	1	mg/kg	M	770	120	25	2800	350
Mercury	ICP/OES	1	mg/kg	M	6	1	<1	4	1
Nickel	ICP/OES	1	mg/kg	M	47	18	33	110	35
Selenium	ICP/OES	3	mg/kg	M	<3	<3	<3	<3	<3
Vanadium	ICP/OES	1	mg/kg	M	53	27	28	120	49
Zinc	ICP/OES	1	mg/kg	M	410	210	130	2800	300
Total Organic Carbon	OX/IR	0.1	%	N	5.8	2.9	-	34	4.7

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil Analysed as Soil

Metals and TOC

SAL Reference	143694 006	143694 007	143694 008	143694 009	143694 010
Customer Sample Reference	BH08/04	BH08/05	BH08/05	BH08/05	BH08/13
Test Sample	A40	A40	A40	A40	A40
Depth	7.00	0.55	1.00	4.10	1.00
Date Sampled					
Type	Clay	Sand	Clay	Clay	Clay

Determinand	Technique	LOD	Units	Symbol					
Arsenic	ICP/OES	2	mg/kg	M	7	9	26	6	14
Barium	ICP/OES	1	mg/kg	U	210	350	710	200	830
Beryllium	ICP/OES	1	mg/kg	U	1	2	2	1	1
Cadmium	ICP/OES	1	mg/kg	M	<1	<1	1	<1	<1
Chromium	ICP/OES	1	mg/kg	M	24	37	24	22	40
Copper	ICP/OES	1	mg/kg	M	30	110	350	21	95
Lead	ICP/OES	1	mg/kg	M	26	110	930	21	360
Mercury	ICP/OES	1	mg/kg	M	<1	<1	<1	<1	3
Nickel	ICP/OES	1	mg/kg	M	32	33	44	30	37
Selenium	ICP/OES	3	mg/kg	M	<3	<3	<3	<3	<3
Vanadium	ICP/OES	1	mg/kg	M	26	34	52	20	39
Zinc	ICP/OES	1	mg/kg	M	74	320	500	120	260
Total Organic Carbon	OX/IR	0.1	%	N	-	2.3	7.5	-	4.0

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil Analysed as Soil

Metals and TOC

SAL Reference	143694 011	143694 012
Customer Sample Reference	BH08/13	BH08/13
Test Sample	A40	A40
Depth	2.00	9.00
Date Sampled		
Type	Sand	Sand

Determinand	Technique	LOD	Units	Symbol		
Arsenic	ICP/OES	2	mg/kg	M	14	25
Barium	ICP/OES	1	mg/kg	U	140	370
Beryllium	ICP/OES	1	mg/kg	U	<1	1
Cadmium	ICP/OES	1	mg/kg	M	<1	<1
Chromium	ICP/OES	1	mg/kg	M	13	25
Copper	ICP/OES	1	mg/kg	M	36	150
Lead	ICP/OES	1	mg/kg	M	160	260
Mercury	ICP/OES	1	mg/kg	M	<1	2
Nickel	ICP/OES	1	mg/kg	M	16	30
Selenium	ICP/OES	3	mg/kg	M	<3	<3
Vanadium	ICP/OES	1	mg/kg	M	33	47
Zinc	ICP/OES	1	mg/kg	M	76	300
Total Organic Carbon	OX/IR	0.1	%	N	2.6	-

SAL Reference: 143694									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3692									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference		143694	143694	143694	143694	143694			
		001	002	003	004	005			
Customer Sample Reference		BH08/03	BH08/03	BH08/03	BH08/04	BH08/04			
Test Sample		AR	AR	AR	AR	AR			
Depth		0.55	1.00	2.30	0.50	2.00			
Date Sampled									
Type		Clay	Sand	Clay	Topsoil	Sand			
Determinand	Technique	LOD	Units	Symbol					
Asbestos (Screen Only)	Visual			N	ND	-	-	-	-
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	1.0	-	-	1.2	<0.1
Cyanide (Total)	Colorimetry	1	mg/kg	U	<1	-	-	-	<1
pH	Probe			M	11.2	11.4	8.7	7.8	7.8
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	<1	<1	<1	<1
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	<1	-	-	<1	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	<0.1	0.1	0.2	0.7	0.6

SAL Reference: 143694									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3692									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference		143694	143694	143694	143694	143694			
		006	007	008	009	010			
Customer Sample Reference		BH08/04	BH08/05	BH08/05	BH08/05	BH08/13			
Test Sample		AR	AR	AR	AR	AR			
Depth		7.00	0.55	1.00	4.10	1.00			
Date Sampled									
Type		Clay	Sand	Clay	Clay	Clay			
Determinand	Technique	LOD	Units	Symbol					
Asbestos (Screen Only)	Visual			N	-	ND	-	-	ND
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	-	0.6	-	-	0.2
Cyanide (Total)	Colorimetry	1	mg/kg	U	-	<1	-	-	-
pH	Probe			M	8.1	8.8	8.1	8.1	10.7
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	<1	<1	<1	<1
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	-	<1	-	-	<1
Sulphate(2:1)	ICP/OES	0.1	g/l	N	0.2	0.2	-	0.3	0.2

SAL Reference: 143694
Project Site: McNulty's Yard, South Shields
Customer Reference: 3692

Soil Analysed as Soil
Miscellaneous

SAL Reference	143694 011	143694 012
Customer Sample Reference	BH08/13	BH08/13
Test Sample	AR	AR
Depth	2.00	9.00
Date Sampled		
Type	Sand	Sand

Determinand	Technique	LOD	Units	Symbol		
Asbestos (Screen Only)	Visual			N	-	-
Calorific value	Bomb calorimetry	0.1	MJ/kg	SN	-	-
Cyanide (Total)	Colorimetry	1	mg/kg	U	-	-
pH	Probe			M	10.0	8.0
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	<1
Phenols (Total-Mono)	Colorimetry	1	mg/kg	U	-	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	-	0.8

SAL Reference: 143694									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3692									
Soil		Analysed as Soil							
BRE SD1									
SAL Reference		143694	143694	143694	143694	143694	143694	143694	143694
		002	002	006	006	006	006	006	009
Customer Sample Reference		BH08/03	BH08/03	BH08/04	BH08/04	BH08/04	BH08/04	BH08/04	BH08/05
Test Sample		AR	A40	AR	A40	AR	A40	AR	AR
Depth		1.00	1.00	7.00	7.00	7.00	7.00	7.00	4.10
Date Sampled									
Type		Sand	Sand	Clay	Clay	Clay	Clay	Clay	Clay
Determinand	Technique	LOD	Units	Symbol					
Ammonia expressed as NH4	Titration	5	mg/kg	N	220	-	160	-	140
Chloride (2:1)	IC	0.5	mg/l	WN	-	90	-	700	-
Magnesium water soluble	ICP/OES	0.1	g/l	N	<0.1	-	<0.1	-	<0.1
Nitrate (2:1)	IC	0.5	mg/l	WN	-	3.0	-	(26)<4.0	-
pH	Probe			U	11.4	-	8.1	-	8.1
Sulphate (Total)	ICP/OES	0.01	%	N	-	0.72	-	0.67	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	0.1	-	0.2	-	0.3
Sulphur (Total)	OX/IR	0.01	%	N	-	0.20	-	0.17	-

SAL Reference: 143694									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3692									
Soil		Analysed as Soil							
BRE SD1									
SAL Reference		143694	143694	143694	143694	143694	143694	143694	143694
		009	012	012	012	012	012	012	012
Customer Sample Reference		BH08/05	BH08/13	BH08/13	BH08/13	BH08/13	BH08/13	BH08/13	BH08/13
Test Sample		A40	AR	AR	A40	A40	A40	A40	A40
Depth		4.10	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Date Sampled									
Type		Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Determinand	Technique	LOD	Units	Symbol					
Ammonia expressed as NH4	Titration	5	mg/kg	N	-	300	-	-	-
Chloride (2:1)	IC	0.5	mg/l	WN	80	-	-	170	-
Magnesium water soluble	ICP/OES	0.1	g/l	N	-	<0.1	-	-	-
Nitrate (2:1)	IC	0.5	mg/l	WN	(26)<4.0	-	-	(26)<4.0	-
pH	Probe			U	-	8.0	-	-	-
Sulphate (Total)	ICP/OES	0.01	%	N	1.2	-	-	0.85	-
Sulphate(2:1)	ICP/OES	0.1	g/l	N	-	0.8	-	-	-
Sulphur (Total)	OX/IR	0.01	%	N	0.26	-	-	0.30	-

SAL Reference: 143694							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3692							
Soil		Analysed as Soil					
TPH Ali/Aro							
SAL Reference		143694 004	143694 007	143694 007			
Customer Sample Reference		BH08/04	BH08/05	BH08/05			
Test Sample		A105	AR	A105			
Depth		0.50	0.55	0.55			
Date Sampled							
Type		Topsoil	Sand	Sand			
Determinand	Technique	LOD	Units	Symbol			
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(62,63) <0.100	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(62,63) <0.100	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(62,63) <0.100	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(62,63) <0.100	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	-	(9) <10	-
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	-	24	-
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	-	240	-
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(62,63) <0.100	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(62,63) <0.100	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(62,63) <0.100	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	(62,63) <0.100	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	-	11	-
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	-	41	-

SAL Reference: 143694							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3692							
Soil		Analysed as Soil					
TPH Ali/Aro							
SAL Reference				143694 004	143694 007	143694 007	
Customer Sample Reference				BH08/04	BH08/05	BH08/05	
Test Sample				A105	AR	A105	
Depth				0.50	0.55	0.55	
Date Sampled							
Type				Topsoil	Sand	Sand	
Determinand							
Technique		LOD	Units	Symbol			
Total Petroleum Hydrocarbons (C21-C35 aromatic)		1	mg/kg	N	-	240	-

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil Analysed as Soil
TPH Ali/Aro

SAL Reference	143694 010	143694 010
Customer Sample Reference	BH08/13	BH08/13
Test Sample	AR	A105
Depth	1.00	1.00
Date Sampled		
Type	Clay	Clay

Determinand	Technique	LOD	Units	Symbol		
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	0.604
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GC/FID	1	mg/kg	N	19	-
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GC/FID	1	mg/kg	N	11	-
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GC/FID	1	mg/kg	N	47	-
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GC/MS(Head Space)(MCERTS)	0.100	mg/kg	N	-	(62,63) <0.100
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GC/FID	1	mg/kg	N	2	-
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GC/FID	1	mg/kg	N	7	-
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GC/FID	1	mg/kg	N	41	-

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil Analysed as Soil
BTEX

SAL Reference	143694 001	143694 004	143694 007	143694 010
Customer Sample Reference	BH08/03	BH08/04	BH08/05	BH08/13
Test Sample	A105	A105	A105	A105
Depth	0.55	0.50	0.55	1.00
Date Sampled				
Type	Clay	Topsoil	Sand	Clay

Determinand	Technique	LOD	Units	Symbol				
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13)<10	(13) 42	(13)<10	(13)<10

SAL Reference: 143694									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3692									
Soil		Analysed as Soil							
EPH									
SAL Reference					143694	143694	143694	143694	143694
					002	003	005	006	008
Customer Sample Reference					BH08/03	BH08/03	BH08/04	BH08/04	BH08/05
Test Sample					AR	AR	AR	AR	AR
Depth					1.00	2.30	2.00	7.00	1.00
Date Sampled									
Type					Sand	Clay	Sand	Clay	Clay
Determinand									
Technique									
LOD									
Units									
Symbol									
Total Petroleum Hydrocarbons (C10-C12)	GC/FID	1	mg/kg	U	<1	<1	91	<1	1
Total Petroleum Hydrocarbons (C12-C16)	GC/FID	1	mg/kg	U	10	<1	590	<1	10
Total Petroleum Hydrocarbons (C16-C21)	GC/FID	1	mg/kg	U	59	(13)<1	870	<1	27
Total Petroleum Hydrocarbons (C21-C35)	GC/FID	1	mg/kg	U	150	<1	1800	12	72
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	26	<1	360	4	15
Total Petroleum Hydrocarbons (C10 - C40)	GC/FID	1	mg/kg	N	250	<1	3700	16	130

SAL Reference: 143694									
Project Site: McNulty's Yard, South Shields									
Customer Reference: 3692									
Soil		Analysed as Soil							
EPH									
SAL Reference					143694	143694	143694		
					009	011	012		
Customer Sample Reference					BH08/05	BH08/13	BH08/13		
Test Sample					AR	AR	AR		
Depth					4.10	2.00	9.00		
Date Sampled									
Type					Clay	Sand	Sand		
Determinand									
Technique									
LOD									
Units									
Symbol									
Total Petroleum Hydrocarbons (C10-C12)	GC/FID	1	mg/kg	U	<1	<1	<1		
Total Petroleum Hydrocarbons (C12-C16)	GC/FID	1	mg/kg	U	<1	3	3		
Total Petroleum Hydrocarbons (C16-C21)	GC/FID	1	mg/kg	U	<1	9	8		
Total Petroleum Hydrocarbons (C21-C35)	GC/FID	1	mg/kg	U	(13)<1	27	31		
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	<1	5	10		
Total Petroleum Hydrocarbons (C10 - C40)	GC/FID	1	mg/kg	N	<1	44	52		

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil **Analysed as Soil**

Total and Speciated USEPA16 PAH

SAL Reference	143694 001	143694 002	143694 004	143694 005	143694 007
Customer Sample Reference	BH08/03	BH08/03	BH08/04	BH08/04	BH08/05
Test Sample	A105	A105	A105	A105	A105
Depth	0.55	1.00	0.50	2.00	0.55
Date Sampled					
Type	Clay	Sand	Topsoil	Sand	Sand

Determinand	Technique	LOD	Units	Symbol					
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	<0.1	6.2	<0.1	0.3
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	0.2	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.8	<0.1	0.3	<0.1	1.6
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.8	<0.1	0.4	<0.1	2.2
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	6.0	0.4	3.4	<0.1	16
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	1.6	0.2	0.6	<0.1	5.0
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	7.5	0.6	2.3	<0.1	26
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	6.0	0.5	2.5	<0.1	20
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	4.0	0.2	1.5	<0.1	16
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	3.2	0.2	1.4	<0.1	12
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	4.7	0.2	2.2	<0.1	17
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	2.4	<0.1	1.2	<0.1	8.9
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.8	<0.1	0.5	<0.1	2.8
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	<0.1	0.1	<0.1	0.9
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.9	<0.1	0.8	<0.1	3.2
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	39	2.3	24	<0.1	130

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil **Analysed as Soil**

Total and Speciated USEPA16 PAH

SAL Reference	143694 008	143694 010	143694 011
Customer Sample Reference	BH08/05	BH08/13	BH08/13
Test Sample	A105	A105	A105
Depth	1.00	1.00	2.00
Date Sampled			
Type	Clay	Clay	Sand

Determinand	Technique	LOD	Units	Symbol			
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.3	<0.1
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.5	<0.1
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.5	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	3.9	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	1.1	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	4.8	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	3.8	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	2.7	<0.1
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	2.2	<0.1
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	3.0	<0.1
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	1.6	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.5	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.2	<0.1
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.6	<0.1
Polyaromatic Hydrocarbons (Total)	GC/MS(MCERTS)	0.1	mg/kg	U	0.2	26	<0.1

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil Analysed as Soil
SVOC 625 + TICs

SAL Reference	143694 001	143694 004	143694 007	143694 010
Customer Sample Reference	BH08/03	BH08/04	BH08/05	BH08/13
Test Sample	A105	A105	A105	A105
Depth	0.55	0.50	0.55	1.00
Date Sampled				
Type	Clay	Topsoil	Sand	Clay

Determinand	Technique	LOD	Units	Symbol				
1,2,4-Trichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
1,2-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
1,3-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
1,4-Dichlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2,4,5-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4-Dichlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4-Dimethylphenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2,6-Dinitrotoluene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
2-Chloronaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2-Chlorophenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2-methyl phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	3.7	0.2	0.2
2-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
2-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
3-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
3/4-Methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
4-Bromophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
4-Chloroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
4-Chlorophenyl phenylether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
4-Nitroaniline	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
4-Nitrophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Acenaphthene	GC/MS(MCERTS)	0.1	mg/kg	M	0.8	0.3	1.6	0.5
Acenaphthylene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	0.2	<0.1	<0.1
Anthracene	GC/MS(MCERTS)	0.1	mg/kg	U	1.6	0.6	5.0	1.1
Azobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Benzo(a)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	4.0	1.5	16	2.7
Benzo(a)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	2.4	1.2	8.9	1.6
Benzo(b/k)Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	4.7	2.2	17	3.0
Benzo(ghi)Perylene	GC/MS(MCERTS)	0.1	mg/kg	M	0.9	0.8	3.2	0.6
Bis (2-chloroethoxy) methane	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Bis (2-chloroethyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Bis (2-chloroisopropyl) ether	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Bis (2-ethylhexyl)phthalate	GC/MS(MCERTS)	0.1	mg/kg	M	2.3	0.5	1.4	3.6
Butyl benzylphthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Carbazole	GC/MS(MCERTS)	0.1	mg/kg	U	0.7	0.4	1.1	0.5
Chrysene	GC/MS(MCERTS)	0.1	mg/kg	M	3.2	1.4	12	2.2

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil Analysed as Soil
SVOC 625 + TICs

SAL Reference	143694	143694	143694	143694
	001	004	007	010
Customer Sample Reference	BH08/03	BH08/04	BH08/05	BH08/13
Test Sample	A105	A105	A105	A105
Depth	0.55	0.50	0.55	1.00
Date Sampled				
Type	Clay	Topsoil	Sand	Clay

Determinand	Technique	LOD	Units	Symbol				
Di-n-butylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Di-n-octylphthalate	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	0.1	<0.1	<0.1
Dibenzo(ah)Anthracene	GC/MS(MCERTS)	0.1	mg/kg	M	0.2	0.1	0.9	0.2
Dibenzofuran	GC/MS(MCERTS)	0.1	mg/kg	M	0.5	1.6	1.1	0.3
Diethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Dimethyl phthalate	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Fluoranthene	GC/MS(MCERTS)	0.1	mg/kg	M	7.5	2.3	26	4.8
Fluorene	GC/MS(MCERTS)	0.1	mg/kg	M	0.8	0.4	2.2	0.5
Hexachlorobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Hexachlorobutadiene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Hexachlorocyclopentadiene	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Hexachloroethane	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Indeno(123-cd)Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	0.8	0.5	2.8	0.5
Isophorone	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Naphthalene	GC/MS(MCERTS)	0.1	mg/kg	M	0.4	6.2	0.3	0.3
Nitrobenzene	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	GC/MS(MCERTS)	0.1	mg/kg	U	<0.1	<0.1	<0.1	<0.1
Phenanthrene	GC/MS(MCERTS)	0.1	mg/kg	M	6.0	3.4	16	3.9
Phenol	GC/MS(MCERTS)	0.1	mg/kg	M	<0.1	<0.1	<0.1	<0.1
Pyrene	GC/MS(MCERTS)	0.1	mg/kg	M	6.0	2.5	20	3.8
Semi-Volatile Organic Compounds Screen (additional peaks)	GC/MS(MCERTS)	1	mg/kg	N	<1	<1	<1	<1

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil Analysed as Soil
VOC 624 + TICs

SAL Reference	143694 001	143694 004	143694 007	143694 010
Customer Sample Reference	BH08/03	BH08/04	BH08/05	BH08/13
Test Sample	A105	A105	A105	A105
Depth	0.55	0.50	0.55	1.00
Date Sampled				
Type	Clay	Topsoil	Sand	Clay

Determinand	Technique	LOD	Units	Symbol				
1,1,1,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,1,1-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,1,2,2-Tetrachloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50
1,1,2-Trichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,1-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,1-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,1-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,2,3-Trichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50
1,2,4-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,2-dibromoethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,2-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,2-Dichloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,3,5-Trimethylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,3-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,3-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
1,4-Dichlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
2,2-Dichloropropane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50
2-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50
4-Chlorotoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil Analysed as Soil
 VOC 624 + TICs

SAL Reference	143694 001	143694 004	143694 007	143694 010
Customer Sample Reference	BH08/03	BH08/04	BH08/05	BH08/13
Test Sample	A105	A105	A105	A105
Depth	0.55	0.50	0.55	1.00
Date Sampled				
Type	Clay	Topsoil	Sand	Clay

Determinand	Technique	LOD	Units	Symbol				
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
Bromobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Bromochloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Bromodichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Bromoform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Bromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50
Carbon tetrachloride	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Chlorobenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Chlorodibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Chloroethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Chloroform	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Chloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50
Cis-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Cis-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Dibromomethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Dichlorodifluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Dichloromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
Isopropyl benzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10

SAL Reference: 143694

Project Site: McNulty's Yard, South Shields

Customer Reference: 3692

Soil **Analysed as Soil**
VOC 624 + TICs

SAL Reference	143694 001	143694 004	143694 007	143694 010
Customer Sample Reference	BH08/03	BH08/04	BH08/05	BH08/13
Test Sample	A105	A105	A105	A105
Depth	0.55	0.50	0.55	1.00
Date Sampled				
Type	Clay	Topsoil	Sand	Clay

Determinand	Technique	LOD	Units	Symbol				
n-Propylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
p-Isopropyltoluene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Sec-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Styrene	GC/MS(Head Space)(MCERTS)	50	µg/kg	U	<50	<50	<50	<50
Tert-Butylbenzene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Tetrachloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	1500	<50	<50
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	⁽¹³⁾ <10	⁽¹³⁾ 42	⁽¹³⁾ <10	⁽¹³⁾ <10
Trans-1,2-Dichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Trans-1,3-Dichloropropene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Trichloroethylene	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Trichlorofluoromethane	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Vinyl chloride monomer	GC/MS(Head Space)(MCERTS)	50	µg/kg	M	<50	<50	<50	<50
Volatile Organic Compounds (Top 10 Screen)	GC/MS(Head Space)(MCERTS)	10	µg/kg	N	<10	Branched alkane circa C10 280	<10	<10

SAL Reference: 143694
Project Site: McNulty's Yard, South Shields
Customer Reference: 3692

Soil Analysed as Soil
TBT - Organotins

SAL Reference	143694 001	143694 007
Customer Sample Reference	BH08/03	BH08/05
Test Sample	AR	AR
Depth	0.55	0.55
Date Sampled		
Type	Clay	Sand

Determinand	Technique	LOD	Units	Symbol		
Dibutyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10
Tetrabutyl tin	GC/MS	0.01	mg/kg	N	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10
Tributyl tin	GC/MS (Deriv.)	0.01	mg/kg	N	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10
Triphenyl Tin	GC/MS	0.01	mg/kg	N	⁽⁹⁾ <0.10	⁽⁹⁾ <0.10

SAL Reference: 143694							
Project Site: McNulty's Yard, South Shields							
Customer Reference: 3692							
Soil		Analysed as Soil					
PCB EC7							
					SAL Reference	143694 001	143694 010
					Customer Sample Reference	BH08/03	BH08/13
					Test Sample	A105	A105
					Depth	0.55	1.00
					Date Sampled		
					Type	Clay	Clay
Determinand	Technique	LOD	Units	Symbol			
Polychlorinated biphenyl BZ#101	GC/MS (HR)	0.05	µg/kg	M	0.09	0.17	
Polychlorinated biphenyl BZ#118	GC/MS (HR)	0.05	µg/kg	M	<0.05	0.12	
Polychlorinated biphenyl BZ#138	GC/MS (HR)	0.05	µg/kg	M	0.09	0.24	
Polychlorinated biphenyl BZ#153	GC/MS (HR)	0.05	µg/kg	M	0.07	0.18	
Polychlorinated biphenyl BZ#180	GC/MS (HR)	0.05	µg/kg	M	<0.05	0.19	
Polychlorinated biphenyl BZ#28	GC/MS (HR)	0.05	µg/kg	M	<0.05	<0.05	
Polychlorinated biphenyl BZ#52	GC/MS (HR)	0.05	µg/kg	M	<0.05	0.07	

SITE INVESTIGATION REPORT
of land at
DEVENICK PROJECT
McNulty Offshore, South Shields
Client: McNulty Offshore

REPORT NO. M0754/Phase 3
March 2011

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Durham
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SITE INVESTIGATION
of land at
MCNULTY OFFSHORE
DEVENICK PROJECT
prepared for
DTA CONSULTING ENGINEERS
on behalf of
McNULTY OFFSHORE
CONTENTS

1.0 INTRODUCTION	1
2.0 SITE DESCRIPTION	1
2.1 Site Location & Features	1
3.0 FIELDWORK	1
3.1 Introduction	1
3.2 Strata Description	2
3.3 Sampling and In-situ Testing	2
3.4 Exploratory Hole Locations	2
4.0 LABORATORY TESTING	2
4.1 Geotechnical	2
6.0 GROUND CONDITIONS	2
7.0 SETTLEMENTS	3

Appendix A - Drawings

Appendix B - Exploratory Hole Records

Appendix C - Geotechnical Laboratory Results

Appendix D – Notes on Limitations

1.0 INTRODUCTION

Solmek Ltd were commissioned by DTA Consulting Engineers, acting on behalf of McNulty Offshore, to carry out a site investigation of land at McNulty Offshore, South Shields as part of the Devenick Project.

The objectives of the investigation were as follows:

- To determine the typical nature, thickness and engineering parameters of the made ground and natural soils.
- To recover disturbed samples of made ground and natural strata for and geotechnical laboratory testing.

Fieldwork, as specified by DTA Consulting Engineers, comprised the drilling of three cable percussive boreholes. The fieldwork was carried out between 24th and 26th February 2011.

Following the completion of the fieldwork selected soil samples were scheduled by Solmek for a range of geotechnical testing.

The information contained in this report is limited to the boreholes drilled on site.

This report is based on the data obtained from the exploratory holes and from the subsequent tests carried out. There is always a possibility of variation in the ground conditions between boreholes. Responsibility cannot be accepted for conditions not revealed by the investigation. Any diagram or opinion of the possible configuration of the findings is conjectural and given for guidance only, and confirmation of intermediate ground conditions should be considered if deemed necessary.

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2.0 SITE DESCRIPTION

2.1 Site Location & Features

The site is located 2km west of South Shields town centre. The approximate centre of the site is at National Grid Reference 435697,565919.

A site location plan is presented as Drawing No. M0754/1 in Appendix A to this report.

The site comprises a relatively flat irregular parcel of land adjacent to the River Tyne and presently covered by gravel and forms part of the construction and storage yard for the production of offshore equipment.

3.0 FIELDWORK

3.1 Introduction

The fieldwork comprised the following:

- Three cable percussive boreholes to a maximum depth of 11.95m bgl.

3.2 Strata Description

Depths and descriptions of strata and groundwater together with details of the samples recovered are presented on the exploratory hole record sheets in Appendix B to this report and summarised in Section 6 below.

Strata descriptions are based on an examination of the strata encountered together with consideration of the in-situ and laboratory test data. Procedures and principles contained in BS5930 (1999), BS10175 (2001) and BS1377 (1990) have been followed.

3.3 Sampling and In-situ Testing

Samples were selected by a representative of Solmek during the investigation works. Samples of soil for chemical analysis were placed into amber glass jars and plastic tubs as appropriate. Groundwater samples were collected in 1 litre amber glass bottles. Glass jars/bottles were stored at approximately 4°C until delivery to the laboratory.

In-situ testing of the strata encountered was undertaken at a frequency and at depths determined by Solmek. In-situ standard penetration tests (SPTs) were carried out throughout the depth of the borehole using a split spoon sampler or 60° apex solid cone, in order to give an indication of the relative density of the granular soils and an indication of the undrained shear strength of cohesive soils. The results of these tests are shown as 'N' values and can be found adjacent to the appropriate sample level on the Solmek exploratory records in Appendix B.

3.4 Exploratory Hole Locations

The exploratory hole locations, as determined by DTA, are shown on Drawing No. M0754/04 in Appendix A.

