

soiltechnics

environmental and geotechnical consultants

Proposed commercial development,
Former Be Modern premises,
Western Approach
South Shields

Ground Investigation Report

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NE33 5QZ**

GROUND INVESTIGATION REPORT

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Aerial photograph of site



Report status and format

Report section	Principal coverage	Report status	
		Revision	Comments
1	Executive summary	01	
2	Introduction	01	Updated to include new development proposals.
3	Desk study information and site observations		
4	Fieldwork		
5	Ground conditions encountered		
6	Laboratory testing		
7	Engineering assessment		
8	Chemical contamination	01	Revised assessment following receipt of updated proposal layout
9	Gaseous contamination	01	Updated to include gas monitoring
10	Effects of ground conditions on building materials		
11	Classification of waste soils under the Waste Acceptance Criteria		
12	Further investigations	01	Updated to account for report revisions

List of drawings

Drawing	Principal coverage	Status	
		Revision	Comments
01	Site location plan		
02	Plan showing existing site features and location of exploratory points		
02a	Plan showing existing site features inside buildings – Ground floor		
02b	Plan showing existing site features inside buildings – First floor		
02c	Plan showing location of type 1 and type 2 soils (section 11)		
04	Plot summarising insitu density testing		
05a	Plot summarising results of pocket penetrometer determinations by location		
05b	Plot summarising results of pocket penetrometer determinations by geology		
06	Section showing construction of gas monitoring standpipe installed in boreholes DTS01, DTS02 and DTS09		

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E	Copies of laboratory test result certificates – classification testing
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J	Landfill waste acceptance criteria - primary classification
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N	Copy of correspondence received from South Tyneside Council
P	Copy of desk study information produced by Envirocheck
Q	Coal Authority Report
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T	Drawing of Proposed Trade Park Western Approach – Drawing by Portland Consulting

1 Executive summary

General

We recommend the following executive summary is not read in isolation to the main report which follows.

Site description, history and development proposals

The site is located within a predominantly industrial area of South Shields and consists of large, double height warehouses with office space to the north which covers the majority of the site. At the time of investigation, the site was used as a metal works and furniture factory, although the factory was in the later stages of being decommissioned and removed.

Historically, the site has been occupied by terraced properties prior to industrial development. The change in use appears to coincide with WWII and it is considered likely that the site was bombed.

We understand the scheme will comprise the refurbishment of the existing building to provide a Travis Perkins trade park. The existing building will be stripped back to the steel portal frame and reclad. The existing floor slab will be retained and additional hard standing proposed to provide storage and vehicle circulation areas.

Ground conditions encountered

Deep Made Ground was encountered across the entire site. Where penetrated, underlying soils comprised with Till (Devensian) and Seventy Fathom Post Member.

Made Ground comprised of loose and medium dense, dark and light brown, orange brown, light grey and reddish brown gravelly sand and sandy gravel with localised bands of slightly silty gravelly clay and orange brown, reddish brown, dark grey and dark brown, clays, sands and gravels. Made Ground extended beyond the depth of our investigation in the majority of locations (greater than 4m).

Foundation solution

The proposed development does not give rise to the need for new foundations. However, in the event they are required, based on ground conditions, trench fill foundations are not recommended at the site. We recommend that piled foundations are used for new foundations. It is possible that vibrotreatment could be considered, however the organic contents and the possibility of in-ground obstructions is likely to preclude this option.

Existing foundations are likely to be piled and such piles represent a potential obstruction to new foundations.

Ground bearing floor and external slabs could be adopted, however total and differential settlement of the slabs would be expected.

Shallow soil infiltration systems are not suitable at the site due to the high leachate potential of the Made Ground.

Chemical and gaseous contamination

The risk to human site users and construction operatives is considered to be low.

We recommend the report is supplied to the landscape architect for selection of appropriate planting given the high concentrations of copper and zinc.

The risk to groundwater is mitigated by the presence of paving and buildings. Some leachable contamination is present within the Made Ground across the site however due to the total area of soft landscaping being reduced by the proposals, the pathway will be further restricted. The risk to groundwater receptors will thus be reduced following redevelopment of the site and no further remediation is considered necessary.

Protected water supply pipes are likely to be required.

Gas monitoring has been completed and the site is classified as characteristic gas situation one and therefore does not require gas protection measures.

Landfill classification

The soils have been separate for the purposes of waste classification into two types – soil to the North and soils to the south. Soils to the north generally had a higher coal and ash concentration.

The primary waste assessment indicates both soil types (so all Made Ground) are hazardous– both by virtue of heavy metals and particularly lead and zinc. Following the secondary assessment, soils to the south are classified as stable non-reactive hazardous waste, but toward the north the soils exceed the criteria threshold for hazardous waste with Total Organic Carbon and Loss on Ignition values being well above threshold criteria for hazardous waste.

There are options (these are not inclusive) –

- Additional, more targeted testing and possible further zoning of soils types on a vertical as well as lateral scale.
- Screening of the waste soils followed by further testing/analysis.
- Alternative treatments such as monolithic treatment for granular waste
- Minimising waste arisings (for example adopting a driven pile foundation solution).

2 Introduction

2.1	Objectives
2.2	Client instructions and confidentiality
2.3	Site location and scheme proposals
2.4	Report format and investigation standards
2.5	Status of this report
2.6	Report distribution

2.1 Objectives

- 2.1.1 This report describes a ground investigation carried out for the redevelopment of a former industrial property off Tudor Way, Western Approach, South Shields, NE33 5QZ into a new Travis Perkins trade park.
- 2.1.2 The objective of the ground investigation was to establish ground conditions at the site, sufficient to identify possible foundation solutions for the development and provide parameters necessary for the design and construction of foundations.
- 2.1.3 The investigation included an evaluation of potential chemical and gaseous contamination of the site leading to the production of a risk assessment in relation to contamination.
- 2.1.4 Our brief also included investigations and testing to allow classification of soils at the site to be disposed of to landfill.

2.2 Client instructions and confidentiality

- 2.2.1 The report was completed following instructions from our client, Travis Perkins Plc
- 2.2.2 This report has been prepared for the sole benefit of our above named instructing client, but this report, and its contents, remains the property of Soiltechnics Limited until payment in full of our invoices in connection with production of this report.
- 2.2.3 Our original investigation proposals were outlined in our letter of correspondence to Travis Perkins Plc. The investigation generally followed our original investigation proposals. The investigation process was also determined to maintain as far as possible the original investigation budget costs.

2.3 Site location and scheme proposals

- 2.3.1 The National Grid reference for the site is 436180, 566540. A plan showing the location of the site is presented on Drawing 01.

2.3.2 We understand the scheme will comprise the refurbishment of the existing building to provide a Travis Perkins trade park. The existing building will be stripped back to the steel portal frame and reclad. The existing floor slab will be retained and additional hard standing proposed to provide storage and vehicle circulation areas. Proposals are presented in Appendix T.

2.4 Report format and investigation standards

2.4.1 Sections 2 to 6 of this report describe the factual aspects of the investigation with Section 7 presenting an engineering assessment of the investigatory data. Section 8 provides a risk assessment of chemical contamination based on readily available historic records, inspection of the soils and laboratory testing. Section 9 provides a similar risk assessment in relation to gaseous contamination with Section 10, a risk assessment relating to construction materials likely to be in contact with the ground. Section 11 provides a classification of waste soils for off-site disposal under the waste acceptance criteria

2.4.2 This investigation integrates both contamination and geotechnical aspects. The investigation was carried out generally, and where practical following the recommendations of BS EN 1997:2 2007 '*Eurocode 7 – Geotechnical Design – Part 2: Ground Investigation and Testing*'. The investigation process also followed the principles of BS10175: 2011 '*Investigation of potentially Contaminated Sites – Code of Practice*'. In view of the client's requirement for rapid implementation of the investigation, the following elements, defined in BS10175, have been completed and incorporated in this report.

- a) Phase I Preliminary investigation (desk study and site reconnaissance)
- b) Phase II Exploratory and main (intrusive) investigations

2.4.3 The extent and result of the preliminary investigation (desk study) is reported in Section 3. Fieldwork combined the exploratory investigation and main investigation stages into one phase with the extent of these works described in Sections 4 and 6 of this report. Any supplementary investigations deemed necessary are identified in Section 12.

2.5 Status of this report

2.5.1 This report is final based on our current instructions.

2.5.2 This investigation has been carried out and reported based on our understanding of best practice. Improved practices, technology, new information and changes in legislation may necessitate an alteration to the report in whole or part after publication. Hence, should the development commence after expiry of one year from the publication date of this report then we would recommend the report be referred back to Soiltechnics for reassessment. Equally, if the nature of the development changes, Soiltechnics should be advised and a reassessment carried out if considered appropriate.

2.6 Report distribution

2.6.1 This report has been prepared to assist in the design and planning process of the development and normally will require distribution to the following parties, although this list may not be exhaustive:

Table summarising parties likely to require information contained in this report	
Party	Reason
Client	For information / reference and cost planning
Developer / Contractor / project manager	To ensure procedures are implemented, programmed and costed
Planning department	Potentially to discharge planning conditions
Environment Agency	If ground controlled waters are affected and obtain approvals to any remediation strategies
Independent inspectors such as Building Control	To ensure procedures are implemented and compliance with building regulations
Project design team	To progress the design
Principal Designer (PD)	To advise in construction risk identification and management under the Construction (design and management) regulations 2015

Table 2.6

3 Desk study information and site observations

3.1	General
3.2	Description of the site
3.3	Injurious and invasive weeds and asbestos
3.4	History of the site
3.5	Geology and geohydrology of the area
3.6	Environmental study
3.7	Landfill and BGS recorded mineral sites
3.8	Coal mining records
3.9	Radon
3.10	Flood risk
3.11	Shallow mining and natural subsidence hazards
3.12	Borehole records
3.13	Mining and dissolution hazards
3.14	Enquiries with statutory undertakers
3.15	Enquiries with Local Authority Environmental Health Officers

3.1 General

3.1.1 We have carried out a desk study which was limited to a review of readily available information including:

- a) Review of published Ordnance Survey maps dating back to 1857 at various published scales
- b) Inspection of geological maps produced by the British Geological Survey together with relevant geological memoirs
- c) Consultation with Statutory Undertakers
- d) Site reconnaissance
- e) Other relevant published documents

3.1.2 We have obtained old Ordnance Survey maps using the Envirocheck database system. In addition to retrieval of historical and current Ordnance Survey data, Envirocheck provide information compiled from outside agencies including: -

- Ordnance Survey
- Environment Agency
- Scottish Environment Protection Agency
- The Coal Authority
- British Geological Survey
- Centre for Ecology and Hydrology
- Countryside Council for Wales
- Scottish Natural Heritage
- Natural England
- Health Protection Agency

3.1.3 The study did not extend to research of meteorological information or consultation with other interested parties such as English Heritage (ancient monuments), Ordnance Survey (survey control points), Planning Authorities or Archaeological Units.

3.2 Description of the site

3.2.1 The site is situated on relatively flat ground toward the northwest of South Shields. Off site local topography falls gradually to the north west, culminating at the channel of the River Tyne some 700m north west of the site.

3.2.2 The site is located within a predominantly industrial area of South Shields and consists of large, double height warehouses with office space to the north which covers the majority of the site. The buildings are generally steel framed with masonry walls and metal sheet cladding and suspected ACM roofing. At the time of investigation the main buildings on site were occupied by a powder metal coating works toward the north and furniture factory to the south. Two smaller storage buildings are located within the western part of the site. At the time of our investigation one building was not in use and the other was used for storage of electrical and mechanical components.



Photograph 1 – View of the furniture factory, looking northwest.



Photograph 2 – View of the furniture factory, looking northwest.

3.2.3 The furniture factory toward the south comprised a storage warehouse, large workshop, material storage area, diesel tank, HVAC unit, chemical store and metal coating plant office space. At the time of our investigation the furniture factory was not in operation and manufacturing equipment was in the process of being removed from site.

3.2.4 A mezzanine level consisting of office and storage space is located above the storage warehouse to the southern part of the site. Crack damage was observe to the floor slab located to the south eastern part of the site.



Photograph 3 – View of the storage area with mezzanine level.



Photograph 4 – View of the crack damage to the floor slab to the south eastern part of the warehouse

3.2.4 To the north west of the site a diesel tank and HVAC unit is present. At the time of our investigation we did not observe any staining or fuel spills to the surrounding area. The floor slab to the surrounding area was in good condition with no cracks.



Photograph 5 – View of the HVAC unit adjacent to the former furniture works



Photograph 6 – View of the HVAC unit

3.2.4 Oil drums were observed to the western part of the work shop and a pump/plant room was observed to the eastern part of the warehouse. No evidence of fuel spills or staining to the floor slab was evident. The floor slab to both areas was in good condition with no cracks. A chemical store was noted to the southern part of the warehouse. The chemical store was empty with no evidence of chemical use apart for two metal storage units. Their floor slab was in good condition and no drainage was observed within the room.



Photograph 7 – View of oil drums stored to the eastern part of the warehouse



Photograph 8 – View of chemical store to the southern part of the warehouse

3.2.4 The metal works comprised a main workshop to the south western part of the warehouse. At the time of our investigation the works was still active with approximately 6 people coating metal components which are heated within an industrial oven.



Photograph 9 – View of metal works

3.2.5 External areas of the site are predominately covered in concrete, bituminous bound material and block paving hardstandings with grassed landscaped areas located to the northern, eastern and southern extremes of the site. Dense vegetation including several semi mature trees is present toward the northern boundary. Further mature trees are also located to the eastern part of the site.



Photograph 10 – View of the vegetation to the northwest of the site.



Photograph 11 – View of the mature trees to the north eastern part of the site.

- 3.2.6 The northern site boundary is marked by a metal fence with public walkway located beyond, the north eastern site boundary is defined by the walls to the adjacent public house and commercial property. The south eastern boundary is defined by a public footpath adjacent to Western Approach. The southern boundary is marked by Tudor Way. The western boundary is defined by Wilson Street and metal fencing.
- 3.2.7 Immediately adjacent site uses comprise a mixture of residential housing to the south and commercial/industrial uses in all other directions including a coach yard and depot, warehouse, police headquarters, public house and commercial window property to the northeast.
- 3.2.8 A plan showing observed site features and location of exploratory points together with scheme proposals is presented on Drawing 2. Internal warehouse features are detailed on Drawing 2a.

3.3 Injurious and invasive weeds and asbestos

3.3.1 Injurious and invasive weeds

- 3.3.1.1 Under the Weeds Act 1959, the Secretary of State may serve an enforcement notice on the occupier of land on which injurious weeds are growing, requiring the occupier to take action to prevent the spread of injurious weeds. The Weeds Act specifies five Injurious weeds: Common Ragwort, Spear Thistle, Creeping or Field Thistle, Broad leaved Dock and Curled Dock. The Wildlife and Countryside act 1981 provides the primary controls on the release of non-native species into the wild in Great Britain. It is an offence under section 14(2) of the act to '*plant or otherwise cause to grow in the wild*' any plants listed in schedule 9, part II. The full list of proscribed species is reviewed regularly by the Environment Agency. Guidance notes are published on their website at www.environment-agency.gov.uk, and also by DEFRA in their publication "*Guidance on section 14 of the Wildlife and Countryside Act, 1981*" available to download at www.defra.gov.uk. The presence of such weeds on site may have considerable effects on the cost / timescale in developing the site.

3.3.1.2 Our investigations exclude surveys to identify the presence of injurious and invasive weeds. Although it should be noted that during our site reconnaissance we did not observe any obvious evidence the above species, we recommend specialists in the identification and procedures to deal with injurious and invasive weeds are appointed prior to commencement of any works on site or if appropriate purchase of the site.

3.3.2 Asbestos

3.3.2.1 Our investigations exclude surveys to identify the presence or indeed absence of asbestos on site. It should be noted that we did observe potential asbestos containing materials on site. Suspected asbestos containing material was observed to the roof of the warehouse and to the down pipes. Internally potential asbestos containing material was observed to the internal walls (*refer to photograph 3*). We took precautions to avoid disturbance of these materials during our on-site activities and recommend a specialist be appointed to confirm or otherwise the presence of asbestos. No evidence of potential asbestos containing material was observed within soil samples retrieved from exploratory excavations.

3.3.2.2 The presence of asbestos on site may have considerable effects on the cost / timescale in developing the site. There is good guidance in relation to Asbestos available on the Health and Safety Executive (HSE) web site.

3.4 History of the site

3.4.1 An attempt to trace the history of the site has been carried out by obtaining copies of old Ordnance Survey maps provided by Envirocheck. The recent history of the site based on published Ordnance Survey maps is summarised on the following table: -

Summary description of site history from Ordnance Survey maps		
Date	Historical Usage	Comment
1857-1858	Site occupied by terraced residential properties to the east and open space to the west.	Buildings on site include a public house, chapel and school. Rail track recorded 20m north west of the site associated with clay pit and brick fields to the west and north. Number of Ballast Hills recorded locally. Soda Works recorded 100m north of the site. St Hildas Colliery recorded 150m north of the site. Waterworks recorded 50m north east of the site. Waterworks recorded 30m northeast of the site. Quarry recorded 150m south east of the site.
1862	No significant change	Quarry recorded 220m south east of the site. Dump recorded 160m east of the site.
1895-1896	Entire site occupied by terraced properties.	Suspected tramway running from north to south on site, following Cuthbert Street. Goods station recorded 50m north west of the site. Smithy and coal depot recorded 60m west of the site. Works recorded 50m north of the site. Buildings have been constructed on the former quarry/brick field to the west.
1897-1899	No significant change	Cart and Trolley works recorded 80m north west of the site. Depot recorded 200m south east of the site.
1915	No significant change	Corporation slaughterhouse recorded 30m north west of the site. Gas works recorded 120m north of the site. Extension and additions to the railtracks from 30m north of the site.

Summary description of site history from Ordnance Survey maps		
Date	Historical Usage	Comment
1956	A number of the buildings are no longer recorded on site (suspected bomb damage)	Clothing factory recorded 20m east of the site. Engineering works recorded 90m north east of the site. Number of 'ruins' recorded locally (suspected further bomb damage).
1963-1967	Majority of residential properties are no longer recorded on site. Properties remain along the west and northern boundaries.	Several garages and depots recorded 100-120m east of the site. Railways to the northeast have been replaced with Corporation yard.
1974-1975	Furniture works, photographic laboratory and garage recorded on site	Metal coating works recorded to the north eastern part of the factory.
1989-2015	No significant change	Garages and depot recorded immediately west of the site and Western Approach Industrial Estate to the east.

Table 3.4.1

3.5 Geology and geohydrology of the area

3.5.1 Geology of the area

3.5.1.1 Envirocheck reproduce geological map extracts taken from the British Geological Survey (BGS) digital geological map of Great Britain at 1:50,000 scale (ref Appendix P). A summary of the recorded geological information for the site is presented in Table 3.5.1.below:-

Summary of Geology and likely aquifer containing strata					
Strata	Bedrock or drift	Approximate thickness	Typical soil type	Likely permeability	Likely aquifer designation
Till, Devensian	Drift	0-10m	Gravelly clay	Impermeable	Unproductive strata
Seventy Fathom Post Member (part of the Pennine Middle Coal Measures)	Bedrock	>50m	Mudstone, siltstone and sandstone with frequent coal seams	Secondary Aquifer A	Permeable

Table 3.5.1

3.5.1.2 Substantial areas of Made Ground are also recorded immediately adjacent to the site toward the northwest. The thickness of the Made Ground is not recorded.

3.5.1.3 A series of faults are also recorded locally with the closest recorded 100m to the east, positioned in a northwest to south-easterly direction.

3.5.1.4 It should be noted strata names in accordance with the BGS Lexicon of Named Rock Units have superseded commonly used local names for specific strata. Bedrock deposits are soils or rocks deposited prior to the glaciation, with drift deposited during or post glaciation. Soil types and assessments of permeability are based on geological memoirs, in combination with our experience of investigations in these soil types.

3.5.2 Geohydrology – aquifer designation and groundwater vulnerability

3.5.2.1 Envirocheck reports the Till deposits (superficial) at the site are designated Unproductive Strata and Seventy Fathom Member deposits (bedrock) are designated a Secondary A Aquifer.

3.5.2.2 Unproductive Strata are defined as deposits exhibiting low permeability with negligible significance for water supply or river base flow. Unproductive Strata are generally regarded as not containing groundwater in exploitable quantities.

3.5.2.3 Secondary A Aquifers are predominantly permeable layers capable of supporting water supplies at a local rather than strategic scale. In some cases, Secondary A aquifers can form an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

3.5.3 Geohydrology – water abstractions

3.5.3.1 Envirocheck reports two surface water abstractions located within 2000m of the site, located 1836m southwest of the site. Abstracted water is used for dust suppression, purposes and water is taken directly from the Port of Tyne (surface tidal waters). The status of the abstractions is not known.

3.5.4 Geohydrology – source protection zone

3.5.4.1 Envirocheck does not record the site is located within a zone protecting a potable water supply abstracting from a principal aquifer (i.e. a source protection zone).

3.6 Environmental database

3.6.1 A copy of records produced by Envirocheck is presented in Appendix P. Envirocheck produce a wealth of factual database information. Although we can provide a discussion on each of the database topics, this would produce a very lengthy document, but some of these discussions would not be relevant to the aims of this report. As a consequence we have extracted some of the relevant geotechnical topics (including flood risk) and discussed them in this section of the report. Key environmental issues from the Envirocheck database are discussed in Section 8. Similarly landfilling is discussed in detail in Section 9.

3.7 Landfill and BGS recorded mineral sites

- 3.7.1 Envirocheck reports two landfills within 2000m of the site, located approximately 450m to the west and 900m to the north. The type of waste accepted at the landfills is not recorded.
- 3.7.2 The local area has been subject to opencast and underground mining activities. There are eleven BGS recorded mineral sites recorded within 1km of the site. The three closest are recorded 119m south west (opencast), 175m north (underground) and 200m south east of the site. Mining is discussed below. The two open cast sites were mined for common clay, shale and sandstone. And have now ceased operations. The material used to back fill the open mines is not recorded.
- 3.7.3 Worked ground is recorded on and adjacent to the western site boundary. It is likely that this is a result of local open cast mining activities.

3.8 Coal mining records

- 3.8.1 We have reviewed the Coal Authority web site, to determine if the site is located within an area which has been affected by coal mining or brine extraction (within the Cheshire Brine Compensation District only). The web site address is:

http://coal.decc.gov.uk/en/coal/cms/services/reports/en_cy/en_cy.aspx.
- 3.8.2 The Coal Authority advises the site is located within an area where coal has been extracted. As a consequence, we have instructed The Coal Authority to carry out a search of their records centred on the development site. A copy of their report is presented in Appendix Q.
- 3.8.3 The Non-Residential Coal Authority Mining Report indicate that the property was in the likely zone of influence from workings in six seams between 160m and 340m below ground level, last worked in 1955. The site is not within a zone of likely physical influence from present underground coal workings.
- 3.8.4 Notably, the Coal Authority has not received a damage notice or claim for any property within 50m since 1994, and no notice of land being affected by subsidence has been given for the site under Section 33 of the Coal Mining Act 1991.
- 3.8.5 There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the site.
- 3.8.6 The report further states that the Coal Authority does not hold any further plans for the extraction of coal within the local area.

3.9 Radon

3.9.1 With reference to the Building Research Establishment (BRE) publication "*Radon: guidance on protective measures for new buildings*" (2007), the site is located where no protection is considered necessary. In addition, Envirocheck use the British Geological Survey database to review reported radon levels in the area in which the site is located to establish recommended radon protection levels for new dwellings. The database confirms the BRE recommendations.

3.9.2 The Building Research Establishment publication applies to all new buildings, conversions and refurbishments whether they be for domestic or non-domestic use. For non-domestic buildings, the guidance supplements the requirements for radon protection at work specified in the Ionising Radiations Regulations 1999, legislation made under the Health and Safety at Work Act administered by the Health and Safety Executive (HSE). Further information is contained in the HSE/BRE guide "*Radon in the Workplace*".

3.9.3 It is noteworthy that the BRE and BGS / HPA information is based on statistical analysis of measurements made in dwellings in combination with geological units, which are known to emit radon. Therefore there is a risk for actual radon levels at the site to exceed the levels assessed by the BGS / HPA / BRE. Currently, the only true method of checking actual radon levels is by measurement within a building on the site over a period of several months. It should be noted that it is not currently a requirement of the Building Regulations to test new buildings for radon, however the BRE recommends testing on completion or occupation of all new buildings (domestic and non-domestic), extensions and conversions. Should you wish to undertake radon monitoring following completion of the development, we can provide proposals.

3.10 Flood risk

3.10.1 The Envirocheck report indicates the site is not located within a fluvial or tidal flood plain. It should be noted that this information does not constitute a site specific Flood Risk Assessment (FRA), and a full FRA may be required for the development to support a planning application or satisfy planning conditions.

3.11 Shallow mining and natural subsidence hazards

3.11.1 Envirocheck use the British Geological Survey database to establish hazard ratings for shallow minings and natural subsidence hazards. The database indicates the following ratings for the immediate site (based on published geological records).

Table summarising Envirocheck mining and subsidence hazards	
Hazard	Envirocheck rating
Shallow non-coal mining hazard rating	No hazard
Potential for collapsible ground stability hazard	Very low
Potential for compressible ground stability hazard	Very low
Potential for ground dissolution stability hazard	Very low
Potential for landslide ground stability hazard	Very low
Potential for running sand ground stability hazard	Very low
Potential for shrinking or swelling clay ground stability hazard	Low

Table 3.11

3.12 Borehole records

3.12.1 The British Geological Survey (BGS) retain records of boreholes formed from ground investigations carried out on a nationwide basis. The location of boreholes with records held by the BGS is recorded on the borehole map contained in Appendix P. We do not normally obtain copies of these records but can do on further instructions. There is normally a charge made by the BGS for retrieving and copying these records.

3.13 Enquiries with statutory undertakers

3.13.1 We have contacted the following Statutory Undertakers (SUs) to obtain copies of their records in order to avoid damaging their apparatus during our fieldwork activities: -

- a) BT Openreach Ltd
- b) Transco
- c) Northern Powergrid
- d) Northern Gas Network
- e) Northumbrian Water

Copies of responses received prior to publication of this report are presented in Appendix M. These records have been obtained solely for the purposes described above. Some of these records have been obtained from the Internet and from our database without contacting the statutory undertaker direct. Occasionally, SU information is recorded on drawings larger than A3, and thus cannot be easily presented in this report. In such cases we will copy the correspondence but not incorporate the drawing in this report, and maintain the records on our office file.

3.13.2 In addition, we have visited the linesearch web site (www.linesearch.org) which provides a report on national grid networks (National Gas and Electricity Transmission Networks). Again a copy of their report is presented in Appendix M.

3.13.3 Normally Statutory Undertakers drawings record the approximate location of their services. We recommend further on site investigations be undertaken to confirm the position of the apparatus and thus establish the effect on the proposed development and the necessity or otherwise for the permanent or temporary diversion of the service to allow the construction of the development to safely and successfully proceed.

3.14.4 It should be noted that statutory undertakers' records normally exclude private services.

3.15 Enquiries with local authority environmental health officers

3.15.2 We have contacted Local Authority Environmental Health Officers who have provided an assessment of the report. A full copy of the correspondence is provided in Appendix N but in brief the Environmental Protection Officer reports the following:

- The site is not designated as Contaminated Land under Part IIA of the Environmental Protection Act.
- The site has been used for heavy industrial use in the past which present a risk of contamination to the ground including railway land and a factory.
- The site lies within close proximity to additional heavy industrial uses including a claypit, quarrying, chemical manufacture (alkali), heap of unknown constituents, railway land and a factory.
- The existing building (formerly Be Modern) required a permit due to operations on site including the manufacture of fire surrounds, fires and heating equipment. The permit has been revoked.
- Prior to the above, the site was permitted for timber activities, waste wood combustion and solvent (coating) operations.

3.15.3 The industrial uses described above present potential sources of contamination which could have impacted the ground on site

4 Fieldwork

4.1	General
4.2	Site restrictions
4.3	Exploratory trial pits
4.4	Driven tube sampling
4.5	Dynamic probing
4.6	Concrete slab investigation
4.7	Sampling strategy

4.1 General

4.1.1 Fieldwork comprised the following activities:-

- Excavation of four exploratory trial pits
- Excavation of eleven exploratory boreholes formed using driven tube sampling equipment
- Dynamic cone penetration testing in five locations
- Diamond tipped coring in eighteen positions
- Schmidt hammer testing
- Ferro- and GPR scanning

4.1.2 A plan of the site showing observed/existing site features and position of exploratory points is presented on Drawing 02. The position of exploratory points shown on these plans is approximate only and confirmation of these positions is subject to dimensional surveys, which is considered outside our brief.

4.1.3 The extent of fieldwork activities and position of exploratory points were determined by Soiltechnics.

4.1.4 Exploratory points were positioned to avoid known locations of underground services but to provide a reasonable coverage of the site. Prior to commencement of exploratory excavations an electronic cable locating tool was used to scan the area of the excavation. If we received a response to this equipment then the excavation would be relocated.

4.1.5 All soils exposed in excavations were described in accordance with BS EN ISO 14688 '*Identification and Classification of soil*' and BS EN ISO 14689 '*Identification and classification of rock*'.

4.2 Site restrictions

4.2.1 The excavations were limited to the excavation of boreholes and hand dug trial pits to limit disruption on site and minimise damage to surfacings. Excavations were also positioned to limit disruption to on site activities. Excavations were also prevented within the existing metal coating works and offices.

4.3 Exploratory trial pits

- 4.3.1 Trial pits HP01-HP04 were excavated using hand tools to a maximum depth of 1.4 metres. An electrically powered breaker was used to loosen surface concrete/bituminous bound materials prior to excavation. An electrically powered spade was used for excavation of stiff/dense soils.
- 4.3.2 Trial pits exposed foundation arrangements to existing buildings within the site. The trial pit excavations were backfilled with excavated material, which was compacted using hand held ramming tools. The surface was reinstated to match the original surroundings. A Geotechnical Engineer supervised the excavations.
- 4.3.3 Sampling and logging was carried out as trial pit excavations proceeded but were not entered at depths exceeding 1.2 metres, or where trial pit sides were deemed unstable. The density of granular soils encountered in excavations was gauged by the ease of excavation.
- 4.3.4 Soil samples for subsequent laboratory determination of concentration of chemical contaminants were taken from the sides of trial pits using clean stainless steel equipment and stored in new plastic containers, which were labelled and sealed. If as a consequence of visual or olfactory evidence, a sample was suspected to be contaminated by organic material, the sample was stored in an amber glass jar with a PTFE sealing washer.
- 4.3.5 Soil samples for subsequent 'physical' or 'physical and classification' laboratory testing were taken from the side of trial pits. The sample was placed in a plastic bag and subsequently sealed and labelled. Samples for moisture content determination were placed in sealable tubs and appropriately labelled.
- 4.3.6 Soil samples were obtained to meet quality class 3 to 5 as described in BS EN 1997-2:2007. Sample sizes were appropriate for the laboratory test being considered.
- 4.3.7 A pocket penetrometer was used in the cohesive soils encountered. This tool is deemed to measure the apparent ultimate bearing capacity of the soil under test. The pocket penetrometer is calibrated in kg/cm^2 . The reading can be approximately converted to equivalent undrained shear strength by multiplying the results by a factor of 50. Tests were carried out in the sides of trial pits when access can be safely achieved otherwise testing was carried out on excavated intact clods. The results are reported in columns to the right of trial pit results. The pocket penetrometer is not covered by British Standards. This tool has the advantage that it can be used to determine the approximate insitu undrained shear strength of stony cohesive soils.
- 4.3.8 A summary of pocket penetrometer results obtained from the cohesive soils encountered in exploratory excavations are presented in graphical format on Drawing 05.
- 4.3.9 Trial pit records are presented in Appendix C.

4.4 Driven tube sampling

- 4.4.1 Boreholes DTS01-DTS11 were formed using driven tube sampling equipment. Driven tube sampling comprises driving 1m long steel sample tubes, which are screw coupled together or coupled to extension rods and fitted with a screw on cutting edge. The sample tubes are of various diameters, generally commencing with 100mm and reducing, with depth, to 50mm, and include a disposable plastic liner which is changed between sampling locations in order to limit the risk of cross contamination. On completion of excavation the liner containing the sample is cut open and the soil sample logged by a geo-environmental engineer. Borehole records are presented in Appendix D.
- 4.4.2 Samples for determination concentration of chemical contaminants are taken from samples obtained in the disposable tubes as sub-samples, using stainless steel sampling equipment, which is cleaned with de-ionised water.
- 4.4.3 The driven tube sampler obtains samples under category A allowing laboratory test quality classes 3 to 5 as described in BS EN ISO 22475-1:2006.
- 4.4.4 In each location, where necessary, surface concrete was either broken out or cored prior to excavation of the borehole. The concrete surface was reinstated on completion.
- 4.4.5 A pocket penetrometer was used in the cohesive soils retrieved from the borehole. This tool is deemed to measure the apparent ultimate bearing capacity of the soil under test. The pocket penetrometer is calibrated in kg/cm^2 . The reading can be approximately converted to an equivalent undrained shear strength by multiplying the results by a factor of 50. The results are reported on borehole records. The pocket penetrometer is not covered by British Standards.
- 4.4.6 A summary of pocket penetrometer results obtained from the cohesive soils retrieved from the boreholes are presented in graphical format on Drawing 05.
- 4.4.7 Gas monitoring standpipes were installed in boreholes DTS01, DTS02 and DTS09. The standpipes were installed following the recommendations of BS EN ISO 22475-1:2006 '*Geotechnical Investigation and Testing – Sampling methods and groundwater measurements – Part 1: Technical Principles for execution*'. Details of the standpipe installation are recorded on Drawing 06.
- 4.4.8 Whilst granular deposits were encountered on site, the soils comprised Made ground with the potential to generate leachate contamination, and thus soil infiltration testing was not attempted.
- 4.4.9 Records of boreholes formed using driven tube sampling techniques are presented in Appendix D.

4.5 Dynamic cone penetration testing

- 4.5.1 Dynamic Cone Penetration (DCP) testing was carried out in five locations. Dynamic Cone Penetration testing consists of driving a 50mm diameter, 90° cone into the ground, via an anvil and extension rods with successive blows of a freefall hammer. The number of blows required to drive the cone each successive 100mm (N100) is recorded.
- 4.5.2 Dynamic Cone Penetration testing was carried out following BS EN ISO 22476-2:2005 and the apparatus used was categorised as 'Super heavy' (DPSH-B) in accordance with the standard.
- 4.5.3 Dynamic cone penetration test data is presented in graphical format on Drawing 04.

4.6 Concrete slab investigation

- 4.6.1 Concrete floor slabs were investigated using a combination of diamond coring, ferro- and GPR scanning and Schmidt rebound hammer testing.
- 4.6.2 Diamond coring was undertaken through the existing slabs in order to determine the thickness of slabs. Coring was carried out using 75mm to 300mm diameter thin wall steel barrels with a diamond tipped cutting edge. The barrel is rotated using an electrically powered motor and when cutting, was lubricated with water and powered using a portable generator. Coreholes were reinstated with concrete on completion.
- 4.6.3 The ferro- and GPR scanner is for non-destructive locating of steel reinforcement in concrete members. It determines the position and direction of the reinforcing bars using a combined ferro-scanner and 3D GPR imaging unit. The unit is supplied with an imaging unit and search head which is capable of measuring to a maximum depth of 360mm.
- 4.6.4 The Schmidt hammer was used to estimate the compressive strength of concrete. Corehole records, along with Schmidt hammer test results are presented in Appendix C.

4.7 Sampling strategies

4.7.1 Geotechnical

- 4.7.1.1 In general we adopted a judgemental sampling strategy in relation to geotechnical aspects of the investigation. The location and frequency of sampling was carried out in consideration of the following:-
- i) Topography
 - ii) Geology (including Made Ground)
 - iii) Nature of development proposals

4.7.2 Environmental

4.7.2.1 Details of sampling with respect to contamination issues are described in Section 8.

4.7.3 Sample retention

4.7.3.1 Samples are stored for a period of one month following issue of this report unless otherwise required.

5 Ground conditions encountered

5.1	Soils/rocks
5.2	Existing foundation arrangements
5.3	Groundwater

5.1 Soils / Rocks

- 5.1.1 Each exploratory excavation encountered a similar profile of soils. Deep Made Ground was encountered across the entire site. Where penetrated, underlying soils comprised with Till (Devensian) and Seventy Fathom Post Member.
- 5.1.2 Made Ground in boreholes DTS01-DTS06 and trial pit HP01 generally comprised of an assortment of loose and medium dense, dark and light brown, orange brown, light grey and reddish brown gravelly sand and sandy gravel with localised bands of slightly silty gravelly clay. Soils appeared to contain a substantial coal content. Gravels consisted of angular to rounded flint, metal, plastic, clinker, ash and brick. Such soils extended to depths between 3.2m and in excess of 5.0m. For the purposes of waste classification this Made Ground was classed as Made Ground Type 1 (ref Section 11).
- 5.1.3 Made Ground in boreholes DTS07-DTS11 and trial pits HP02 and HP03 generally comprised of an assortment of orange brown, reddish brown, dark grey and dark brown, clays, sands and gravels. Gravels consisted of angular to rounded flint, ash and brick with occasional timber and sandstone. Such soils extended to depths in excess of 3m. For the purposes of waste classification this Made Ground was classed as Made Ground Type 2 (ref Section 11).
- 5.1.4 The base of the Made Ground was only encountered in three locations; DTS01 (at 3.2m) and DTS02 (3.4m) toward the extreme north and DTS08 (4.9m) toward the southern boundary.
- 5.1.5 Till was only encountered in boreholes DTS01 and DTS02 and generally comprised of high strength, dark green and grey clay. The base of the Glacial Till was not encountered, with excavations extending to 4m depth.
- 5.1.6 Seventy Fathom Post member was only encountered in borehole DTS08, directly below the Made Ground at 4.9m, where it comprised of extremely weak light orange brown medium grained sandstone and light brown gravelly sand, gravels consist of extremely weak sandstone. Till was absent in DTS08.

5.2 Existing foundation arrangements

- 5.2.1 Trial pit HP01 exposed a shuttered concrete footing to a depth of 0.96m.
- 5.2.2 Trial pit HP02 exposed concrete footings and using drill probes found that concrete footings extended to a depth of between 0.72m and 0.84m.

- 5.2.3 Trial pit HP03 exposed shuttered concrete footing to a depth of 1.2m.
- 5.2.4 Trial pit HP04 exposed concrete footing to a depth of 0.54m.
- 5.2.5 Each trial pit encountered Made Ground soils below the footing. With the depth of Made Ground found across site in excess of 5m in some areas it is likely that the existing buildings have been piled.

5.3 Groundwater

- 5.3.1 No groundwater inflows were observed in any of the exploratory excavations.

6 Laboratory testing

6.1	Classification testing
6.2	Chemical testing

6.1 Classification testing

6.1.1 Laboratory testing was carried out in accordance with BS1377: 1990 “*Methods of Test for Soils for Civil Engineering Purposes*” and limited to determination of

- i) the liquid limit (one point cone penetrometer method)(method 4.4)
- ii) the plastic limit and plasticity index (method 5)

6.1.2 Laboratory testing was carried out by an independent specialist testing house, which operates a quality assurance scheme. Copies of laboratory test result certificates are presented in Appendix E.

6.2 Chemical testing

6.2.1 Laboratory testing was carried out as deemed necessary and carried out using the following techniques:

- Using inductively coupled plasma mass spectrometry (ICP-MS), determination of concentration of metals, semi-metals and soluble sulphate.
- Using gas chromatography flame ionisation detection methods (GC-FID), determination of concentration of petroleum hydrocarbons (TPH)
- Using gas chromatography flame ionisation detection methods (GC-FID), determination of concentration of polycyclic aromatic hydrocarbons (PAH)
- Using gas chromatography mass spectrometry (GS-MS), determination of the concentration of
 - i) Volatile organic compounds (VOC)
 - ii) Semi-volatile organic compounds (sVOCs),
- Using procedure SOP2185 in accordance with the requirements of Appendix 2 of the Analyst Guide (HSG 248), determination of bulk asbestos.
- Using procedure SOP 2192 using stereo-microscopy, polarised light optical microscopy and dispersion staining, determination of asbestos in soils.
- Determination of the concentration of leachable metals, semi-metals and PAH.
- Using electromagnetic measurement, determination of pH

- Determination of the concentration of polychlorinated biphenyls
- Following methods described in the Environment Agency publication '*Guidance on sampling and testing of wastes to meet landfill waste acceptance procedures*' (April 2005) – suite of testing in accordance with Table 2.1.

6.2.2 Laboratory testing was carried out by an independent specialist testing house, which operates a quality assurance scheme. Copies of laboratory test result certificates are presented in Appendix F.

7 Engineering assessment

7.1	General description of the development
7.2	Building foundation design and construction
7.3	Influence of trees and hedges
7.4	Ground floor construction
7.5	Service trench excavations
7.6	Infiltration potential
7.7	Pavement foundations
7.8	Reuse of excavated soils from the site

7.1 General description of the development

7.1.1 The following assessments are made on the investigatory data presented in the preceding sections of this report and are made with reference to specific nature of the development. Should scheme proposals change then it may be necessary to review the investigation and report.

7.1.2 The proposed scheme includes the existing building being stripped back to the steel portal frame and re-clad, with existing floor slabs being retained. Additional hard standing is proposed to provide additional storage and vehicle circulation areas.

7.2 Building foundation, design and construction

7.2.1 Definitions of geotechnical terms used in the following paragraphs are provided in Appendix A. The proposed scheme does not require new foundation, however we have provided the following commentary in the event that new foundations are needed at the site.

7.2.2 Deep Made Ground (3.2->5m) was encountered across the site. The composition and strength of the soils was variable across the site. The near surface Made Ground deposits in our opinion are incapable of supporting the concentrated foundation loads without promoting high levels of total and differential settlement, possibly beyond the capability of the building superstructure. Alternative foundation solutions are thus identified below.

7.2.3 Option 1 – Piled foundations

7.2.3.1 A piled foundation solution would transmit superstructural loads down through the Made Ground and Glacial Till and into the Seventy Fathom Member at depth to obtain end bearing and shaft adhesion support. The difficulty of driving or boring piles through the dense sandstone and potential cobbles within the Made Ground will need to be considered by any specialist piling company and will affect the method of pile installation.

7.2.3.2 Should the piled foundation solution be selected then we recommend a supplementary borehole investigation be carried out to explore ground conditions at depths beyond possible pile lengths and provide geotechnical data for the design of the piles.

7.2.4 Option 2 – Vibrotreatment

7.2.4.1 Another option would be to increase the density of the Made Ground using vibrotreatment. By increasing the density of the Made Ground, settlement levels can be substantially reduced and allow the adoption of traditional concrete pad/strip foundations located 1m below existing or finished ground levels, whichever produces the deeper foundation. Typically concrete strip foundations require reinforcement to stiffen the foundations to resist localised differential movement.

7.2.4.2 Should this option be considered we recommend the contents of this report be provided to a specialist vibrotreatment contractor to obtain their opinion as to the ability of the Made Ground to be effectively treated to allow the adoption of traditional spread foundations located at shallow depths. It is important that the vibrotreatment specialist takes into account potential boulder-sized materials in the Made Ground, which may affect penetration of the vibratory poker. Additional considerations as to the effectiveness of vibrotreatment include potential existing piles (their presence has not been confirmed at this stage) and the quantity of coal, timber and ash fragments within the Made Ground.

7.2.4.3 Typically, following vibrotreatment, the Made Ground deposits will be able to provide an allowable bearing pressure of 120kN/m² at a depth of 1m but this would need to be confirmed by the vibrotreatment specialist.

7.2.4.4 It is noteworthy that vibrotreatment does generate vibrations which could damage nearby buildings and any nearby vibration sensitive equipment including services.

7.2.4.5 We recommend vibrotreatment be continued below the floor slab of the proposed buildings to minimise levels of settlement of the new slab. We recommend that specialist advice is sought in order to pursue this option further.

7.2.3.6 Should vibrotreatment be undertaken, we recommend it is carried out following the “specification for ground treatment” produced by the Institution of Civil Engineers. Guidance on vibrotreatment is also provided in NHBC Standards, Chapter 4.6.

7.2.3.7 It is also noteworthy that normally vibrotreatment specialists are reluctant to use this option on buildings of more than 4 storeys, but again, this needs to be confirmed by the specialists once development proposals have been determined. Also, vibrotreatment will not affect the plastic (shrinkable nature) of the near surface soils and thus deeper foundations may be required locally close to major vegetation.

7.2.4 Option 3 – Ring Beam

7.2.4.1 A possible third option would be to adopt reinforced concrete ring beams). A detailed layout of the development proposals, anticipated loadings and more targeted density testing would be required in order to assess the feasibility of this option further.

7.2.5 Option 4 – Raft Foundations

7.2.5.1 Raft foundations potentially have the ability to spread superstructural loads over the footprint of the building thus substantially reducing stresses imparted to the ground compared with spread foundations transferring more concentrated loads to the ground.

7.2.5.2 At this stage rafts are considered an unlikely solution for the site but we can re-assess our analysis following determination of exact development proposals. Should a raft foundation solution then be considered a possibility, we recommend further, targeted insitu density testing is carried out across the site to allow an assessment of the likely settlement behaviour of the raft(s) to be made and potentially providing information to allow the loss of support and stiffness of such a raft to be determined.

7.3 Influence of Trees and other major vegetation

7.3.1 Soil classification and new foundation design

7.3.1.1 The results of plastic and liquid limit determinations performed on a sample of the Glacial Till indicate the deposits are soils of medium volume change potential when classified in accordance with National House Building Council (NHBC) Standards, Chapter 4.2. Testing on cohesive Made Ground samples indicate the deposits include low and medium change potential clays, though were predominantly granular nature. Foundations taken down onto a depth of 0.9m will penetrate the zone of shrinkage and swelling caused by seasonal wetting and drying. Trees and other major vegetation extend this zone and will require deeper foundations. A good guide to this subject is provided in NHBC Standards, Chapter 4.2.

7.3.1.2 The type of foundation and localised ground conditions will play a significant impact upon the depth of foundations required for potential foundations solutions such as rafts, ring beam or vibrotreatment.

7.3.1.3 A piled foundation solution would transmit superstructural loads beyond the influence of shrinkage caused by vegetation/season wetting and thus will not be substantially impacted by shrinkage/swelling of near surface soils.

7.3.2 New planting

7.3.2.1 Any planting schemes should also take into account the effect that new trees could have on foundations when they reach maturity. Again a good guide to this subject is provided in NHBC Standards, Chapter 4.2.

7.3.3 Tree species identification

- 7.3.3.1 There are a number of trees and other major vegetation at the site. We recommend a qualified Arboriculturist (listed in the Arboricultural Association Directory of Consultants – www.trees.org.uk) be appointed to determine the location, height (and mature height) and water demand of all trees/major hedgerows at the site, information, which will be necessary to design foundations in accordance with NHBC Standards, Chapter 4.2.

7.4 Ground Floor Construction

- 7.4.1 The proposals are for existing floor slabs to be reused, however should new floor slabs be required, ground bearing floor slabs can be adopted at this site located on the Made Ground deposits, but some settlement (both total and differential) could be expected (refer paragraph 7.4.4 below). Following completion of excavations to formation levels we recommend the formation is rolled using a heavy roller to identify any soft areas and indeed compact near surface soils which may have been disturbed by excavation processes. Any 'soft' areas will require excavation to locate more stable soils. We recommend a blanket of good quality compacted granular material be placed prior to construction of the floor slabs.
- 7.4.2 Assuming then, the floor slab is not required to support settlement sensitive equipment and will be constructed for general warehouse/retail usage. With reference to 'Concrete industrial ground floors' (Technical Report no. 34 – third edition) produced by the Concrete Society, the modulus of subgrade reaction (k) supporting the floor slab has only a minor effect on the slab design thickness for flexural stresses and does not therefore have to be estimated with great accuracy.
- 7.4.3 The modulus of subgrade reaction is a measure of the elastic properties of near surface soils. Plate bearing tests provide the most accurate measure of elastic modulus and we can carry this out on further instructions. California Bearing Ratio (CBR) test data be converted to an equivalent modulus of subgrade reaction (see Technical Report 34), but CBRs are not a direct measure of modulus. Again, we can carry out CBR testing on further instructions. Technical report 34, provides typical values of modulus of subgrade reaction based on soil descriptions, and using this guidance we estimate the modulus subgrade reaction in the range of 0.05 to 0.1 N/mm³.
- 7.4.4 In addition to elastic deformation of soils (estimated from k values described above), some long-term settlement of the floor slab will occur under applied loads, particularly uniformly distributed loads. It is difficult to accurately predict levels of settlement, as the applied load pattern is not known. Assuming a constantly applied uniformly distributed load of say 50kN/m², settlements in the order of 15-25mm could occur within 5 to 10 years. Differential settlement will occur in the long term, if the floor slab is not uniformly loaded. Removal of the Made Ground and replacement with a well compacted (to an end point specification) well graded and durable granular fill would substantially reduce levels of possible settlement

7.4.5 Vibrotreatment of the area below the floor slab will increase the density of the near surface deposits and thus reduce levels of settlement.

7.4.6 If a piled foundation is selected then a suspended floor could be adopted supported off piled foundations.

7.5 Service Trench Excavations

7.5.1 It is difficult to predict the stability of trench sides from borehole investigations. Generally we would anticipate overbreak/instability in Made Ground deposits potentially requiring shoring to maintain an open excavation.

7.5.2 Based on groundwater observations in exploratory excavations, we consider it is unlikely that significant groundwater will be encountered in excavations extending to depths of up to 5m. There is however a potential risk of minor water quantities being encountered in basal deposits of the Made Ground as they overlie the relatively impermeable Glacial Till deposits. We anticipate any water will be controlled with nominal pumping techniques.

7.5.3 We recommend any trench excavation requiring human entry is shored as necessary to conform with current best practice, and accepted by the Health and safety Executive (HSE) and in particular, following guidance provided in the HSE publication 'Health and safety in construction (HSG 150)' (www.hse.gov.uk)

7.6 Infiltration Potential

7.6.1 Although, it is possible that the predominantly granular deposits of the Made Ground could dispose of stormwater using infiltration systems, laboratory testing indicates soakaways would promote leaching of chemical contaminants in the soil sufficient to cause concern. On this basis alone the use of soakaways is not recommended in the Made Ground.

7.6.2 It is possible that the predominantly granular deposits of the Seventy Fathom Member deposits at depth could dispose of stormwater using infiltration systems. If should such a system is considered as a drainage option we recommend deep soil infiltration tests be carried out in accordance with Building Research Establishment Digest 365 (2007) "soakaway design" to allow the design of infiltration systems. We would be pleased to carry out such testing on further instructions.

