Phase 1: Desk Study
51 Sunderland Road, Cleadon
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PHASE 1 DESK STUDY

51 SUNDERLAND ROAD, CLEADON

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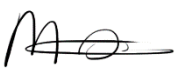
APPENDICES

Revision	Date	Prepared By	Signed
Final	November 2015	M Atkins *Geotechnical Engineer*	
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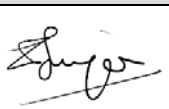
		D Simpson *Principal Geotechnical Engineer*	
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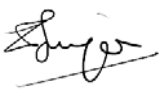
		D Simpson *Principal Geotechnical Engineer*	

1 EXECUTIVE SUMMARY

Site Address	51 Sunderland Road, Cleadon, Sunderland, Tyne & Wear, SR6 7UW.
Site Description	The desk study area comprises a single storey brick built summer house and garage to the north east of the site. A bungalow is located to the western boundary. The north and south of the site is primarily garden areas with a tarmac driveway running along the eastern boundary. It is noted several mature trees are located on and surrounding the site. The topography of the site is level.
Site History *On Site* *Offsite*	 The earliest maps showed that the site is located within an agricultural area. A building was constructed along with two additional structure by the late 1930's with a small structure developing to the north west by the 1950's. From the earliest mapping the land usage around the site is primarily agricultural land. The land within a 500m radius of the site has undergone small developments until this time.
Proposed End Use	The proposed development is outlined to be a single residential property.
Environmental Setting *Landfill & Waste* *Regulated Industries* *Geology* *Mining* *Hydrogeology* *Hydrology* *Flooding* *Radon Gas*	 The Envirocheck report indicates that there is one Historical Landfill Site entry located 570m south west of the site at Moor Lane, Boldon. The nearest active Contemporary Trade Directory entry is located 730m north of the site at Allison Heating Ltd. There is one Fuel Station entry located 688m north west of the site at Cleadon Service Station. . The solid geology beneath the site is likely to comprise Upper Magnesian Limestone of the Permian Age (Limestone) with the drift deposits on site are likely to comprise Clay of the Pelaw Clay Member. The Hebburn Dyke is noted approximately 50m north of the site. The mining report highlights that the site is situated in an area where four seams have been worked within the likely zone of physical influence on the surface at a depth of 310m to 450m and last worked in 1978. Using the Environment Agency's Policy and Practice for the Protection of Groundwater the solid geology beneath the site is classified as a **Principal Aquifer**. The overlying drift is classified as an **Unproductive Strata**. The site does not lie within a Source Protection Zone. There are no Ground Water Abstractions located within 1km of the site. The nearest surface water feature is located 173m north east of the site. The Envirocheck states that the site is not situated within a zone affected by historical records of Flooding or Extreme Flooding from Rivers and Sea without Defences. The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level. No radon protection measures are necessary for new buildings on the site.
Preliminary Geotechnical Assessment	Given the expected ground conditions noted above, the use of traditional strip or pad footings for the new structures will be dependent on the depth of made ground proven across the site. Where loose made ground or soft/loose natural deposits are encountered, foundations will need to be taken through the made ground/disturbed ground into underlying natural strata of adequate bearing capacity.
Preliminary Contamination Assessment	The desk study has shown that the site is unlikely to have been exposed to anything other than minimal contamination, with construction/demolition waste the most likely source local to the surrounding structures.
Potential Sources of Ground Gas	Minimal made ground is expected on site, therefore ground gas assessment is not recommended.
Phase Two Recommendations	• A series of small percussive boreholes with insitu testing and samples. • Geotechnical testing.

2 INTRODUCTION AND SCOPE OF INVESTIGATION

Solmek were instructed by Mr David Butler to undertake a desk study on a parcel of land at 51 Sunderland Road, Cleadon. The proposed development is outlined to be the construction of a single residential property.

The following steps may be required in the investigation and remediation of potentially contaminated land:

Phase 1: Desk Study
Phase 2: Intrusive Investigation
Phase 3: Remediation Statement
Phase 4: Validation Reports

Phases 1 and 2 are generally required in the redevelopment of most sites. Phases 3 and 4 are subject to the findings of the initial stages. This report represents Phase 1 of the site investigation.

The purpose of this Phase 1 Desk Study is to evaluate likely ground conditions and significant environmental issues at the site, and to plan the scope of subsequent phases of investigation.

This report may be regarded as a Preliminary Risk Assessment in accordance with the Environment Agency's guidance document *Model Procedures for the Management of Land Contamination* (CLR 11, 2004).

This Phase 1 Desk Study has been undertaken with due regard to current contaminated land guidance issued by the Royal Institution of Chartered Surveyors (RICS) together with BS 10175: 2001, *"Code of Practice for the Investigation of Potentially Contaminated Land"* and relevant sections of BS 5930: 1999, *"Code of Practice for Site Investigations"*.

The objectives of the investigation are as follows:

- To determine the land use history of the site from an inspection of available Historical Maps
- To determine the environmental setting of the site from available sources
- To determine whether past mining may have had an influence on the site
- To determine whether the site has previously been used for purposes that may have given rise to significant ground contamination
- To provide recommendations for further investigation.

3 SITE WALKOVER AND DESCRIPTION

3.1 General

The centre of the site is located at OS Grid Ref 438840, 561860 and covers an area of approximately 0.25Ha. The area is located at 51 Sunderland Road, Cleadon, Sunderland, Tyne & Wear.

The preliminary site inspection was undertaken on the 10th November 2015 and site photographs are presented in Appendix A.

3.2 On Site Features

The desk study area is located on a parcel of land attached to 51 Sunderland Road, Cleadon. It currently consists of a single storey brick built summer house and garage to the north east of the site. A bungalow is located to the western boundary. The north and south of the site is primarily garden areas with a tarmac driveway running along the eastern boundary.

The north and western boundary is marked by a wooden fence with the east boundary comprising of shrub, mature trees and small fence. The southern boundary is marked by Sunderland Road.

No obvious signs of surface contamination were noted at the time of the walkover, however, a number of services were located on and surrounding the site including drainage, overhead cables and manhole covers.

Mature trees of various species were located toward the northern and eastern boundaries of the site.

3.3 Off Site Features

The surrounding area of the site is comprised of predominately of agricultural and residential properties.

4 SITE HISTORY

4.1 Map Descriptions

In order to determine the history of the site, previous editions of Historical Maps and Ordnance Survey Plans were inspected. The Historical Maps are presented in Appendix B.

Table 1 presents a summary of the history of the area which includes plots from 1862 to 2015. The summary focuses on the historical land uses and changes relevant to the site and the proposed end use. Measurements to features of note are taken from the nearest boundary of the site and all distances quoted are approximate.

TABLE 1: SUMMARY OF SITE HISTORY

OS Map Edition	On-site Features	Off-site Features
1862 1:10,560	The site appears undeveloped located within agricultural land.	The surrounding area of the site is shown to be predominantly agricultural land with Sunderland Road running along the south western boundary of the site. The village of Cleadon is located approximately 600m north west of the site.
1898 1:10,560	No apparent change.	No significant change.
1919 1:2,500	A tree line is shown around the site boundary.	A building has been constructed 25m north of site and 70m north west of the site. Residential housing has been constructed 210m north west of the site with further housing located 300m south west of the site.
1921 1:10,560	No apparent change.	No significant change.
1938 1:10,560	No apparent change.	Additional housing has been constructed 150m north west of the site.
1939 1:2,500	A building has been constructed on the north west boundary of the site with two small additional structures to the north east of the site.	Three structures located 200m north east of the site.
1951 1:10,000	No apparent change.	No significant change.
1958 1:1,250	Very small structures shown to the northern area of the site.	Additional buildings constructed 50m north and 250m north west of the site.
1966-1968 1:10,000	No apparent change.	No significant change.
1984-1987 1:10,000	No apparent change.	Additional structured construed 100m north of the site.
2006 1:10,000	No apparent change.	A residential property has been constructed immediately north of the site.
2015 1:10,000	No apparent change.	No significant change.

4.2 Potential contamination sources identified via historical plans

Contamination from historical land uses within a 250m radius of the site have been identified:

Made ground from materials used to infill depressions and form a level area for access or building. This may include brick, concrete, timber, ash, slag, coal and metals.

Construction/demolition waste from construction and demolition immediately around the site over the documented history. This may include brick, concrete, timber, asbestos and metals.

5 ENVIRONMENTAL SETTING

5.1 Information Sources

The environmental setting of the site was determined through reference to the following:

- Envirocheck Report (including historical map extracts)
- British Geological Survey (BGS) 1:50,000 scale sheet No 21 Sunderland solid and drift
- BRE Publication BR211 Radon: Guidance on Protective Measures for New Dwellings

5.2 Landfill and Waste

The Envirocheck report indicates that there is one Historical Landfill Site entry located 570m south west of the site at Moor Lane, Boldon.

The Envirocheck report indicated there are no other landfills or sites dealing with waste located within 1km of the site.

5.3 Regulated Industries

The Envirocheck report indicates that there are eight Contemporary Trade Directory entries located within 1km of the site. The nearest active entry is located 730m north of the site at Allison Heating Ltd for boilers – servicing, replacements and repairs.

The Envirocheck report indicates that there is one Fuel Station entry located 688m north west of the site at Cleadon Service Station under the brand Jet and is currently open.

The Envirocheck report indicates that there is one Local Authority Pollution Prevention and Control entry located 688m north west of the site at Cleadon Service Station.

5.4 Geology

The solid geology beneath the site is likely to comprise Upper Magnesian Limestone of the Permian Age (Limestone) with the drift deposits on site are likely to comprise Clay of the Pelaw Clay Member.

The Hebburn Dyke is noted approximately 50m north of the site.

The Cleadon Fault is noted 200m north and 670m south east of the site with a downthrow to the south.

5.5 Mining & Quarrying

A coal mining report was required to assess the risks posed by historic and possible future developments associated with coal mining. A coal mining search report for the site from The Coal Authority dated, 6th November 2015 is presented in Appendix D.

The mining report highlights that the site is situated in an area where four seams have been worked within the likely zone of physical influence on the surface at a depth of 310m to 450m and last worked in 1978. Any ground movement from these coal seams should have stopped by now.

The report states there are no known coal mine entries within, or within 20m of, the boundary of the property.

The report highlights that the site is not situated within the boundary of a former opencast coal mining site. Neither is the site located within 200m of a currently operating opencast coal mine or 800m of a future opencast coal mine.

It should be noted that the site is not located within a High Risk Development Area.

The Envirocheck report indicates that there are four BGS Recorded Mineral Site entries located within 1km of the site. The nearest is located 723m south west of the site at Moor Lane Brick Works for extraction of common clay and shale using opencast methods, however, operations have since ceased.

5.6 Geological Hazards and Instability

The Envirocheck report presents the maximum hazard ratings of ground stability hazards located on site as follows:

- Very low hazard is posed by Collapsible Deposits, Ground Dissolution of Soluble Rocks and Landslides
- Low hazard is posed by Shrinking or Swelling Clay
- Negligible hazard is posed by Compressible Deposits and Running Sand

5.7 Hydrogeology

Using the Environment Agency's Policy and Practice for the Protection of Groundwater the solid geology beneath the site is classified as a **Principal Aquifer** with the overlying drift is classified as an Unproductive Strata.

The site does not lie within a **Source Protection Zone**.

The Envirocheck report states there are no Ground Water Abstraction entries located within 1km of the site.

5.8 Hydrology

The nearest surface water feature is located 173m north east of the site.

The Envirocheck report indicates that there is one Discharge Consent entries located 702m east of the site at Westhall Campsite for a sewage deposal works.

The Envirocheck report states there are no Surface Water Abstraction entries located within 1km of the site.

5.9 Flooding

The Envirocheck states that the site is not situated within a zone affected by historical records of Flooding or Extreme Flooding from Rivers and Sea without Defences.

The Envirocheck report indicates that there are no flood defences or areas benefiting from flood defences within 1km of the site.

5.10 Sensitive Land Use

The site is located within 2km of an Area of Adopted Green Belt. This is located at its nearest point 1m south east of the site.

The site is located within 2km of a Record of a Local Nature Reserve. This is identified as Cleadon Hills and located at its nearest point 966m north of the site.

The site is located within 2km of a Site of Special Scientific Interest. This is identified as Boldon Pastures and located at its nearest point 705m west of the site.

5.11 Radon Gas

The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

In accordance with the procedure described in BRE Publication BR211 Radon: Guidance on Protective Measures for New Dwellings, no radon protection measures are necessary for new buildings or extensions on the site.

6 CONCEPTUAL SITE MODEL

6.1 General

Based on the information presented in the preceding Sections, and in accordance with the CLR11 guidance noted in Section 1, a Preliminary Conceptual Site Model has been produced.

The main features of the model are discussed in the following sections together with preliminary recommendations where appropriate.

6.2 Likely Ground Conditions

It is expected that, based on available information, ground conditions are likely to be made ground comprising of hardstanding, construction/demolition waste and topsoils. Made ground likely to be deepest around the existing buildings. The drift deposits on site are shown to likely comprise of clay deposits overlying a limestone bedrock.

6.3 Potential Buried Obstructions

Based on the site history the likelihood of buried obstructions is expected to be minimal, however, natural boulders maybe encountered within the clay deposits.

6.4 Mining Assessment

The site is within a Coal Mining Reporting Area as defined by the Coal Authority.

The general guidance and good practice for assessing if a seam is within influencing distance to the surface is if rock cover (not including made ground and drift) is greater than 10x the worked thickness of the coal seam, then generally no void migration will reach the interface of the rock and drift deposits/made ground and thus no instability via a crown hole tyre collapse will occur.

The mining report highlights that the site is situated in an area where four seams have been worked within the likely zone of physical influence on the surface at a depth of 310m to 450m and last worked in 1978. Any ground movement from these coal seams should have stopped by now.

The mining report does not state any possible shallow worked seams, therefore it is unlikely the proposed development will be affected by past worked coal seams.

6.5 Preliminary Geotechnical Assessment

Given the expected ground conditions noted above, the use of traditional strip or pad footings for the new structures will be dependent on the depth of made ground proven across the site. Where loose made ground or soft/loose natural deposits are encountered, foundations will need to be taken through the made ground/disturbed ground into underlying natural strata of adequate bearing capacity.