4.0 LABORATORY TESTING

4.1 Geotechnical

Geotechnical laboratory testing, as scheduled by Solmek, was carried out on selected samples in accordance with techniques outlined in BS 1377:1990.

6.0 GROUND CONDITIONS

Ground conditions encountered comprised granular made ground to between 5.00 and 5.10m thick comprising sands and gravels of brick, concrete, clinker, ash, sandstone and flint. Occasional wood and metal fragments were also encountered. Variable SPT 'N' values of between 2 and 20 (very loose to medium dense) were recorded with the deposit although it was noted that the density generally increased with depth.

Directly underlying the made ground stiff glacial clay was encountered. Possible sandstone rockhead was encountered at between 6.00m and 11.50m bgl.

SPT 'N' values within the glacial clay varied from 30 to >50 confirming the firm to very stiff nature of the deposit.

Moisture content testing within the clays recorded values of 14% to 20% with plasticity indices of 10 to 13 indicating low plasticity clay.

Triaxial tests in the clays recorded shear strengths of between 49 and 71kN/m².

To enable buried concrete to be designed to resist sulfate attack, samples of made ground and natural strata from depths corresponding to the anticipated foundation depth have been tested for water-soluble sulfate and pH.

The maximum water-soluble sulfate concentration is 885mg/l and the lowest recorded pH value is 11.7.

Based on the above results, Design Sulfate Class DS-1 and ACEC Classification AC-1 would be appropriate for buried concrete at the site.

Groundwater was encountered at a depth of between 3.30m and 2.50m bgl.

7.0 SETTLEMENTS

Information supplied by DTA has indicated that the Devenick project comprises foundation pad sizes and loads as follows:

- 4 corner pads at a depth of 0.70m bgl, 4m x 3m in size with a maximum load of 300kN/m²
- 4 central pads at a depth of 0.6m bgl, 5m x 2m with a maximum load of 150kN/m²

These pads are spread across an area as shown in the NTA sketch in Appendix A.

Estimates of settlements at each pad have been calculated using the following methods:

- 1) Burland and Burbidge (ref. Burland, J.B. and Burbidge, M.C. Settlement of foundations on sand and gravel, *Proceedings of the Institute of Civil Engineers*, 78(1), 1325-1381, 1985.
- 2) Schultz and Sherif (Ref. Schultz, E. and Sherif, G., Prediction of settlement from evaluated settlement observations for sand, *Proceedings of the 8th Conference on Soil Mechanics*, Moscow, Vol.1 p.225, 1973.

All this is based on an assumption of consistent material and it may be that the made ground, although detected in our boreholes to have a SPT'N' value of 6, it may be looser in between the boreholes.

Settlements of between 60mm and >100mm have been calculated using the methods above.

It is understood that a piled foundation solution was not acceptable and as such, in order to limit differential settlement the made ground across the pad area could be removed and replaced with compacted granular fill.

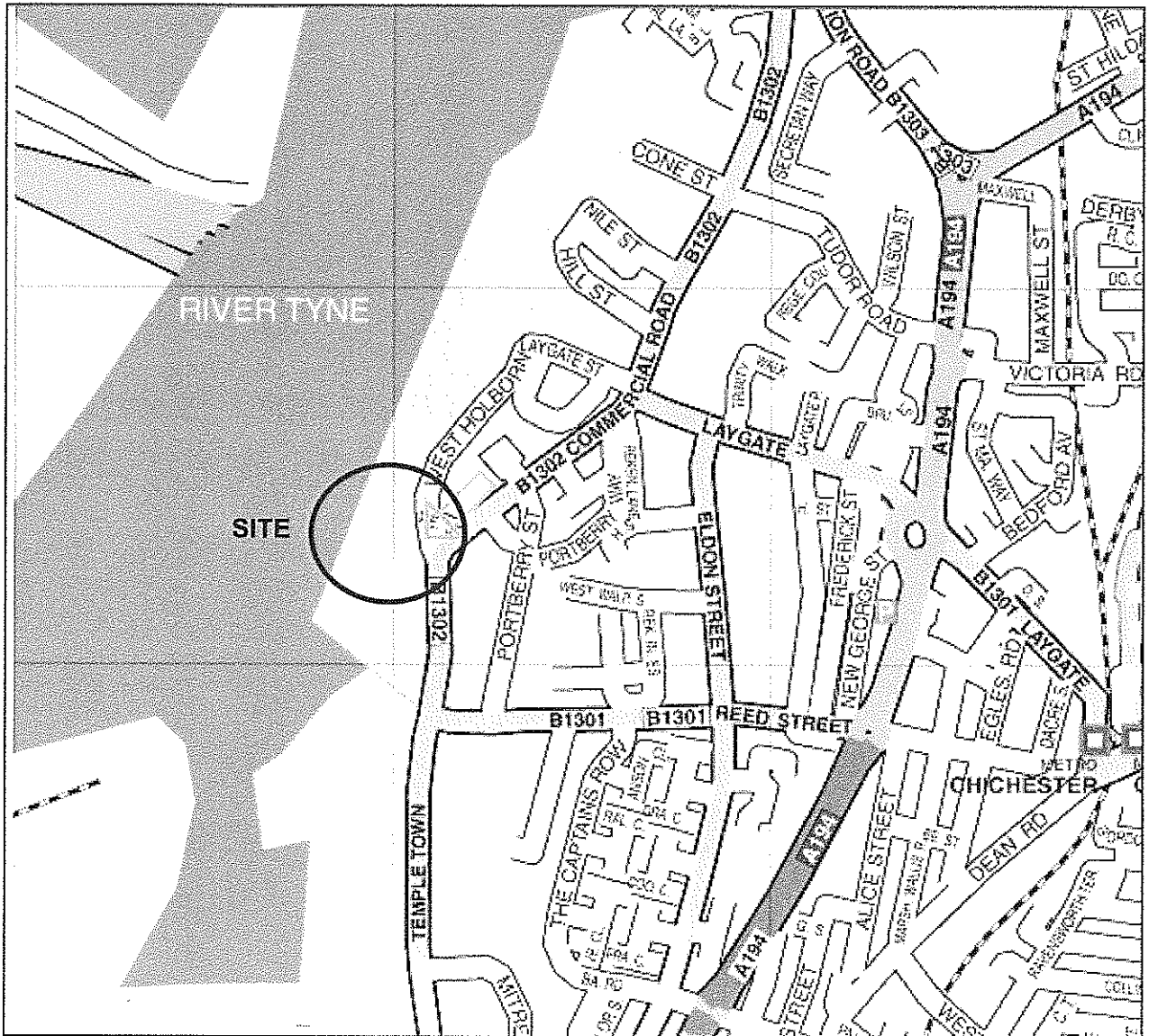
As instructed by DTA settlements were calculated for a compacted granular blanket comprising the upper 1m of made ground being removed and recompacted below the intended 0.6-0.7m depth of foundation. However, in doing this loose made ground will still remain and as such settlements of >60mm will occur which will include unacceptable differential settlements between the pads.

In order to further limit differential settlement over the foundation area in question, Tensar recommend a two layer reinforced section over the entire area (extending 2m beyond the pad foundations), constructed as follows:

150mm granular material, max. particle size 75mm, compacted to Highway specs TX160

300mm granular material, max. particle size 75mm, compacted to Highway specs TX160 on formation.

Appendix A
Drawings



Contract:
McNulty Offshore, South Shields

Contract No:
M0754

Client:
McNulty Offshore

TEL: 0191 378 3310
FAX: 01670 515013

Drawing Title:
Site Location Plan

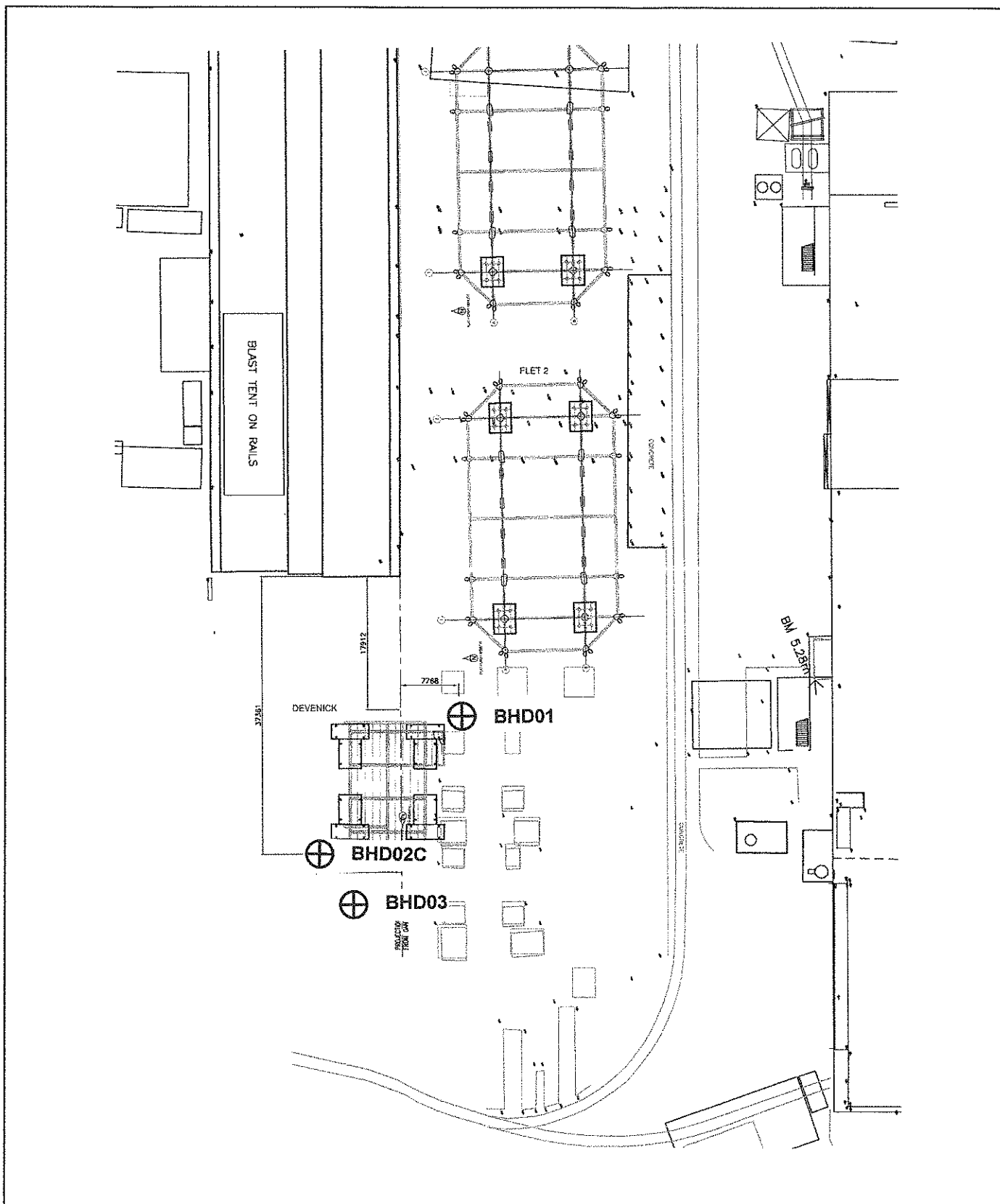
Drawing No:
M0754r/01


Date:
January 2011

Scale:
NTS

Status:
Final

Drawn by:
AIL



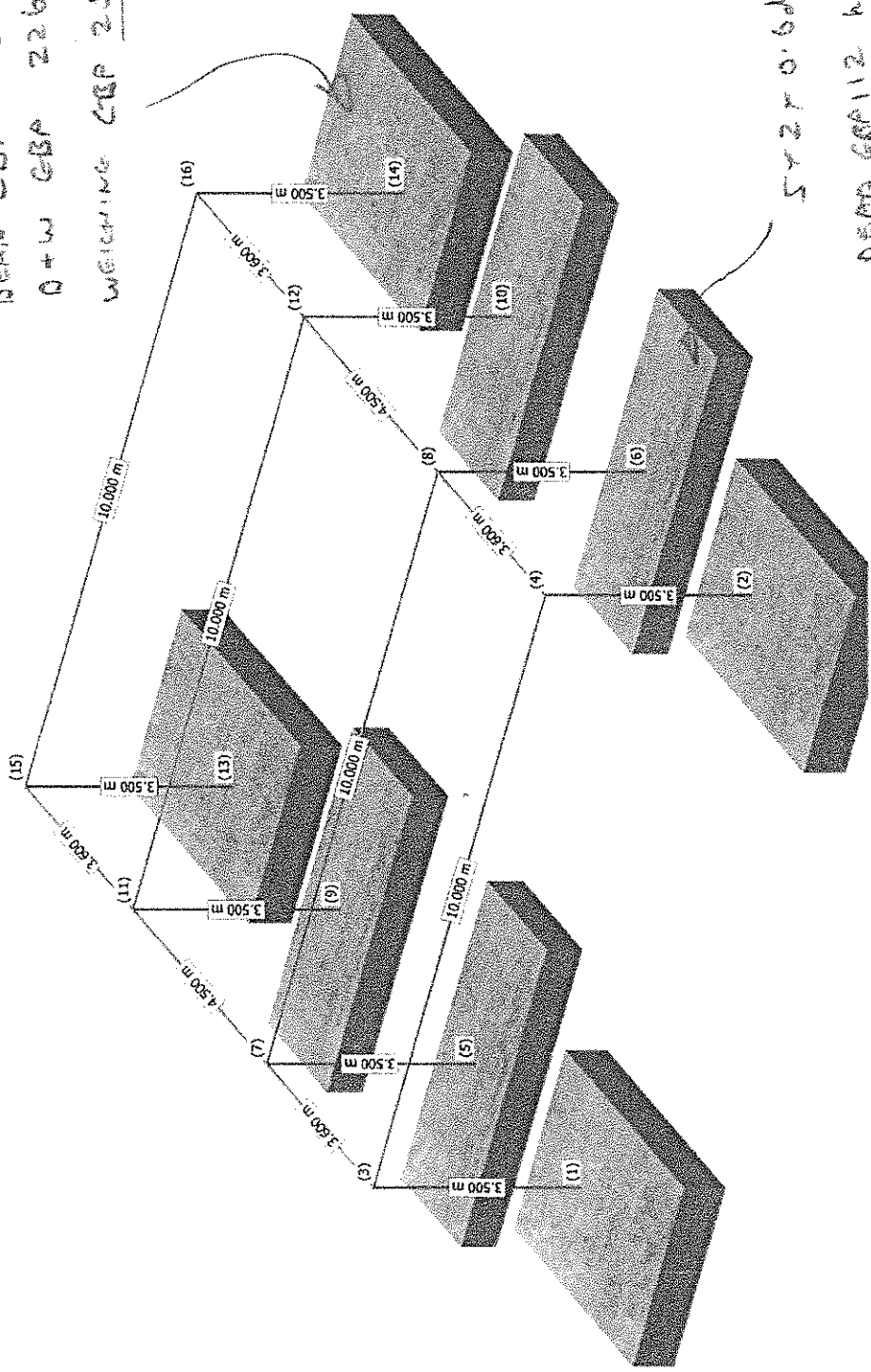
	Contract: Devenick Project, McNulty Off Shore		Contract No: M0754	
	Client: McNulty Off Shore			
TEL: 0191 378 3310 FAX: 01670 515013	Drawing Title: Exploratory Hole Location Plan			
Drawing No: M0754/04	Date: March 2011	Scale: NTS	Status: Final	Drawn by: AIL



4x 3x0.7dp
DEAD GBP 181 kN/m²
D+W GBP 226

WEIGHING GBP 255

supported on
corner beams
only.



5x2x0.6dp
D+M+D GBP 112 kN/m²
D+W GBP 146 kN/m²

Frame Geometry - (Full Frame) - 3D Front View

Not to Scale

Appendix B
Exploratory Hole Records



BOREHOLE RECORD

BH No. **BHD1**
Sheet 1 of 2

Site: McNulty Offshore (Devenick Project)

Contract No: **M0754**

Client: McNulty Offshore

Dates:
24/02/2011

Method: Cable Percussive Rig

Scale **1:50**

SAMPLE DETAILS			Groundwater (Casing)	STRATA RECORD			
Type	Depth From - To(m)	N (cu)		Description	Depth (m)	Level (m AOD)	Legend
B	0.00 - 0.50		MADE GROUND. Bituminous Macadam.	0.20			
B	0.50 - 1.00		MADE GROUND. Brown black gravelly sand. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse of ash concrete brick and clinker.				
B	1.50 - 2.00	N=6 (2,2,2,1,2,1)					
B	2.50 - 3.00	N=7 (2,1,2,2,1,2) N=6 (2,1,2,1,1,2)					
B	3.50 - 4.00	N=2 (1,0,0,1,1,0) N=9 (3,2,3,2,2,2) N=11 (2,3,2,2,3,4)	MADE GROUND. Brown gravelly sand. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse of flint and sandstone.	2.80			
B	4.50 - 5.00	N=16 (3,4,4,3,4,5)					
UF B	5.20 - 5.65 5.20 - 5.70		Stiff brown grey sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse of sandstone and coal.	5.10			
B	6.20 - 6.70	N=30 (9,7,6,7,8,9) N=48 (12,10,9,13,12,14)					
U	8.20 - 8.65	50/61mm (18,7,50)					
B	9.00 - 9.50	44/300mm - Abandoned					
B	9.50 - 10.00	N=43 (7,8,10,10,11,12)					

Continued next sheet

Remarks and Water Observations

1. Groundwater encountered at 2.50m rising to 2.20m after 20mins.
2. Chiselling between 8.50m to 8.90m for 1hr.
3. Chiselling at 11.50 for 1hr (No progression)

GL (m AOD)

- Easting:

- Northing:

Fig. No.



BOREHOLE RECORD

BH No. **BHD1**
Sheet 2 of 2

Site: McNulty Offshore (Devenick Project)

Contract No: **M0754**

Client: McNulty Offshore

Dates:
24/02/2011

Method: Cable Percussive Rig

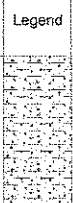
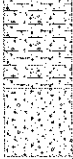
Scale 1:50

SAMPLE DETAILS

STRATA RECORD

Driller: SK

Logged By: IN

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)	Description	Depth (m)	Level (m AOD)	Legend	Well
B	10.50 - 11.00	N=36 (5,6,8,8,10,10)	10	Stiff brown grey sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse of sandstone and coal.				
		75/30mm Abandoned	11	Dense brown grey andy GRAVEL of sandstone.	11.50			
			12	End of Borehole at 11.95 m	11.95			
			13					
			14					
			15					
			16					
			17					

Remarks and Water Observations

1. Groundwater encountered at 2.50m rising to 2.20m after 20mins.
2. Chiselling between 8.50m to 8.90m for 1hr.
3. Chiselling at 11.50 for 1hr (No progression)

GL (m AOD)

- Easting:

- Northing:

-

Fig. No.

BOREHOLE RECORD

BH No. **BHD2C**

Sheet 1 of 1



Site: McNulty Offshore (Devenick Project)

Contract No: **M0754**

Client: McNulty Offshore

Dates:
28/02/2011

Method: Cable Percussive Rig

Scale **1:50**

SAMPLE DETAILS			Groundwater (Casing)	STRATA RECORD			
Type	Depth From - To(m)	N (cu)		Description	Depth (m)	Level (m AOD)	Legend
B	0.00 - 0.50		MADE GROUND. Brown black gravelly sand. Sand is fine to coarse of ash. Gravel is angular to sub angular fine to coarse of sandstone, concrete, slag, clinker. Occasional peices of metal and wood noted.	0.30			
B	0.50 - 1.00			MADE GROUND. Concrete.	0.50		
B	1.50 - 2.00	N=8 (1,0,1,2,2,3)	MADE GROUND. Brown sandy gravel. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse of concrete and brick. Occasional pieces of metal noted.	1.30			
B	2.50 - 3.00	N=13 (3,3,3,4,3,3)	MADE GROUND. Grown sandy gravel. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse of flint sandstone and occasional brick.	2.60			
B	3.50 - 4.00	N=12 (2,3,3,3,3,3)	MADE GROUND. Brown sandy gravel. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse of flint and sandstone.	5.00			
B	4.50 - 5.00	N=3 (1,1,1,0,1,1)		6.40			
B	5.50 - 6.00	N=9 (1,2,2,3,2,2)		6.50			
U	5.20 - 5.65	N=18 (5,3,4,6,4,4)	Stiff brown grey sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular fine to coarse of sandstone and coal.				
B	5.60 - 5.70	N=9 (7,4,3,3,1,2)					
D	5.60 - 5.70	N=16 (2,3,3,5,4,4)					
		50/95mm (4,4,17,33)	Dense grey sandy GRAVEL of sandstone (Possible Rock).				
		50/21mm (25,50)	End of Borehole at 6.50 m				

Remarks and Water Observations

1. Groundwater encountered at 2.70m rising to 2.60m after 20mins.
2. Chiselling between 6.40m to 6.50m for 1hr.

GL (m AOD)

- Easting:

- Northing:

Fig. No.



BOREHOLE RECORD

BH No. **BHD3**
Sheet 1 of 1

Site: McNulty Offshore (Devenick Project)

Contract No: **M0754**

Client: McNulty Offshore

Dates:
25/02/2011

Method: Cable Percussive Rig

Scale **1:50**

Driller: SK

Logged By:

SAMPLE DETAILS			Groundwater (Casing)	STRATA RECORD				
Type	Depth From - To(m)	N (cu)		Description	Depth (m)	Level (m AOD)	Legend	Well
B	0.00 - 0.50		<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">1</div> <div style="margin-bottom: 10px;">2</div> <div style="margin-bottom: 10px;">3</div> <div style="margin-bottom: 10px;">4</div> <div style="margin-bottom: 10px;">5</div> <div style="margin-bottom: 10px;">6</div> <div style="margin-bottom: 10px;">7</div> <div style="margin-bottom: 10px;">8</div> </div>	MADE GROUND. Brown black gravelly sand. Sand is fine to coarse of ash. Gravel is sub angular fine to coarse of sandstone, clinker, coal, flint and slag. Occasional metal peices noted throughout.				
B	0.50 - 1.00							
B	1.30 - 2.00	N=7 (2,2,1,2,2 ,2)		MADE GROUND. Brown gravelly sand. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse of flint, sandstone and slag.	3.30			
B	2.50 - 3.00	N=9 (2,2,2,2,2 ,3)						
B	3.50 - 4.00	N=7 (1,2,2,2,1 ,2)						
B	4.50 - 5.00	N=9 (1,2,2,2,2 ,3)						
D	5.10	N=20 (3,4,6,4,4 ,9)		Stiff brown grey sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse of sandstone and coal.	5.10			
U	5.50 - 5.95	N=14 (5,4,4,4,3 ,3)						
D	6.00	N=7 (2,2,1,2,2 ,2)	Dense grey sandy gravel of sandstone (Possible rock).	6.00				
		N=11 (2,3,2,3,3 ,3)	End of Borehole at 6.20 m	6.20				

Remarks and Water Observations

1. Groundwater encountered at 3.30m rising to 3.00m aftern 20mins.

GL (m AOD)

-
Eastings:
-
Northing:
-

Fig. No.

IN

Appendix C
Geotechnical Laboratory Results

Undrained Shear Strength in Triaxial Compression

without measurement of Pore Pressure

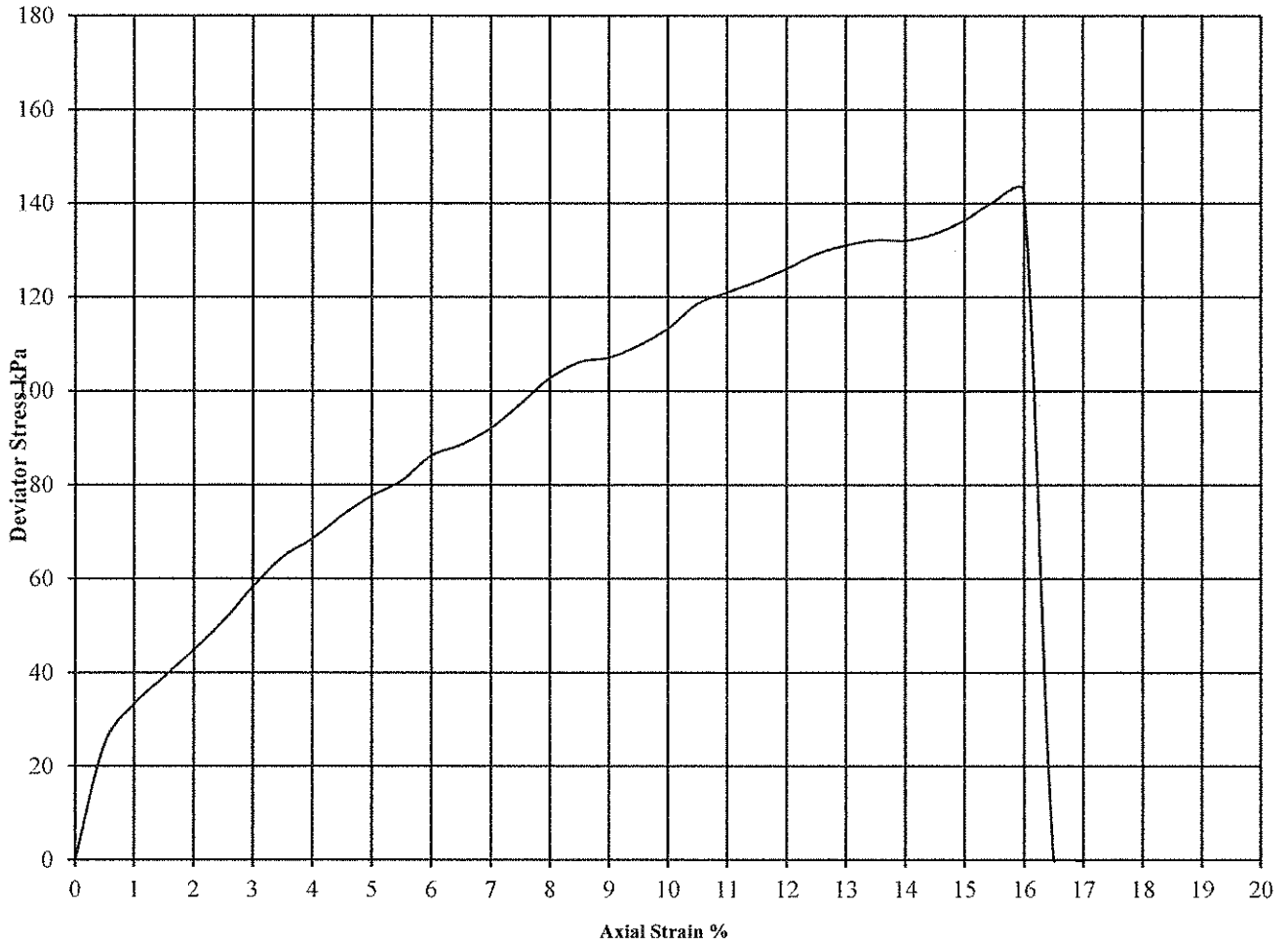
BS1377-7:1990+A1:1994 [Preparation Method BS1377-1:1990:Clause 8.3]

Hole Reference

BHD 3

Depth (m)

5.50 - 5.95



Diameter (mm):		100		Height (mm):		200		Test:		100 mm Single Stage.		Sketch of Failure Conditions:	
Stage	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Deviator Stress (kPa)	Cohesion (kPa)	Failure Strain (%)	Mode of Failure	Shear Strength (kPa)				
1	18	2.51	2.12	110	143	71	16.0	Compound	71				
Sample Description:		Firm grey brown slightly gravelly CLAY											
Sample Condition:		Undisturbed		Rate of Strain %/min		2		Membrane Thickness		0.5mm			

Remarks:

Operator	Checked by	Date

	McNulty Phase 3	Contract No M754
--	-----------------	---------------------

Undrained Shear Strength in Triaxial Compression

without measurement of Pore Pressure

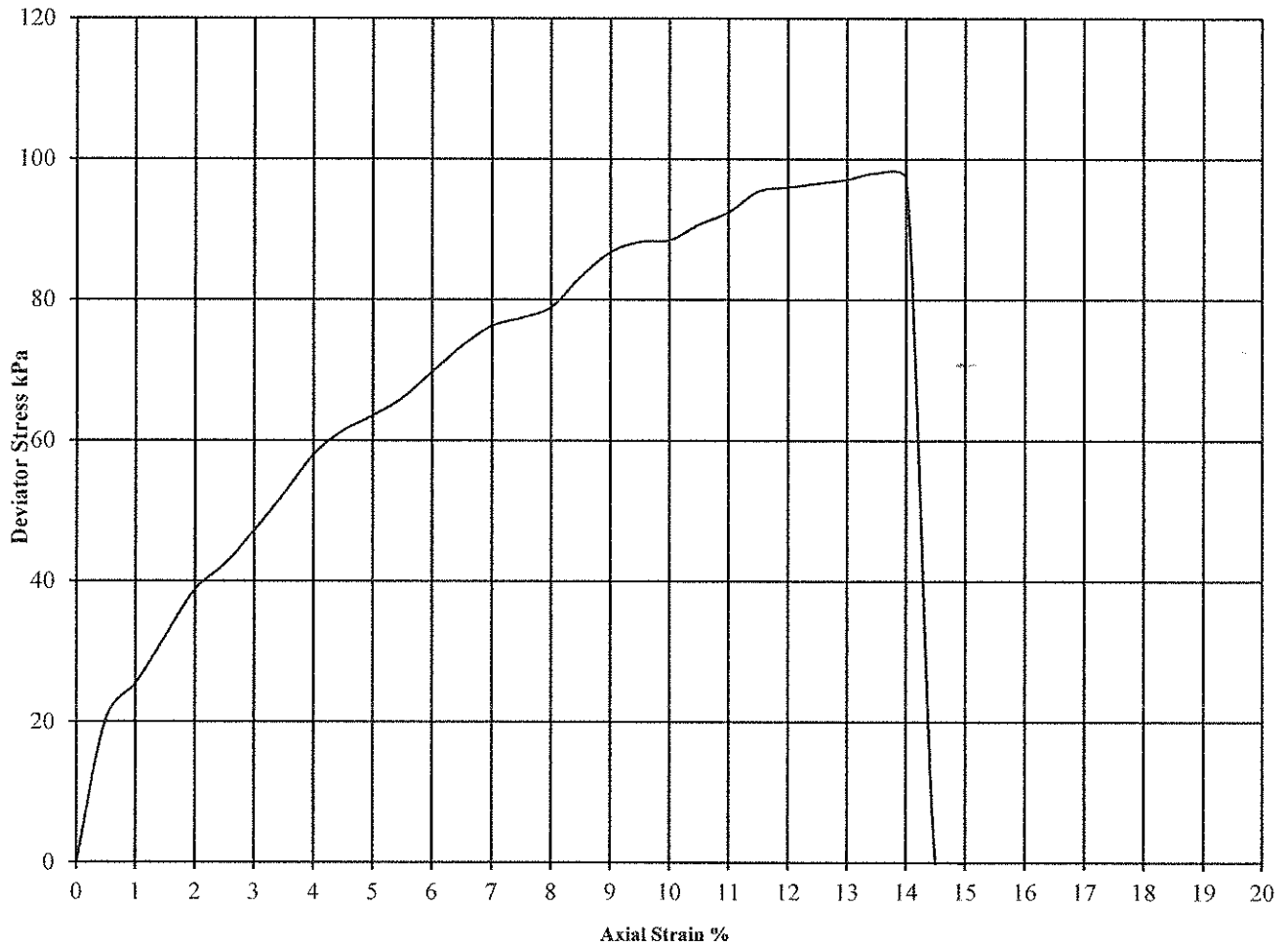
BS1377-7:1990+A1:1994 [Preparation Method BS1377-1:1990:Clause 8.3]

Hole Reference

BHD 2C

Depth (m)

5.20 - 5.65



Diameter (mm):		100		Height (mm):		200		Test:		100 mm Single Stage.		Sketch of Failure Conditions:			
Stage	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Deviator Stress (kPa)	Cohesion (kPa)	Failure Strain (%)	Mode of Failure	Shear Strength (kPa)						
I	14	2.40	2.10	110	98	49	13.5	Compound	49						
Sample Description:		Firm grey brown slightly gravelly CLAY													
Sample Condition:		Undisturbed		Rate of Strain %/min		2		Membrane Thickness		0.5mm					
Remarks:															
						Operator		Checked by		Date					



McNulty Phase 3

Contract No
M754

Appendix D

Notes on Limitations

♣Solmek conditions of offer, notes on limitations & basis for contract (ref: version 2/2010)

These conditions accompany our tender and supercede any previous conditions issued. Solmek will prepare a report solely for the use of the Client (the party invoiced) and its agent(s). No reliance should be placed on the contents of this report, in whole or in part by 3rd parties. The report, its content and format and associated data are copyright, and the property of Solmek. Photocopying of part or all of the contents, transfer or reproduction of any kind is forbidden without written permission from Solmek. A charge may be levied against such approval, the same to be made at the discretion of Solmek

Solmek cannot be held liable and do not warrant, or otherwise guarantee the validity of information provided by third parties and subsequently used in our reports. Solmek are not responsible for the action negligent of otherwise of subcontractors or third parties.

Site investigation is a process of sampling. The scope and size of an investigation may be considered proportional to levels of confidence regarding the ground and groundwater conditions. The exploratory holes undertaken investigate only a small volume of the ground in relation to the overall size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions as encountered within each of the exploratory holes. There may be different ground conditions elsewhere on the site which have not been identified by this investigation and which therefore have not been taken into account in this report. Reports are generally subject to the comments of the local authority and Environment Agency. The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that mobile contamination, ground gas levels and groundwater levels may vary owing to seasonal, tidal and/or weather related effects. Solmek cannot be held liable for any unrecorded or unforeseen obstructions between exploratory boreholes and trial pits. This includes instances where previous structures on the site (buried man made structures) or the presence of boulder clay/Glacial Till (cobbles and/or boulder obstructions) have been anticipated. All types of piling operations should make allowance for obstructions within the construction budget to accommodate this. Unrecorded ancient mining may occur anywhere where seams that have been worked and influence the rock and soil above. Dissolution cavities can occur where gypsum or chalk is present. Rotary drilling is the recommended technique to prove the integrity of the rock.

Where the scope of the investigation is limited via access to information, time constraints, equipment limitations, testing, interpretation or by the client or his agents budgetary constraints, elements not set out in the proposal and excluded from the report are deemed to be omitted from the scope of the investigation.

Desk studies are generally prepared in accordance with RICS guidelines. Environmental site investigations are generally undertaken as 'exploratory investigations' in accordance with the definitions provided in paragraph 5.4 of BS 10175:2001 in order to confirm the conceptual assumptions. You are advised to familiarize yourself with the typical scope of such an investigation. No pumping of water will be undertaken unless a licence or facilities/equipment have been arranged by others.

Where the type, number or/and depth of exploratory hole is specified by others, Solmek cannot and will not be responsible for any subsequent shortfall or inadequacy in data, and any consequent shortfall in interpretation of environmental and geotechnical aspects which may be required at a later date in order to facilitate the design of permanent or temporary works.

All information acquired by Solmek in the course of investigation is the property of Solmek, and, only also becomes the joint property of the Client only on the complete settlement of all invoices relating to the project. Solmek reserve the right to use the information in commercial tendering and marketing, unless the Client expressly wishes otherwise in writing. The quoted rates do not include VAT, and payment terms are 30 days from dispatch of invoice from our offices. Quotes are subject to a site visit.

We have allowed for 1 mobilisation and normal working hours unless otherwise stated. The scope of the investigation may be reviewed following the desk study and/or fieldwork. The presence or otherwise of Japanese Knotweed or other invasive plants can be difficult to identify especially during winter months. If Japanese Knotweed or other invasive species are suspect, it should be confirmed by an ecologist. We have not allowed for acquiring services information, and cannot be responsible for damage to underground services or pipes not shown to us or not clearly shown on plans. Costs incurred will be passed on to you, and in commissioning Solmek you understand and accept that you/your agent have a contractual relationship with Solmek & you accept this. Our rates assume unobstructed, reasonably level and firm access to the exploratory positions and adequate clear working areas and headroom. We have priced on the basis that you or your client have the necessary permissions, wayleaves and approvals to access land. All boreholes and pits are backfilled with arisings except where gas monitoring pipes are installed with stopcock covers. Solmek are not responsible for any uneven surfaces as a result of siteworks and rutting and backfilled excavations may require re-levelling and/or making good by others after fieldwork is complete, and Solmek has not allowed for this. No price has been provided or requested for a return visit to remove pipework and covers. Hourly rates apply to consultancy only and do not include expenses unless otherwise shown. If warranties are required, legal costs incurred will be passed on to you assuming Solmek agree to complete such warranties, modified or otherwise and you understand and agree to pay all costs.

We reserve the right to pursue full payment of the invoice prior to release of any information including reports. We advise you/your client that we may elect to pursue our statutory rights under late payment legislation, and will apply 8% to the base rate for unreasonably late payments. Solmek are exempt from the CIS Scheme. Solmek offer to undertake work only in strict accordance with conditions covered by our current insurances, which are available for inspection. Solmek are not responsible for acts, negligent or otherwise of subcontractors and as a matter of policy cannot indemnify any other parties. Professional indemnity Insurance is limited to ten times the invoice net total except where stated otherwise by Solmek. Solmek give notice that consequential loss as a direct or indirect result of Solmek's activities or omission of the same are excluded.

DUNELM DRILLING CO.

SITE INVESTIGATION SPECIALISTS
SUBSIDENCE INVESTIGATION
GEOTECHNICAL, GEOLOGICAL &
ENVIRONMENTAL CONSULTANTS

Established 1966

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DAVIES TINDALE & ASSOCIATES

SITE INVESTIGATION

PROPOSED FOUNDATIONS FOR NEW MODULE

McNULTY YARD COMMERCIAL ROAD SOUTH SHIELDS

REPORT C8141

NOVEMBER 1995

1.0 Introduction

As requested by Davies Tindale & Associates, Consulting Engineers of Washington, on behalf of McNulty Offshore Services Ltd, a ground investigation was carried out over an area of land within the existing McNulty Yard off Commercial Road, South Shields, where it is proposed to construct new foundations to support a new offshore module.

In total four shell and auger boreholes and three open hole rotary boreholes were put down the locations of which were positioned on site by the Engineers.

This Report is based on the data obtained from the boreholes put down and from the subsequent tests carried out. There is always a possibility of variation in the ground conditions between and around the boreholes. The Report is limited to the data obtained and responsibility cannot be accepted for conditions not revealed by the Investigation. Any diagram or opinion of the possible configuration of strata in the area around the boreholes or extrapolation of the findings is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

2.0 Site Investigation

a) Shell & Auger Boreholes - Boreholes A, B, C and D were put down using conventional percussive boring equipment with each hole being lined as necessary to enable undisturbed samples to be retrieved or insitu tests to be carried out. The types and

Contd/.....

2.0 Site Investigation (Contd)

a) Shell & Auger Boreholes (Contd)

changes of strata were noted and these are duly recorded on the graphic borehole record sheets which accompany this report as are the depths at which ground water was encountered and its final standing levels.

No major problems were experienced when gaining access to these borehole locations which lie on a relatively level area adjacent to the existing Quay, although chiselling techniques were employed at various depths in order to break through the surfacing and underlying obstructions.

The depths of strata on the record sheets are recorded from current ground levels at each location. No walkover survey, desk top study or topographical survey was undertaken or requested.

b) Rotary Boreholes - The three rotary boreholes were put down using a crawler mounted open hole rotary drilling rig with the hole being lined as necessary down to rockhead level below which coring was carried out. The types and changes of strata noted in the boreholes were monitored through the arisings and cuttings brought to the surface with the air return. The cores were logged geologically and obviously give a more detailed description of the solid strata being penetrated.

The boreholes themselves were grouted back to rockhead level on completion and again no major problems were experienced when gaining the borehole positions or the depth of strata noted in these boreholes.

The depths of strata on the record sheets are recorded from current ground levels at each location. No walkover survey, desk top study or topographical survey was undertaken or requested.

3.0 Strata

3.1 Shell & Auger Boreholes - In general the ground conditions exposed in the boreholes were fairly similar although significant variations were noted and the types and depths of materials encountered.

Boreholes A and B revealed various bands of loose to medium dense fill materials below an initial tarmacadam concrete ash stone and roadstone surfacing between 0.55m and 0.70m in thickness. These

Contd/.....

3.0 Strata

3.1 Shell & Auger Boreholes (Contd)

bands of materials generally consisted of black ash, stone, concrete, brick, rubble, clay and towards their base there was evidence of old ships ballast.

In Borehole A elements of white very fine grained ash and mineral powder were also recovered. These materials continued to depths of between 5.50m and 5.80m before the natural strata was encountered. In Borehole A this initially consisted of soft black sandy gravelly slightly organic silt which continued to a depth of just 6.00m before firm dark grey very sandy silty clay was encountered. Underlying this material at a depth of 7.75m was stiff dark brown and grey mottled glacial till which continued to a total depth of 11.60m before initially weak and weathered yellow and light brown sandstone was encountered. This borehole was terminated within the sandstone at a depth of 12.00m below current ground levels.

In Borehole B underlying the made ground at a depth of 5.80m was loose dark grey sandy gravelly silt which continued to a depth of 6.70m before firm dark brown and grey very sandy silty clay was encountered. This material was noted to become significantly softer with depth until again bedrock was encountered at 14.00m below current ground levels and consisted of weathered yellow and light brown sandstone.

Borehole C revealed loose roadstone black ash and brick fill materials which continued to a depth of 2.00m before a band of concrete was encountered and this was finally penetrated to a depth of 2.25m before a large timber obstruction was encountered and after a significant period of chiselling the borehole was abandoned at a depth of 3.25m still within the timber obstruction.

Consequently Borehole D was put down close to Borehole C and revealed 1.30m of roadstone, ash and stone materials below which various bands of loose to medium dense fill material was encountered. These consisted of dense brick, ash, rubble, sand, silt, clay, some timber and towards their base what may again be old ships ballast. At a depth of 7.80m a band of possibly made ground consisting of dark grey silt/claybound coarse gravel and cobbles was present but this could represent the original river bed level. Underlying this material at a depth of 8.70m was loose dark grey slightly sandy silt and this material continued

Contd/.....

3.0 Strata

3.1 Shell & Auger Boreholes (Contd)

to a depth of 18.50m below current ground levels before light brown and yellow weathered sandstone was noted. This borehole was finally terminated within the sandstone at a depth of 19.50m.

As anticipated and bearing in mind the close proximity of the boreholes to the existing River Tyne, ground water was encountered in Boreholes A, B and D at depths of around 3.00m below current ground levels and in the case of Boreholes A and B were sealed off at depths of between 6.60m and 7.00m but were also noted to fluctuate tidally. Due to the shallow termination depth of Borehole C there was no ground water encountered in this borehole.

3.2 Rotary Boreholes - As can be seen from the rotary borehole logs at the end of this report the upper strata descriptions are purely based on the drillers interpretation of the cuttings brought to the surface and therefore are not as detailed as those recovered from the shell and auger boreholes.

In Boreholes 1 and 2 these revealed made ground to depths of between 3.00m and 4.00m before various bands of saturated sandy clays with gravel or boulder clays were encountered before the bedrock itself was noted at between 11.70m and 11.80m below current ground levels.

However in Borehole 3 the made ground was noted to a depth of 12.30m before once again the sandstone bedrock was encountered. An initial depth of fairly soft weathered sandstone was noted at between 0.30m and 0.50m before coring (undisturbed samples) was carried out. The descriptions given on the borehole logs are relatively detailed and a full description of the cores are contained within the following paragraphs.

RBH1

12.30m to 17.50m - Light orangey brown and grey fine to medium grained slightly micaceous SANDSTONE with closely spaced joints dipping 5 degrees to 10 degrees. The cores are occasionally ironstained containing muddy interdigitations with a marked vertical fracture from 17.00m to 17.70m. Moderately strong.

17.50m to 19.70m - Medium to dark grey very silty slightly micaceous MUDSTONE with very closely spaced joints and very

Contd/.....

3.0 Strata (Contd)

3.2 Rotary Boreholes (Contd)

RBH1 (Contd)

fractured from 17.70m to 18.20m generally moderately weak with a small band of coaly sandy MUDSTONE from 17.50m to 17.60m.

19.70m to 20.1m - Reasonable quality COAL with much pyrite.

20.1m to 21.3m - Light grey very silty MUDSTONE. Slightly micaceous with close joints and generally overall weak to moderately weak.

RBH2

12.00m to 17.00m - Light orangey brown and grey fine to medium grained slightly to micaceous well rounded and sorted SANDSTONE with interdigitated ironstained bands and closely spaced joints. Generally moderately strong to strong but very to completely weathered from 12.40m to 12.70m and 13.50m to 13.80m.

17.00m to 20.90m - Medium to dark grey moderately weak to strong very silty slightly micaceous MUDSTONE. Occasionally very fractured areas (17.70m to 19.0m & 19.9m to 20.5m).

20.90m to 21.05m - Very fractured poor quality occasionally muddy COAL.

21.05m to 22.00m - Light to medium grey very silty moderately strong MUDSTONE becoming more silty with depth.

RBH3

12.80m to 19.20m - Light orangey brown and grey fine to medium grained slightly micaceous SANDSTONE with closely spaced joints dipping 5 degrees to 10 degrees. Occasionally ironstained and generally moderately strong with very occasionally weathered muddy bands (20mm to 30mm thick).

19.20m to 22.60m - Light to medium grey very silty moderately strong MUDSTONE with closely spaced joints with occasional completely weathered bands (0.05m to 0.10m thickness) and steeply dipping joints with vertical fractures noted throughout.

In addition to the geological descriptions given above the Total

Contd/.....

3.0 Strata (Contd)3.2 Rotary Boreholes (Contd)

RBH3 (Contd)

Core Recovery (TCR%), Solid Core Recovery (SCR%) and Rock Quality Designation (RQD%) values have been determined and are shown in the table below. Plastic core liner was used and as can be seen produced fairly high TCR values ranging from 61% up to 100% and giving an average value of 89.9%. However due to the fractured and slightly weathered nature of the solid strata the SCR values were moderate and the RQD values significantly lower falling to a minimum of 15%.

Obviously these results can be used when assessing the nature and extent of solid strata below this site and its likely bearing capacity characteristics.

BH	CORE RUNS	TCR%	SCR%	RQD%
1	12.30-13.80	80	70	50
1	13.80-15.10	96	85	61
1	15.10-17.70	90	81	54
1	17.70-19.30	84	59	28
1	19.30-21.30	95	60	15
2	12.00-14.20	91	70	48
2	14.20-17.00	100	96	46
2	17.00-19.90	91	67	34
2	19.90-22.0	100	88	24
3	12.80-14.20	82	57	21
3	14.20-15.10	61	56	28
3	15.10-17.80	98	89	74
3	17.80-19.20	96	82	64
3	19.20-21.30	93	74	38
3	21.30-22.60	92	69	54

Contd/.....

4.0 Insitu Testing

Insitu standard penetration tests were carried out at various levels within the majority of THE shell and auger boreholes with the use of either a normal split spoon sampler or a 60 degree solid cone penetrometer. In addition at the same depth small disturbed samples were recovered for identification purposes.

As can be seen from the results of the tests carried out within the fill materials encountered in the upper levels of Boreholes A and B these tend to be of a loose to very loose density with 'N' values ranging from 3 up to 13 with no significant increase in density with depth or consistency. In Borehole C the only test carried out penetrated the concrete obstruction and therefore produced an artificially high value of 68. In Borehole D 'N' values recorded for the fill materials ranged from 8 up to 32 again indicating a fairly wide range in densities and therefore the variable nature of the fill materials themselves.

Where 'N' values have been recorded in the natural strata in Borehole D these again produced fairly low but more consistent 'N' values ranging from 4 up to 5 indicating that the silts themselves are of a loose density.

As anticipated fairly high 'N' values were recorded within the weathered sandstone at the base of Boreholes A and B with 'N' values ranging from 52 to 102 indicating that this material would be capable of supporting fairly heavy loadings without the risk of failure or excessive settlements occurring especially compared to the overlying fill materials or natural softer strata.

5.0 Laboratory Testing

All testing was carried out in accordance with BS1377:1990:Parts 1-9 unless otherwise stated.

5.1 Quick Undrained Triaxial Tests - The undisturbed samples recovered from the more cohesive materials encountered in Boreholes A and B were taken to the laboratory for examination and subsequent testing. In each case specimens were prepared from these samples and tested at varying lateral pressures in order to obtain the apparent cohesion of these clays.

As can be seen from the results of these tests the band of sandy silty clay encountered in Borehole A is of a reasonably firm nature with a value of apparent cohesion of 61.9 kN/m² being

Contd/.....

5.0 Laboratory Testing (Contd)5.1 Quick Undrained Triaxial Tests (Contd)

recorded and the underlying boulder clays appear to be of a fairly stiff nature with values of 136.2 kN/m^2 and 142.5 kN/m^2 being recorded. As anticipated these results were all accompanied by moderate to high values of bulk density and moderate to low values of natural moisture content with no angle of shearing resistance being recorded.

The initial sample recovered from Borehole B indicated again a reasonably firm sandy silty clay with a cohesion of 57.7 kN/m^2 being recorded. However these values significantly deteriorated with depth with apparent cohesions of 12.5 kN/m^2 and 17.4 kN/m^2 accompanied by angles of shearing resistance of between 7 degrees and 8 degrees being noted for the lower levels of these sandy silty clays. These results were in turn accompanied by moderate to fairly high values of natural moisture content and significantly lower values of bulk density which are typical for these kinds of materials.

These results would suggest that where the natural glacial till is present this material tends to be of a reasonably stiff nature and would be capable of supporting fairly heavy loadings and the overlying sandy silty clays in the upper levels also appear to be reasonably firm. However where significant depths of sandy silty clays are present the strength of these materials rapidly decreases with depth and they would not be capable of supporting any significant loadings without the risk of failure or excessive settlements occurring. The results of all these tests can be found adjacent to the appropriate sample level on the borehole record sheet and can also be seen in the table below along with the values of natural moisture content and bulk density and where recorded the angle of shearing resistance has also been noted.

BH	DEPTH(m)	M/C%	$C_u(\text{kN/m}^2)$	ϕ^0	BULK DENSITY kg/m^3
A	6.00	19.5	61.9	-	2120
A	8.00	15.6	142.5	-	2220
A	10.00	14.0	136.2	-	2260
B	8.00	29.3	57.7	-	1980
B	10.00	42.0	12.5	8	1830
B	12.00	36.1	17.4	7	1910

5.0 Laboratory Testing (Contd)

5.2 Determination of pH & SO₃ - Selected samples were tested in order to determine their acidity and soluble sulphate contents of the various fill materials noted in the shell and auger boreholes and the results can be seen in the table below.

BH	DEPTH	pH	SO ₃ (g/l)	CLASS
A	2.00	7.4	1.18	2
A	4.00	7.9	0.81	1
B	2.00	8.1	0.41	1
B	4.00	6.5	1.89	2
D	3.00	5.5	5.14	4
D	6.50	7.8	4.14	4

As can be seen from these results the fill materials noted in Boreholes A and B are generally of a slightly acidic to slightly alkaline disposition and the amount of soluble sulphate present ranges from 0.41g/l up to 1.89g/l which falls both outside and within the negligible range. Therefore in accordance with BRE Digest 363:1991 these materials would fall within the Class 1 and Class 2 ranges indicating that some precautions will be necessary with respect to foundation or buried concrete coming into contact with these materials.

However the results of the tests carried out on the samples recovered from Borehole D indicated an acidic to neutral disposition and soluble sulphate levels ranging from 4.14g/l up to 5.14g/l which puts both these samples within the Class 4 range. Under normal circumstances these levels of soluble sulphates would require Sulphate Resisting Cement of an adequate type and mix ratio and in general could be classed as high requiring significant precautions to be taken. However it is felt that these results represent pockets of materials within the vicinity of Borehole D which it is understood does not fall within the area of the current proposed schemes.

Therefore if future development is to be carried out in the area of Borehole D then it is suggested further chemical testing is carried out in order to determine the acidic and soluble sulphate contents of the fill materials so that adequate protection can be given to any foundation or buried concrete put down within these materials in the area of Borehole D in the future.

Contd/.....

6.0 Conclusions

From the information gained in this investigation and from the results of the tests carried out it would appear that the ground conditions below the area of the proposed new module do not vary significantly from those ground conditions revealed in previous investigations carried out over this area in general and therefore the proposed foundations for the new module supports are likely to require a similar solution.

From the evidence of Boreholes A and B the depth of made ground would appear to be between 5.00m and 6.00m below which in some cases reasonably stiff glacial tills are present but also significant depths of soft to very soft sandy silty clays. Rockhead would appear to be present at depths of between 11.60m and 14.00m below current ground levels and this is likely to prove the most suitable bearing strata for any proposed foundations.

The overlying fill materials are fairly variable in both their origin and insitu density and have obviously not been put down under controlled conditions resulting in bands of loose materials at depth.

Ground water is obviously present below the site and would appear to fluctuate tidally and also present within the fill materials as well as in some of the more granular natural strata below.

From the evidence of the cores recovered from the rotary boreholes the various bands of solid strata consist generally of Sandstones on Mudstones with a fairly high total core recovery being maintained throughout. In addition solid core recovery was fairly good but the rock quality designation noted from the cores did fall as low as 15% in some cases and this can be accounted for by the various jointing and fracturing of the rock. Obviously this information should be used by any piling contractor if these materials are to be used to support piled foundations.

In the area of Boreholes C and D significantly greater depths of fill materials were noted as well as some obstructions within the fill themselves before the natural strata was noted which again consisted of fairly loose silts and bedrock was noted at a significantly greater depth of 18.50m below current ground levels and this should be taken into account when considering future development work in this area.

Contd/.....

6.0 Conclusions (Contd)

However when considering the type of foundations for the proposed new modules it is suggested that piled foundations will provide the only suitable solution provided they are taken down through the overlying fill materials and natural strata and based within the bedrock itself. It is understood from previous experience that in some cases the piles themselves have extended to a considerable depth into the rock due to significant bands of softer weathered rock but this would not appear to be the case from the various cores recovered in this investigation. Due to the numerous types of pile and methods of installation available today if this option is to be chosen then it is suggested the information contained within this report is passed onto Specialist Piling Contractors so they can design and price a suitable scheme. If these piles extend into the area of Borehole D then special precautions will be necessary with respect to any foundation and buried concrete coming into these materials over and above those normally taken for a classification of Class 2 for the rest of the site.

When considering any excavations within the fill materials for drainage service runs or the like it can be seen that adequate lateral trench support will be required below a depth of 1.20m in order to provide a safe working environment as well as prevent trench wall collapse or over excavation and if these excavations extend below the depth at which ground water will be encountered, bearing in mind the tidal fluctuations then provision will also have to be made for adequate pumping equipment to take care of these ingresses.

Bearing in mind the presence of concrete obstructions within the made ground provision should also be made for the possible introduction of plant capable of both breaking up and excavating these fill materials for any major excavations.

When considering deep excavations, drainage service runs or the like that may pass close to or beneath any existing or proposed new foundations, these should be undertaken with care and completed prior to the preparation of any new foundation, so as not to allow any loose or granular material to move or 'flow' thus causing settlement to occur to any new or adjacent old foundation based at a higher level.

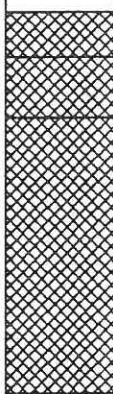
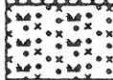
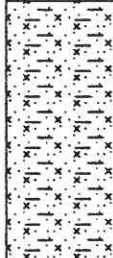
In making these recommendations no consideration has been given to past or future mining activities beneath this site. Therefore recourse should be made to The Coal Authority for their comments

Contd/.....