7.6.3 Such testing could not be carried out during this phase of works as the Seventy Fathom Member was not substantially penetrated to enable testing without potentially mobilising contaminants from the Made Ground.

7.6.2 Contamination considerations

- 7.6.2.1 With reference to Environment Agency (EA) publication '*Groundwater protection: Policy and practice (GP3) Section G*, 2012, outside of SPZ1, the EA will support sustainable drainage systems for new discharges to ground. This is subject to an appropriate risk assessment to demonstrate that ground conditions are suitable and infiltration systems do not present an unacceptable risk of promoting mobilisation of contaminants or creating new pathways for contaminant migration.
- 7.6.2.2 The potential permeability of the Seventy Fathom Member in combination with the site located over a Secondary A aquifer suggests the site is sensitive to migration of contaminants. The site is not located within or close to a source protection zone. We have carried out leachate testing of a suite of contaminants with our assessment provided in Section 8. Essentially, measured concentrations of some leachable contaminants within the **Made Ground** are above EQS and UKDWS values for the local environment and thus any infiltration on site should be prevented from infiltrating through the Made Ground. The risk of infiltration systems within the Seventy Fathom Member only, promoting mobilisation of contaminants at the site is considered low. All discharges to groundwater are subject to compliance with the Water Framework Directive (2000/60/EC) and Groundwater Daughter Directive (2006/118/EC).

7.7 Pavement Foundations

- 7.7.1 It is anticipated that the proposed access road and associated hardstanding areas will be located at or about existing ground levels with formation located on Made Ground soils.
- 7.7.2 Equilibrium CBR (California Bearing Ratio) values (with reference to Transport and Road Research Laboratory (TRRL) Report LR1132 '*Structural design of Bituminous Roads*') are derived from knowledge of soil classification data (plasticity index for soils exhibiting cohesion (clay type) and particle size distribution for granular soils), the location of the water table pavement thickness, and weather conditions at the time of construction. It is anticipated that excavations to formation levels will encounter predominantly granular soils with localised clay lenses. Granular soils will provide numerically high CBR values (say 20%), but cohesive soils will typically provide significantly lower values. As a worst case scenario however we have determined a CBR assuming soil exhibit cohesion. Adopting then an average plasticity index of say 20 for cohesive soils, a low water table, a 'thin' pavement the following equilibrium CBR values are derived for varying construction conditions

Equilibrium CBR values for differing construction conditions		
Poor	Average	Good
CBR = 3%	CBR = 5%	CBR = 6%

Table 7.7.2

- 7.7.3 It is possible to derive the 'insitu' CBR value at formation from undrained shear strength data by applying a conversion factor of 23 (refer TRRL laboratory report LR889). Thus adopting pessimistic undrained shear strength of say 60kN/m² at formation level (based on insitu shear strength measurements) then an equivalent CBR value can be obtained i.e.

$$\text{Insitu CBR} = \text{undrained shear strength} \frac{C}{23} = 2.6 \%$$

The 'insitu' CBR derived above, is susceptible to change dependent upon weather conditions during construction. The equilibrium CBR value derived in paragraph 7.7.2 above is an estimate of the CBR value, which will predominate during the life of the pavement. We recommend the insitu CBR of 2.6% derived from shear strength data be utilised for design purposes and reassessed during construction. The fact that the clay subgrade soils are likely to be deemed frost susceptible will probably be the overriding criteria for pavement foundation design purposes. It should also be noted that the thickness of the pavement foundation also relates to the amount and loading from construction traffic, which is discussed in detail in the Transport and Road Research Laboratory (TRRL) Report LR1132 '*Structural design of Bituminous Roads*'.

- 7.7.4 Made Ground deposits at the site exhibit a degree of variation in compactness. Some long term settlement of hardstandings will occur due to consolidation of the Made Ground deposits and from applied loads, particularly uniformly distributed loads. It is difficult to accurately predict levels of settlement, as potentially applied loading patterns are not known. Assuming a constantly applied uniformly distributed load of say 10kN/m², settlement in the order of 20mm could occur within 5 to 10 years of construction. Equally, some differential settlement could occur in the long term, if hardstandings are not uniformly loaded. Consideration to the external drainage system to account for any deformation of the pavement will also be required to limit the risk of localised depressions and subsequent ponding in the future.
- 7.7.5 Once formation levels have been established it is recommended that the formation be trimmed and rolled following current requirements of the Highways Agency Specification for Highways Works (clause 616) (refer www.dft.gov.uk/ha/standards/mchw/vol1) Such a process will identify any soft areas, which we recommend be either excavated out and backfilled with a suitable well compacted material similar to those exposed in the sides of the resulting excavation, or large cobbles of a good quality stone rolled into the formation to stabilise the 'soft' area.
- 7.7.6 The silty nature of the Made Ground will render them moisture susceptible with small increases in moisture content giving rise to a rapid loss of support to construction plant. We therefore recommend, as soon as formation is trimmed and rolled, that sub-base is laid in order to avoid deterioration of the subgrade in wet or frosty conditions.

8 Chemical contamination

8.1	Contaminated land, regulations and liabilities
8.2	Objectives and procedures
8.3	Development characterisation and identified receptors
8.4	Identification of pathways
8.5	Assessment of sources of contamination
8.6	Initial conceptual model
8.7	Laboratory testing
8.8	Updated conceptual model
8.9	Risk assessment in relation to the use of infiltration systems
8.10	Risk assessment summary and recommendations
8.11	Statement with respect to National Planning Policy Framework
8.12	On site monitoring

8.1 Contaminated land, regulation and liabilities

8.1.1 Statute

8.1.1.1 Part IIA of the Environment Protection Act 1990 became statute in April 2000. The principal feature of this legislation is that the hazards associated with contaminated land should be evaluated in the context of a site-specific risk based framework. More specifically contaminated land is defined as:

“any land which appears to the local authority in whose area it is situated to be in such a condition, by reasons of substances in, on or under the land, that:

- a) Significant harm is being caused or there is a significant possibility of such harm being caused; or*
- b) Pollution of controlled waters is being or is likely to be caused”.*

8.1.1.2 Central to the investigation of contaminated land and the assessment of risks posed by this land is that:

- i) There must be contaminants(s) at concentrations capable of causing health effects (*Sources*).
- ii) There must be a human or environmental receptor present, or one which makes use of the site periodically (*Receptor*); and
- iii) There must be an exposure pathway by which the receptor comes into contact with the environmental contaminant (*Pathway*).

8.1.1.3 In most cases the Act is regulated by Borough or District Councils and their role is as follows:

- i) Inspect their area to identify contaminated land
- ii) Establish responsibilities for remediation of the land

- iii) See that appropriate remediation takes place through agreement with those responsible, or if not possible:
 - by serving a remediation notice, or
 - in certain cases carrying out the works themselves, or
 - in certain cases by other powers
- iv) keep a public register detailing the regulatory action which they have taken

8.1.1.4 For “special” sites the Environment Agency will take over from the Council as regulator. Special sites typically include:-

- Contaminated land which affects controlled water and their quality
- Oil refineries
- Nuclear sites
- Waste management sites

8.1.2 Liabilities under the Act

8.1.2.1 Liability for remediation of contaminated land would be assigned to persons, organisations or businesses if they caused, or knowingly permitted contamination, or if they own or occupy contaminated land in a case where no polluter can be found.

8.1.3 Relevance to predevelopment conditions

8.1.3.1 For current use, Part IIA of the Environmental Protection Act 1990 provides the regulatory regime. The presence of harmful chemicals could provide a ‘source’ in a ‘pollutant linkage’ allowing the regulator (local authority or Environment Agency) to determine if there is a significant possibility of harm being caused to humans, buildings or the environment. Under such circumstances the regulator would determine the land as ‘contaminated’ under the provision of the Act requiring the remediation process to be implemented.

8.1.4 Relevance to planned development

8.1.4.1 The developer is responsible for determining whether land is suitable for a particular development or can be made so by remedial action. In particular, the developer should carry out an adequate investigation to inform a risk assessment to determine:

- a) Whether the land in question is already affected by contamination through source – pathway – receptor pollutant linkages and how those linkages are represented in a conceptual model
- b) Whether the development proposed will create new linkages e.g. new pathways by which existing contaminants might reach existing or proposed receptors and whether it will introduce new vulnerable receptors, and
- c) What action is needed to break those linkages and avoid new ones, deal with any unacceptable risks and enable safe development and future occupancy of the site and neighbouring land?

8.1.4.2 Building control bodies enforce compliance with the Building Regulations. Practical guidance is provided in Approved documents, one of which is Part C, '*Site preparation and resistance to contaminants and moisture*' which seeks to protect the health, safety and welfare of people in and around buildings, and includes requirements for protection against harm from chemical contaminants.

8.1.5 Pollution of controlled waters

8.1.5.1 Part IIA of the Environment Protection Act 1990, defines pollution of controlled waters as

'The entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter'

8.1.5.2 Paragraphs A36 and A39 of statutory guidance (DETR 2000) further define the basis on which land may be determined to be contaminated land on the basis of pollution of controlled waters.

'Before determining that pollution of controlled waters is being, or likely to be, caused, the Local Authority should be satisfied that a substance is continuing to enter controlled waters, or is likely to enter controlled waters. For this purpose, the local authority should regard something as being likely when they judge it more likely than not to occur'

'Land should not be designated as contaminated land where:

- a) A substance is already present in controlled waters:*
- b) Entry into controlled waters of that substance from the land has ceased, and*
- c) It is not likely that further entry will take place.*

Substances should be regarded as having entered controlled waters where:

- a) They are dissolved or suspended in those waters; or*
- b) If they are immiscible with water, they have direct contact with those waters, or beneath the surface of the waters'*

8.1.5.3 Controlled waters are defined in statute to be:

'territorial waters which extend seawards for 3 miles, coastal waters, inland freshwaters, that is to say, the waters in any relevant lake or pond or of so much of any relevant river or watercourse as is above the freshwater limit, and groundwaters, that is to say, any waters contained in underground strata.'

8.1.6 Further information

8.1.6.1 The above provides a brief outline as regards current statute and planning controls. Further information can be obtained from the Department for the Environment, Food and Rural Affairs (DEFRA) and their Web site www.defra.gov.uk.

8.2 Objectives and procedures

8.2.1 Objectives

8.2.1.1 This report section discusses investigations carried out with respect to chemical contamination issues relating to the site. The investigations were carried out to determine if there are any liabilities with respect to Part IIA of the Environment Protection Act. As stated in Section 2.4.2, the investigation process followed the principles of BS10175: 2011 '*Investigation of potentially contaminated sites – Code of Practice*', with the investigation combining a desk study (preliminary investigation) together with the exploratory and main investigations (refer BS10175: 2011 for an explanation).

8.2.1.2 This section of the report produces '*Conceptual models*' based on investigatory data obtained to date. The conceptual model is constructed by identification of *contaminants* and establishment of feasible *pathways* and *receptors*. The conceptual model allows a *risk assessment* to be derived. Depending upon the outcome of the risk assessment it may be necessary to carry out remediation and/or further investigations with a view to eliminating, reducing or refining the risk of harm being caused to identified receptors. If appropriate, our report will provide recommendations in this respect.

8.2.1.3 Clearly we must consider the current pre-development condition, establishing risks which may require action to render the site safe to all relevant (current) receptors meeting the requirements of current legislation (Part IIA of the Environmental Protection Act 1990)

8.2.1.4 Definition of terms used in the preceding paragraph and subsequent parts of this section of the report are presented in Appendix B.

8.2.2 Procedure to assess risks of chemical contamination

8.2.2.1 For the purposes of presenting this section of this report, we have adopted the following sequence in assessing risks associated with chemical contamination.

Table outlining sequence to assess risk associated with chemical contamination		
Conceptual model element	Contributory information	Outcome
Receptor	Development categorisation	Identification of receptors at risk of being harmed Method of analysing test data Criteria for risk assessment modelling
Pathways	Geology and ground conditions Development proposals	Identification of critical pathways from source to receptor
Source	Previous site history Desk study information Site reconnaissance Fieldwork observations	Testing regime Identification of a chemical source Analysis of test data and other evidence

Table 8.2.2

8.2.2.2 We have adopted, in general, the procedures described in CIRIA C552 ‘Contaminated land risk assessment - a guide to good practice’ in deriving a risk assessment. Initially we have carried out a ‘phase 1 assessment’ based on desk study information and site reconnaissance, to produce an initial conceptual model and thus a preliminary risk assessment. This model / assessment is then used to target fieldwork activities and laboratory testing, with the results of this part of the investigation used to allow a phase 2 assessment to be produced by updating the conceptual model and refining the risk assessment.

8.3 Development characterisation and identified receptors

8.3.1 Site characterisation

8.3.1.1 The nature of the site has a significant influence the likely exposure pathways between potentially contaminated soils and potential receptors. The following table summarises elements which characterise the site based on site observations and desk study information.

Summary of site characteristics		
Element	Source / criteria	Characteristic
Current land use	Observations	Mixed industrial use including furniture making and metal coating works. Fuel and chemical stores present on site together with an electricity substation.
Future land use	Advice	The site is to be redeveloped for industrial/commercial use.
Site history	Desk study	Formerly occupied by residential buildings. Suspected bomb damage during WWII and redevelopment into a warehouse/factory.
Geology	Desk study and Site investigation	Made Ground found from 3.2m to > 5m Till encountered in the north from 3.2m to a proven depth of 4m. Seventy Fathom Post Member encountered to the south from a depth of 4.9m.
Ground water	Aquifer potential	Secondary A Aquifer within Seventy Fathom Post Member.
	Abstractions	No active groundwater abstraction points
	Source protection zone	Site not within source protection zone
Surface waters	Location	The channel of the River Tyne is located 700m north west of the site.
	Abstractions	One abstraction point located 1836m south west of the site.

Table 8.3.1

8.3.2 Identified receptors

8.3.2.1 The principal receptors subject to harm caused by any contamination of the proposed development site are as follows.

Principle Receptor	Detail
Humans	Users of the current site
	End user of the developed site
	Construction operatives and other site investigators
Vegetation	Plants and trees, both before and after development
Controlled waters	Surface waters (Rivers, streams, ponds and above ground reservoirs)
	Ground waters (used for abstraction or feeding rivers / streams etc)
Building materials	Materials in contact with the ground

Table 8.3.2

This section of the report assesses those receptors listed above. Section 10 provides a risk assessment in relation to building materials.

8.3.3 Human receptors

8.3.3.1 The Contaminated Land Exposure Assessment (CLEA) model can be used to derive guideline values, against which land quality data can be compared to allow an assessment of the likely impacts of soil contamination on humans. The parameters used within the model can be chosen to allow guideline values to be derived for a variety of land uses and exposure pathways. For example, a construction worker is likely to be exposed in different ways and for different durations than an adult in a residential setting.

8.3.3.2 On the basis that the current site is restricted to industrial activities the adult is considered an appropriate adult receptor. Following completion of the proposed commercial development the critical site user (receptor) is again considered to be an adult. This criterion has been used in the conceptual model for the current and future site use. Our assessment also considers construction operatives as adult receptors.

8.3.4 Vegetation receptors

8.3.4.1 Soil contaminants can have an adverse effect on plants if they are present at sufficient concentrations. The effects of phytotoxic contaminations include growth inhibition, interference with natural processes within the plant and nutrient deficiencies.

8.3.4.2 Vegetation is currently present on site and is likely to be present following completion of the redevelopment.

8.3.4 Water receptors

8.3.4.1 The site lies in an area designated as a Secondary A aquifer probably contained in the Seventy Fathom Post Member. The channel of the River Tyne lies some 700m to the north of the site.

8.3.5 Summary of identified receptors

8.3.5.1 Based on the above assessments, the following table summarises identified and critical receptors.

Table summarising identified (viable) receptors				
Principle Receptor	Detail	Viable and critical receptors		
		Viability and justification	Critical receptor	
Humans	Users of the current site	Yes	Site is in use for commercial/industrial activity	Adult
	End user of the developed site	Yes	Site to be redeveloped for industrial/commercial use.	Adult
	Construction operatives and other site investigators	Yes		Adult
Vegetation	Current site	Yes	Vegetation observed on site	Vegetation
	Developed site	Yes	Landscaping areas likely to be present following redevelopment	Vegetation
Controlled waters	Surface waters (Rivers, streams, ponds and above ground reservoirs)	No	Site relatively remote from sensitive surface water receptor:700m distant from the River Tyne	Surface waters
	Ground waters (used for abstraction or feeding rivers / streams etc)	Yes	Secondary A Aquifer within Seventy Fathom Post deposits at depth	Groundwater
Building materials	Materials in contact with the ground	Yes	Assessed in report section 10	Building materials

Table 8.3.5

8.4 Identification of pathways

8.4.1 Pathways to human receptors

8.4.1.1 Guidance published by the Environment Agency in Science Report SC050021/SR3 'Updated technical background to the CLEA model' provides a detailed assessment of pathways and assessment and human exposure rates to source contaminants. In summary, there are three principal pathway groups for a human receptor:

Table summarising likely pathways	
Principal pathways	Detail
Ingestion through the mouth	Ingestion of air-borne dusts
	Ingestion of soil
	Ingestion of soil attached to vegetables
	Ingestion of home grown vegetables
Inhalation through the nose and mouth.	Inhalation of air-borne dusts
	Inhalation of vapours
Absorption through the skin.	Dermal contact with dust
	Dermal contact with soil

Table 8.4

8.4.1.2 The site is currently used for commercial/industrial purposes and such use will remain, with the majority of the site covered in buildings/hardstanding. Some landscaping areas are present to the north and east but a significant proportion of these will be replaced with new hardstandings as part of the redevelopment (ref Appendix T). On this basis, all pathways listed above are considered relevant to existing and proposed site users, albeit to a minor degree, with the exception of pathways associated with home grown vegetables. We consider the same pathways will be present for construction operatives.

8.4.2 Pathways to vegetation

8.4.2.1 Guidance published by the Environment Agency in Science Report SC050021/SR (Evaluation of models for predicting plant uptake of chemicals from soil) provides a detailed assessment of plant uptake pathways. In summary, plants are exposed to contaminants in soils by the following pathways:

- Passive and active uptake by roots.
- Gaseous and particulate deposition to above ground shoots.
- Direct contact between soils and plant tissue.

8.4.2.2 All of the above routes of exposure are considered to be present for vegetation.

8.4.3 Pathways to controlled waters

8.4.3.1 A number of pathways exist for the transport of soil contamination to controlled waters. A summary of these pathways is presented below:

- Percolation of water through contaminated soils.
- Near-surface water run-off through contaminated soils.
- Saturation of contaminated soils by flood waters.

8.4.3.2 The site is predominately covered in buildings and hardstanding, though in areas of existing/proposed soft landscaping a potential infiltration pathway exists to the observed critical receptor (groundwater).

8.4.3.3 With the site relatively remote from a surface water receptor, near surface water run-off has not been considered further.

8.4.3.4 The site is not located within a flood zone and thus saturation of contaminated soils by flood water is not considered viable.

8.4.4 Summary of identified likely pathways

8.4.4.1 Based on the above assessments, the following table summarises likely pathways of potential chemical contaminants at the site to identified receptors.

Table of likely pathways		
Receptor group	Critical receptor	Pathway
All human receptors	Adult	Ingestion air-borne dusts
		Ingestion of soil.
		Inhalation air-borne dusts
		Inhalation of vapours
		Dermal contact with dust
		Dermal contact with soil
Vegetation		Root uptake, deposition to shoots and foliage contact.
Controlled waters	Groundwater	Percolation of water through contaminated soils

Table 8.4.4

8.5 Assessment of sources of chemical contamination

8.5.1 Introduction

8.5.1.1 Initially, potential sources of contamination are assessed using the following elements of the investigation process.

- History of the site
- Desk study information
- Site reconnaissance
- Geology
- Fieldwork

These elements will dictate a relevant soil/water testing regime to quantify possible risks of any identified contaminative sources which may harm identified receptors.

8.5.2 Source assessment – History of the site

8.5.2.1 The history of the site and its immediate surroundings based on published Ordnance Survey maps is described in Section 3.

8.5.2.2 Residential properties and a tramway were recorded on site from at least 1857 until circa 1967. Bomb damage also occurred on site during WWII. The site was redeveloped circa 1968 and recorded as a furniture works with two smaller buildings recorded on the western part of the site with one recorded as a garage. A photographic laboratory was recorded on site circa 1974.

8.5.2.3 Immediately adjacent site uses have included backfilled quarries, spoil heaps, railway land, depots and a chemical works.

8.5.2.4 Many of the former site usages, and adjacent site usages, are included in 'Industry profiles' 'Timber products manufacturing works', 'Timber treatment works', 'Metal manufacturing works (electroplating and finishing works)' and 'Railway land' published by the Department of the Environment, which provides an indication of the type of chemical contaminants likely to be used by the industry. Clearly, the possibility of potential soil contamination from such former land use would be dependent upon the management of the potential contaminants within this former industry. At this stage we have assumed there is a risk of each of the potential contaminants impacting soils at the site, and thus there is a potential (and thus a risk) of this chemical source harm on site receptors.

8.5.2.5 Information from industrial profiles regarding potential contaminants suggests that the site may have been impacted with the following contaminants:

- PAHs
- Metals
- PCBs
- VOCs
- Asbestos
- Fuel oils
- Dioxins

8.5.3 Source assessment – Desk study information

8.5.3.1 Envirocheck presents a detailed database of environmental information in relation to the site including;

- Pollution incidents
- Landfill sites
- Trading activities

8.5.3.3 Envirocheck reports 2 minor and 1 significant pollution incidents within 500m of the site. The first minor incident occurred on 1st October 1996 involving acid from an unknown source occurring 295m south west of the site. The second minor pollution incident occurred on 7th September 2014 located 465m north west of the site. The significant pollution incident occurred on 29th September 1993 involving oil from a boat/ship 463m north west of site. Based on the age and severity of the incidents, the site is not considered to be at risk from these pollution incidents.

8.5.3.4 Based on the distance and direction of recorded landfill sites (ref Section 3), the site is not considered to be at risk from landfill sites. There are however eleven BGS recorded mineral sites recorded within 1km of the site which we understand have been backfilled – evident from a substantial proportion of the local area being recorded as 'Made Ground' on geological maps. Such soils are located immediately adjacent to the northwest boundary of the site and thus have the potential to impact soils on site.

8.5.3.5 Envirocheck reports 93 active and inactive trading activities within 1km of site. The closest trading activities to site are:

- Be Modern Ltd (on site), fireplace manufacturing, recorded as active*
- North Eastern Distribution (on site), fireplace distributor, recorded as inactive
- Tandem Black (5m south) , textile manufacturing, recorded as inactive
- The Plastic Trim Centre (5m north east), builders merchant, recorded as active
- ATC Euromaster Ltd (14m south east), tyre dealers, recorded as active
- Harkers MOT (16m west), MOT test centre, recorded as active
- Crown (17m east) , PVC-U product manufacturer, recorded as inactive

* Whilst Envirocheck records Be Modern Ltd as currently active, this was not evident during fieldwork.

8.5.3.6 The industrial/commercial uses listed above have the potential to generate contaminative sources on or close to the site.

8.5.4 Source assessment – Site reconnaissance

8.5.4.1 A full description of the site and observed adjacent land uses is provided in Section 3 of this report. A plan summarising observations made on site during our site reconnaissance visit is presented on Drawing 02.

8.5.4.2 During our site investigation, a small metal finishing factory was observed to the north eastern part of the warehouse. The concrete floor slab within the area of works appeared to be in good condition with no cracks. On this basis, the risk of the activity having impacted near surface soils is considered low-moderate.

8.5.4.3 An electricity substation was recorded in the northern eastern part of the site. Typically substations include both transformers and capacitors. Polychlorinated biphenyls (PCBs) were used in the manufacture of transformers, however the use of PCBs in transformers ceased in the late 1970s and less than 1% of transformers manufactured in the UK between 1955 and 1976 contained PCBs. The manufacture of capacitors also used PCBs, albeit less chlorinated PCBs. Although there is a potential risk that the electricity substation has the potential to produce a source of chemical contamination, in consideration of the above the risk of the area (and soils) around the substation being impacted by PCBs is not considered significant.

8.5.4.4 The diesel tank and HVAC unit located to north western part of the warehouse was in good condition with no evidence of fuel leaks. The chemical store to the southern part of the warehouse was empty with no sign of chemical use except from two metal containers (former chemical stores). Machinery was spread across the warehouse with no evidence of fuel/oil leaks. At the time of our investigation factory workers were in the process of demolishing and removing machinery. A small plant/pump room located to the eastern part of the site was in good condition with no evidence of fuel/oil leaks.

8.5.5 Source assessment – Correspondence with the local environmental health officer

8.5.5.1 Information received details that the site was previously used for heavy industrial use with surrounding land also used for heavy industry. The information provided regarding the history of the site and surrounding area generally reflects our historical site usage in section 3. In addition however, we understand the site was also permitted for timber activities, waste wood combustion and solvent coating operations.

8.5.5.2 The EHO confirmed that there are no private water supplies, groundwater abstractions or discharges via soakaways within the area.

8.5.5.3 A copy of the letter from the EHO is recorded in Appendix N.

8.5.6 Source assessment – Geology

8.5.6.1 The geological map of the area indicates the topography local to the site is formed in deposits of Till over Seventy Fathom Post Member. Typically, and in our experience, these deposits do not exhibit any abnormal concentrations of naturally occurring chemical contaminants.

8.5.7 Source assessment - Fieldwork observations

8.5.7.1 Deposits of Made Ground were encountered across the entire site during intrusive investigations, containing gravels of ash, brick, clinker, timber and concrete and with a substantial concentration of coal to the north. Such materials are likely to contain chemical contamination. We obtained samples of the potentially chemically impacted soils for subsequent laboratory testing.

8.5.8 Source assessment - summary

8.5.8.1 Based on the paragraphs above, we have identified the following potential sources of contamination:

Table summarising results of source assessment				
Source	Origin of information	Possible contaminant	Probability of risk occurring	Likely extent of contamination
On site				
Bomb damage	Desk study	Unexploded ordnance	Moderate	Potentially site wide
General demolition of historic buildings (residential)	Desk study	Heavy metals, PAHs, asbestos	High	Site wide
Former railway land	Desk study	Heavy metals, PAHs, TPH	Low-moderate	Possibly site wide
Former tramway	Desk study	Heavy metals, PAH	Low	Potentially restricted to central area
Former furniture works (Be Modern)	Desk study	Heavy metals, PAHs and VOCs	High	Site wide
Former photographic laboratory	Desk study	Metals, PAHs and VOCs	High	Local to northern part of the site
Former garage	Desk study	TPHs	Moderate	Potentially restricted to northern area
Chemical store	Site reconnaissance	Metals, PAHs and VOCs	Low	Local to southern part of site
Metal coating works	Site investigation	Heavy metals, hydrocarbons	Low	Local to northern part of the site
Diesel tank and waste wood combustion area	Site investigation	Metals, PAHs and TPH	High	Local to tank area
Electrical substation (north eastern part of the site)	Site investigation	PCBs	Low	Local to electrical substation
Engine/pump room located to the eastern part of the warehouse	Site investigation	PAHs and TPH	High	Local to engine/pump room
Made Ground soils	Site investigation	Metals, PAHs, asbestos	High	Site wide
Adjacent site				
Railway land	Desk study	Metals, PAHs, TPH	High	Local to site boundaries
Depots	Desk study	Metals, PAHs, TPH	Moderate	Local to northern site boundary
Chemical works	Desk study	Alkaline	Moderate	Local to eastern site boundary
Recorded Made Ground	Desk study	Metals, PAHs, asbestos	High	Possibly restricted to north and west boundaries
MOT test centre	Desk study	TPHs	Moderate	Possibly restricted to northwest boundary
PVC-U manufacturer	Desk Study	VOCs/SVOCs, TPHs	Moderate	Possibly restricted to eastern boundary
Table reference 8.5.7				

8.6 Initial Conceptual Model

- 8.6.1 Based on our assessment of potential contaminative sources, identified receptors and viable pathways to receptors described in preceding paragraphs, we have produced an initial conceptual model in the form of a table which is presented in Appendix H.
- 8.6.2 Based on the conceptual model there are risks which exceed the low category which in our opinion are unacceptable, and require further investigation by laboratory testing of soil / water samples to refine the risk assessment.

8.7 Laboratory testing

8.7.1 Testing regime – Human receptors

- 8.7.1.1 Based on our source assessment in the preceding paragraphs we have identified a number of current and historic land uses, both onsite and on adjacent sites, which have the potential to generate chemical contamination, sufficient to harm identified human receptors. We have therefore scheduled a number of samples for the determination of contaminations associated with past and present land uses, namely total petroleum hydrocarbons (TPH) including BTEX (benzene, toluene, ethylbenzene and xylenes), volatile organic compounds (VOCs) and semi volatile organic compounds (SVOCs).
- 8.7.1.1.1 Six soil samples targeting areas considered to be at risk of potential contaminative sources were scheduled to measure concentration of above contaminants, targeting areas where contamination was identified during fieldworks or areas of former potentially contaminative site/off site uses. We have also scheduled testing to measure the concentration of commonly occurring inorganic and organic contaminants on eight samples.
- 8.7.1.6 The table 8.7.2 summarises the scheduled testing, in relation to soil types and identified receptors under consideration of the conceptual model.

8.7.2 Testing regime – Water receptors

- 8.7.2.1 In order to produce a quantitative assessment, we have selected seven soil samples for measurement the concentrations of potential contaminants. Based on our conceptual model, it is considered unlikely that naturally deposited soils at the site have been affected by artificial contamination thus we have selected three samples of Made Ground for our assessment. The testing included commonly occurring inorganic and organic contaminants where they are considered a risk to water resources.

Table summarising scheduled testing (human and water receptors)						
Sample origin	Sample type	Strata	Targeted sampling	Non targeted sampling	Scheduled testing	Critical receptor
DTS01 0.3-0.4m	Soil	Made Ground		✓	Metals, PAHs, leachate and asbestos	All human and water receptors
DTS02 1.1-1.2m	Soil	Made Ground		✓	Metals, PAHs and leachate	All human and water receptors
DTS02 0.4-0.5m	Soil	Made Ground	✓		Metals, PAHs, asbestos, TPH and VOCs	All human receptors
DTS02 3.2-3.3m	Soil	Made Ground		✓	Metals and PAHs	All human receptors
DTS03 0.3-0.4m	Soil	Made Ground		✓	Metals, PAHs, leachate and asbestos	All human and water receptors
DTS03 0.5-0.6m	Soil	Made Ground	✓		TPH and VOCs	All human receptors
DTS04 1.2-1.3m	Soil	Made Ground		✓	Metals and PAHs	All human receptors
DTS04 0.4-0.5m	Soil	Made Ground	✓		TPH and VOCs	All human receptors
DTS05 0.2-0.3m	Soil	Made Ground		✓	Metals, PAHs and asbestos	All human receptors
HP01 0.4-0.5m	Soil	Made Ground		✓	Metals, PAHs and asbestos	All human receptors
DTS06 0.5-0.6m	Soil	Made Ground		✓	Metals and PAHs	All human receptors
DTS06 1.8-1.9m	Soil	Made Ground	✓		Asbestos, TPH and VOCs	All human receptors
DTS07 0.3-0.4m	Soil	Made Ground		✓	Metals, PAHs, leachate and asbestos	All human and water receptors
DTS07 0.7-0.8m	Soil	Made Ground	✓		TPH, BETEX and VOCs	All human receptors
DTS08 0.2-0.3m	Soil	Made Ground		✓	Asbestos	Construction
DTS08 0.4-0.5m	Soil	Made Ground	✓		Metals, TPH, PAHs and BETEX	All human receptors
DTS09 0.4-0.5m	Soil	Made Ground		✓	Metals, PAHs and leachate	All human and water receptors
DTS09 1.4-1.5m	Soil	Made Ground		✓	Metals and PAHs	All human receptors
DTS10 0.5-0.6m	Soil	Made Ground	✓		TPH, BETEX and VOCs	All human receptors
DTS10 0.3-0.4m	Soil	Made Ground	✓		Metals, PAHs, leachate and BETEX	All human and water receptors
DTS11 0.5-0.6m	Soil	Made Ground		✓	Metals, PAHs and leachate	All human and water receptors
DTS11 1.6-1.7m	Soil	Made Ground	✓		PCBs	All human receptors
CH09 0.2-0.3m	Soil	Made Ground	✓		Metals, TPH, BETEX and VOCs	All human receptors
CH10 0.2-0.3m	Soil	Made Ground	✓		Metals and PAHs	All human receptors
CH16 0.2-0.3m	Soil	Made Ground	✓		Metals, TPH, BETEX and VOCs	All human receptors

Table 8.7.2

8.7.2.2

The results of laboratory determination of concentration of chemical contaminants are presented in Appendix F.

8.7.3 Criteria for assessment of test data – Human receptors

- 8.7.3.1 Assessment of laboratory test data has been carried out with reference to current nationally recognised documents listed in the final page of Appendix F. Due to changes in guidance on contaminated land, items 6-8 and item 10 in the document listing above have been withdrawn. In the absence of alternative guidance however we have used these documents. Where new guidance is available, this has been followed in preference to superseded guidance.
- 8.7.3.2 Soil guideline values (SGVs) are used as a screening tool to assess the risks posed to health of humans from exposure to soil contamination in relation to land uses. Where published SGVs are not available, we have adopted Generic Assessment Criteria (GAC) and Soil Screening Values (SSV) derived by Soiltechnics and by Atkins (SSV^{ATK}). GACs have been derived by Land Quality Management (LQM) and the Chartered Institute of Environmental Health (CIEH) and presented in '*Generic Assessment Criteria for Human Health Risk Assessment*'. GACs have been prepared for a number of metals and polycyclic aromatic hydrocarbons (PAH) and are used in preference to values produced by Soiltechnics and Atkins. The CLEA model has been used with toxicology data presented by the EA, LQM/CIEH and Atkins (in that order of preference) to derive SSVs by Soiltechnics. SSVs produced by Atkins are presented on their ATRISK^{SOIL} website.
- 8.7.3.3 SGVs, GACs, SSVs and SSV^{ATK}s represent 'intervention values'; indications to an assessor that soil concentrations above these levels might present an unacceptable risk to the health of site users. These soil guideline values have been produced using conceptual exposure models, which use assumptions and are applied to differing end uses of land. If the values are exceeded, it does not necessarily imply there is an actual risk to health and site-specific circumstances should be taken into account. Conversely, where a critical pathway or chemical form of the contaminant has not been evaluated, a risk may be present even if the SGV/GAC has not been exceeded.
- 8.7.3.4 For evaluation of test data in relation to polycyclic aromatic hydrocarbon (PAH) contamination, we have compared measured concentrations with corresponding GACs. The GAC fractions are dependent on the Soil Organic Matter (SOM) content of the soils. We have adopted the lowest GAC as an initial screening value.
- 8.7.3.5 For evaluation of total petroleum hydrocarbon (TPH) and BTEX contamination we have compared measured concentrations directly to the relevant SGV or GAC.
- 8.7.3.6 We have followed procedures outlined by the CIEH to compare measured concentrations of metals and PAH contaminants against guideline values. TPH contamination results are compared directly with the relevant guideline values. The guidance presents an approach to data analysis and includes the examination of data for potential outliers, assessment of the normality of the test data and the calculation of a 95% Upper Confidence Limit (UCL). The UCL provides an estimate of the population mean, based on test data, with a 95% confidence that the actual mean does not exceed this value. The UCL is compared to the guideline value for the site.

8.7.3.7 We have adopted a commercial/industrial land use for current and proposed site users.

8.7.4 Criteria for assessment of test data – Construction operatives

8.7.4.1 In the absence of guidelines we have adopted industrial guideline values for assessment of construction operatives.

8.7.5 Criteria for assessment of test data – Vegetation

8.7.5.1 Guidance published by Forest Research in “BPG Note 5 - Best Practice Guidance for Land Regeneration” suggests that a residential without plant uptake or industrial/commercial CLEA model should be adopted for this receptor although specific guideline values are provided for copper and zinc at 130mg/kg and 300mg/kg respectively. As a practice we have adopted the industrial / commercial CLEA model for assessment of test data for vegetation.

8.7.6 Criteria for assessment of test data – Controlled waters

8.7.6.1 For interpretation of test data in relation to water receptors we have directly compared measured values with the Environmental Quality Standards (EQS) and UK Drinking Water Standards (UKDWS). In the absence of EQS or UKDWS we have adopted World Health Organisation Drinking Water Guidelines (WHODWG)

8.7.6.2 EQS values are published by the Environment Agency in their publication, “Environment Agency technical advice to third parties on Pollution of Controlled Waters for Part 11A of the Environmental Protection Act 1990”. EQS values for most inorganic contaminants in freshwater are dictated by the hardness of the receiving watercourse. The hardness of water is a measure of the concentration of calcium carbonate in the water. Although we have not sampled water from nearby watercourses, we have reviewed information supplied by the Drinking Water Inspectorate website, which indicates a hardness in excess of 100mg/l for drinking water in the local area. Although not an insitu groundwater measurement, such results are likely to be similar to those that would be measured in groundwater in the local area.

8.7.6.3 Using this information for List II substances (DOE Circular 7/89) we have compared the measured values with the EQS values relative to the hardness of the receiving watercourse assuming a worst case scenario of the watercourse supporting ‘sensitive’ aquatic life.

8.7.6.4 UKDWS are presented in the Water Supply (Water Quality) Regulations.

8.7.6.5 Following our receptor assessment, we have adopted EQS values in preference to alternative guidelines where possible.

8.7.7 Evaluation of test data – Human receptors

8.7.7.1 Tables summarising and analysing test data are presented in Appendix G. The following table summarises the outcome of the analyses.

Table Summarising assessment of test data for Human receptors					
Analysis tables	Receptor group	Critical receptor	CLEA model	Inorganic contaminants	Organic contaminants
1, 2 and 3	All human receptors	Adult	Industrial/commercial	No exceedances	No exceedances

Table 8.7.7.1

8.7.7.2 Based on laboratory testing, all concentrations of inorganic and organic contaminants were below adopted criteria threshold values. In addition, all VOCs/SVOCs and PCBs were recorded to be below guideline values (where available) or below detectable limits.

8.7.7.3 No asbestos was identified by the laboratory within any of the Made Ground samples taken from the site.

8.7.7.4 Based on the above evaluation, we are of the opinion that the near surface soils are unlikely to exhibit significant contamination from a perspective of human receptors.

8.7.8 Evaluation of test data – Vegetation

8.7.8.1 Comparison of test data with guideline values is presented on Tables 4 in Appendix G. None of the measured concentrations exceed the adopted guideline values with the exception of copper and zinc. The UCL of copper was measured at 148.1mg/kg compared to a guideline value of 130mg/kg. The mean value was calculated at 64.9mg/kg with two of the 17 values over the guideline value. The UCL of zinc was calculated at 377.9mg/kg compared to a guideline value of 300mg/kg. The mean value was calculated at 190.0mg/kg with two of the 17 values above the guideline value.

8.7.9 Evaluation of test data – Controlled waters

8.7.9.1 *Leachable contaminants - Inorganic contaminants*

8.7.9.1.1 The measured values of inorganic contaminants fall well below the relevant guideline (outlined in Section 8.7.6) with the exception of lead and sulphate. Two elevated samples of lead were detected in DTS03 at 0.3m and DTS11 at 0.5m at a concentration of 13µg/l and 50µg/l compared to a EQS value of 20µg/l. Elevated concentrations of sulphate were detected in DTS07 at 0.3m and DST10 at 0.3m with concentrations recorded at 1000mg/l and 480mg/l compared to a EQS value of 400mg/l.

8.7.9.2 Leachable contaminants - Organic contaminants (polycyclic aromatic hydrocarbons)

8.7.9.2.1 For the analysis of PAH contamination, the sum of the following contaminants has been compared to a UKDWS.

- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(ghi)perylene
- Indeno(1,2,3-cd)pyrene

8.7.9.2.2 The summed concentration of the PAH 'suite' exceeds the UKDWS in DTS10 at 0.3m with a summed concentration of 6.1µg/l compared to a UKDWS guideline value of 0.1µg/l. In addition the leachable concentration of benzo(a)pyrene exceeds the UKDWS guideline values of 0.01µg/l in DTS03 at 0.3m, DTS10 at 0.3m and DTS11 at 0.5m with concentration so 2.9µg/l, 3.8µg/l and 2.9µg/l respectively. We note that a UKDWS has been adopted in the absence of an EQS for PAHs which is considered to be particularly stringent for this site but nevertheless worthy of further consideration.

8.7.9.3 Summary and Evaluation

8.7.9.3.1 Concentrations of both organic and inorganic chemical concentrations are not considered to present a risk of harm to human receptor in view of site development proposals.

8.7.9.3.2 Localised elevated concentrations of metals present a potential risk of harm to vegetation and selection of appropriate planting will be required for new landscaping areas.

8.7.9.3.3 Testing indicates the Made Ground has the potential to impact groundwater by generating slightly elevated concentrations of lead, sulphate and PAH. The Made Ground source of contamination is likely to be prevalent in the area of the site and is not necessarily specific to the site. The presence of hardstanding across much of the site limits the infiltration pathway through Made Ground and thus limits the leachate generation potential. As a result of the proposed development, existing landscaping areas will be substantially reduced and replaced with hardstanding. It is not proposed to introduce new areas of soft landscaping (ref to Appendix T for indication of the extent of removal of landscaped areas). With the site being almost entirely covered in hardstanding and as no new landscaping is proposed, the infiltration pathway is effectively severed and the site is not considered to present a significant risk to water receptors.

8.8 Updated conceptual model

8.8.1 Having now completed analysis of laboratory testing, we can now update our conceptual model which is presented in Appendix H.

8.8.2 Based on the updated conceptual model, and following refurbishment proposals, none of the risk phrases exceed the low-risk category and thus no further testing or remediation is considered necessary with respect to human or water receptors.

8.9 Risk assessment in relation to use of infiltration systems

8.9.1 With reference to Environment Agency publication '*Groundwater protection: Policy and practice (GP3)* 2012, outside of SPZ1, the EA will support sustainable drainage systems for new discharges to ground. This is subject to an appropriate risk assessment to demonstrate that ground conditions are suitable and infiltration systems do not present an unacceptable risk of promoting mobilisation of contaminants or creating new pathways for contaminant migration.

8.9.2 At this stage we do not know whether the Seventy Fathom Post member soil on site are permeable (subject to deep borehole testing) but in any case, if infiltration systems are pursued on site, water should not be permitted to infiltrate through Made Ground soils.

8.9.3 All discharges to groundwater are subject to compliance with the Water Framework Directive (2000/60/EC) and Groundwater Daughter Directive (2006/118/EC).

8.10 Risk assessment summary and recommendations

8.10.1 Based on our assessments described above, we can provide the following summary and recommendations for each identified receptor.

8.10.2 Current and proposed site users

8.10.2.1 With reference to current and proposed site uses and in view of site development proposals, the site is considered to present a low risk of causing harm to the health of current and proposed users of the site.

8.10.3 Construction operatives and other site investigators

8.10.3.1 The risk of damage to health of construction operatives and other site investigators is, in our opinion, low. As a precautionary approach, however, we recommend adequate hygiene precautions are adopted on site. Such precautions would be:-

- Wearing protective clothing particularly gloves to minimise ingestion from soil contaminated hands.
- Avoiding dust by dampening the soils during the works.
- Wearing masks if processing produce dust.

8.10.3.2 Guidance on safe working practices can be obtained from the following documents

- The Health and Safety Executive Publication *“Protection of Workers and the General Public during the Development of Contaminated Land”* (HMSO) and
- *“A Guide to Safer Working on Contaminated Sites”* (CIRIA Report 132).

8.10.3.3 In addition, reference should be made to the Health and Safety Executive. In all cases work shall be undertaken following the requirements of the Health and Safety at Work Act 1974 and regulations made under the Act including the COSHH regulations.

8.10.4 Controlled waters

8.10.4.1 As a result of the proposed reduction in landscaping areas, the site is not considered to present a risk to controlled waters and no further testing is considered necessary.

8.10.5 Vegetation

8.10.5.1 Elevated concentrations of copper and zinc were detected. It is difficult to quantify the phytotoxicity of a contaminant as large variations exist between plant tolerances, soil effects and synergistic/antagonistic reactions between chemicals. Due to the complexities of the effects of soil contamination on different plant species, we recommend that the test results presented in this report are passed to a landscape architect for the selection of suitable planting.

8.11 Statement with respect to National Planning Policy Framework

8.11.1 Based on investigations completed to date with respect to chemical contamination, we are of the opinion the proposed development will be safe and suitable for use for the purpose for which it is intended (without the need for any remedial action) thus meeting the requirements of the National Planning Policy Framework section 121, and compliant with the Building Regulations Part C, *'Site preparation and resistance to contaminants and moisture'*

8.12 On Site Monitoring

8.12.1 We have attempted to identify the potential for chemical contamination on the site, however, areas, which have not been investigated at this stage, may exhibit higher levels of contamination. If such areas are exposed at any time during construction we will be pleased to re-attend site to assess what action is required to allow the development of safely proceed.

9 Gaseous contamination

9.1	Legislative framework
9.2	General
9.3	Assessment of source of gasses
9.4	Gas migration
9.5	Conceptual model
9.6	Development categorisation
9.7	Monitoring observations
9.8	Classification of site characteristic gas situation
9.9	Gas protective measures – new buildings
9.10	Effect of gases on existing buildings
9.11	Flammability
9.12	Statement with respect to National Planning Policy Framework

9.1 Legislative framework

- 9.1.1 There is currently a complex mix of documentation relating to legislative and regulatory procedures on the issue of contamination, and it is not considered a purpose of this report to discuss the detail of these regulations. Essentially, Government Policy is based on *'suitable for use approach'*, which is relevant to both the current and proposed future use of land. For current use Part IIA of the Environmental Protection Act 1990 provides the regulatory regime (see Section 8.1 above). The presence of harmful soil gasses could provide a 'source' in a 'pollutant linkage' allowing the regulator (Local Authority) to determine if there is a significant possibility of harm being caused to humans, buildings or the environment. Under such circumstances the regulator would determine the land as 'contaminated' under the provision of the Act requiring the remediation process to be implemented with the Environment Agency responsible for enforcement.
- 9.1.2 The Town and Country Planning (General Development Procedure) Order 1995, requires the planning authority to consult with the Environment Agency before granting planning permission for development on land within 250 metres of land which is being used for deposit of waste, (or has been at any time in the last 30 years) or has been notified to the planning authority for the purposes of that provision.
- 9.1.3 Building control bodies enforce compliance with the Building Regulations. Practical guidance is provided in Approved documents, one of which is Part C, *'Site preparation and resistance to contaminants and moisture'* which seeks to protect the health, safety and welfare of people in and around buildings, and includes requirements for protection against harm from soil gas.

9.2 General

9.2.1 The following assessment relates to the potential for, and the effects of, gasses generated by biodegradable matter. A separate, but related class of problem involves migration of vapour phase of hydrocarbons resulting from spillages of petroleum and solvents, but this is addressed under organic contamination in Section 8. The potential for the development to be affected by Radon Gas is considered in Section 3 above. The principal ground gasses are carbon dioxide (CO₂) and methane (CH₄). The following table provides a summary of the effects of these gases when mixed with air.

Significant gas concentrations in air		
Gas	Concentration by volume	Consequence
Methane	0.25%	Ventilation required in confined spaces
	5%	Potentially explosive when mixed with air
	30%	Asphyxiation
Carbon Dioxide	0.5%	8 hour long term exposure limit (LTEL) (HSE workplace limit)
	1.5%	15 min short term exposure limit (STEL) (HSE workplace limit)
	>3%	Breathing difficulties
	>5%	Death can occur

Table 9.2.1

9.2.2 Following the current Building Regulations Approved Document C1, Section 2 'Resistance to Contaminates' (2004 incorporating 2010 and 2013 amendments) a risk assessment approach is required in relation to gaseous contamination based on the source-pathway-receptor conceptual model procedure. We have adopted procedures described in the following reference documents for investigation and assessments of risk of the development being affected by landfill type gases (permanent gases) and if appropriate the identification of mitigation measures.

- BS10175:2011 'Investigation of potentially contaminated sites- Code of Practice'.
- BS8576: 2013 'Guidance on investigations for ground gas –Permanent gases and Volatile Organic Compounds (VOCs)'
- BS8485: 2007 'British Standard Code of practice for the characterisation and remediation from ground gas in affected developments'
- CIRIA Report C665 'Assessing risks posed by hazardous ground gases to buildings' (2007).
- NHBC report No 10627-R01(04) 'Guidance on development proposals on sites where methane and carbon dioxide are present' (January 2007)

9.2.3 An assessment of the risk of the site being affected by ground gases is based on the following aspects.

- a) Source of the gas
- b) Investigation information
- c) Migration feasibility
- d) Sensitivity of the development and its location relative to the source

9.3 Assessment of source of gases

9.3.1 General sources

9.3.1.1 The following table summarises the source of gasses and parameters for producing gasses

Source and control of gasses	
Type	Parameters affecting the rate of gassing
Landfills	Portion of biodegradable material, rate reduces with time.
Mine workings	Flooding reduces rate of gassing
Dock silt	Portion of organic matter
Carbonate deposits	Ground / rainwater (acidic) reacts with some carbonates to produce carbon dioxide.
Soils / rocks	Portion of organic matter

Table 9.3.1

The rate of decomposition in gas production is also related to atmospheric conditions, pH, temperature, and water content / infiltration.

9.3.1.2 As the site is not within a dockland environment or an area affected by mineworkings, and near surface soils do not exhibit high carbonate content, then potential gas sources are limited to landfills and /or soils with a high proportion of organic matter.

9.3.2 Landfill sources

9.3.2.1 Waste Management Paper 27 (1991) produced by the Department of the Environment '*Control of Landfill Gases*' contains the recommendation to avoid building within 50m of a landfill site actively producing large quantities of landfill type gases and to carry out site investigations within a zone 250m beyond the boundary of a landfill site. No distinction is made between sites of differing ground conditions, but the paper does not advocate the site is safe beyond the 250m zone, dependant, of course, upon the type of landfill and potential for migration of landfill gasses.

9.3.2.2 Envirocheck reports two registered landfill site located some 450m west of site and 900m north of site. Records do not indicate the type of waste the landfills were licenced for receipt. On this basis we must take the worst case scenario that both landfills were licenced for receipt of commercial/industrial wastes. Such materials are likely to generate any significant quantities of landfill type gasses. In addition, we have reviewed old Ordnance Survey maps and there are eleven BGS recorded mineral sites within 1km of the site. The three closest are recorded 119m south west (opencast), 175m north (underground) and 200m south east of the site. The material used to backfill the open cast mines is not known. On the above basis there evidence to suggest a source of landfill gases from material used to back fill formed open cast mines. Worked ground is recorded on and adjacent to the western site boundary, likely to have resulted from local open cast mining activities.