6.6 Preliminary Contamination Assessment

The desk study has shown that the site is unlikely to have been exposed to anything other than minimal contamination.

In view of the current and future site use, chemical contamination testing is considered unnecessary.

It should be noted that the above potential contaminants are considered to be commonly associated with the specified past land uses of the site, and adjacent land use. Risk assessment should be undertaken for contamination identified during intrusive investigation.

Potential pathways which link the potential contaminants to end users of the site and controlled waters (receptors) include the following:

- Ingestion of soil (outdoors) / dust (indoors)
- Skin contact with soil (outdoors) / dust (indoors)

- Inhalation of dust (outdoors and indoors)
- Contamination via buried water pipes
- Surface water run-off, including via existing drainage infrastructure
- Downward infiltration of leachable contaminants to groundwater

6.7 Potential Sources of Ground Gas

Ground gases such as carbon dioxide and methane can be classed as a form of contamination. Potential sources of ground gases include:

- Made Ground
- Quarries, Infilled Clay Pits & Infilled Ponds
- Underlying Natural Strata (alluvium, peat and chalk)
- Petrol re-fuelling sites (which also includes Volatile Organic Compounds)
- Landfill (on and off-site)
- Coal measures

Based on historical map evidence and consideration of the sites environmental setting the table below shows a preliminary comparison of *consequence* against *probability* where ground gas is considered a potential threat to human health.

TABLE 2: POTENTIAL GROUND GAS POLLUTION LINKAGES

Potential Sources	Potential Pathway	Receptor
Made ground (CO_2, CO and CH_4).	Ingress and Accumulation into buildings from vertical and horizontal migration	Future users of site are likely to include adults and children. Construction workers (in particular utility workers).
Preliminary Comparison of Consequence verses Probability		
	Classification	**Justification**
Probability *(Based on Table 8.1, CIRIA C665, 2007)*	LOW	Ground gas from made ground.
		No landfills located within 500m radius of the site.
		No shallow coal seams.
Consequence *(Based on Table 8.2, CIRIA C665, 2007)*	MILD	Construction of a residential house.
	Risk	**Details**
Consequence vs. Probability *(Based on Table 8.3, CIRIA C665, 2007)*	LOW RISK	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.

6.8 Risk Assessment for Contaminated Land

As part of this Phase 1 Desk Study, a preliminary conceptual model and risk assessment is produced. This assessment should be revised following the Phase 2 Site Investigation outlining a qualitative risk assessment. Should there be unacceptable risks to the various receptors/end-users following the Phase 2 works, then a remediation strategy may be required to outline measures to satisfy Part 2A of the Environmental Protection Act (1990). The above measures are inline with CLR11 – Model Procedures.

The results of the chemical contamination testing as part of the Phase 2 investigation should be compared to the current Land Quality Management (LQM) – Suitable 4 Use Levels (S4UL) December 2014.

6.9 Conceptual Site Model

The conceptual model collates the salient aspects of the site to form a model which should enable

comparison after fieldwork and testing. This model identifies the potential pollution linkages that may influence the proposed development and geotechnical considerations.

The risk ratings are based on the current potential liabilities and likely potential future liabilities. The risks posed by the geotechnical and contamination aspects of the site will be revised following site works, and any mitigating action required added.

TABLE 3: PRELIMINARY CONCEPTUAL MODEL

Source	Pathway	Receptor
Potential contamination in made ground from construction materials	Dermal absorption Inhalation of soils Soil ingestion Contaminated water contact Soft landscaping and gardens	Users of the site after development complete Adult and infant householders
Potential contamination in made ground from construction materials and historical land uses	Dermal absorption Inhalation of soils Soil ingestion Contaminated water contact Windblown dust contact	Construction workforce
		Users of surrounding sites
	Uptake via roots and leaf surfaces	Vegetation
	Slow seepage/leaching contaminants	Groundwater **Bedrock is Principal Aquifer**
	Slow seepage/leaching contaminants Accumulation of contaminated sediments	Surface water 173m north east of site
	Direct contact	Construction materials Concrete Service fabric

Low Risk *Moderate Risk* *High Risk*

7 PROPOSED PHASE TWO INTRUSIVE WORKS

A Phase 2 Site Investigation should be undertaken to verify the assumptions made in the Preliminary Conceptual Site Model and to provide data for foundation design.

An outline ground investigation strategy is summarised below, based on the preliminary conceptual site model and information obtained during the desk study.

TABLE 2: SITE INVESTIGATION RECOMMENDATIONS

Proposed method of investigation	Purpose	Comments
Hand dug trial pits	Hand dug trial pits to 1.2m to ensure positions are clear of underground services.	To be undertaken prior to the drilling of all boreholes.
A series of small percussive boreholes to 6mbgl	To determine shallow ground conditions. To collect soil samples for geotechnical and chemical testing. To observe soils profile, localised variations in materials and presence of groundwater.	Ensure positions are CAT scanned and service plans inspected prior to excavation. Hand vanes to be taken in cohesive deposits. SPT samples in granular strata and rock head. Disturbed and jar samples to be undertaken for chemical testing.
Geotechnical Testing	To confirm material properties. To provide concrete classification of materials.	Tests may include sulphate and pH, moisture content, atterberg tests, triaxial and particle size distribution tests. Further tests may be required depending on the materials encountered.

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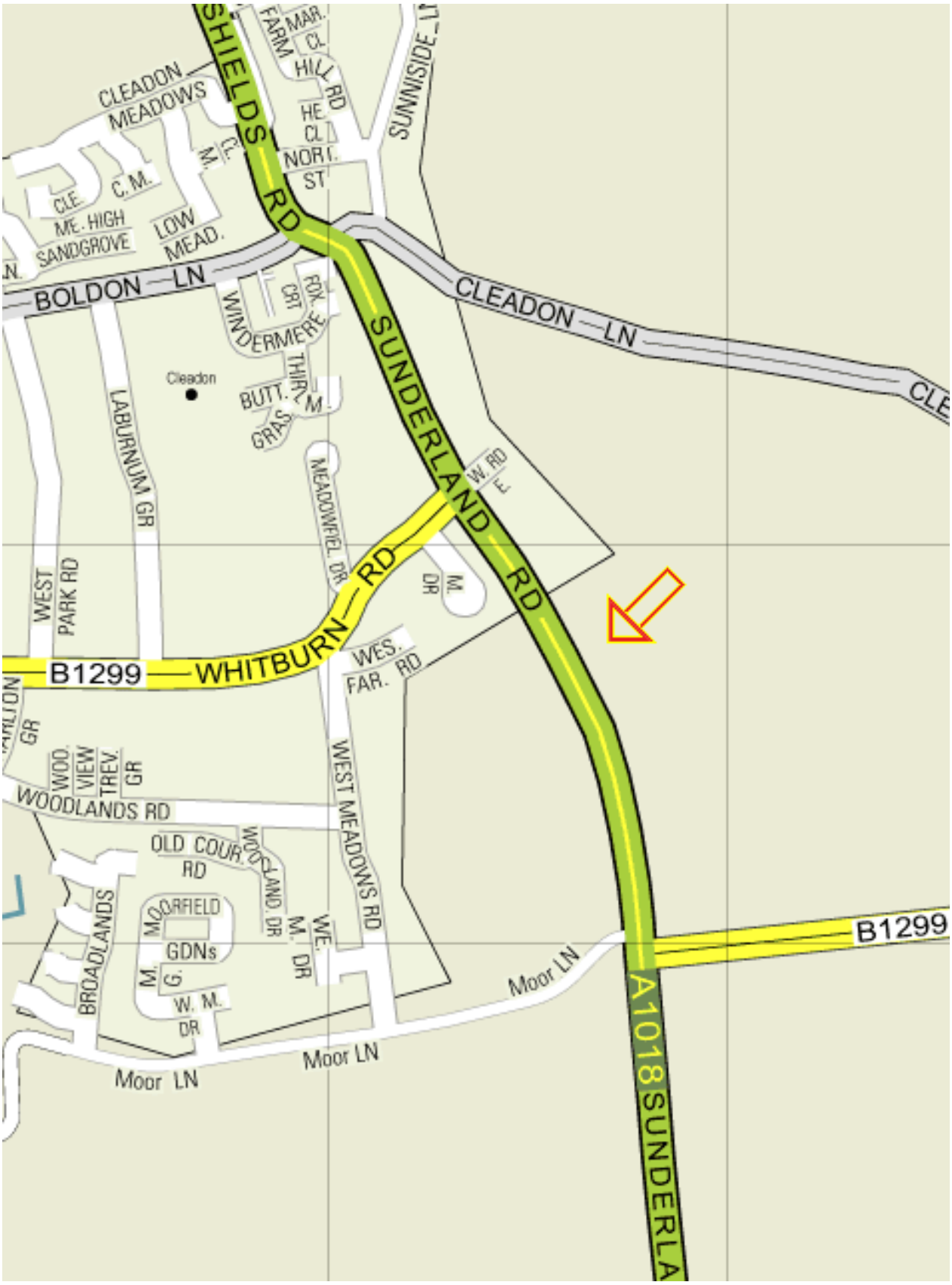
Appendix A
Drawings & Photographs



Client:	51 Sunderland Road, Cleadon
Project:	Mr David Butler
Title:	Site Location Plan
DRG No:	Figure 1
Date	November 2015

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Client:	51 Sunderland Road, Cleadon
Project:	Mr David Butler
Title:	Site Specific Location Plan
DRG No:	Figure 2
Date	November 2015

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Plate 1: View looking south east from the north west of the site.

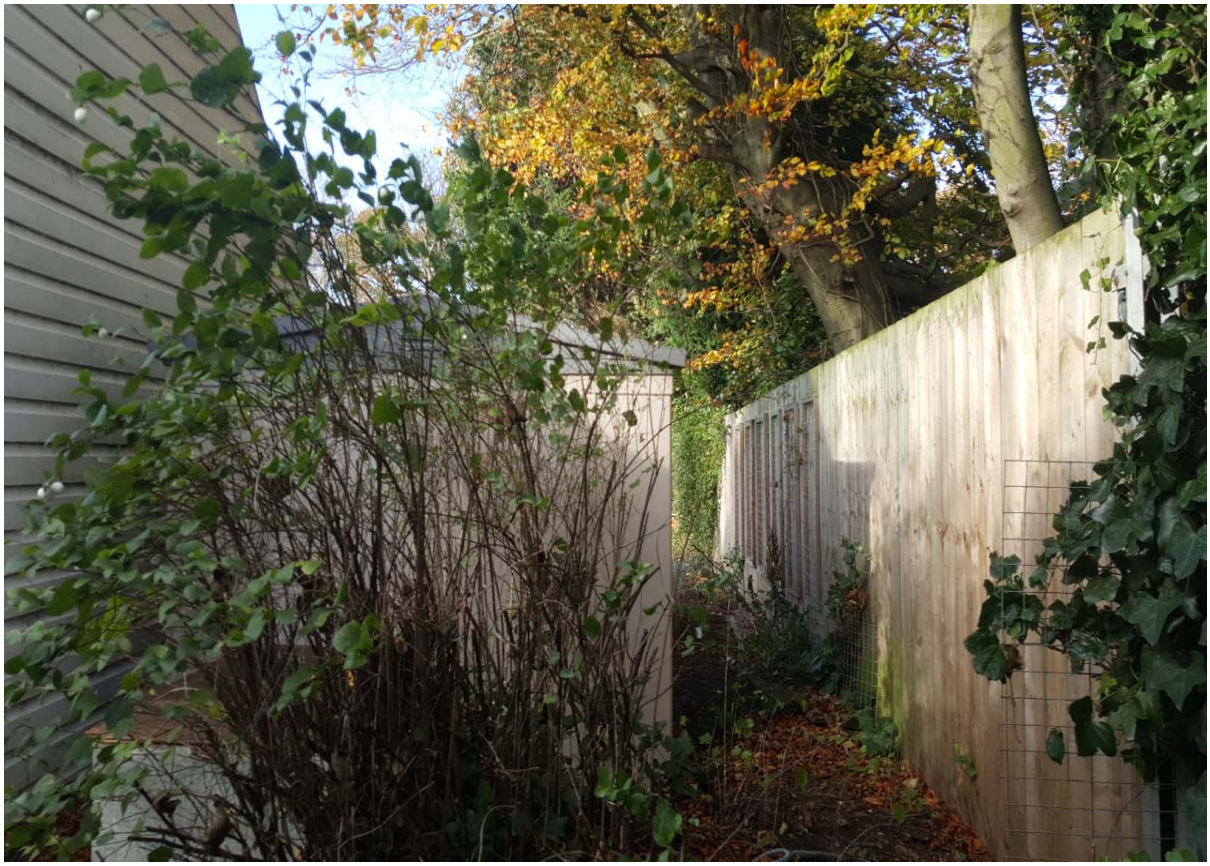

Plate 2: View looking north west from the north east of the site.

Client:	51 Sunderland Road, Cleadon
Project:	Mr David Butler
Title:	Plates 1 & 2
DRG No:	Figure 3
Date	November 2015

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Plate 3: View looking south from the north east.

Plate 4: View looking north from the south of the site.