6.0 Conclusions (Contd)

and any recommendations that they might make should be strictly adhered to.

Finally it should be noted that no consideration has been given to the possible presence of contaminants and/or landfill gas on or from adjacent sites. Therefore no assessment has been made as to the potential risks associated with the design, construction and final end-use of the development and this information may be required to enable the appointed Planning Supervisor to formulate an adequate safety plan in accordance with the current CDM Regulations.


CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO BH A		
DATE NOVEMBER 1995		SCALE 1 to 50	BORING METHOD CABLE PERCUSSIVE			Sheet: 1	
Drilling & Coaling Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
	Type & No.	Daph(M)					
9TH	C 1	2.00 - 2.45	7	MADE GROUND - Roadstone, ash stones etc..			0.0
				MADE GROUND - Concrete.			0.30
				MADE GROUND - Very loose to loose black ash, stones, concrete and brick rubble etc...			0.70
	C 2	4.00 - 4.45	3	MADE GROUND - Very loose saturated white very fine grained ash/mineral powder?			2.50
				Soft black sandy gravelly slightly organic SILT (possibly original ground?)			5.50
9TH	U 3	6.00 - 6.45	61.90	Firm dark grey very sandy silty CLAY.		6.00	
	U 4	8.00 - 8.45	142.50	Stiff dark brown and grey mottled GLACIAL TILL (BOULDER CLAY).		7.75	
				U 5	10.00 - 10.45	136.20	

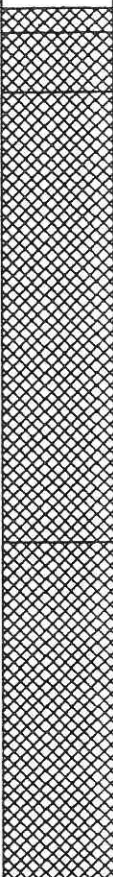
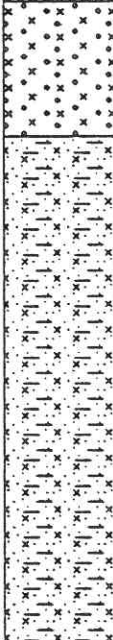
DUNELM DRILLING COMPANY
TEL 091-528-2534 FAX 091-517-0085

BOREHOLE LOGSHEET

Water Observations, Remarks, Etc
 Water struck at 3.00m.
 Sealed off at 6.00m.
 Water struck again at 11.30m.
 Water levels fluctuating tidaly.

Chiselling from 0.30m to 2.50m - 1.5 hrs.

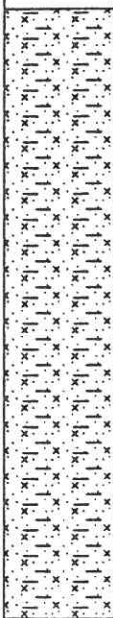

CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO BH A		
DATE NOVEMBER 1995		SCALE 1 to 50	BORING METHOD CABLE PERCUSSIVE		Sheet: 2		
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	
	Type & No.	Depth(M)					DEPTH
9TH	S 6	11.60 - 11.75	102	Stiff dark brown and grey mottled GLACIAL TILL (BOULDER CLAY).			10.0
				Initially weak and weathered, becoming dense, yellow/light brown SANDSTONE.			11.60
							12.00
DUNELM DRILLING COMPANY TEL 091-526-2534 FAX 091-517-0085					BOREHOLE LOGSHEET		
Water Observations, Remarks, Etc							

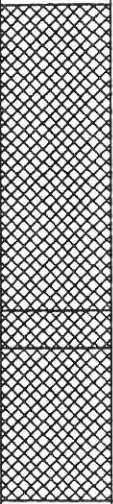
CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO BH B		
DATE NOVEMBER 1995		SCALE 1 to 50	BORING METHOD CABLE PERCUSSIVE		Sheet: 1		
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
	Type & No.	Depth(M)					
10TH				MADE GROUND - Tarmacadam (drillers description)			0.0
				MADE GROUND - Concrete.			0.16
				MADE GROUND - Loose black ash, stones, bricks, clay and concrete etc..			0.55
	C 1	2.00 - 2.45	8				3.50
	C 2	4.00 - 4.45	13	MADE GROUND - Medium dense fine to coarse gravel (ships ballast?)			5.80
	C 3	6.00 - 6.45	7	Loose dark grey sandy gravelly SILT.			6.70
10TH				Firm dark brown and grey very sandy silty CLAY. Becoming soft to very soft with depth.			
	U 4	8.00 - 8.45	57.70				
	U 5	10.00 - 10.45	12.50				

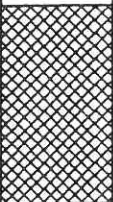
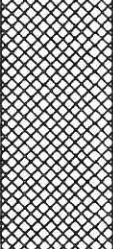
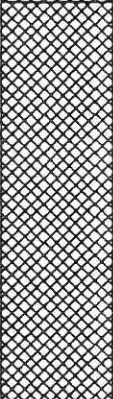
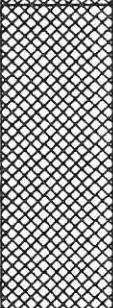
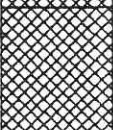



DUNELM DRILLING COMPANY
TEL 091-526-2534 FAX 091-517-0085

BOREHOLE LOGSHEET

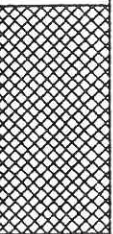
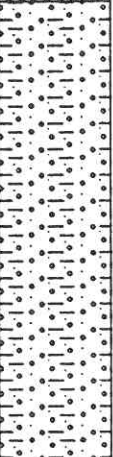

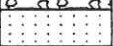
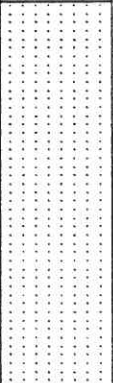

<p>Water Observations, Remarks, Etc Water struck at 3.00m. Sealed off at 7.00m. Water level fluctuating tidally.</p>	<p>Chiselling from 0.16m to 0.55m - 1.5 hrs.</p>
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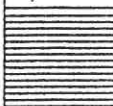
CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO BH B		
DATE NOVEMBER 1995		SCALE 1 to 50	BORING METHOD CABLE PERCUSSIVE			Sheet: 2	
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
	Type & No.	Depth(M)					
	U 6	12.00 - 12.45	17.40	Firm dark brown and grey very sandy silty CLAY. Becoming soft to very soft with depth.			10.0
10TH	S 7	14.00 - 14.15	52	Weathered yellow/light brown SANDSTONE.			14.00 14.15
DUNELM DRILLING COMPANY TEL 091-526-2634 FAX 091-517-0085					BOREHOLE LOGSHEET		
Water Observations, Remarks, Etc							

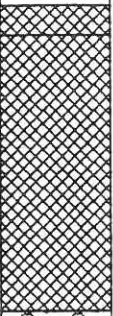
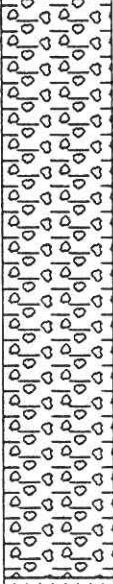
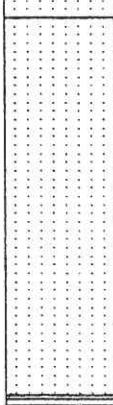
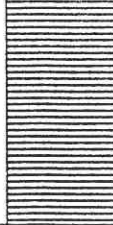
CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO BH C		
DATE NOVEMBER 1995		SCALE 1 to 50	BORING METHOD CABLE PERCUSSIVE		Sheet: 1		
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
	Type & No.	Depth(M)					
13TH	C 1	2.00 - 2.20	68	MADE GROUND - Loose roadstone, black ash, bricks etc.			0.0
13TH				MADE GROUND - Concrete.			2.00
13TH				MADE GROUND - Large timber obstruction. Unable to penetrate beyond 3.25m			2.25
							3.25
DUNELM DRILLING COMPANY TEL 091-626-2534 FAX 091-517-0085					BOREHOLE LOGSHEET		
Water Observations, Remarks, Etc No water encountered.				Chiselling from 2.00m to 3.25m - 2.5 hrs. Borehole abandoned at 3.25m.			


CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO BH D		
DATE NOVEMBER 1995		SCALE 1 to 50	BORING METHOD CABLE PERCUSSIVE		Sheet: 1		
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
	Type & No.	Depth(M)					
13TH				MADE GROUND - Roadstone, ash and stones etc..			0.0
	C 1	2.00 - 2.45	20	MADE GROUND - Medium dense brick and black ash rubble.			1.30
	B 2	3.00 - 3.50		MADE GROUND - Soft to firm sandy silty gravelly clay with frequent timber.			3.00
	C 3	4.00 - 4.45	8				5.70
	C 4	6.00 - 6.45	32	MADE GROUND - Medium dense fine to coarse gravel (ships ballast?).			7.80
	B 5	6.50 - 7.00					8.70
	C 6	8.00 - 8.45	12	MADE GROUND? - Dark grey silt/claybound coarse gravel and cobbles.			
				Loose dark grey slightly sandy SLT.			
	C 7	10.00 - 10.45	5				
DUNELM DRILLING COMPANY TEL 091-626-2634 FAX 091-617-0086					BOREHOLE LOGSHEET		
Water Observations, Remarks, Etc Water at approximately 3.00m. Water fluctuating tidally.				Standing time awaiting instructions etc.. Chiselling in rock - 2 hrs.			

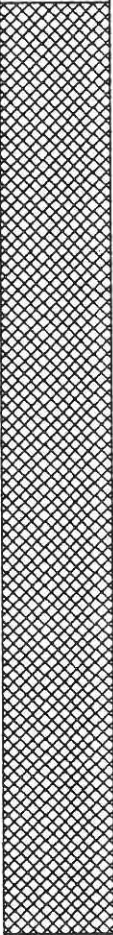
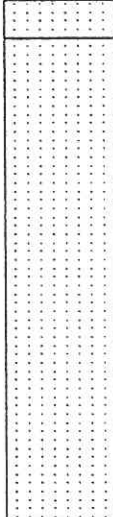
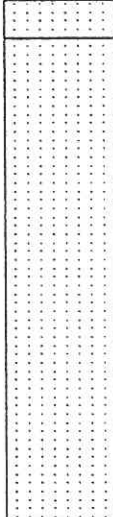

CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO BH D	
DATE NOVEMBER 1995		SCALE 1 to 50	BORING METHOD CABLE PERCUSSIVE		Sheet: 2	
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND
	Type & No.	Depth(M)				
				Loose dark grey slightly sandy SLT.		
13TH						
13TH	C 8	12.00 - 12.45	4			
14TH						
14TH	C 9	15.00 - 15.45	5			
	B 10	17.00 - 17.50				
	D 11	18.50		Light brown/yellow weathered SANDSTONE.		18.50
14TH						19.50
DUNELM DRILLING COMPANY TEL 091-528-2534 FAX 091-517-0085				BOREHOLE LOGSHEET		
Water Observations, Remarks, Etc						

CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO RBH1		
DATE NOVEMBER 1995		SCALE 1 to 100	BORING METHOD OPEN HOLE/ROTARY CORED		Sheet: 1		
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
	Type & No.	Depth(M)					
9TH				MADE GROUND—Fill materials (driller's description)			0.0 3.00
				Saturated sandy CLAY with gravel (Driller's description)			9.05
				BOULDER CLAY (Driller's description)			11.80
9TH	U 1	12.30 - 13.80		Soft weathered yellow SANDSTONE (Driller's description)			12.30
	U 2	13.80 - 15.10		Light orangey brown & grey fine to medium grained slightly micaceous SANDSTONE. Moderately strong (full description in report)			17.50
	U 3	15.10 - 17.70					
	U 4	17.70 - 19.30		Medium to dark grey very silty slightly micaceous MUDSTONE. Generally moderately weak. (full description in report)			19.70
	U 5	19.30 - 21.30					
DUNELM DRILLING COMPANY TEL 091-626-2634 FAX 091-517-0086					BOREHOLE LOGSHEET		
Water Observations, Remarks, Etc Borehole grouted to rockhead with bentonite/cement mix Borehole back filled with arisings/collapse after casing removed.							

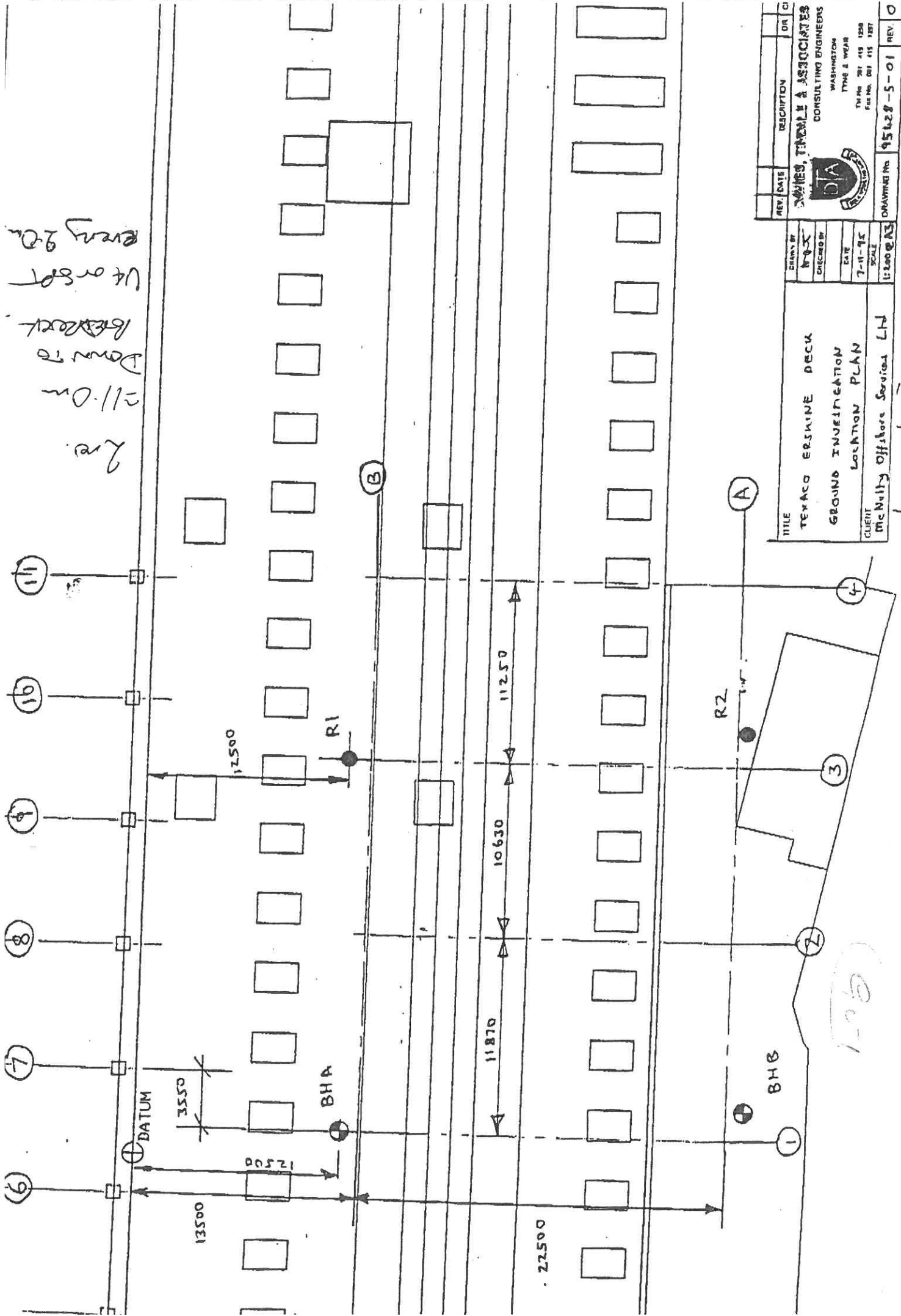
CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO RBH1		
DATE NOVEMBER 1995		SCALE 1 to 100	BORING METHOD OPEN HOLE/ROTARY CORED			Sheet: 2	
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	
	Type & No.	Depth(M)					DEPTH
9TH				Reasonable quality COAL with much pyrite.			20.0 20.10
				Light grey very silty slightly micaceous MUDSTONE with close joints and generally weak to moderately weak.			21.30
DUNELM DRILLING COMPANY TEL 091-526-2534 FAX 091-517-0085					BOREHOLE LOGSHEET		
Water Observations, Remarks, Etc							

CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO RBH2		
DATE NOVEMBER 1995		SCALE 1 to 100	BORING METHOD OPEN HOLE/ROTARY CORED.		Sheet: 1		
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
	Type & No.	Depth(M)					
13TH				CONCRETE			0.0 0.40
				MADE GROUND—Driller's description			
				BOULDER CLAY (Driller's description)			4.00 11.70
13TH	U 1	12.00 - 14.20		Soft SANDSTONE (Driller's description)			12.00
	U 2	14.20 - 17.00		Light orangay brown and grey fine to medium grained slightly to micaceous well rounded and sorted SANDSTONE. Generally moderately strong to very strong (full description in report)			
	U 3	17.00 - 19.90		Medium to dark grey moderately weak to strong very silty slightly micaceous MUDSTONE. Occasional very fractured areas (17.70-19.00m & 19.90-20.50m)			17.00
	U 4	19.90 - 22.00					
DUNELM DRILLING COMPANY TEL 091-526-2534 FAX 091-517-0085					BOREHOLE LOGSHEET		
Water Observations, Remarks, Etc Borehole grouted to rockhead with bentonite/cement mix Backfilled with arisings/collapse of hole after casing withdrawn.							

CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO RBH2		
DATE NOVEMBER 1995		SCALE 1 to 100	BORING METHOD OPEN HOLE/ROTARY CORED.		Sheet: 2		
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	
	Type & No.	Depth(M)					
13TH				Medium to dark grey moderately weak to strong very silty slightly micaceous MUDSTONE. Occasional very fractured areas (17.70-19.00m & 19.90-20.50m)			20.0 20.90 21.05 22.00
				Very fractured poor quality occasionally muddy COAL			
					Light to medium grey very silty moderately strong MUDSTONE becoming more silty with depth.		
DUNELM DRILLING COMPANY TEL 091-626-2634 FAX 091-617-0085					BOREHOLE LOGSHEET		
Water Observations, Remarks, Etc							

CLIENT DAVIES TINDALE ASSOCIATES		JOB NO C 8141	LOCATION MCNULTY YARD - SOUTH SHIELDS		BOREHOLE NO RBH3			
DATE NOVEMBER 1995		SCALE 1 to 100	BORING METHOD OPEN HOLE/ROTARY CORED.		Sheet: 1			
Drilling & Casing Progress	SAMPLE/TEST		SPT N - value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH	
	Type & No.	Depth(M)						
15TH				MADE GROUND—Wood ash clay & brick (driller's description)			0.0	
15TH				Soft SANDSTONE			12.30	
	U 1	12.80 - 14.20		Light orangay brown and grey fine to medium grained slightly micaceous SANDSTONE. Generally moderately strong. (Full description in report)			12.80	
	U 2	14.20 - 15.10						
	U 3	15.10 - 17.80						
	U 4	17.80 - 19.20					19.20	
	U 5	19.20 - 21.30						
DUNELM DRILLING COMPANY TEL 091-526-2534 FAX 091-517-0085				BOREHOLE LOGSHEET				
Water Observations, Remarks, Etc Borehole grouted to rockhead with a bentonite/cement mix. Borehole backfilled with arisings/collapse as casing withdrawn.								

2 no.
 211.0m
 Down to
 Borehole
 Ut on spot
 every 9.0m



REV.	DATE	DESCRIPTION	DR.	CI
DAVIES, TINDALE & ASSOCIATES CONSULTING ENGINEERS WASHINGTON 17th & W. Ave. TM No. 201 415 1200 Fax No. 201 415 1207				
DRAWN BY		TITLE		
M-X		TERACO ERSKINE DECK		
CHECKED BY		GROUND INVESTIGATION		
DATE		LOCATION PLAN		
7-11-95				
SCALE		CLIENT		
1:200 @ A3		McNally Offshore Services LM		
DRAWING No. 95128-5-01		REV. 0		

106

GEOENVIRONMENTAL APPRAISAL
of land at
McNulty Offshore, South Shields
Client: McNulty Offshore Construction Ltd

REPORT NO. M0696
MAY 2009

Written by	Checked by
KP	GD

Solmek
PO Box 464
Durham
DH1 9AD
Tel: +44 (0) 191 378 3310

CONTENTS

1 INTRODUCTION.....1

2 SITE RECONNAISSANCE1

 2.1 General..... 1

 2.2 Topography and Site Features..... 1

3 PREVIOUS INVESTIGATION.....1

4 SITE WORKS AND LABORATORY TESTING2

 4.1 Summary of Investigation 2

 4.2 Geotechnical Testing..... 2

5 GROUND CONDITIONS & MATERIAL PROPERTIES3

 5.1 General..... 3

 5.2 Made Ground..... 3

 5.3 Natural Soils 3

 5.4 Rock Head..... 3

 5.5 Groundwater 3

 5.6 Concrete in Aggressive Ground 3

6 FOUNDATIONS AND GEOTECHNICAL ISSUES.....4

 6.1 Introduction..... 4

 6.2 Foundations..... 4

 6.3 Excavations 4

APPENDICES

Appendix A - Drawings

Drawing Number	Drawing Title
M0696/01	Site Location Plan
M0696/02	Exploratory Hole Location Plan

Appendix B - Exploratory Hole Records

Appendix C - Geotechnical Testing Results

Appendix D - Solmek Conditions of Offer, Notes on Limitations & Basis for Contract

1 INTRODUCTION

Solmek carried out a geotechnical appraisal of land at McNulty Offshore on behalf of McNulty Offshore Construction Ltd.

The scope of the investigation was specified by DTA Consulting (DTA).

It is proposed to design foundations for the construction and movement of a large offshore module.

The objectives of this exploratory phase of investigation were as follows:

- To provide recommendations for foundations for a new module construction

Previous investigations have been undertaken on site to determine the properties of the underlying ground conditions for foundation design. Details of the relevant reports can be found in section 3.

Conditions of offer and notes on limitations relevant to all Solmek geotechnical investigations are described in Appendix D and should be read in conjunction with this report.

2 SITE RECONNAISSANCE

2.1 General

The centre of the site is located at OS Grid Ref NZ 355 663 situated approximately 17km east of Newcastle city centre. The site location is shown in Drawing Number M0696/01 in Appendix A to this report.

The preliminary site inspection was undertaken during April 2009.

2.2 Topography and Site Features

The site is a predominantly flat area of land located within McNulty Offshore yard. The site occupies a small area of the yard which is covered in a combination of concrete and rough ground. The yard is an active site with a number of metal frame structures present. Equipment and materials are present around the site and include timber, crates, metalwork, gas canisters and ladders. Machinery is also present on site and includes fork lift trucks, compressors and other small lifting machinery.

The northern boundary of the site extends down to the River Tyne. The site under investigation forms a small part of the McNulty yard therefore no physical boundaries are present. Adjacent landuses extend further into McNulty yard with further commercial and industrial land uses to the east and west.

3 PREVIOUS INVESTIGATION

Solmek have examined the following reports: Geoenvironmental Appraisal for land at Consafe, South Shields produced by Sirius dated February 2004. A summary of the works undertaken is shown in the following Table together with the main findings.

Item	Scope of works	Main findings
Review of desk study information	Desk study undertaken by DTA Consulting and reviewed within the Sirius Report.	<p><u>Geology:</u> Drift deposits comprise glacial till overlying coal measures strata.</p> <p><u>History:</u> 1778 - Site used as a shipyard. 1820-1827 - Site partially occupied by a dock. 1830-1899 - A further two dry docks were built. Post 1938 – The original 3 docks were infilled using waste from the nearby ballast hills and timber quay. These have since been developed over with buildings.</p>
Trial pits	Total number:4 Maximum depth: 2.9m bgl	Made ground extends to the base of the trial pits and comprises concrete and tarmac overlying granular made ground including brick, burnt shale, concrete, sandstone and slag. No natural ground was recorded within the trial pits.
Cable percussive boreholes	Total number:3 Depths:8.8-12.95m bgl	Made ground extends to depths of 5.35m in C3, the base of the made ground was not proved in C1 and C2 where obstructions were encountered. Natural ground within C3 recorded firm to stiff clay with sandstone rockhead recorded at 12.8m bgl.
Foundation recommendations		<p>Pad foundations to be constructed in the vicinity of C2 and C3.</p> <p>The net foundation pressure at 1.5m bgl is assumed to be equal to 100kN/m² over a 9x15m pad.</p> <p>Foundation in the location of C2:</p> <ul style="list-style-type: none"> • Settlement in granular made ground - 50mm, • Settlement in cohesive made ground - 10mm, • Settlement in Glacial till <5mm <p>Foundation in the location of C3:</p> <ul style="list-style-type: none"> • Settlement in made ground - 40mm • Settlement in Glacial till <5mm

4 SITE WORKS AND LABORATORY TESTING

4.1 Summary of Investigation

The initial investigation strategy, as specified by DTA, included three boreholes however, BH1 could not be accessed due to existing structures on site.

The exploratory holes listed below were advanced during April 2009. Records for each of the exploratory holes noted are included in Appendix B and the locations are shown on Drawing Number M0696/01 in Appendix A.

A summary of the site works undertaken is presented below

- Cable percussion boreholes BH2 and BH3

4.2 Geotechnical Testing

Samples of natural soil were delivered to a suitably accredited laboratory with a schedule of testing drawn up by Solmek. The geotechnical laboratory test results are presented in Appendix C to this report. Material properties assessed using the results are considered further in the following Section.

5 GROUND CONDITIONS & MATERIAL PROPERTIES

5.1 General

Previous works have been undertaken on site; DTA replaced the near surface material in the vicinity of BH2 with approximately 4m of engineered granular fill. DTA advise that the Consafe Project pad foundations were used in this area with bearing pressures of 200 to 250kN/m² with settlements less than 10mm during the construction of the module.

BH3 lies outside the area of engineered fill however, the backfilled dock area is still thought to comprise similar ground conditions.

5.2 Made Ground

BH2 recorded granular made ground to a depth of 4.4m bgl. The made ground comprised sandy gravel of limestone (dolomite) with a number of cobbles noted. SPT 'N' values within these deposits ranged between 32 and 74 indicating dense to very dense materials.

BH3 recorded made ground to a depth of 10m where the borehole was terminated on a concrete obstruction thought to represent the base of the dry dock. The made ground comprised sandy gravel of brick, coal, concrete and sandstone from ground level to 3.2m, the granular material were underlain by cohesive made ground to a depth of 9.0m bgl which included a number of cobbles and/or boulders and occasional ash. SPT testing within the granular made ground deposits recorded values between 43 and 64, with 'N' values ranging from 22 to 32 within the cohesive deposits. Clayey gravelly sand with brick was recorded from 9.0m to 10.0m bgl with an obstruction recorded at 10m (suspected base of dock).

5.3 Natural Soils

Natural deposits were recorded within BH2 from 4.4m bgl. Deposits comprise stiff sandy gravelly clay, recorded as very stiff from 6.0m. SPT testing within the clays recorded 'N' values between 38 and 51 confirming the stiff and very stiff nature of the clay.

Moisture content testing recorded values between 11% and 15% with plasticity indices ranging from 12 to 15 indicating a low plasticity clay with low volume change potential. Moisture contents fall either below or equal to the plasticity index indicating stiff deposits.

Triaxial testing within the clays recorded shear strengths between 171 and 251kN/m² further confirming the stiff and very stiff clays.

Oedometer testing was undertaken on the undisturbed clay samples, Mv values in the order of 0.05m²/MN were recorded at the relevant pressure ranges.