9.3.3 Soil conditions

9.3.3.1 Deep Made ground (>5m) was encountered across site containing many gravels of anthropogenic material and high organic matter content. Such material is likely to produce elevated quantities of carbon dioxide and / or methane gas.

9.3.4 Source assessment summary

9.3.4.1 The following table summarises the possibility of a source of landfill type gasses.

Source assessment summary		
Potential source origin	Viability of source	Evidence
Landfills	Possible	Two landfills recorded 450 west and 900m north of the site. Eleven BGS mineral sites recorded within 1km of the site. The three closest are located 119m south west, 175m north and 200m south east of the site.
Mineworkings	Possible	Desk Study information. Workings in 6 seams of coal at 160m to 340m depth.
Dock silt	Unlikely	Site remote from dockland environment
Carbonate deposits	Unlikely	Recorded and observed soil conditions do not indicate high concentrations of carbonates
Soils / rocks	Possible	Deep Made Ground encountered across site to depth beyond 5m.

Table 9.3.4

9.3.4.2 Based on the above it there is a possibility of a source of potential landfill gasses which may affect the subject site. On this basis, it is considered necessary to consider possible pathways for migration of ground gasses, from this potential source to the site.

9.4 Gas migration

9.4.1 Exploratory excavations encountered a reasonably consistent deposit of Made Ground deposits to depths in excess of 5m. Made Ground deposits to the north of the site were generally more granular than the Made Ground deposits encountered to the southern part of the site. Made Ground deposits encountered across site our opinion are relatively permeable and would provide little resistance to both lateral and vertical migration of landfill type gasses. On this it is considered possible that the potential source of landfill type gasses (identified in Section 9.2 above) would feasibly migrate to the subject site.

9.5 Conceptual model

9.5.1 Based on the above, there is a potential source of landfill type gases, and a feasible migration pathway to the site via potentially permeable Glacial Sands and Gravels. Our conceptual model is tabled below. On this evidence we are of the opinion that the site is at risk of being affected by ground gasses (carbon dioxide / methane) sufficient to potentially cause harm to human end users of the site, construction operatives or indeed buildings. On this basis, we have installed monitoring standpipes in boreholes, and implemented a monitoring regime, generally following procedures described in CIRIA report C665, to quantify the risk, and if appropriate, identify mitigation measures.

Conceptual model		
Potential source origin	Potential pathway	Receptors at risk
Landfills	Via deep Made Ground	End users
Restored opencast quarry 119m south of the site– source of backfill not known.	deposits	Construction operatives Buildings

Table 9.5.1

9.6 Development categorisation

9.6.1 With reference to BS8485:2015 (table 3), the proposed building type would be classified as *'Type D - Commercial/industrial'*.

9.7 Monitoring observations

9.7.1 Three standpipes have been installed at the site in accordance with BS9576:2013, Section 9 (refer Drawing 06). Following BS8576:2013 (Figure 6) and CIRIA Report C665 (Tables 5.5a and 5.5b) we have provisionally assessed the site as presenting a potential risk of gas generation ideally requiring three monitoring visits over one month period. This initial assessment will be reviewed pending the results of further monitoring observations.

9.7.2 We have returned to site for all three proposed monitoring visits to obtain measurements of landfill type gases at atmospheric conditions in the range of 995 to 1020mb and temperatures in the range of 10°C to 18°C. Essentially we detected concentrations of methane in the range of 0 to 0.1% and concentrations of carbon dioxide measured in the range of 0.5 to 3.1%. If flows were detected during our monitoring visits then these are recorded, but where no flow is detected then we have assumed flow at the detection limit of the monitoring equipment at 0.1l/s.

9.7.3 Gas monitoring results reported in Appendix S can be summarised as follows in respect to carbon dioxide and methane.

Test point	Methane			Carbon dioxide		
	Maximum concentration, C _{hg} , (%)	Maximum flow, q (l/hr)	Maximum gas flow rate, Q _{hg} (l/hr)	Maximum concentration, C _{hg} , (%)	Maximum flow, q (l/hr)	Maximum gas flow rate, Q _{hg} (l/hr)
DTS01	0.1	0.0	0.0	1.1	0.0	0.0
DTS02	0.1	0.0	0.0	1.1	0.0	0.0
DTS09	0.0	0.0	0.0	3.1	0.0	0.0
All points	0.1	0.1*	0.0001	3.1	0.1	0.0031

Table 9.7.3

* Maximum gas flow of 0.1l/hr used as worst case scenario (0.1l/hr = detection limit)

9.8 Classification of site characteristic gas situation

9.8.1 Using test data and with reference to Table 2 of BS8485:2015, the site would be classified as characteristic gas situation one.

9.8.2 Clearly further monitoring will increase the accuracy of this risk assessment, however in our opinion we have followed current best practice with respect to investigations completed to date, the monitoring regime and analysis of data, and again in our opinion, the data categories used in the analysis is considered to be *'representative and comprehensive'* as defined in section 6.3.7 of BS8485:2015.

9.8.3 In addition we have assessed the sufficiency of data in accordance with annex F of BS8576:2013. The following table summarises our assessment.

Action	Result
From current results (concentration, flow rates and pressure) estimate likely risk associated with ground gas (note steady state flow results are to be used, not peak values that only last a few seconds on opening the gas tap)	Current estimate of risk GSV = gas concentration x borehole flow rate. GSV = 3.1/100 x 0.1 = 0.0031l/hr Characteristic situation CS1 (maximum limit is 0.07l/hr)
What increase in gas concentration is required to increase the estimated risk and level of gas protection to be provided?	Estimate increase in gas concentration Keeping the flow rate constant, the gas concentration would need to exceed 70% (over twenty fold increase) to move into the next band.
What increase in flow rate is required to increase the estimated risk and level of gas protection to be provided?	Estimate increase in flow rate: Keeping the gas concentration constant, the flow rate would need to exceed 2.2l/hr (over twenty fold increase) to move into the next risk band. From current data and knowledge of the gas source and generation potential, this is not considered feasible.
Is the increase in gas concentration feasible given the known source of the gas?	The main source of gas is deep Made Ground on site which presents a relatively low-risk source generation potential of gas and thus a substantial increase in gas concentration is considered unlikely.
Is the increase in flow rate feasible when compared to gas generation and migration model results, the collected gas monitoring data and the conceptual site model?	No A consistently low flow rate has been recorded which combined with a relatively low-risk source potential and low-variability of the monitoring data suggests a substantial increase in flow is unlikely.
Decide whether further monitoring is required.	Based on the above analysis, further gas monitoring is not required.

Table 9.8.3

9.9 Gas protective measures – new buildings

9.9.1 Based on monitoring, development categorisation (section 9.6 above), and the site characteristic gas situation (section 9.8 above) and with reference to Table 4 of BS8485:2015, the development does not require any gas protective measures.

9.10 Effect of gases on existing buildings

9.10.1 Internal gas monitoring

9.10.1.1 To determine the risk of elevated carbon dioxide results recorded in boreholes DTS01, DTS02 and DTS09 to future occupants, internal gas monitoring was carried out between 15th May and 18th May 2015. The gas monitor was positioned in an enclosed storage area near the electrical substation to allow for any potential build-up of carbon dioxide.

9.10.1.2 The gas monitor was programmed to take readings every 15 minutes for three days. Our observations/measurements are recorded in Appendix S. In total 279 readings were taken and did not detect any methane or carbon dioxide. The error margin of the equipment may mean that this is a slight over (or indeed under) exaggeration (+/- 0.5%). The results did not vary despite rising and falling air pressures measured between 996 and 1020mb.

9.10.1.3 Under current HSE guidance “*EH40/2005 Workplace exposure limits*” a long-term exposure limit (over an 8 hour period) is set at 0.5%. Internal monitoring observations to date would suggest that the risk of landfill gases to future occupants is very low and no additional gas protective measures are considered necessary for the existing building.

9.11 Flammability

9.11.1 Methane is a flammable gas. When the concentrations of methane in air (oxygen 20.9% by volume) are between the limits of 5% and 15% by volume, then an explosive mixture is formed. The lower explosive limit (LEL) of methane is 5% which is equivalent to 100% LEL. The 15% limit is known as the upper explosive limit (UEL), but concentrations above this level cannot be assumed to represent safe concentrations. The flammability of gas mixtures is affected by their composition, presence of an ignition source, temperature, pressure and nature of the surroundings. The explosive hazard of a flammable mixture arises from the speed of propagation of the flame in a confined space and the ability of the container to absorb the associated shock wave. The flammability range can vary depending upon differing circumstances, for example:

- When carbon dioxide concentrations of greater than 25% are present, methane is rendered non-flammable, and
- If the oxygen concentration is reduced, the limits of flammability are reduced. For example at 13.45% oxygen the LEL and UEL for methane are altered to 6.5% and 7% respectively, whilst at 13.25% oxygen the mixture is incapable of propagating a flame (refer CIRIA report 130)

9.11.2 From measurements taken to date, none of the air, methane and carbon dioxide mixtures are potentially explosive and thus no associated remedial measures are required for the new building. Additional monitoring would further refine this risk assessment.

9.12 Statement with respect to National Planning Policy Framework

9.12.1 Based on investigations completed to date with respect to gaseous contamination, we are of the opinion the proposed development will be safe and suitable for use for the purpose for which it is intended (without the need for any remedial action) thus meeting the requirements of the National Planning Policy Framework section 121, and compliant with the Building Regulations Part C, *'Site preparation and resistance to contaminants and moisture.*

10 Effects of ground conditions on building materials

10.1	General
10.2	Reference documents
10.3	Hazard identification and assessment
10.4	Provision of test data to specifiers/manufacturers/installers
10.5	Risk assessments for individual building materials
10.6	Concrete – general mechanisms of attack
10.7	Concrete – sulphate attack
10.8	Concrete – chloride attack
10.9	Concrete – acid attack
10.10	Concrete – magnesium attack
10.11	Concrete – ammonium attack
10.12	Concrete blocks
10.13	Clay bricks/pipes
10.14	Mortar
10.15	Metals – general
10.16	Metals – cast iron
10.17	Metals – steel piles
10.18	Metals – stainless steel
10.19	Metals – galvanised steel
10.20	Metals – copper
10.21	Metals – lead
10.22	Plastics – general
10.23	Plastic membranes and geotextiles
10.24	Plastic pipes
10.25	Electrical cables
10.26	Rubbers

10.1 General

10.1.1 Building materials are often subjected to aggressive environments which cause them to undergo chemical or physical changes. These changes may result in loss of strength or other properties that may put at risk their structure integrity or ability to perform to design requirements. Aggressive conditions include:-

- Severe climates
- Coastal conditions
- Polluted atmospheres
- Aggressive ground conditions

This report section only considers aggressive ground conditions, with other items considered outside our brief and scope of investigations.

10.1.2 In aggressive ground conditions, the potential for contaminant attack depends on the following:-

- The presence of water as a carrier of chemical contaminants, (except free phase organic contamination)
- The availability of the contaminant in terms of solubility, concentration and replenishment rate
- Contact between the contaminant and the building material
- The nature of the building materials and its capability of being attacked by contaminants

In general the thicker the building material the less likelihood there is for contaminant attack to cause damage to the integrity of the structure.

10.2 Reference documents

10.2.1 Following the Environment Agency publication '*Model Procedures for the Management of Land Contamination*' (Contaminated Land Report 11) the following documents have been referred to in production of the following report paragraphs.

- '*Performance of Building Materials in Contaminated Land*' report BR255 (Building Research Establishment 1994).
- '*Risks of Contaminated Land to Buildings, Building Materials and Services. A Literature Review*' - Technical Report P331 (Environment Agency 2000).
- '*Guidance on assessing and managing risks to buildings from land contamination*' - Technical Report P5 035/TR/01).
- Building Regulations Approved document C - site preparation and resistance to contaminants and moisture (Office of the Deputy Prime Minister, 2004).
- '*Concrete in aggressive ground*' Special Digest 1: 2005 (Building Research Establishment).

10.3 Hazard identification and assessment

10.3.1 The identification of hazards is based on the findings of this investigation primarily relating to former land uses (potential for chemical contamination, and likely type of contamination) and laboratory determination of concentration of chemical contaminants. Clearly, the scope of laboratory testing is determined with respect to former land uses, contaminants which may cause harm to human health and water resources.

10.3.2 Based on the above, the scope of our testing regime is described in Sections 8. We have utilised this test data in production of the following risk assessments in relation to building materials, in conjunction with test data targeting the effects of chemical attack on concrete in contact with the ground, as described in BRE Special Digest 1.

10.3.3 The identification of hazards from contamination and subsequent assessment of risks is based on the following:-

- The contaminants present on site.
- The nature of the contaminant (i.e. calcium sulphate is much less soluble than sodium or magnesium sulphate and is, therefore, less of a concern with regards sulphate attack).
- The concentration of contaminants - in general the higher the concentration the greater the hazard.
- The solubility of the contaminants - contaminants which are not soluble will not generally react with materials.
- The permeability of the soils - i.e. ease by which fluids can transport contaminants to the building.

10.3.4 The process of risk assessment for building materials is concerned with identification of the hazard (contaminants at the site - a source) and subsequently how the contaminants can reach the building (pathway) and how they can react with the building (receptor). Thus the risk assessment is produced based on the source - pathway - receptor model.

10.4 Provision of test data to specifiers/manufacturer/installer

10.4.1 The following risk assessments are based on current published data. We strongly recommend, however, that information gained from this investigation are provided to specifiers/manufacturers/installers of building materials/service ducts/apparatus who may have more up to date research to confirm the ability of the product to resist the effects of chemical contaminants at the site for the desired lifespan of the product.

10.5 Risks assessments for individual building materials

10.5.1 The following/typical sections contain risk assessments for various building materials likely to be incorporated in developments. Other materials which we are not aware of may also be used in developments and in contact with the ground and, therefore, recommend the suppliers are consulted with respect to ground conditions at this site and their opinion sought as to the ability of the product to resist chemical conditions determined at the site.

10.6 Concrete - General mechanisms of attack

10.6.1 There are a number of mechanisms by which contaminants attack concrete including the following:-

- Hydrolysis of the hardened concrete.
- Degradation as a result of exchange reactions between calcium in calcium hydroxide (free lime hydrate) and ions in aggressive solutions.
- Expansive reactions as a result of chemical reaction or salt crystallisation.

10.7 Concrete - Sulphate attack

10.7.1 Hazard

10.7.1.1 Sulphate attack on concrete is characterised by expansion, leading to loss of strength, cracking, spalling and eventual disintegration. There are three principal forms of sulphate attack, as follows:-

- Formation of gypsum through reaction of calcium hydroxide and sulphate ions.
- Ettringite formation through reaction of tricalcium alluminate and sulphite ions.
- Thaumasite formation as a result of reactions between calcium silicate hydrates, carbonate ions (from aggregates) and sulphate ions.

10.7.2 Assessment

10.7.2.1 The hazard of sulphide attack is addressed by reference to procedures described in Building Research Establishment (BRE) Special Digest 1: 2005 '*Concrete in Aggressive Ground*' to establish a design sulphate class (DS) and the '*aggressive Chemical Environment for Concrete*' (ACEC). These procedures have been followed during our investigation and are described in the following paragraphs.

10.7.3 Desk Study Information

10.7.3.1 The first step in the procedure is to consider specific elements of the desk study. These are tabulated below.

Summary of desk study information			
Element	Interrogation	Outcome	SD1: 2005 reference
Geology	Likelihood of soils containing pyrites	Unlikely	Box C6
Past industrial uses	Brownfield site?	Yes	C2.1.2

Table 10.7

10.7.3.2 A brownfield site is defined in SD1: 2005 as a site, or part of a site which has been subject to industrial development, storage of chemicals (including for agricultural use) or deposition of waste, and which may contain aggressive chemicals in residual surface materials, or in ground penetrated by leachates. Where the history of the site is not known, it should be treated as brownfield until there is evidence to classify it as natural.

10.7.3.3 Based on the above it is necessary to follow the procedures described in figure C6 ('*locations on brownfield sites except where soils may contain pyrite*').

10.7.4 Assessment of Design Sulphate Class

- 10.7.4.1 The sulphate concentration in a 2:1 water/soil extract was measured in four samples of Made Ground, one sample of Till and one sample of Seventy Fathom Post Member. The highest test result has been calculated as the characteristic value (refer to table 10.7.4). The measured values are not considered to be significantly variable.
- 10.7.4.2 The concentration of sulphate was measured at less than 3000mg/l and thus the concentration of magnesium was not measured.

10.7.5 Assessment of groundwater mobility

- 10.7.5.1 With reference to SD1: 2005, Section C3.1, we are of the opinion that Glacial Till soils at the site generally have a low permeability and thus 'static' groundwater conditions are considered characteristic of the site.
- 10.7.5.2 With reference to SD1: 2005, Section C3.2, we are of the opinion that Made Ground and Seventy Fathom Post Member soils exhibit permeability and thus 'mobile' ground water conditions are considered characteristic of the site.

10.7.6 Assessment of pH

- 10.7.5.1 Following SD1: 2005, Section C5.1.1 (step 4) only a 'small number' of samples have been tested and thus the characteristic value for pH within *Made Ground, Glacial Till and Seventy Fathom Post Member* equates to the lowest measured values of 8.6, 7.9 and 8.3 respectively.
- 10.7.6.2 None of the measured pH values were below 5.5, thus the concentration of chlorides and nitrates was not measured.

10.7.7 Assessment of aggressive chemical environment for concrete (ACEC)

- 10.7.7.1 Based on the design sulphate class, characteristic value of pH and assessment of groundwater mobility, and with reference to table C2 of SDI: 2005, the ACEC class for each soil type is presented in Table 10.7.2 below.

Summary of concrete classification							
Soil type	No. of samples	Characteristic pH	Groundwater mobility	Characteristic TPS	Characteristic sulphate (mg/l)	DS class	ACEC class
Made ground	4	8.6	Mobile	N/A	1300	DS-2	AC-2
Glacial Till	1	7.9	Static	N/A	270	DS-1	AC-1s
Seventy Fathom Post Member	1	8.3	Mobile	N/A	66	DS-1	AC-1
Table reference 10.7.2							

10.8 Concrete - Chloride attack

10.8.1 Hazards

10.8.1.1 There are a number of ways in which chlorides can react with hydrated cement compounds in concrete. These are as follows:-

- Chlorides react with calcium hydroxide in the cement binder to form soluble calcium chloride. This reaction increases the permeability of the concrete reducing its durability.
- Calcium and magnesium chlorides can react with calcium aluminate hydrates to form chloroaluminates which result in low to medium expansion of the concrete.
- If concrete is subject to wetting and drying cycles caused by groundwater fluctuations, salt crystallisation can form in concrete pores. If pressure produced by crystal growth is greater than the tensile strength of the concrete, the concrete will crack and eventually disintegrate.

10.8.2 Risk assessment

10.8.2.1 Chlorides of sodium, potassium, and calcium are generally regarded as being non-aggressive towards mass concrete; indeed brine containers used in salt mines have been known to be serviceable after 20 years' service. Depending upon the type of concrete, and the cement used up to 0.4% chloride is allowed in BS8110: Part 1.

10.9 Concrete - Acid attack

10.9.1 Hazards

10.9.1.1 Concrete being an alkaline material is vulnerable to attack by acids. Prolonged exposure of concrete structures to acidic solutions can result in complete disintegration.

10.9.2 Risk assessment

10.9.2.1 The rate of acid attack on concrete depends upon the following:-

- The type of acid
- The acid concentration (pH)
- The composition of the concrete (cement/aggregate)
- The soil permeability
- Groundwater movement

British Standard BS8110: Part 1 classifies extreme environment as one where concrete is exposed to flowing groundwater that has a pH<4.5. The standard also warns that Portland Cement is not suitable for acidic conditions with a pH of 5.5 or lower.

10.9.2.2 The pH of the soil/groundwater was measured exceeding 5.5 and on this basis the risk of concrete being affected by acidic conditions is considered low.

10.10 Concrete - Magnesium attack

10.10.1 Hazards

10.10.1.1 Magnesium salts (excepting magnesium hydrogen carbonate) are destructive to concrete. Corrosion of concrete occurs from cation exchange reactions where calcium in the cement paste hydrates and is replaced with magnesium. The cement loses binding power and eventually the concrete disintegrates.

10.10.2 Risk assessment

10.10.2.1 In practise 'high' concentrations of magnesium will be found in the UK only in ground having industrial residues. Following BRE Special Digest 1:2005, measurement of the concentration of magnesium is recommended if sulphate concentrations in water extract or groundwater exceed 3000mg/l. Once measured the concentration of magnesium is considered further in BRE Special Digest in establishing the concrete mix to resist chemical attack.

10.10.2.3 BS EN 206-1:2000 '*Concrete - Part 1: Specification, performance, production and conformity*' does, however, provide exposure classes for concrete in contact with water, with varying concentrations of magnesium for the design/specification for concrete mixes. No groundwater was encountered by the investigation and we would consider the risk of magnesium requiring special consideration with respect to enhancement of exposure class for this contaminant in isolation to be low.

10.11 Concrete - Ammonium attack

10.11.1 Hazards

10.11.1.1 Ammonium salts, like magnesium salts act as weak acids and attack hardened concrete paste resulting in softening and gradual decrease in strength of the concrete.

10.11.2 Risk assessment

10.11.2.1 UK guidance is not available on the concentration of ammonium which may affect concrete. BS EN 206-1: 2000 '*Concrete - Part 1: Specification, performance, production and conformity*' does, however, provide exposure classes for concrete in contact with water with varying concentrations of ammonia for the design/specification for concrete mixes.

10.11.2.2 As no groundwater was encountered by the investigation, we have not been able to obtain water samples for measurement of concentration of ammonia. In addition the site has no history which provides evidence of the uses of ammonia on site, and in overall conclusion the risk of concrete being affected by ammonia is considered low.

10.12 Concrete blocks

10.12.1 Hazards

10.12.1.1 Precast aggregate concrete blocks and autoclaved aerated concrete blocks are commonly used in the construction of shallow foundations. Concrete blocks are potentially attacked by the same contaminants and ground conditions which affect dense concrete.

10.12.2 Risk Assessment

10.12.2.1 In general, the mechanism of attack on concrete blocks is the same for hardened concrete. We recommend parameters for ground conditions for concrete described in the preceding paragraphs for concrete blockwork in contact with the ground/groundwater and the blockwork manufacturers confirmation sought for applicability of their product.

10.13 Clay Bricks/Pipes

10.13.1 Clay Bricks are highly durable materials which have been used in buildings for many centuries. Fire clay pipe material can also be considered similarly resistant to contaminants.

10.13.2 Hazards

10.13.2.1 Dissolution of clay brick in a potentially serious cause of deterioration. The extent of dissolution depends upon the solubility of the glassy material (produced by firing of the clay) contained in the brick. The acidic nature of the glass phase will produce low solubility in a neutral and acidic environment, but can be soluble in a basic environment.

10.13.2.2 A potentially more serious hazard for brickwork is the crystallisation of soluble salts within the brick pore structure. Salts are transported by water to the interior of the brick originating from the external environment or by rehydration, however, are only likely to occur when there is a gradient from a wet interior to a drying surface. The potential, therefore, for salt crystallisation in the ground is, therefore, low.

10.13.3 Risk Assessment

10.13.3.1 There seems to be little published information as regards the resistance to clay bricks/pipes in aggressive ground conditions, however, clay bricks are generally considered very durable. We recommend manufacturers' advices are sought with respect to their resistance to ground conditions encountered at this site.

10.13.3.2 Some basic guidance is provided in BS5628-3: 2005 '*Code of Practice for the Use of Masonry - Part 3: Materials and components, design and workmanship*' with regards to resistance of masonry to resist the effects of sulphate attack.

10.14 Mortar

10.14.1 Mortars are based on building sands mixed with cement and/or lime as a binder. In the UK Portland cements and masonry cement are commonly used. Masonry cements are a mixture of Portland Cements and fine mineral filler (i.e. Limestone) with an air entraining agent.

10.14.2 Hazards

10.14.2.1 Mortar is subject to the same agents for deterioration as concrete with the major cause of deterioration being sulphate attack.

10.14.3 Risk assessment

10.14.3.1 Sulphates can originate from soils/groundwater or from the bricks themselves. Calcium, magnesium, sodium and potassium sulphates are present in almost all fired-clay bricks. Water can dissolve a fraction of these sulphates and transport them to the mortar.

10.14.3.2 Currently, we are not aware of any guidance on the resistance of mortars to sulphate attack. The Building Research Establishment report that the sulphate resistance of mortar was improved by the use of sulphate resisting Portland cements and lime. Some guidance is also provided in BS5628-3: 2005 '*Code of Practice for the use of Masonry - Part 3: Materials and components, design and workmanship*'.

10.15 Metals - general

10.15.1 There are a number of metals which are used in buildings either as piles, services, non-structural and, indeed, structural components. The most common metals used in buildings are steel, stainless steel, copper, lead, zinc, aluminium and cast iron. All these metals can deteriorate through corrosion process. Corrosion can affect metals in a variety of ways depending upon the nature of the metal and the environment to which it is subjected. In most common forms of corrosion are:-

- Electrochemical - the most common form of corrosion in an aqueous solution
- Chemical corrosion - occurs when there is a direct charge transfer between the metal and the attacking medium (examples are oxidation, attack by acids, alkalis and organic solvents)
- Microbial induced corrosion

10.16 Metals - Cast iron

10.16.1 Cast iron is a term to describe ferrous metals containing more than 1.7% carbon and is used extensively in the manufacture of pipes.

10.16.2 Hazards

10.16.2.1 Generally, cast iron has a good resistance to corrosion by soils, however, corrosion can occur due to the following mechanisms:-

- 1) Generation of large scale galvanic cells caused by differences in salt concentrations, oxygen availability or presence of stray electrical currents.
- 2) Hydrochloric acid will cause corrosion at any concentration and temperature. Dilute sulphuric, nitric and phosphoric acids are also aggressive as also are well aerated organic acids.

10.16.3 Risk assessment

10.16.3.1 Testing can be carried out on site to measure the resistivity and redox potential of soils which can assist in deriving recommendations for protection of cast iron components using coatings, burial trenches, or isolation techniques. Currently, however, there is no specific guidance and we recommend advice is sought from manufacturers.

10.16.3.2 Guidelines produced by the Water Research Centre (WRC) on the use of ductile iron pipes, state that highly acidic soils (pH <5) are corrosive to cast iron pipe even when protected by a zinc coating or polythene sleeving. WRC also indicate that groundwater containing >300ppm chloride may corrode even protected cast iron pipes.

10.16.3.3 On the basis that the pH of soils at the site are not less than 5, and groundwater is unlikely to be in contact with cast iron elements, then the risk of ductile cast iron pipes being affected by acid/chloride attack is considered low. We have not carried out any redox/resistivity testing (considered outside our brief) and thus we cannot comment further with regards to the risks of galvanic action.

10.17 Metals - Steel piles

10.17.1 Hazards

10.17.1.1 The corrosion of steel requires the presence of both oxygen and water. In undisturbed natural soils the amount of corrosion of driven steel piles is generally small. In disturbed soils (made ground) however, corrosion rates can be high and normally twice as high as those for undisturbed natural soils.

10.17.2 Risk Assessment

10.17.2.1 Guidance on the use of steel piles in different environments is provided in British Steel's piling handbook which includes calculating the effective life of steel piles. There is no specific guidance, however, for contaminated soils in this publication. Coatings can be provided to the pile surface but experience has shown that some coatings can be damaged during driving, particularly in ground which can contain hard materials such as brick/concrete/stone.

10.18 Metals - Stainless steel

10.18.1 Hazards

10.18.1.1 Stainless steel is used in a number of building components including services, pipework, reinforcement bars and wall ties. There is little knowledge, however, of the performance of stainless steel in aggressive environments.

10.18.2 Risk assessment

10.18.2.1 Stainless steel can withstand pH of 6.5 to 8.5, but the chlorine content of a soil increases the risk of corrosion. At concentrations of 200mg/l type 304 stainless steel can be used, but for concentrations of 200 to 1000mg/l type 316 should be used in preference to type 304, but for concentrations greater than 1000mg/l type 316 should always be used.

10.18.2.2 At this site the pH of the soils was near neutral (within the range of 6.5 to 8.5) and it is considered unlikely that groundwater will be in contact with stainless steel components (unless we are advised otherwise) thus the risk of ground conditions at the site affecting stainless steel is considered low.

10.19 Metals - Galvanised steel

10.19.1 Hazards

10.19.1.1 Galvanising steel is a means of protecting steel from aggressive environments; however, zinc galvanising can be corroded by salts and acids.

10.19.2 Risk assessment/remedial action

10.19.2.1 There is no current specific guidance on the effects of aggressive ground conditions on galvanised steel, however, some research indicates zinc alloys are generally more resistant than pure zinc coatings in aggressive conditions.

10.20 Metals - Copper

10.20.1 Hazards

10.20.1.1 Copper is commonly used for gas and water supplies. Copper is generally resistant to corrosion in most natural environments, but in contaminated ground copper can be subject to corrosion by acids, sulphates, chlorides and ground containing cinders/ash. Wet peat (pH 4.6) and acid clays (pH 4.2) are considered aggressive conditions to promote corrosion to copper.

10.20.2 Risk assessment

10.20.2.1 There is no specific published guidance on what constitutes aggressive conditions to copper except very acid/peaty conditions.

10.20.2.2 There are no significantly acidic or peaty conditions in near surface soils at the site or, indeed, significant concentrations of ash/cinders. On this basis the risk of significant corrosion to copper in contact with the ground is considered low.

10.21 Metals - Lead

10.21.1 Hazards

10.21.1.1 Lead is used in tanking, flashings, damp proof courses, etc. Lead is a durable material which is resistant to corrosion in most environments. Lead damp proof courses can be subject to attack from the lime released by Portland Cement based mortar and concrete. In the presence of moisture, a slow corrosive attack is initiated on lead sheet. In such cases a thick coat of bitumen should be used to protect the lead damp proof course.

10.21.2 Risk assessment

10.21.2.1 There is no current guidance on the performance of lead in contact with contaminated soils, however, acids and alkalis (lime) could be aggressive towards lead.

10.21.2.2 At the site pH conditions are not considered significantly extreme and this it is considered unlikely that ground conditions at the site would significantly affect lead.

10.22 Plastics - General

10.22.1 The range of plastics in construction is wide and increasing. The deterioration of plastics varies with the individual material and the environment to which it is exposed. In general, plastics deteriorate through degradation of their polymer constituent, but loss of plasticizer and other additives can render plastics ultimately unserviceable.

10.23 Plastic membranes and geotextiles

10.23.1 Plastic membranes and textiles are used in the construction industry as damp proof courses, gas resistant membranes, cover systems and liners. They are typically used to restrict the movement of gas or water into buildings, building materials or components or to separate differing soil types. Typically materials used for membranes are polyethylene (PE) and poly vinyl chloride (PVC).

10.23.2 Hazards

10.23.2.1 Membranes of PE and PVC are attacked by a variety of acids and solvents. PE has a poor corrosion resistance to oxidising acids (nitric and sulphuric) at high concentrations. Hydrochloric acid (HCl) does not chemically attack PE but can have a detrimental effect on its mechanical properties. Alkalis, basic salts, ammonia solutions and bleaching chemicals such as chlorine will cause deterioration of PE. PE is resistant to non-oxidising salt solutions.

10.23.2.2 PVC is degraded by the action of oxidising acids. Nitric acid is particularly aggressive towards PVC. PVC does not deteriorate under the action of neutral or alkaline solutions.

10.23.3 Risk assessment

10.23.3.1 There is no published guidance on quantitative assessment of the risks to PE or PVC although there is a lot of advice on how contaminants react with these plastics. In general, the more concentrated the contamination the greater the risk to plastic membranes/geotextiles.

10.23.3.2 Based on the investigatory data obtained to date, and in consideration of the hazards described above, there is no evidence of significant concentrations of acids or alkalis, indicating the risks of ground conditions at the site affecting PE and PVC materials are considered low.

10.24 Plastic Pipes

10.24.1 Hazards

10.24.1.1 Plastic pipes are predominantly manufactured from PVC and PE but other materials can be used. In general they perform well but it is known that chemical attack and permeation of contaminants through the pipes can result from use in contaminated land. A published review on plastic pipes reports the following:-

- Polyethylene (PE) - good resistance to solvents, acids and alkalis
- Poly vinyl chloride (PVC) - most common form of pipe. Good general resistance to chemical attack but can be attacked by solvents such as ketones, chlorinated hydrocarbons and aromatic polypropylene (PP) - chemically resistant to acids, alkalis and organic solvents but not recommended for use with storing oxidising acids, chlorinated hydrocarbons and aromatics.
- Poly vinylidene fluoride (PVDF) - inert to most solvents, acids and alkalis as well as chlorine, bromide and other halogens
- Polytetrafluoroethylene (PTFE) - one of the most inert thermoplastics available. PTFE has good chemical resistance to solvents, acids and alkalis

A survey carried out by the Water Research Centre (WRC) on reported incidents of permeation (more than 25), only two involved PVC with these incidents relating to spillages of fuel.

10.24.2 Assessment

10.24.2.1 A survey carried out by the Water Research Centre (WRC) on reported incidents of permeation (more than 25), only two involved PVC with these incidents relating to spillages of fuel.

The UK Water Industry research (UKWIR) have published a document entitled '*Guidance for the selection of Water supply pipes to be used in Brownfield sites*'. The publication defines brownfield sites as

'Land or premises that have been used or developed. They may also be vacant, or derelict. However they are not necessarily contaminated'

The subject site has previously been developed and on this basis could potentially be considered brownfield in accordance with the UKWIR document. Following the preliminary risk assessment procedures described in the UKWIR document however, (paragraph 2.4.2) there is no evidence to indicate that chemicals have ever been used or stored on site.

10.24.2.2 Whilst we have not carried out a full investigation set out in guidance in the UKWIR document, the subject site does exhibit a degree of localised hydrocarbon (PAH) contamination. The UKWIR document advises a trigger concentration of 0.125mg/kg for their 'extended VOC (Volatile Organic Carbons) suite' which includes the PAH suite which we have results for. The measured concentration of individual contaminants forming part of the PAH suite exceeds the trigger value of 0.125mg/kg, and on this basis it is considered likely that barrier pipes will have to be installed at this site. We recommend Northumbrian Water however is consulted on this to gain their opinion and requirements.

10.25 Electrical cables

10.25.1 Hazards

10.25.1.1 Electrical cables are generally protected by plastic sleeves. These sleeves are potentially subject to chemical and permeation in similar modes as plastic pipes. Medium and low voltage cables are often laid directly into the ground and are thus at risk of attack by contaminants. High voltage cables tend to be laid in trenches backfilled with 'clean' materials.

10.25.2 Risk assessment/remedial action

10.25.2.1 The selection of appropriate sheathing material is important to provide resistance to ground conditions at the site and recommend manufacturers' advices are sought.

10.26 Rubbers

10.26.1 Hazards

10.26.1.1 Rubbers are crosslinked polymeric materials containing a number of additives such as carbon black, fillers, antioxidant and vulcanising agents. The corrosion resistance of rubber is dependent upon the polymeric constituent. The mechanisms by which rubbers deteriorate when placed in aggressive chemical environments are similar to those described for plastics. Oxidation is the principal form of degradation. Whilst rubbers are resistant to strong acids and alkalis, they are rapidly attacked by oxidising agents such as nitric acid and oxidising salts such as copper, manganese and iron.

10.26.1.2 Rubber is also susceptible to attack by certain hydrocarbons and oils. The absorption of these liquids causes the rubber to smell.

10.26.2 Risk assessment/remedial action

10.26.2.1 Information on the effect of a range of chemicals on the physical properties of various rubbers has been produced by the Rubber and Plastics Research Association. This was based on observations carried out following immersion tests using undiluted chemicals, but this has limitations such as the effects of combined chemicals and the effects of dilution.

10.26.2.2 We recommend manufacturers of the rubber materials likely to be in contact with the ground at the site are consulted to confirm, or otherwise, the applicability of their product.

11 Classification of waste soils under the Waste Acceptance Criteria

11.1	The Landfill Directive
11.2	Classification of soil types
11.3	Waste Acceptance Criteria (WAC)
11.4	Primary Classification
11.5	Secondary Classification
11.6	Naturally deposited soils not affected by artificial contaminants
11.7	Basic Categorisation
11.8	Treatment of waste
11.9	Reuse of soils - Materials Management Plans

11.1 The Landfill Directive

11.1.1 The Landfill Directive represents an important change in the way we dispose of waste. It encourages waste minimisation by promoting increased levels of recycling and recovery. The Landfill Directive became law in 1999 and transcribed into the Landfill (England and Wales) Regulations which came into force in 2002. These Regulations were amended in 2005 by introducing criteria to classify soils for disposal to landfill. It is the duty of the waste producer (the client) to classify the soils for this purpose.

11.2 Classification of soil types

11.2.1 Our investigations consider two soil types which may be generated as wastes as part of construction operations, potentially contaminated soil and uncontaminated soil. A full hazard assessment and subsequent testing for waste acceptance criteria is undertaken on soils which are not considered to be naturally deposited or are likely to be affected by artificial contamination. For soils that are unlikely to be affected by artificial contamination (such as natural soils), specific testing in relation to the classification process is not necessary.

11.3 Waste acceptance criteria (WAC)

11.3.1 The Environment Agency publication, '*Framework for the classification of contaminated soils as hazardous wastes*' (July 2004), provides an appropriate procedure for establishing if the soils are hazardous or non-hazardous and applies to soils that are identified as potentially contaminated. Uncontaminated, natural soils are considered separately (see Section 11.6).

11.3.2 Primary classification

11.3.2.1 The first stage is classifying a potentially 'contaminated' soil for disposal to landfill is to establish its chemical status by first identifying potential sources/types of chemical contamination (desk study) followed by intrusive site investigations to obtain samples for undefined testing of soil samples to measure concentrations of chemical contaminants. Such data provides information to partly complete the basic characteristic checklist.

11.3.2.2 Laboratory test data is then compared with the Environment Agency publication '*hazardous waste – Interpretation of the definition and classification of hazardous waste (second edition, version 2.1)*'. Where the waste is suspected to contain oil, we have referred to the Environment Agency draft consultation paper '*How to Find Out if Waste Oil and Wastes that Contain Oil are Hazardous*' (Draft Version 2.5 – October 2006). With reference to these documents a hazard assessment has been carried out to enable categorisation of the material as hazardous or non-hazardous and to subsequently establish the European Waste Catalogue (EWC) code (ref Section 11.3.4 below).

11.3.3 Secondary classification

11.3.3.1 If the soil is deemed hazardous then measurement of organic contaminants and leachable inorganic contaminants is necessary for comparison with values listed in the Environment Agency publication '*Guidance on sampling and testing of wastes to meet landfill waste acceptance procedures*' (April 2005) Table 5.1. Similarly should the soil be deemed as non-hazardous then such testing may also be undertaken to determine if it is potentially inert. This document also provides guidance on sampling materials and frequency as well as test procedures and quality assurance of testing.

11.3.3.2 The above procedures are described with respect to the subject site in the following sections Section 11.4 (primary) and 11.5 (secondary), leading to basic characterisation of soils for disposal. Subject to the results of the categorisation and anticipated development methodology, consideration should be given by the developer to reduce volumes of disposal or treatment to allow reclassification.

11.3.4 European waste catalogue (EWC) coding

11.3.4.1 The EWC 2002 is a catalogue of all wastes, grouped according to generic industry, process or waste type. It is divided into twenty main chapters, each with a two digit code between 01 and 20. Following the EWC, in our opinion, soils considered as part of this investigation would be categorised within 'Group 17' of the EWC catalogue, which comprises 'Construction and Demolition Wastes (including excavated soils from contaminated sites)'.

11.3.4.2 The Catalogue further categorises the waste, such that soils considered as part of this investigation would be classified as either 17 05 04 defined as *'soil and stones (other than those mentioned in 17 05 03)'*; or 17 05 03* defined as soil or stones containing dangerous substances (where hazardous wastes are described by entries followed by an asterisk).

11.4 Primary classification

11.4.1 Soil types

11.4.1.1 Based on soils exposed in exploratory excavations, in combination with anticipated construction works, we assume soils requiring off-site disposal will comprise Made Ground, Glacial Till and Seventy Fathom Post formation deposits generated from general site clearance and foundation and service trench excavations.

11.4.2 Classification as hazardous or non-hazardous waste

11.4.2.1 The Environment Agency publication *'Framework for the classification of contaminated soils as hazardous wastes'* (July 2004) provides the following procedure for establishing if the soils are hazardous or non-hazardous. The first stage in classifying a potentially 'contaminated' soil for disposal is to establish its chemical status by first identifying potential sources/types of chemical contamination (desk study) followed by intrusive site investigations to obtain samples for laboratory testing of soil samples to measure concentrations of chemical contaminants.

11.4.2.2 An assessment of potential source of contamination is presented in Section 8 of this report. Laboratory testing has been set as deemed appropriate to our source assessment.

11.4.2.3 We have carried out an analysis of test data for each chemical contaminant considered in this investigation. A conservative approach has been adopted for the analysis whereby the maximum test value for each contaminant has been adopted as a preliminary screening process to determine if the soils are hazardous or non-hazardous. Should the analysis indicate potentially hazardous properties then a process of zoning by further analysing the site history, geological conditions and analytical data may be undertaken.

11.4.2.4 Laboratory test data measures the concentration of anions, which are unlikely to exist in the pure metallic form in the soil, but probably exist as a compound. Following guidance provided in the Environment Agency Technical Guidance WM2 *'Interpretation of the definition and classification of hazardous waste'*, we have reviewed a variety of compounds for each of the metallic and semi metallic elements we have tested.

- 11.4.2.5 To determine the hazardous waste properties for each element, we have reviewed chemical compounds listed in Table 3.2 of Annex VI of the European Regulation (1272/2008) for Classification, Labelling and Packaging (CLP) of chemicals which has now superseded the Approved Supply List (Published by the Health and Safety Executive) for the classification of hazardous chemicals in the UK. In order to provide a 'worst case' scenario, initially we adopt the most severe hazardous properties (risk phrases) associated with the various compounds for each element under review. If measured concentrations produce a hazardous outcome then the element or elements are reassessed on a site specific basis. For review of organic contamination, we have directly adopted the threshold concentrations for the appropriate organic compounds listed in Table 3.2.
- 11.4.2.6 The compound or compounds adopted for each element is used to convert the measured metallic concentration to the substance concentration using their respective molecular weights. This derived conversion factor is then used in the threshold concentration spreadsheet (refer paragraph 11.3.2.8 below).
- 11.4.2.7 Our assessment of each of the chemical substances is maintained on our files and is available for confidential review/audit by the Environment Agency.
- 11.4.2.8 A spreadsheet detailing the hazard assessment following the procedures described in 'framework for the classification of contaminated soils as hazardous wastes' is presented in Appendix J.
- 11.4.2.9 The spreadsheet indicates the Made Ground soils are **hazardous** by virtue of elevated heavy metal concentrations.

11.5 Secondary assessment

- 11.5.1 Following 'Guidance on sampling and testing of wastes to meet landfill waste acceptance procedures' produced by the Environment Agency (Version 1, April 2005) we have scheduled testing of **two** samples to measure the parameters listed in table 5.1 (landfill waste acceptance criteria) included in the above publication. A copy of the test result certificate is presented in Appendix K. The source of the composite samples is detailed below:

Composition of soil samples for classification testing		
Strata	Source	Soil Type
Made Ground – Type 1	Made Ground within excavations undertaken to the north of the site, including boreholes DTS01-07.	Brown, orange brown, light grey and reddish brown sand and sandy gravel with localised gravelly clay lenses and substantial coal content. Gravels include flint, metal, plastic, clinker ash and brick.
Made Ground – Type 2	Made Ground from the south of the site, from boreholes DTS08-DTS11.	Orange brown, reddish brown, dark grey and dark brown, clay, sand and gravels of flint, ash, brick, timber and sandstone.

Table 11.5.1

- 11.5.2 The samples were deemed representative of Made Ground soil types described in Section 5. The sample was formed by combining individual samples taken from exploratory excavations within each Made Ground types. The combined samples were then quartered in the laboratory to produce a representative sample for subsequent testing.
- 11.5.3 Laboratory test data has been compared with the landfill waste acceptable criteria (table 5.1) to allow the secondary assessment to be completed. A copy of table 5.1 is presented in Appendix F with test result data added for ease of comparison.
- 11.5.4 Comparison of test data with landfill waste acceptance criteria indicates that:
- **Made Ground – Type 1 (north of site) exceed the criteria thresholds for hazardous waste by virtue of elevated concentrations of TOC and LOI.**
 - **Made Ground – Type 2 (south of site) are classified as stable non reactive hazardous waste.**
- 11.5.5 In view of the above, and in order to refine this assessment and/or limit any waste being sent off site we recommend additional assessments are carried out including:
- Additional, more targeted testing and possible further zoning of soil types on a vertical and lateral level
 - Screening of waste soils followed by additional sampling and testing.
 - Alternative treatments of the Type 1 wastes such as monolithic treatment.
 - Minimising potential waste arisings (for example by adopting a driven piled foundation solution).
 - Discussion with landfill operator regarding potential amendments to their license regarding elevated TOC/LOI concentrations within soils.

11.6 Naturally deposited soils not affected by artificial contaminants

- 11.6.1 With reference to the European Waste Catalogue and table 5.1 of the Environment Agency publication '*a better place – guidance for waste destined for disposal in landfills – version 2 June 2006*', naturally occurring soils not likely to be affected by contamination can be classified as inert waste, with a EWC code of 17 05 04. Should any of the naturally deposited soils be suspected to contain contamination (by virtue of visual or olfactory evidence) upon excavation, then such soils should be stockpiled appropriately and additional testing carried out as considered necessary. Based on evidence obtained during our investigations, we are of the opinion that the Glacial Till and Seventy Fathom Post Member soils at the site are not likely to be affected by chemical contamination and thus can be classified as **inert waste**.

11.7 Basic categorisation

11.7.1 Based on the preceding assessment, we have produced **four** basic categorisation schedules relating to the Made Ground (Type 1 and 2), the Glacial Till and Seventy Fathom Post Member deposits, which are presented in Appendix L. These schedules should be provided together with a copy of this report to an appropriately licensed landfill facility to demonstrate the material can be deposited at this facility.

11.7.2 We understand that some landfill sites have licences which have restrictions on concentrations of chemical contaminants and thus we recommend this report is provided to the selected landfill facility to confirm (or otherwise) it can accept the waste. Please be aware that landfill sites are obligated to undertake in house quality assurance tests and thus may require further WAC testing for any soils encountered as part of this investigation. There is no obligation on any landfill operator to accept waste if they choose not to and waste operators may require additional testing of untested waste soils prior to acceptance at landfill in accordance with the landfill regulations.

11.8 Treatment of waste

11.8.1 Treatment of wastes is now a requirement of the landfill directive applied by the Landfill (England and Wales) Regulations 2002. Landfill cannot accept untreated waste (be it hazardous or non-hazardous), thus waste producers have the choice of treating it themselves on site or treating it elsewhere prior to disposal to landfill. The regulations require:

'10 – (1) The operator of a landfill shall ensure that the landfill is only used for landfilling waste which is subject to prior treatment unless:

a) It is inert waste for which treatment is not technically feasible; or

b) It is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment.'

11.8.2 Regulation 2 defines treatment as: *'physical, thermal, chemical or biological processes (including sorting) that change the characteristics of waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery.'*

11.8.3 A treatment option must comply with the definition of treatment. This involves a 'three point test' against which treatment is assessed i.e.

1. It must be a physical, thermal, chemical or biological process including sorting
2. It must change the characteristics of the waste: and
3. It must do so in order to:
 - a) Reduce its volume: or

- b) Reduce its hazardous nature: or
- c) Facilitate its handling: or
- d) Enhance its recovery.

11.8.4 Treatment of inert wastes

11.8.4.1 Inert waste does not need to be treated if it is not technically feasible however treatment should reduce the amount of waste which goes to landfill and enhance its recovery (by re-use or recycling). Inert wastes are often suitable for recycling, for example as an aggregate or an engineering fill material. A fact sheet on treatment of inert wastes is available on the following website www.environment-agency.gov.uk

11.8.4.2 Clearly, excavations in the Glacial Till and Seventy Fathom Post Member soils (not affected by artificial contamination) will generate inert wastes which could be reused on site or off site for bulk filling, subject of course to maintenance of an acceptable water content and provided that it is fit for its intended purpose.

11.8.5 Treatment of non-hazardous waste

11.8.5.1 Guidance and indeed examples of treatment is provided in the Environment Agency publication '*Treatment of non hazardous wastes for landfill - your waste – your responsibility,*' again available on the EA website.

11.8.6 Landfill operators

11.8.6.1 It is a requirement of the landfill operator to check if the waste soils taken to the facility have been treated.

11.9 Reuse of Soils - Materials Management Plans

11.9.1 Where soils are to be moved and reused onsite, or are to be imported to the site, a Waste Exemption or an Environmental Permit is required.

11.9.2 An alternative is the use of a Materials Management Plan (MMP) to determine where soils are and are not considered to be a waste. By following '*The Definition of Waste: Development Industry Code of Practice*' published by CL:AIRE (produced in 2008 and revised in March 2011), soils that are suitable for reuse without the need for remediation (either chemical or geotechnical) and have a certainty of use, are not considered to be waste and therefore do not fall under waste regulations. In addition, following this guidance may present an opportunity to transfer suitable material between sites, without the need for Waste Exemptions or Environmental Permits.

11.9.3 MMPs offering numerous benefits, including maximising the use of soils onsite, minimising soils going to landfill and reducing costs and time involved in liaising with waste regulators.

11.9.4 We can provide further advice on this and provide fees for producing a Materials Management Plan on further instructions.