Client:	51 Sunderland Road, Cleadon
Project:	Mr David Butler
Title:	Plates 3 & 4
DRG No:	Figure 4
Date	November 2015

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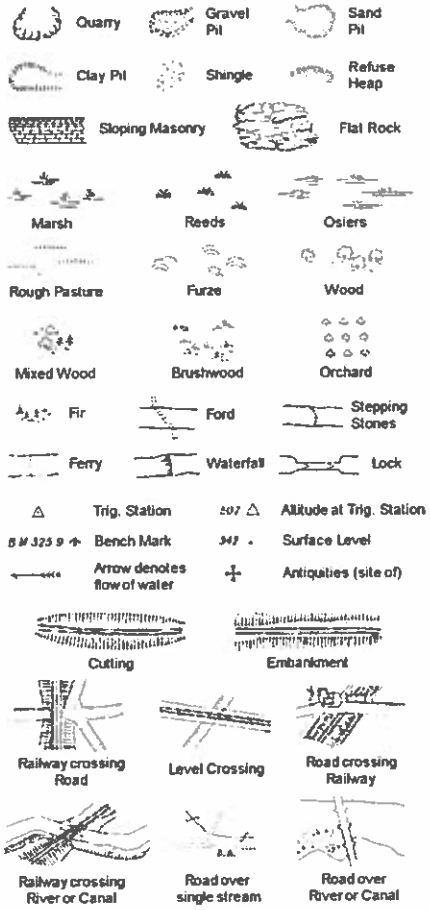
Appendix B
Historical Maps

Historical Mapping Legends

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



B P B S	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

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
El 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

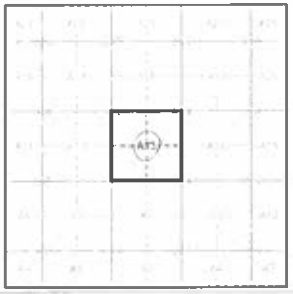
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Disntd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El 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

Envirocheck®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:2,500	1873	2
Durham	1:2,500	1896	3
Durham	1:2,500	1919	4
Durham	1:2,500	1939	5
Ordnance Survey Plan	1:1,250	1958	6
Ordnance Survey Plan	1:2,500	1958 - 1959	7
Ordnance Survey Plan	1:1,250	1963 - 1975	8
Ordnance Survey Plan	1:2,500	1967 - 1968	9
Additional SIMs	1:2,500	1967 - 1968	10
Supply of Unpublished Survey Information	1:1,250	1974	11
Supply of Unpublished Survey Information	1:1,250	1974	12
Ordnance Survey Plan	1:1,250	1977 - 1982	13
Additional SIMs	1:2,500	1977	14
Additional SIMs	1:1,250	1978 - 1990	15
Large-Scale National Grid Data	1:1,250	1993	16
Large-Scale National Grid Data	1:2,500	1993	17
Large-Scale National Grid Data	1:1,250	1996	18

Historical Map - Segment A13



Order Details

Order Number: 74673377_1_1
Customer Ref: S151122
National Grid Reference: 438840, 561860
Slice: A
Site Area (Ha): 0.25
Search Buffer (m): 100

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

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
·286 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
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
Co. Bore. Bdy. County Borough Boundary (England)
Co. Burgh Bdy County Burgh Boundary (Scotland)
R.D. Bdy. 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
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
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 where not coincident with other boundaries
Civil Parish
Shown alternately where 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
Mean high water (springs)
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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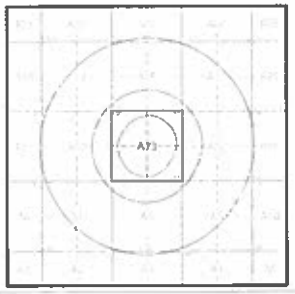
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:10,560	1862	3
Durham	1:10,560	1898	4
Durham	1:10,560	1921	5
Durham	1:10,560	1938	6
Ordnance Survey Plan	1:10,000	1951	7
Ordnance Survey Plan	1:10,000	1968 - 1968	8
Ordnance Survey Plan	1:10,000	1969	9
Sunderland	1:10,000	1976	10
Ordnance Survey Plan	1:10,000	1977	11
Newcastle-upon-Tyne	1:25,000	1977	12
Ordnance Survey Plan	1:10,000	1984 - 1987	13
10K Raster Mapping	1:10,000	2006	14
VectorMap Local	1:10,000	2015	15

Historical Map - Slice A



Order Details

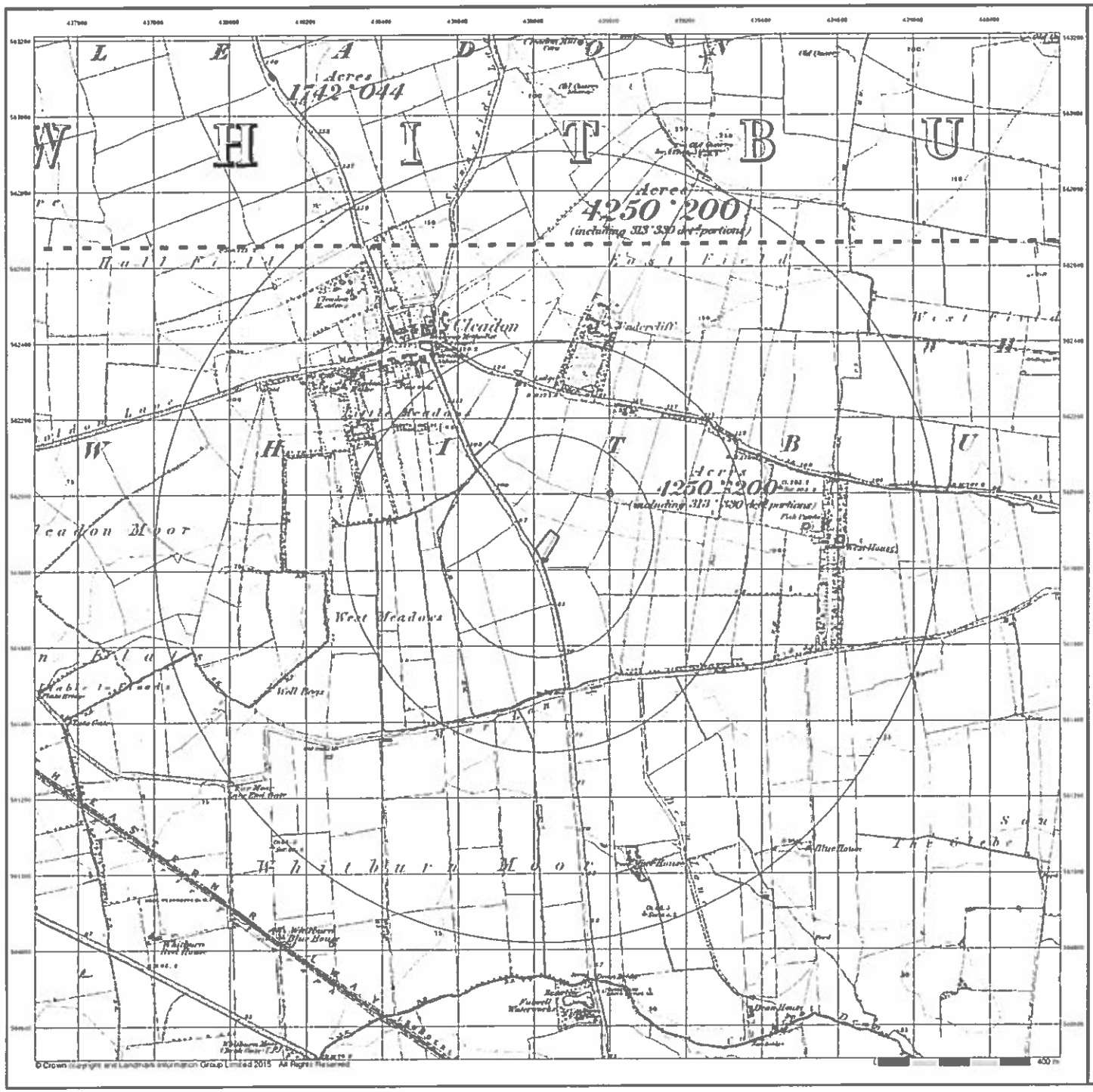
Order Number: 74673377_1_1
Customer Ref: 5151122
National Grid Reference: 438840, 561860
Slice: A
Site Area (Ha): 0.25
Search Buffer (m): 1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

Landmark Information

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



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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)

00400
1862
1:10,560

00800
1862
1:10,560

Historical Map - Slice A

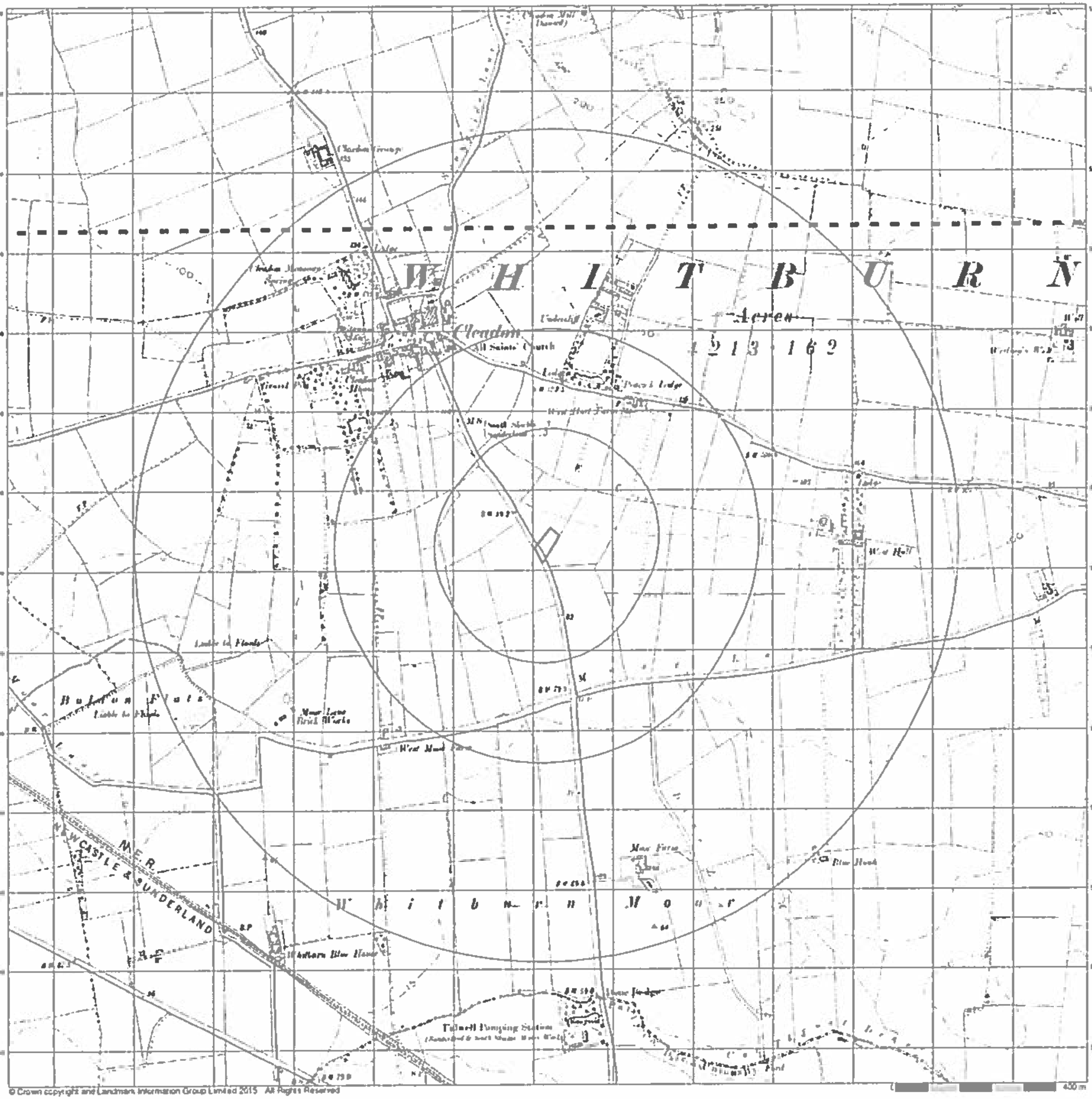
Order Details

Order Number:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

Landmark®



Envirocheck®

Durham
Published 1898
Source map scale - 1:10,560

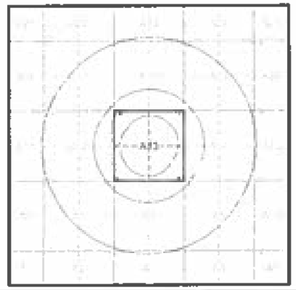
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some 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)

004SW
1898
1:10,560

008NW
1898
1:10,560

Historical Map - Slice A



Order Details

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Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

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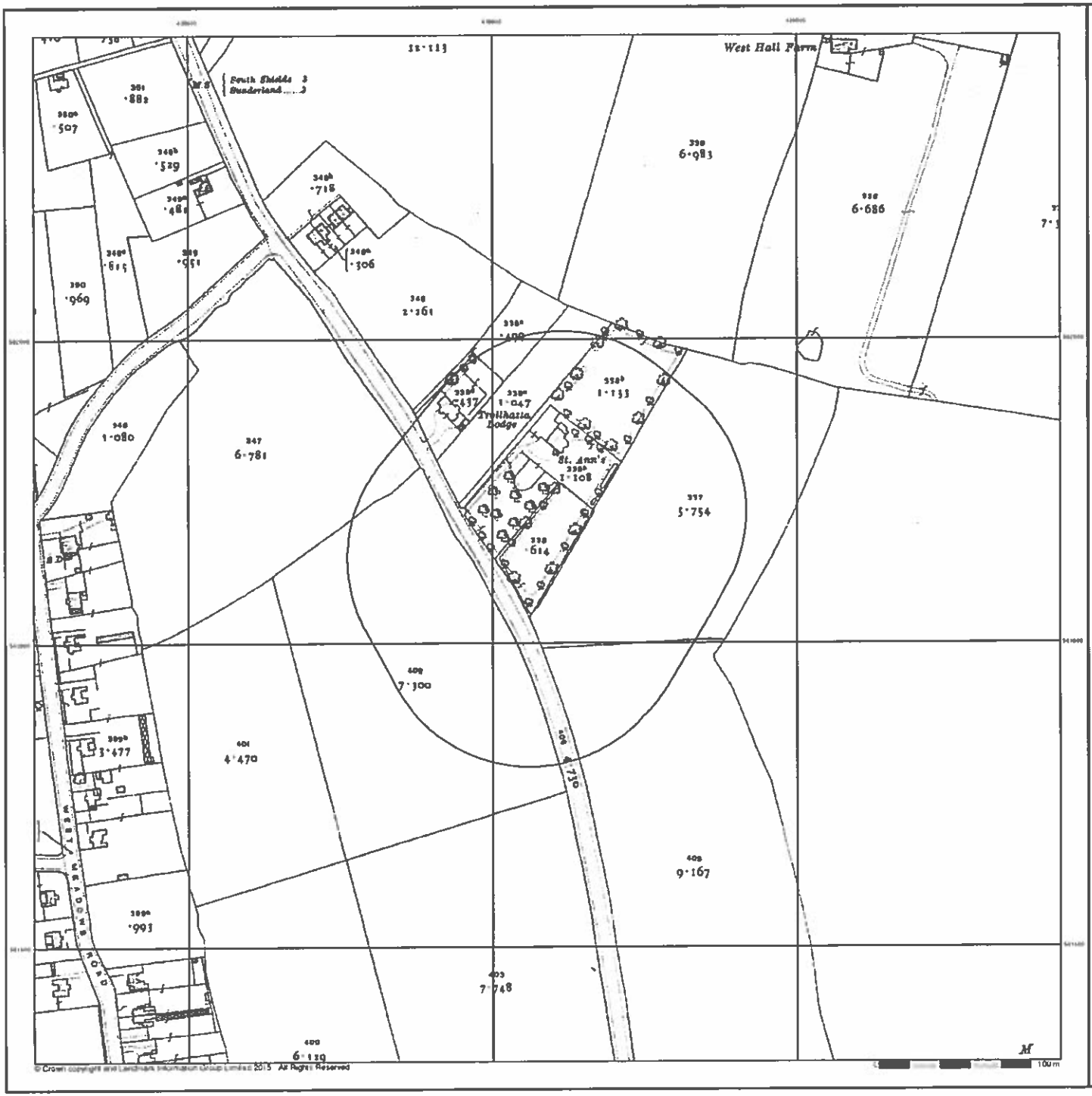