5.4 Rock Head

Although not proved by coring, sandstone was encountered at a depth of 13.0m. Chiselling progressed the borehole to a maximum depth of 13.2m bgl.

5.5 Groundwater

Groundwater was recorded as a seepage in BH2 at 4.4m bgl; BH3 did not encounter groundwater during the site works.

5.6 Concrete in Aggressive Ground

To enable buried concrete to be designed to resist sulfate attack, samples of made ground and natural strata from depths corresponding to the anticipated foundation depth have been tested for water-soluble sulfate and pH.

The maximum water-soluble sulfate concentration is 490mg/l and the lowest recorded pH value is 8.5.

Based on the above results, Design Sulfate Class DS-1 and ACEC Classification AC-1 would be appropriate for buried concrete at the site.

6 FOUNDATIONS AND GEOTECHNICAL ISSUES

6.1 Introduction

The proposed development is understood to comprise the construction and movement of a new offshore module.

Ground conditions encountered during this investigation comprised granular made ground to depths of 3.2 and 4.4m underlain by cohesive made ground in BH3 to the base of the borehole at 10m bgl where an obstruction thought to represent the base of the dock was encountered. BH2 recorded stiff clays beneath the made ground with sandstone rockhead recorded at 13.0m bgl.

6.2 Foundations

It is considered that pad foundations should be suitable for the proposed structures within the dense and very dense made ground. Calculations of the estimated settlement have been undertaken using the parameters derived from this ground investigation and the procedures set out in Tomlinson (Foundation Design and Construction, seventh Edition). The estimated mV values (coefficient of volume compressibility) for the stiff/very stiff clay have been derived from the relationship between the PI and the SPT 'N' value as these estimated values were more conservative than the laboratory values derived from the consolidation tests. In view of the various layers and depth of influence several formulae have been used from Tomlinson.

It is understood that the proposed module legs are to be located in the approximate positions of BH2 and BH3. Information from DTA indicates the proposed load in the location BH2 is 3700kN with a proposed pad size of 4.5x4.5m; the BH3 location has an anticipated pad size of 5x5m and a load of 4800kN. Both foundations are understood to be placed at a depth of 0.65m bgl in order to limit frost and heave effects.

Settlements within the granular made ground were calculated using Burland and Burbridge and Schultz and Sherif methods using the lowest 'N' value recorded within each borehole.

Based on a pad size of 4.5x4.5m in the location of BH2 and a bearing pressure of 180kN/m², a total settlement of 40mm has been calculated. The majority of the settlement will be within the Glacial Till.

Based on a pad size of 5.0x5.0m in the location of BH3 and a bearing pressure of 190 kN/m², a settlement of 50mm has been calculated. The majority of the settlement will be within the cohesive made ground.

The actual amount of settlement will be dependent upon the amount of time the foundations will be loaded given that the majority of the estimated settlement is consolidated settlement. The rate of settlement will be variable given the variation on the ground conditions encountered at each location. It is estimated that approximately 50% of the settlement will be complete within 1 month, although it is difficult to accurately assess the rate of settlement within the cohesive made ground.

The bearing capacity may be increased if required as the upper layer is granular and the bearing capacity criteria is mainly dependent upon the settlement which can be accepted by the structure as the underlying clay is unlikely to be overstressed.

The made ground has been re-engineered in the location of BH2 with the materials of BH3 also recorded as dense and very dense. In view of the heavy loads and the possibility for re-use of foundations for future modules it is recommended that foundations are suitably reinforced to limit potential differential settlement.

Sub-surface concrete should be Design Sulphate Class DS-1, with the site allocated an ACEC Classification of AC-1.

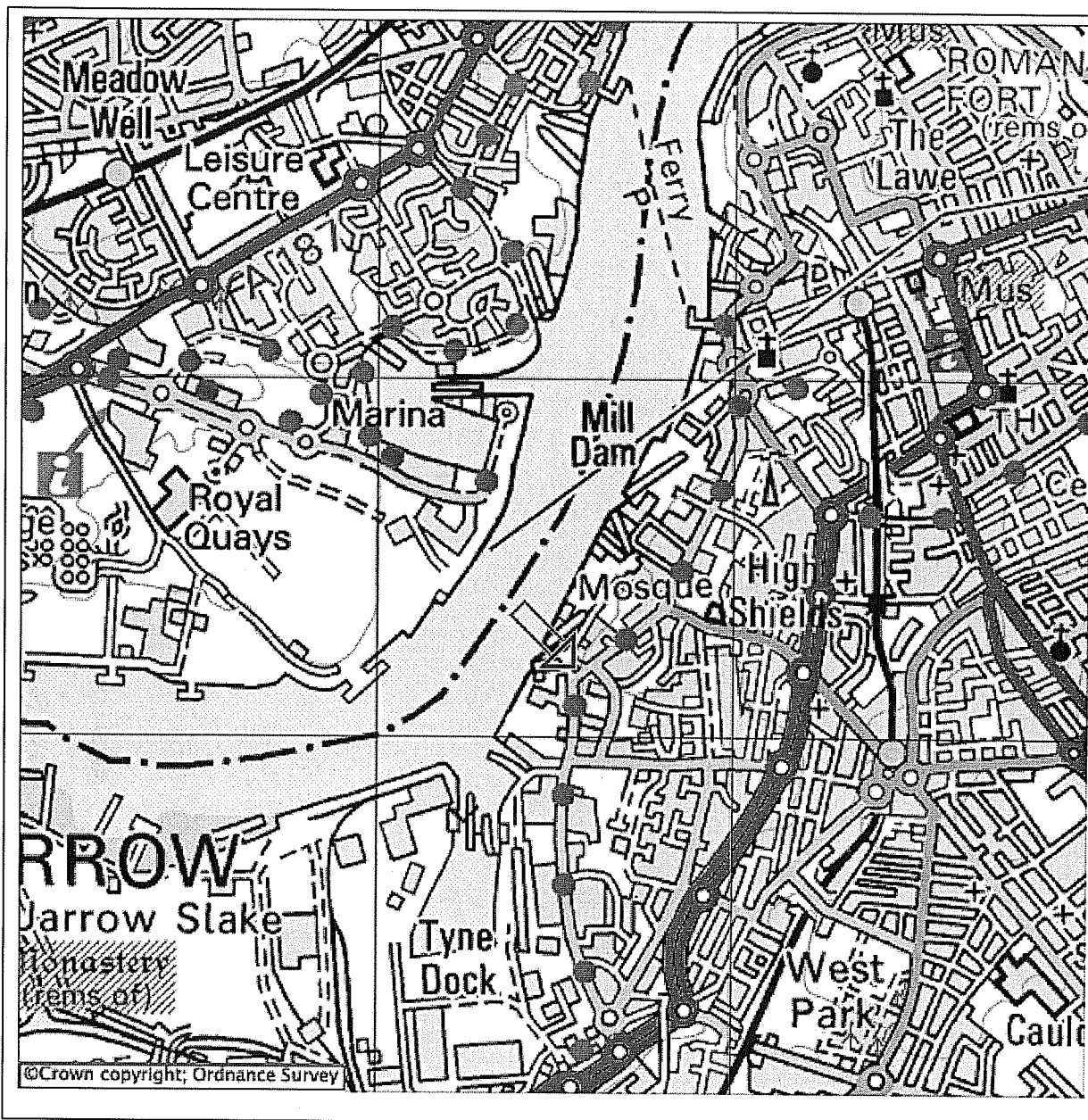
Further advice should be sought from Solmek if unexpected ground conditions are encountered during redevelopment.


6.3 Excavations

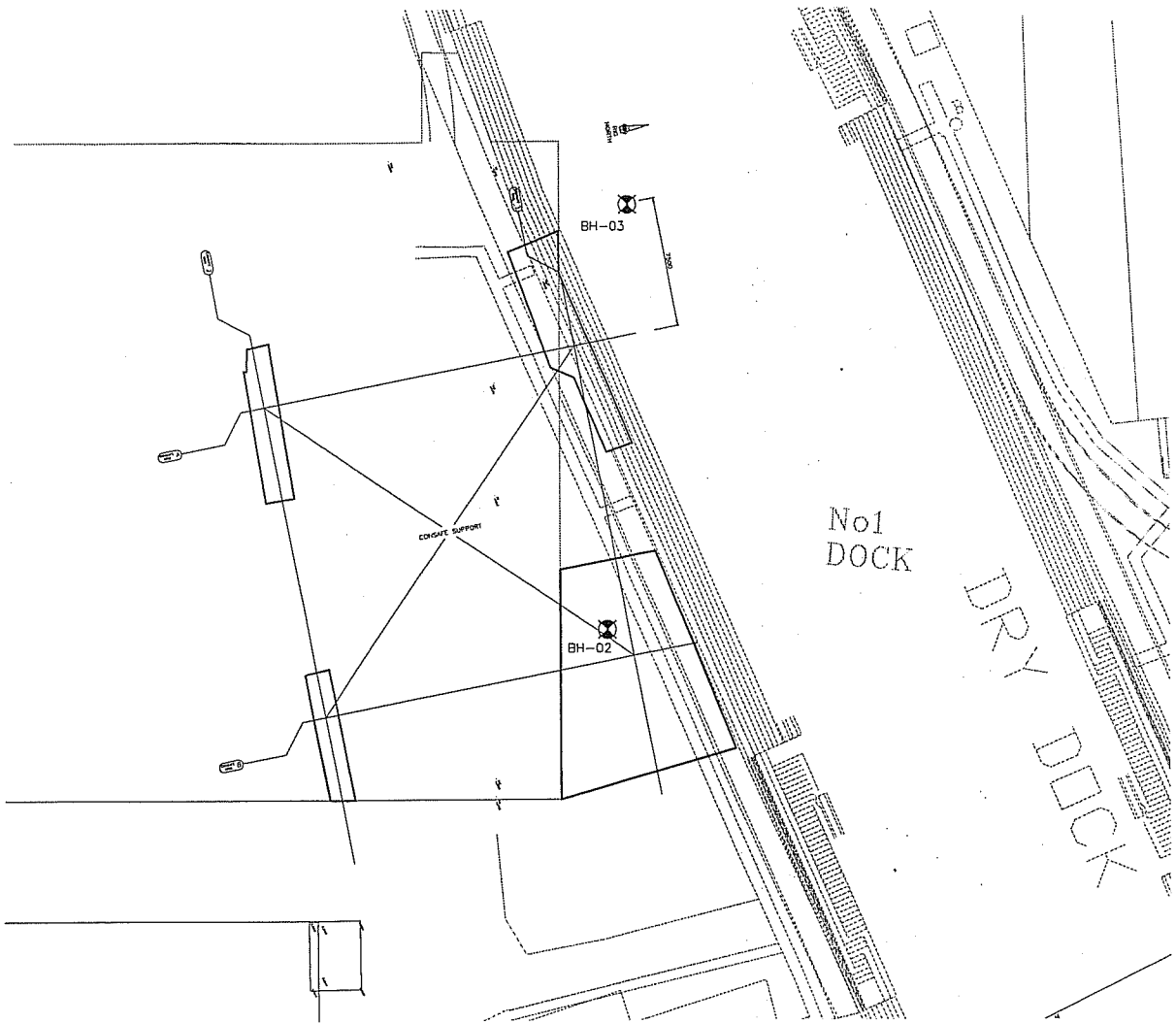
Observations made during the fieldwork indicate that significant groundwater flows would not be anticipated in shallow excavations. However, the rapid rate of advancement of the exploratory holes may mask any minor seepages and it should be borne in mind that water levels fluctuate with a number of influences including season, rainfall, dewatering and pumping activities. Therefore, water levels significantly higher than those found during this investigation may be encountered.

Appendix A

Drawings



	Contract: McNulty Offshore, South Shields		Contract No: M0696	
	Client: McNulty Offshore Construction Ltd			
TEL: 0191 378 3311 FAX: 0167 051 5013		Drawing Title: Site Location Plan		
Drawing No: M0696/01	Date: May 2009	Scale: NTS	Status: Final	Drawn by: KP



Contract:
McNulty Offshore, South Shields

Contract No:
M0696

Client:
McNulty Offshore Construction Ltd

TEL: 0191 378 3311
FAX: 0167 051 5013

Drawing Title:
Exploratory Hole Location Plan

Drawing No:
M0696/02

Date:
May 2009

Scale:
NTS

Status:
Final

Drawn by:
KP

Appendix B

Exploratory Hole Records

BOREHOLE RECORD

BH No. **BH2**
Sheet 1 of 2



Site: McNulty Offshore, South Shields

Contract No: **M0696**

Client: McNulty Offshore

Dates:
06/04/2009

Method: Cable Percussion

Scale **1:50**

SAMPLE DETAILS			Groundwater (Casing)	STRATA RECORD			
Type	Depth From - To(m)	N (cu)		Description			
			Driller: MH	Depth (m)	Level (m AOD)	Legend	Well
			Logged By: IN				
B	0.20		1	<p>MADE GROUND: Black and yellow sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of dolomite/sandstone/brick. Metal and wood noted.</p>	0.60	[Cross-hatch pattern]	
B	0.50						
B	1.00						
D	1.20 - 1.65	N=74 (14,15,20,15,18,21)					
D	1.70 - 2.15	N=44 (10,10,12,12,10,10)					
D	2.20 - 2.65	N=64 (15,15,17,17,15,15)					
D	2.70 - 3.15	N=41 (6,7,8,10,11,12)					
D	3.20 - 3.65	N=42 (7,7,8,10,12,12)					
D	3.70 - 4.15	N=40 (8,8,9,9,10,12)					
D	4.20 - 4.65	N=32 (5,10,9,8,7,8)					
B	4.50		2	<p>MADE GROUND: Yellow sandy GRAVEL with cobbles. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of limestone.</p>	4.40	[Cross-hatch pattern]	
			3	<p>Stiff grey/brown gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal.</p>		[Dotted pattern]	
			4	<p>Very stiff from 6m.</p>		[Horizontal line pattern]	
			5	<p>Continued next sheet</p>		[Vertical line pattern]	
			6	<p>Continued next sheet</p>		[Vertical line pattern]	
			7	<p>Continued next sheet</p>		[Vertical line pattern]	
			8	<p>Continued next sheet</p>		[Vertical line pattern]	
			9	<p>Continued next sheet</p>		[Vertical line pattern]	

Remarks and Water Observations

1. Traces of water at 4.4m.
2. Hand dug pit - 2 hours and 45 minutes.
3. Chiselling between 13.0 and 13.2m for 1 hour.
4. Slow drilling from 1.2m to 5.0m for 8 hours.

GL (m AOD)
-
Easting:
-
Northing:
-

Fig. No.

BOREHOLE RECORD

BH No. **BH2**
Sheet 2 of 2



Site: McNulty Offshore, South Shields

Contract No: **M0696**

Client: McNulty Offshore

Dates:
06/04/2009

Method: Cable Percussion

Scale 1:50

SAMPLE DETAILS

STRATA RECORD

Driller: MH

Logged By: IN

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)
U	10.00		10
D	11.50 - 11.95	N=42 (6,7,9,9,12,12)	11
D	13.00	50/0mm	13
D	13.20	Abandoned 50/0mm - Abandoned	13.20
			14
			15
			16
			17

Description
Stiff grey/brown gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal.
<div style="border: 1px dashed black; padding: 5px; display: inline-block;"> Weak fine grained micaceous quartz SANDSTONE recovered as fine to coarse sand and fine to coarse angular gravel. </div>
End of Borehole at 13.20 m

Depth (m)	Level (m AOD)	Legend	Well
		[Patterned Box]	
13.00			
13.20		[Patterned Box]	

Remarks and Water Observations

1. Traces of water at 4.4m.
2. Hand dug pit - 2 hours and 45 minutes.
3. Chiselling between 13.0 and 13.2m for 1 hour.
4. Slow drilling from 1.2m to 5.0m for 8 hours.

GL (m AOD)
-
Easting:
-
Northing:
-

Fig. No.

BOREHOLE RECORD

BH No. **BH3**

Sheet 1 of 2

Site: McNulty Offshore, South Shields

Contract No: **M0696**

Client: McNulty Offshore

Dates:
14/04/2009

Method: Cable Percussion

Scale 1:50



SAMPLE DETAILS			Groundwater (Casing)	STRATA RECORD			
Type	Depth From - To(m)	N (cu)		Description	Depth (m)	Level (m AOD)	Legend
B	0.20		MADE GROUND. Brown sandy GRAVEL. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of brick, coal, concrete and sandstone.			[Cross-hatch pattern]	
B	0.50						
B	1.00		Clayey from 1m.	1			
D	1.20 - 1.65	N=64 (10,11,15,15,18,16)					
D	1.70 - 2.15	N=64 (10,15,15,16,17,16)		2			
D	2.20 - 2.65	N=43 (6,7,10,11,12,10)					
D	2.70 - 3.15	N=45 (6,8,10,12,12,11)		3			
D	3.20 - 3.65	N=22 (3,4,5,5,6,6)	MADE GROUND. Dark grey sandy gravelly CLAY. Sand is fine to coarse, some ash noted. Gravel is angular to subrounded fine to coarse of sandstone. Cobbles and/or boulders noted.		3.20		
D	3.70 - 4.15	N=23 (3,3,4,6,6,7)					
D	4.20 - 4.65	N=31 (6,10,8,8,7,8)		4			
				5			
B	6.00		MADE GROUND. Brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of sandstone and coal.	6	5.90		
D	6.00 - 6.45	N=32 (3,4,8,8,8,8)					
D	7.00 - 7.45	N=26 (5,7,7,5,7,7)		7			
D	8.00 - 8.45	N=32 (5,8,7,6,7,12)		8			
D	9.00 - 9.45	N=46 (3,4,12,15,10,9)	MADE GROUND. Brown grey sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subrounded of sandstone. Cobbles and/or boulders noted.		8.60		
			MADE GROUND. Brown red clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of brick and sandstone.		9.00		

Continued next sheet

Remarks and Water Observations

1. No groundwater encountered.
2. Hand dug pit - 2 hours.
3. Slow drilling between 1.2m and 2.7m for 3 hours.
4. Standing waiting for access due to crane obstruction - 4 hours
5. Concrete hit at 10m (base of dock).

GL (m AOD)

- Easting:

- Northing:

Fig. No.

BOREHOLE RECORD

BH No. **BH3**
Sheet 2 of 2



Site: McNulty Offshore, South Shields

Contract No: **M0696**

Client: McNulty Offshore

Dates:
14/04/2009

Method: Cable Percussion

Scale 1:50

SAMPLE DETAILS

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)
D	10.00 - 10.08	50/75mm Abandoned	10 11 12 13 14 15 16 17

STRATA RECORD

Description	Depth (m)	Level (m AOD)	Legend	Well
MADE GROUND. Brown red clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of brick and sandstone. End of Borehole at 10.00 m	10.00		XXXX	

Driller: MH
Logged By: IN

Remarks and Water Observations

1. No groundwater encountered.
2. Hand dug pit - 2 hours.
3. Slow drilling between 1.2m and 2.7m for 3 hours.
4. Standing waiting for access due to crane obstruction - 4 hours
5. Concrete hit at 10m (base of dock).

GL (m AOD)

Easting:

Northing:

Fig. No.

Appendix C
Geotechnical Testing Results

Undrained Shear Strength in Triaxial Compression

without measurement of Pore Pressure

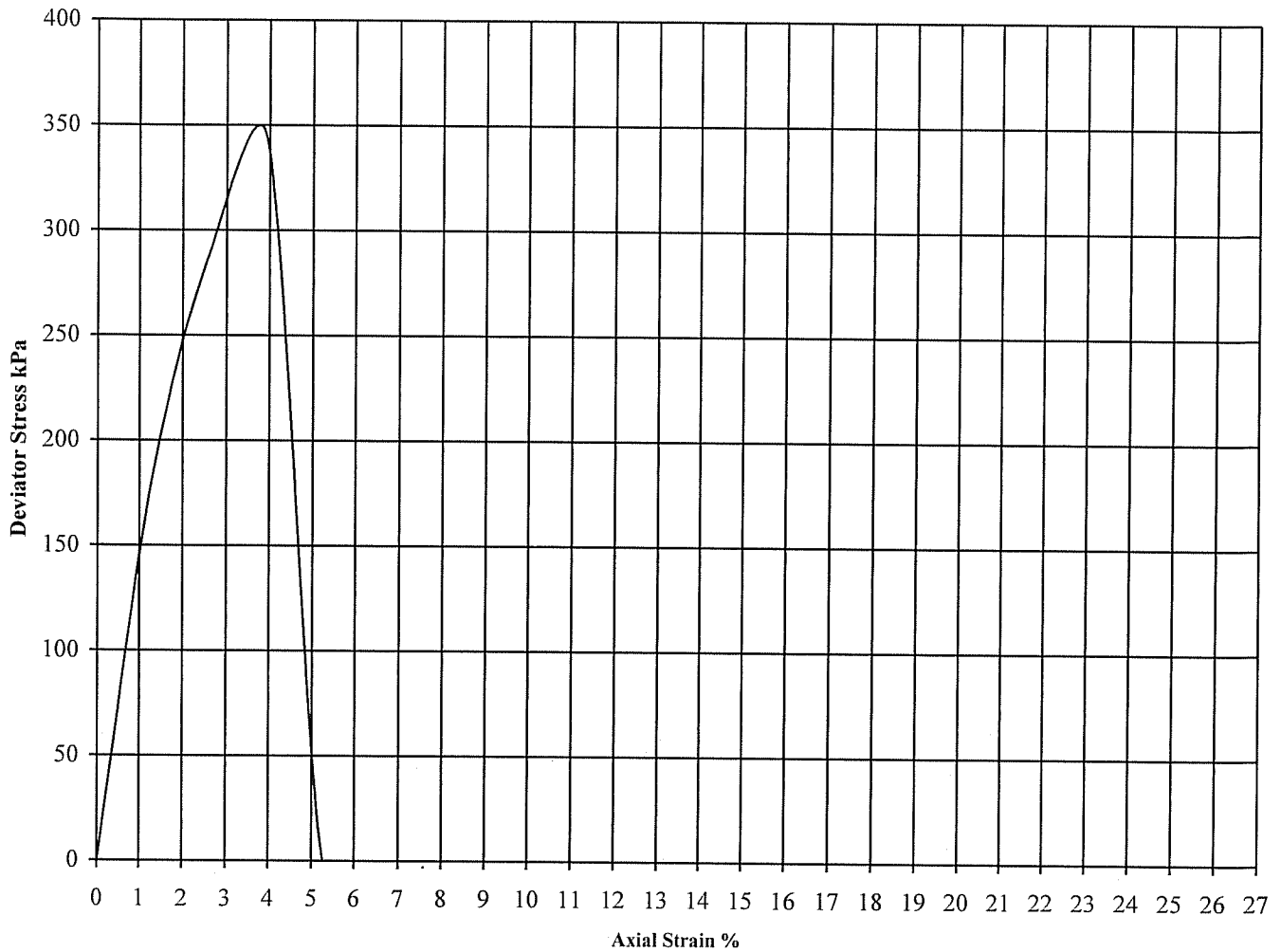
B.S. 1377 : Part 7 : Clause 8 : 1990

Hole Reference:

Borehole 2

Depth (m)

6.00 - 6.45



Diameter (mm):		38		Height (mm):		76		Test:		38 mm Single Stage.	
Stage	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Deviator Stress (kPa)	Cohesion (kPa)	Failure Strain (%)	Mode of Failure	Shear Strength (kPa)	Remarks	
1	10	2.27	2.05	120	343	171	3.9	Brittle	171	V. Stiff dark brown slightly sandy slightly gravelly CLAY	

Checked and Approved	Date



McNulty

Contract No
M0696

Undrained Shear Strength in Triaxial Compression

without measurement of Pore Pressure

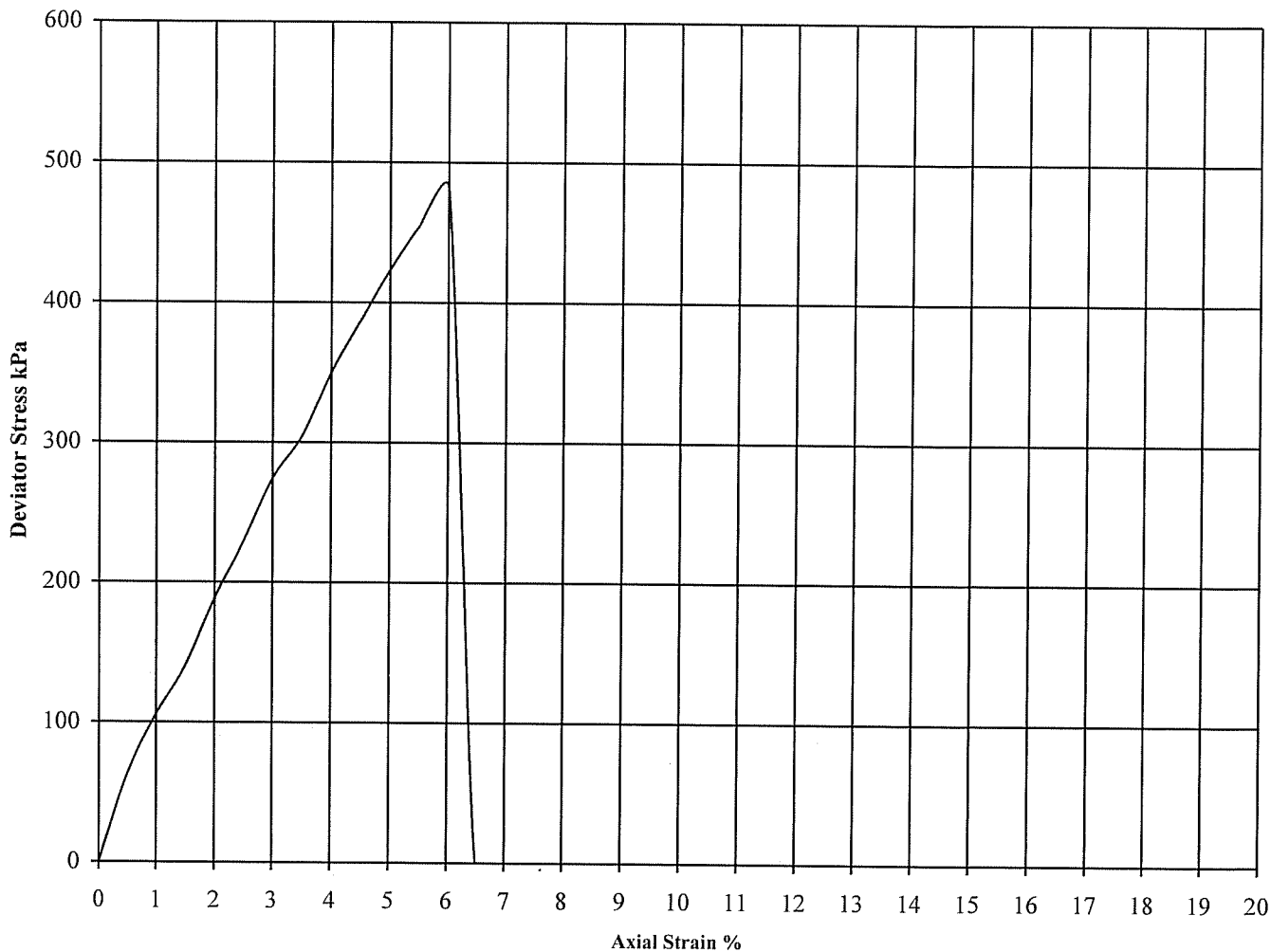
B.S. 1377 : Part 7 : Clause 8 : 1990

Hole Reference:

Borehole 2

Depth (m)

8.00 - 8.45



Diameter (mm):		Height (mm):			Test:		100 mm Single Stage.			Remarks
Stage	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Deviator Stress (kPa)	Cohesion (kPa)	Failure Strain (%)	Mode of Failure	Shear Strength (kPa)	
1	11	2.40	2.17	160	482	241	6.0	Brittle	241	V. Stiff dark brown slightly sandy slightly gravelly CLAY