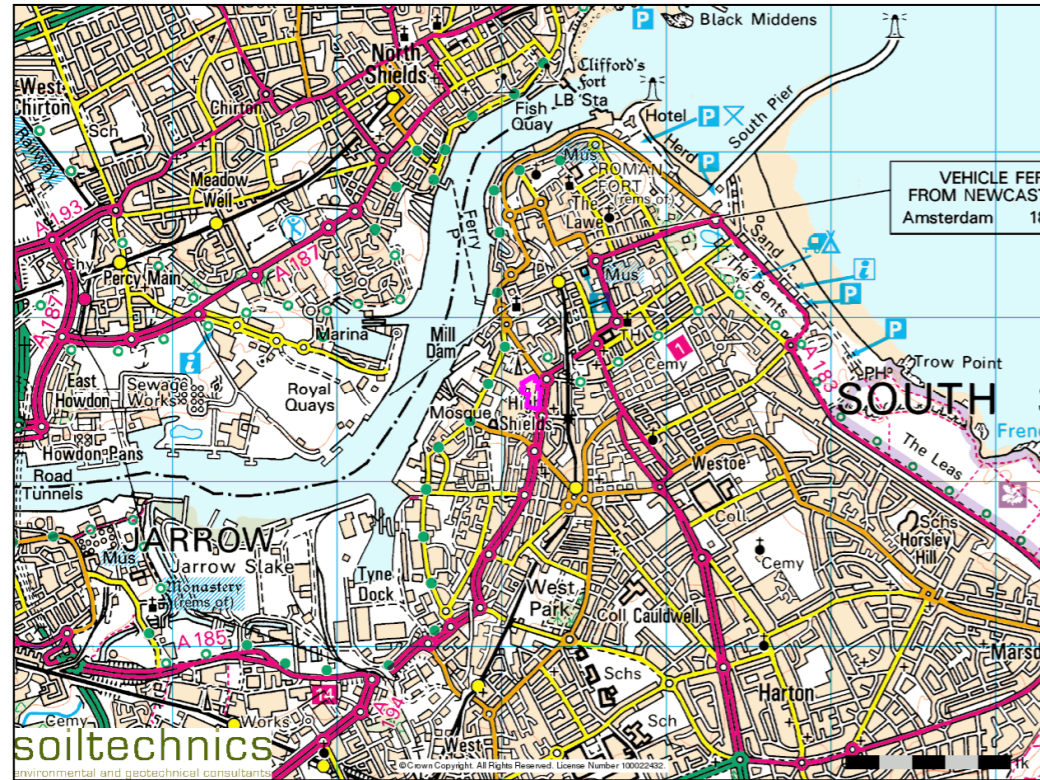
12 Further investigations

12.1	Further investigations
------	------------------------

12.1 Although we have endeavoured to provide a comprehensive investigation for the proposed development within budgetary constraints there are areas, which we recommend further investigations be carried out. These are as follows: -

1. Further sampling and testing with a view to reduce the primary landfill classification from hazardous to non-hazardous. This testing is for landfill classification only.

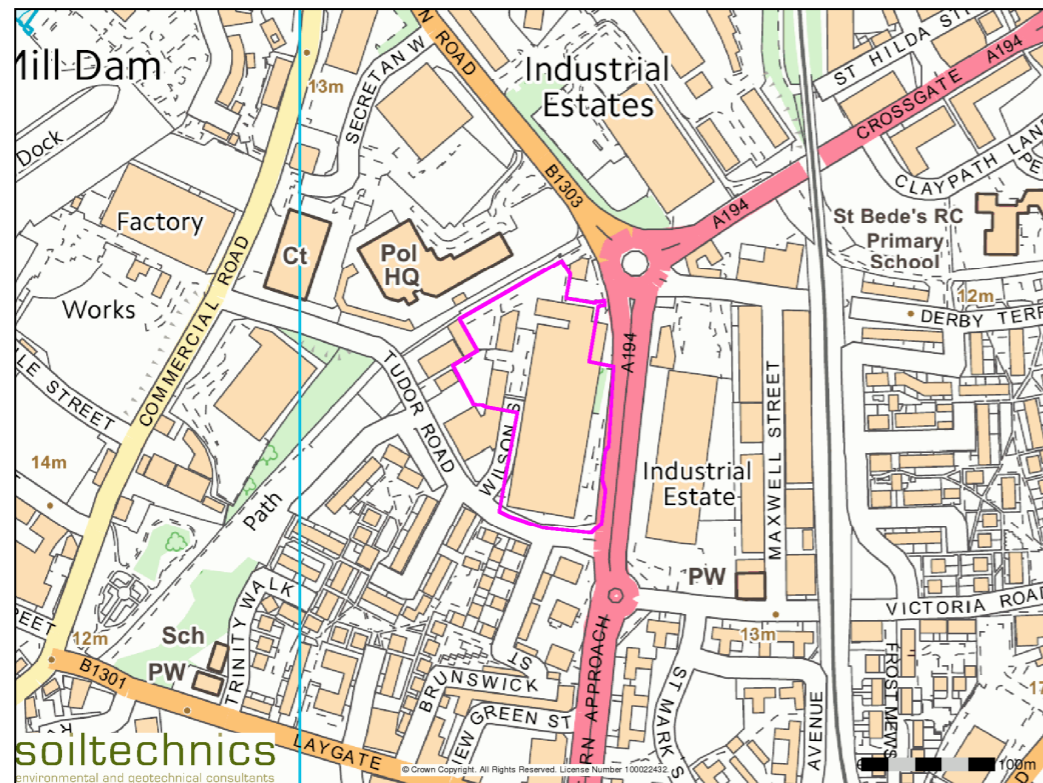
12.2 We would be pleased to carry out any of the supplementary investigations described above and provide proposals with costings on further instructions.



Neighbourhood extract from Ordnance Survey map

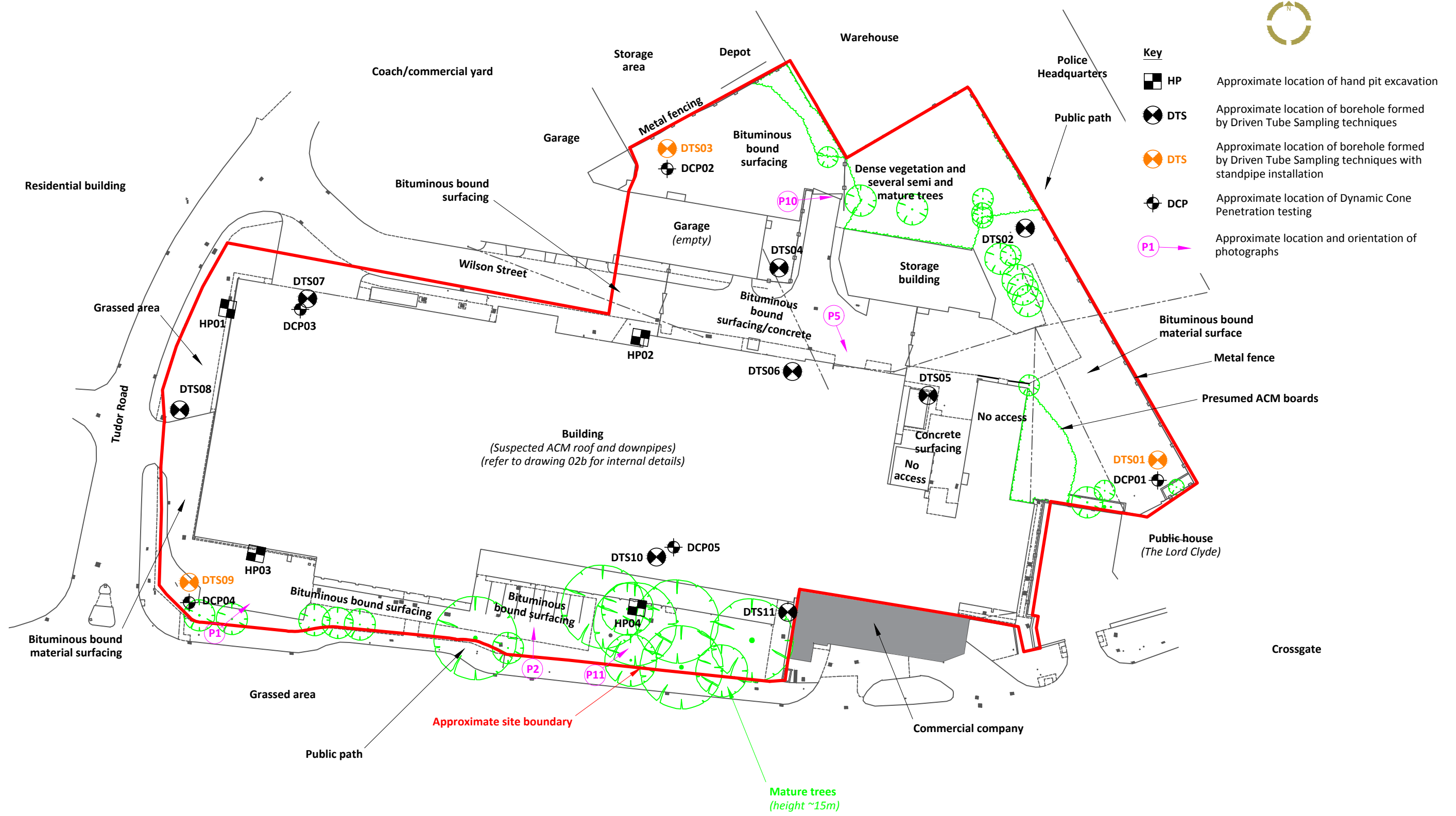


Town extract from Ordnance Survey map



Detail extract from Ordnance Survey map

Title	Scale	Drawing number
Site location plan	Not to scale	01






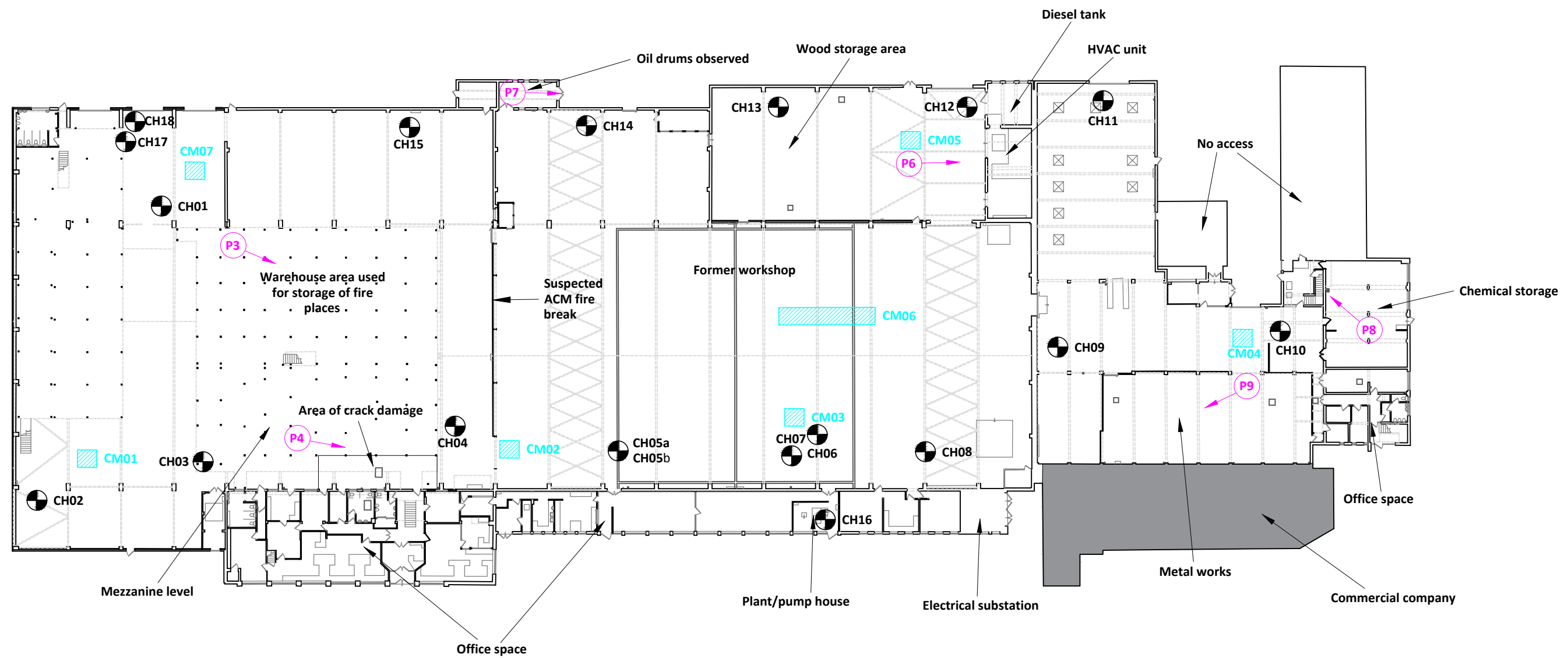
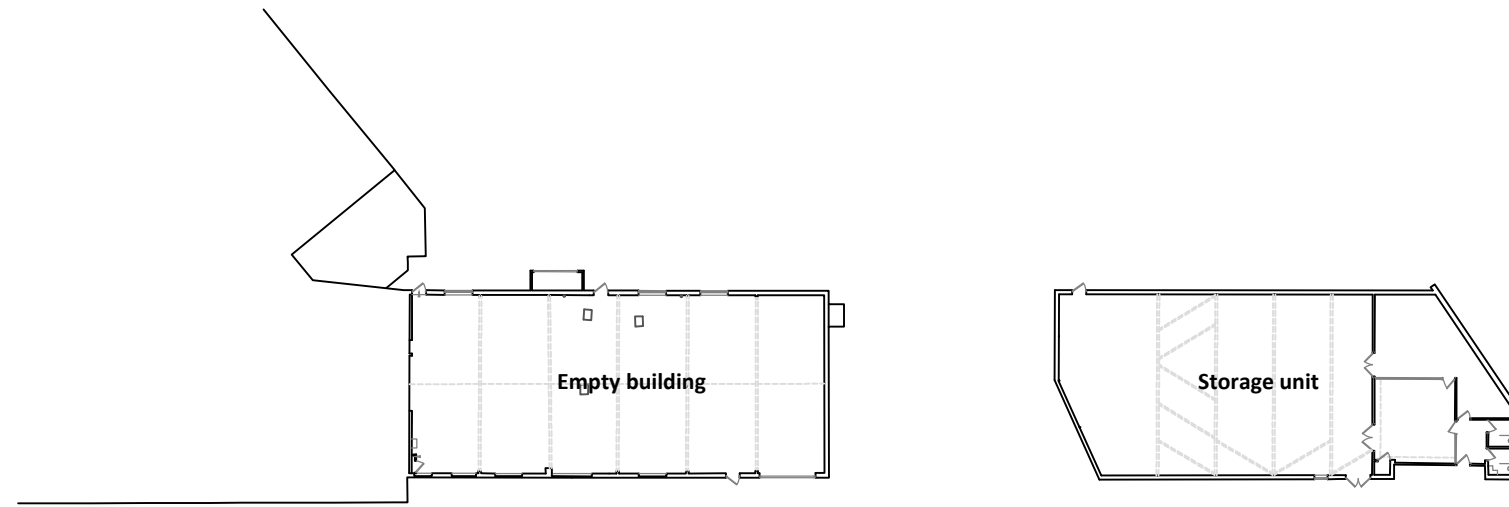
- Key**
- HP Approximate location of hand pit excavation
 - DTS Approximate location of borehole formed by Driven Tube Sampling techniques
 - DTS Approximate location of borehole formed by Driven Tube Sampling techniques with standpipe installation
 - DCP Approximate location of Dynamic Cone Penetration testing
 - P1 Approximate location and orientation of photographs

Title	Scale	Drawing number
Plan showing existing external site features and location of exploratory points	1:750 at A3	02

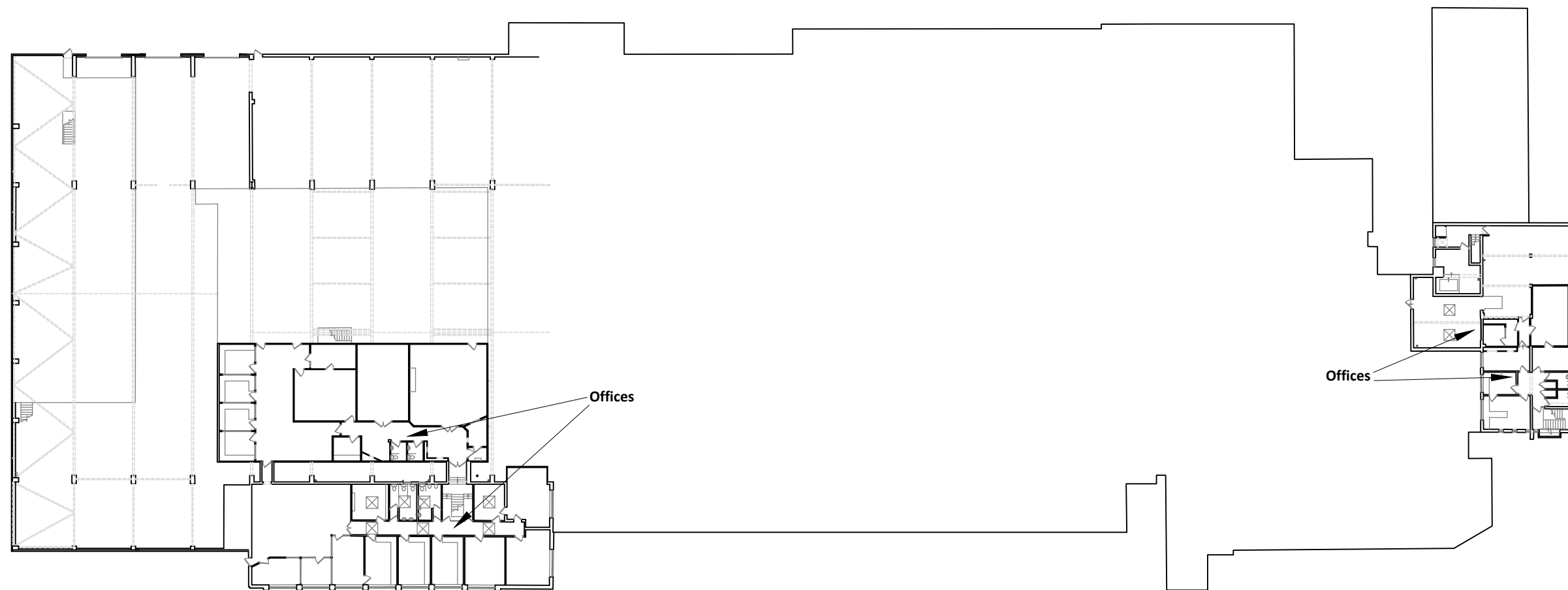


Key

-  **CM** Approximate location of Hilti scan(s) obtained using Hilti scanning equipment
-  **CH** Approximate location of corehole
-  **P1** Approximate location and orientation of photographs



Title	Scale	Drawing number
Plan showing existing internal site features and location of exploratory points to ground floor	1:500 at A3	02a



Title	Scale	Drawing number
Plan showing features at first floor level	1:500 at A3	02b



Key



Extent of type 1 soil



Extent of type 2 soil

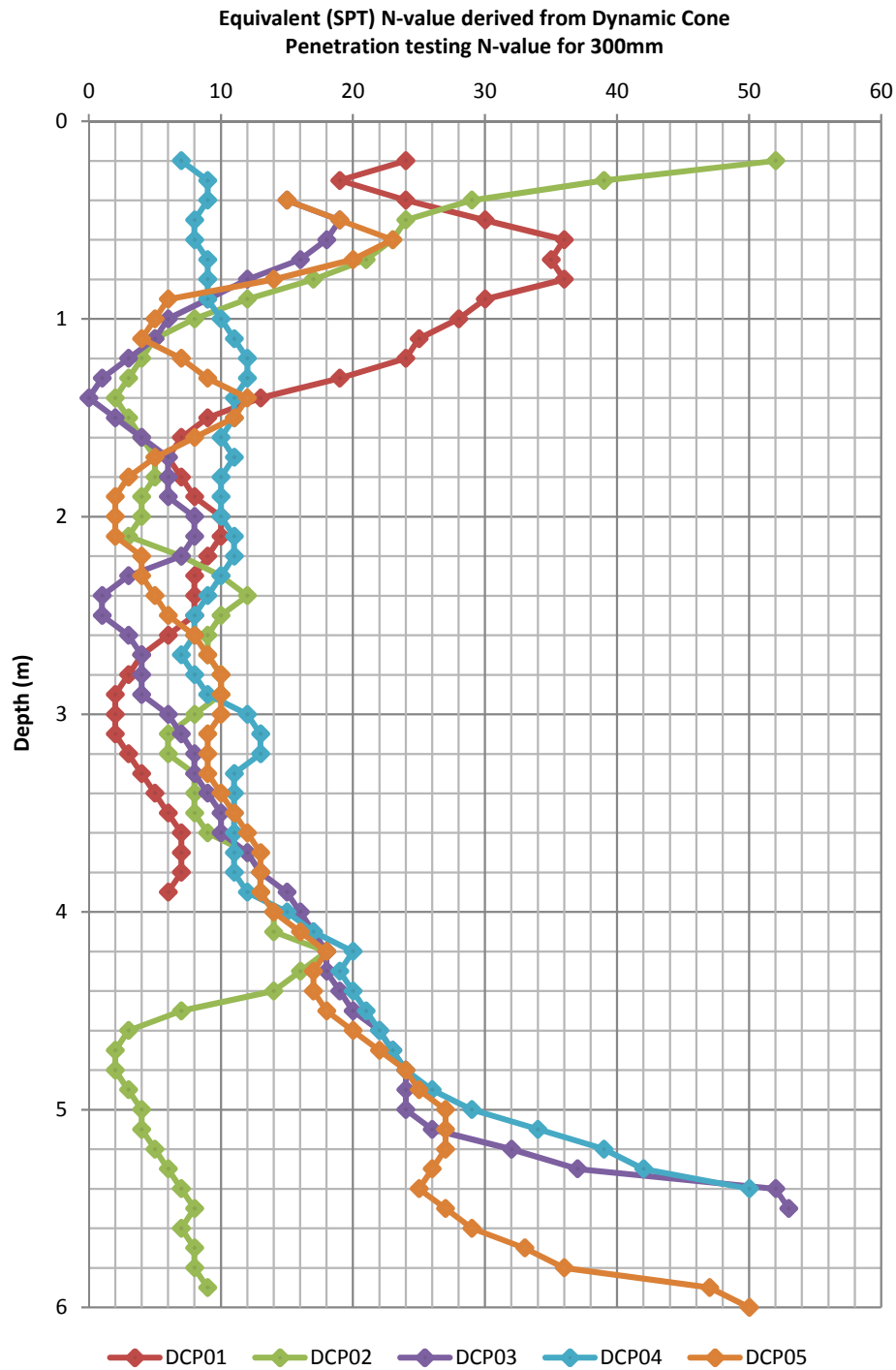


Western Approach

Title
Plan showing location and extent of type 1 and
type 2 soils

Scale
1:750 at A3

Drawing number
02c



Notes

1) Density descriptions obtained from EN ISO 14688-2:2004

Density terms

0 - 4	Very loose
4 - 10	Loose
10 - 30	Medium dense
30 - 50	Dense
50+	Very dense

Title

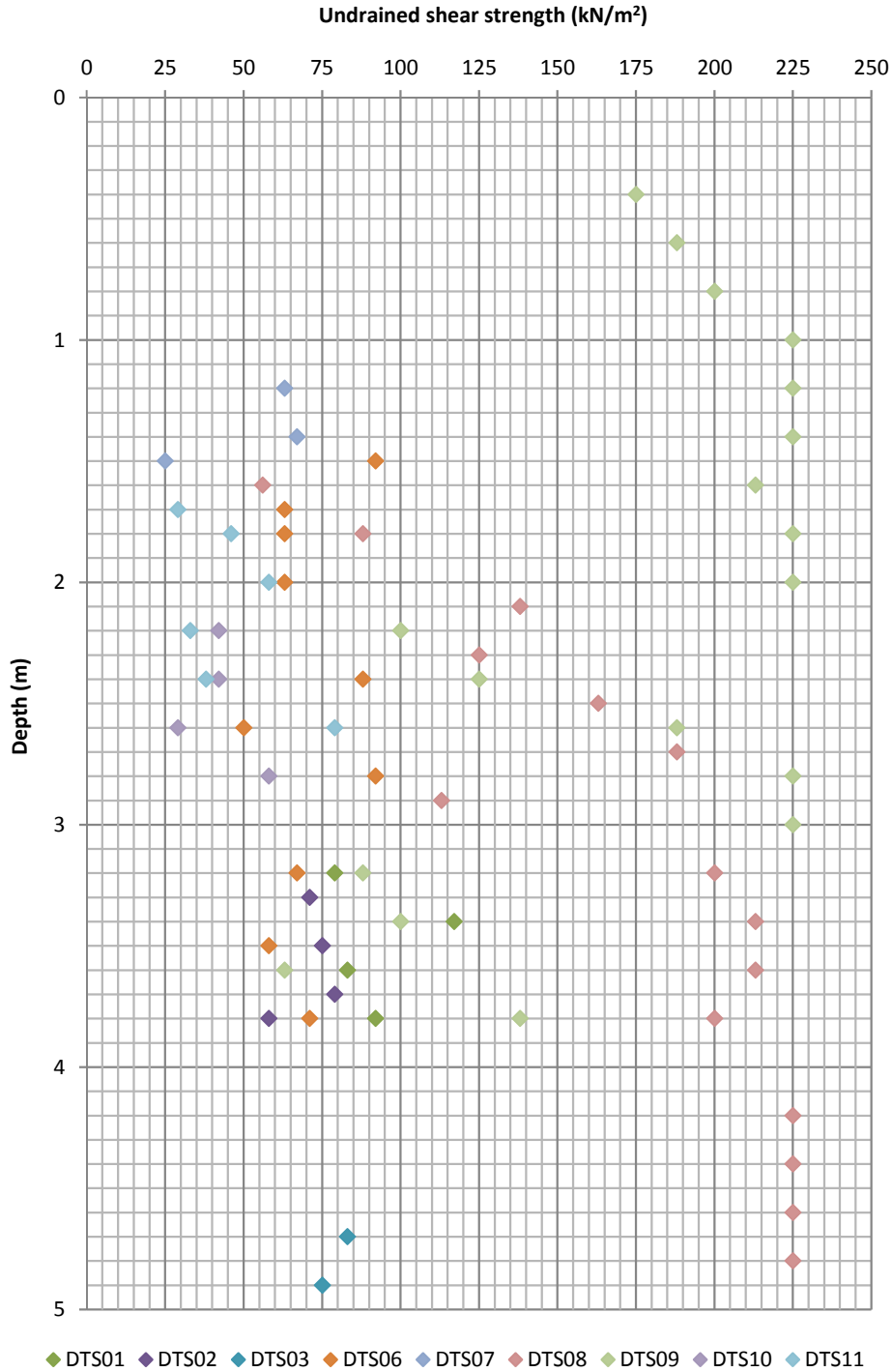
Plot summarising insitu density testing utilising dynamic cone penetration (DCP) techniques

Scale

As shown

Drawing number

04



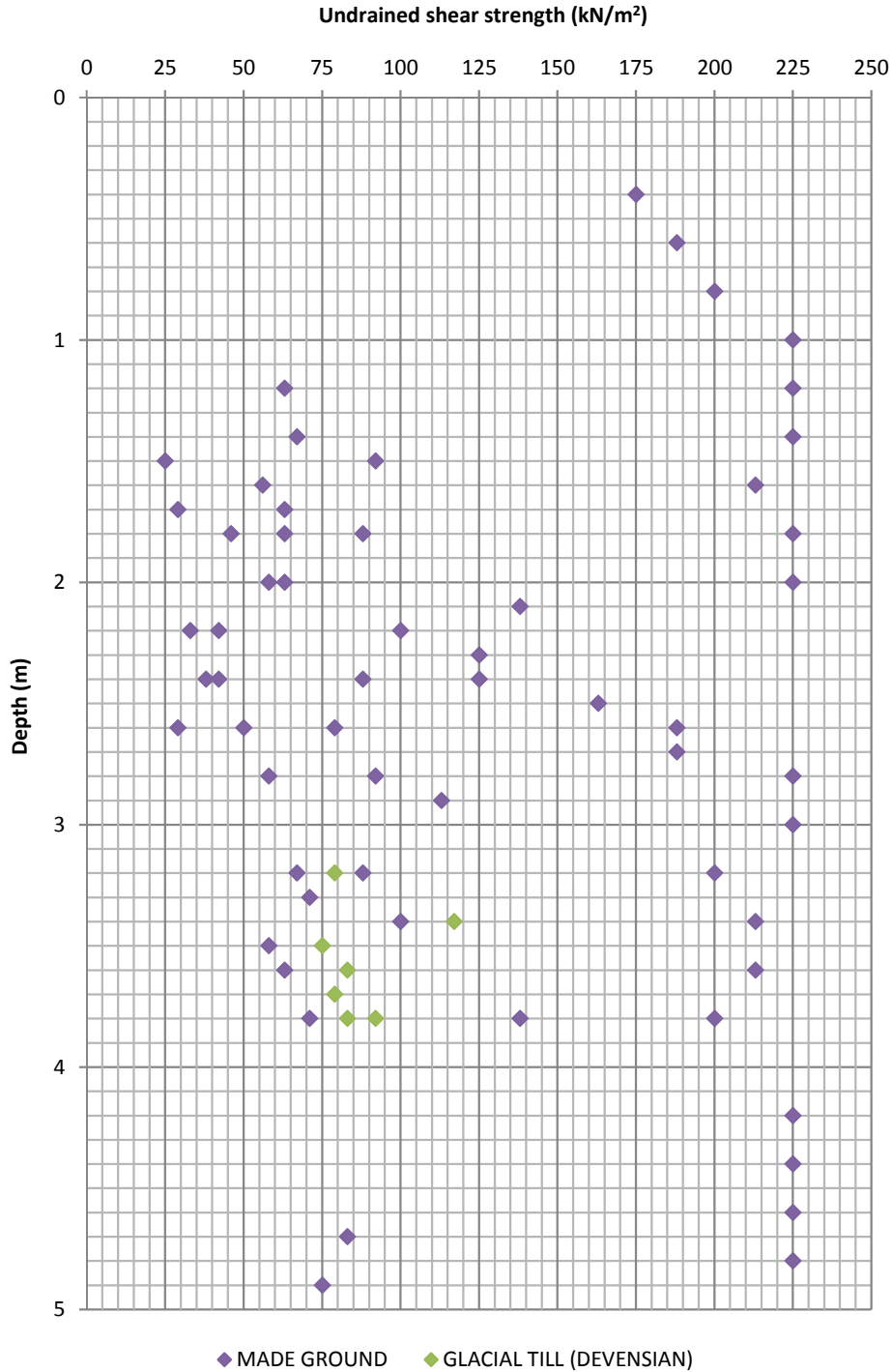
Notes

- 1) Strength terms obtained from EN ISO 14688-2:2004
- 2) Equivalent undrained shear strength derived by multiplying Pocket Penetrometer (PP) results by 50

Strength terms

0 - 20	Very low strength
20 - 40	Low strength
40 - 75	Medium strength
75 - 150	High strength
150 - 300	Very high strength
300+	Extremely high strength

<p>Title</p> <p>Plot summarising results of pocket penetrometer determinations by location</p>	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Scale</td> <td style="width: 50%;">Drawing number</td> </tr> <tr> <td>As shown</td> <td>05a</td> </tr> </table>	Scale	Drawing number	As shown	05a
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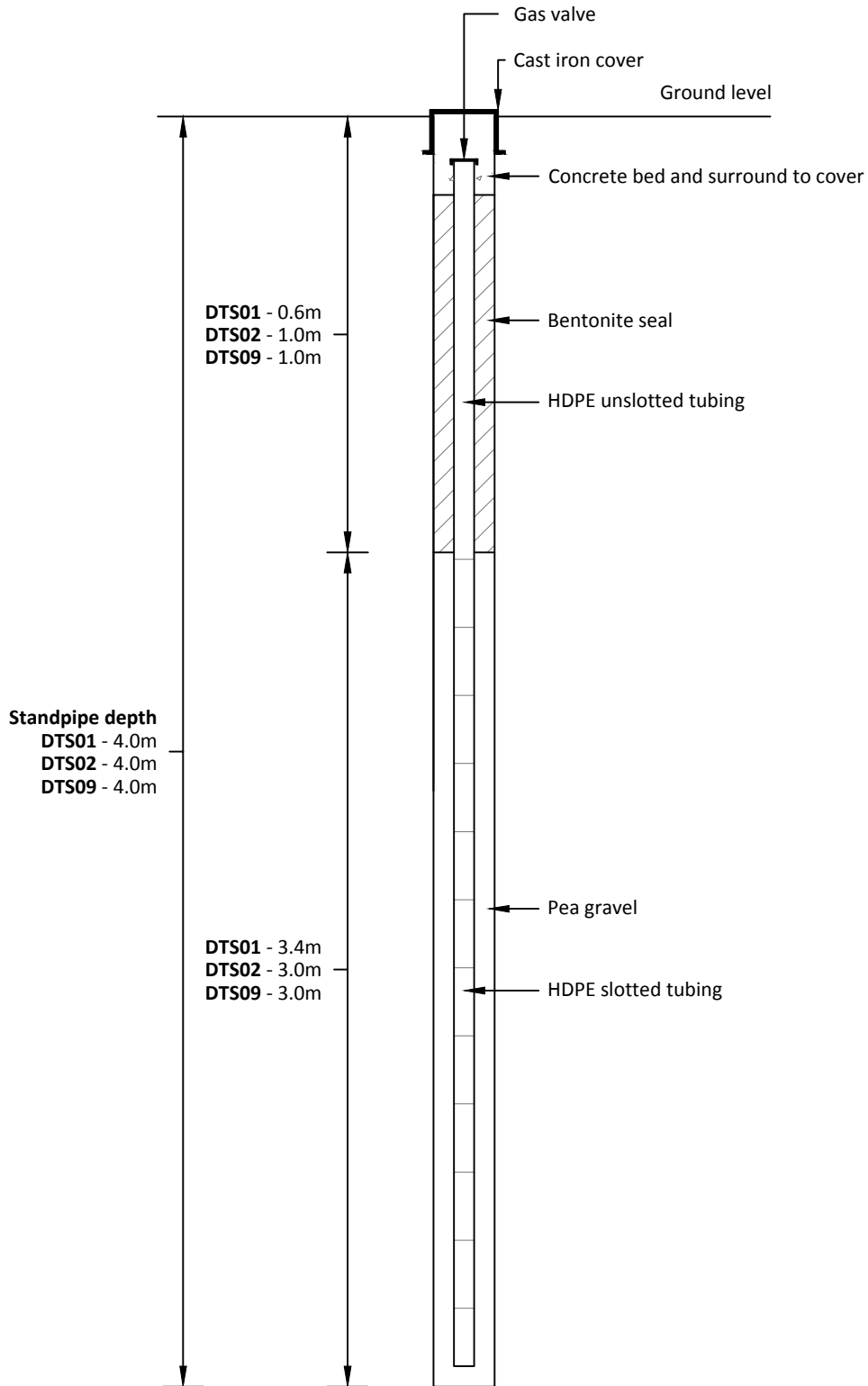
Notes

- 1) Strength terms obtained from EN ISO 14688-2:2004
- 2) Equivalent undrained shear strength derived by multiplying Pocket Penetrometer (PP) results by 50

Strength terms

0 - 20	Very low strength
20 - 40	Low strength
40 - 75	Medium strength
75 - 150	High strength
150 - 300	Very high strength
300+	Extremely high strength

<p>Title</p> <p>Plot summarising results of pocket penetrometer determinations by geology</p>	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Scale</td> <td style="width: 50%;">Drawing number</td> </tr> <tr> <td>As shown</td> <td>05b</td> </tr> </table>	Scale	Drawing number	As shown	05b
Scale	Drawing number				
As shown	05b				



Title

Section showing construction of gas monitoring standpipes installed in boreholes DTS01, DTS02 and DTS09

Scale

Not to scale

Drawing number

06

Definition of geotechnical terms used in this report - foundations

Strip foundations.

A foundation providing a continuous longitudinal ground bearing.

Trench fill concrete foundation.

A trench filled with mass concrete providing continuous longitudinal ground bearing.

Pad foundation.

An isolated foundation to spread a concentrated load.

Raft foundation.

A foundation continuous in two directions, usually covering an area equal to or greater than the base area of the structure.

Substructure.

That part of any structure (including building, road, runway or earthwork) which is below natural or artificial ground level. In a bridge this includes piers and abutments (and wing walls), whether below ground level or not, which support the superstructure.

Piled foundations and end bearing piles. A pile driven or formed in the ground for transmitting the weight of a structure to the soil by the resistance developed at the pile point or base and the friction along its surface. If the pile supports the load mainly by the resistance developed at its point or base, it is referred to as an end-bearing pile; if mainly by friction along its surface, as a friction pile.

Bored cast in place pile.

A pile formed with or without a casing by excavating or boring a hole in the ground and subsequently filling it with plain or reinforced concrete.

Driven pile.

A pile driven into the ground by the blows of a hammer or a vibrator.

Precast pile.

A reinforced or prestressed concrete pile cast before driving.

Driven cast in place pile.

A pile installed by driving a permanent or temporary casing, and filling the hole so formed with plain or reinforced concrete.

Displacement piles.

Piled formed by displacement of the soil or ground through which they are driven.

Skin friction.

The frictional resistance of the surrounding soil on the surface of cofferdam or caisson walls, and pile shafts.

Downdrag or negative skin friction. A downwards frictional force applied to the shaft of a pile caused by the consolidation of compressible strata, e.g. under recently placed fill. Downdrag has the effect of adding load to the pile and reducing the factor of safety.

Definition of geotechnical terms used in this report – bearing values

Ultimate bearing capacity.

The value of the gross loading intensity for a particular foundation at which the resistance of the soil to displacement of the foundation is fully mobilised.

Presumed bearing value.

The net loading intensity considered appropriate to the particular type of ground for preliminary design purposes. The particular value is based on calculation from shear strength tests or other field tests incorporating a factor of safety against shear failure.

Allowable bearing pressure.

The maximum allowable net loading intensity at the base of the foundation, taking into account the ultimate bearing capacity, the amount and kind of settlement expected and our estimate of ability of the structure to accommodate this settlement.

Factor of safety.

The ratio of the ultimate bearing capacity to the intensity of the applied bearing pressure or the ratio of the ultimate load to the applied load.

Definition of geotechnical terms used in this report – road pavements

The following definitions are based on Transport and Road Research Laboratory (TRRL) Report LR1132.

Equilibrium CBR values.

A prediction of the CBR value, which will be attained under the completed pavement.

Thin pavement.

A thin pavement (which includes both bound and unbound pavement construction materials 1 in 300mm thick and a thick pavement is 1200mm thick (typical of motorway construction)).

Definition of geo-environmental terms used in this report

Conceptual model

Textual and/or schematic hypothesis of the nature and sources of contamination, potential migration pathways (including description of the ground and groundwater) and potential receptors, developed on the basis of the information obtained from the investigatory process.

Contamination

Presence of a substance which is in, on or under land, and which has the potential to cause harm or to cause pollution of controlled water.

Controlled water

Inland freshwater (any lake, pond or watercourse above the freshwater limit), water contained in underground strata and any coastal water between the limit of highest tide or the freshwater line to the three mile limit of territorial waters.

Harm

Adverse effect on the health of living organisms, or other interference with ecological systems of which they form part, and, in the case of humans, including property.

Pathway

Mechanism or route by which a contaminant comes into contact with, or otherwise affects, a receptor.

Receptor

Persons, living organisms, ecological systems, controlled waters, atmosphere, structures and utilities that could be adversely affected by the contaminant(s).

Risk

Probability of the occurrence of, and magnitude of the consequences of, an unwanted adverse effect on a receptor.

Risk Assessment

Process of establishing, to the extent possible, the existence, nature and significance of risk.

Definition of environmental risk/hazard terms used in this report.

Based on CIRIA report C552 '*Contaminated land risk assessment – A guide to good practice*'.

Potential hazard severity definition

Category	Definition
Severe	Acute risks to human health, catastrophic damage to buildings/property, major pollution of controlled waters
Medium	Chronic risk to human health, pollution of sensitive controlled waters, significant effects on sensitive ecosystems or species, significant damage to buildings or structures.
Mild	Pollution of non sensitive waters, minor damage to buildings or structures.
Minor	Requirement for protective equipment during site works to mitigate health effects, damage to non sensitive ecosystems or species.

Probability of risk definition

Category	Definition
High likelihood	Pollutant linkage may be present, and risk is almost certain to occur in long term, or there is evidence of harm to the receptor.
Likely	Pollutant linkage may be present, and it is probable that the risk will occur over the long term
Low likelihood	Pollutant linkage may be present, and there is a possibility of the risk occurring, although there is no certainty that it will do so.
Unlikely	Pollutant linkage may be present, but the circumstances under which harm would occur are improbable.

Level of risk for potential hazard definition

Probability of risk	Potential severity			
	Severe	Medium	Mild	Minor
High Likelihood	Very high	High	Moderate	Low/Moderate
Likely	High	Moderate	Low/Moderate	Low
Low Likelihood	Moderate	Low/Moderate	Low	Very low
Unlikely	Low/Moderate	Low	Very low	Very low

Refer sheet 2 for definitions of 'very high' to 'low'

Definition of environmental risk/hazard terms used in this report.

Based on CIRIA report C552 '*Contaminated land risk assessment – A guide to good practice*'.

Risk classifications and likely action required:

Very high risk

High probability that severe harm could arise to a designated receptor from an identified hazard OR there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised is likely to result in substantial liability. Urgent investigation and remediation are likely to be required.

High risk

Harm is likely to arise to a designated receptor from an identified hazard. This risk, if realised, is likely to result in substantial liability. Urgent investigation is required and remedial works may be necessary in the short term and are likely over the long term.

Moderate risk

It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is likely that the harm would be relatively mild. Investigation is normally required to clarify risks and to determine potential liability. Some remedial works may be required in the long term.

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.

Very low risk

It is a low possibility that harm could arise to a designated receptor. On the event of such harm being realised it is not likely to be severe.

Gaseous contamination -

Extract copy of table 3 of BS8485:2007 Solutions scores

PROTECTION ELEMENT/SYSTEM	SCORE	COMMENTS	
a) Venting/dilution (see Annex A of BS8485)			
Passive sub-floor ventilation (venting layer can be a clear void or formed using gravel, geocomposites, polystyrene void formers, etc) ^{A)}	Very good performance	2.5	<i>Ventilation performance in accordance with Annex A of BS8485.</i>
	Good performance	1	<i>If passive ventilation is poor this is generally unacceptable and some form of active system will be required.</i>
Subfloor ventilation with active abstraction/pressurization (venting layers can be a clear void or formed using gravel, geocomposites, polystyrene void formers, etc)(A)		2.5	<i>There have to be robust management systems in place to ensure the continued maintenance of any ventilation system.</i> <i>Active ventilation can always be designed to meet good performance.</i> <i>Mechanically assisted systems come in two main forms: extraction and positive pressurization</i>
Ventilated car park (basement or undercroft)		4	<i>Assume car park is vented to deal with car exhaust fumes, designed to Building Regulations Document F and IStructE guidance.</i>
b) Barriers			
Floor Slabs			
Block and beam floor slab		0	<i>It is good practice to install ventilation in all foundation systems to effect pressure relief as a minimum.</i> <i>Breaches in floor slabs such as joints have to be effectively sealed against gas ingress in order to maintain these performances.</i>
Reinforced concrete ground bearing floor slab		0.5	
Reinforced concrete ground bearing foundation raft with limited service penetrations that are cast into slab		1.5	
Reinforced concrete cast in situ suspended slab with minimal service penetrations and water bars around all slab penetrations and at joints		1.5	
Fully tanked basement		2	
c) Membranes			
Taped and sealed membrane to reasonable levels of workmanship/in line with current good practice with validation ^{B), C)}		0.5	<i>The performance of membranes is heavily dependent on the quality and design of the installation, resistance to damage after installations, and the integrity of joints.</i>
Proprietary gas resistant membrane to reasonable levels of workmanship/in line with current good practice under independent inspection (CQA) ^{B), C)}		1	
Proprietary gas resistant membrane installed to reasonable levels of workmanship/in line with current good practice under CQA with integrity testing and independent validation.		2	
d) Monitoring and detection (not applicable to non-managed property, or in isolation)			
Intermittent monitoring using hand held equipment		0.5	<i>Where fitted, permanent monitoring system ought to be installed in the underfloor venting/dilution system in the first instance but can also be provided within the occupied space as a fail safe.</i>
Permanent monitoring and alarm system ^{A)}	Installed in the underfloor venting/dilution system	2	
	Installed in the building	1	
e) Pathway Intervention			
Pathway intervention	-		<i>This can consist of site protection measures for off-site or on-site sources (see Annex A of BS8485)</i>

NOTE In practice the choice of materials might well rely on factors such as construction method and the risk of damage after installation. It is important to ensure that the chosen combination gives an appropriate level of protection.

^{A)} It is possible to test ventilation systems by installing monitoring probes for post installation validation.

^{B)} If a 200g DPM material is to function as a gas barrier it should be installed according to BRE 212)/BRE 414), being taped and sealed to all penetrations.

^{C)} Polymeric Materials > 1 200g can be used to improve confidence in the barrier. Remember that their gas resistance is little more than the standard 1 200g (proportional to thickness) but their physical properties mean that they are more robust and resistant to site damage.





















List of documents used in assessment of chemical contamination

No.	Title	Publication reference / publisher
1	Human health toxicological assessment of contaminants in soil	EA Science Report – SC050021/SR2
2	Updated technical background to the CLEA model	EA Science Report – SC050021/SR3
3	CLEA Software (Version 1.03 beta) Handbook	EA Science Report - SC050021/SR4
4	Guidance on comparing Soil Contamination Data with a Critical Concentration	CIEH
5	Generic Assessment Criteria for Human Health Risk Assessment	LQM/CIEH
6	Assessment of Risks to Human Health from Land Contamination: An overview of the development of soil guideline values and related research	R&D Publication, Contaminated Land Report CLR 7
7	Contaminants of Soil: Collation of Toxicological Data and Intake Values for Humans	R&D Publication, Contaminated Land Report CLR 9
8	The Contaminated Land Exposure Assessment Model (CLEA): Technical Basis and Algorithms	R&D Publication, Contaminated Land Report CLR 10
9	Model Procedures for the Management of Land Contamination	R&D Publication, Contaminated Land Report CLR 11
10	Contaminants in Soil: Collection of Toxicological Data and Intake Values for Human Values	R&D Publications, Tox. 6
11	Soil Guideline Values for Contamination (2002)	R&D Publications, SGV 10
12	Soil Guideline Values (2009)	EA Science Reports – SC050021

CIEH Chartered institute of Environmental Health
LQM Land Quality Management
EA Environment Agency

Key to legends

Composite materials, soils and lithology

	Topsoil		Made Ground		Boulders
	Chalk		Clay		Coal
	Cobbles		Cobbles & Boulders		Concrete
	Gravel		Limestone		Mudstone
	Peat		Sand		Sand and Gravel
	Sandstone		Silt		Silt / Clay
					Siltstone


Note: Composite soil types are signified by combined symbols.


Key to 'test results' and 'sampling' columns

Test result		Sampling	
Depth	Records depth that the test was carried out (i.e.: at 2.10m or between 2.10m and 2.55m)	From (m) To (m)	Records depth of sampling
Result	PID - Photo Ionisation Detector result (ppm equivalent Isobutylene)	Type	D Disturbed sample
	PP – Pocket penetrometer result (kN/m ²)		B Bulk disturbed sample
	HVP – Hand held shear vane result (kN/m ²)		ES Environmental sample comprising plastic and/or glass container
	<i>PP result converted to an equivalent undrained shear strength by applying a factor of 50. Where at least 3 results obtained at same depth then an average value may be reported.</i>		W Water sample
		CBR	Undisturbed sample in mould (California Bearing Ratio)

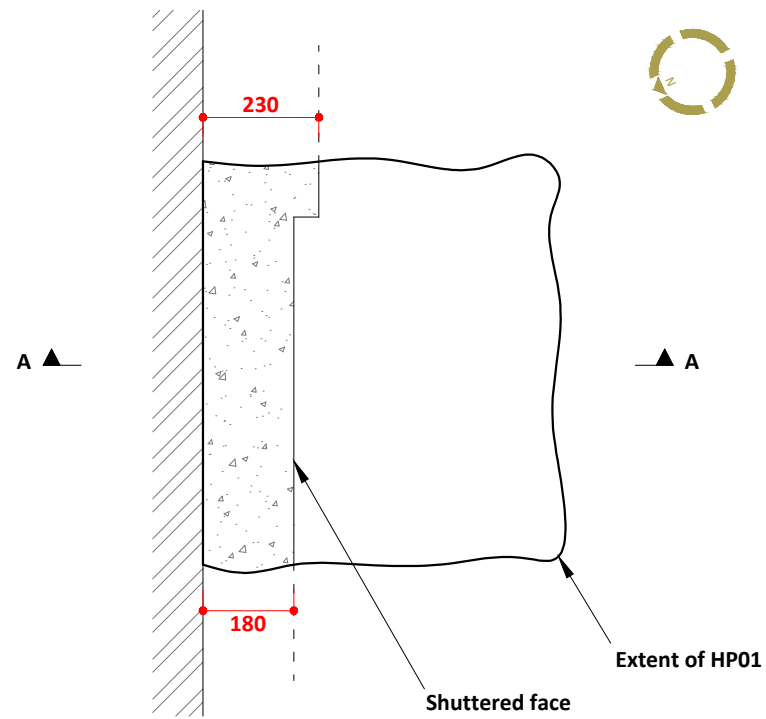
Water observations

Described at foot of log and shown in the 'water strike' column.