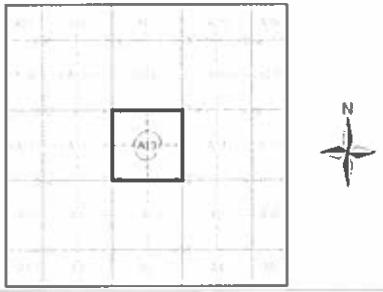
Envirocheck®

Durham
Published 1919
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



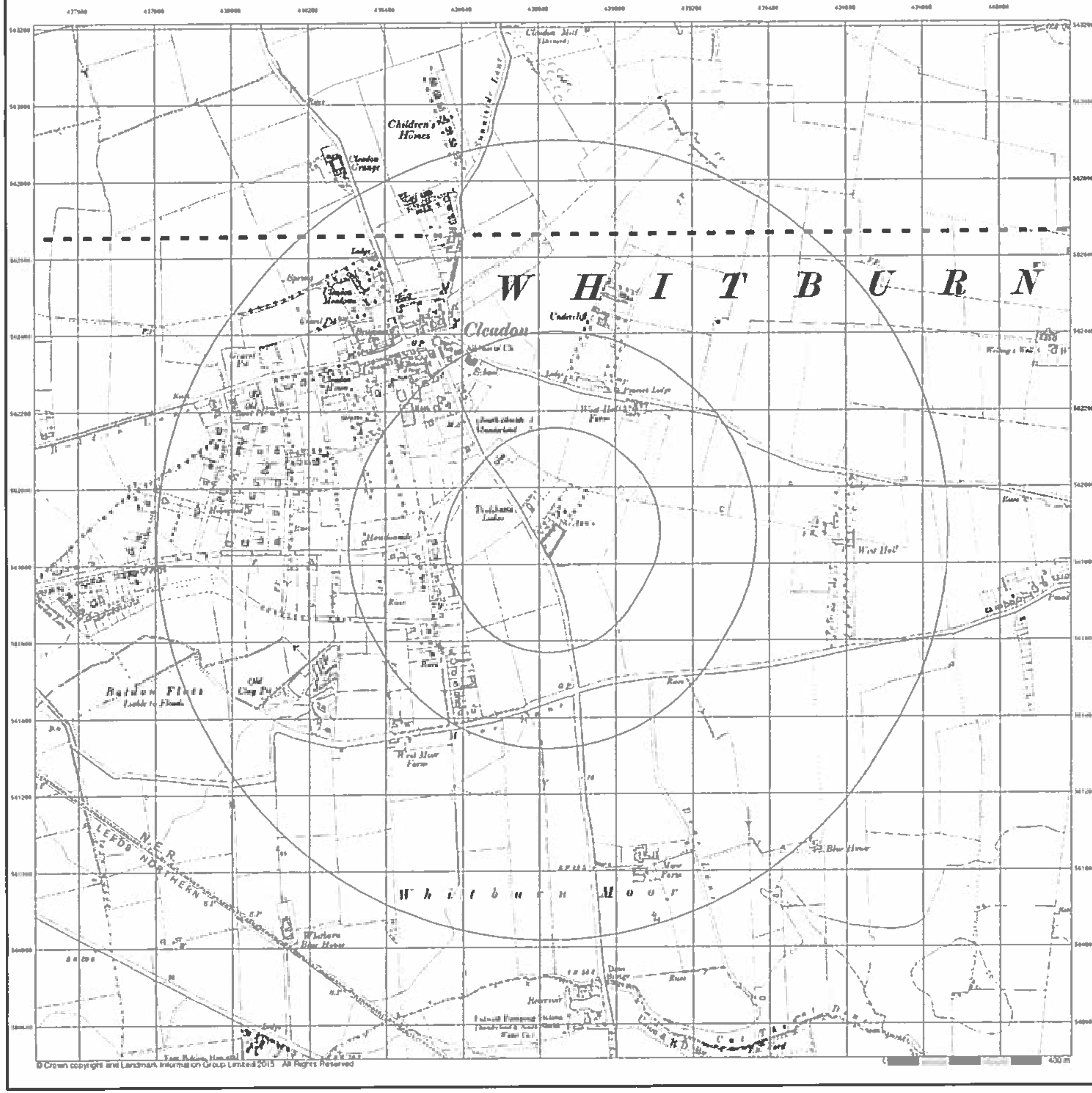
Order Details

Order Number:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	100

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

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



Envirocheck®

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

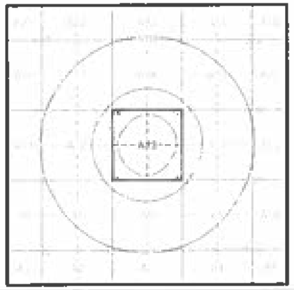
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some 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)

004SW
1921
1:10,560

008NW
1921
1:10,560

Historical Map - Slice A



Order Details

Order Number:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

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Fax: 0844 844 9951
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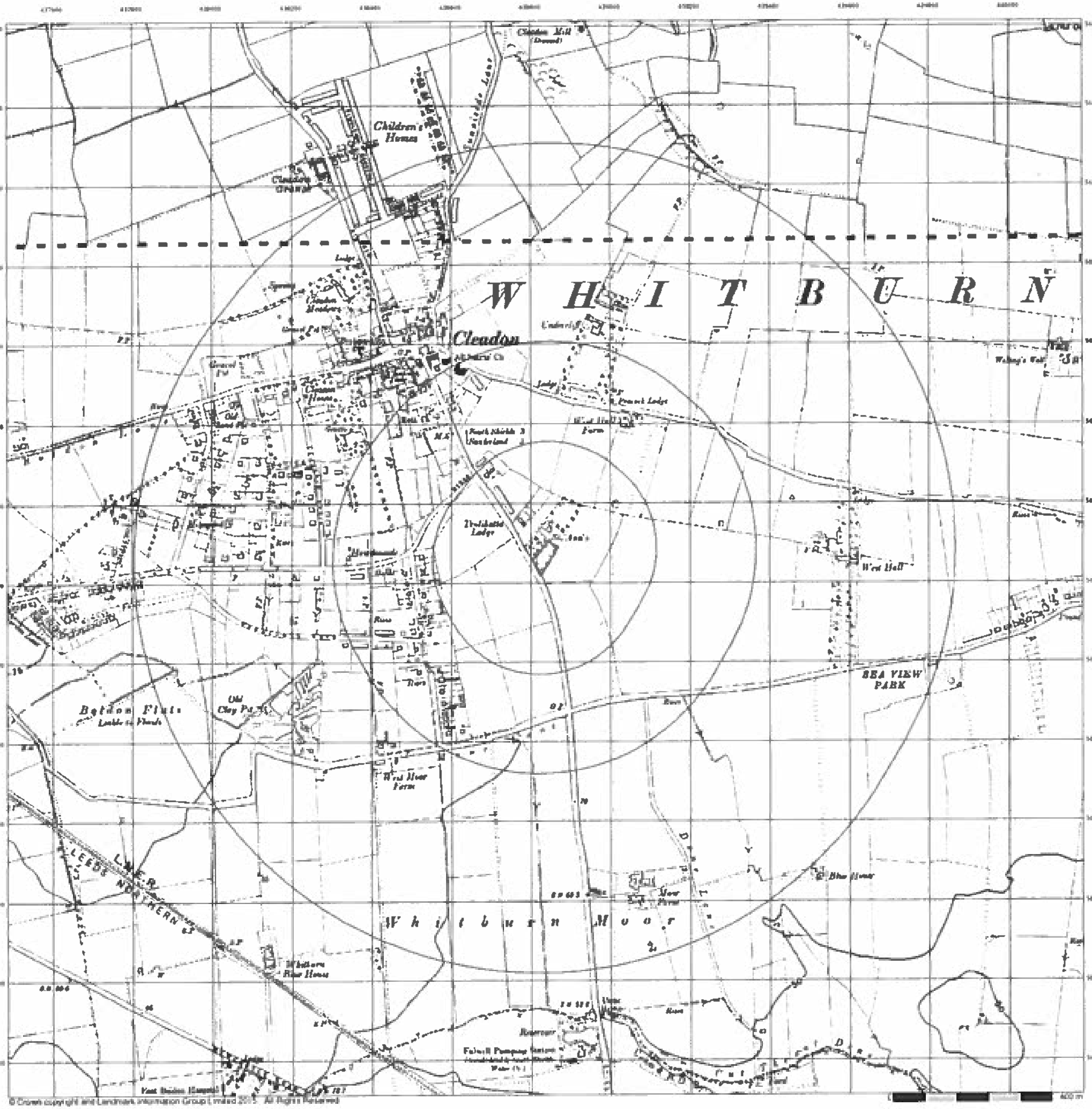


Envirocheck®

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

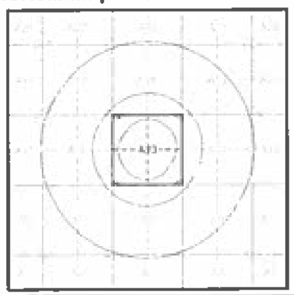
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some 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)

004SW
1938
1:10,560

008NW
1938
1:10,560

Historical Map - Slice A



Order Details

Order Number:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

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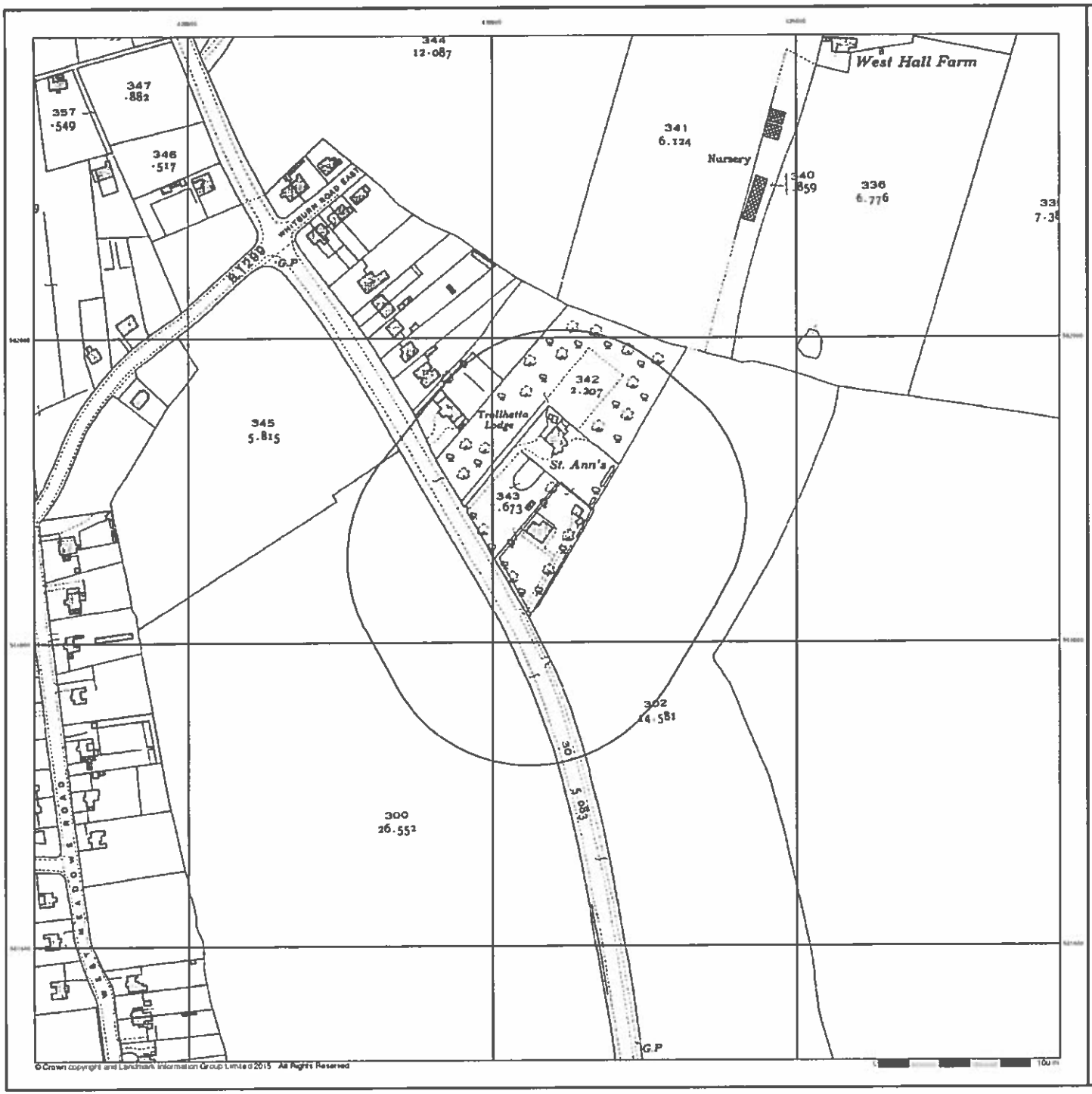