Checked and Approved	Date



McNulty

Contract No
M0696

Undrained Shear Strength in Triaxial Compression

without measurement of Pore Pressure

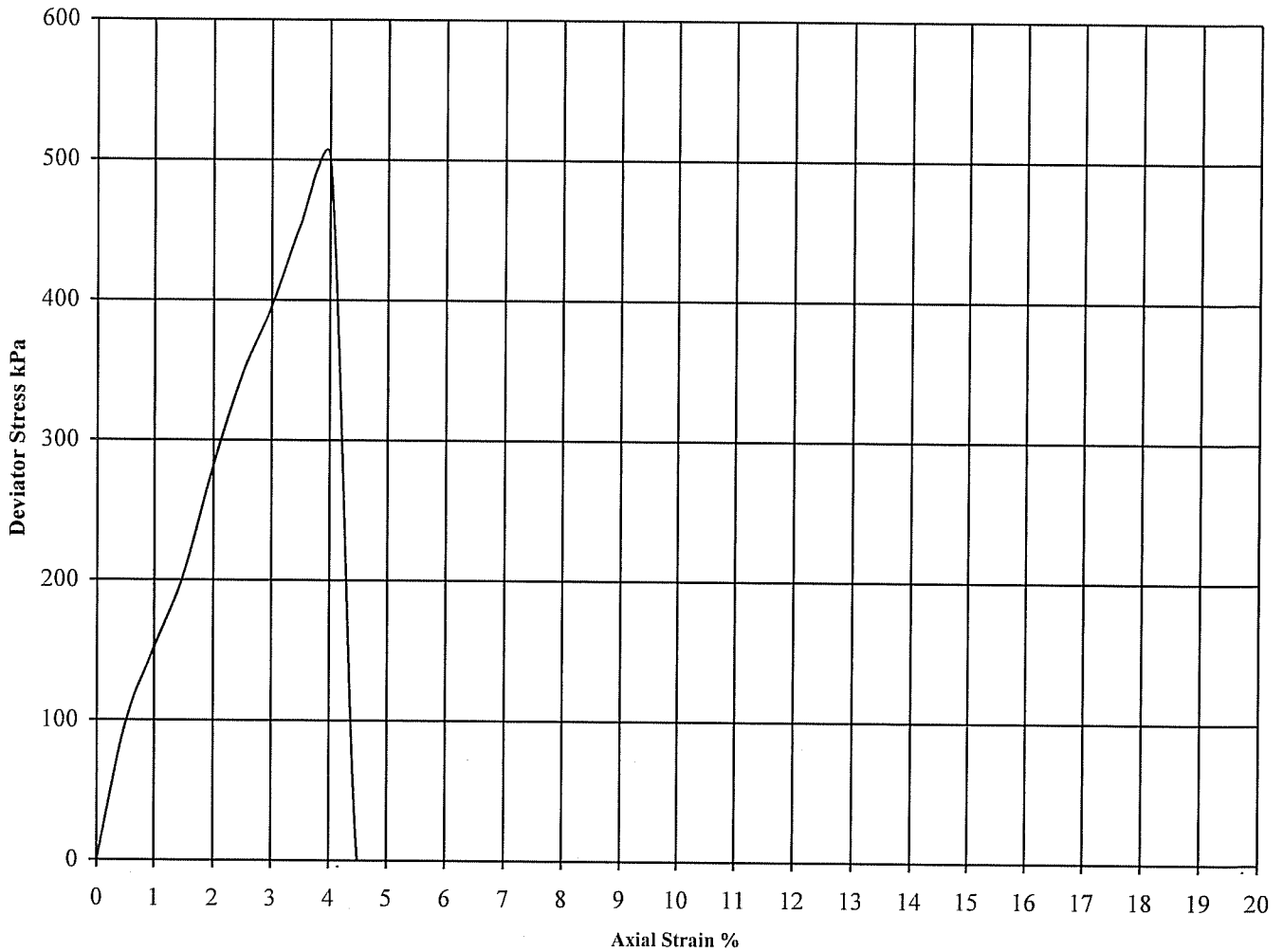
B.S. 1377 : Part 7 : Clause 8 : 1990

Hole Reference:

Borehole 2

Depth (m)

10.00 - 10.45



Diameter (mm):		100		Height (mm):		200		Test:		100 mm Single Stage.	
Stage	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Deviator Stress (kPa)	Cohesion (kPa)	Failure Strain (%)	Mode of Failure	Shear Strength (kPa)	Remarks	
1	15	2.34	2.04	200	502	251	4.0	Brittle	251	V. Stiff dark brown slightly sandy slightly gravelly thickly laminated CLAY	

Checked and Approved	Date



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Contract No
M0696

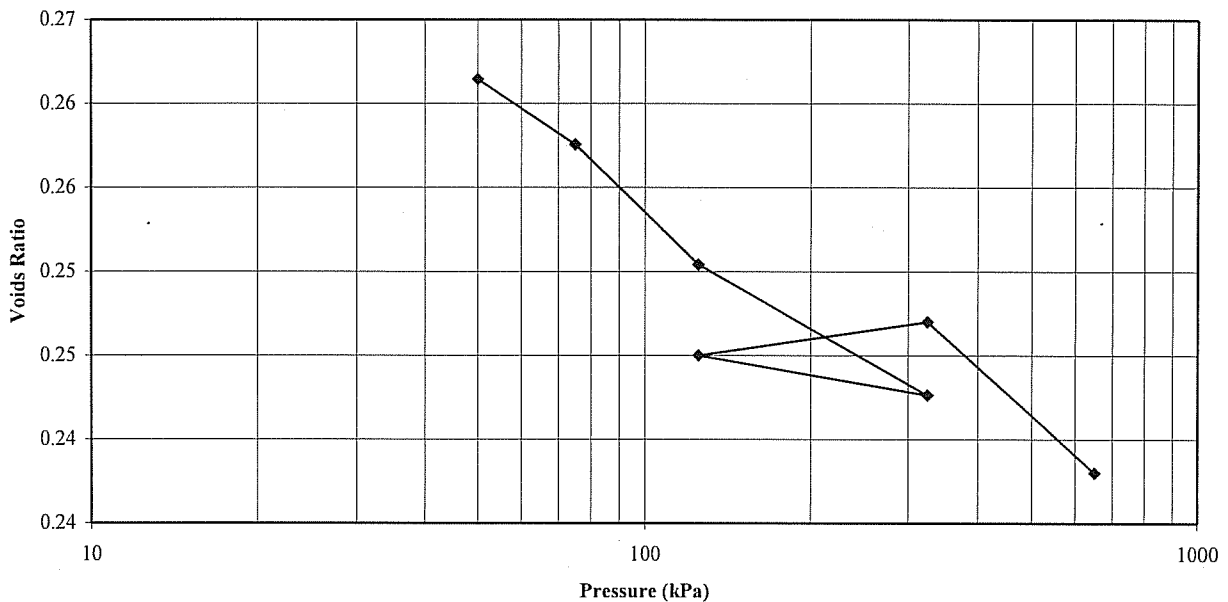
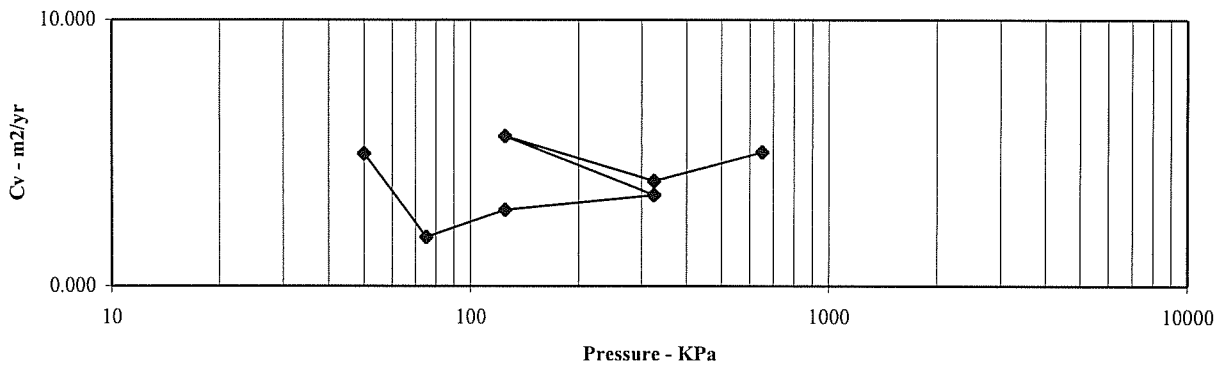
ONE DIMENSIONAL CONSOLIDATION

BS 1377 :Part 5:1990

Borehole: 2

Depth (m): 6.00 - 6.45

Initial Conditions		Pressure Range		Mv	Cv	Final Conditions	
		kPa		m ² /MN	m ² /yr		
Moisture Content (%):	12	0	- 50	0.242	4.977	Moisture Content (%) :	12
Bulk Density (Mg/m ³):	2.32	50	- 75	0.123	1.841	Bulk Density (Mg/m ³) :	2.41
Dry Density (Mg/m ³):	2.08	75	- 125	0.114	2.863	Dry Density (Mg/m ³) :	2.15
Voids Ratio:	0.2769	125	- 325	0.031	3.423	Voids Ratio:	0.2337
Degree of saturation:	112.4	325	- 650	-0.011	5.636	Degree of Saturation: :	136.6
Height (mm):	20	125	- 325	0.015	3.942	Height (mm) :	19.324
Diameter (mm)	75	325	- 650	0.022	5.028	Remarks:	
Particle Density (Mg/m ³):	2.65	V. Stiff dark brown slightly sandy					
Assumed		slightly gravelly laminated CLAY					



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Contract No. M0696

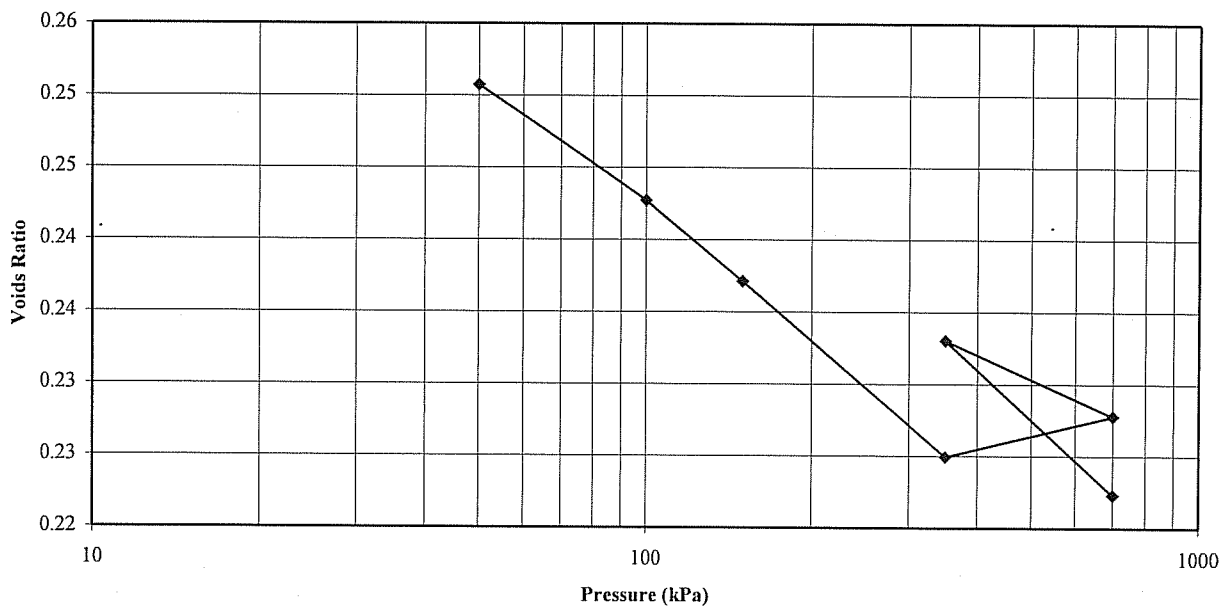
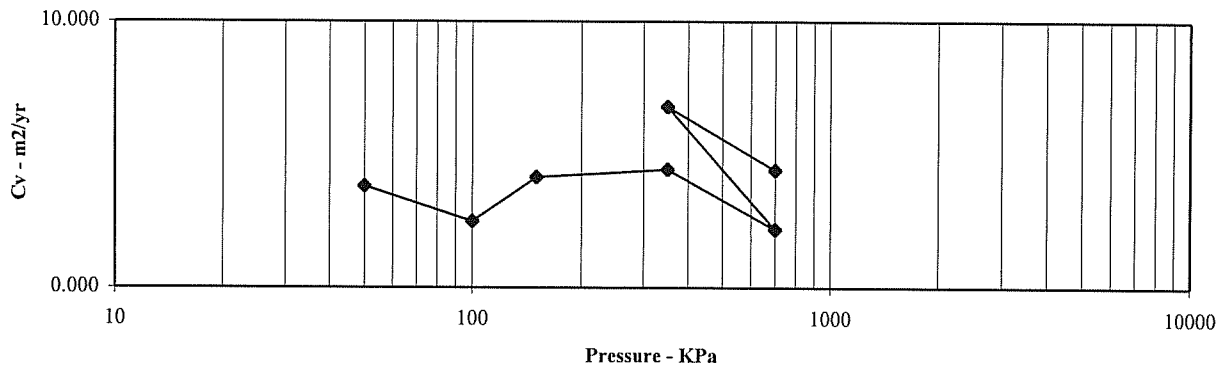
ONE DIMENSIONAL CONSOLIDATION

BS 1377 :Part 5:1990

Borehole: 2

Depth (m): 8.00 - 8.45

Initial Conditions		Pressure Range		Mv	Cv	Final Conditions	
Moisture Content (%):	11	kPa		m ² /MN	m ² /yr	Moisture Content (%) :	11
Bulk Density (Mg/m ³):	2.30	0	- 50	0.455	3.817	Bulk Density (Mg/m ³) :	2.42
Dry Density (Mg/m ³):	2.07	50	- 100	0.128	2.492	Dry Density (Mg/m ³)	2.17
Voids Ratio:	0.2798	100	- 150	0.090	4.157	Voids Ratio:	0.2223
Degree of saturation:	105.5	150	- 350	0.049	4.436	Degree of Saturation: :	136.8
Height (mm):	19	350	- 150	-0.070	2.187	Height (mm) :	18.146
Diameter (mm)	76	150	- 350	0.017	6.793	Remarks: V. Stiff dark brown slightly sandy slightly gravelly laminated CLAY	
Particle Density (Mg/m ³):	2.65	350	- 700	0.025	4.413		
Assumed							



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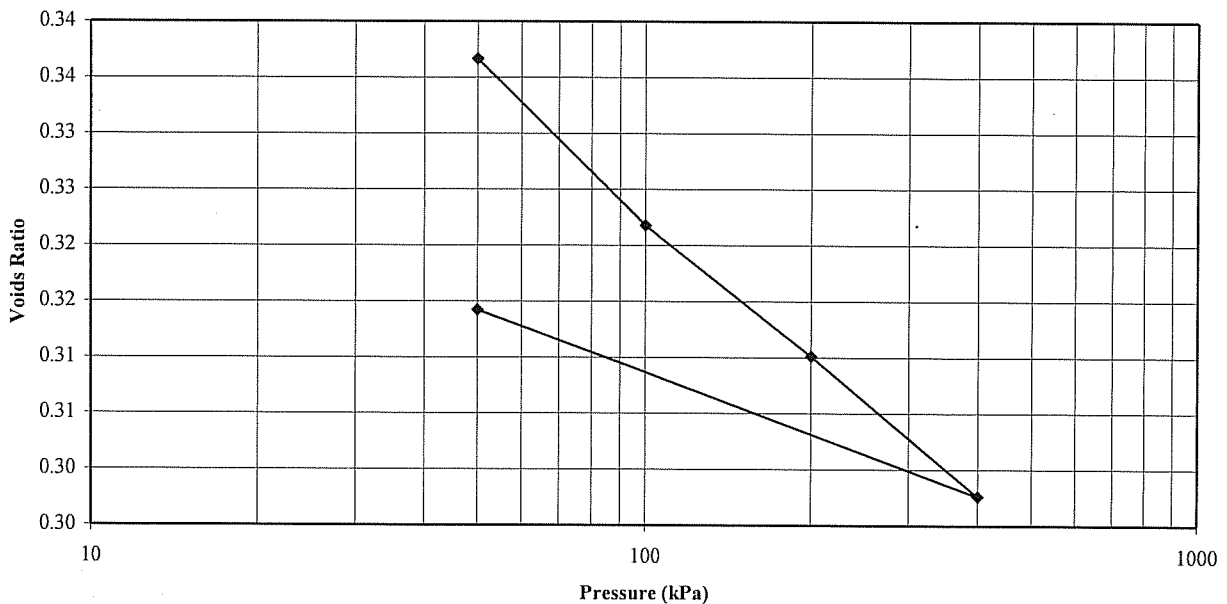
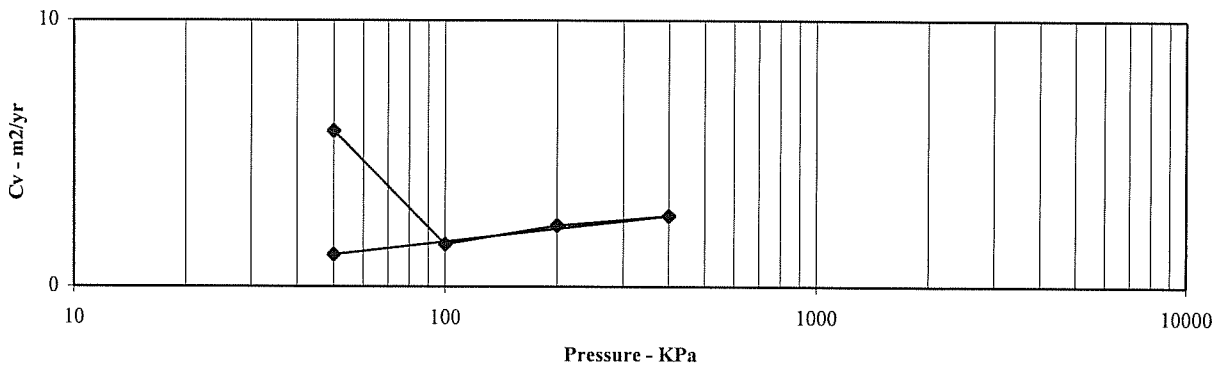
ONE DIMENSIONAL CONSOLIDATION

BS 1377 :Part 5:1990

Borehole: 2

Depth (m): 10.00 - 10.45

Initial Conditions		Pressure Range			Mv	Cv	Final Conditions	
Moisture Content (%):	16	kPa			m2/MN	m2/yr	Moisture Content (%) :	17
Bulk Density (Mg/m3):	2.24	0	-	50	0.616	5.844	Bulk Density (Mg/m3) :	2.36
Dry Density (Mg/m3):	1.92	50	-	100	0.223	1.587	Dry Density (Mg/m3)	2.02
Void Ratio:	0.3791	100	-	200	0.088	2.298	Void Ratio:	0.3142
Degree of saturation:	114.2	200	-	400	0.048	2.656	Degree of Saturation: :	143.8
Height (mm):	19	400	-	50	-0.037	1.201	Height (mm) :	18.106
Diameter (mm)	76	Remarks: V. Stiff dark brown slightly sandy slightly gravelly laminated CLAY						
Particle Density (Mg/m3):	2.65							
Assumed								



Checked and Approved By _____ Date _____

McNulty

Contract No. M0696

Appendix D
Notes on Limitations

These conditions accompany our tender and supercede any previous conditions issued. Solmek will prepare a report solely for the use of the Client (the party invoiced) and its agent(s). No reliance should be placed on the contents of this report, in whole or in part by 3rd parties. The report, its content and format and associated data are copyright, and the property of Solmek. Photocopying of part or all of the contents, transfer or reproduction of any kind is forbidden without written permission from Solmek. A charge may be levied against such approval, the same to be made at the discretion of Solmek. Solmek is a trading name of Hymas Geoenvironmental Ltd.

Solmek cannot be held liable and do not warrant, or otherwise guarantee the validity of information provided by third parties and subsequently used in our reports. Solmek are not responsible for the action negligent of otherwise of subcontractors or third parties.

Site investigation is a process of sampling. The scope and size of an investigation may be considered proportional to levels of confidence regarding the ground and groundwater conditions. The exploratory holes undertaken investigate only a small volume of the ground in relation to the overall size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions as encountered within each of the exploratory holes. There may be different ground conditions elsewhere on the site which have not been identified by this investigation and which therefore have not been taken into account in this report. Reports are generally subject to the comments of the local authority and Environment Agency. The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that mobile contamination, ground gas levels and groundwater levels may vary owing to seasonal, tidal and/or weather related effects. Solmek cannot be held liable for any unrecorded or unforeseen obstructions between exploratory boreholes and trial pits. This includes instances where previous structures on the site (buried man made structures) or the presence of boulder clay (cobbles and/or boulder obstructions) have been anticipated. All types of piling operations should make allowance for obstructions within the construction budget to accommodate this. Unrecorded ancient mining may occur anywhere where seams that have been worked and influence the rock and soil above. Dissolution cavities can occur where gypsum or chalk is present. Rotary drilling is the recommended technique to prove the integrity of the rock.

Where the scope of the investigation is limited via access to information, time constraints, equipment limitations, testing, interpretation or by the client or his agents budgetary constraints, elements not set out in the proposal and excluded from the report are deemed to be omitted from the scope of the investigation.

Desk studies are generally prepared in accordance with RICS guidelines. Environmental site investigations are generally undertaken as 'exploratory investigations' in accordance with the definitions provided in paragraph 5.4 of BS 10175:2001 in order to confirm the conceptual assumptions. You are advised to familiarize yourself with the typical scope of such an investigation. No pumping of water will be undertaken unless a licence or facilities/equipment have been arranged by others.

Where the type, number or/and depth of exploratory hole is specified by others, Solmek cannot and will not be responsible for any subsequent shortfall or inadequacy in data, and any consequent shortfall in interpretation of environmental and geotechnical aspects which may be required at a later date in order to facilitate the design of permanent or temporary works.

All information acquired by Solmek in the course of investigation is the property of Solmek, and, only also becomes the joint property of the Client only on the complete settlement of all invoices relating to the project. Solmek reserve the right to use the information in commercial tendering and marketing, unless the Client expressly wishes otherwise in writing. The quoted rates do not include VAT, and payment terms are 30 days from dispatch of invoice from our offices. Quotes are subject to a site visit.

We have allowed for 1 mobilisation and normal working hours unless otherwise stated. The scope of the investigation may be reviewed following the desk study and/or fieldwork. The presence or otherwise of Japanese Knotweed or other invasive plants can be difficult to identify especially during winter months. If Japanese Knotweed or other invasive species are suspect, it should be confirmed by an ecologist. We have not allowed for acquiring services information, and cannot be responsible for damage to underground services or pipes not shown to us or not clearly shown on plans. Costs incurred will be passed on to you, and in commissioning Solmek you understand and accept that you/your agent have a contractual relationship with Solmek & you accept this. Our rates assume unobstructed, reasonably level and firm access to the exploratory positions and adequate clear working areas and headroom. We have priced on the basis that you or your client have the necessary permissions, wayleaves and approvals to access land. All boreholes and pits are backfilled with arisings except where gas monitoring pipes are installed with stopcock covers. Solmek are not responsible for any uneven surfaces as a result of siteworks and rutting and backfilled excavations may require re-levelling and/or making good by others after fieldwork is complete, and Solmek has not allowed for this. No price has been provided or requested for a return visit to remove pipework and covers. Hourly rates apply to consultancy only and do not include expenses unless otherwise shown. If warranties are required, legal costs incurred will be passed on to you assuming Solmek agree to complete such warranties, modified or otherwise and you understand and agree to pay all costs.

We reserve the right to pursue full payment of the invoice prior to release of any information including reports. We advise you/your client that we may elect to pursue our statutory rights under late payment legislation, and will apply 8% to the base rate for unreasonably late payments. Solmek are exempt from the CIS Scheme. Solmek offer to undertake work only in strict accordance with conditions covered by our current insurances, which are available for inspection. Solmek are not responsible for acts, negligent or otherwise of subcontractors and as a matter of policy cannot indemnify any other parties. Professional indemnity Insurance is limited to ten times the invoice net total except where stated otherwise by Solmek. Solmek give notice that consequential loss as a direct or indirect result of Solmek's activities or omission of the same are excluded.

SITE INVESTIGATION REPORT
of land at
AUK PROJECT
McNulty Offshore, South Shields
Client: McNulty Offshore

REPORT NO. M0754/Phase 1
January 2011

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SITE INVESTIGATION
of land at
MCNULTY OFFSHORE
AUK PROJECT
prepared for
DTA CONSULTING ENGINEERS
on behalf of
McNulty Offshore
CONTENTS

1.0 INTRODUCTION	1
2.0 SITE DESCRIPTION	1
2.1 Site Location & Features	1
3.0 FIELDWORK	1
3.1 Introduction	1
3.2 Strata Description	2
3.3 Sampling and In-situ Testing	2
3.4 Exploratory Hole Locations	2
4.0 LABORATORY TESTING	2
4.1 Geotechnical	2
5.0 GROUNDWATER MONITORING	3
5.1 Monitoring Procedure	3
6.0 GROUND CONDITIONS	3
7.0 CONCLUSIONS	3

Appendix A - Drawings

Appendix B - Exploratory Hole Records

Appendix C - Geotechnical Laboratory Results (Currently outstanding)

Appendix D - Plate Load Tests

Appendix E – Notes on Limitations

1.0 INTRODUCTION

Solmek Ltd were commissioned by DTA Consulting Engineers, acting on behalf of McNulty Offshore, to carry out a site investigation of land at McNulty Offshore, South Shields as part of the Auk Project.

The objectives of the investigation were as follows:

- To determine the typical nature, thickness and engineering parameters of the made ground and natural soils.
- To recover disturbed samples of made ground and natural strata for and geotechnical laboratory testing.

Fieldwork, as specified by DTA Consulting Engineers, comprised the drilling of three cable percussive boreholes. The fieldwork was carried out between 13th and 21st January 2011.

Following the completion of the fieldwork selected soil samples were scheduled by Solmek for a range of geotechnical testing.

The information contained in this report is limited to the boreholes drilled on site.

This report is based on the data obtained from the exploratory holes and from the subsequent tests carried out. There is always a possibility of variation in the ground conditions between boreholes. Responsibility cannot be accepted for conditions not revealed by the investigation. Any diagram or opinion of the possible configuration of the findings is conjectural and given for guidance only, and confirmation of intermediate ground conditions should be considered if deemed necessary.

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2.0 SITE DESCRIPTION

2.1 Site Location & Features

The site is located 2km west of South Shields town centre. The approximate centre of the site is at National Grid Reference 435697,565919.

A site location plan is presented as Drawing No. M0754/1 in Appendix A to this report.

The site comprises a relatively flat irregular parcel of land adjacent to the River Tyne and presently covered by gravel and forms part of the construction and storage yard for the production of offshore equipment.

3.0 FIELDWORK

3.1 Introduction

The fieldwork comprised the following:

- Three cable percussive boreholes to a maximum depth of 11.50mbgl.
- Plate load tests at ground level.

BH1 was terminated at 0.6m due to a service cable. The borehole was repositioned and denoted BH1A.

On completion a groundwater monitoring wells was installed in BH1A. The wells consisted of a lower slotted section of 50mm diameter HDPE casing surrounded by single size non-calcareous gravel. The upper section of the well was constructed from plain HDPE casing surrounded by a bentonite cement seal. A flush-fitting lockable security cover completed the well.

3.2 Strata Description

Depths and descriptions of strata and groundwater together with details of the samples recovered are presented on the exploratory hole record sheets in Appendix B to this report and summarised in Section 6 below.