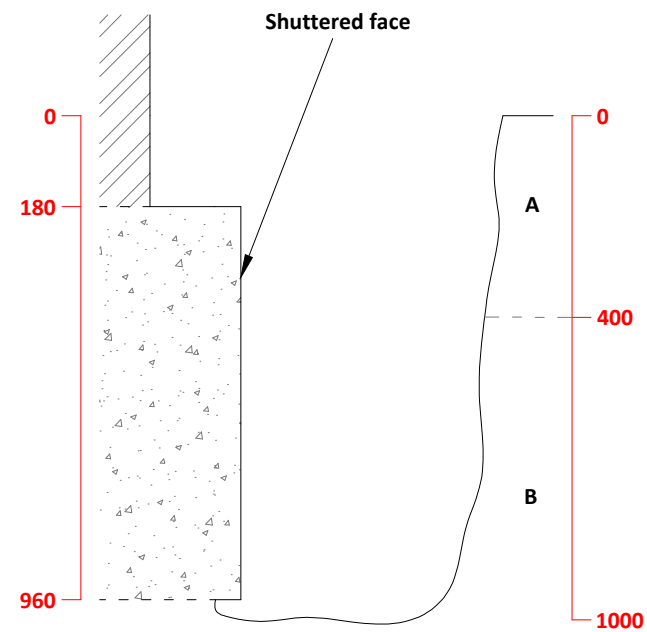
 = water level observed after specified delay in excavation

 = water strike

Plan





Section A-A



Photographic records



Key

- A. Loose to medium dense light brown gravelly SAND. Gravel consists of plastic, glass, ash and brick. (MADE GROUND)
- B. Medium dense slightly gravelly SAND. Gravel consists of flint. (MADE GROUND)
- Observed features
- - - Assumed features
-  Denotes brickwork
-  Denotes concrete

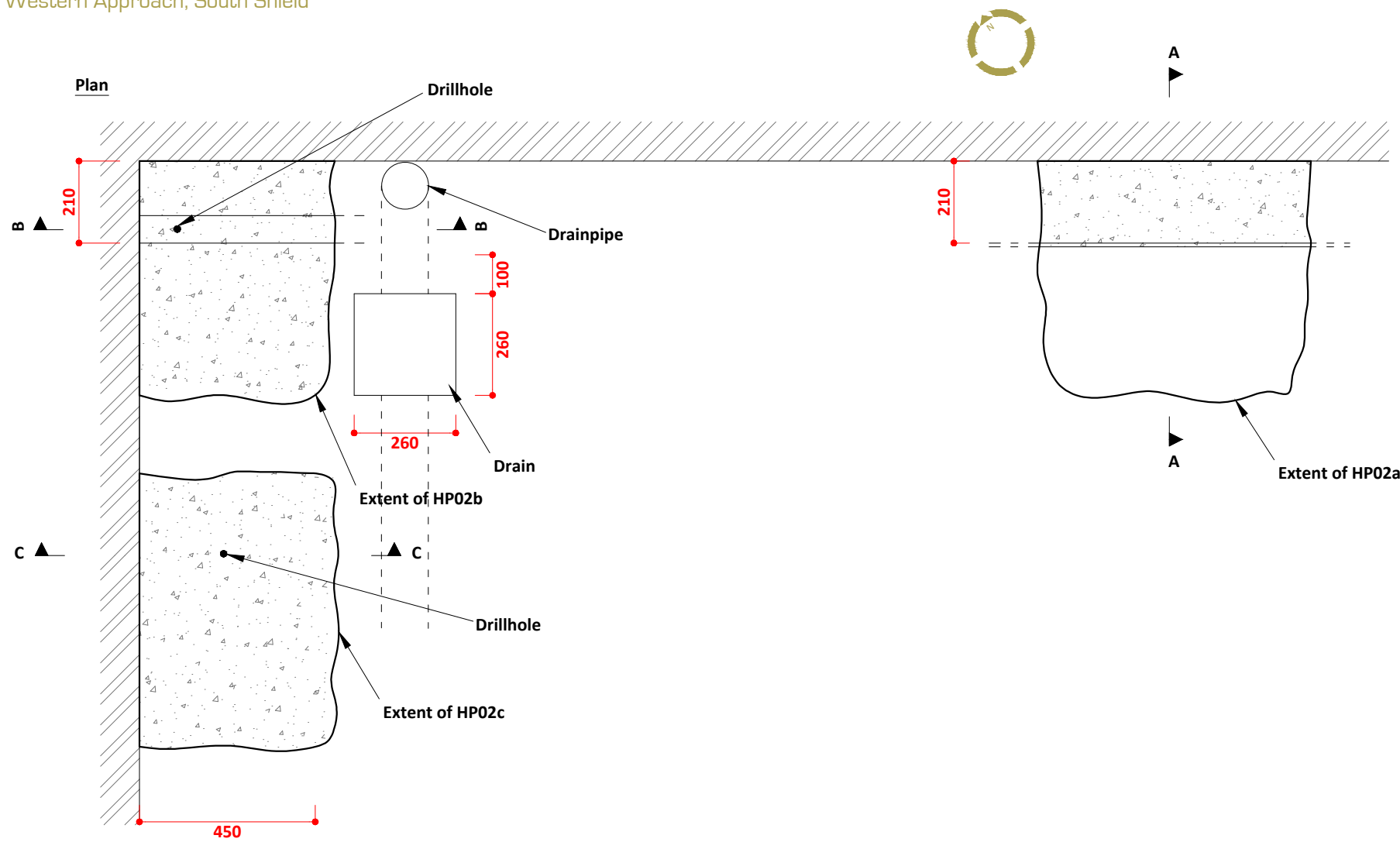
Notes

1. All dimensions shown in millimetres
2. Disturbed samples taken from 0.5m - 0.6m and 0.96m - 1.0m depth.

Method of excavation
Hand tools
Trial pit dimensions
As shown
Groundwater observations
No groundwater encountered

Title
Trial pit record
Date of excavation
19.02.2015
Scale
1:15 at A3

Trial pit number
HP01
Location plan on drawing number
02
Appendix
C



Photographic records



HP02a

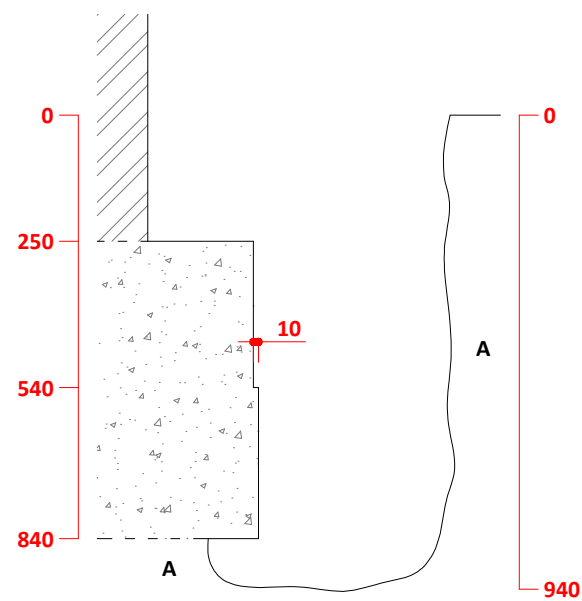


HP02b

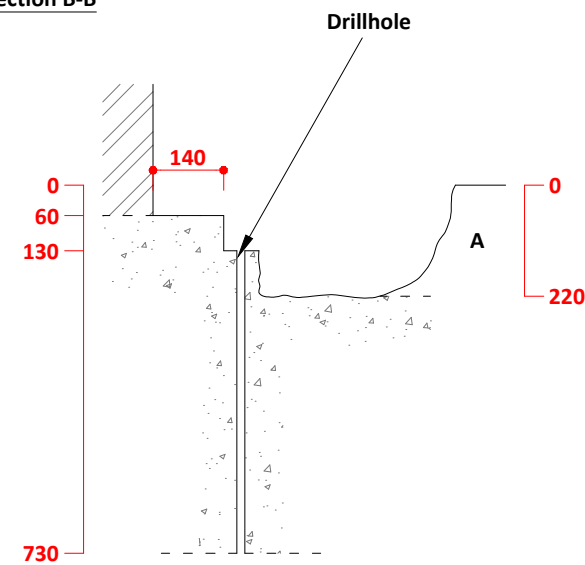


HP02c

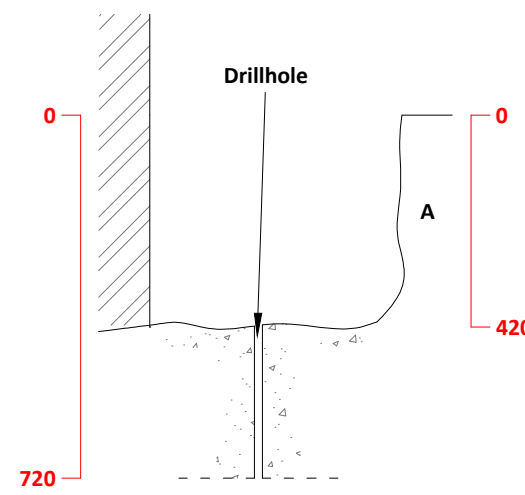
Section A-A



Section B-B



Section C-C



Key

A. Loose to medium dense light brown gravelly SAND. Gravel consists of metal, plastic, textile, ash, slate and brick. (MADE GROUND)

- Observed features
- - - Assumed features
- Denotes brickwork
- Denotes concrete

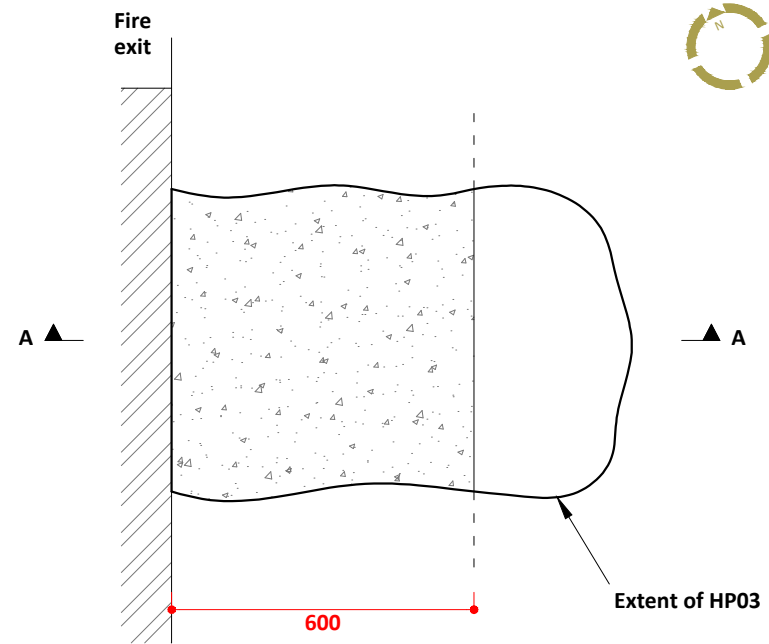
Notes

1. All dimensions shown in millimetres
2. Extent of looking determined using drill holes

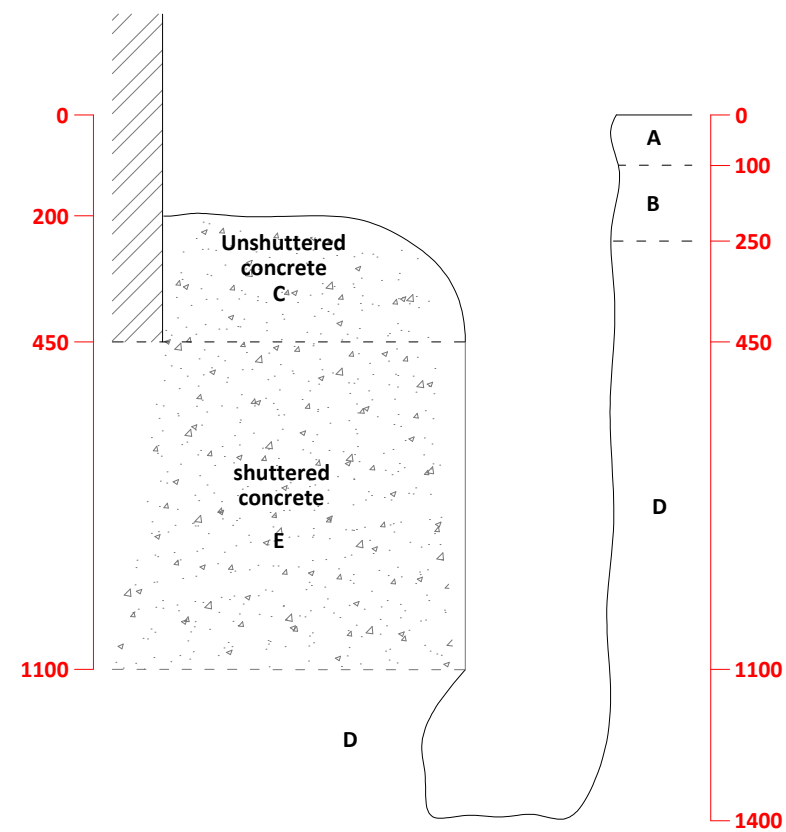
Method of excavation
Hand tools
Trial pit dimensions
As shown
Groundwater observations
No groundwater encountered

Title	Trial pit record	Trial pit number
Date of excavation	19.02.2015	HP02
Scale	1:15 at A3	Location plan on drawing number 02
		Appendix C

Plan



Section A-A



Photographic records



Key

- A. Light grey unreinforced CONCRETE. (MADE GROUND)
- B. Medium dense dark brown gravelly SAND. Gravel consists of ash and brick. (MADE GROUND)
- C. Light grey unreinforced CONCRETE. (MADE GROUND)
- E. Light grey CONCRETE. (MADE GROUND)
- D. Medium strength dark brown slightly gravelly CLAY. Gravel consists of ash, timber and brick. (MADE GROUND)

- Observed features
- - - Assumed features
- Denotes brickwork
- Denotes concrete

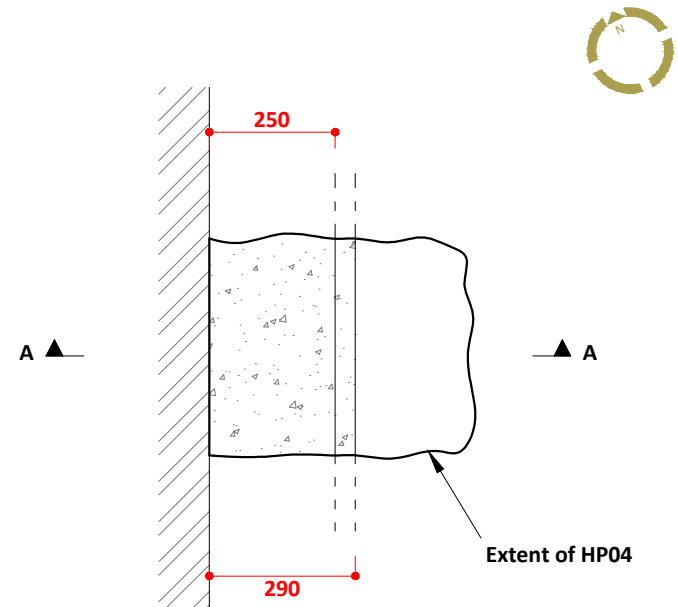
Notes

1. All dimensions shown in millimetres
2. Environmental sample taken from 0.3m to 0.4m depth
3. Pocket penetrometer testing (kN/m²):
 - P 0.3m - 88
 - P 0.6m - 83
 - P 0.8m - 79

Method of excavation
Hand tools
Trial pit dimensions
As shown
Groundwater observations
Minor seepage observed from 0.8-1.1m depth.

Title	Trial pit record	Trial pit number
Date of excavation	19.02.2015	HP03
Scale	1:15 at A3	Location plan on drawing number 02
		Appendix C

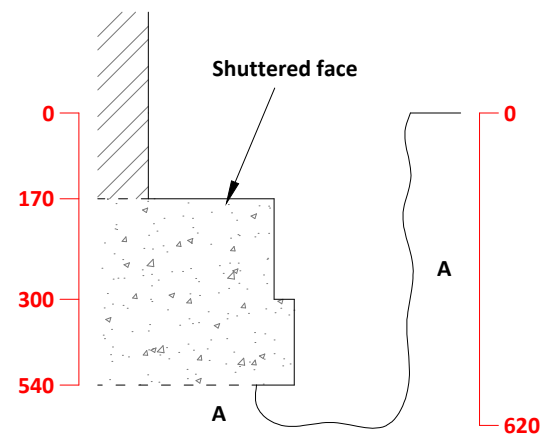
Plan



Photographic records



Section A-A



Key

A. Dark brown gravelly SAND with frequent roots up to 5mm in diameter. Gravel consists of brick. (MADE GROUND)

- Observed features
- - - Assumed features
- Denotes brickwork
- Denotes concrete

Notes

1. All dimensions shown in millimetres
2. Environmental sample taken from 0.4m to 0.5m depth

Method of excavation
Hand tools
Trial pit dimensions
As shown
Groundwater observations
No groundwater encountered

Title
Trial pit record
Date of excavation
19.02.2015
Scale
1:15 at A3

Trial pit number
HP04
Location plan on drawing number
02
Appendix
C

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.165	Light grey reinforced CONCRETE comprised of aggregates of sub-rounded flint up to 25mm in size. 6mm diameter reinforcement bar located at 0.06m depth. Approximate 1% voids up to 2mm in size. Plastic membrane below.
0.165 – 0.18	Medium dense orange brown sandy GRAVEL. Gravel consists of angular igneous-type rock. (SUBBASE)
CORE TERMINATED AT 0.165m DEPTH. HAND EXCAVATED TO 0.18m DEPTH.	
Schmidt hammer testing in four locations around the core - 40 to 59 N/mm ²	

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.165m

Title
Core record
Co-ordinates
N/A
Date of excavation
18.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH01

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.135	Vinyl floor tile onto light grey reinforced CONCRETE comprised of aggregates of rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.085m depth. Approximate 1% voids up to 1mm in size. Plastic membrane below.
0.135 – 0.14	Medium dense orange brown sandy GRAVEL. Gravel consists of angular igneous-type rock. (SUBBASE)
CORE TERMINATED AT 0.135m DEPTH. HAND EXCAVATED TO 0.14m DEPTH.	

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.135m

Title
Core record
Co-ordinates
N/A
Date of excavation
18.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH02

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.21	Light grey reinforced CONCRETE comprised of aggregates of sub-rounded to sub-angular flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.093m depth. Approximate 1% voids up to 5mm in size. Plastic membrane below.
0.21 – 0.23	Medium dense orange brown sandy GRAVEL. Gravel consists of angular igneous-type rock. (SUBBASE)
CORE TERMINATED AT 0.21m DEPTH. HAND EXCAVATED TO 0.23m DEPTH.	

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.21m

Title
Core record
Co-ordinates
N/A
Date of excavation
18.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH03

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.2	Light grey reinforced CONCRETE comprised of aggregates of rounded to sub-rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.065m, 0.09m and 0.155m depths. Approximate 5% voids up to 5mm in size. Plastic membrane below.
0.2 – 0.22	Medium dense orange brown sandy GRAVEL. Gravel consists of angular igneous-type rock. (SUBBASE)
CORE TERMINATED AT 0.2m DEPTH. HAND EXCAVATED TO 0.22m DEPTH.	
Schmidt hammer testing in four locations around the core - 40 to 45 N/mm ²	

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.22m

Title
Core record
Co-ordinates
N/A
Date of excavation
18.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH04

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.18	Light grey reinforced CONCRETE comprised of aggregates of flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.025m and 0.04m depths. Approximate 2% voids up to 2mm in size.
0.18 – 0.22	Medium dense dark brown gravelly SAND. Gravel consists of ash and rounded flint. (SUBBASE)

CORE TERMINATED AT 0.18m DEPTH. HAND EXCAVATED TO 0.22m DEPTH.

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.18m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH05a

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.18	Light grey reinforced CONCRETE comprised of aggregates of flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.04m and 0.09m depths. Approximate 40% voids up to 40mm in size. Plastic membrane below.
0.18 – 0.22	Medium dense dark brown gravelly SAND. Gravel consists of ash and rounded flint. (SUBBASE)

CORE TERMINATED AT 0.18m DEPTH. HAND EXCAVATED TO 0.22m DEPTH.

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.18m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH05b

Photographic record of the core

Top

Bottom

Depth (m)	Description
0.0 – 0.13	Light grey reinforced CONCRETE comprised of aggregates of sub-rounded to rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at and 0.12m depths. Approximate 2% voids up to 2mm in size.
CORE TERMINATED AT 0.13m DEPTH	

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.13m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH06

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.2	Light grey reinforced CONCRETE comprised of aggregates of rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.075m and 0.125m depths.

CORE TERMINATED AT 0.2m DEPTH

Method of excavation
Diamond tipped core barrel
Diameter
150mm
Total core thickness
0.2m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH07

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.14	Light grey reinforced CONCRETE comprised of aggregates of rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.04m and 0.09m depths. Approximate 5% voids up to 15mm in size. Brick observed at base of core. Plastic membrane below.
0.14 – 0.21	Medium dense dark brown gravelly SAND. Gravel consists of flint and brick. (SUBBASE)
CORE TERMINATED AT 0.16m DEPTH	

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.14m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
02
Ground level
N/A
Core reference
CH08

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.02	Bituminous SCREED.
0.02 – 0.175	Light grey reinforced CONCRETE comprised of aggregates of rounded flint up to 20mm in size. 12mm diameter reinforcement bar located at 0.1m and 0.12m depths. Less than 1% voids up to 1mm in size. Plastic membrane below.
0.175 – 0.3	Dark grey sandy gravelly CLAY. Gravel consists of coal. (SUBBASE)
CORE TERMINATED AT 0.175m DEPTH. HAND EXCAVATED TO 0.3m DEPTH.	
Schmidt hammer testing in four locations around the core - 44 to 48 N/mm ²	

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.175m

Title
Core record
Co-ordinates
N/A

Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH09

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.23	Light grey reinforced CONCRETE comprised of aggregates of sub-rounded to rounded flint up to 20mm in size. 12mm diameter reinforcement bar located at 0.115m and 15mm diameter reinforcement bar located at 0.18m depth depths. Approximate 1% voids up to 1mm in size.
0.23 – 0.3	Medium strength brown slightly gravelly sandy CLAY. Gravel consists of ash. (SUBBASE)

CORE TERMINATED AT 0.23m DEPTH. HAND EXCAVATED TO 0.3m DEPTH.

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.23m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH10

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.02	Dark grey cemented SCREED.
0.02 – 0.165	Light grey reinforced CONCRETE comprised of aggregates of sub-rounded to rounded flint up to 20mm in size. 12mm diameter reinforcement bar located at 0.115m depth. Approximate 1% voids up to 1mm in size.
0.165 – 0.17	Medium strength dark grey sandy CLAY. (SUBBASE)
CORE TERMINATED AT 0.165m DEPTH. HAND EXCAVATED TO 0.17m DEPTH.	

Method of excavation
Diamond tipped core barrel
Diameter
150mm
Total core thickness
0.165m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH11

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.29	Light grey reinforced CONCRETE comprised of aggregates of sub-angular to rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.07m and 0.14m depths. Approximate 1% voids up to 2mm in size.
0.29 – 0.32	Dense orange grey cobbles of brick and concrete. (SUBBASE)

CORE TERMINATED AT 0.29m DEPTH. HAND EXCAVATED TO 0.32m DEPTH.

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.2m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH12

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.19	Light grey reinforced CONCRETE comprised of aggregates of sub-angular to rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.095m, 0.1m and 0.14m depths. Approximate 2% voids up to 5mm in size.
0.19 – 0.22	Medium dense dark brown gravelly SAND. Gravel consists of ash and brick. (SUBBASE)
CORE TERMINATED AT 0.19m DEPTH. HAND EXCAVATED TO 0.22m DEPTH.	

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.19m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH13

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.175	Light grey unreinforced CONCRETE comprised of aggregates of sub-rounded to rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.095m depth. Approximate 1% voids up to 1mm in size.
CORE TERMINATED AT 0.175m DEPTH	
Schmidt hammer testing in four locations around the core - 38 to 45 N/mm ²	

Method of excavation
Diamond tipped core barrel
Diameter
150mm
Total core thickness
0.175m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH14

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.19	Light grey reinforced CONCRETE comprised of aggregates of rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.12m depth. Less than 1% voids up to 1mm in size. Plastic membrane below.
0.19 – 0.20	Medium to dense dark grey gravelly SAND. Gravel consists of flint. (SUBBASE)

CORE TERMINATED AT 0.19m DEPTH. HAND EXCAVATED TO 0.2m DEPTH.

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
190mm

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH15

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.1	Light grey unreinforced concrete with aggregate of flint measuring up to 20mm in size. Approximately 1% voids measuring up to 2mm in size.
0.1 – 0.12	Medium dense orange brown sandy GRAVEL. Gravel consists of angular igneous-type rock. (SUBBASE)
CORE TERMINATED AT 0.1m DEPTH. HAND EXCAVATED TO 0.12m DEPTH.	

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.1m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH16

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.235	Light grey reinforced CONCRETE comprised of aggregates of sub-rounded to rounded flint up to 20mm in size. 6mm diameter reinforcement bar located at 0.04m, 0.11m and 0.22m depths. Approximate 1% voids up to 1mm in size. Plastic membrane below.

CORE TERMINATED AT 0.235m DEPTH

Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.235m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH17

Photographic record of the core

Top

Bottom



Depth (m)	Description
0.0 – 0.14	Dark grey reinforced concrete with aggregate of flint measuring up to 20mm in size. 6mm diameter reinforcement bar located at 0.08m depth. Approximately 1% void space measuring up to 2mm in size.
0.14 – 0.15	Medium dense orange brown sandy GRAVEL. Gravel consists of angular igneous-type rock. (SUBBASE)
CORE TERMINATED AT 0.14m DEPTH. HAND EXCAVATED TO 0.15m DEPTH.	

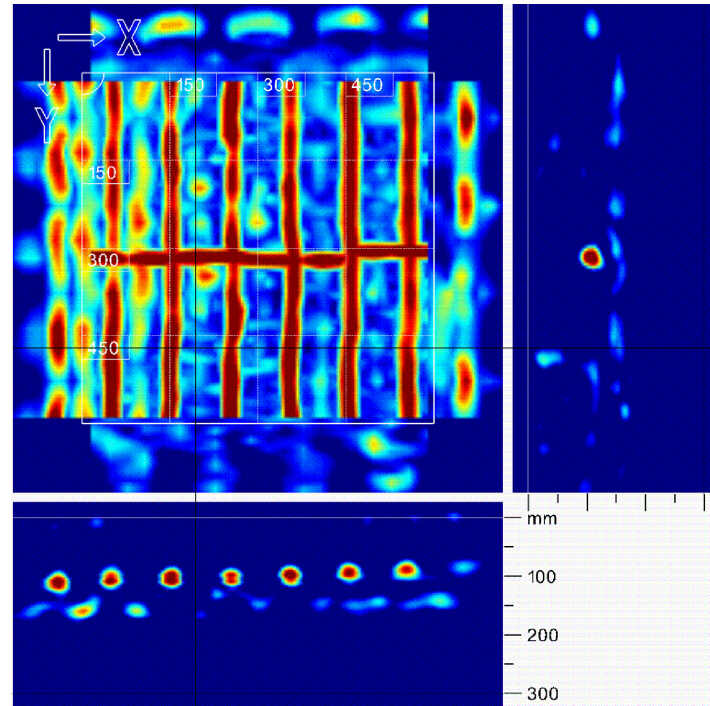
Method of excavation
Diamond tipped core barrel
Diameter
100mm
Total core thickness
0.14m

Title
Core record
Co-ordinates
N/A
Date of excavation
19.02.2015

Location plan on drawing number
01
Ground level
N/A
Core reference
CH18

Hilti PS 1000 scan showing details

(scan obtained using Hilti PS 1000)



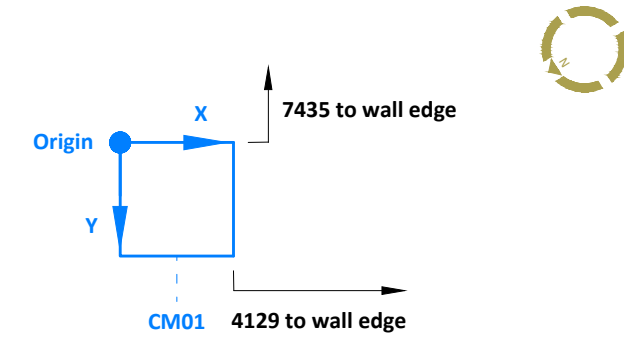
Hilti PS 1000 interpretation

(analysis information obtained from Hilti PS 1000 software)

Direction	Offset direction from origin (centre)	Spacing	Direction	Offset direction from origin (centre)	Spacing	
X	-42	-	Y	192	-	
	49	91				
	150	101				
	256	106				
	355	99				
	455	100				
	554	99				

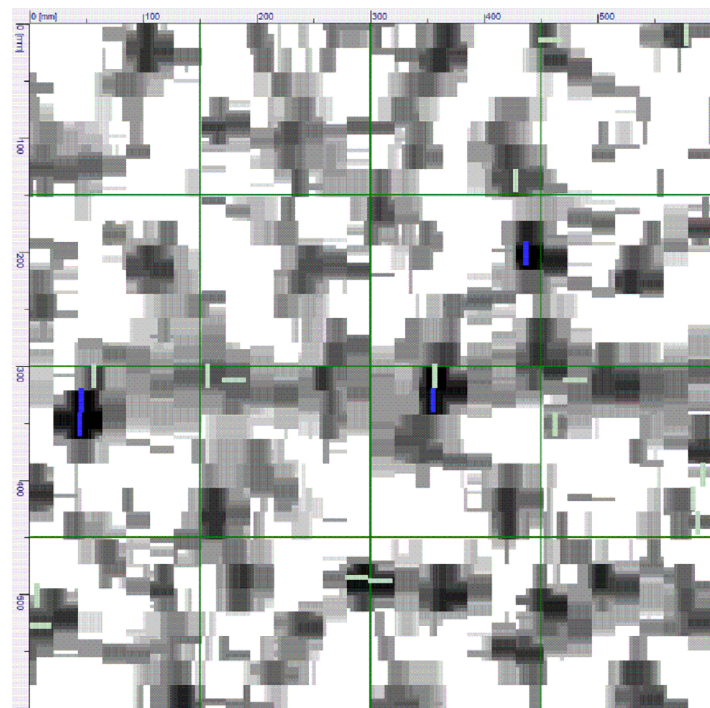
Plan view showing location of scan

(scale 1:40 @ A3)



Hilti PS 200 scan showing details

(scan obtained using Hilti PS 200)



Hilti PS 200 scan interpretation

(analysis information obtained from Hilti PS 200 software)

Scan indicates the following details:

Poor scan therefore limited analysis.

Notes

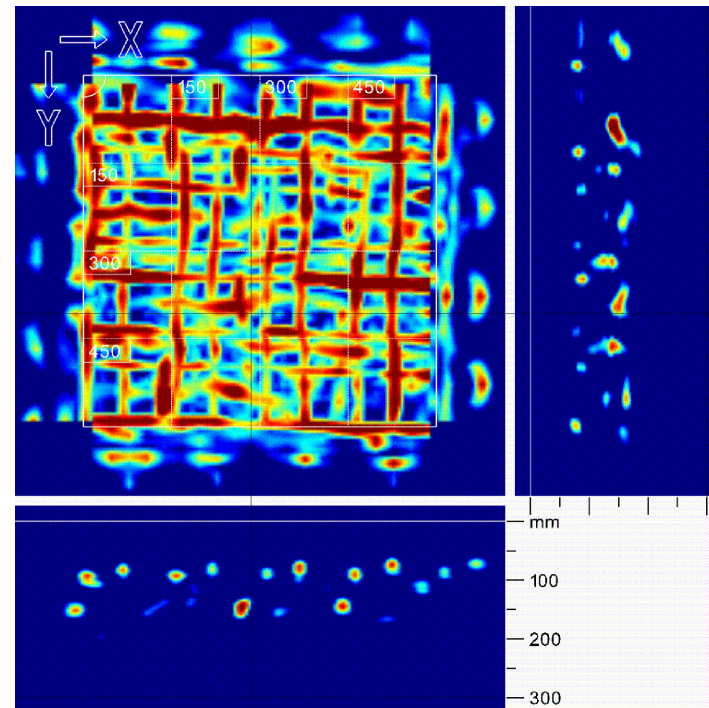
1. All dimensions shown in millimetres.
2. Dimensions were taken during time of investigation.

Title
Scan record
Scale
As shown
Method(s)
Hilti PS 1000 | Hilti PS 200 | 600x600 Grid

Location reference
CM01
Date of scan
18.02.2015
Location plan on drawing number
02b
Appendix
C

Hilti PS 1000 scan showing details

(scan obtained using Hilti PS 1000)



Hilti PS 1000 interpretation

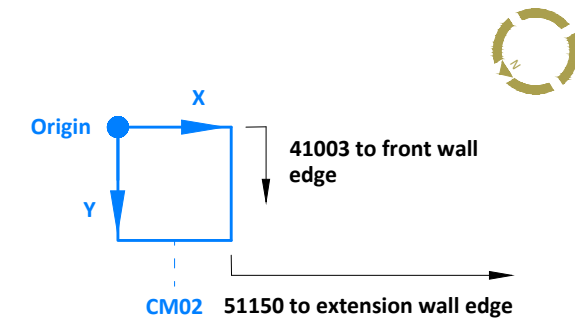
(analysis information obtained from Hilti PS 1000 software)

Scan indicates the following details:

Variable cover range and spacings.

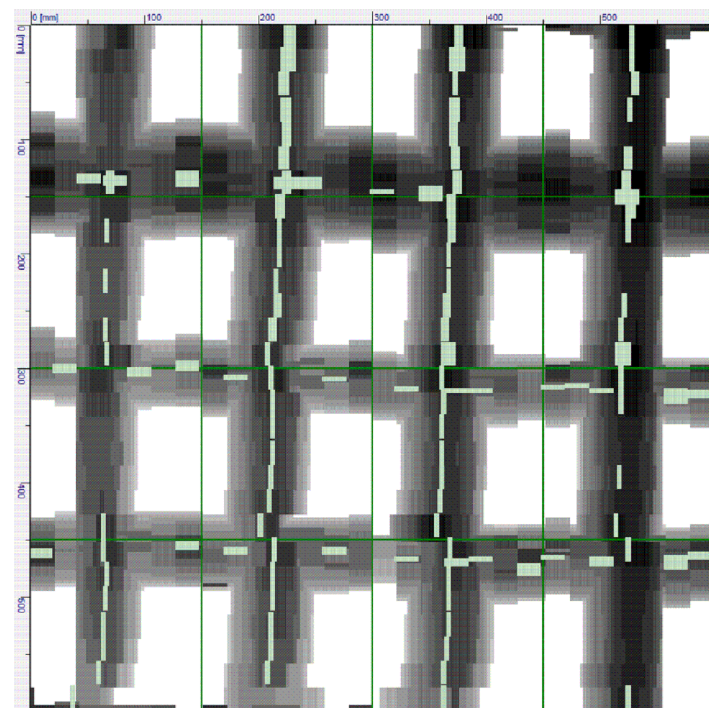
Plan view showing location of scan

(scale 1:40 @ A3)



Hilti PS 200 scan showing details

(scan obtained using Hilti PS 200)



Hilti PS 200 scan interpretation

(analysis information obtained from Hilti PS 200 software)

Scan indicates the following details:

'X' reinforcement bars:

70-80 cover range

6-14 bar diameter range

'Y' reinforcement bars:

15-25 cover range

6-12 bar diameter range

Note: Green blocks indicate unverified bars

Notes

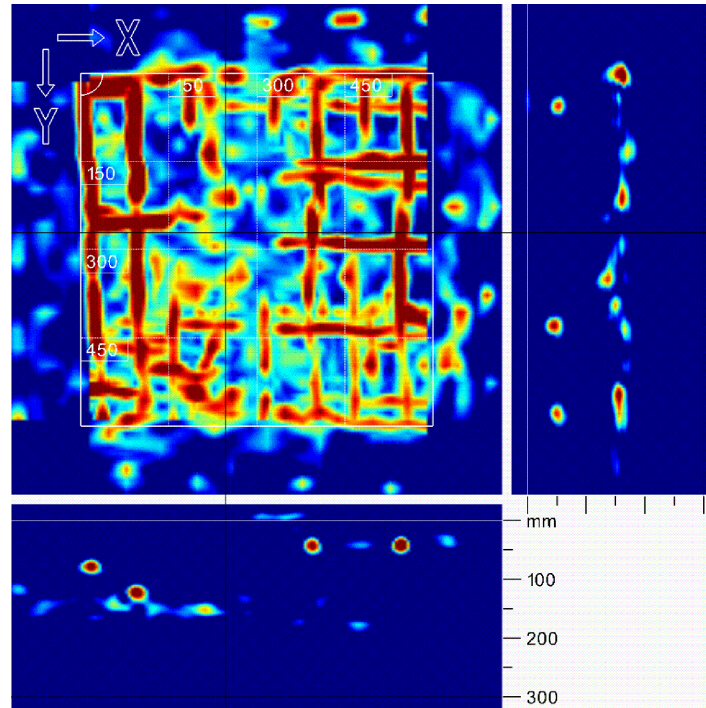
1. All dimensions shown in millimetres.
2. Dimensions were taken during time of investigation.

Title
Scan record
Scale
As shown
Method(s)
Hilti PS 1000 | Hilti PS 200 | 600x600 Grid

Location reference
CM02
Date of scan
18.02.2015
Location plan on drawing number
02b
Appendix
C

Hilti PS 1000 scan showing details

(scan obtained using Hilti PS 1000)



Hilti PS 1000 interpretation

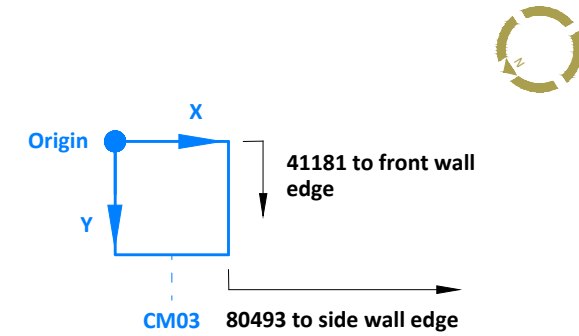
(analysis information obtained from Hilti PS 1000 software)

Scan indicates the following details:

Variable cover range and spacings.

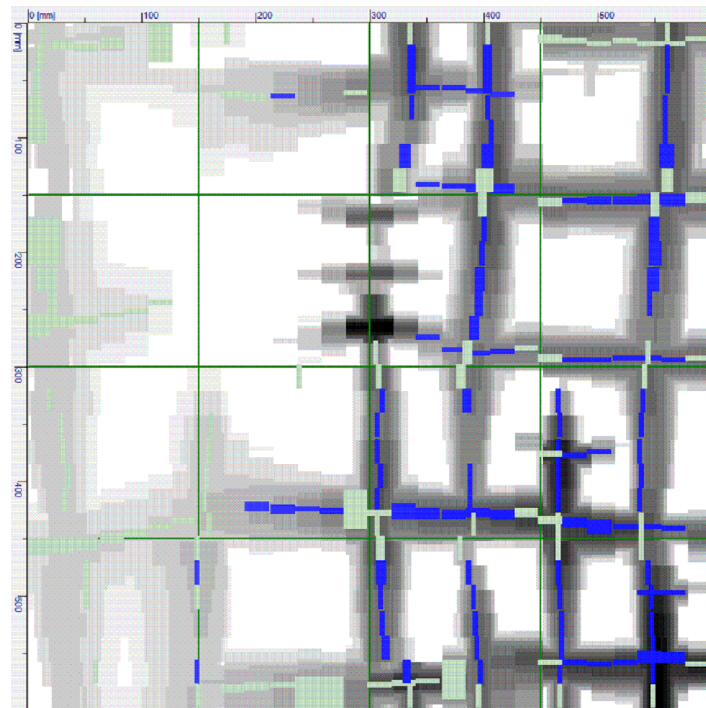
Plan view showing location of scan

(scale 1:40 @ A3)



Hilti PS 200 scan showing details

(scan obtained using Hilti PS 200)



Hilti PS 200 scan interpretation

(analysis information obtained from Hilti PS 200 software)

Scan indicates the following details:

'X' reinforcement bars:

30-40 cover range

6-12 bar diameter range

'Y' reinforcement bars:

25-50 cover range

6-8 bar diameter range

Note: Green blocks indicate unverified bars

Notes

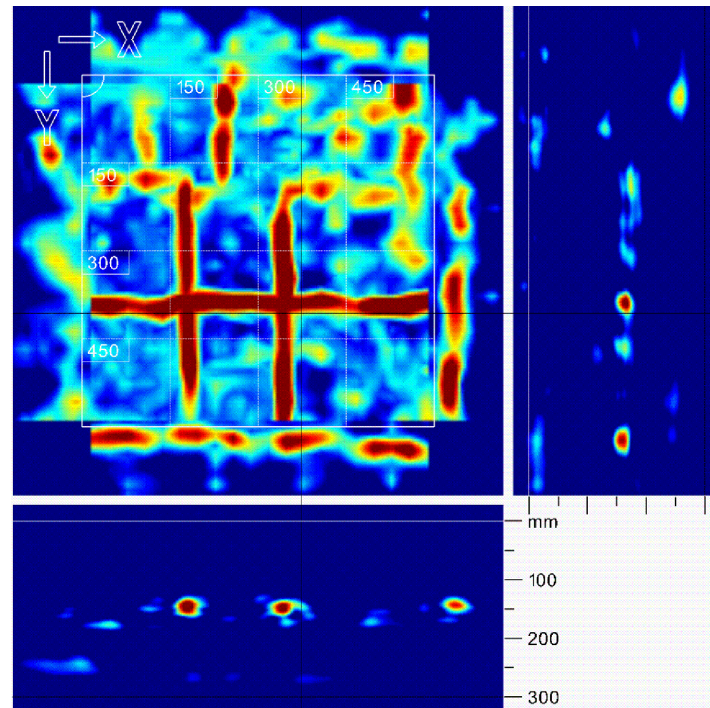
1. All dimensions shown in millimetres.
2. Dimensions were taken during time of investigation.

Title
Scan record
Scale
As shown
Method(s)
Hilti PS 1000 | Hilti PS 200 | 600x600 Grid

Location reference
CM03
Date of scan
18.02.2015
Location plan on drawing number
02b
Appendix
C

Hilti PS 1000 scan showing details

(scan obtained using Hilti PS 1000)



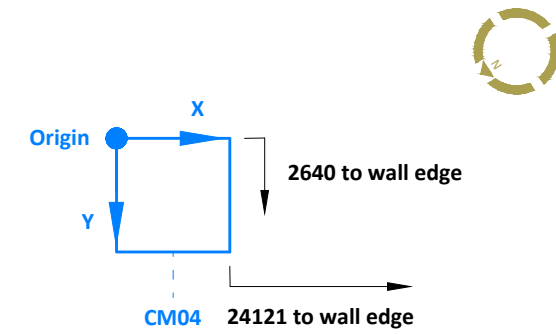
Hilti PS 1000 interpretation

(analysis information obtained from Hilti PS 1000 software)

Direction	Offset direction from origin (centre)	Spacing	Direction	Offset direction from origin (centre)	Spacing	
X	177	-	Y	389	-	
	343	166				
	633	290				

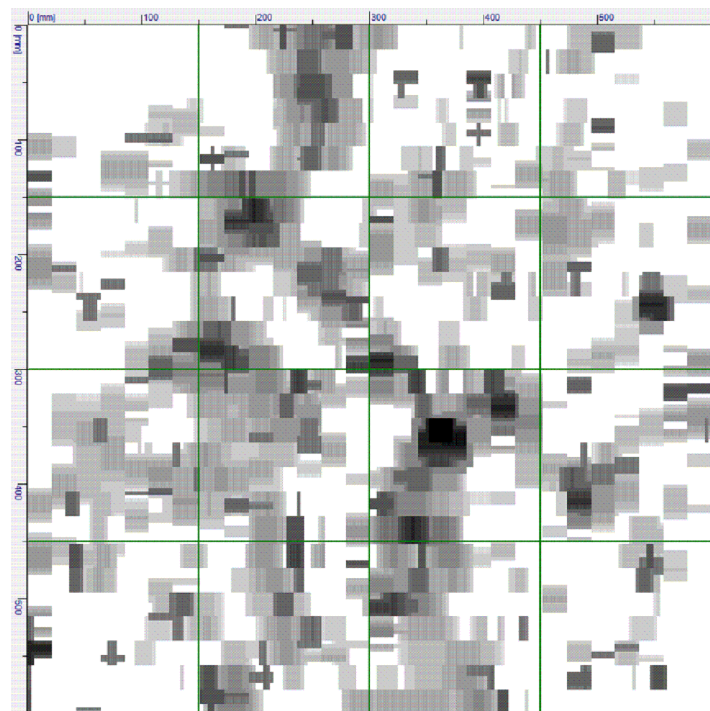
Plan view showing location of scan

(scale 1:40 @ A3)



Hilti PS 200 scan showing details

(scan obtained using Hilti PS 200)



Hilti PS 200 scan interpretation

(analysis information obtained from Hilti PS 200 software)

Scan indicates the following details:

Poor scan therefore limited analysis.

Notes

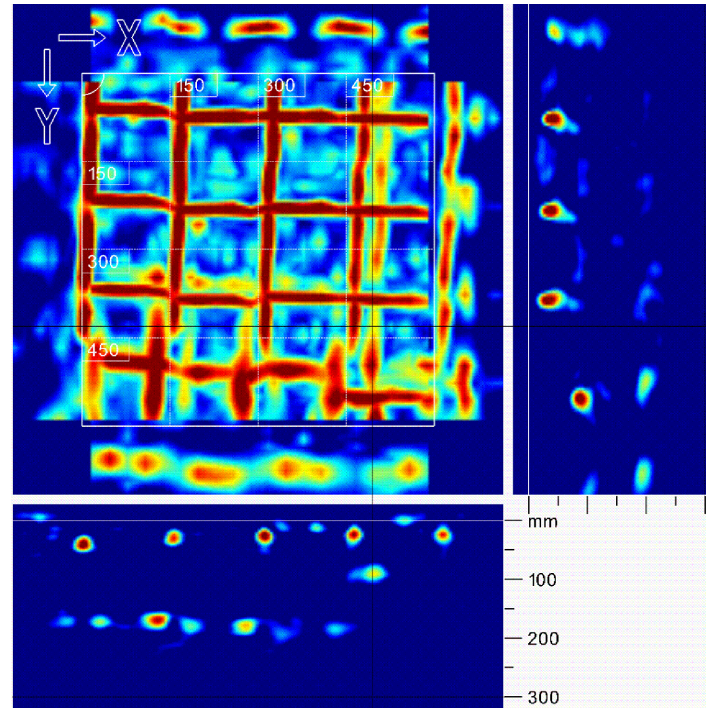
1. All dimensions shown in millimetres.
2. Dimensions were taken during time of investigation.

Title
Scan record
Scale
As shown
Method(s)
Hilti PS 1000 | Hilti PS 200 | 600x600 Grid

Location reference
CM04
Date of scan
18.02.2015
Location plan on drawing number
02b
Appendix
C

Hilti PS 1000 scan showing details

(scan obtained using Hilti PS 1000)



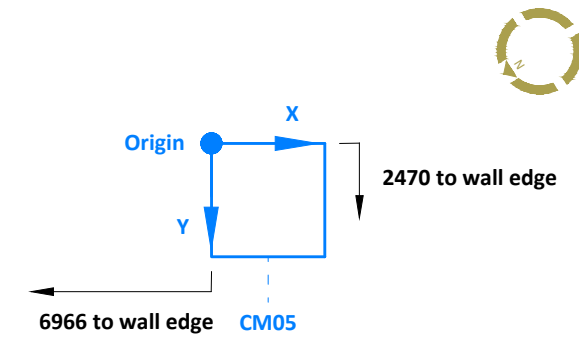
Hilti PS 1000 interpretation

(analysis information obtained from Hilti PS 1000 software)

Direction	Offset direction from origin (centre)	Spacing	Direction	Offset direction from origin (centre)	Spacing
X	3	-	Y	-74	-
	155	152		77	151
	311	156		236	159
	462	151		386	150
	616	154		557	171

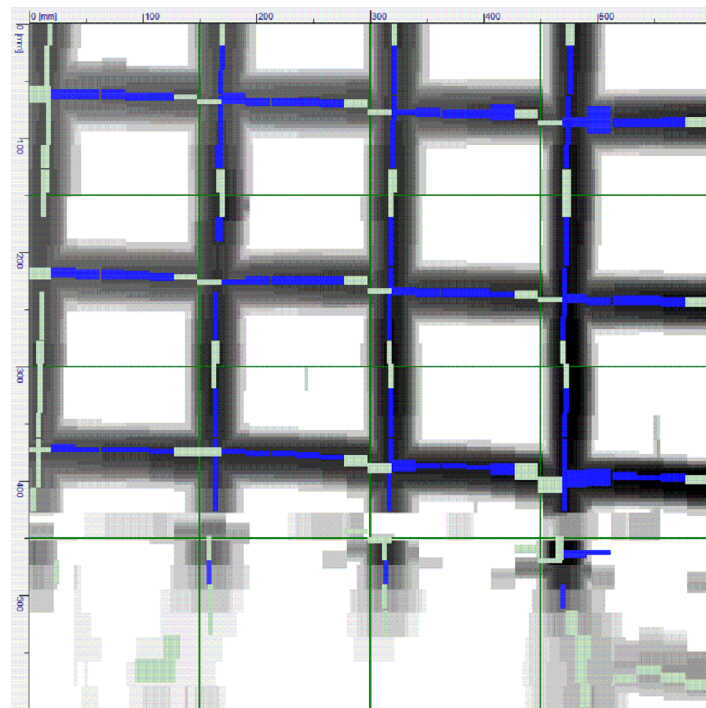
Plan view showing location of scan

(scale 1:40 @ A3)



Hilti PS 200 scan showing details

(scan obtained using Hilti PS 200)



Hilti PS 200 scan interpretation

(analysis information obtained from Hilti PS 200 software)

Scan indicates the following details:

'X' reinforcement bars:

20-35 cover range

6-8 bar diameter range

'Y' reinforcement bars:

25-45 cover range

6-14 bar diameter range

Note: Green blocks indicate unverified bars

Notes

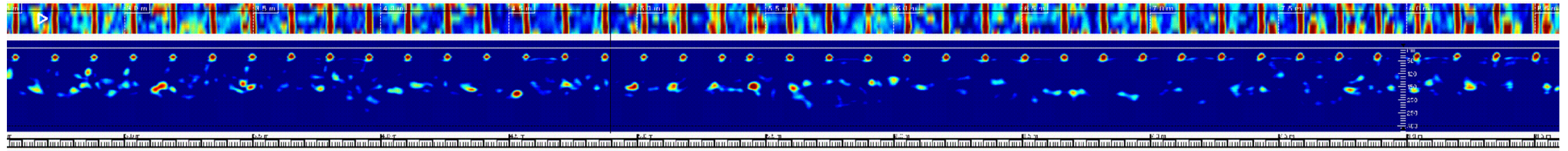
1. All dimensions shown in millimetres.
2. Dimensions were taken during time of investigation.

Title
Scan record
Scale
As shown
Method(s)
Hilti PS 1000 | Hilti PS 200 | 600x600 Grid

Location reference
CM05
Date of scan
18.02.2015
Location plan on drawing number
02b
Appendix
C

Hilti 'Quickscan' scan showing details

(scan obtained using Hilti 'Quickscan')



Hilti 'Quickscan' scan interpretation

(analysis information obtained from Hilti 'Quickscan' software)

Scan indicates the following details:

Reinforcement consistently at 150mm centres.