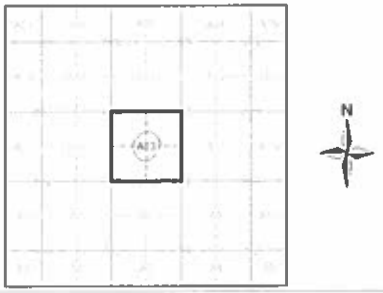
Envirocheck®

Durham
Published 1939
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:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	100

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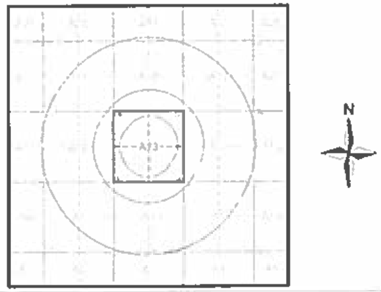
Ordnance Survey Plan
Published 1951
Source map scale - 1:10,000

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: 74673377_1_1
Customer Ref: S151122
National Grid Reference: 438840, 561860
Slice: A
Site Area (Ha): 0.25
Search Buffer (m): 1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

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

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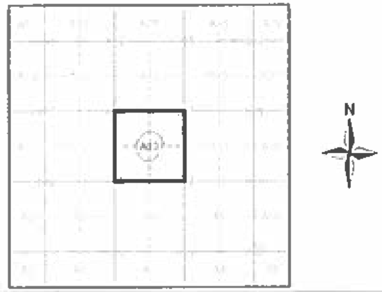
Ordnance Survey Plan
Published 1958
Source map scale - 1:1,250

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)

NZ3862SW 1958 1:1,250	NZ3862SE 1958 1:1,250
NZ3861NW 1958 1:1,250	NZ3861NE 1958 1:1,250

Historical Map - Segment A13



Order Details

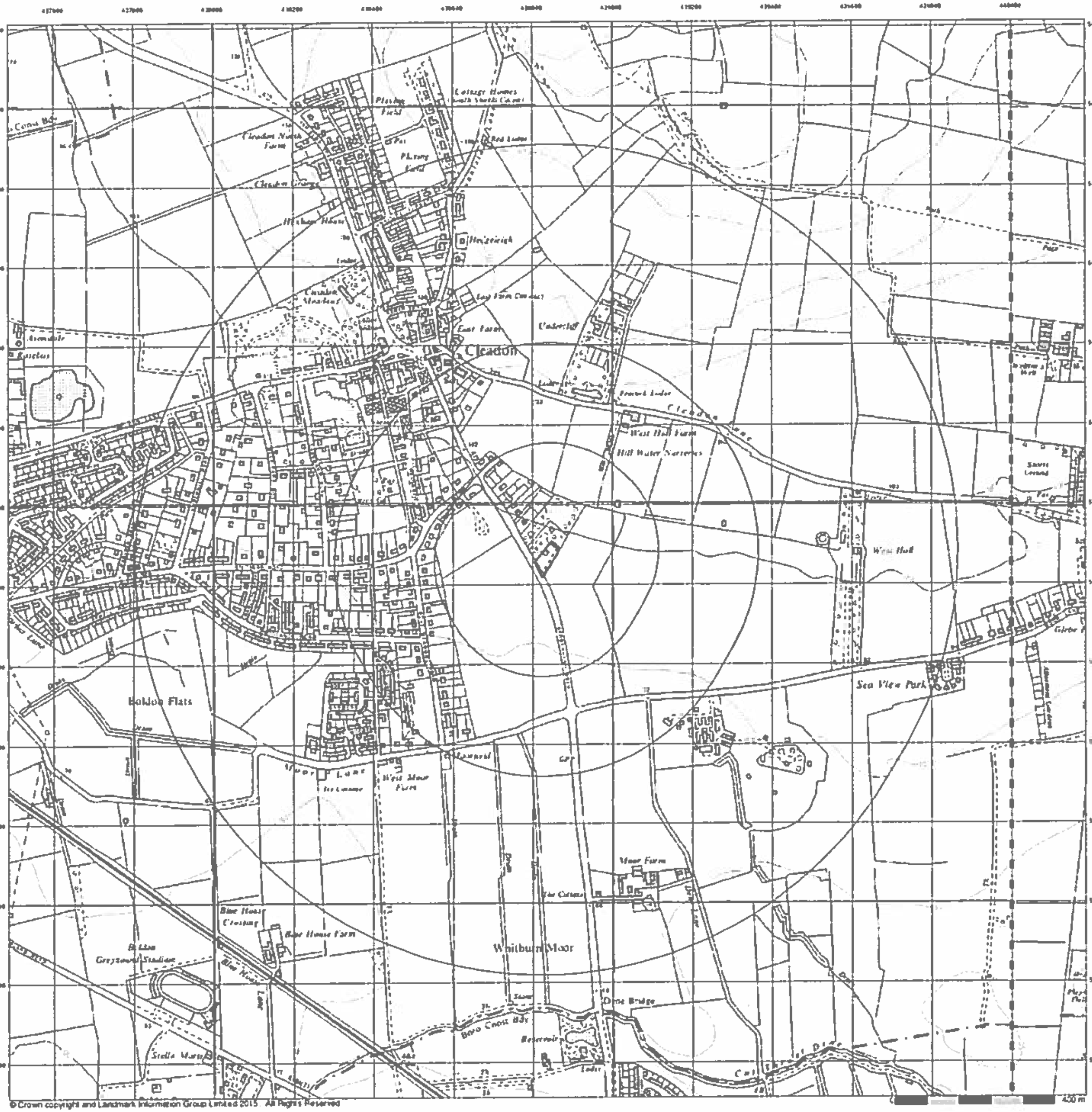
Order Number: 74673377_1_1
Customer Ref: S151122
National Grid Reference: 438840, 561860
Slice: A
Site Area (Ha): 0.25
Search Buffer (m): 100

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

Landmark®

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

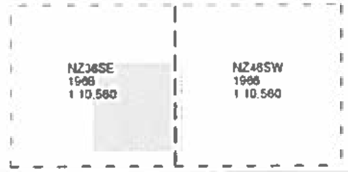


Envirocheck®

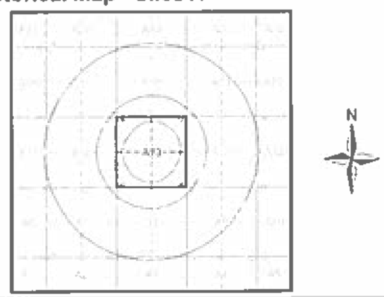
Ordnance Survey Plan
Published 1966 - 1968
Source map scale - 1:10,000

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:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

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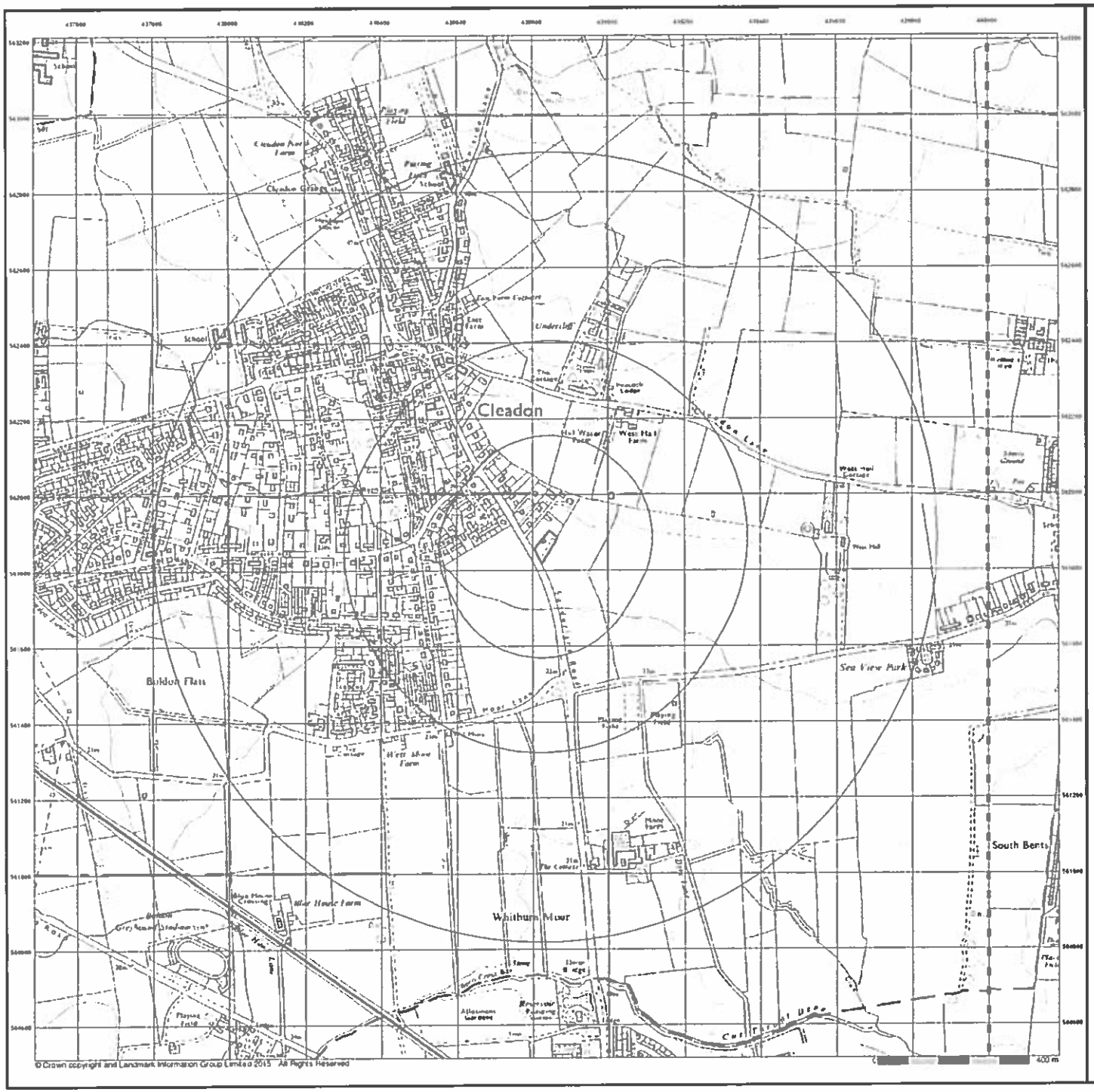


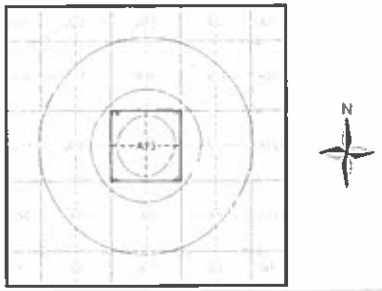
Envirocheck®

Ordnance Survey Plan
Published 1984 - 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)

Historical Map - Slice A



Order Details

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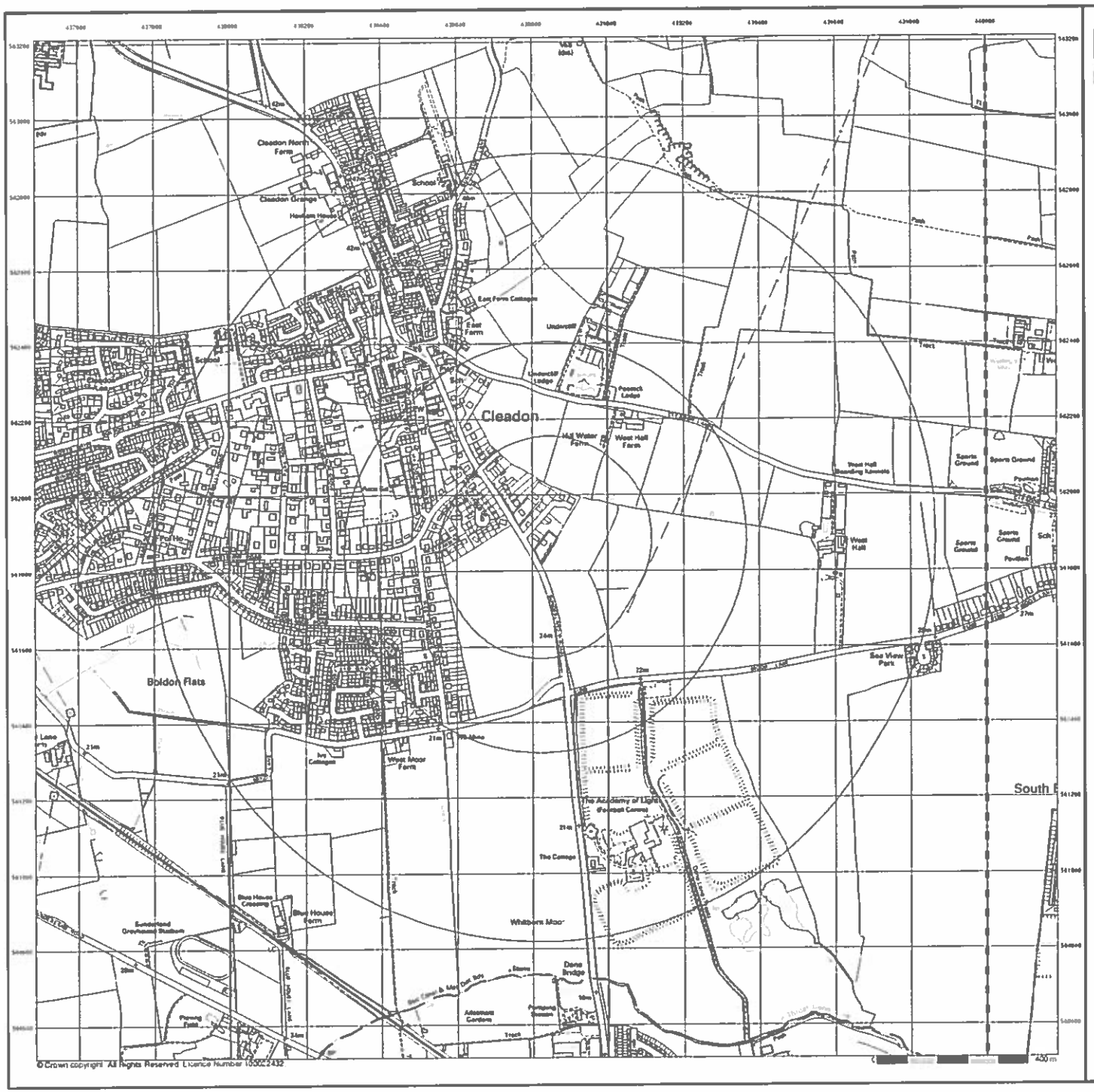
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW



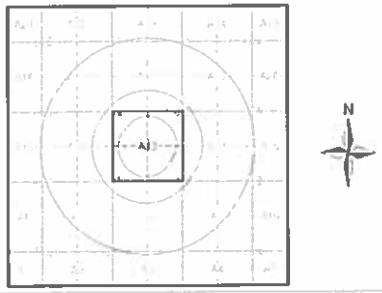
Envirocheck®

10k Raster Mapping
Published 2006
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 A



Order Details

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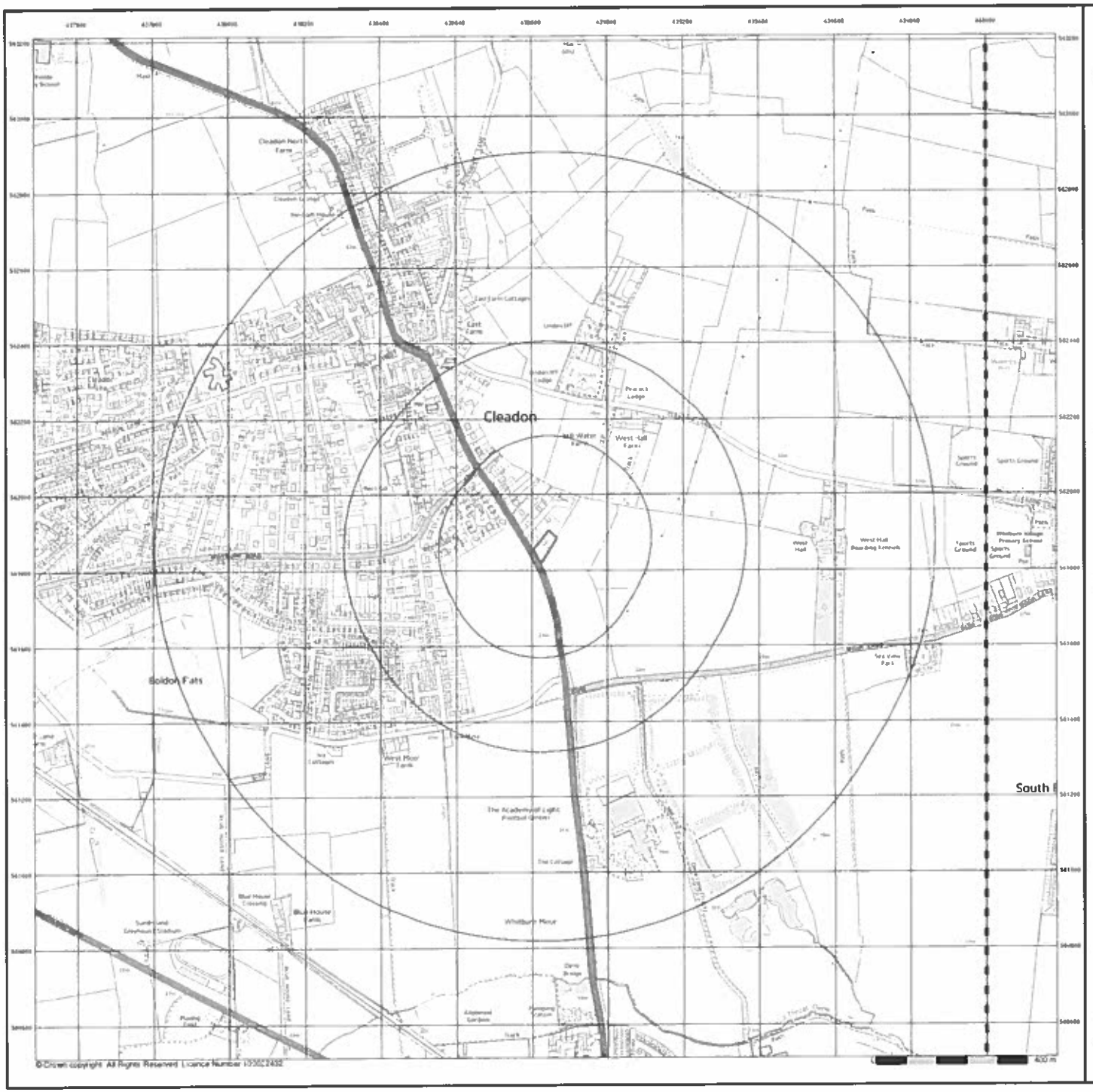
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

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



Envirocheck®

VectorMap Local

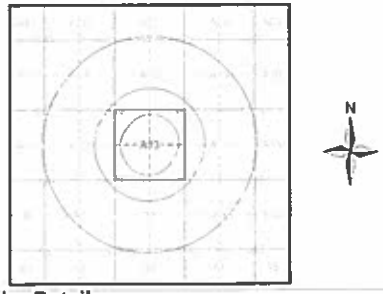
Published 2015

Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1 10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1 1250 scale (covering major towns and cities), 1 2500 scale (smaller towns, villages and developed rural areas), and 1 10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

Historical Map - Slice A



Order Details

Order Number:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

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Appendix C
Envirocheck Report

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
74673377_1_1

Customer Reference:
S151122

National Grid Reference:
438840, 561860

Slice:
A

Site Area (Ha):
0.25

Search Buffer (m):
1000

Site Details:

51 Sunderland Road
Cleadon Village
SUNDERLAND
SR6 7UW

Client Details:

Mr R Woods
Solmek Ltd
12 Yarm Road
Stockton on Tees
Cleveland
TS18 3NA

Contents

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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Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Report Version v50.0

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1				1
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 1				1
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 1		Yes		
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 1				(*6)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 2	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 3	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 3	Yes	n/a	n/a	n/a
Source Protection Zones	pg 3		2		1
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				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					n/a
Detailed River Network Offline Drainage					n/a

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 4				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 5	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 5	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 14				4
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 14	Yes	n/a	n/a	n/a
Mining Instability	pg 14	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 14	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 15	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 15	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards				n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 15	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

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Summary

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 16			1	7
Fuel Station Entries	pg 16				1
Sensitive Land Use					
Areas of Adopted Green Belt	pg 17		1		
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves	pg 17				1
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest	pg 17				2
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: South Tyneside District Scouts Property Type: Sewage Disposal Works - Other Location: Westhall Campsite, Moor Lane, Whitburn, Tyne & Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/2011 Permit Version: 1 Effective Date: 18th July 2007 Issued Date: 18th July 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Cut Throat Dene (North Sea) **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	702	2	439560 561780
2	**Local Authority Pollution Prevention and Controls** Name: Cleadon Service Station (Bp) Location: Shields Road, Cleadon, SUNDERLAND, Tyne and Wear, SR6 7PQ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: STC/015b/1.2(d) B Dated: 27th October 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	688	3	438456 562471
	Nearest Surface Water Feature	A13NE (NE)	173	-	439004 561991
	Water Abstractions Operator: Sunderland Afc Ltd Licence Number: 1/24/05/061/R01 Permit Version: 1 Location: Pond - Academy Of Light Authority: Environment Agency, North East Region Abstraction: Sports Grounds/Facilities: Spray Irrigation - Direct 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: 1st April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	1049	2	439408 560948
	Water Abstractions Operator: Sunderland Afc Ltd Licence Number: 1/24/05/061 Permit Version: 1 Location: Pond - Academy Of Light Authority: Environment Agency, North East Region Abstraction: Sports Grounds/Facilities: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Academy Of Light Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th May 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	1049	2	439408 560948

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Sunderland Afc Ltd Licence Number: 1/24/05/060/R01 Permit Version: 1 Location: Borehole - Magnesian Limestone-Academy Of Light-Sunderland Authority: Environment Agency, North East Region Abstraction: Sports Grounds/Facilities: Transfer Between Sources Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	1068	2	439411 560927
	Water Abstractions Operator: Sunderland Afc Ltd Licence Number: 1/24/05/060 Permit Version: 1 Location: Borehole - Magnesian Limestone-Academy Of Light-Sunderland Authority: Environment Agency, North East Region Abstraction: Sports Grounds/Facilities: Transfer Between Sources Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Academy Of Light Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	1068	2	439411 560927
	Water Abstractions Operator: Northumbrian Water Licence Number: 1/24/05/035 Permit Version: 100 Location: Borehole - Magnesian Limestone - Fulwell Authority: Environment Agency, North East Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 5455 Yearly Rate (m3): 1827492 Details: Within The Authorised Area Of Supply Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 8th April 1968 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A3NE (S)	1250	2	438880 560570
	Water Abstractions Operator: Northumbrian Water Licence Number: 1/23/05/001 Permit Version: 100 Location: Borehole - Magnesian Limestone - Cleadon Authority: Environment Agency, North East Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 5773 Yearly Rate (m3): 1241058 Details: Within The Authorised Area Of Supply Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 8th April 1968 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(N)	1680	2	438720 563580
	Groundwater Vulnerability Soil Classification: Soils of Intermediate Leaching Potential (I1) - Soils which can possibly transmit a wide range of pollutants Map Sheet: Sheet 5 Tyne and Tees Scale: 1:100,000	A13NW (SE)	0	2	438835 561863
	Drift Deposits Drift Deposit: Low permeability drift deposits occuring 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	A13NW (SE)	0	2	438835 561863

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A13NW (SE)	0	4	438835 561863
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13NW (SE)	0	4	438835 561863
3	**Source Protection Zones** Name: Fulwell Source: Environment Agency, Head Office Reference: Ne031 Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A13SW (SW)	201	2	438642 561731
4	**Source Protection Zones** Name: Fulwell Source: Environment Agency, Head Office Reference: Ne031 Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	A13SW (SW)	219	2	438709 561633
5	**Source Protection Zones** Name: Cleadon Source: Environment Agency, Head Office Reference: Ne029 Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A18NW (N)	725	2	438718 562619
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
	Detailed River Network Lines None				
	Detailed River Network Offline Drainage None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Moor Lane, Boldon Name: Boldon Flatts Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06278 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: ST 002	A12SE (SW)	570	2	438292 561608
	Local Authority Landfill Coverage Name: South Tyneside Metropolitan Borough Council - Has no landfill data to supply		0	6	438835 561863

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Zechstein Group	A13NW (SE)	0	4	438835 561863
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (SE)	0	4	438835 561863
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (N)	31	4	438849 561935
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SW)	46	4	438780 561797
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (N)	48	4	438852 561952
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (N)	95	4	438835 562000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (E)	134	4	439000 561863

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (E)	134	4	439000 561896
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (E)	137	4	439000 561914
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NE)	176	4	439000 562000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (N)	182	4	438889 562081
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NE)	217	4	439000 562057
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SE)	277	4	439000 561605

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (W)	286	4	438547 561979
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (NW)	320	4	438519 562000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SW)	342	4	438544 561623
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18SE (N)	413	4	438927 562310
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18SE (N)	424	4	439000 562299
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NE (NW)	429	4	438452 562099

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18SW (NW)	464	4	438511 562227
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NW (E)	568	4	439423 562000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NE (NW)	572	4	438332 562178
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SE (W)	601	4	438218 561727
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NW (SE)	662	4	439350 561414
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	682	4	438133 561974

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NW (SE)	705	4	439211 561230
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	716	4	438104 562000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	726	4	438100 562027
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	751	4	439608 562000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	757	4	438062 562000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	764	4	438061 562030

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SW)	782	4	438276 561261
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	805	4	438000 561863
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	812	4	438006 562000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	813	4	438009 562020
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	818	4	438000 562000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	818	4	438000 562002

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SW (S)	819	4	438835 561000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	822	4	438000 562023
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	824	4	438000 562032
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	825	4	438000 562036
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SW (W)	827	4	438000 561666
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	836	4	438000 562082

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SE (S)	838	4	439000 561000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SW (S)	851	4	438594 561000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	851	4	438000 562130
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SE (S)	853	4	439064 561000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	869	4	438000 562182
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (SW)	898	4	438000 561459

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9SW (SE)	907	4	439214 561000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SE (S)	928	4	439000 560908
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17SW (NW)	931	4	438130 562500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	985	4	437841 562058
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9SW (SE)	993	4	439429 561032
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A3NE (S)	999	4	438935 560826

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**BGS Recorded Mineral Sites** Site Name: Moor Lane Brick Works Location: , Cleadon, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99260 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Pelaw Clay Member Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	723	4	438184 561485
8	**BGS Recorded Mineral Sites** Site Name: Cleadon Gravel Pit Location: , Cleadon, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99269 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	765	4	438290 562431
9	**BGS Recorded Mineral Sites** Site Name: Cleadon Sand Pit Location: , Cleadon, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99268 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	804	4	438093 562229
10	**BGS Recorded Mineral Sites** Site Name: Cleadon Gravel Pit Location: , Cleadon, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99267 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	859	4	438098 562344
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	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.	A13NW (SE)	0	5	438835 561863
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (SE)	0	-	438835 561863
	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	A13NW (SE)	0	4	438835 561863
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	4	438835 561863

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	4	438835 561863
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	30	4	438849 561935
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	48	4	438852 561952
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	4	438835 561863
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	4	438835 561863
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	4	438835 561863
	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	A13NW (SE)	0	4	438835 561863
	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	A13NW (SE)	0	4	438835 561863