Strata descriptions are based on an examination of the strata encountered together with consideration of the in-situ and laboratory test data. Procedures and principles contained in BS5930 (1999), BS10175 (2001) and BS1377 (1990) have been followed.

3.3 Sampling and In-situ Testing

Samples were selected by a representative of Solmek during the investigation works. Samples of soil for chemical analysis were placed into amber glass jars and plastic tubs as appropriate. Groundwater samples were collected in 1 litre amber glass bottles. Glass jars/bottles were stored at approximately 4°C until delivery to the laboratory.

In-situ testing of the strata encountered was undertaken at a frequency and at depths determined by Solmek. In-situ standard penetration tests (SPTs) were carried out throughout the depth of the borehole using a split spoon sampler or 60° apex solid cone, in order to give an indication of the relative density of the granular soils and an indication of the undrained shear strength of cohesive soils. The results of these tests are shown as 'N' values and can be found adjacent to the appropriate sample level on the Solmek exploratory records in Appendix B.

Plate load tests were carried out at three locations as shown on drawing number M0754/2. The results are included in Appendix D. These results show that for loads up to 90.5kN/m² on a 600mm diameter plate settlements of up to 2.18mm were recorded.

3.4 Exploratory Hole Locations

The exploratory hole locations, as determined by DTA, are shown on Drawing No. M0754/02 in Appendix A.

4.0 LABORATORY TESTING

4.1 Geotechnical

Geotechnical laboratory testing, as scheduled by Solmek, was carried out on selected samples in accordance with techniques outlined in BS 1377:1990.

5.0 GROUNDWATER MONITORING

5.1 Monitoring Procedure

The groundwater monitoring well installed by Solmek was monitored on one occasion with a standing water level of 2.95mbgl, recorded at 0745hrs on 26.01.2011. It is considered that the groundwater is likely to be in hydraulic conductivity with the River Tyne and therefore will fluctuate with tidal levels.

6.0 GROUND CONDITIONS

Boreholes 1, 1A and 2 were drilled outside the dry dock, the ground conditions encountered consisted of granular made ground to a maximum depth of 6.70mbgl with SPT N values of between 5 and 25. The made ground was underlain by stiff clay to a maximum depth of 8.80mbgl. In BH1A the clay was underlain by dense sands, with SPT 'N' refusals, overlying possible sandstone rock head at a depth of 9.00mbgl. The stiff clay in BH2 was underlain by medium dense sand with a recorded thickness of 1.00m. The sand recorded an SPT 'N' value of 15. The sand was further underlain by stiff clay with suspected sandstone rock head recorded at 10.70mbgl.

Moisture content tests carried out within the natural clay recorded levels of 12% and 15% with plasticity indices of 18 and 21. Undrained triaxial tests recorded shear strength values of 113kN/m² and 116kN/m². These results confirm the generally stiff nature of the clay in this area.

BH3 was drilled within the infilled dry dock and the ground conditions consisted of granular made ground to a depth of 9.90mbgl where the borehole terminated on a concrete and brick obstruction considered to be the base of the dry dock. SPT 'N' values within the granular made ground varied from 19 to 50 confirming the material to be medium dense to very dense.

In view of the results of the insitu testing of the made ground a ϕ value of 35° can be assumed for the dense granular made ground, providing proof rolling is undertaken.

To enable buried concrete to be designed to resist sulfate attack, samples of made ground and natural strata from depths corresponding to the anticipated foundation depth have been tested for water-soluble sulfate and pH.

The maximum water-soluble sulfate concentration is 330mg/l and the lowest recorded pH value is 7.9.

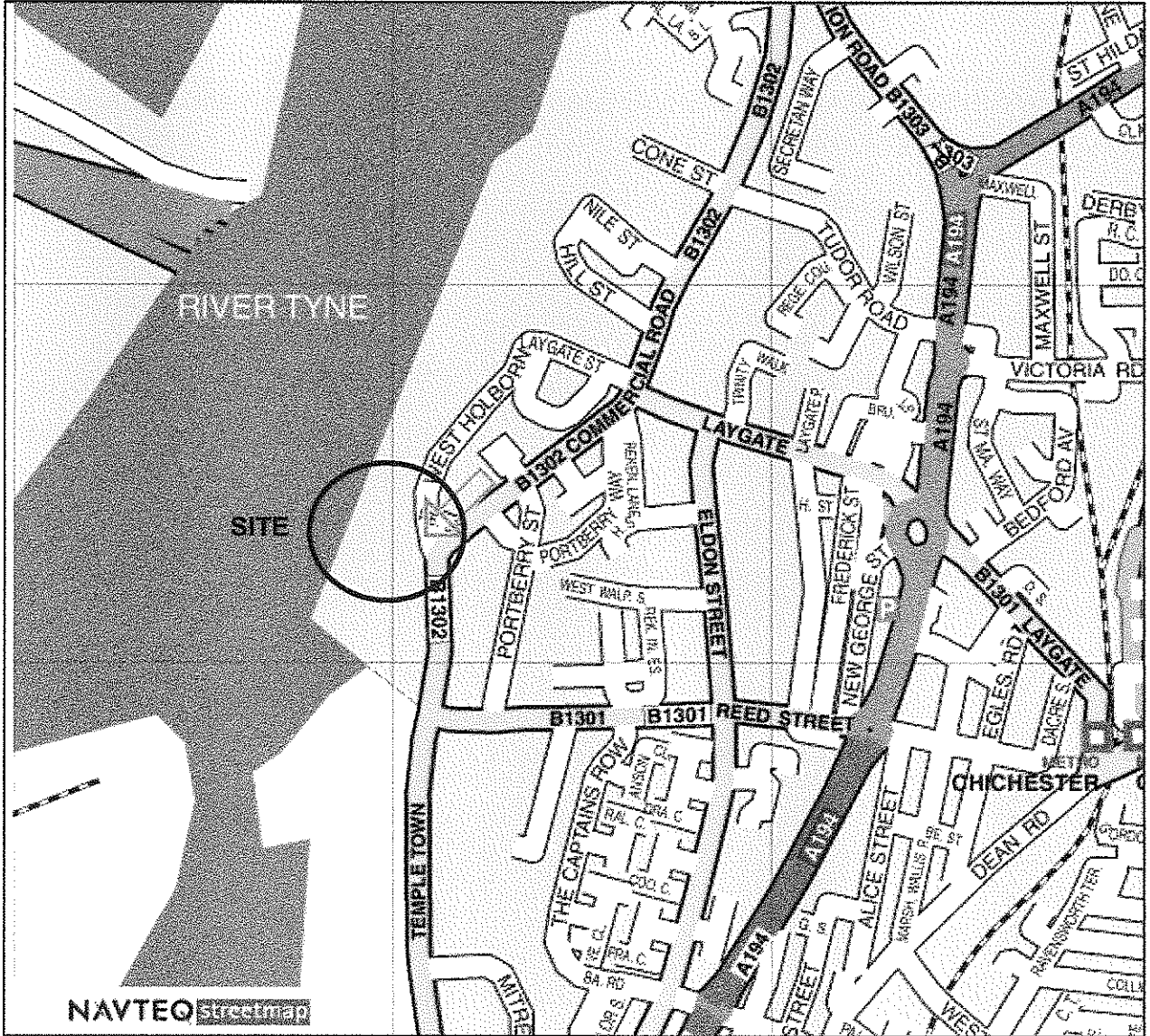
Based on the above results, Design Sulfate Class DS-1 and ACEC Classification AC-1 would be appropriate for buried concrete at the site.


7.0 CONCLUSIONS

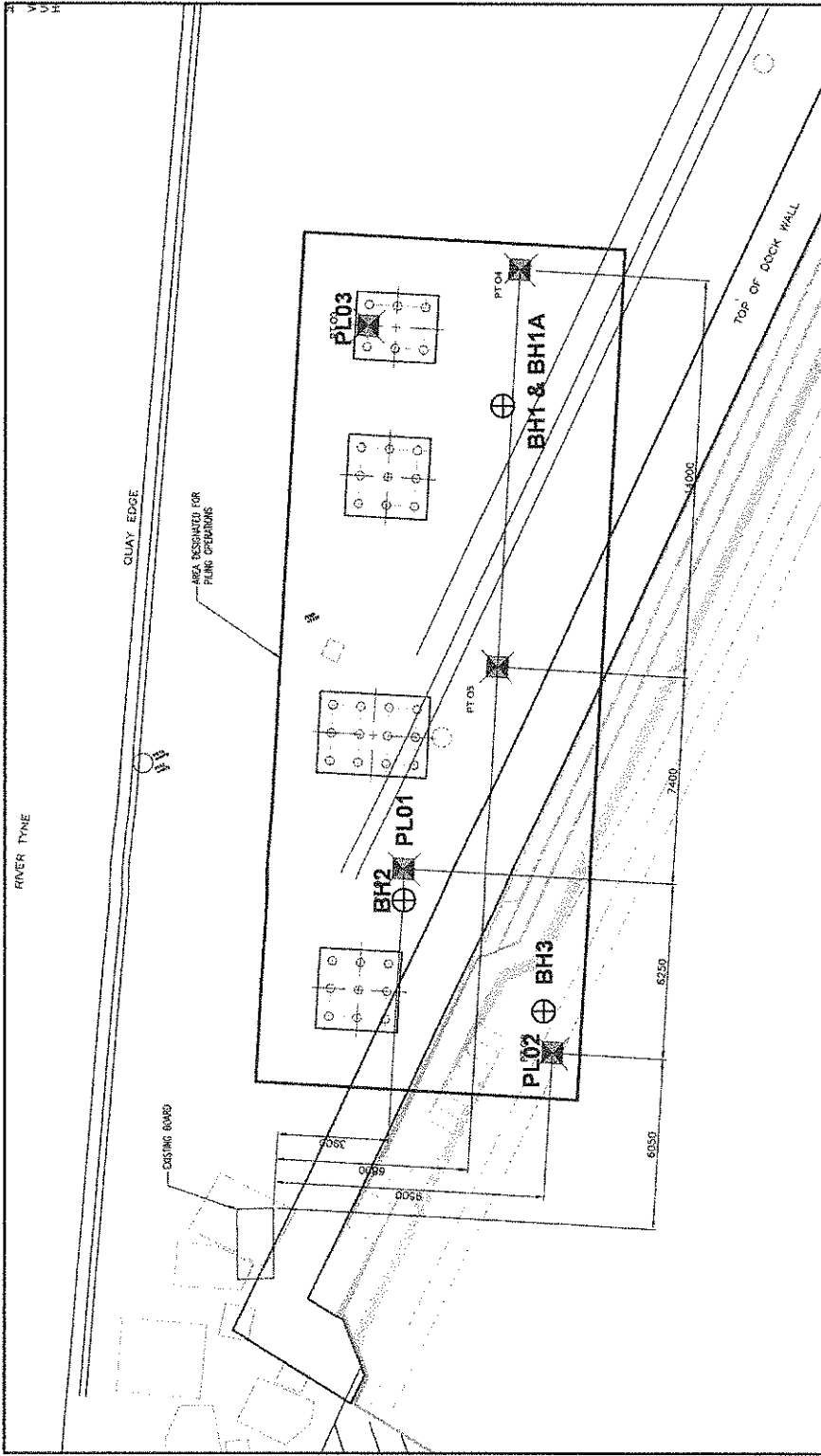
It is understood that a piled solution is being considered for foundation design outside of the infilled dock. As such the piling contractor should note the presence of obstructions requiring chiselling within the boreholes drilled.

Pad sizes of up to 4.5 x 5.5m are also to be considered with loads of up to 200kN/m². Based on the ground conditions encountered it has been calculated that settlements will be less than 25mm for a pad of this size with the expected loads founding within the made ground on the infilled dock.

Appendix A
Drawings



	Contract: McNulty Offshore, South Shields		Contract No: M0754	
	Client: McNulty Offshore			
TEL: 0191 378 3310 FAX: 01670 515013		Drawing Title: Site Location Plan		
Drawing No: M0754r/01	Date: January 2011	Scale: NTS	Status: Final	Drawn by: AIL



TEL: 0191 378 3310
 FAX: 01670 515013

Drawing No:
 M0754/02

Contract:
 McNulty Offshore, South Shields

Client:
 McNulty Offshore

Drawing Title:
 Exploratory Hole Location Plan

Date:
 January 2011

Scale:
 NTS

Contract No:
 M0754

Drawn by:
 AIL

Status:
 Final

Appendix B
Exploratory Hole Records



BOREHOLE RECORD

BH No. **BH1**
Sheet 1 of 1

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
12/01/2011

Method: Cable Percussive Boring

Scale 1:25

SAMPLE DETAILS

STRATA RECORD

Driller: DG

Logged By: IN

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)	Description	Depth (m)	Level (m AOD)	Legend	Well
B	0.60			<p>MADE GROUND: Brown black gravelly sand. Sand is fine to coarse with much ash. Gravel is angular to subangular fine to coarse of coal, slag, clinker, brick sandstone and flint with occasional pieces of metal wire and timber.</p> <p>Service cable uncovered at 0.60m</p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;">End of Borehole at 0.60 m</p>	0.60		[Cross-hatch pattern]	[Diagonal line pattern]

Remarks and Water Observations

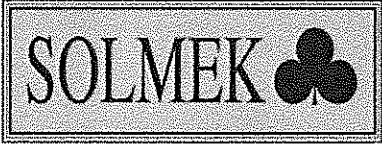
1. No groundwater encountered.
2. Borehole terminated at 0.60m due to service cable in hand dug pit.
3. Dayworks due to induction (1.5hrs).

GL (m AOD)

Easting:

Northing:

Fig. No.



BOREHOLE RECORD

BH No. **BH1A**
Sheet 1 of 2

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
12/01/2011

Method: Cable Percussive Boring

Scale 1:25

SAMPLE DETAILS			Groundwater (Casing)	STRATA RECORD	Driller: DG			
Type	Depth From - To(m)	N (cu)			Logged By: IN			
					Depth (m)	Level (m AOD)	Legend	Well
J	0.20			MADE GROUND: Brown black gravelly sand. Sand is fine to coarse with much ash. Gravel is angular to subangular fine to coarse of coal, slag, clinker, brick, sandstone and flint with occasional pieces of metal wire and timber.				
J	0.60							
J	1.00		1					
B	1.30			MADE GROUND: Brown sandy gravel. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint.	1.30			
B	1.40	N=6 (1,2,1,2,2,1)						
B	1.90	N=5 (1,3,1,2,1,1)	2					
B	2.50	N=8 (1,3,2,2,1,3)						
B	3.00	N=5 (1,2,2,2,1,0)	3					
B	3.20							
B	3.50	N=9 (2,3,2,2,3,2)						
B	4.00	N=7 (1,2,2,1,2,2)						
B	4.30							
B	4.50	N=13 (2,4,4,2,3,4)						

Continued next sheet

Remarks and Water Observations

1. Groundwater encountered at 1.30m rising to 1.00m after 20 minutes.
2. Second groundwater strike encountered at 8.60m rising to 6.50m after 20 minutes.
3. Dayworks setting up fencing (30mins).
4. Chiselling 8.60m to 9.00m and 9.00m to 9.50m (4hrs).
5. Pipework installed 7.00m of plain pipe and 2.50m of slotted pipe.

GL (m AOD)

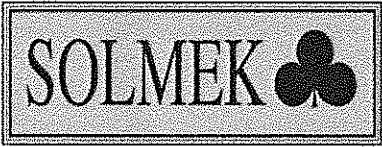
- Easting:

-

- Northing:

-

Fig. No.



BOREHOLE RECORD

BH No. **BH1A**
Sheet 2 of 2

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
12/01/2011

Method: Cable Percussive Boring

Scale 1:25

SAMPLE DETAILS			Groundwater (Casing)	STRATA RECORD				Driller: DG
Type	Depth From - To(m)	N (cu)		Description	Depth (m)	Level (m AOD)	Legend	Well
B	5.50	N=22 (3,3,6,7,5, 4)	MADE GROUND: Brown sandy gravel. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint.					
			MADE GROUND: Brown silty very sandy gravel. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of flint, brick and sandstone.	5.80				
U	6.50		Stiff brown sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is angular to subangular fine to coarse of sandstone and coal.	6.40				
D	7.00							
D B	7.50	50/150mm (8,12,27,23)						
B	8.60		Dense brown gravelly SAND. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of sandstone. Occasional sandstone cobbles noted.	8.60				
D	8.80	50/150mm (17,8,36,12)	Light brown angular fine to coarse GRAVEL of sandstone.	8.80				
B	9.00		Reddish brown fine to coarse GRAVEL of sandstone.	9.00				
D	9.10	50/150mm (9,14,21,29)	Possible rockhead.					
D	9.50	75/160mm - Abandoned	End of Borehole at 9.50 m	9.50				

Remarks and Water Observations

1. Groundwater encountered at 1.30m rising to 1.00m after 20 minutes.
2. Second groundwater strike encountered at 8.60m rising to 6.50m after 20 minutes.
3. Dayworks setting up fencing (30mins).
4. Chiselling 8.60m to 9.00m and 9.00m to 9.50m (4hrs).
5. Pipework installed 7.00m of plain pipe and 2.50m of slotted pipe.

GL (m AOD)

- Easting:

- Northing:

-

Fig. No.



BOREHOLE RECORD

BH No. **BH2**
Sheet 1 of 3

Site: **McNulty Offshore**

Contract No: **M0754**

Client: **McNulty Offshore**

Dates:
17/01/2011-18/01/2011

Method: Cable Percussive Boring

Scale 1:25

SAMPLE DETAILS

STRATA RECORD

Driller: DG

Logged By: IN

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)	Description	Depth	Level	Legend	Well
					(m)	(m AOD)		
J	0.20			MADE GROUND: Brown black very sandy gravel. Sand is fine to coarse with much ash. Gravel is angular to subangular fine to coarse of slag, clinker, flint and sandstone with much timber and occasional pieces of metal. Sandstone cobbles noted.				
J	0.60							
B J	1.00		1					
B	1.50	N=7 (3,3,2,2,1,2)						
J B	2.00	N=5 (1,2,2,1,1,1)	2	MADE GROUND: Brown sandy gravel. Sand is fine to coarse with much ash. Gravel is angular to subangular fine to coarse of sandstone, flint and clinker with much timber.	2.00			
B	2.50	N=8 (1,1,4,1,2,1)						
J B	3.00	N=5 (1,0,1,1,1,2)	3					
B	3.50	N=16 (1,2,2,4,4,6)						
B	4.10	N=21 (3,5,5,4,6,6)		MADE GROUND: Brown sandy gravel. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint and occasional sandstone.	4.10			
B	4.60	N=22 (3,4,5,5,6,6)						

Continued next sheet

Remarks and Water Observations

1. Groundwater strike at 4.10m rising to 3.80m after 20 minutes.
2. Second groundwater strike at 8.80m rising to 8.10m after 20 minutes.
3. Third groundwater strike at 10.70m rising to 8.50m after 20 minutes.
4. Chiselling 10.90m to 11.50m (1.5hrs).
5. Standing due to waiting for BH3 position to be cleared by McNulty (1.5hrs).

GL (m AOD)

Easting:

Northing:

Fig. No.



BOREHOLE RECORD

BH No. **BH2**
Sheet 2 of 3

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
17/01/2011-18/01/2011

Method: Cable Percussive Boring

Scale 1:25

SAMPLE DETAILS			Groundwater (Casing)	STRATA RECORD			
Type	Depth From - To(m)	N (cu)		Description	Depth (m)	Level (m AOD)	Legend
B	5.10		MADE GROUND: Brown sandy gravel. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint and occasional sandstone.				
B	5.50	N=25 (4,5,6,6,7,6)					
B	6.10		MADE GROUND: Brown silty sandy gravel. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint.	6.10			
U	6.80		Stiff brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium of sandstone with occasional coal. Occasional sandstone cobbles and/or boulders noted.	6.70			
D B	7.30						
D B	7.80	50/225mm (7,10,13,24,13)					
D B	8.80	N=15 (2,3,3,4,4,4)	Medium dense brown silty SAND. Sand is fine to coarse.	8.80			
U	9.70		Stiff brown very sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of Continued next sheet	9.70			

Remarks and Water Observations

1. Groundwater strike at 4.10m rising to 3.80m after 20 minutes.
2. Second groundwater strike at 8.80m rising to 8.10m after 20 minutes.
3. Third groundwater strike at 10.70m rising to 8.50m after 20 minutes.
4. Chiselling 10.90m to 11.50m (1.5hrs).
5. Standing due to waiting for BH3 position to be cleared by McNulty (1.5hrs).

GL (m AOD)

- Easting:

- Northing:

-

Fig. No.



BOREHOLE RECORD

BH No. **BH2**
Sheet 3 of 3

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
17/01/2011-18/01/2011

Method: Cable Percussive Boring

Scale 1:25

SAMPLE DETAILS

STRATA RECORD

Driller: DG

Logged By: IN

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)	Description	Depth (m)	Level (m AOD)	Legend	Well
D	10.20		10	sandstone and coal. Occasional sandstone cobbles and/or boulders noted throughout.				
D B	10.70	50/150mm (8,11,16,34)	11	Very dense brown gravelly SAND. Sand is fine to coarse. Gravel is angular fine to coarse of sandstone. Possible rockhead.	10.70			
B	11.50	50/75mm (17,25,50)	12	End of Borehole at 11.50 m	11.50			

Remarks and Water Observations

1. Groundwater strike at 4.10m rising to 3.80m after 20 minutes.
2. Second groundwater strike at 8.80m rising to 8.10m after 20 minutes.
3. Third groundwater strike at 10.70m rising to 8.50m after 20 minutes.
4. Chiselling 10.90m to 11.50m (1.5hrs).
5. Standing due to waiting for BH3 position to be cleared by McNulty (1.5hrs).

GL (m AOD)

- Easting:

- Northing:

-

Fig. No.



BOREHOLE RECORD

BH No. **BH3**
Sheet 1 of 2

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
19/01/2011

Method: Cable Percussive Boring

Scale 1:25

SAMPLE DETAILS

STRATA RECORD

Driller: DG

Logged By: IN

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)	Description	Depth (m)	Level (m AOD)	Legend	Well
J	0.20			MADE GROUND: Brown black gravelly sand. Sand is fine to coarse with much ash. Gravel is angular to subangular fine to coarse of sandstone, slag, clinker and flint with occasional pieces of metal and wire.				
J	0.50							
B J	1.00		1					
B	1.50	50/150mm (8,17,35,15)						
B J B	2.00	40/75mm - Abandoned	2					
B	2.50	N=34 (4,7,10,12,6,6)						
B D B	3.00	N=38 (3,9,6,10,12,10)	3					
B	3.50	N=36 (5,8,8,10,8,10)						
B	4.00	N=19 (4,5,6,4,4,5)						
B D B	4.40 4.50	N=21 (3,4,6,6,5,4)			MADE GROUND: Brown silty gravelly sand. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint.	4.40		

Continued next sheet

Remarks and Water Observations

1. Standing waiting for BH3 position to be cleared (2hrs).
2. Groundwater encountered at 3.00m rising to 2.80m after 20 minutes.
3. Second groundwater strike at 4.40m rising to 4.20m after 20 minutes.
4. Third groundwater strike at 9.30m rising to 3.20m after 20 minutes.
5. Chiselling 1.70m to 2.30m and 9.60m to 9.90m (3.5hrs).

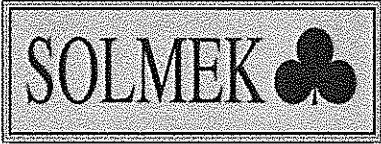
GL (m AOD)

- Easting:

- Northing:

-

Fig. No.



BOREHOLE RECORD

BH No. **BH3**
Sheet 2 of 2

Site: McNulty Offshore

Contract No: **M0754**

Client: McNulty Offshore

Dates:
19/01/2011

Method: Cable Percussive Boring

Scale **1:25**

SAMPLE DETAILS

STRATA RECORD

Driller: DG

Logged By: IN

Type	Depth From - To(m)	N (cu)	Groundwater (Casing)	Description	Depth	Level	Legend	Well
					(m)	(m AOD)		
B	5.00		5	MADE GROUND: Brown silty gravelly sand. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint. MADE GROUND: Brown silty gravelly sand.	5.00			
B	5.50	N=30 (2,4,4,6,8,10)						
B	6.00		6					
B	6.50	N=22 (2,3,4,4,6,8)						
B	7.00		7					
B	7.50	N=26 (4,7,7,10,9,10)						
B	8.00							
B	8.50	N=28 (6,6,7,6,7,8)						
B	9.30			MADE GROUND: Brown grey sandy gravel. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of brick and concrete.	9.30			
B	9.50	50/150mm (9,12,18,32)		Base of dry dock.				
B	9.90	75/150mm		End of Borehole at 9.90 m	9.90			

Remarks and Water Observations

1. Standing waiting for BH3 position to be cleared (2hrs).
2. Groundwater encountered at 3.00m rising to 2.80m after 20 minutes.
3. Second groundwater strike at 4.40m rising to 4.20m after 20 minutes.
4. Third groundwater strike at 9.30m rising to 3.20m after 20 minutes.
5. Chiselling 1.70m to 2.30m and 9.60m to 9.90m (3.5hrs).

GL (m AOD)

- Easting:

-

- Northing:

-

Fig. No.

Appendix C
Geotechnical Laboratory Results

Undrained Shear Strength in Triaxial Compression

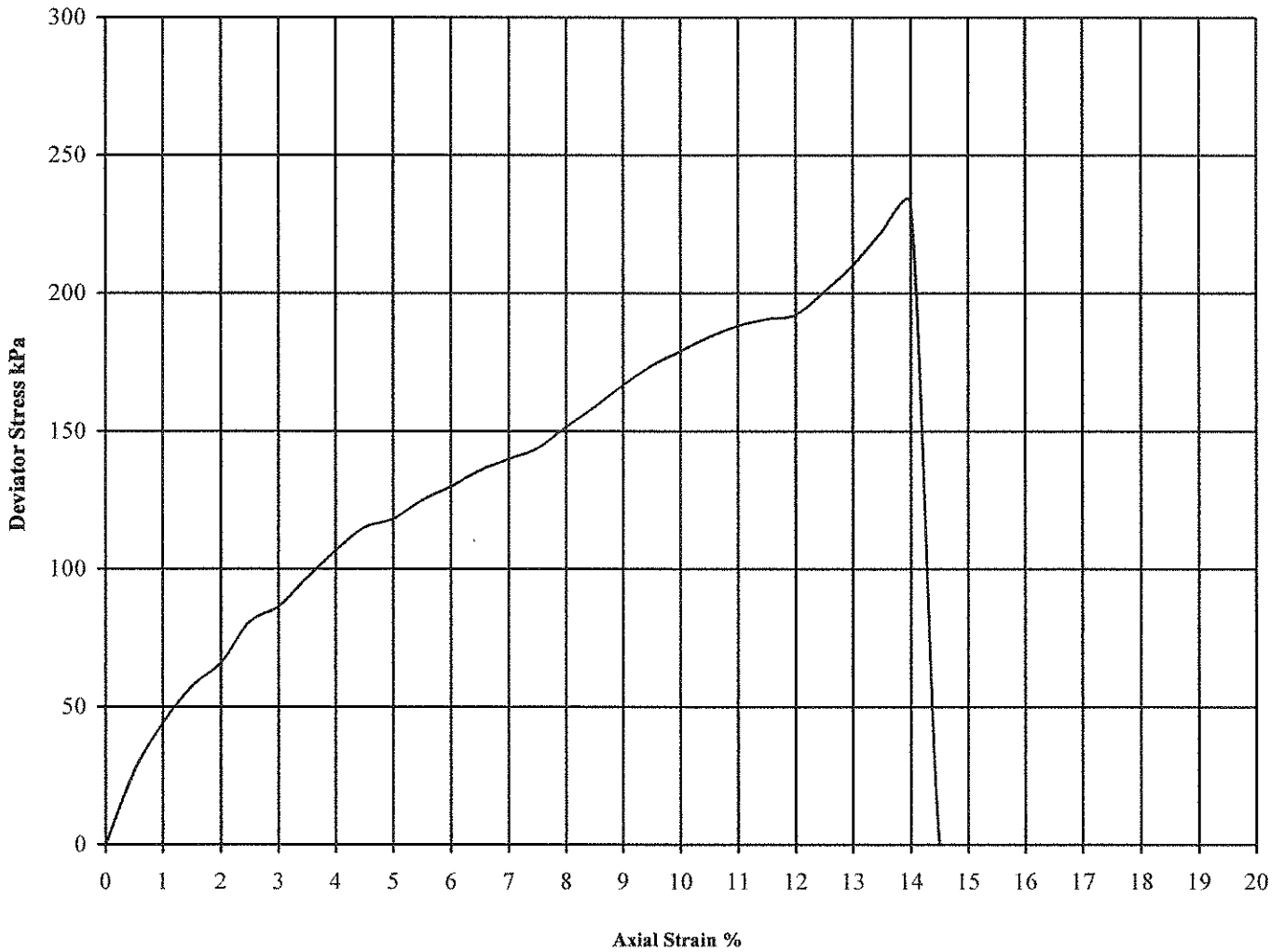
without measurement of Pore Pressure
B.S. 1377 : Part 7 : Clause 8 : 1990

Hole Reference

BH 1A

Depth (m)

6.50 - 6.95



Diameter (mm):		100		Height (mm):		200		Test:		100 mm Single Stage.	
Stage	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Deviator Stress (kPa)	Cohesion (kPa)	Failure Strain (%)	Mode of Failure	Shear Strength (kPa)	Remarks	
1	15	2.37	2.06	130	232	116	14.0	Brittle	116	Stiff dark brown sandy gravelly CLAY.	