Notes

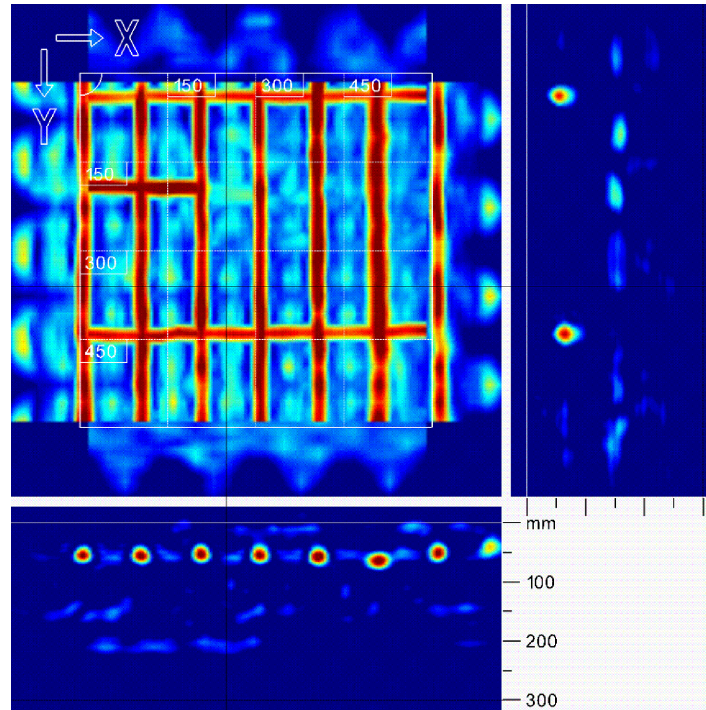
1. All dimensions shown in millimetres.
2. Dimensions were taken during time of investigation.

Title
Scan record
Scale
As shown
Method(s)
Hilti 'Quickscan' 300x10000 Grid

Location reference	Location plan on drawing number
CM06	02b
Date of scan	Appendix
18.02.2015	C

Hilti PS 1000 scan showing details

(scan obtained using Hilti PS 1000)



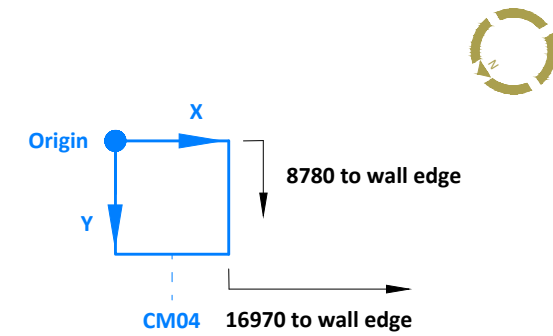
Hilti PS 1000 interpretation

(analysis information obtained from Hilti PS 1000 software)

Direction	Offset direction from origin (centre)	Spacing	Direction	Offset direction from origin (centre)	Spacing
X	6	-	Y	39	-
	104	98		444	405
	206	102			
	306	100			
	405	99			
	508	103			
	608	100			

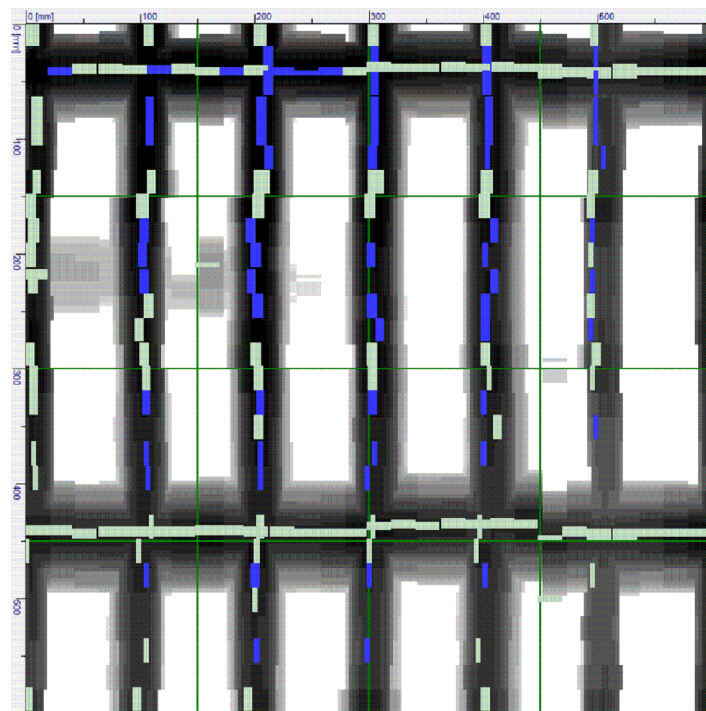
Plan view showing location of scan

(scale 1:40 @ A3)



Hilti PS 200 scan showing details

(scan obtained using Hilti PS 200)



Hilti PS 200 scan interpretation

(analysis information obtained from Hilti PS 200 software)

Scan indicates the following details:

'X' reinforcement bars:

50-60 cover range

10-14 bar diameter range

'Y' reinforcement bars:

65-70 cover range

6-10 bar diameter range

Note: Green blocks indicate unverified bars




















Notes

1. All dimensions shown in millimetres.
2. Dimensions were taken during time of investigation.

Title
Scan record
Scale
As shown
Method(s)
Hilti PS 1000 | Hilti PS 200 | 600x600 Grid

Location reference
CM07
Date of scan
18.02.2015
Location plan on drawing number
02b
Appendix
C

Key to legends

Composite materials, soils and lithology					
	Topsoil		Made Ground		Boulders
	Chalk		Clay		Coal
	Cobbles		Cobbles & Boulders		Concrete
	Gravel		Limestone		Mudstone
	Peat		Sand		Sand and Gravel
	Sandstone		Silt		Silt / Clay
					Siltstone



Note: Composite soil types are signified by combined symbols.

Key to 'test results' and 'sampling' columns






Test result		Sampling	
Depth	Records depth that the test was carried out (<i>i.e.</i> : at 2.10m or between 2.10m and 2.55m)	From (m) To (m)	Records depth of sampling
Result	PID - Photo Ionisation Detector result (ppm equivalent Isobutylene)		D Disturbed sample
	PP - Pocket penetrometer result (kN/m ²)		B Bulk disturbed sample
	HVP - Hand held shear vane result (kN/m ²) <i>PP result converted to an equivalent undrained shear strength by applying a factor of 50. Where at least 3 results obtained at same depth then an average value may be reported.</i>		ES Environmental sample comprising plastic and/or glass container
	SPT - Standard Penetration Test result (uncorrected) SPT(c) - Standard Penetration Test result (solid cone) (uncorrected)	Type	W Water sample
			U (32) Undisturbed sample 100mm diameter sampler with number of blows of driving equipment required to obtain sample

Water observations

Described at foot of log and shown in the 'water strike' column.

	= water level observed after specified delay in drilling
	= water strike

Standpipe details

	Gravel filter		Arisings
	Bentonite		
	Slotted pipe		
	Unslotted pipe		

Density

Density recorded in brackets inferred from density testing and soil descriptions from across the site (*i.e.*: [Medium dense]).

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING				
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE		
	Grass onto [medium dense] dark brown gravelly SAND. Gravel consists of angular flint, brick, concrete, clinker and ash. MADE GROUND						0.20	0.30	ES		
								0.30	0.40	D	
									0.40	0.50	ES
									0.50	0.60	D
					0.80						
			[Medium dense] orange brown sandy GRAVEL. Gravel consists of angular flint. MADE GROUND		0.90						
			[Medium dense] dark brown gravelly SAND. Gravel consists of brick, flint, ash and clinker. MADE GROUND						1.10	1.20	ES
									1.20	1.30	D
			[Medium strength] dark brown sandy CLAY. MADE GROUND		1.30						
					1.40						
			[Medium dense] dark brown occasionally grey gravelly SAND. Gravel consists of flint, brick, ash and coal. MADE GROUND						1.80	1.90	D
			3.20				3.20	3.30	ES		
	Medium strength dark green and grey slightly gravelly CLAY. Gravel consists of rounded flint and brick. MADE GROUND		3.40		PP 3.30	71	3.30	3.40	D		
					PP 3.50	75					
	High strength dark grey and grey CLAY. GLACIAL TILL (DEVENSIAN)				PP 3.70	79					
					PP 3.80	83					
			4.00								
	BOREHOLE TERMINATED AT 4.00m										

Notes: Borehole collapsed to 2.69m depth, 30 minutes after completion of borehole.

Ground level (mAOD)

Co-ordinates

436103, 566630

Title

Driven tube sampler borehole record

Surface breaking

No

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

18/02/2015










Appendix

D

Location plan on drawing number

02

DTS02

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING		
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Dark grey BITUMINOUS BOUND MATERIAL. MADE GROUND								
	Loose orange brown gravelly fine SAND. Gravel consists of igneous-type rock. MADE GROUND		0.16						
	Loose orange brown gravelly fine SAND. Gravel consists of igneous-type rock. MADE GROUND		0.30				0.30	0.40	ES
	Medium dense becoming loose light brown and reddish brown gravelly SAND. Gravel consists of flint, chalk, ash and brick. MADE GROUND						0.50	0.60	ES
	Medium dense becoming loose light brown and reddish brown gravelly SAND. Gravel consists of flint, chalk, ash and brick. MADE GROUND						0.70	0.80	D
	Loose becoming medium dense at a 3.6m depth dark brown gravelly SAND. Gravel consists of flint, chalk, brick and ash. MADE GROUND						1.20	1.30	ES
	Loose becoming medium dense at a 3.6m depth dark brown gravelly SAND. Gravel consists of flint, chalk, brick and ash. MADE GROUND						2.10	2.20	ES
	Medium strength dark brown sandy slightly gravelly CLAY. Gravel consists of brick and flint. MADE GROUND		4.60		PP 4.70	83	4.60	5.00	D
	Medium strength dark brown sandy slightly gravelly CLAY. Gravel consists of brick and flint. MADE GROUND				PP 4.90	75			

CONTINUED ON NEXT SHEET

Notes: Standpipe installed to 5m depth. 80% recovery between 1.0m and 2.0m depth. 70% recovery between 4.0m and 5.0m depth. For Dynamic Cone Penetration testing, refer to DCP02.

Ground level (mAOD)

Co-ordinates
436088, 566561

Title

Driven tube sampler borehole record

Surface breaking

No

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

18/02/2015

Appendix

D

Location plan on drawing number

02

DTS03

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING		
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	BOREHOLE TERMINATED AT 5.00m		5.00						

Notes: Standpipe installed to 5m depth. 80% recovery between 1.0m and 2.0m depth. 70% recovery between 4.0m and 5.0m depth. For Dynamic Cone Penetration testing, refer to DCP02.

Ground level (mAOD)

Co-ordinates

436088, 566561

Title

Driven tube sampler borehole record

Surface breaking

No

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

18/02/2015


Appendix

D

Location plan on drawing number

02

DTS03

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING		
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	[Medium dense] dark brown and light grey sandy GRAVEL. Gravel consists of plastic, sandstone, ash and brick. MADE GROUND						0.20	0.30	ES
							0.40	0.50	ES
	[Medium dense becoming loose] light grey and orange brown sandy GRAVEL. Gravel consists of brick and ash. MADE GROUND		0.90				1.20	1.30	ES
	[Loose becoming medium dense] dark brown gravelly SAND. Gravel consists of sandstone, chalk, brick and ash. MADE GROUND		2.40				2.70	2.80	ES
							3.40	3.50	D
	BOREHOLE TERMINATED AT 4.00m		4.00						

Notes:

Ground level (mAOD)

Co-ordinates
436111, 566583

Title

Driven tube sampler borehole record

Surface breaking

No

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

18/02/2015

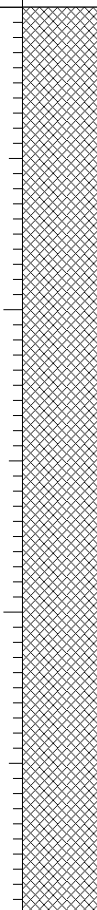
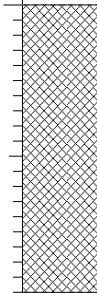
Appendix

D

Location plan on drawing number

02

DTS04

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING		
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	[Medium dense becoming loose] dark brown and light grey sandy GRAVEL with occasional cobbles of brick. Gravel consists of sandstone, ash and brick. MADE GROUND						0.20	0.30	ES
							0.40	0.50	ES
							0.80	0.90	D
							1.40	1.50	D
	NO RECOVERY.		3.00						
	[Medium dense] dark brown and light grey sandy GRAVEL with occasional cobbles of brick. Gravel consists of sandstone, ash and brick. MADE GROUND		4.00				4.70	4.80	ES
CONTINUED ON NEXT SHEET									

Notes: No recovery between 3-4m due to cobbles.

Ground level (mAOD)

Co-ordinates
436136, 566612

Title

Driven tube sampler borehole record

Surface breaking

No

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

18/02/2015

Appendix

D

Location plan on drawing number

02

DTS05

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING		
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	BOREHOLE TERMINATED AT 5.00m		5.00						

Notes: No recovery between 3-4m due to cobbles.

Ground level (mAOD)

Co-ordinates
436136, 566612

Title

Driven tube sampler borehole record

Surface breaking

No

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

18/02/2015

Appendix

D

Location plan on drawing number

02

DTS05

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING			
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE	
	Light grey reinforced concrete. Refer to corehole 'CH12' for surface details. MADE GROUND									
	Medium strength brown slightly gravelly silty CLAY. Gravel consists of brick. MADE GROUND		0.29				0.30	0.40	ES	
	[Medium dense] dark and reddish brown gravelly SAND with frequent cobbles of brick. Gravel consists of flint, clayware, ash and brick. MADE GROUND		0.40				0.50	0.60	ES	
	Medium strength dark brown slightly sandy CLAY. MADE GROUND		1.00							
	[Medium dense] orange brown gravelly SAND. Gravel consists of ash, flint and brick. MADE GROUND		1.20							
	High and medium strength light brown mottled grey CLAY. MADE GROUND		1.30		PP 1.50	92				
	Medium strength dark grey slightly sandy gravelly CLAY. Gravel consists of ash and brick. Dark grey hydrocarbon staining noted. MADE GROUND		1.80		PP 1.70 PP 1.80	63 63	1.80	1.90	ES	
	[Medium dense] dark brown sandy GRAVEL. Gravel consists of ash and brick. MADE GROUND		2.20		PP 2.00	63				
	Medium strength dark orange brown slightly gravelly sandy CLAY. Gravel consists of ash. MADE GROUND		2.40		PP 2.40	88				
	Medium strength dark brown slightly sandy gravelly CLAY. Gravel consists of ash, flint and brick. MADE GROUND		3.10		PP 2.60 PP 2.80	50 92	2.60	2.80	D	
	Medium strength dark brown slightly sandy gravelly CLAY. Gravel consists of ash, flint and brick. MADE GROUND		3.10		PP 3.20	67	3.10	3.40	ES	
					PP 3.50	58				
					PP 3.80	71				
	BOREHOLE TERMINATED AT 4.00m		4.00							

Notes: 40% recovery between 1.0m and 2.0m depth.

Ground level (mAOD)

Co-ordinates

436133, 566583

Title

Driven tube sampler borehole record

Surface breaking

Yes

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

19/02/2015

Appendix

D

Location plan on drawing number

02

DTS06

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING			
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE	
	Grass onto brown slightly gravelly SAND. Gravel consists of brick. MADE GROUND									
	[Medium dense] brown and reddish brown sandy GRAVEL. Gravel consists of brick. MADE GROUND		0.20				0.20	0.30	ES	
	Medium strength dark brown slightly gravelly sandy CLAY. Gravel consists of ash and brick. MADE GROUND		0.40				0.40	0.50	ES	
	[Medium dense] dark grey gravelly SAND. Gravel consists of brick and ash. MADE GROUND		0.60				0.50	0.60	ES	
							0.80	0.90	ES	
	Loose light grey and orange brown sandy GRAVEL. Gravel consists of brick and ash. MADE GROUND		1.10							
	Medium and high strength orange brown mottled grey CLAY. MADE GROUND		1.60		PP 1.60	56				
					PP 1.80	88	1.80	1.90	ES	
	High and very high strength dark brown mottled grey CLAY. MADE GROUND		2.00		PP 2.10	138				
					PP 2.30	125	2.20	2.60	D	
					PP 2.50	163				
					PP 2.70	188				
	High strength and very high dark brown slightly gravelly CLAY. Gravel consists of ash and sandstone. MADE GROUND		2.80		PP 2.90	113				
					PP 3.20	200				
					PP 3.40	213	3.40	3.50	ES	
					PP 3.60	213				
					PP 3.80	200				
	Very high strength dark brown slightly sandy gravelly CLAY. Gravel consists of ash, brick and sandstone. MADE GROUND		4.00		PP 4.20	225	4.20	4.40	D	
					PP 4.40	225				
					PP 4.60	225				
					PP 4.80	225	4.80	4.90	D	
			4.90				4.90	5.00	ES	

CONTINUED ON NEXT SHEET

Notes: Borehole terminated due to competence of Seventy Fathom Post Member.

Ground level (mAOD)

Co-ordinates
436138, 566467

Title

Driven tube sampler borehole record

Surface breaking

No

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

18/02/2015 - 20/02/2015



Appendix

D

Location plan on drawing number

02

DTS08

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING		
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Extremely weak light orange brown medium grained SANDSTONE. SEVENTY FATHOM POST MEMBER		5.15				5.00	5.20	ES
	[Dense] light orange brown gravelly SAND. Gravel consists of cemented sand and extremely weak sandstone. SEVENTY FATHOM POST MEMBER BOREHOLE TERMINATED AT 5.20m		5.20						

Notes: Borehole terminated due to competence of Seventy Fathom Post Member.

Ground level (mAOD)

Co-ordinates
436138, 566467

Title
Driven tube sampler borehole record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Date of excavation (range if applicable)
18/02/2015 - 20/02/2015

Appendix
D

Location plan on drawing number
02

DTS08

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING			
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE	
1	Grass onto loose dark brown gravelly SAND. Gravel consists of brick and sandstone. MADE GROUND		0.30				0.20	0.30	ES	
	Medium dense orange brown sandy GRAVEL. Gravel consists of brick. MADE GROUND		0.40		PP 0.40	175	0.40	0.50	ES	
	High and very high strength dark brown slightly sandy gravelly CLAY. Gravel consists of sandstone, ash and brick. MADE GROUND				PP 0.60	188	0.50	0.60	D	
				PP 0.80	200					
				PP 1.00	225					
				PP 1.20	225		1.20	1.30	D	
				PP 1.40	225		1.40	1.50	ES	
				PP 1.60	213					
				PP 1.80	225					
				PP 2.00	225					
				PP 2.20	100					
				PP 2.40	125		2.40	2.50	D	
				PP 2.60	188					
				PP 2.80	225					
			Medium and high and very high strength dark brown gravelly CLAY. Gravel consists of ash, brick and flint. MADE GROUND	3.00		PP 3.00	225			
						PP 3.20	88			
						PP 3.40	100			
				PP 3.60	63	3.50	3.60	ES		
				PP 3.80	138					
	BOREHOLE TERMINATED AT 4.00m		4.00							

Notes: For Dynamic Cone Penetration testing, refer to DCP04.

Ground level (mAOD)

Co-ordinates
436172, 566469

Title

Driven tube sampler borehole record

Surface breaking

No

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

19/02/2015

Appendix

D

Location plan on drawing number

02

DTS09

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS		SAMPLING		
					TYPE/DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Dense light grey unreinforced CONCRETE. MADE GROUND		0.09						
	[Medium dense] dark grey sandy GRAVEL. Gravel consists of ash. MADE GROUND		0.20				0.30	0.40	ES
	[Loose to medium dense] dark brown and reddish brown sandy GRAVEL with occasional cobbles of brick. Gravel consists of ash and brick. MADE GROUND						0.50	0.60	ES
	[Loose] light grey sandy GRAVEL with occasional cobbles of sandstone. Gravel consists of sandstone. MADE GROUND		0.70						
	[Loose] dark brown gravelly very clayey SAND with occasional cobbles of brick. Gravel consists of timber, ash and brick. MADE GROUND		0.90						
	<i>... between 1.5m and 1.8m depth, possible hydrocarbon staining.</i>								
	Low and medium strength dark brown slightly gravelly CLAY. Gravel consists of ash and flint. MADE GROUND		1.60		PP 1.70	29	1.60	1.70	ES
					PP 1.80	46			
					PP 2.00	58			
					PP 2.20	33	2.20	2.30	D
					PP 2.40	38			
					PP 2.60	79			
	BOREHOLE TERMINATED AT 3.00m		3.00						

Notes: 90% recovery between 0.0m and 1.0m depth. 50% recovery between 1.0m and 2.0m depth. 80% recovery between 2.0m and 3.0m depth. Limited recovery between 1-2m depth due to cobbles of sandstone.

Ground level (mAOD)

Co-ordinates
436177, 566585

Title

Driven tube sampler borehole record

Surface breaking

Yes

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)

20/02/2015

Appendix

D

Location plan on drawing number

02

DTS11

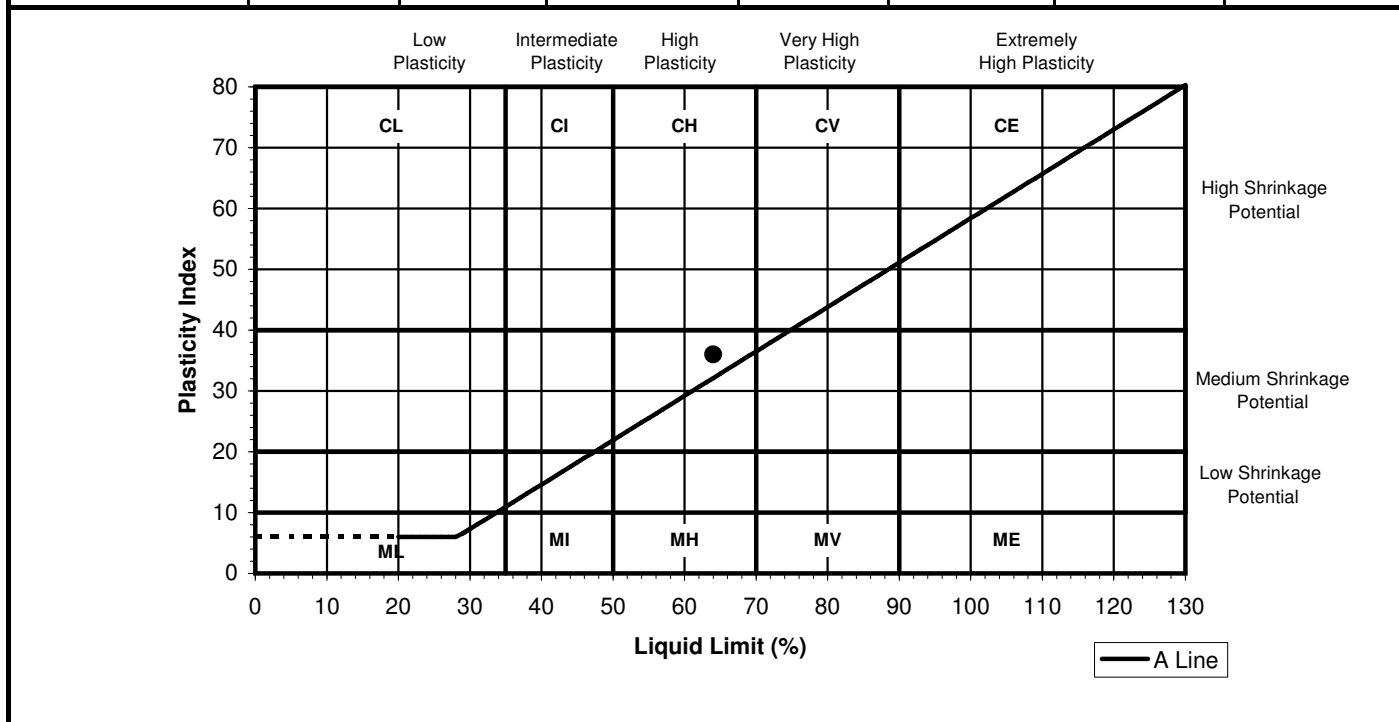
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51011901/15/01
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0052142
Postcode:	NN6 9PY	Client Reference:	STM3043D
Contact:	Andy Keeler	Sampled by:	Client
		Date Sampled:	Not Advised
		Date Received:	24.02.15
Site:	STM3043D - TP South Sheilds Tudor Road	Tested From:	04.03.05-05.03.15
		Sample Type:	Disturbed

Test Results:

Description: Grey/Brown CLAY

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45237519	DTS01	3.30-3.60	N/A	64	28	36	100



Sample Preparation: As Received, Coarse particles removed by hand prior to test
 Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

Signed

[] M. Carr - Section Manager
 [✓] D. Berrill - Laboratory Manager

For and on behalf of Environmental Scientifics Group

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

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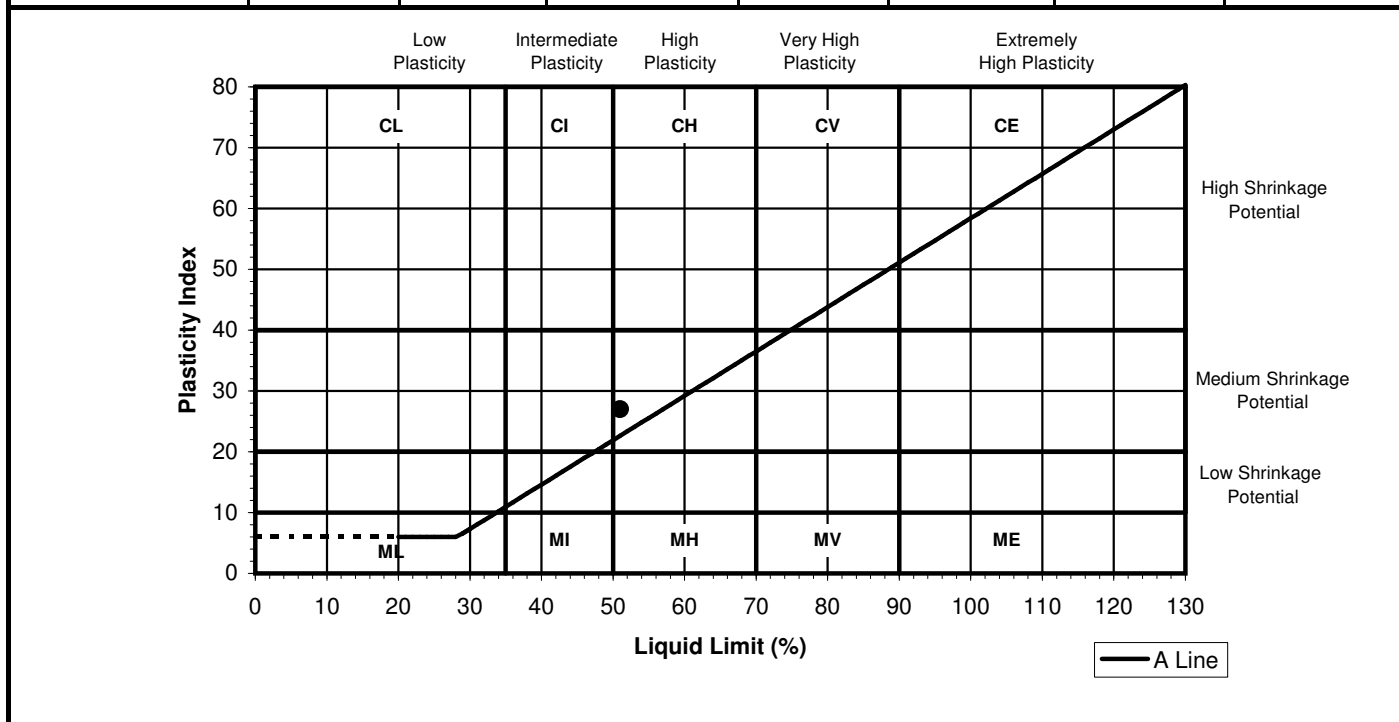
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51011901/15/02
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0052142
Postcode:	NN6 9PY	Client Reference:	STM3043D
Contact:	Andy Keeler	Sampled by:	Client
		Date Sampled:	Not Advised
		Date Received:	24.02.15
Site:	STM3043D - TP South Sheilds Tudor Road	Tested From:	04.03.05-05.03.15
		Sample Type:	Disturbed

Test Results:

Description: Brown Slightly Sandy CLAY

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45237520	DTS08	0.50-0.60	N/A	51	24	27	100



Sample Preparation: As Received, Coarse particles removed by hand prior to test
 Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

Signed



[] M. Carr - Section Manager
 [✓] D. Berrill - Laboratory Manager

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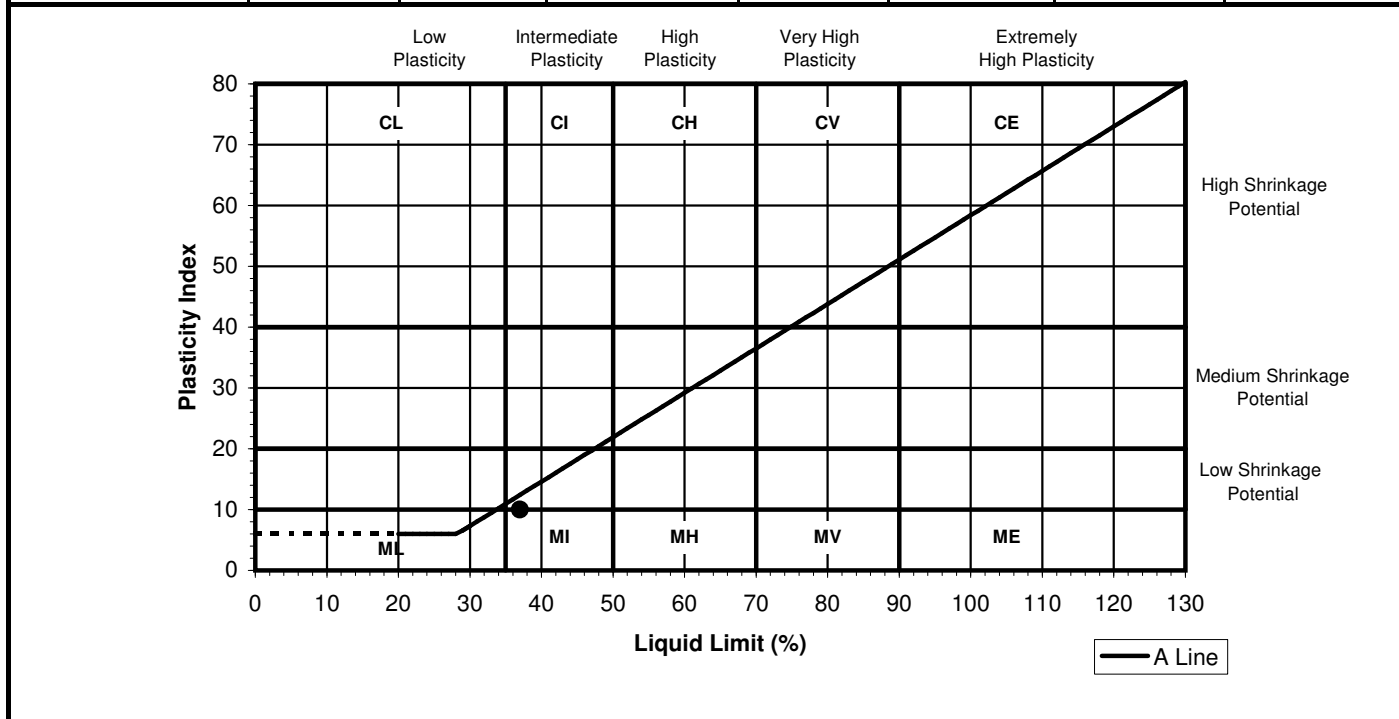
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51011901/15/03
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0052142
Postcode:	NN6 9PY	Client Reference:	STM3043D
Contact:	Andy Keeler	Sampled by:	Client
		Date Sampled:	Not Advised
		Date Received:	24.02.15
Site:	STM3043D - TP South Sheilds Tudor Road	Tested From:	04.03.05-05.03.15
		Sample Type:	Disturbed

Test Results:

Description: Brown Slightly Sandy Gravelly CLAY

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45237521	CH11	0.20-0.30	N/A	37	27	10	29



Sample Preparation: As Received, Coarse particles removed by hand prior to test
 Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

Signed

[] M. Carr - Section Manager
 [✓] D. Berrill - Laboratory Manager

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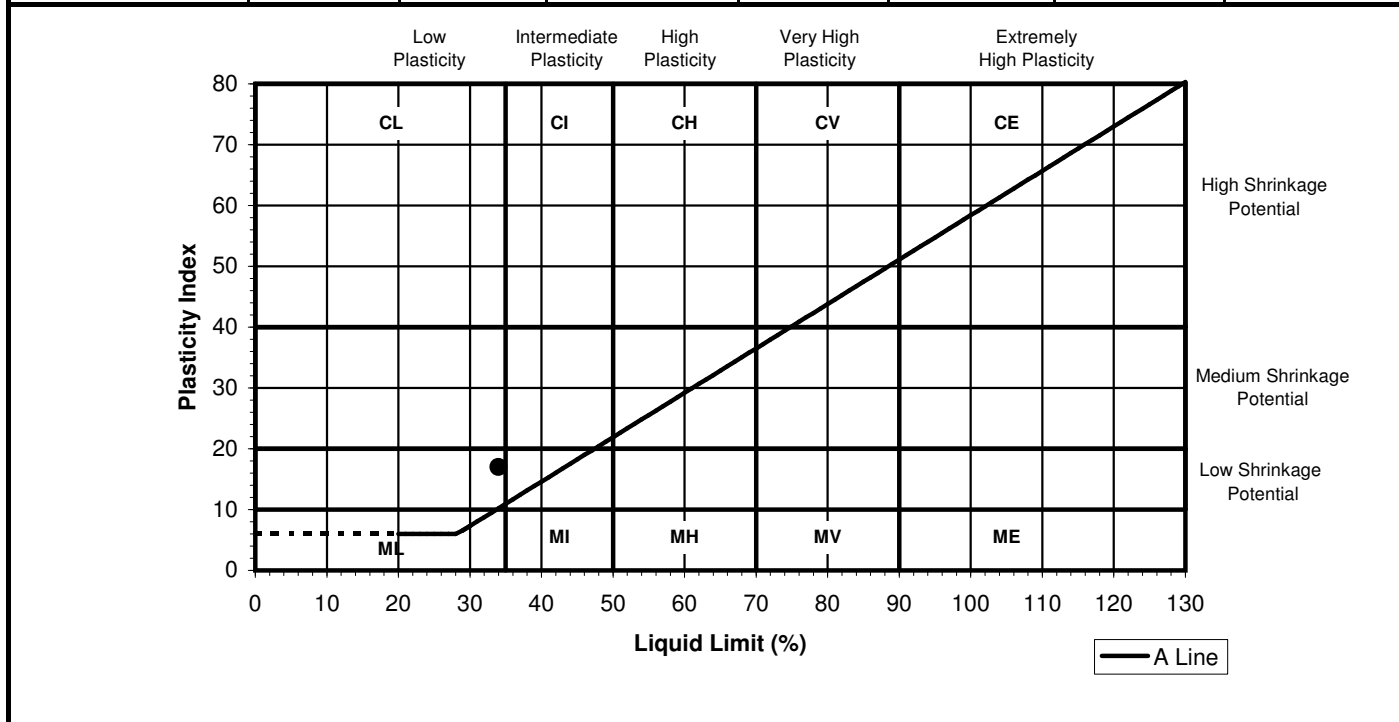
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51011901/15/04
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0052142
Postcode:	NN6 9PY	Client Reference:	STM3043D
Contact:	Andy Keeler	Sampled by:	Client
		Date Sampled:	Not Advised
		Date Received:	24.02.15
Site:	STM3043D - TP South Sheilds Tudor Road	Tested From:	04.03.05-05.03.15
		Sample Type:	Disturbed

Test Results:

Description: Brown Slightly Sandy CLAY with occasional Gravel

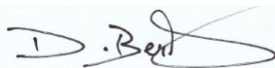
Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45237522	DTS09	0.70-0.80	N/A	34	17	17	95



Sample Preparation: As Received, Coarse particles removed by hand prior to test
 Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

Signed



[] M. Carr - Section Manager
 [✓] D. Berrill - Laboratory Manager

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Final Report

Report Number: 15-04330 Issue-1

Initial Date of Issue: 05-Mar-2015

Client: Soiltechnics Limited

Client Address: Cedar Barn
White Lodge
Walgrave
Northampton
Northamptonshire
NN6 9PY

Contact(s): Rachel Brown
Sara Bertholdson

Project: STM3043D TP South Shields, Tudor Rd

Quotation No.: **Date Received:** 25-Feb-2015

Order No.: 18422 **Date Instructed:** 25-Feb-2015

No. of Samples: 1

Turnaround: (Wkdays) 7 **Results Due Date:** 05-Mar-2015

Date Approved: 05-Mar-2015

Approved By:

Details: Keith Jones, Technical Manager

Results Summary - 2 Stage WAC
Project: STM3043D TP South Shields, Tudor Rd

Chemtest Job No: 15-04330 Chemtest Sample ID: 107402 Sample Ref: Sample ID: Soil Type 1 Top Depth(m): Bottom Depth(m): Sampling Date: 20-Feb-2015										Landfill Waste Acceptance Criteria Limits		
										Inert Waste Landfill	Stable Non-reactive Hazardous waste in non-hazardous	Hazardous Waste Landfill
Determinand	SOP	Accred.	Units									
Total Organic Carbon	2625	U	%				14	3	5	6		
Loss on Ignition	2610	U	%				13	--	--	10		
Total BTEX	2760	U	mg/kg				< 0.01	6	--	--		
Total PCBs (7 congeners)	2815	U	mg/kg				< 0.10	1	--	--		
TPH Total WAC (Mineral Oil)	2670	U	mg/kg				< 10	500	--	--		
Total (of 17) PAHs	2700	N	mg/kg				7.8	100	--	--		
pH	2010	U					9.7	--	>6	--		
Acid Neutralisation Capacity	2015	N	mol/kg				0.91	--	To evaluate	To evaluate		
Eluate Analysis			2:1 mg/l	8:1 mg/l	2:1 mg/kg	Cumulative 10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg					
Arsenic	1450	U	< 0.001	< 0.001	< 0.050	< 0.050	0.5	2	25			
Barium	1450	U	0.024	0.02	< 0.50	< 0.50	20	100	300			
Cadmium	1450	U	< 0.0001	< 0.0001	< 0.010	< 0.010	0.04	1	5			
Chromium	1450	U	< 0.001	< 0.001	< 0.050	< 0.050	0.5	10	70			
Copper	1450	U	0.006	0.001	< 0.050	< 0.050	2	50	100			
Mercury	1450	U	< 0.0005	< 0.0005	< 0.001	< 0.005	0.01	0.2	2			
Molybdenum	1450	U	0.047	0.009	0.092	0.14	0.5	10	30			
Nickel	1450	U	0.004	0.002	< 0.050	< 0.050	0.4	10	40			
Lead	1450	U	< 0.001	< 0.001	< 0.010	< 0.010	0.5	10	50			
Antimony	1450	U	< 0.001	< 0.001	< 0.010	< 0.010	0.06	0.7	5			
Selenium	1450	U	0.01	0.004	0.02	0.044	0.1	0.5	7			
Zinc	1450	U	0.015	0.005	< 0.50	< 0.50	4	50	200			
Chloride	1220	U	13	1.3	25	29	800	15000	25000			
Fluoride	1220	U	0.12	0.084	< 1.0	< 1.0	10	150	500			
Sulphate	1220	U	1000	140	2000	2600	1000	20000	50000			
Total Dissolved Solids	1020	N	1100	280	2100	3900	4000	60000	100000			
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-			
Dissolved Organic Carbon	1610	N	54	12	110	180	500	800	1000			

Soild Information	
Dry mass of test portion/kg	0.175
Moisture (%)	19

Leachate Test Information	
Leachant volume 1st extract/l	0.308
Leachant volume 2nd extract/l	1.4
Eluant recovered from 1st extract/l	0.239

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 15-04333 Issue-1

Initial Date of Issue: 05-Mar-2015

Client: Soiltechnics Limited

Client Address: Cedar Barn
White Lodge
Walgrave
Northampton
Northamptonshire
NN6 9PY

Contact(s): Rachel Brown
Sara Bertholdson

Project: STM3043D TP South Shields, Tudor Rd

Quotation No.: **Date Received:** 25-Feb-2015

Order No.: 18422 **Date Instructed:** 25-Feb-2015

No. of Samples: 1

Turnaround: (Wkdays) 7 **Results Due Date:** 05-Mar-2015

Date Approved: 05-Mar-2015

Approved By:

Details: Keith Jones, Technical Manager

Results Summary - 2 Stage WAC

Project: STM3043D TP South Shields, Tudor Rd

Chemtest Job No: 15-04333 Chemtest Sample ID: 107427 Sample Ref: Sample ID: Soil Type 2 Top Depth(m): Bottom Depth(m): Sampling Date: 20-Feb-2015							Landfill Waste Acceptance Criteria Limits		
							Inert Waste Landfill	Stable Non-reactive Hazardous waste in non-hazardous	Hazardous Waste Landfill
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	U	%				1.2	3	5
Loss on Ignition	2610	U	%				5	--	10
Total BTEX	2760	U	mg/kg				< 0.01	6	--
Total PCBs (7 congeners)	2815	U	mg/kg				< 0.10	1	--
TPH Total WAC (Mineral Oil)	2670	U	mg/kg				< 10	500	--
Total (of 17) PAHs	2700	N	mg/kg				< 2.0	100	--
pH	2010	U					8.6	--	>6
Acid Neutralisation Capacity	2015	N	mol/kg				0.2	--	To evaluate
Eluate Analysis			2:1 mg/l	8:1 mg/l	2:1 mg/kg	Cumulative 10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
Arsenic	1450	U	< 0.001	< 0.001	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.011	0.003	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.0001	< 0.0001	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.001	< 0.001	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	< 0.001	< 0.001	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.0005	< 0.0005	< 0.001	< 0.005	0.01	0.2	2
Molybdenum	1450	U	< 0.001	< 0.001	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	0.001	0.001	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.001	< 0.001	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	< 0.001	< 0.001	< 0.010	< 0.010	0.06	0.7	5
Selenium	1450	U	0.001	0.001	< 0.010	0.01	0.1	0.5	7
Zinc	1450	U	0.003	0.001	< 0.50	< 0.50	4	50	200
Chloride	1220	U	15	1.8	30	31	800	15000	25000
Fluoride	1220	U	0.42	0.14	< 1.0	1.7	10	150	500
Sulphate	1220	U	74	6.4	150	130	1000	20000	50000
Total Dissolved Solids	1020	N	260	55	520	750	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	N	8.8	4.2	< 50	< 50	500	800	1000

Soild Information	
Dry mass of test portion/kg	0.175
Moisture (%)	13

Leachate Test Information	
Leachant volume 1st extract/l	0.324
Leachant volume 2nd extract/l	1.4
Eluant recovered from 1st extract/l	0.175

Report Information

Key

- U UKAS accredited
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- I/S Insufficient Sample
- U/S Unsuitable sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 15-04344 Issue-1

Initial Date of Issue: 02-Mar-2015

Client: Soiltechnics Limited

Client Address: Cedar Barn
White Lodge
Walgrave
Northampton
Northamptonshire
NN6 9PY

Contact(s): Rachel Brown
Sara Bertholdson

Project: STM3043D - TP South Shields, Tudor Road

Quotation No.: **Date Received:** 25-Feb-2015

Order No.: **Date Instructed:** 25-Feb-2015

No. of Samples: 29

Turnaround: (Wkdays) 3 **Results Due Date:** 27-Feb-2015

Date Approved: 02-Mar-2015

Approved By:

Details: Robert Monk, Technical Development
Chemist

Bulk Identification Certificate

Client: Soiltechnics Limited

Your Ref.:

Site Address:

Analysis Location: STM3043D - TP South Shields, Tudor Road

Date Sampled: 18-Feb-2015

Job Number: 15-04344_1

Date Received: 25-Feb-2015

No Samples: 1

Date Reported: 02-Mar-2015

Sample No.	Sample Ref.	Description	SOP	Accred.	Material	Result
107487	Sample 1		2185	U	Board	No Asbestos Detected

The in-house procedure SOP2185 is in accordance with the requirements of Appendix 2 of the Analyst Guide (HSG 248).

The results relate only to items tested as supplied by the client.

Comments and interpretations are beyond the scope of UKAS accreditation.