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Contemporary Trade Directory Entries** Name: Seaburn Plasterers Location: 18a, Whitburn Road, Cleadon, Sunderland, SR6 7QP Classification: Damp & Dry Rot Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	408	-	438397 561871
12	**Contemporary Trade Directory Entries** Name: Bp Location: Margram Service Station, Shields Road, Cleadon, Sunderland, SR6 7PQ Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	688	-	438456 562471
13	**Contemporary Trade Directory Entries** Name: Ambicool Ltd Location: 18, West Park Road, Sunderland, Tyne and Wear, SR6 7RR Classification: Air Conditioning Equipment & Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	706	-	438117 562015
14	**Contemporary Trade Directory Entries** Name: Britannia Auto Centres Ltd Location: 3, Boldon Lane, Sunderland, Tyne and Wear, SR6 7RH Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	716	-	438287 562353
15	**Contemporary Trade Directory Entries** Name: Allison Heating Ltd Location: 12, Sunniside Lane, Cleadon, Sunderland, SR6 7XB Classification: Boilers - Servicing, Replacements & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	730	-	438607 562595
16	**Contemporary Trade Directory Entries** Name: 2 Hot 2 Handle Location: 14, Cleadon Meadows, Sunderland, SR6 7PH Classification: Oven cleaning **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	770	-	438360 562503
17	**Contemporary Trade Directory Entries** Name: P E Clark Ltd Location: 75, Whitburn Road, Cleadon, Sunderland, SR6 7RB Classification: Cabinet Makers **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SE (W)	991	-	437815 561804
18	**Contemporary Trade Directory Entries** Name: Stained Glass Works Location: 6, Sea View Park, Sunderland, SR6 7JS Classification: Stained Glass Designers & Producers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	994	-	439806 561563
19	**Fuel Station Entries** Name: Cleadon Service Station Location: Shields Road, Cleadon, Sunderland, Tyne & Wear, SR6 7PQ Brand: Jet Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	688	-	438456 562472

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**Areas of Adopted Green Belt** Authority: South Tyneside Metropolitan Borough Council, Planning Department Plan Name: Core Strategy **Status: Adopted** Plan Date: 30th June 2007	A13SE (SE)	1	6	438849 561855
21	**Local Nature Reserves** Name: Cleadon Hills Multiple Area: N Area (m2): 101999.89 Source: Natural England Designation Date: 28th March 2012	A18NE (N)	966	8	438928 562868
22	**Sites of Special Scientific Interest** Name: Boldon Pastures Multiple Areas: N Total Area (m2): 35528.34 Source: Natural England Reference: 1002859 Designation Details: Site Of Special Scientific Interest Designation Date: 1st April 1987 Date Type: Notified	A12SW (W)	705	8	438134 561641
23	**Sites of Special Scientific Interest** Name: Cleadon Hill Multiple Areas: N Total Area (m2): 102837.39 Source: Natural England Reference: 1000817 Designation Details: Site Of Special Scientific Interest Designation Date: 1st April 1984 Date Type: Notified	A18NE (N)	966	8	438928 562868

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
South Tyneside Metropolitan Borough Council - Neighbourhood Services	December 2014	Annual Rolling Update
Sunderland City Metropolitan Borough Council - Environmental Health Department	March 2015	Annually
Discharge Consents		
Environment Agency - North East Region	July 2015	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 2015	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Sunderland City Metropolitan Borough Council - Environmental Health Department	July 2013	Annual Rolling Update
South Tyneside Metropolitan Borough Council - Environmental Health Department	September 2012	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Sunderland City Metropolitan Borough Council - Environmental Health Department	July 2013	Annual Rolling Update
South Tyneside Metropolitan Borough Council - Environmental Health Department	September 2012	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Sunderland City Metropolitan Borough Council - Environmental Health Department	July 2013	Annual Rolling Update
South Tyneside Metropolitan Borough Council - Environmental Health Department	September 2012	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	July 2015	Quarterly
Environment Agency - North East Region - Northumbria Area	July 2015	Quarterly
Water Abstractions		
Environment Agency - North East Region	July 2015	Quarterly
Water Industry Act Referrals		
Environment Agency - North East Region	July 2015	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	October 2012	As notified
Superficial Aquifer Designations		
British Geological Survey - National Geoscience Information Service	January 2015	As notified
Source Protection Zones		
Environment Agency - Head Office	July 2015	Quarterly

Agency & Hydrological	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	August 2015	Quarterly
Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	August 2015	Quarterly
Areas Benefiting from Flood Defences		
Environment Agency - Head Office	August 2015	Quarterly
Flood Water Storage Areas		
Environment Agency - Head Office	August 2015	Quarterly
Flood Defences		
Environment Agency - Head Office	August 2015	Quarterly
Detailed River Network Lines		
Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage		
Environment Agency - Head Office	March 2012	Annually
Surface Water 1 in 30 year Flood Extent		
Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent		
Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent		
Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability		
Environment Agency - Head Office	October 2013	As notified
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - North East Region - North East Area	May 2015	Quarterly
Environment Agency - North East Region - Northumbria Area	May 2015	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	August 2014	Quarterly
Environment Agency - North East Region - Northumbria Area	August 2014	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - North East Region - North East Area	July 2015	Quarterly
Environment Agency - North East Region - Northumbria Area	July 2015	Quarterly
Local Authority Landfill Coverage		
South Tyneside Metropolitan Borough Council - Planning Department	May 2000	Not Applicable
Sunderland City Metropolitan Borough Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
South Tyneside Metropolitan Borough Council - Planning Department	May 2000	Not Applicable
Sunderland City Metropolitan Borough Council - Environmental Health Department	May 2000	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	June 2015	Bi-Annually
Explosive Sites Health and Safety Executive	June 2015	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Planning	December 2014 March 2014	Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Planning	December 2014 March 2014	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 Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	January 2010	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2015	Bi-Annually
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	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	July 2014	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	August 2015	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2015	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt		
South Tyneside Metropolitan Borough Council - Planning Department	November 201	As notified
Sunderland City Metropolitan Borough Council - Planning	November 201	As notified
Areas of Unadopted Green Belt		
South Tyneside Metropolitan Borough Council - Planning Department	November 201	As notified
Sunderland City Metropolitan Borough Council - Planning	November 201	As notified
Areas of Outstanding Natural Beauty		
Natural England	October 2015	Bi-Annually
Environmentally Sensitive Areas		
Natural England	October 2015	Annually
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	October 2015	Bi-Annually
Marine Nature Reserves		
Natural England	October 2015	Bi-Annually
National Nature Reserves		
Natural England	October 2015	Bi-Annually
National Parks		
Natural England	August 2015	Bi-Annually
Nitrate Sensitive Areas		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Annually
Ramsar Sites		
Natural England	October 2015	Bi-Annually
Sites of Special Scientific Interest		
Natural England	October 2015	Bi-Annually
Special Areas of Conservation		
Natural England	October 2015	Bi-Annually
Special Protection Areas		
Natural England	October 2015	Bi-Annually

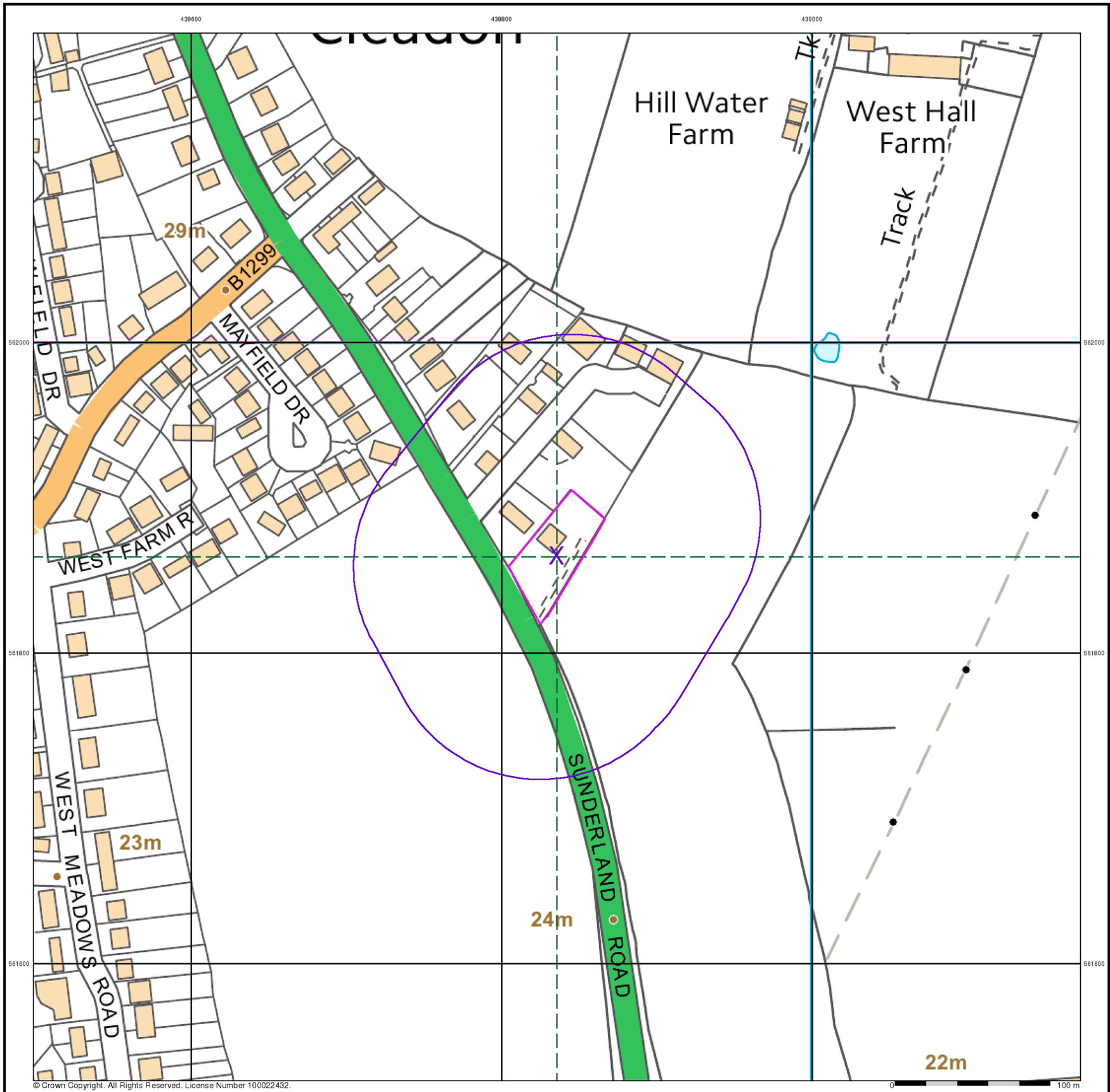
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 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	**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
5	**The Coal Authority - Mining Report Service** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
6	**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
7	**Sunderland City Metropolitan Borough Council - Planning** PO Box 107, Civic Centre, Sunderland, Tyne & Wear, SR2 7DN	Telephone: 0191 553 1000 Fax: 0191 553 1099 Website: www.sunderland.gov.uk
8	**Natural England** Suite D, Unex House, Bourges Boulevard, Peterborough, Cambridgeshire, PE1 1NG	Telephone: 0845 600 3078 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
9	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
-	**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
Notes on Limitations



Envirocheck®

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
- 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

Geological

- BGS Recorded Mineral Site

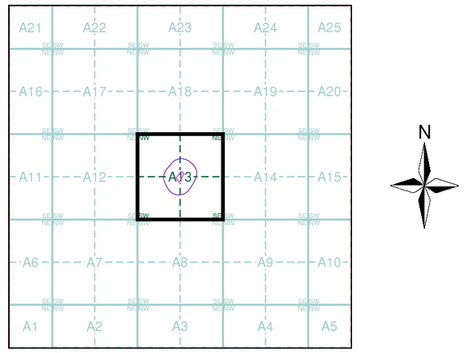
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment A13



Order Details

Order Number:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

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

Envirocheck®

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
- 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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

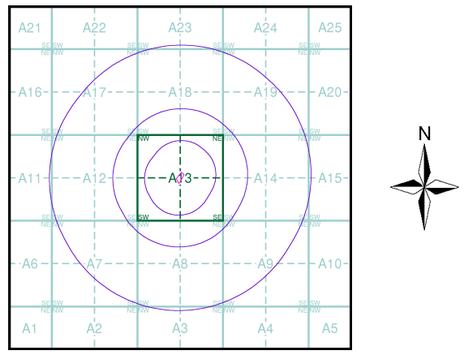
Waste

- 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

Site Sensitivity Map - Slice A



Order Details

Order Number:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

Landmark® Information Group

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

Envirocheck®

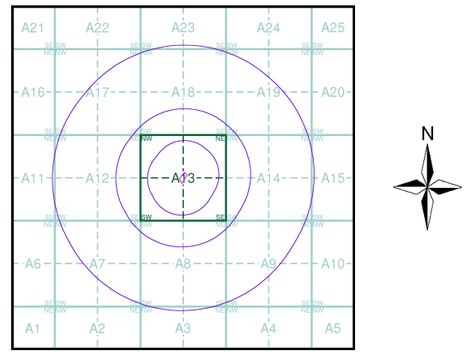
General

- Specified Site
- Specified Buffer(s)
- 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