Checked and Approved	Date



McNulty Offshore

Contract No
M754

Undrained Shear Strength in Triaxial Compression

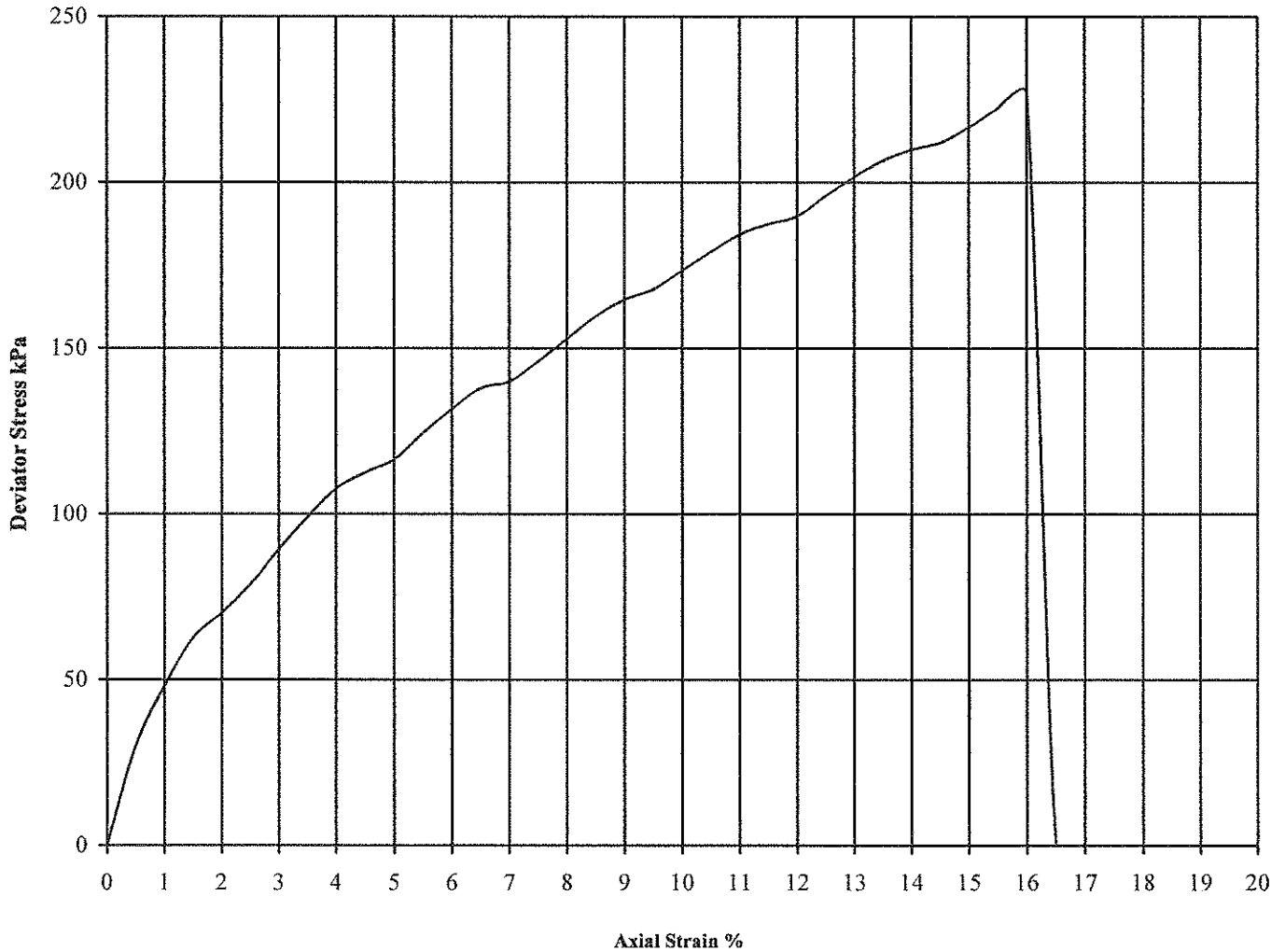
without measurement of Pore Pressure
B.S. 1377 : Part 7 : Clause 8 : 1990

Hole Reference

BH 2

Depth (m)

6.80 - 7.25



Diameter (mm):		100		Height (mm):		200		Test:		100 mm Single Stage.	
Stage	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Deviator Stress (kPa)	Cohesion (kPa)	Failure Strain (%)	Mode of Failure	Shear Strength (kPa)	Remarks Stiff dark brown sandy gravelly CLAY.	
1	12	2.39	2.14	130	227	113	16.0	Compound	113		

Checked and Approved	Date



McNulty Offshore

Contract No
M754

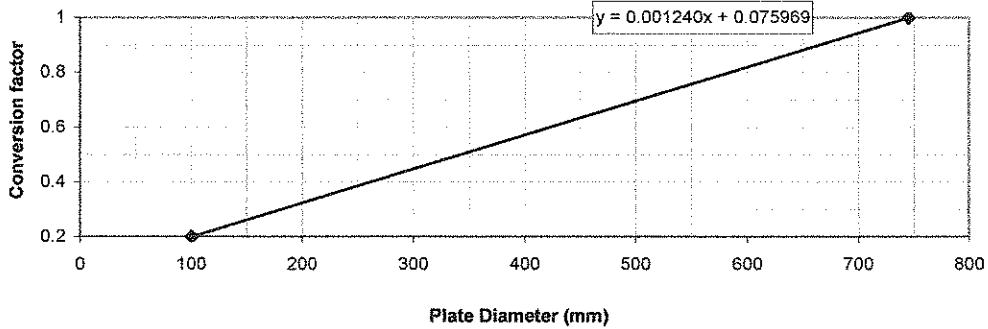
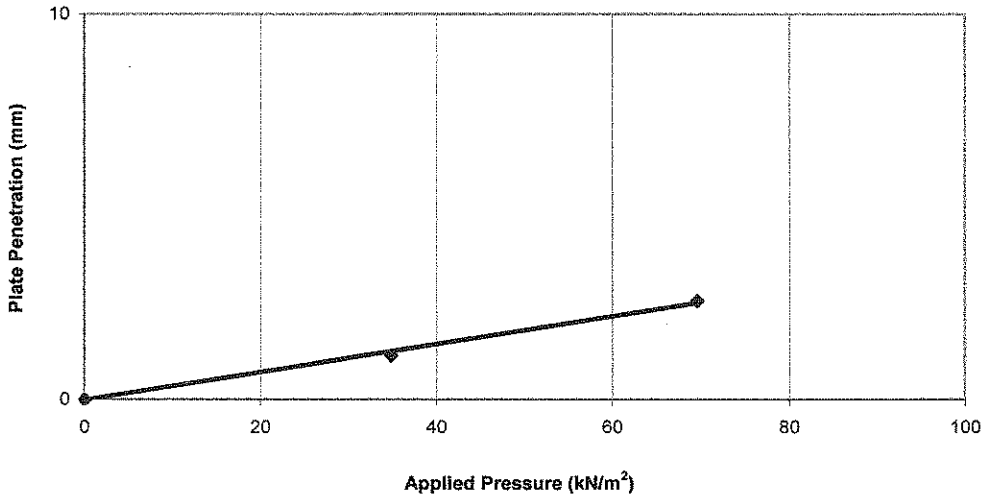
Appendix D
Plate Load Test Results

**SOLMEK
GEOTECHNICAL TESTING LABORATORY**

PLATE BEARING TEST					Date:	21.01.2011	
Location: McNulty Offshore					Test No:	1	
					Sheet:	1 of 2	
Test Method: BS 1377 : Part 9 : 1990 (Incremental Method)					Test Level:	0.00mbgl	
Plate Diameter: 0.600 m					Weather:	Clear, windy and frozen ground	
Kettleage Type: JCB Sitemaster + Jack					Load Applied:	69.6kN/m ²	
					Start Time of Test:	11:55	
Elapsed Time (mins)	Pressure (kN/m ²)	Dial Gauge Reading (mm)			Average Settlement (mm)	Cumulative Settlement (mm)	
		Dial 1	Dial 2	Dial 3			
0	0	0	0	0	Increment 1		
Start	0	0	0	0			
2	34.8	0	0.62	0.63			
3	34.8	0.14	0.76	0.72			
4	34.8	0.15	1.83	0.76			
5	34.8	0.29	1.9	0.81			
6	34.8	0.31	1.93	0.81			
7	34.8	0.37	1.99	0.81			
8	34.8	0.39	2	0.81			
9	34.8	0.41	2.06	0.81			
10	34.8	0.44	2.09	0.81			
11	34.8	0.48	2.13	0.81			
12	34.8	0.48	2.13	0.81			
Settlement		0.48	2.13	0.81	1.140	1.140	
13	69.6	1.19	2.81	0.81	Increment 2		
14	69.6	1.19	2.81	1.74			
15	69.6	1.35	2.97	1.94			
16	69.6	1.45	3.07	2.05			
17	69.6	1.46	3.09	2.08			
18	69.6	1.5	3.13	2.15			
19	69.6	1.56	3.2	2.23			
20	69.6	1.57	3.21	2.24			
21	69.6	1.59	3.23	2.25			
22	69.6	1.61	3.25	2.25			
23	69.6	1.65	3.29	2.29			
24	69.6	1.66	3.31	2.31			
25	69.6	1.68	3.32	2.32			
26	69.6	1.69	3.33	2.33			
27	69.6	1.72	3.36	2.35			
28	69.6	1.74	3.39	2.37			
29	69.6	1.75	3.4	2.38			
30	69.6	1.76	3.43	2.47			
31	69.6	1.76	3.43	2.47			
Settlement		1.28	1.3	1.66	1.413	2.553	

**SOLMEK
GEOTECHNICAL TESTING LABORATORY**

PLATE BEARING TEST	Sheet:	2 of 2
Location: McNulty Offshore	Test No:	1



HD 25/94 Figure 4.4 : Correction for Smaller Plates

Total Plate Deflection	2.553 mm	Produced by:	I J Newham
Plate Diameter	600 mm	Date:	21.01.2011
		Checked by:	
		Date:	



**SOLMEK
GEOTECHNICAL TESTING LABORATORY**

PLATE BEARING TEST					Date:	21.01.2011	
Location: McNulty Offshore					Test No:	2	
					Sheet:	1 of 2	
Test Method: BS 1377 : Part 9 : 1990 (Incremental Method)					Test Level:	0.00mbgl	
					Weather:	Clear, windy, frozen ground	
Plate Diameter: 0.600 m					Load Applied:	90.5kN/m ²	
Kentledge Type: JCB Sitemaster + Jack					Start Time of Test:	10:00	
Elapsed Time (mins)	Pressure (kN/m ²)	Dial Gauge Reading (mm)			Average Settlement (mm)	Cumulative Settlement (mm)	
		Dial 1	Dial 2	Dial 3			
0	0	0	0	0	Increment 1		
Start	Loading	0	0	0			
2	34.8	0.13	0.34	0.1			
3	34.8	0.24	0.25	0.11			
4	34.8	0.28	0.15	0.14			
5	34.8	0.3	0.15	0.14			
6	34.8	0.32	0.11	0.14			
7	34.8	0.35	0.07	0.14			
8	34.8	0.36	0.05	0.14			
9	34.8	0.38	0.01	0.14			
10	34.8	0.38	0.01	0.14			
Settlement		0.38		0.14	0.260	0.260	
11	69.6	0.38	0.01	1.51	Increment 2		
12	69.6	0.56	0.07	1.51			
13	69.6	0.59	0.07	1.75			
14	69.6	0.62	0.12	1.84			
15	69.6	0.62	0.16	1.86			
16	69.6	0.62	0.16	1.93			
17	69.6	0.64	0.2	1.99			
18	69.6	0.66	0.25	2.01			
19	69.6	0.69	0.31	2.05			
20	69.6	0.7	0.35	2.08			
21	69.6	0.74	0.37	2.1			
22	69.6	0.76	0.41	2.11			
23	69.6	0.8	0.43	2.15			
24	69.6	0.85	0.47	2.15			
25	69.6	0.88	0.5	2.16			
26	69.6	0.94	0.54	2.16			
27	69.6	0.97	0.57	2.17			
28	69.6	1.01	0.6	2.17			
29	69.6	1.06	0.62	2.19			
30	69.6	1.09	0.66	2.19			
31	69.6	1.13	0.68	2.19			
32	69.6	1.16	0.7	2.19			

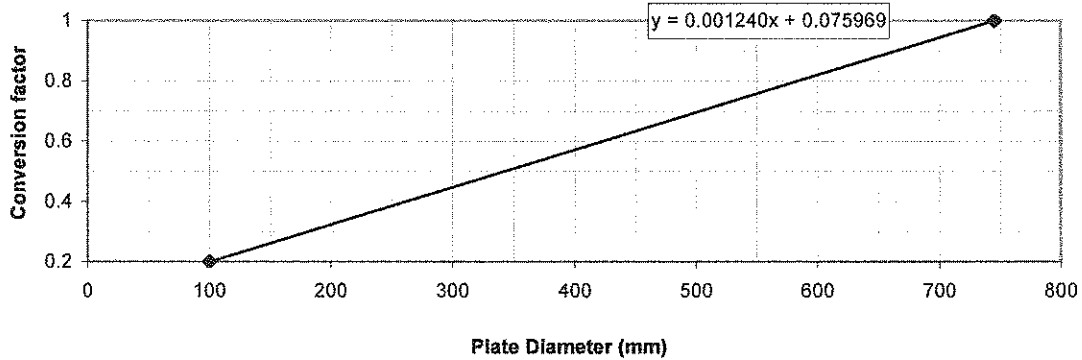
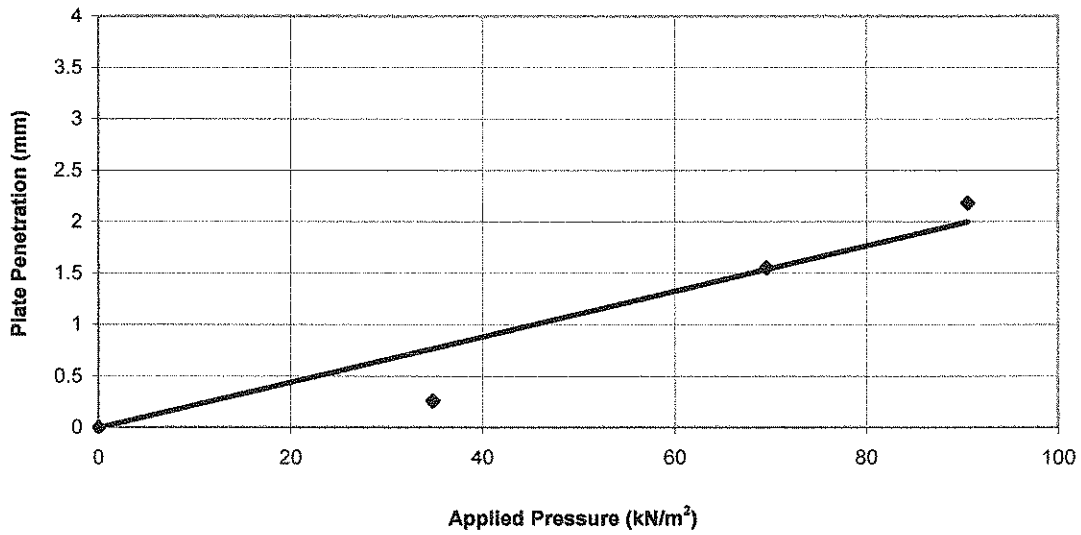
33	69.6	1.18	0.72	2.19
34	69.6	1.22	0.75	2.19
35	69.6	1.26	0.77	2.19
36	69.6	1.29	0.8	2.21
37	69.6	1.32	0.82	2.21
38	69.6	1.35	0.84	2.21
39	69.6	1.35	0.84	2.21
40	69.6	1.35	0.84	2.21
Settlement		0.97	0.83	2.07
41	90.5	1.7	0.95	2.31
42	90.5	1.9	0.95	2.42
43	90.5	1.9	1.03	2.45
44	90.5	1.97	1.06	2.46
45	90.5	2.02	1.07	2.47
46	90.5	2.09	1.09	2.48
47	90.5	2.16	1.13	2.49
48	90.5	2.22	1.15	2.5
49	90.5	2.26	1.16	2.5
50	90.5	2.32	1.18	2.5
51	90.5	2.35	1.2	2.5
52	90.5	2.37	1.21	2.5
53	90.5	2.42	1.21	2.5
54	90.5	2.47	1.21	2.51
55	90.5	2.48	1.22	2.51
56	90.5	2.48	1.22	2.51
57	90.5	2.56	1.22	2.51
Settlement		1.21	0.38	0.3

1.290	1.550
Increment 3	
0.630	2.180

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**SOLMEK
GEOTECHNICAL TESTING LABORATORY**

PLATE BEARING TEST	Sheet:	2 of 2
Location: McNulty Offshore	Test No:	2



Total Plate Deflection	2.180 mm	Produced by:	I J Newham
Plate Diameter	600 mm	Date:	21.01.2011
		Checked by:	
		Date:	

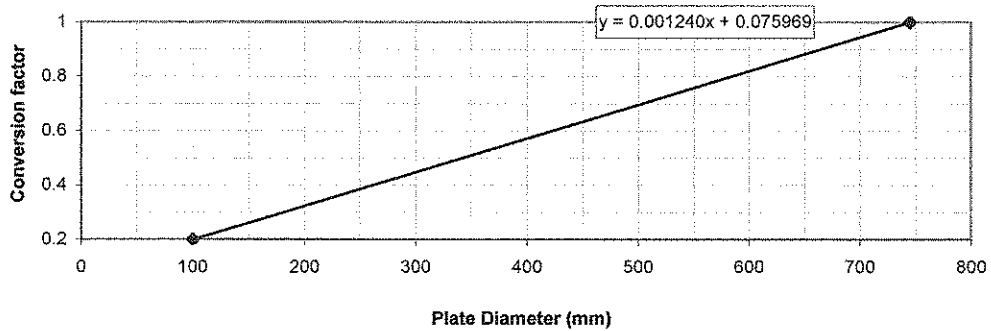
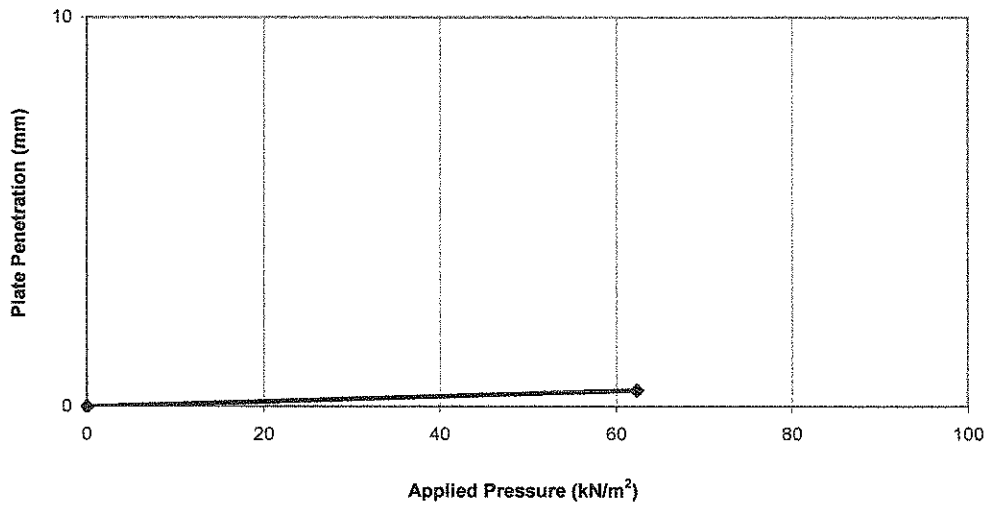


**SOLMEK
GEOTECHNICAL TESTING LABORATORY**

PLATE BEARING TEST					Date:	21.01.2011	
Location: McNulty Offshore					Test No:	3	
					Sheet:	1 of 2	
Test Method: BS 1377 : Part 9 : 1990 (Incremental Method)					Test Level:	0.00mbgl	
Plate Diameter: 0.455 m					Weather:	Clear, windy and frozen ground	
Kentledge Type: JCB Sitemaster + Jack					Load Applied:	62.3kN/m ²	
					Start Time of Test:	1300	
Elapsed Time (mins)	Pressure (kN/m ²)	Dial Gauge Reading (mm)			Average Settlement (mm)	Cumulative Settlement (mm)	
		Dial 1	Dial 2	Dial 3			
0	0	0	0	0	Increment 1		
Start	0	0	0	0			
2	62.3	0.14	0.01	0.3			
3	62.3	0.29	0.1	0.41			
4	62.3	0.38	0.17	0.52			
5	62.3	0.41	0.24	0.62			
6	62.3	0	0	0			
7	62.3	0	0	0			
8	62.3	0	0	0			
Settlement		0.41	0.24	0.62	0.423	0.423	

**SOLMEK
GEOTECHNICAL TESTING LABORATORY**

PLATE BEARING TEST	Sheet:	2 of 2
Location: McNulty Offshore	Test No:	3



HD 25/94 Figure 4.4 : Correction for Smaller Plates

Total Plate Deflection	0.423 mm	Produced by:	I J Newham
Plate Diameter	455 mm	Date:	21.01.2011
		Checked by:	
		Date:	

Appendix E
Notes on Limitations

¶Solmek conditions of offer, notes on limitations & basis for contract (ref: version1/2008)

These conditions accompany our tender and supercede any previous conditions issued. Solmek will prepare a report solely for the use of the Client (the party invoiced) and its agent(s). No reliance should be placed on the contents of this report, in whole or in part by 3rd parties. The report, its content and format and associated data are copyright, and the property of Solmek. Photocopying of part or all of the contents, transfer or reproduction of any kind is forbidden without written permission from Solmek. A charge may be levied against such approval, the same to be made at the discretion of Solmek. Solmek is a trading name of Hymas Geoenvironmental Ltd.

Solmek cannot be held liable and do not warrant, or otherwise guarantee the validity of information provided by third parties and subsequently used in our reports. Solmek are not responsible for the action negligent of otherwise of subcontractors or third parties.

Site investigation is a process of sampling. The scope and size of an investigation may be considered proportional to levels of confidence regarding the ground and groundwater conditions. The exploratory holes undertaken investigate only a small volume of the ground in relation to the overall size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions as encountered within each of the exploratory holes. There may be different ground conditions elsewhere on the site which have not been identified by this investigation and which therefore have not been taken into account in this report. Reports are generally subject to the comments of the local authority and Environment Agency. The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that mobile contamination, ground gas levels and groundwater levels may vary owing to seasonal, tidal and/or weather related effects. Solmek cannot be held liable for any unrecorded or unforeseen obstructions between exploratory boreholes and trial pits. This includes instances where previous structures on the site (buried man made structures) or the presence of boulder clay (cobbles and/or boulder obstructions) have been anticipated. All types of piling operations should make allowance for obstructions within the construction budget to accommodate this. Unrecorded ancient mining may occur anywhere where seams that have been worked and influence the rock and soil above. Dissolution cavities can occur where gypsum or chalk is present. Rotary drilling is the recommended technique to prove the integrity of the rock.

Where the scope of the investigation is limited via access to information, time constraints, equipment limitations, testing, interpretation or by the client or his agents budgetary constraints, elements not set out in the proposal and excluded from the report are deemed to be omitted from the scope of the investigation.

Desk studies are generally prepared in accordance with RICS guidelines. Environmental site investigations are generally undertaken as 'exploratory investigations' in accordance with the definitions provided in paragraph 5.4 of BS 10175:2001 in order to confirm the conceptual assumptions. You are advised to familiarize yourself with the typical scope of such an investigation. No pumping of water will be undertaken unless a licence or facilities/equipment have been arranged by others.

Where the type, number or/and depth of exploratory hole is specified by others, Solmek cannot and will not be responsible for any subsequent shortfall or inadequacy in data, and any consequent shortfall in interpretation of environmental and geotechnical aspects which may be required at a later date in order to facilitate the design of permanent or temporary works.

All information acquired by Solmek in the course of investigation is the property of Solmek, and, only also becomes the joint property of the Client only on the complete settlement of all invoices relating to the project. Solmek reserve the right to use the information in commercial tendering and marketing, unless the Client expressly wishes otherwise in writing. The quoted rates do not include VAT, and payment terms are 30 days from dispatch of invoice from our offices. Quotes are subject to a site visit.

We have allowed for 1 mobilisation and normal working hours unless otherwise stated. The scope of the investigation may be reviewed following the desk study and/or fieldwork. The presence or otherwise of Japanese Knotweed or other invasive plants can be difficult to identify especially during winter months. If Japanese Knotweed or other invasive species are suspect, it should be confirmed by an ecologist. We have not allowed for acquiring services information, and cannot be responsible for damage to underground services or pipes not shown to us or not clearly shown on plans. Costs incurred will be passed on to you, and in commissioning Solmek you understand and accept that you/your agent have a contractual relationship with Solmek & you accept this. Our rates assume unobstructed, reasonably level and firm access to the exploratory positions and adequate clear working areas and headroom. We have priced on the basis that you or your client have the necessary permissions, wayleaves and approvals to access land. All boreholes and pits are backfilled with arisings except where gas monitoring pipes are installed with stopcock covers. Solmek are not responsible for any uneven surfaces as a result of siteworks and rutting and backfilled excavations may require re-levelling and/or making good by others after fieldwork is complete, and Solmek has not allowed for this. No price has been provided or requested for a return visit to remove pipework and covers. Hourly rates apply to consultancy only and do not include expenses unless otherwise shown. If warranties are required, legal costs incurred will be passed on to you assuming Solmek agree to complete such warranties, modified or otherwise and you understand and agree to pay all costs.

We reserve the right to pursue full payment of the invoice prior to release of any information including reports. We advise you/your client that we may elect to pursue our statutory rights under late payment legislation, and will apply 8% to the base rate for unreasonably late payments. Solmek are exempt from the CIS Scheme. Solmek offer to undertake work only in strict accordance with conditions covered by our current insurances, which are available for inspection. Solmek are not responsible for acts, negligent or otherwise of subcontractors and as a matter of policy cannot indemnify any other parties. Professional indemnity Insurance is limited to ten times the invoice net total except where stated otherwise by Solmek. Solmek give notice that consequential loss as a direct or indirect result of Solmek's activities or omission of the same are excluded.