Samples associated with asbestos in building surveys are retained for six months (HSG 264 refers)

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107462	107463	107464	107465	107466	107467	107468	107469	107470	107471	
Order No.:	Client Sample Ref.:												
	Client Sample ID.:		DTS01	DTS02	DTS02	DTS03	DTS03	DTS04	DTS04	DTS05	HP01	DTS06	
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top Depth (m):		0.3	1.1	0.4	0.3	0.5	1.2	0.4	0.2	0.4	0.5	
	Bottom Depth(m):		0.4	1.2	0.5	0.4	0.6	1.3	0.5	0.3	0.5	0.6	
	Date Sampled:		18-Feb-15	18-Feb-15	18-Feb-15	19-Feb-15	19-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15	
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-		-	-			-	-	
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected			No Asbestos Detected	No Asbestos Detected	
Soil Colour	N				Black	Black	Brown	Brown	Brown	Brown	Black	Brown	Brown
Other Material	N				Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N				Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010			8.4	8.0	8.2	8.4	8.9		9.6	9.9	8.4
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4	0.40	1.8	0.62	0.46	< 0.40		1.1	0.62	1.3
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.01									
Total Sulphur	M	2175	%	0.01									
Cyanide (Total)	M	2300	mg/kg	0.5	1.7	< 0.50	< 0.50	0.70	0.50		< 0.50	< 0.50	< 0.50
Cyanide (Free)	M	2300	mg/kg	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		< 0.50	< 0.50	< 0.50
Cyanide (Complex)	M	2300	mg/kg	0.5	1.7	< 0.50	< 0.50	0.70	0.50		< 0.50	< 0.50	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.01									
Arsenic	M	2450	mg/kg	1	51	4.2	150	23	26		9.0	11	18
Beryllium	U	2450	mg/kg	1	3.1	1.5	1.4	< 1.0	< 1.0		< 1.0	< 1.0	1.1
Cadmium	M	2450	mg/kg	0.1	0.23	< 0.10	0.45	0.28	0.60		< 0.10	< 0.10	0.91
Chromium	M	2450	mg/kg	1	30	9.5	13	21	34		14	5.7	30
Copper	M	2450	mg/kg	0.5	200	310	110	49	53		10	8.9	42
Mercury	M	2450	mg/kg	0.1	0.23	< 0.10	1.7	0.38	0.43		< 0.10	1.3	0.46
Nickel	M	2450	mg/kg	0.5	90	38	45	26	31		20	11	29
Lead	M	2450	mg/kg	0.5	160	230	170	540	400		20	39	190
Selenium	M	2450	mg/kg	0.2	1.4	< 0.20	< 0.20	< 0.20	0.68		< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5	160	52	63	43	52		26	23	91
Zinc	M	2450	mg/kg	0.5	240	81	240	230	640		56	32	180
Chromium (Hexavalent)	N	2490	mg/kg	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.4	40	40	24	3.3	5.2	1.9	14	4.1	0.90
Total Organic Carbon	M	2625	%	0.2			14		3.0	1.1			
Aliphatic TPH >C5-C6	N	2675	mg/kg	0.01			< 0.010		< 0.010		< 0.010		
Aliphatic TPH >C6-C8	N	2675	mg/kg	0.01			< 0.010		< 0.010		< 0.010		
Aliphatic TPH >C8-C10	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10		
Aliphatic TPH >C10-C12	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10		
Aliphatic TPH >C12-C16	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10		

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107462	107463	107464	107465	107466	107467	107468	107469	107470	107471
Order No.:	Client Sample Ref.:											
	Client Sample ID.:		DTS01	DTS02	DTS02	DTS03	DTS03	DTS04	DTS04	DTS05	HP01	DTS06
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.3	1.1	0.4	0.3	0.5	1.2	0.4	0.2	0.4	0.5
	Bottom Depth(m):		0.4	1.2	0.5	0.4	0.6	1.3	0.5	0.3	0.5	0.6
	Date Sampled:		18-Feb-15	18-Feb-15	18-Feb-15	19-Feb-15	19-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD								
Aliphatic TPH >C16-C21	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10	
Aliphatic TPH >C21-C35	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10	
Aliphatic TPH >C35-C44	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10	
Total Aliphatic Hydrocarbons	N	2675	mg/kg	1			< 1.0		< 1.0		< 1.0	
Aromatic TPH >C5-C7	N	2675	mg/kg	0.01			< 0.010		< 0.010		< 0.010	
Aromatic TPH >C7-C8	N	2675	mg/kg	0.01			< 0.010		< 0.010		< 0.010	
Aromatic TPH >C8-C10	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10	
Aromatic TPH >C10-C12	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10	
Aromatic TPH >C12-C16	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10	
Aromatic TPH >C16-C21	N	2675	mg/kg	0.1			< 0.10		< 0.10		3.8	
Aromatic TPH >C21-C35	N	2675	mg/kg	0.1			< 0.10		< 0.10		12	
Aromatic TPH >C35-C44	N	2675	mg/kg	0.1			< 0.10		< 0.10		< 0.10	
Total Aromatic Hydrocarbons	N	2675	mg/kg	1			< 1.0		< 1.0		16	
Total Petroleum Hydrocarbons	N	2675	mg/kg	2			< 2.0		< 2.0		16	
Dichlorodifluoromethane	U	2760	µg/kg	1					< 1.0			
Chloromethane	M	2760	µg/kg	1					< 1.0			
Vinyl Chloride	M	2760	µg/kg	1					< 1.0			
Bromomethane	M	2760	µg/kg	20					< 20			
Chloroethane	U	2760	µg/kg	2					< 2.0			
Trichlorofluoromethane	M	2760	µg/kg	1					< 1.0			
1,1-Dichloroethene	M	2760	µg/kg	1					< 1.0			
Trans 1,2-Dichloroethene	M	2760	µg/kg	1					< 1.0			
1,1-Dichloroethane	M	2760	µg/kg	1					< 1.0			
cis 1,2-Dichloroethene	M	2760	µg/kg	1					< 1.0			
Bromochloromethane	U	2760	µg/kg	5					< 5.0			
Trichloromethane	M	2760	µg/kg	1					< 1.0			
1,1,1-Trichloroethane	M	2760	µg/kg	1					< 1.0			
Tetrachloromethane	M	2760	µg/kg	1					< 1.0			
1,1-Dichloropropene	U	2760	µg/kg	1					< 1.0			
Benzene	M	2760	µg/kg	1			< 1.0		< 1.0		< 1.0	
1,2-Dichloroethane	M	2760	µg/kg	2					< 2.0			
Trichloroethene	M	2760	µg/kg	1					< 1.0			
1,2-Dichloropropane	M	2760	µg/kg	1					< 1.0			

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107462	107463	107464	107465	107466	107467	107468	107469	107470	107471
Order No.:	Client Sample Ref.:											
	Client Sample ID.:		DTS01	DTS02	DTS02	DTS03	DTS03	DTS04	DTS04	DTS05	HP01	DTS06
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.3	1.1	0.4	0.3	0.5	1.2	0.4	0.2	0.4	0.5
	Bottom Depth(m):		0.4	1.2	0.5	0.4	0.6	1.3	0.5	0.3	0.5	0.6
	Date Sampled:		18-Feb-15	18-Feb-15	18-Feb-15	19-Feb-15	19-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD								
Dibromomethane	M	2760	µg/kg	1				< 1.0				
Bromodichloromethane	M	2760	µg/kg	5				< 5.0				
cis-1,3-Dichloropropene	N	2760	µg/kg	10				< 10				
Toluene	M	2760	µg/kg	1		< 1.0		< 1.0		< 1.0		
Trans-1,3-Dichloropropene	N	2760	µg/kg	10				< 10				
1,1,2-Trichloroethane	M	2760	µg/kg	10				< 10				
Tetrachloroethene	M	2760	µg/kg	1				< 1.0				
1,3-Dichloropropane	U	2760	µg/kg	2				< 2.0				
Dibromochloromethane	U	2760	µg/kg	10				< 10				
1,2-Dibromoethane	M	2760	µg/kg	5				< 5.0				
Chlorobenzene	M	2760	µg/kg	1				< 1.0				
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2				< 2.0				
Ethylbenzene	M	2760	µg/kg	1		1.9		< 1.0		< 1.0		
m & p-Xylene	M	2760	µg/kg	1		1.9		< 1.0		< 1.0		
o-Xylene	M	2760	µg/kg	1		1.2		< 1.0		< 1.0		
Styrene	M	2760	µg/kg	1				< 1.0				
Tribromomethane	U	2760	µg/kg	1				< 1.0				
Isopropylbenzene	M	2760	µg/kg	1				< 1.0				
Bromobenzene	M	2760	µg/kg	1				< 1.0				
1,2,3-Trichloropropane	N	2760	µg/kg	50				< 50				
N-Propylbenzene	U	2760	µg/kg	1				< 1.0				
2-Chlorotoluene	M	2760	µg/kg	1				< 1.0				
1,3,5-Trimethylbenzene	M	2760	µg/kg	1				< 1.0				
4-Chlorotoluene	U	2760	µg/kg	1				< 1.0				
Tert-Butylbenzene	U	2760	µg/kg	1				< 1.0				
1,2,4-Trimethylbenzene	M	2760	µg/kg	1				< 1.0				
Sec-Butylbenzene	U	2760	µg/kg	1				< 1.0				
1,3-Dichlorobenzene	M	2760	µg/kg	1				< 1.0				
4-Isopropyltoluene	U	2760	µg/kg	1				< 1.0				
1,4-Dichlorobenzene	M	2760	µg/kg	1				< 1.0				
N-Butylbenzene	U	2760	µg/kg	1				< 1.0				
1,2-Dichlorobenzene	M	2760	µg/kg	1				< 1.0				
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50				< 50				

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited		Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:		Chemtest Sample ID.:		107462	107463	107464	107465	107466	107467	107468	107469	107470	107471
Order No.:		Client Sample Ref.:											
		Client Sample ID.:		DTS01	DTS02	DTS02	DTS03	DTS03	DTS04	DTS04	DTS05	HP01	DTS06
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.3	1.1	0.4	0.3	0.5	1.2	0.4	0.2	0.4	0.5
		Bottom Depth(m):		0.4	1.2	0.5	0.4	0.6	1.3	0.5	0.3	0.5	0.6
		Date Sampled:		18-Feb-15	18-Feb-15	18-Feb-15	19-Feb-15	19-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD									
1,2,4-Trichlorobenzene	M	2760	µg/kg	1				< 1.0					
Hexachlorobutadiene	U	2760	µg/kg	1				< 1.0					
1,2,3-Trichlorobenzene	U	2760	µg/kg	2				< 2.0					
Carbon Disulphide	N	2760	µg/kg	50				< 50					
Methyl Tert-Butyl Ether	M	2760	µg/kg	1				< 1.0					
N-Nitrosodimethylamine	N	2790	mg/kg	0.5				< 0.50					
Phenol	N	2790	mg/kg	0.5				< 0.50					
2-Chlorophenol	N	2790	mg/kg	0.5				< 0.50					
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.5				< 0.50					
1,3-Dichlorobenzene	N	2790	mg/kg	0.5				< 0.50					
1,4-Dichlorobenzene	N	2790	mg/kg	0.5				< 0.50					
1,2-Dichlorobenzene	N	2790	mg/kg	0.5				< 0.50					
2-Methylphenol	N	2790	mg/kg	0.5				< 0.50					
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.5				< 0.50					
Hexachloroethane	N	2790	mg/kg	0.5				< 0.50					
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.5				< 0.50					
4-Methylphenol	N	2790	mg/kg	0.5				< 0.50					
Nitrobenzene	N	2790	mg/kg	0.5				< 0.50					
Isophorone	N	2790	mg/kg	0.5				< 0.50					
2-Nitrophenol	N	2790	mg/kg	0.5				< 0.50					
2,4-Dimethylphenol	N	2790	mg/kg	0.5				< 0.50					
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.5				< 0.50					
2,4-Dichlorophenol	N	2790	mg/kg	0.5				< 0.50					
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.5				< 0.50					
Naphthalene	N	2790	mg/kg	0.5				< 0.50					
4-Chloroaniline	N	2790	mg/kg	0.5				< 0.50					
Hexachlorobutadiene	N	2790	mg/kg	0.5				< 0.50					
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.5				< 0.50					
2-Methylnaphthalene	N	2790	mg/kg	0.5				< 0.50					
Hexachlorocyclopentadiene	N	2790	mg/kg	0.5				< 0.50					
2,4,6-Trichlorophenol	N	2790	mg/kg	0.5				< 0.50					
2,4,5-Trichlorophenol	N	2790	mg/kg	0.5				< 0.50					
2-Chloronaphthalene	N	2790	mg/kg	0.5				< 0.50					

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited		Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	
Quotation No.:		Chemtest Sample ID.:		107462	107463	107464	107465	107466	107467	107468	107469	107470	107471
Order No.:		Client Sample Ref.:											
		Client Sample ID.:		DTS01	DTS02	DTS02	DTS03	DTS03	DTS04	DTS04	DTS05	HP01	DTS06
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.3	1.1	0.4	0.3	0.5	1.2	0.4	0.2	0.4	0.5
		Bottom Depth(m):		0.4	1.2	0.5	0.4	0.6	1.3	0.5	0.3	0.5	0.6
		Date Sampled:		18-Feb-15	18-Feb-15	18-Feb-15	19-Feb-15	19-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD									
2-Nitroaniline	N	2790	mg/kg	0.5				< 0.50					
Acenaphthylene	N	2790	mg/kg	0.5				< 0.50					
Dimethylphthalate	N	2790	mg/kg	0.5				< 0.50					
2,6-Dinitrotoluene	N	2790	mg/kg	0.5				< 0.50					
Acenaphthene	N	2790	mg/kg	0.5				< 0.50					
Dibenzofuran	N	2790	mg/kg	0.5				< 0.50					
4-Chlorophenylphenylether	N	2790	mg/kg	0.5				< 0.50					
2,4-Dinitrotoluene	N	2790	mg/kg	0.5				< 0.50					
Fluorene	N	2790	mg/kg	0.5				< 0.50					
Diethyl Phthalate	N	2790	mg/kg	0.5				< 0.50					
4-Nitroaniline	N	2790	mg/kg	0.5				< 0.50					
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.5				< 0.50					
Azobenzene	N	2790	mg/kg	0.5				< 0.50					
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.5				< 0.50					
Hexachlorobenzene	N	2790	mg/kg	0.5				< 0.50					
Pentachlorophenol	N	2790	mg/kg	0.5				< 0.50					
Phenanthrene	N	2790	mg/kg	0.5				< 0.50					
Anthracene	N	2790	mg/kg	0.5				< 0.50					
Carbazole	N	2790	mg/kg	0.5				< 0.50					
Di-N-Butyl Phthalate	N	2790	mg/kg	0.5				< 0.50					
Fluoranthene	N	2790	mg/kg	0.5				< 0.50					
Pyrene	N	2790	mg/kg	0.5				< 0.50					
Butylbenzyl Phthalate	N	2790	mg/kg	0.5				< 0.50					
Benzo[a]anthracene	N	2790	mg/kg	0.5				< 0.50					
Chrysene	N	2790	mg/kg	0.5				< 0.50					
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.5				< 0.50					
Di-N-Octyl Phthalate	N	2790	mg/kg	0.5				< 0.50					
Benzo[b]fluoranthene	N	2790	mg/kg	0.5				< 0.50					
Benzo[k]fluoranthene	N	2790	mg/kg	0.5				< 0.50					
Benzo[a]pyrene	N	2790	mg/kg	0.5				< 0.50					
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.5				< 0.50					
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.5				< 0.50					
Benzo[g,h,i]perylene	N	2790	mg/kg	0.5				< 0.50					

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107462	107463	107464	107465	107466	107467	107468	107469	107470	107471
Order No.:	Client Sample Ref.:											
	Client Sample ID.:		DTS01	DTS02	DTS02	DTS03	DTS03	DTS04	DTS04	DTS05	HP01	DTS06
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.3	1.1	0.4	0.3	0.5	1.2	0.4	0.2	0.4	0.5
	Bottom Depth(m):		0.4	1.2	0.5	0.4	0.6	1.3	0.5	0.3	0.5	0.6
	Date Sampled:		18-Feb-15	18-Feb-15	18-Feb-15	19-Feb-15	19-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD								
Naphthalene	M	2800	mg/kg	0.1	1.5	0.13	0.99	0.39	< 0.10	1.3	0.16	0.11
Acenaphthylene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.1	0.13	< 0.10	< 0.10	0.86	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.1	0.33	< 0.10	< 0.10	0.78	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.1	4.0	2.2	2.7	7.1	0.56	1.3	0.52	0.22
Anthracene	M	2800	mg/kg	0.1	0.23	< 0.10	< 0.10	2.3	< 0.10	0.22	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	1.8	0.23	1.0	9.5	0.41	1.6	0.86	0.17
Pyrene	M	2800	mg/kg	0.1	1.6	0.38	0.91	7.2	0.46	1.4	0.92	0.23
Benzo[a]anthracene	M	2800	mg/kg	0.1	0.79	0.14	0.30	4.0	< 0.10	0.76	0.39	< 0.10
Chrysene	M	2800	mg/kg	0.1	0.76	0.22	0.57	4.2	0.11	0.72	0.37	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	0.54	< 0.10	0.50	4.7	< 0.10	0.96	0.48	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	0.16	< 0.10	0.12	1.7	< 0.10	0.32	0.15	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	0.31	< 0.10	0.27	3.1	< 0.10	0.56	0.29	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	0.15	< 0.10	0.15	2.4	< 0.10	0.32	0.22	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	0.29	< 0.10	0.11	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	0.28	< 0.10	0.26	2.5	< 0.10	0.40	0.32	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2	13	3.3	7.8	51	< 2.0	10	4.7	< 2.0
PCB 81	N	2815	mg/kg	0.01								
PCB 77	N	2815	mg/kg	0.01								
PCB 105	N	2815	mg/kg	0.01								
PCB 114	N	2815	mg/kg	0.01								
PCB 118	N	2815	mg/kg	0.01								
PCB 123	N	2815	mg/kg	0.01								
PCB 126	N	2815	mg/kg	0.01								
PCB 156	N	2815	mg/kg	0.01								
PCB 157	N	2815	mg/kg	0.01								
PCB 167	N	2815	mg/kg	0.01								
PCB 169	N	2815	mg/kg	0.01								
PCB 189	N	2815	mg/kg	0.01								
Total PCBs (12 Congeners)	N	2815	mg/kg	0.01								
Total Phenols	M	2920	mg/kg	0.3	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107472	107473	107474	107475	107476	107477	107478	107479	107480	107481	
Order No.:	Client Sample Ref.:												
	Client Sample ID.:		DTS06	DTS06	DTS07	DTS07	DTS08	DTS08	DTS08	DTS08	DTS01	DTS09	DTS10
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		3.1	1.8	0.3	0.7	0.2	0.4	5.0	3.3	0.4	0.3	
	Bottom Depth(m):		3.4	1.9	0.4	0.8	0.3	0.5	5.2	3.6	0.5	0.4	
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192				-	-	-					
Asbestos Identification	U	2192	%	0.001		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected					
Soil Colour	N				Brown	Brown	Grey	Brown		Brown	Brown	Brown	Brown
Other Material	N				Stones	NONE	Stones	Stones		Stones	Stones	NONE	Stones
Soil Texture	N				Sand	Clay	Sand	Sand		Sand	Clay	Sand	Sand
pH	M	2010			8.8		8.1	8.6		8.7	8.3	7.9	8.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4			1.2			0.51			0.57
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.01	1.3			0.36		0.11	0.066	0.27	
Total Sulphur	M	2175	%	0.01	0.29			0.14		0.040	0.010	0.030	
Cyanide (Total)	M	2300	mg/kg	0.5			< 0.50			< 0.50			< 0.50
Cyanide (Free)	M	2300	mg/kg	0.5			< 0.50			< 0.50			< 0.50
Cyanide (Complex)	M	2300	mg/kg	0.5			< 0.50			< 0.50			< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.01	1.2			0.24		0.072	0.028	0.067	
Arsenic	M	2450	mg/kg	1			18			24			6.5
Beryllium	U	2450	mg/kg	1			< 1.0			< 1.0			1.3
Cadmium	M	2450	mg/kg	0.1			< 0.10			< 0.10			< 0.10
Chromium	M	2450	mg/kg	1			15			24			47
Copper	M	2450	mg/kg	0.5			29			25			28
Mercury	M	2450	mg/kg	0.1			0.63			0.31			< 0.10
Nickel	M	2450	mg/kg	0.5			21			29			58
Lead	M	2450	mg/kg	0.5			110			140			29
Selenium	M	2450	mg/kg	0.2			0.46			< 0.20			< 0.20
Vanadium	U	2450	mg/kg	5			32			41			52
Zinc	M	2450	mg/kg	0.5			150			67			95
Chromium (Hexavalent)	N	2490	mg/kg	0.5			< 0.50			< 0.50			< 0.50
Organic Matter	M	2625	%	0.4			14	2.1	3.6	2.6			1.7
Total Organic Carbon	M	2625	%	0.2			8.0		2.1	1.5			
Aliphatic TPH >C5-C6	N	2675	mg/kg	0.01			< 0.010		< 0.010	< 0.010			< 0.010
Aliphatic TPH >C6-C8	N	2675	mg/kg	0.01			< 0.010		< 0.010	< 0.010			< 0.010
Aliphatic TPH >C8-C10	N	2675	mg/kg	0.1			< 0.10		< 0.10	< 0.10			< 0.10
Aliphatic TPH >C10-C12	N	2675	mg/kg	0.1			< 0.10		< 0.10	< 0.10			< 0.10
Aliphatic TPH >C12-C16	N	2675	mg/kg	0.1			< 0.10		< 0.10	< 0.10			< 0.10

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107472	107473	107474	107475	107476	107477	107478	107479	107480	107481
Order No.:	Client Sample Ref.:											
	Client Sample ID.:		DTS06	DTS06	DTS07	DTS07	DTS08	DTS08	DTS08	DTS01	DTS09	DTS10
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		3.1	1.8	0.3	0.7	0.2	0.4	5.0	3.3	0.4	0.3
	Bottom Depth(m):		3.4	1.9	0.4	0.8	0.3	0.5	5.2	3.6	0.5	0.4
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD								
Aliphatic TPH >C16-C21	N	2675	mg/kg	0.1		< 0.10		< 0.10		< 0.10		< 0.10
Aliphatic TPH >C21-C35	N	2675	mg/kg	0.1		< 0.10		< 0.10		< 0.10		< 0.10
Aliphatic TPH >C35-C44	N	2675	mg/kg	0.1		< 0.10		< 0.10		< 0.10		< 0.10
Total Aliphatic Hydrocarbons	N	2675	mg/kg	1		< 1.0		< 1.0		< 1.0		< 1.0
Aromatic TPH >C5-C7	N	2675	mg/kg	0.01		< 0.010		< 0.010		< 0.010		< 0.010
Aromatic TPH >C7-C8	N	2675	mg/kg	0.01		< 0.010		< 0.010		< 0.010		< 0.010
Aromatic TPH >C8-C10	N	2675	mg/kg	0.1		< 0.10		< 0.10		< 0.10		< 0.10
Aromatic TPH >C10-C12	N	2675	mg/kg	0.1		< 0.10		< 0.10		< 0.10		< 0.10
Aromatic TPH >C12-C16	N	2675	mg/kg	0.1		< 0.10		< 0.10		< 0.10		< 0.10
Aromatic TPH >C16-C21	N	2675	mg/kg	0.1		< 0.10		1.9		< 0.10		5.1
Aromatic TPH >C21-C35	N	2675	mg/kg	0.1		< 0.10		3.2		< 0.10		11
Aromatic TPH >C35-C44	N	2675	mg/kg	0.1		< 0.10		< 0.10		< 0.10		< 0.10
Total Aromatic Hydrocarbons	N	2675	mg/kg	1		< 1.0		5.1		< 1.0		16
Total Petroleum Hydrocarbons	N	2675	mg/kg	2		< 2.0		5.1		< 2.0		16
Dichlorodifluoromethane	U	2760	µg/kg	1		< 1.0		< 1.0				
Chloromethane	M	2760	µg/kg	1		< 1.0		< 1.0				
Vinyl Chloride	M	2760	µg/kg	1		< 1.0		< 1.0				
Bromomethane	M	2760	µg/kg	20		< 20		< 20				
Chloroethane	U	2760	µg/kg	2		< 2.0		< 2.0				
Trichlorofluoromethane	M	2760	µg/kg	1		< 1.0		< 1.0				
1,1-Dichloroethene	M	2760	µg/kg	1		< 1.0		< 1.0				
Trans 1,2-Dichloroethene	M	2760	µg/kg	1		< 1.0		< 1.0				
1,1-Dichloroethane	M	2760	µg/kg	1		< 1.0		< 1.0				
cis 1,2-Dichloroethene	M	2760	µg/kg	1		< 1.0		< 1.0				
Bromochloromethane	U	2760	µg/kg	5		< 5.0		< 5.0				
Trichloromethane	M	2760	µg/kg	1		< 1.0		< 1.0				
1,1,1-Trichloroethane	M	2760	µg/kg	1		< 1.0		< 1.0				
Tetrachloromethane	M	2760	µg/kg	1		< 1.0		< 1.0				
1,1-Dichloropropene	U	2760	µg/kg	1		< 1.0		< 1.0				
Benzene	M	2760	µg/kg	1		< 1.0		< 1.0		< 1.0		< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2		< 2.0		< 2.0				
Trichloroethene	M	2760	µg/kg	1		< 1.0		< 1.0				
1,2-Dichloropropane	M	2760	µg/kg	1		< 1.0		< 1.0				

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	
Quotation No.:	Chemtest Sample ID.:		107472	107473	107474	107475	107476	107477	107478	107479	107480	107481
Order No.:	Client Sample Ref.:											
	Client Sample ID.:		DTS06	DTS06	DTS07	DTS07	DTS08	DTS08	DTS08	DTS01	DTS09	DTS10
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		3.1	1.8	0.3	0.7	0.2	0.4	5.0	3.3	0.4	0.3
	Bottom Depth(m):		3.4	1.9	0.4	0.8	0.3	0.5	5.2	3.6	0.5	0.4
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD								
Dibromomethane	M	2760	µg/kg	1		< 1.0		< 1.0				
Bromodichloromethane	M	2760	µg/kg	5		< 5.0		< 5.0				
cis-1,3-Dichloropropene	N	2760	µg/kg	10		< 10		< 10				
Toluene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0			< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10		< 10		< 10				
1,1,2-Trichloroethane	M	2760	µg/kg	10		< 10		< 10				
Tetrachloroethene	M	2760	µg/kg	1		< 1.0		< 1.0				
1,3-Dichloropropane	U	2760	µg/kg	2		< 2.0		< 2.0				
Dibromochloromethane	U	2760	µg/kg	10		< 10		< 10				
1,2-Dibromoethane	M	2760	µg/kg	5		< 5.0		< 5.0				
Chlorobenzene	M	2760	µg/kg	1		< 1.0		< 1.0				
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2		< 2.0		< 2.0				
Ethylbenzene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0			< 1.0
m & p-Xylene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0			< 1.0
o-Xylene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0			< 1.0
Styrene	M	2760	µg/kg	1		< 1.0		< 1.0				
Tribromomethane	U	2760	µg/kg	1		< 1.0		< 1.0				
Isopropylbenzene	M	2760	µg/kg	1		< 1.0		< 1.0				
Bromobenzene	M	2760	µg/kg	1		< 1.0		< 1.0				
1,2,3-Trichloropropane	N	2760	µg/kg	50		< 50		< 50				
N-Propylbenzene	U	2760	µg/kg	1		< 1.0		< 1.0				
2-Chlorotoluene	M	2760	µg/kg	1		< 1.0		< 1.0				
1,3,5-Trimethylbenzene	M	2760	µg/kg	1		< 1.0		< 1.0				
4-Chlorotoluene	U	2760	µg/kg	1		< 1.0		< 1.0				
Tert-Butylbenzene	U	2760	µg/kg	1		< 1.0		< 1.0				
1,2,4-Trimethylbenzene	M	2760	µg/kg	1		< 1.0		< 1.0				
Sec-Butylbenzene	U	2760	µg/kg	1		< 1.0		< 1.0				
1,3-Dichlorobenzene	M	2760	µg/kg	1		< 1.0		< 1.0				
4-Isopropyltoluene	U	2760	µg/kg	1		< 1.0		< 1.0				
1,4-Dichlorobenzene	M	2760	µg/kg	1		< 1.0		< 1.0				
N-Butylbenzene	U	2760	µg/kg	1		< 1.0		< 1.0				
1,2-Dichlorobenzene	M	2760	µg/kg	1		< 1.0		< 1.0				
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50		< 50		< 50				

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	
Quotation No.:	Chemtest Sample ID.:		107472	107473	107474	107475	107476	107477	107478	107479	107480	107481
Order No.:	Client Sample Ref.:											
	Client Sample ID.:		DTS06	DTS06	DTS07	DTS07	DTS08	DTS08	DTS08	DTS01	DTS09	DTS10
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		3.1	1.8	0.3	0.7	0.2	0.4	5.0	3.3	0.4	0.3
	Bottom Depth(m):		3.4	1.9	0.4	0.8	0.3	0.5	5.2	3.6	0.5	0.4
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD								
1,2,4-Trichlorobenzene	M	2760	µg/kg	1	< 1.0	< 1.0						
Hexachlorobutadiene	U	2760	µg/kg	1	< 1.0	< 1.0						
1,2,3-Trichlorobenzene	U	2760	µg/kg	2	< 2.0	< 2.0						
Carbon Disulphide	N	2760	µg/kg	50	< 50	< 50						
Methyl Tert-Butyl Ether	M	2760	µg/kg	1	< 1.0	< 1.0						
N-Nitrosodimethylamine	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Phenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
2-Chlorophenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.5	< 0.50	< 0.50						
1,3-Dichlorobenzene	N	2790	mg/kg	0.5	< 0.50	< 0.50						
1,4-Dichlorobenzene	N	2790	mg/kg	0.5	< 0.50	< 0.50						
1,2-Dichlorobenzene	N	2790	mg/kg	0.5	< 0.50	< 0.50						
2-Methylphenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Hexachloroethane	N	2790	mg/kg	0.5	< 0.50	< 0.50						
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.5	< 0.50	< 0.50						
4-Methylphenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Nitrobenzene	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Isophorone	N	2790	mg/kg	0.5	< 0.50	< 0.50						
2-Nitrophenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
2,4-Dimethylphenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.5	< 0.50	< 0.50						
2,4-Dichlorophenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Naphthalene	N	2790	mg/kg	0.5	< 0.50	< 0.50						
4-Chloroaniline	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Hexachlorobutadiene	N	2790	mg/kg	0.5	< 0.50	< 0.50						
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
2-Methylnaphthalene	N	2790	mg/kg	0.5	< 0.50	< 0.50						
Hexachlorocyclopentadiene	N	2790	mg/kg	0.5	< 0.50	< 0.50						
2,4,6-Trichlorophenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
2,4,5-Trichlorophenol	N	2790	mg/kg	0.5	< 0.50	< 0.50						
2-Chloronaphthalene	N	2790	mg/kg	0.5	< 0.50	< 0.50						

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited		Chemtest Job No.:											
Quotation No.:		Chemtest Sample ID.:											
Order No.:		Client Sample Ref.:											
		Client Sample ID.:											
		Sample Type:											
		Top Depth (m):											
		Bottom Depth(m):											
		Date Sampled:											
Determinand	Accred.	SOP	Units	LOD	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
2-Nitroaniline	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Acenaphthylene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Dimethylphthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50					
2,6-Dinitrotoluene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Acenaphthene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Dibenzofuran	N	2790	mg/kg	0.5		< 0.50		< 0.50					
4-Chlorophenylphenylether	N	2790	mg/kg	0.5		< 0.50		< 0.50					
2,4-Dinitrotoluene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Fluorene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Diethyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50					
4-Nitroaniline	N	2790	mg/kg	0.5		< 0.50		< 0.50					
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Azobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Hexachlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Pentachlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Phenanthrene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Anthracene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Carbazole	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Di-N-Butyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Fluoranthene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Pyrene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Butylbenzyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Benzo[a]anthracene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Chrysene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Di-N-Octyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Benzo[b]fluoranthene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Benzo[k]fluoranthene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Benzo[a]pyrene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.5		< 0.50		< 0.50					
Benzo[g,h,i]perylene	N	2790	mg/kg	0.5		< 0.50		< 0.50					

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107472	107473	107474	107475	107476	107477	107478	107479	107480	107481
Order No.:	Client Sample Ref.:											
	Client Sample ID.:		DTS06	DTS06	DTS07	DTS07	DTS08	DTS08	DTS08	DTS01	DTS09	DTS10
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		3.1	1.8	0.3	0.7	0.2	0.4	5.0	3.3	0.4	0.3
	Bottom Depth(m):		3.4	1.9	0.4	0.8	0.3	0.5	5.2	3.6	0.5	0.4
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD								
Naphthalene	M	2800	mg/kg	0.1		0.29		0.17		< 0.10		0.66
Acenaphthylene	N	2800	mg/kg	0.1		< 0.10		0.11		< 0.10		0.17
Acenaphthene	M	2800	mg/kg	0.1		< 0.10		< 0.10		< 0.10		< 0.10
Fluorene	M	2800	mg/kg	0.1		< 0.10		< 0.10		< 0.10		< 0.10
Phenanthrene	M	2800	mg/kg	0.1		0.70		0.99		< 0.10		2.0
Anthracene	M	2800	mg/kg	0.1		< 0.10		0.79		< 0.10		0.30
Fluoranthene	M	2800	mg/kg	0.1		0.55		4.5		< 0.10		5.1
Pyrene	M	2800	mg/kg	0.1		0.62		3.9		< 0.10		5.0
Benzo[a]anthracene	M	2800	mg/kg	0.1		0.15		2.4		< 0.10		2.7
Chrysene	M	2800	mg/kg	0.1		0.23		2.3		< 0.10		2.9
Benzo[b]fluoranthene	M	2800	mg/kg	0.1		0.26		2.0		< 0.10		4.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.1		< 0.10		0.87		< 0.10		1.6
Benzo[a]pyrene	M	2800	mg/kg	0.1		0.14		1.6		< 0.10		2.9
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1		0.10		0.85		< 0.10		1.9
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1		< 0.10		0.15		< 0.10		0.30
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1		0.16		0.69		< 0.10		2.1
Total Of 16 PAH's	N	2800	mg/kg	2		3.2		21		< 2.0		32
PCB 81	N	2815	mg/kg	0.01								
PCB 77	N	2815	mg/kg	0.01								
PCB 105	N	2815	mg/kg	0.01								
PCB 114	N	2815	mg/kg	0.01								
PCB 118	N	2815	mg/kg	0.01								
PCB 123	N	2815	mg/kg	0.01								
PCB 126	N	2815	mg/kg	0.01								
PCB 156	N	2815	mg/kg	0.01								
PCB 157	N	2815	mg/kg	0.01								
PCB 167	N	2815	mg/kg	0.01								
PCB 169	N	2815	mg/kg	0.01								
PCB 189	N	2815	mg/kg	0.01								
Total PCBs (12 Congeners)	N	2815	mg/kg	0.01								
Total Phenols	M	2920	mg/kg	0.3		< 0.30		< 0.30		< 0.30		< 0.30

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107482	107483	107484	107485	107486	107488	107489	107490	
Order No.:	Client Sample Ref.:										
	Client Sample ID.:		DTS11	DTS11	CH09	CH10	CH16	DTS10	DTS02	DTS09	
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top Depth (m):		0.5	1.6	0.2	0.2	0.2	0.5	3.2	1.4	
	Bottom Depth(m):		0.6	1.7	0.3	0.3	0.3	0.6	3.3	1.5	
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15	
Determinand	Accred.	SOP	Units	LOD							
ACM Type	U	2192			-		-	-			
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected			
Soil Colour	N				Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N				Stones	Stones	Stones	Stones	Stones	NONE	Stones
Soil Texture	N				Sand	Clay	Clay	Loam	Clay	Sand	Clay
pH	M	2010			9.0		11.1	9.6	9.5	8.0	8.6
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4	0.84		0.62	0.84		1.8	0.47
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.01					0.34		
Total Sulphur	M	2175	%	0.01					0.040		
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Cyanide (Free)	M	2300	mg/kg	0.5	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Cyanide (Complex)	M	2300	mg/kg	0.5	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.01					0.18		
Arsenic	M	2450	mg/kg	1	34		13	20		9.8	6.1
Beryllium	U	2450	mg/kg	1	1.2		< 1.0	1.1		< 1.0	1.1
Cadmium	M	2450	mg/kg	0.1	1.0		< 0.10	0.32		< 0.10	0.18
Chromium	M	2450	mg/kg	1	24		11	32		12	38
Copper	M	2450	mg/kg	0.5	62		12	69		15	20
Mercury	M	2450	mg/kg	0.1	0.23		< 0.10	0.54		< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.5	40		19	40		26	42
Lead	M	2450	mg/kg	0.5	1100		75	1500		78	18
Selenium	M	2450	mg/kg	0.2	< 0.20		< 0.20	< 0.20		< 0.20	0.67
Vanadium	U	2450	mg/kg	5	53		24	44		19	36
Zinc	M	2450	mg/kg	0.5	260		69	580		40	65
Chromium (Hexavalent)	N	2490	mg/kg	0.5	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Organic Matter	M	2625	%	0.4	4.0		1.9	2.8	1.6	< 0.40	5.0
Total Organic Carbon	M	2625	%	0.2			1.1		0.90	0.20	
Aliphatic TPH >C5-C6	N	2675	mg/kg	0.01			< 0.010		< 0.010	< 0.010	
Aliphatic TPH >C6-C8	N	2675	mg/kg	0.01			< 0.010		< 0.010	< 0.010	
Aliphatic TPH >C8-C10	N	2675	mg/kg	0.1			< 0.10		< 0.10	< 0.10	
Aliphatic TPH >C10-C12	N	2675	mg/kg	0.1			< 0.10		< 0.10	< 0.10	
Aliphatic TPH >C12-C16	N	2675	mg/kg	0.1			< 0.10		< 0.10	< 0.10	

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107482	107483	107484	107485	107486	107488	107489	107490
Order No.:	Client Sample Ref.:									
	Client Sample ID.:		DTS11	DTS11	CH09	CH10	CH16	DTS10	DTS02	DTS09
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.5	1.6	0.2	0.2	0.2	0.5	3.2	1.4
	Bottom Depth(m):		0.6	1.7	0.3	0.3	0.3	0.6	3.3	1.5
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD						
Aliphatic TPH >C16-C21	N	2675	mg/kg	0.1		< 0.10		< 0.10	< 0.10	
Aliphatic TPH >C21-C35	N	2675	mg/kg	0.1		< 0.10		< 0.10	< 0.10	
Aliphatic TPH >C35-C44	N	2675	mg/kg	0.1		< 0.10		< 0.10	< 0.10	
Total Aliphatic Hydrocarbons	N	2675	mg/kg	1		< 1.0		< 1.0	< 1.0	
Aromatic TPH >C5-C7	N	2675	mg/kg	0.01		< 0.010		< 0.010	< 0.010	
Aromatic TPH >C7-C8	N	2675	mg/kg	0.01		< 0.010		< 0.010	< 0.010	
Aromatic TPH >C8-C10	N	2675	mg/kg	0.1		< 0.10		< 0.10	< 0.10	
Aromatic TPH >C10-C12	N	2675	mg/kg	0.1		< 0.10		< 0.10	< 0.10	
Aromatic TPH >C12-C16	N	2675	mg/kg	0.1		< 0.10		< 0.10	< 0.10	
Aromatic TPH >C16-C21	N	2675	mg/kg	0.1		3.2		< 0.10	< 0.10	
Aromatic TPH >C21-C35	N	2675	mg/kg	0.1		8.0		< 0.10	< 0.10	
Aromatic TPH >C35-C44	N	2675	mg/kg	0.1		< 0.10		< 0.10	< 0.10	
Total Aromatic Hydrocarbons	N	2675	mg/kg	1		11		< 1.0	< 1.0	
Total Petroleum Hydrocarbons	N	2675	mg/kg	2		11		< 2.0	< 2.0	
Dichlorodifluoromethane	U	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
Chloromethane	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
Vinyl Chloride	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
Bromomethane	M	2760	µg/kg	20		< 20		< 20	< 20	
Chloroethane	U	2760	µg/kg	2		< 2.0		< 2.0	< 2.0	
Trichlorofluoromethane	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
1,1-Dichloroethene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
Trans 1,2-Dichloroethene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
1,1-Dichloroethane	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
cis 1,2-Dichloroethene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
Bromochloromethane	U	2760	µg/kg	5		< 5.0		< 5.0	< 5.0	
Trichloromethane	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
1,1,1-Trichloroethane	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
Tetrachloromethane	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
1,1-Dichloropropene	U	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
Benzene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
1,2-Dichloroethane	M	2760	µg/kg	2		< 2.0		< 2.0	< 2.0	
Trichloroethene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
1,2-Dichloropropane	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:				15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:				107482	107483	107484	107485	107486	107488	107489
Order No.:	Client Sample Ref.:										
	Client Sample ID.:				DTS11	DTS11	CH09	CH10	CH16	DTS10	DTS02
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.5	1.6	0.2	0.2	0.2	0.5	3.2
	Bottom Depth(m):				0.6	1.7	0.3	0.3	0.3	0.6	3.3
	Date Sampled:				20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15
Determinand	Accred.	SOP	Units	LOD							
Dibromomethane	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
Bromodichloromethane	M	2760	µg/kg	5			< 5.0		< 5.0	< 5.0	
cis-1,3-Dichloropropene	N	2760	µg/kg	10			< 10		< 10	< 10	
Toluene	M	2760	µg/kg	1			< 1.0		4.0	< 1.0	
Trans-1,3-Dichloropropene	N	2760	µg/kg	10			< 10		< 10	< 10	
1,1,2-Trichloroethane	M	2760	µg/kg	10			< 10		< 10	< 10	
Tetrachloroethene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
1,3-Dichloropropane	U	2760	µg/kg	2			< 2.0		< 2.0	< 2.0	
Dibromochloromethane	U	2760	µg/kg	10			< 10		< 10	< 10	
1,2-Dibromoethane	M	2760	µg/kg	5			< 5.0		< 5.0	< 5.0	
Chlorobenzene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2			< 2.0		< 2.0	< 2.0	
Ethylbenzene	M	2760	µg/kg	1			< 1.0		1.3	< 1.0	
m & p-Xylene	M	2760	µg/kg	1			< 1.0		1.5	< 1.0	
o-Xylene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
Styrene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
Tribromomethane	U	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
Isopropylbenzene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
Bromobenzene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
1,2,3-Trichloropropane	N	2760	µg/kg	50			< 50		< 50	< 50	
N-Propylbenzene	U	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
2-Chlorotoluene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
1,3,5-Trimethylbenzene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
4-Chlorotoluene	U	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
Tert-Butylbenzene	U	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
1,2,4-Trimethylbenzene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
Sec-Butylbenzene	U	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
1,3-Dichlorobenzene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
4-Isopropyltoluene	U	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
1,4-Dichlorobenzene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
N-Butylbenzene	U	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
1,2-Dichlorobenzene	M	2760	µg/kg	1			< 1.0		< 1.0	< 1.0	
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50			< 50		< 50	< 50	

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107482	107483	107484	107485	107486	107488	107489	107490
Order No.:	Client Sample Ref.:									
	Client Sample ID.:		DTS11	DTS11	CH09	CH10	CH16	DTS10	DTS02	DTS09
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.5	1.6	0.2	0.2	0.2	0.5	3.2	1.4
	Bottom Depth(m):		0.6	1.7	0.3	0.3	0.3	0.6	3.3	1.5
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD						
1,2,4-Trichlorobenzene	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
Hexachlorobutadiene	U	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
1,2,3-Trichlorobenzene	U	2760	µg/kg	2		< 2.0		< 2.0	< 2.0	
Carbon Disulphide	N	2760	µg/kg	50		< 50		< 50	< 50	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		< 1.0		< 1.0	< 1.0	
N-Nitrosodimethylamine	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Phenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2-Chlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
1,3-Dichlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
1,4-Dichlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
1,2-Dichlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2-Methylphenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Hexachloroethane	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
4-Methylphenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Nitrobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Isophorone	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2-Nitrophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2,4-Dimethylphenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2,4-Dichlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Naphthalene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
4-Chloroaniline	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Hexachlorobutadiene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2-Methylnaphthalene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Hexachlorocyclopentadiene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2,4,6-Trichlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2,4,5-Trichlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2-Chloronaphthalene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107482	107483	107484	107485	107486	107488	107489	107490
Order No.:	Client Sample Ref.:									
	Client Sample ID.:		DTS11	DTS11	CH09	CH10	CH16	DTS10	DTS02	DTS09
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.5	1.6	0.2	0.2	0.2	0.5	3.2	1.4
	Bottom Depth(m):		0.6	1.7	0.3	0.3	0.3	0.6	3.3	1.5
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD						
2-Nitroaniline	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Acenaphthylene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Dimethylphthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2,6-Dinitrotoluene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Acenaphthene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Dibenzofuran	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
4-Chlorophenylphenylether	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2,4-Dinitrotoluene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Fluorene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Diethyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
4-Nitroaniline	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Azobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Hexachlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Pentachlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Phenanthrene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Anthracene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Carbazole	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Di-N-Butyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Fluoranthene	N	2790	mg/kg	0.5		0.77		< 0.50	< 0.50	
Pyrene	N	2790	mg/kg	0.5		0.62		< 0.50	< 0.50	
Butylbenzyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Benzo[a]anthracene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Chrysene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Di-N-Octyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Benzo[b]fluoranthene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Benzo[k]fluoranthene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Benzo[a]pyrene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	
Benzo[g,h,i]perylene	N	2790	mg/kg	0.5		< 0.50		< 0.50	< 0.50	

Results Summary - Soil

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344
Quotation No.:	Chemtest Sample ID.:		107482	107483	107484	107485	107486	107488	107489	107490
Order No.:	Client Sample Ref.:									
	Client Sample ID.:		DTS11	DTS11	CH09	CH10	CH16	DTS10	DTS02	DTS09
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.5	1.6	0.2	0.2	0.2	0.5	3.2	1.4
	Bottom Depth(m):		0.6	1.7	0.3	0.3	0.3	0.6	3.3	1.5
	Date Sampled:		20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	18-Feb-15	20-Feb-15
Determinand	Accred.	SOP	Units	LOD						
Naphthalene	M	2800	mg/kg	0.1	0.27	< 0.10	0.13		< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10		< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10		< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10		< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.1	0.81	0.40	0.34		< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.1	0.10	< 0.10	< 0.10		< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	0.96	0.60	0.52		< 0.10	< 0.10
Pyrene	M	2800	mg/kg	0.1	0.87	0.71	0.60		< 0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.1	0.39	0.20	0.14		< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.1	0.49	0.20	0.13		< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	0.47	0.36	0.19		< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	0.17	0.10	< 0.10		< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	0.33	0.26	< 0.10		< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	0.28	0.16	< 0.10		< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10		< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	0.28	0.18	< 0.10		< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2	5.4	3.2	2.1		< 2.0	< 2.0
PCB 81	N	2815	mg/kg	0.01		< 0.010				
PCB 77	N	2815	mg/kg	0.01		< 0.010				
PCB 105	N	2815	mg/kg	0.01		< 0.010				
PCB 114	N	2815	mg/kg	0.01		< 0.010				
PCB 118	N	2815	mg/kg	0.01		< 0.010				
PCB 123	N	2815	mg/kg	0.01		< 0.010				
PCB 126	N	2815	mg/kg	0.01		< 0.010				
PCB 156	N	2815	mg/kg	0.01		< 0.010				
PCB 157	N	2815	mg/kg	0.01		< 0.010				
PCB 167	N	2815	mg/kg	0.01		< 0.010				
PCB 169	N	2815	mg/kg	0.01		< 0.010				
PCB 189	N	2815	mg/kg	0.01		< 0.010				
Total PCBs (12 Congeners)	N	2815	mg/kg	0.01		< 0.010				
Total Phenols	M	2920	mg/kg	0.3	< 0.30	< 0.30	< 0.30		< 0.30	< 0.30

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	
Quotation No.:	Chemtest Sample ID.:		107462	107464	107465	107474	107480	107481	107482		
Order No.:	Client Sample Ref.:										
	Client Sample ID.:		DTS01	DTS02	DTS03	DTS07	DTS09	DTS10	DTS11		
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):		0.3	0.4	0.3	0.3	0.4	0.3	0.5		
	Bottom Depth(m):		0.4	0.5	0.4	0.4	0.5	0.4	0.6		
	Date Sampled:		18-Feb-15	18-Feb-15	19-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15		
Determinand	Accred.	SOP	Units	LOD							
pH	U	1010			8.6	8.7	8.7	8.3	8.8	8.4	9.1
Nitrate	U	1220	mg/l	0.5	< 0.50	< 0.50	1.1	10	< 0.50	14	0.57
Sulphate	U	1220	mg/l	1	13	1.2	4.9	1000	9.1	480	8.9
Cyanide (Total)	U	1300	mg/l	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Complex)	U	1300	mg/l	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide	U	1325	mg/l	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Arsenic (Dissolved)	U	1450	µg/l	1	2.3	42	4.8	3.8	1.4	2.9	8.9
Beryllium (Dissolved)	U	1450	µg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Boron (Dissolved)	U	1450	µg/l	20	< 20	< 20	< 20	29	< 20	22	< 20
Cadmium (Dissolved)	U	1450	µg/l	0.08	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080
Chromium (Dissolved)	U	1450	µg/l	1	14	13	13	13	11	11	13
Copper (Dissolved)	U	1450	µg/l	1	3.1	3.2	5.1	7.1	2.8	2.3	4.8
Mercury (Dissolved)	U	1450	µg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel (Dissolved)	U	1450	µg/l	1	< 1.0	< 1.0	< 1.0	1.3	< 1.0	< 1.0	< 1.0
Lead (Dissolved)	U	1450	µg/l	1	1.1	3.5	13	1.1	< 1.0	1.1	50
Selenium (Dissolved)	U	1450	µg/l	1	< 1.0	< 1.0	< 1.0	1.6	1.3	1.3	< 1.0
Vanadium (Dissolved)	U	1450	µg/l	1	6.4	8.0	7.3	5.5	4.4	5.1	12
Zinc (Dissolved)	U	1450	µg/l	1	3.5	2.7	4.0	27	4.3	11	9.0
Naphthalene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	1700	µg/l	0.1	< 0.10	< 0.10	3.8	< 0.10	< 0.10	0.79	0.99
Anthracene	U	1700	µg/l	0.1	< 0.10	< 0.10	1.1	< 0.10	< 0.10	0.16	0.25
Fluoranthene	U	1700	µg/l	0.1	< 0.10	2.0	6.7	< 0.10	< 0.10	5.6	3.7
Pyrene	U	1700	µg/l	0.1	< 0.10	2.5	5.8	< 0.10	< 0.10	6.1	4.2
Benzo[a]anthracene	U	1700	µg/l	0.1	< 0.10	< 0.10	2.3	< 0.10	< 0.10	2.5	2.6
Chrysene	U	1700	µg/l	0.1	< 0.10	< 0.10	1.9	< 0.10	< 0.10	2.2	3.5
Benzo[b]fluoranthene	U	1700	µg/l	0.1	< 0.10	< 0.10	3.4	< 0.10	< 0.10	3.7	1.7
Benzo[k]fluoranthene	U	1700	µg/l	0.1	< 0.10	< 0.10	1.1	< 0.10	< 0.10	1.2	0.56
Benzo[a]pyrene	U	1700	µg/l	0.1	< 0.10	< 0.10	2.9	< 0.10	< 0.10	3.8	2.9
Indeno(1,2,3-c,d)Pyrene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.4	< 0.10

Results Summary - Leachate

Project: STM3043D - TP South Shields, Tudor Road

Client: Soiltechnics Limited	Chemtest Job No.:		15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	15-04344	
Quotation No.:	Chemtest Sample ID.:		107462	107464	107465	107474	107480	107481	107482		
Order No.:	Client Sample Ref.:										
	Client Sample ID.:		DTS01	DTS02	DTS03	DTS07	DTS09	DTS10	DTS11		
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):		0.3	0.4	0.3	0.3	0.4	0.3	0.5		
	Bottom Depth(m):		0.4	0.5	0.4	0.4	0.5	0.4	0.6		
	Date Sampled:		18-Feb-15	18-Feb-15	19-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15	20-Feb-15		
Determinand	Accred.	SOP	Units	LOD							
Dibenz(a,h)Anthracene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.28	< 0.10
Benzo[g,h,i]perylene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.96	< 0.10
Total Of 16 PAH's	U	1700	µg/l	2	< 2.0	4.6	29	< 2.0	< 2.0	30	20
Total Phenols	U	1920	mg/l	0.03	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk

Analysis of test data in relation to concentrations of **inorganic** chemical contaminants

Adopted Model: **Industrial/Commercial**
Receptor: **All human receptors**

Test procedure		Summary of test data					Initial comparison		Outlier test				Normality test			UCL		
Contaminant	Guideline source	Guideline value mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Arsenic	SGV	640	17	4.2	150.0	26.1	0	Mean value below guideline	n					not normal	not normal	n	62.0	Arsenic
Beryllium	GAC	420	17	1.0	3.1	1.2	0	Mean value below guideline	n					not normal	not normal	n	1.8	Beryllium
Boron	GAC	192000	17	0.4	1.8	0.9	0	Mean value below guideline	y					not normal	not normal	n	1.4	Boron
Cadmium	SGV	230	17	0.1	1.0	0.3	0	Mean value below guideline	y					not normal	not normal	n	0.6	Cadmium
Chromium	GAC	30400	17	5.7	47.0	22.4	0	Mean value below guideline	y					normal	normal	y	27.3	Chromium
Copper	GAC	71700	17	8.9	310.0	64.9	0	Mean value below guideline	n					not normal	not normal	n	148.1	Copper
Cyanide (total)	ATK	34	17	0.5	1.7	0.6	0	Mean value below guideline	n					not normal	not normal	n	0.9	Cyanide (total)
Lead	ATK	6490	17	18.0	1500.0	311.7	0	Mean value below guideline	n					not normal	not normal	n	746.1	Lead
Mercury#	SGV	26	17	0.1	1.7	0.4	0	Mean value below guideline	n					not normal	not normal	n	0.9	Mercury#
Nickel	SGV	1800	17	11.0	90.0	35.2	0	Mean value below guideline	n					not normal	not normal	n	54.4	Nickel
Selenium	SGV	13000	17	0.2	1.4	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.7	Selenium
Vanadium	GAC	3160	17	19.0	160.0	50.6	0	Mean value below guideline	n					not normal	not normal	n	85.7	Vanadium
Zinc	GAC	665000	17	32.0	640.0	190.9	0	Mean value below guideline	n					not normal	not normal	n	377.9	Zinc

SGV Soil Guideline Value as published by the Environment Agency 2009
GAC Generic Assessment Criterion as published by LQM and CIEH
SSV Soil Screening Value as derived by Soiltechnics
ATK Soil Screening Value derived by Atkins
NGV No Guideline Value
BPG5 Guideline from BPG Note 5 as published by Forest Research
Assumed to be elemental mercury as initial screening value

Title
Analysis of test data in relation to concentrations of
inorganic chemical contaminants.

Table number
1

Analysis of test data in relation to concentrations of **organic** chemical contaminants

Adopted model: **Industrial/Commercial**
Receptor: **All human receptors and vegetation**

Test procedure		Summary of test data					Initial Screening		Oulier test			Normality test			UCL			
Contaminant	Guideline source	Guideline value mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Acenaphthene	GAC	85000	17	0.1	0.9	0.1	0	Mean value below guideline	n					not normal	not normal	n	0.3	Acenaphthene
Acenaphthylene	GAC	84000	17	0.1	0.2	0.1	0	Mean value below guideline	n					not normal	not normal	n	0.1	Acenaphthylene
Anthracene	GAC	530000	17	0.1	2.3	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.9	Anthracene
Benzo(a)anthracene	GAC	90	17	0.1	4.0	0.8	0	Mean value below guideline	n					not normal	not normal	n	2.0	Benzo(a)anthracene
Benzo(a)pyrene	GAC	14	17	0.1	3.1	0.6	0	Mean value below guideline	n					not normal	not normal	n	1.6	Benzo(a)pyrene
Benzo(b)fluoranthene	GAC	100	17	0.1	4.7	0.9	0	Mean value below guideline	n					not normal	not normal	n	2.4	Benzo(b)fluoranthene
Benzo(g,h,i)perylene	GAC	650	17	0.1	2.5	0.5	0	Mean value below guideline	n					not normal	not normal	n	1.2	Benzo(g,h,i)perylene
Benzo(k)fluoranthene	GAC	140	17	0.1	1.7	0.4	0	Mean value below guideline	n					not normal	not normal	n	0.9	Benzo(k)fluoranthene
Chrysene	GAC	140	17	0.1	4.2	0.8	0	Mean value below guideline	n					not normal	not normal	n	2.1	Chrysene
Dibenzo(a,h)anthracene	GAC	13	17	0.1	0.3	0.1	0	Mean value below guideline	n					not normal	not normal	n	0.2	Dibenzo(a,h)anthracene
Fluoranthene	GAC	23000	17	0.1	9.5	1.7	0	Mean value below guideline	n					not normal	not normal	n	4.3	Fluoranthene
Fluorene	GAC	64000	17	0.1	0.8	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.3	Fluorene
Indeno(1,2,3-cd)pyrene	GAC	60	17	0.1	2.4	0.4	0	Mean value below guideline	n					not normal	not normal	n	1.1	Indeno(1,2,3-cd)pyrene
Naphthalene	GAC	200	17	0.1	1.5	0.4	0	Mean value below guideline	y					not normal	not normal	n	0.9	Naphthalene
Phenanthrene	GAC	22000	17	0.1	7.1	1.4	0	Mean value below guideline	n					not normal	not normal	n	3.3	Phenanthrene
Phenols	SGV	3200	17	0.3	0.3	0.3	0	Mean value below guideline	y					not normal	not normal	n	0.3	Phenols
Pyrene	GAC	54000	17	0.1	7.2	1.5	0	Mean value below guideline	n					not normal	not normal	n	3.6	Pyrene

Notes

SGV Soil Guideline Value as published by the Environment Agency
GAC Generic Assessment Criterion as published by LQM and CIEH
SSV Soil Screening Value as derived by Soiltechnics
NGV No Guideline Value

Title
Analysis of test data in relation to concentrations of
organic chemical contaminants.