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National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
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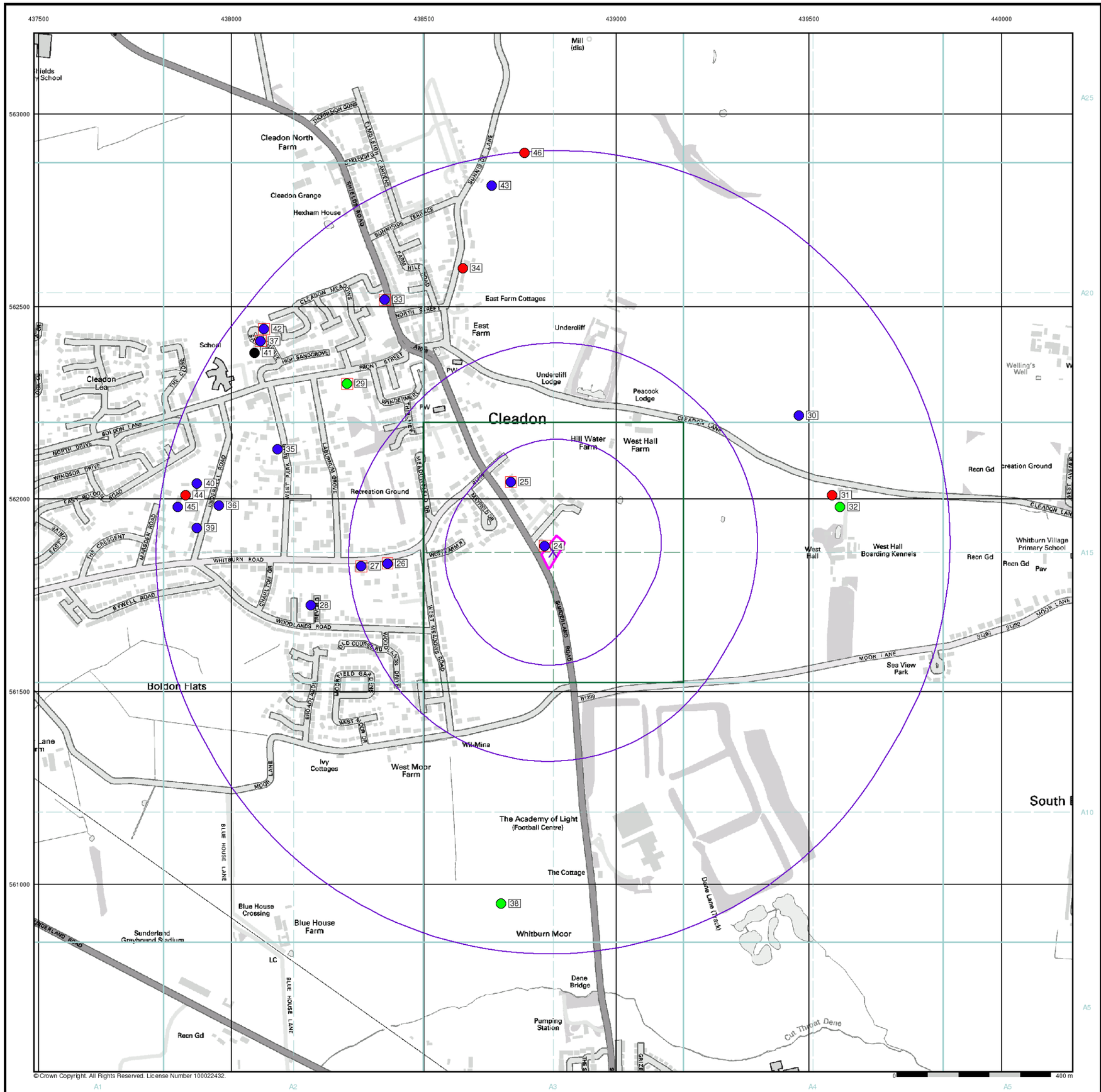


Envirocheck®

General

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

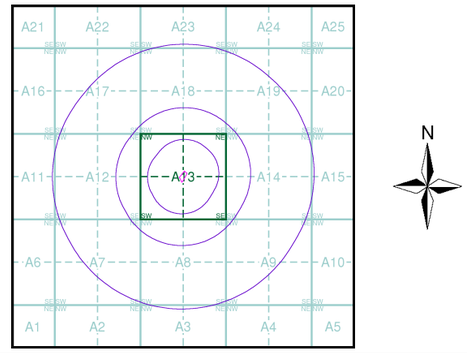
Agency and Hydrological (Boreholes)

- 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



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Slice:	A
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Search Buffer (m):	1000

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Envirocheck®

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

Contours (height in metres)

Standard Contour 105 100 95

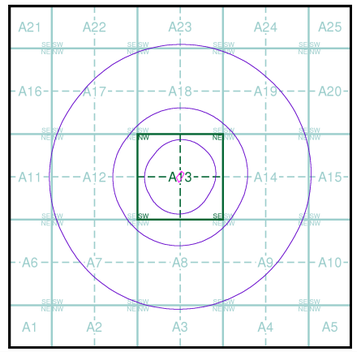
Master Contour

Spot Height *167.3

MLW Mean Low Water

MHW Mean High Water

EA/NRW Detailed River Network Map - Slice A



Order Details

Order Number:	74673377_1_1
Customer Ref:	S151122
National Grid Reference:	438840, 561860
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

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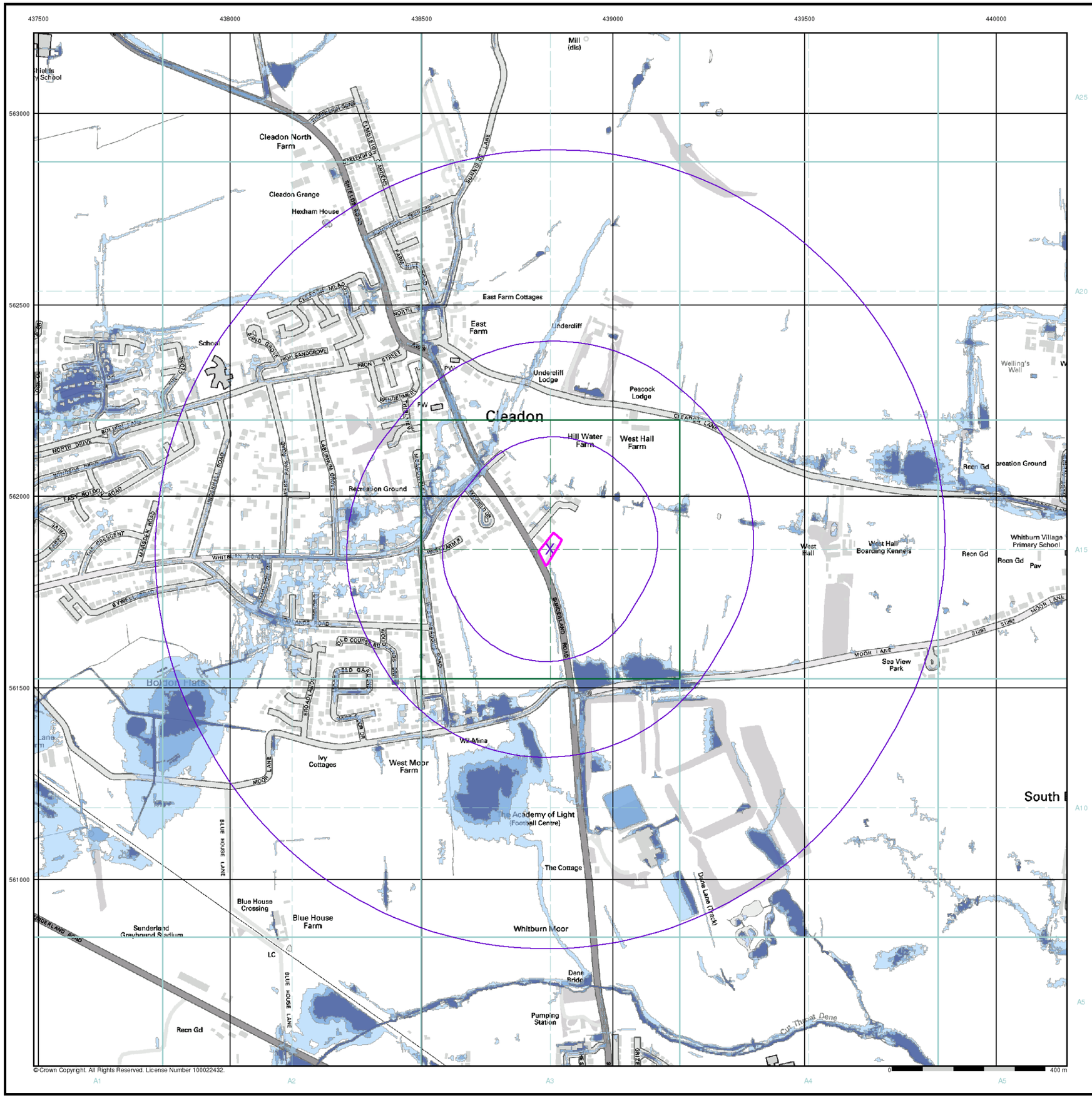


Envirocheck®

General

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

Risk of Flooding from Surface Water

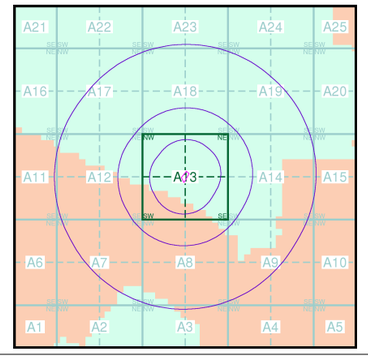
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



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Slice:	A
Site Area (Ha):	0.25
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Site Details

51 Sunderland Road, Cleadon Village, SUNDERLAND, SR6 7UW

Landmark® Information Group

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

Appendix D
Mining Report

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: 0345 762 6848 DX 716176 MANSFIELD 5

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

Our reference:	**51001033430001**
Your reference:	**74673377_2|**
Date of your enquiry:	**06 November 2015**
Date we received your enquiry:	**06 November 2015**
Date of issue:	**06 November 2015**

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

Non-Residential Coal Authority Mining Report

51 SUNDERLAND ROAD, CLEADON VILLAGE, SUNDERLAND, 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 4 seams of coal at 310m to 450m depth, and last worked in 1978.

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

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.

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.

Information from the Cheshire Brine Subsidence Compensation Board

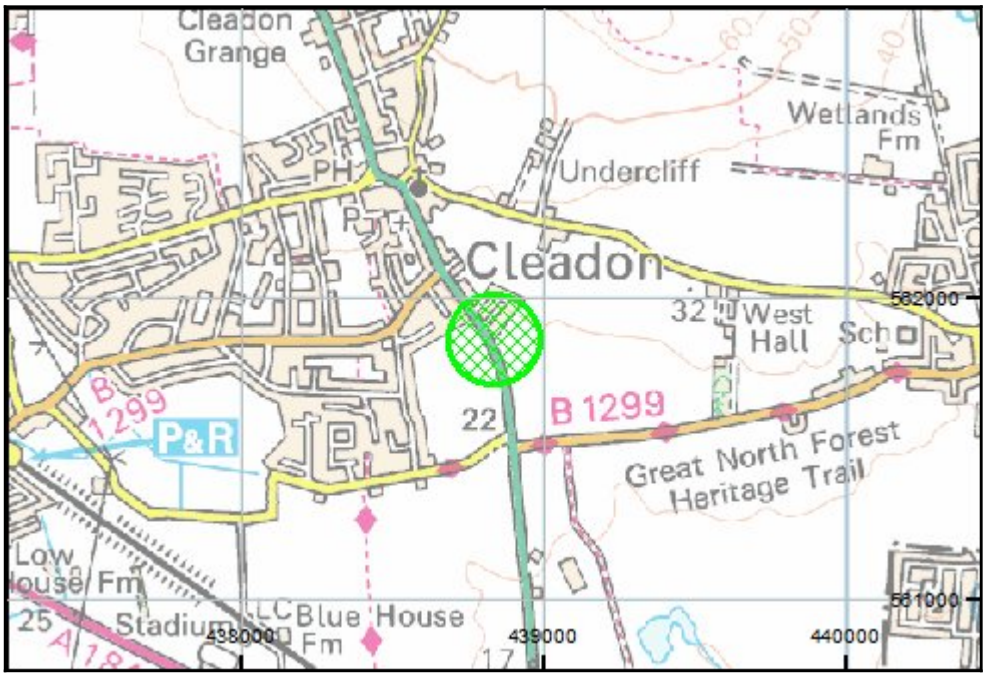
The property lies outside the Cheshire Brine Compensation District.

Additional Remarks

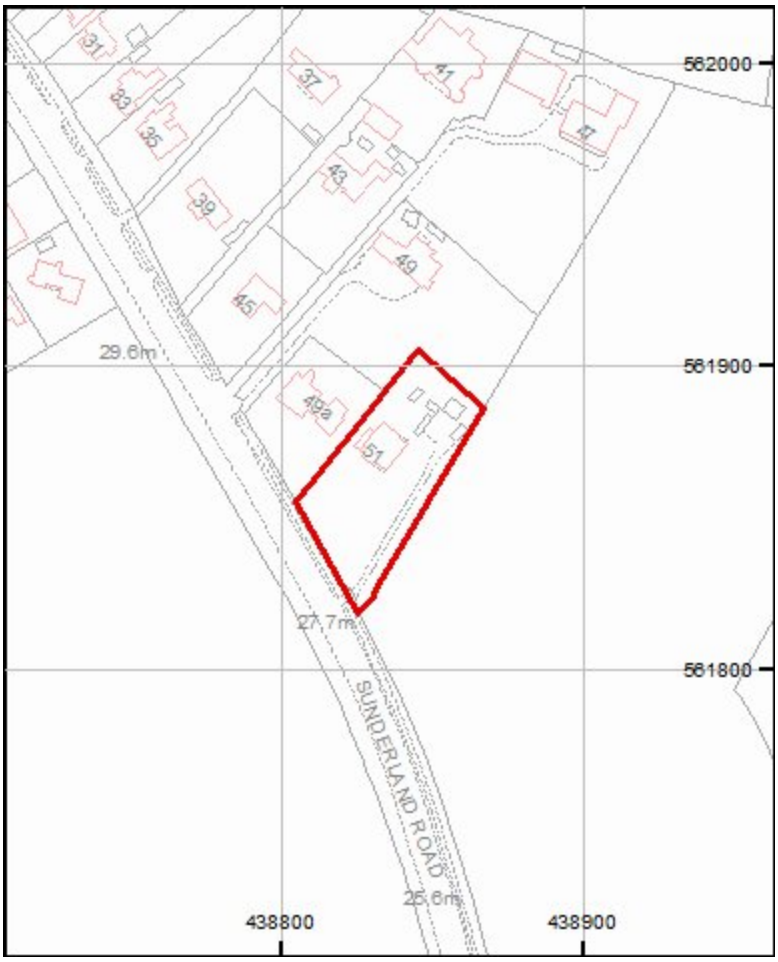
Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. 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 applicable at the time the report was produced.

Location map

Approximate position of property



Enquiry boundary



Key

Approximate position of enquiry boundary shown

♣Solmek conditions of offer, notes on limitations & basis for contract (ref: version1/2015)

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 was 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.