Table number
2

Analysis of test data in relation to concentrations of **inorganic** chemical contaminants

Adopted Model: **Industrial/Commercial and BPG5**
Receptor: **Vegetation**

Test procedure		Summary of test data					Initial comparison		Outlier test				Normality test			UCL		
Contaminant	Guideline source	Guideline value mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Arsenic	SGV	640	17	4.2	150.0	26.1	0	Mean value below guideline	n					not normal	not normal	n	62.0	Arsenic
Beryllium	GAC	420	17	1.0	3.1	1.2	0	Mean value below guideline	n					not normal	not normal	n	1.8	Beryllium
Boron	GAC	192000	17	0.4	1.8	0.9	0	Mean value below guideline	y					not normal	normal	y	1.1	Boron
Cadmium	SGV	230	17	0.1	1.0	0.3	0	Mean value below guideline	y					not normal	not normal	n	0.6	Cadmium
Chromium (hex)	GAC	30400	17	5.7	47.0	22.4	0	Mean value below guideline	y					normal	normal	y	27.3	Chromium (hex)
Copper	BPG5	130	17	8.9	310.0	64.9	2	Mean value below guideline	n					not normal	not normal	n	148.1	Copper
Cyanide (total)	ATK	34	17	0.5	1.7	0.6	0	Mean value below guideline	n					not normal	not normal	n	0.9	Cyanide (total)
Lead	ATK	6490	17	18.0	1500.0	311.7	0	Mean value below guideline	n					not normal	not normal	n	746.1	Lead
Mercury#	SGV	26	17	0.1	1.7	0.4	0	Mean value below guideline	n					not normal	not normal	n	0.9	Mercury#
Nickel	SGV	1800	17	11.0	90.0	35.2	0	Mean value below guideline	n					not normal	not normal	n	54.4	Nickel
Selenium	SGV	13000	17	0.2	1.4	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.7	Selenium
Vanadium	GAC	3160	17	19.0	160.0	50.6	0	Mean value below guideline	n					not normal	not normal	n	85.7	Vanadium
Zinc	BPG5	300	17	32.0	640.0	190.9	2	Mean value below guideline	n					not normal	not normal	n	377.9	Zinc

SGV Soil Guideline Value as published by the Environment Agency 2009
GAC Generic Assessment Criterion as published by LQM and CIEH
SSV Soil Screening Value as derived by Soiltechnics
ATK Soil Screening Value derived by Atkins
NGV No Guideline Value
BPG5 Guideline from BPG Note 5 as published by Forest Research
Assumed to be elemental mercury as initial screening value

Title
Analysis of test data in relation to concentrations of inorganic chemical contaminants.

Table number
3

Summary of petroleum hydrocarbon test results

BTEX (Red highlights indicate exceedance of guideline value)

Indicator	unit	Guideline value	Concentration										
			DTS02 0.4	DTS03 0.5	DTS04 0.4	DTS06 1.8	DTS07 0.7	DTS08 0.4	DTS10 0.3	CH09 0.2	CH16 0.2	DTS10 0.5	
Benzene	mg/kg	95	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	4400	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	2800	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o-Xylene	mg/kg	2600	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m,p-Xylene	mg/kg	3200	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Hydrocarbon banding (Red highlights indicate exceedance of GAC value)

Fraction	unit	GAC	Concentration									
			DTS02 0.4	DTS03 0.5	DTS04 0.4	DTS06 1.8	DTS07 0.7	DTS08 0.4	DTS10 0.3	CH09 0.2	CH16 0.2	DTS10 0.5
Aliphatic												
EC 5 - 6	mg/kg	3400	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
EC >6 - 8	mg/kg	8300	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
EC >8 - 10	mg/kg	2100	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
EC >10 - 12	mg/kg	10000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
EC >12 - 16	mg/kg	61000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
EC >16 - 35	mg/kg	1600000	87	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
EC >35 - 44	mg/kg	1600000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic												
EC 5 - 7 (benzene)	mg/kg	28000	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
EC >7 - 8 (toluene)	mg/kg	59000	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
EC >8 - 10	mg/kg	3700	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
EC >10 - 12	mg/kg	17000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
EC >12 - 16	mg/kg	36000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
EC >16 - 21	mg/kg	28000	< 0.10	< 0.10	3.8	< 0.10	1.9	< 0.10	5.1	3.2	< 0.10	< 0.10
EC >21 - 35	mg/kg	28000	< 0.10	< 0.10	12	< 0.10	3.2	< 0.10	11	8	< 0.10	< 0.10
EC >35 - 44	mg/kg	28000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Notes

1. Generic Assessment Criteria (GAC) as presented in "Generic Assessment Criteria for Human Health Risk Assessment" published by Land Quality Management (LQM) and the Chartered Institute of Environmental Health (CIEH).

Title	Table number
Comparison of measured concentrations of petroleum	4

Summary of leachate test results

Receptor **Groundwater**
Water type **Freshwater**
Fish type **Salmonid**
Water hardness **100-150** mg/l

Contaminant	Guideline value (µg/l)	Guideline source	Location Depth (m)	DTS01 0.3	DTS02 0.4	DTS03 0.3	DTS07 0.3	DTS09 0.4	DTS10 0.3	DTS11 0.5
Inorganics (µg/l)										
Arsenic	50	EQS (f)		2	42	5	4	1	3	9
Boron	2000	EQS (f)		< 20	< 20	< 20	29	< 20	22	< 20
Cadmium	5	EQS (f)		< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080
Chromium	20	EQS (f)		14	13	13	13	11	11	13
Copper	10	EQS (f)		3	3	5	7	3	2	5
Lead	10	EQS (f)		1	4	13	1	< 1.0	1	50
Mercury	1	EQS (f)		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel	150	EQS (f)		< 1.0	< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0
Selenium ¹	10	UKDWS		< 1.0	< 1.0	< 1.0	2	1	1	< 1.0
Vanadium ²	20	EQS (f)		6	8	7	6	4	5	12
Zinc	75	EQS (f)		4	3	4	27	4	11	9
Free Cyanide ¹	50	UKDWS		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate as N	50000	UKDWS		< 0.50	< 0.50	1100	10000	< 0.50	14000	570
Sulphate as SO4	400000	EQS(f)		13000	1200	4900	1000000	9100	480000	8900
PAH (µg/l)										
Benzo(a)pyrene ^{1,4}	0.01	UKDWS		< 0.10	< 0.10	2.90	< 0.10	< 0.10	3.80	2.90
Naphthalene ²	10	EQS (f)		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sum of 4 PAH ¹	0.1	UKDWS		<0.1*	<0.1*	<0.1*	<0.1*	<0.1*	6.1	<0.1*

Notes

- 1 EQS values not available
- 2 UKDWS not available
- 3 Lower detectable limit above UKDWS. Concentrations below detectable limits are not considered further.
- * Taken as lower detection limit
- # Taken as lower detection limit of a single compound
- \$ Hardness data presented by the Environment Agency

UKDWS UK Drinking Water Standard Guideline taken from "The Water Supply (Water Quality) Regulations 2000"
EQS (f) Environmental Quality Standard for freshwater published by the Environment Agency
EQS (s) Environmental Quality Standard for saltwater published by the Environment Agency

Title	Table number
Comparison of measured concentrations with guideline values for water receptors.	5

Initial Conceptual Model

Current site use commercial/industrial
Proposed site use commercial/industrial

Source	Pathway										Receptor	Risk assessment to CIRIA C552			
	Humans											Consequence of risk occurring via most likely pathway	Risk		
	Ingestion of air-borne dusts	Ingestion of soil	Ingestion of vegetables and soil attached to vegetables	Inhalation of air-borne dusts	Inhalation of vapours	Dermal contact with soil and dust	Vegetation Root uptake, deposition to shoots and foliage contact	Water Percolation of water through contaminated soils	Near-surface water run-off through contaminated	Saturation of contaminated soils by flood waters					
Soils - On site															
Bomb damage (unexploded ordnance)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Demolition of historic buildings (residential) Metals, PAHs, asbestos	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (current)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Former railway land (northern part of the site) Metals, PAHs, TPH	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Former tramway (central part of the site) Metals, PAHs, TPH	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Former furniture works (Be Modern) Metals, PAHs and VOCs	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Former photographic laboratory (Metals, PAHs and VOCs)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Former garage (Metals, PAHs and TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Chemical store (Metals, PAHs and VOCs)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Diesel tank and waste wood combustion area (Metals, PAHs and TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Electrical substation (northern eastern part of the site) Metals, PAHs and PCPs	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low

Engine/pump room located to the eastern part of the warehouse (PAHs and TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Made Ground soils (Metals, PAHs and Asbestos)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Medium	Low/moderate	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Adjacent site															
Former railway land (adjaect northern site boundary Metals, PAHs, TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Mild	Low/moderate	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Depots (Metals, PAHs and TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Mild	Low/moderate	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Chemical works (Alkaline)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Mild	Low/moderate	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Recorded Made Ground (Metals, PAHs and Asbestos)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Mild	Low/moderate	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
MOT test centre (TPHs)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Mild	Low/moderate	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
PVC-U manufacture (VOCs/SVOCs and TPHs)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Mild	Low/moderate	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low

Title	Table number
Initial Conceptual Site Model	1

Updated Conceptual Model

Current site use commercial/industrial
Proposed site use commercial/industrial

Source	Pathway											Receptor	Risk assessment to CIRIA C552		
	Humans						Vegetation	Water					Consequence of risk occurring via most likely pathway	Risk	
	Ingestion of air-borne dusts	Ingestion of soil	Ingestion of vegetables and soil attached to vegetables	Inhalation of air-borne dusts	Inhalation of vapours	Dermal contact with soil and dust	Root uptake, deposition to shoots and foliage contact	Percolation of water through contaminated soils	Near-surface water run-off through contaminated	Saturation of contaminated soils by flood waters					
Soils - On site															
Bomb damage (unexploded ordnance)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Demolition of historic buildings (residential) Metals, PAHs, asbestos	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (current)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Former railway land (northern part of the site) Metals, PAHs, TPH	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Former tramway (central part of the site) Metals, PAHs, TPH	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Former furniture works (Be Modern) Metals, PAHs and VOCs	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Former photographic laboratory (Metals, PAHs and VOCs)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Former garage (Metals, PAHs and TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Chemical store (Metals, PAHs and VOCs)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Diesel tank and waste wood combustion area (Metals, PAHs and TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Electrical substation (northern part of the site) Metals, PAHs and PCPs	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	-	Current and proposed site users	Adult	Minor	Low
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
Electrical substation (northern part of the site) Metals, PAHs and PCPs	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low

Engine/pump room located to the eastern part of the warehouse (PAHs and TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Minor	Low	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Made Ground soils (Metals, PAHs and Asbestos)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Minor	Low	
	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Medium	Low/moderate
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Mild	Low
Adjacent site															
Former railway land (adjaect northern site boundary Metals, PAHs, TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Minor	Low	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Depots (Metals, PAHs and TPH)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Minor	Low	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Chemical works (Alkaline)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Minor	Low	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
Recorded Made Ground (Metals, PAHs and Asbestos)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Minor	Low	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
MOT test centre (TPHs)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Minor	Low	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low
PVC-U manufacture (VOCs/SVOCs and TPHs)	Likely	Unlikely	Unlikely	Likely	Likely	Unlikely	-	-	-	-	Current and proposed site users	Adult	Minor	Low	
	Likely	Unlikely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low	
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low	
	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Low likelihood	Unlikely	Water (current)	-	Mild	Low
	-	-	-	-	-	-	-	-	Low likelihood	Low likelihood	Unlikely	Water (proposed)	-	Minor	Very low

Title	Table number
Updated Conceptual Site Model	1

Table comparing cumulative compound concentrations with hazardous waste threshold values

Category of danger	Irritant	Harmful	Toxic	Carcinogenic	Corrosive	Toxic for reproduction	Mutagenic	Ecotoxic								
								ΣN : R50-53/0.25	ΣN : 50-53	ΣN : 50-53						
Risk Phrase	Xi	Xn	T+	T	Carc Cat 1 or 2	Carc Cat 3	C R34	C R35	Repr Cat 1 or 2	Repr Cat 3	Muta Cat 2	Muta Cat 3	ΣN : R51-53/2.5	ΣN : R50	ΣN : 51-53	
													+	+	+	
Contaminant	Highest concentration	H4 (%)	H5 (%)	H6 (%)	H6 (%)	H7 (%)	H8 (%)	H8 (%)	H10 (%)	H10 (%)	H11 (%)	H11 (%)	H14	H14	H14	
Metals																
Arsenic	150.00			0.0198	0.0230	0.0230							2.5646	0.0230	0.0230	
Beryllium	3.10	0.0009		0.0009	0.0009	0.0009									0.0009	
Copper	310.00	0.0775	0.0775											0.0775	0.0775	
Cadmium	0.91		0.0001		0.0001	0.0001										
Chromium	34.00					0.0055								0.0055	0.0055	
Lead	540.00		0.0582						0.0582	0.0582				0.0582	0.0582	
Mercury	1.70			0.0002										0.0002	0.0002	
Nickel	90.00		0.0114				0.0114				0.0114			0.0114	0.0114	
Selenium	1.40				0.0001									0.0001	0.0001	
Zinc	640.00													0.4640	0.0000	
Vanadium	160.00	0.0235			0.0235					0.0235		0.0235			0.0235	
PAH																
Naphthalene	1.50		0.0002											0.0002	0.0002	
Benzo(a)anthracene	4.00			0.0004	0.0004									0.0004	0.0004	
Chrysene	4.20			0.0004	0.0004							0.0004		0.0004	0.0004	
Benzo(b)fluoranthene	4.70			0.0005	0.0005									0.0005	0.0005	
Benzo(k)fluoranthene	1.70			0.0002	0.0002									0.0002	0.0002	
Benzo(a)pyrene	3.10				0.0003				0.0003		0.0003			0.0003	0.0003	
Dibenzo(a,h)anthracene	0.29			0.0000	0.0000									0.0000	0.0000	
TPH																
Benzene	0.00			0.0000	0.0000											
1,2,4-trimethylbenzene	0.00	0.0000	0.0000												0.0000	
PRO (C6 - C10)	0.00		0.0000			0.0000									0.0000	
DRO (C10 - C35)	3.80		0.0004				0.0004								0.0004	
Total (or greatest)		0.1019	0.1478	0.0208	0.0491	(0.023)	(0.0114)	0.0000	0.0000	(0.0582)	(0.0000)	(0.0003)	(0.0000)	2.5646	0.6419	0.2026
Threshold		20%	25%	0.10%	3%	0.10%	1%	5%	1%	0.50%	5%	0.10%	1%	1	25%	25%
Exceeded Y/N		N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N

Title
Hazard assessment spreadsheet for Type 1 Made
Ground soils (north of site)

Table number
1 of 2

Table comparing cumulative compound concentrations with hazardous waste threshold values

Category of danger	Irritant	Harmful	Toxic	Carcinogenic	Corrosive	Toxic for reproduction	Mutagenic	Ecotoxic								
								ΣN : R50-53/0.25	ΣN : 50-53	ΣN : 50-53						
Risk Phrase	Xi	Xn	T+	T	Carc Cat 1 or 2	Carc Cat 3	C R34	C R35	Repr Cat 1 or 2	Repr Cat 3	Muta Cat 2	Muta Cat 3	ΣN : R51-53/2.5	ΣN : R50	ΣN : 51-53	
													ΣN : R52-53/25	ΣN : 52-53		
Contaminant	Highest concentration	H4 (%)	H5 (%)	H6 (%)	H6 (%)	H7 (%)	H8 (%)	H8 (%)	H10 (%)	H10 (%)	H11 (%)	H11 (%)	H14	H14	H14	
Metals																
Arsenic	34.00			0.0045	0.0052	0.0052							2.4855	0.0052	0.0052	
Beryllium	1.30	0.0004		0.0004	0.0004	0.0004									0.0004	
Copper	69.00	0.0173	0.0173											0.0173	0.0173	
Cadmium	1.00		0.0001		0.0001	0.0001										
Chromium	47.00					0.0076								0.0076	0.0076	
Lead	1500.00		0.1617						0.1617	0.1617				0.1617	0.1617	
Mercury	0.63			0.0001										0.0001	0.0001	
Nickel	58.00		0.0074				0.0074			0.0074				0.0074	0.0074	
Selenium	0.67				0.0001									0.0001	0.0001	
Zinc	580.00													0.4205	0.0000	
Vanadium	53.00	0.0078			0.0078					0.0078		0.0078			0.0078	
PAH																
Naphthalene	0.66		0.0001											0.0001	0.0001	
Benzo(a)anthracene	2.70			0.0003	0.0003									0.0003	0.0003	
Chrysene	2.90			0.0003	0.0003							0.0003		0.0003	0.0003	
Benzo(b)fluoranthene	4.10			0.0004	0.0004									0.0004	0.0004	
Benzo(k)fluoranthene	1.60			0.0002	0.0002									0.0002	0.0002	
Benzo(a)pyrene	2.90				0.0003				0.0003		0.0003			0.0003	0.0003	
Dibenzo(a,h)anthracene	0.30			0.0000	0.0000									0.0000	0.0000	
TPH																
Benzene	0.00			0.0000	0.0000											
1,2,4-trimethylbenzene	0.00	0.0000	0.0000												0.0000	
PRO (C6 - C10)	0.00		0.0000			0.0000									0.0000	
DRO (C10 - C35)	5.10		0.0005				0.0005								0.0005	
Total (or greatest)		0.0254	0.1870	0.0049	0.0147	(0.0076)	(0.0074)	0.0000	0.0000	(0.1617)	(0.0000)	(0.0003)	(0.0000)	2.4855	0.6213	0.2094
Threshold		20%	25%	0.10%	3%	0.10%	1%	5%	1%	0.50%	5%	0.10%	1%	1	25%	25%
Exceeded Y/N		N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N

Title
Hazard assessment spreadsheet - Type 2 soils (south of site)

Table number
2 of 2

Landfill Waste				Laboratory test data	
Parameter	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill	Made Ground Type 1 - North of site	Made Ground Type 2 - South of site
Parameters determined on the waste					
Total organic carbon (w/w %)	3%	5%	6%*	14	1.2
Loss on ignition			10%*	13	5
BTEX (mg kg ⁻¹)	6			< 0.01	< 0.01
PCBs (7 congeners) (mg kg ⁻¹)	1			< 0.10	< 0.10
Mineral oil C ₁₀ - C ₄₀ (mg kg ⁻¹)	500			< 10	< 10
PAH (17 congeners)	100			7.8	< 2.0
pH		>6		9.7	8.6
Acid neutralisation capacity pH 6 (mol kg ⁻¹)		To be evaluated	To be evaluated	0.91	0.2
Acid neutralisation capacity pH 4 (mol kg ⁻¹)		To be evaluated	To be evaluated		
Limit values (mg kg⁻¹) for compliance test using BN 12457-3 at L/S 10 l kg⁻¹					
As (arsenic)	0.5	2	25	< 0.050	< 0.050
Ba (barium)	20	100	300	< 0.50	< 0.50
Cd (cadmium)	0.04	1	5	< 0.010	< 0.010
Cr (chromium (total))	0.5	10	70	< 0.050	< 0.050
Cu (Copper)	2	50	100	< 0.050	< 0.050
Hg (mercury)	0.01	0.2	2	< 0.005	< 0.005
Mo (molybdenum)	0.5	10	30	0.14	< 0.050
Ni (nickel)	0.4	10	40	< 0.050	< 0.050
Pb (lead)	0.5	10	50	< 0.010	< 0.010
Sb (antimony)	0.06	0.7	5	< 0.010	< 0.010
Se (selenium)	0.1	0.5	7	0.044	0.01
Zn (zinc)	4	50	200	< 0.50	< 0.50
Cl (chloride)	800	15,000	25,000	29	31
F (fluoride)	10	150	500	< 1.0	1.7
SO ₄ (sulphate)	1000#	20,000	50,000	2600	130
Total Dissolved Solids (TDS) ⁺	4,000	60,000	100,000	3900	750
Phenol index	1			< 0.50	< 0.50
Dissolved organic carbon at own pH or pH 7.5-8.0 [@]	500	800	1000	180	< 50

Notes

- * Either TOC or LOI must be used for hazardous waste
- # If an inert waste does not meet the SO₄ L/S10 limit, alternative limit values of 1500 mg l-1 SO₄ at Co (initial eluate from the percolation test (prCEN/TS 14405:2003)) AND 6000 mg kg-1 SO₄ at L/S10 (either from the percolation test or batch test BS EN 12457-3), can be used to demonstrate compliance with the acceptable criteria for inert wastes.
- + The value for TDS can be used instead of the values for Cl and SO₄
- @ DOC at pH 7.5-8.0 abd L/S10 can be determined or eluate derived from a modified version of the pH dependence Test, prEN 14429, if the limit value at own pH (BS EN 12457 eluate) is not met

PRIMARY CLASSIFICATION	HAZARDOUS	HAZARDOUS
SECONDARY CLASSIFICATION	EXCEEDS HAZARDOUS -	STABLE NON-REACTIVE

Title

Comparison of test data with landfill waste acceptance criteria (table 5.1). (Secondary Assessment)

Appendix

E

Basic categorisation schedule for Made Ground (Type 1) soils

**Produced following the requirements of The Landfill (England and Wales) (Amendment)
Regulations 2004 Part 2 (5)**

(a) *Source and origin of waste*

Proposed development at an industrial property off Tudor Way, Western Approach, South Shields, NE33 5QZ

(b) *Process producing the waste*

Foundation and service trench excavations and general site clearance

(c) *Statement on waste treatment*

Refer to pre-treatment confirmation form

(d) *Composition of the waste*

Made Ground comprised of brown, orange brown, light grey and reddish brown sand and sandy gravel with localised gravelly clay lenses and substantial coal content. Gravels include flint, metal, plastic, clinker ash and brick.

(e) *Appearance of the waste*

As above

(f) *European waste catalogue code*

17-05-03* (for hazardous waste)

(g) *Hazardous waste properties*

none

(h) *Is the waste prohibited under regulation 9?*

No

(i) *Landfill class*

Hazardous waste

(j) *Additional precautions required at landfill*

none

(k) *Can waste be recycled or recovered?*

YES

(l) *Name and address of waste producer*

Land owner / developers name

(m) *Name and address of consultant*

Soiltechnics Limited, Cedar Barn, White Lodge, Walgrave, Northampton. NN6 9PY.

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Website: www.soiltechnics.net

**Schedule Date:
05.03.15**

signed

**Soiltechnics reference
STM3043D**



Andrew Fitzpatrick B.Sc, (Hons), M.Sc.

Geo-environmental Engineer for Soiltechnics Limited

Basic categorisation schedule for Made Ground (Type 2) soils

Produced following the requirements of The Landfill (England and Wales) (Amendment) Regulations 2004 Part 2 (5)

(a) *Source and origin of waste*

Proposed development at an industrial property off Tudor Way, Western Approach, South Shields, NE33 5QZ

(b) *Process producing the waste*

Foundation and service trench excavations and general site clearance

(c) *Statement on waste treatment*

Refer to pre-treatment confirmation form

(d) *Composition of the waste*

Made Ground comprised of orange brown, reddish brown, dark grey and dark brown, clay, sand and gravels of flint, ash, brick, timber and sandstone.

(e) *Appearance of the waste*

As above

(f) *European waste catalogue code*

17-05-03* (for hazardous waste)

(g) *Hazardous waste properties*

none

(h) *Is the waste prohibited under regulation 9?*

No

(i) *Landfill class*

Stable non-reactive hazardous waste

(j) *Additional precautions required at landfill*

none

(k) *Can waste be recycled or recovered?*

YES

(l) *Name and address of waste producer*

Land owner / developers name

(m) *Name and address of consultant*

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Basic categorisation schedule for Seventy Fathom Post Member soils

Produced following the requirements of The Landfill (England and Wales) (Amendment) Regulations 2004 Part 2 (5)

(a) *Source and origin of waste*

Proposed development at an industrial property off Tudor Way, Western Approach, South Shields, NE33 5QZ

(b) *Process producing the waste*

Foundation and service trench excavations and general site clearance

(c) *Statement on waste treatment*

Refer to pre-treatment confirmation form

(d) *Composition of the waste*

Saventy Fathom Post Member comprised of extremely weak light orange brown medium grained sandstone and light brown gravelly sand, gravels consist of extremely weak sandstone

(e) *Appearance of the waste*

As above

(f) *European waste catalogue code*

17-05-03* (for hazardous waste)

(g) *Hazardous waste properties*

none

(h) *Is the waste prohibited under regulation 9?*

No

(i) *Landfill class*

Inert based on soils being of natural origin and unlikely to be affected by artificial contamination

(j) *Additional precautions required at landfill*

none

(k) *Can waste be recycled or recovered?*

YES

(l) *Name and address of waste producer*

Land owner / developers name

(m) *Name and address of consultant*

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**Schedule Date:
05.03.15**

signed

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Basic categorisation schedule for Till soils

Produced following the requirements of The Landfill (England and Wales) (Amendment) Regulations 2004 Part 2 (5)

(a) *Source and origin of waste*

Proposed development at an industrial property off Tudor Way, Western Approach, South Shields, NE33 5QZ

(b) *Process producing the waste*

Foundation and service trench excavations and general site clearance

(c) *Statement on waste treatment*

Refer to pre-treatment confirmation form

(d) *Composition of the waste*

Till comprised of high strength, dark green and grey clay

(e) *Appearance of the waste*

As above

(f) *European waste catalogue code*

17-05-03* (for hazardous waste)

(g) *Hazardous waste properties*

none

(h) *Is the waste prohibited under regulation 9?*

No

(i) *Landfill class*

Inert based on soils being of natural origin and unlikely to be affected by artificial contamination

(j) *Additional precautions required at landfill*

none

(k) *Can waste be recycled or recovered?*

YES

(l) *Name and address of waste producer*

Land owner / developers name

(m) *Name and address of consultant*

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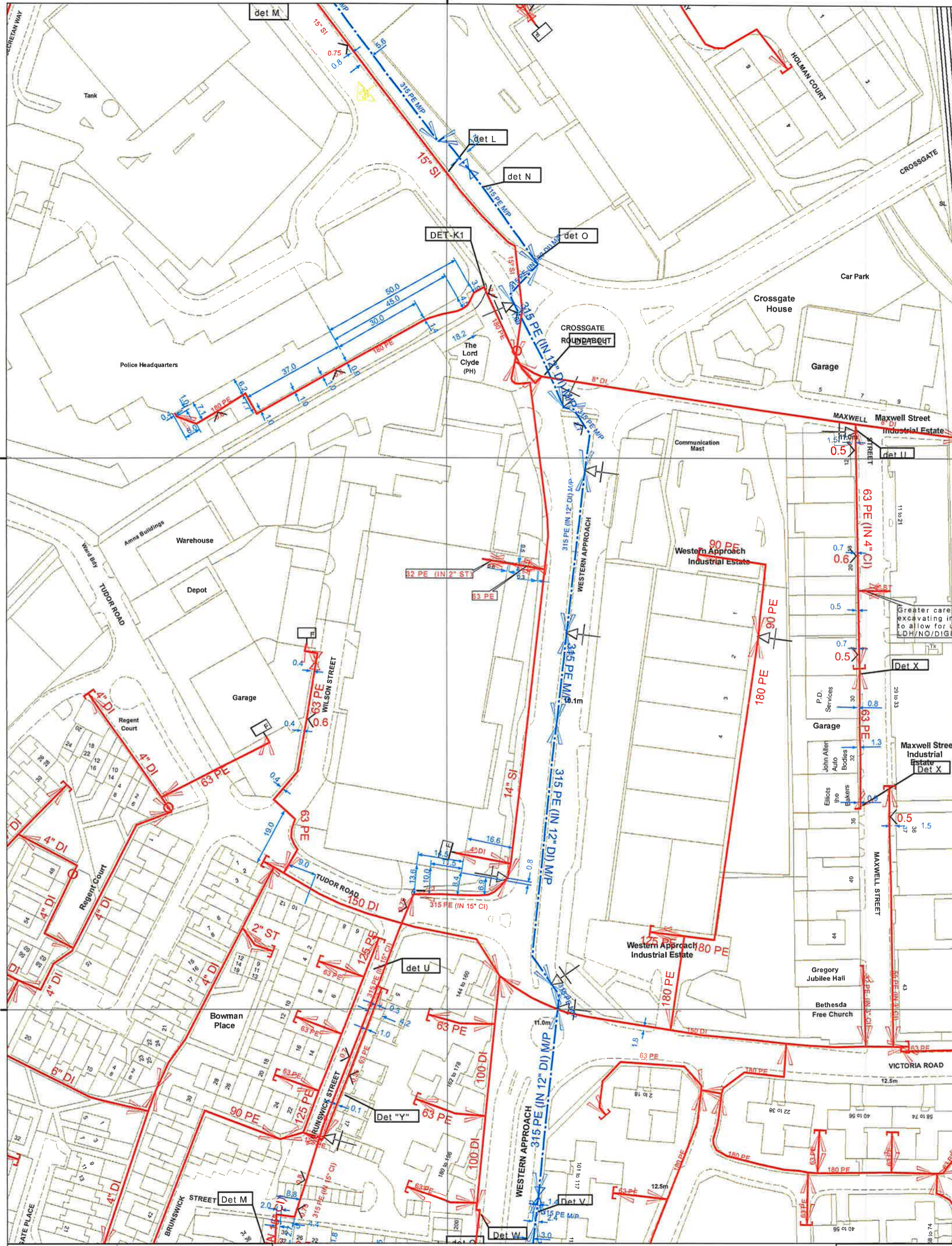
**Schedule Date:
05.03.15**

signed

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DATE:	09/01/2015 15:15:20
GRID REFERENCE:	E: 436212 N: 566539

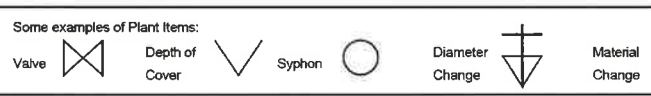
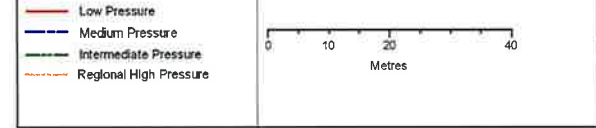
TITLE : Western Approach South Shields NE33 5QZ

The plan shows those pipes owned by Northern Gas Networks or the relevant Gas Distribution Network in their roles as Licenced Gas Transporters (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Northern Gas Networks, the relevant Gas Distribution Network, or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

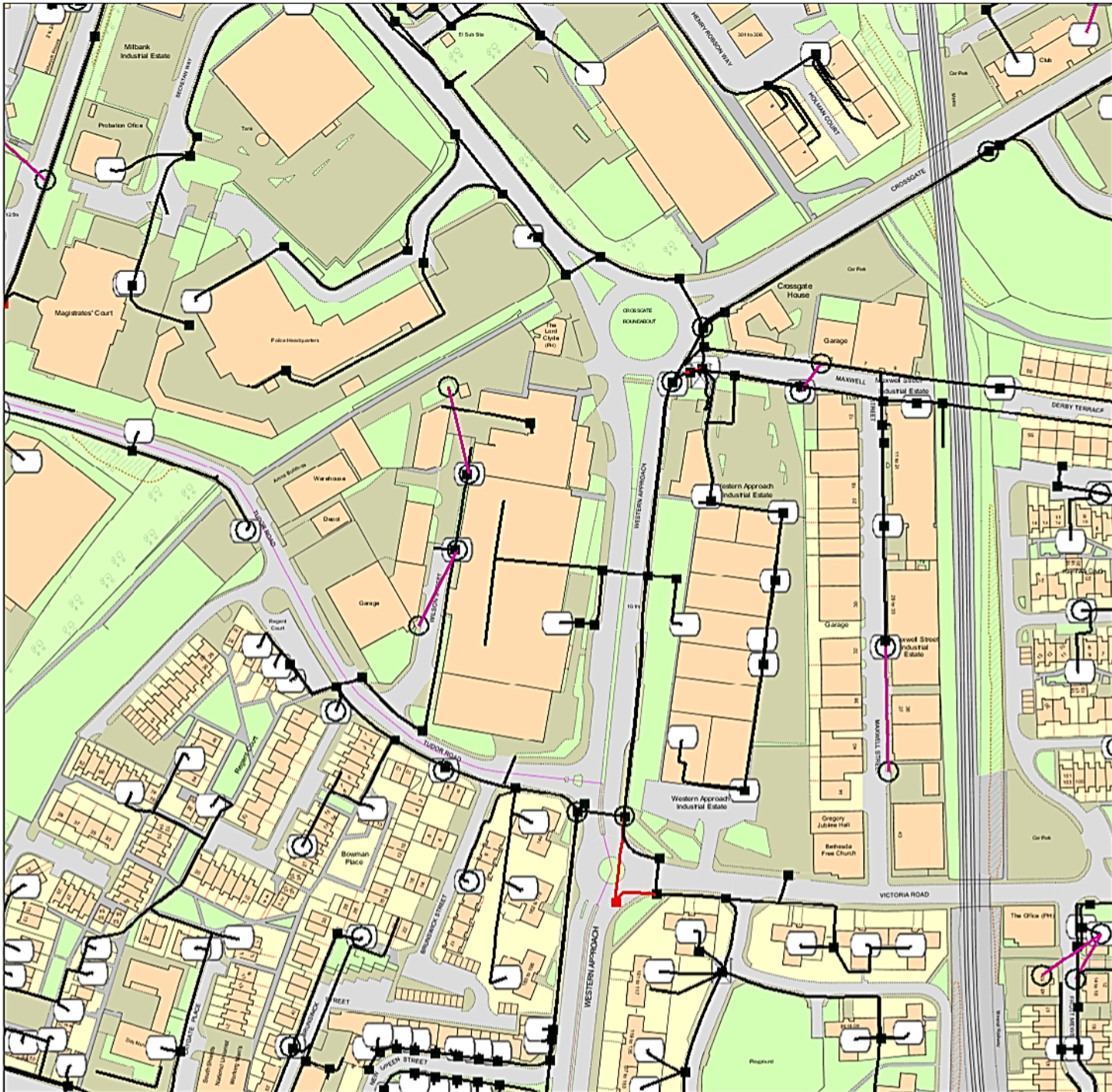
Northern Gas Networks
ArcGIS Server 9.3.1

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NRSWA RESPONSE



Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

DIAL BEFORE YOU DIG

FOR PROFESSIONAL ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS

ADVANCE NOTICE REQUIRED
(Office hours: Monday-Friday 08.00 to 17.00)

Tel: 0800 9173993
E-mail: dbyd@openreach.co.uk
Website: www.dialbeforeyoudig.com

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KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	A/C, D/W or W OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	OTHER BT BOUNDARY		PROPOSED BOX

Other proposed plant is shown using dashed lines. BT symbols not listed above may be disregarded. Existing BT plant may not be recorded. Information valid at the time of preparation.

openreach
a BT Group business

BT Ref : WGC03476C

Map Reference : (centre) NZ3621266539

Easting/Northing : (centre) 436212,566539

Issued : 03/02/2015 15:49:22

FOOTNOTE: WARNING IT IS ESSENTIAL THAT YOU CONTACT NATIONAL NETWORK HANDLING CENTRE BY EMAIL nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA



If telephoning or calling please ask for:

Andrew Ashmore
0191 2294282

Our Ref: 15/366915

Your Ref: STM3043D

Date: 05 February 2015

Rachel Brown
Soiltechnics Geotechnical Consultants
Cedar Barn
White Lodge
Walgrave
Northampton
NN6 9PY

Dear Sir/Madam

REQUEST FOR RECORDS SHOWING LOCATION OF APPARATUS at:

TP South Shields

Thank you for your enquiry dated 03/02/2015 concerning the above. The enclosed Mains Records only give the approximate location of known Northern Powergrid apparatus in the area. Great care is therefore needed and all cables and overhead lines must be assumed to be live.

Please note that while all efforts are made to ensure the accuracy of the data, no guarantee can be given. We would refer you to the Health & Safety Executive's publication HS(G)47 "Avoiding Danger From Underground Services" which emphasises that:

* Plans must only be used as a guide in the location of underground cables. The use of a suitable cable-tracing device is essential and careful hand digging of trial holes must be carried out to positively identify and mark the exact route of the cable. You should also bear in mind that a cable is unmistakably located only when it has been safely exposed.

* Cable depths are not generally indicated on our records and can vary considerably even when shown.

* Great caution must be exercised at all times when using mechanical plant. Careful trial digging should always be carried out on the whole route of the planned excavation to ascertain no cables exist.

The Health & Safety Executive have another publication, GS6 "Avoidance of Danger from Overhead Electric Lines" that you should be aware of if your work is near overhead power lines. Both of these documents provide comprehensive guidance for observance of statutory duties under the Electricity at Work Regulations 1989 and the Health & Safety at Work Act 1974. Our provision of these records is based upon the assumption that people using them will have sufficient competence to interpret the information given. Any damage or injury caused will be the responsibility of the organisation concerned who will be charged for any repairs.

Please note ground cover must not be altered either above our cables or below overhead lines, in addition no trees should be planted within 3 metres of existing underground cables or 10 metres of overhead lines. All our apparatus is legally covered by a wayleaves agreement, lease or deed or alternatively protected under the Electricity Act 1989. Should any alteration / diversion of our Company's apparatus be necessary to allow your work to be carried out, budget costs can be provided by writing to Network Connections, Northumbria Works, Mill Street East, Dewsbury. WF12 9AH.

Yours faithfully

I. Foster.

Northern Powergrid Records Information Centre

Northern Powergrid Mains Records enclosed:

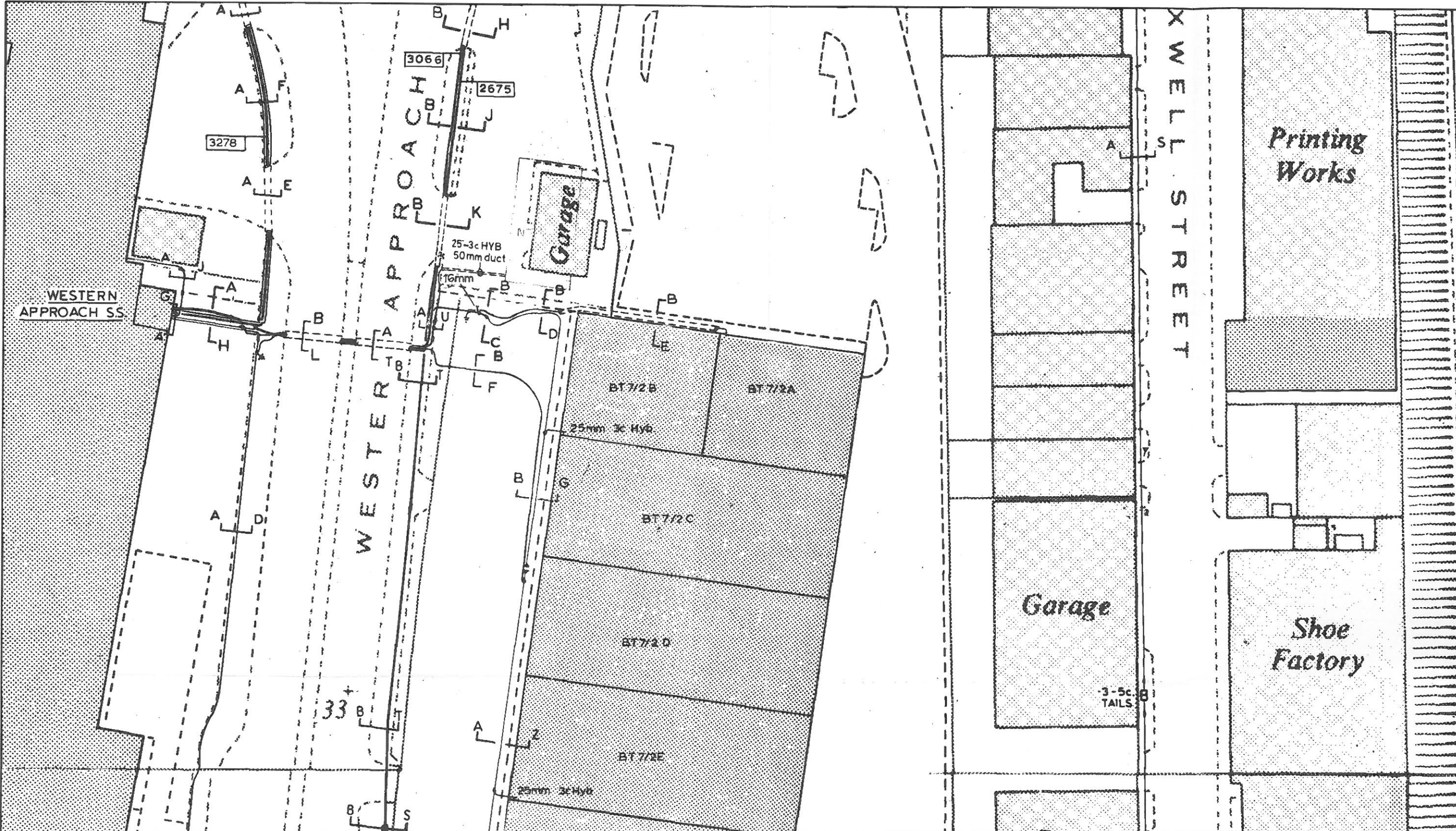
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NZ360666.TIF NZ360666.001 NZ360666.002 NZ360666.003 NZ362662.TIF NZ360662.TIF

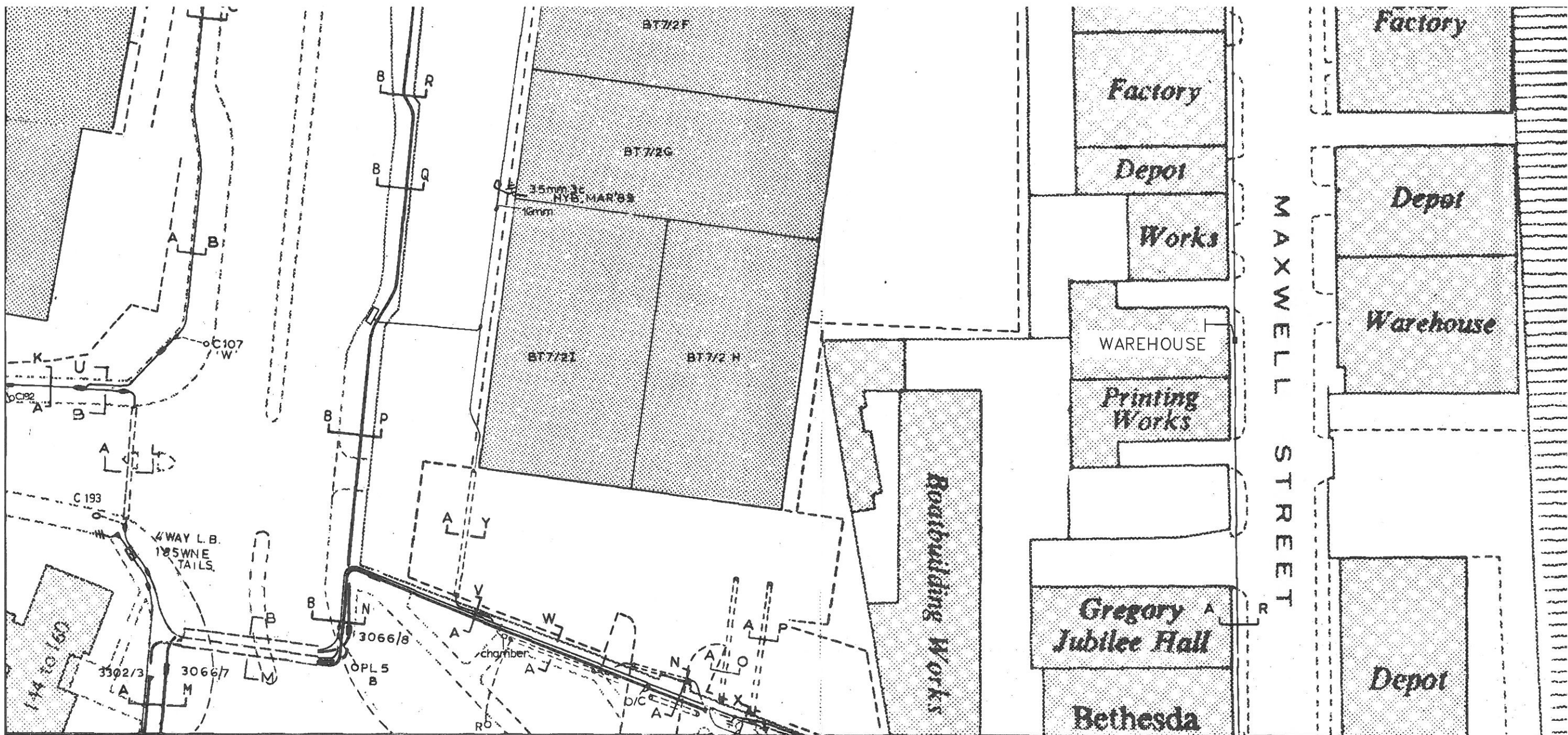
NORTHERN POWERGRID

is the trading name of Northern Powergrid (Northeast) Limited (Registered No: 2906593) and Northern Powergrid (Yorkshire) plc (Registered No: 4112320)
Registered Office: Lloyds Court, 78 Grey Street, Newcastle upon Tyne NE1 6AF. Registered in England and Wales.

If you would like an audio copy of this letter or a copy in large type, Braille or another language, please call 0800 169 7602.

www.northernpowergrid.com





Scale: 1:500
 Map: NZ362664.TIF
 Date: 05 Feb 2015

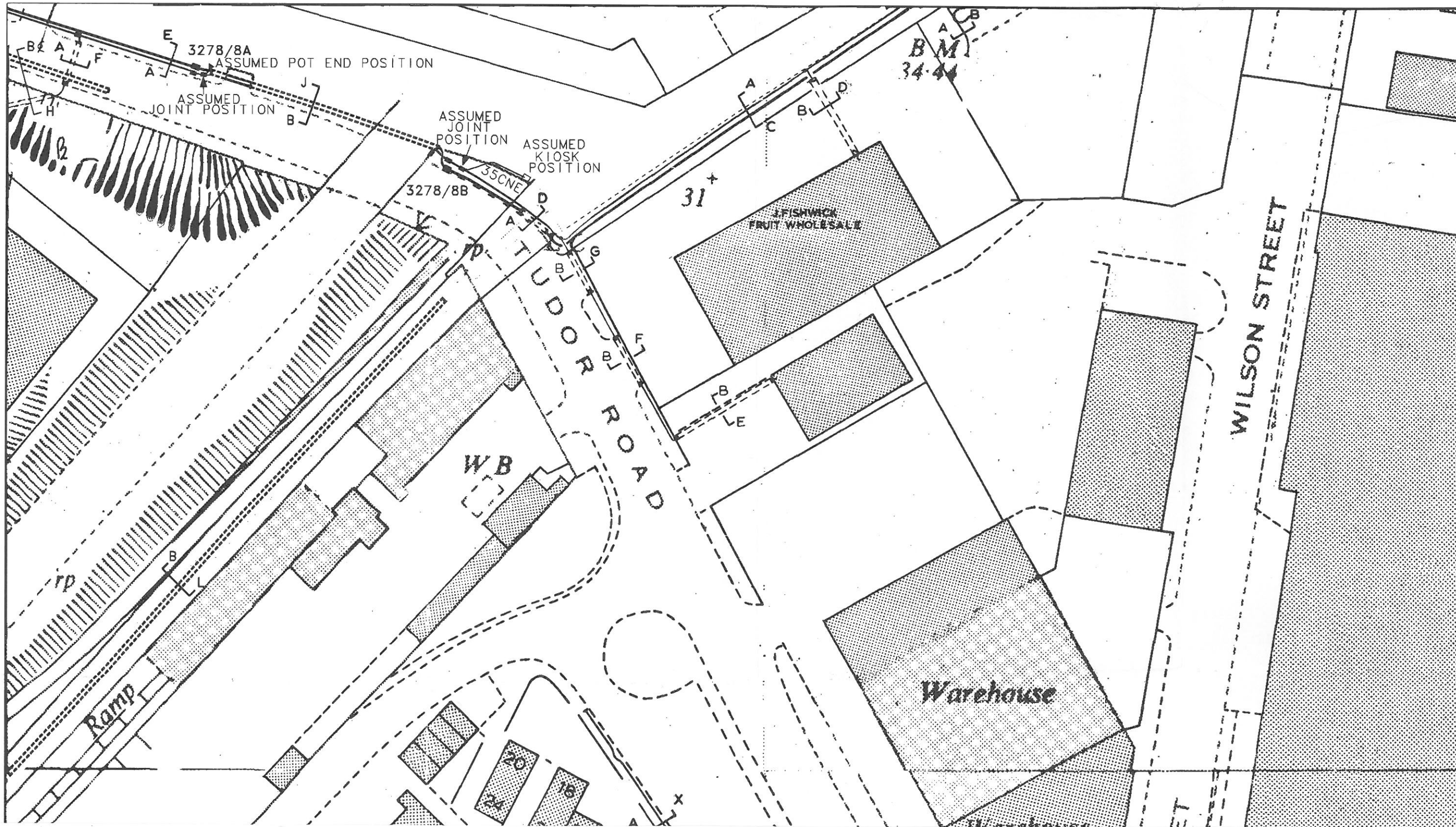


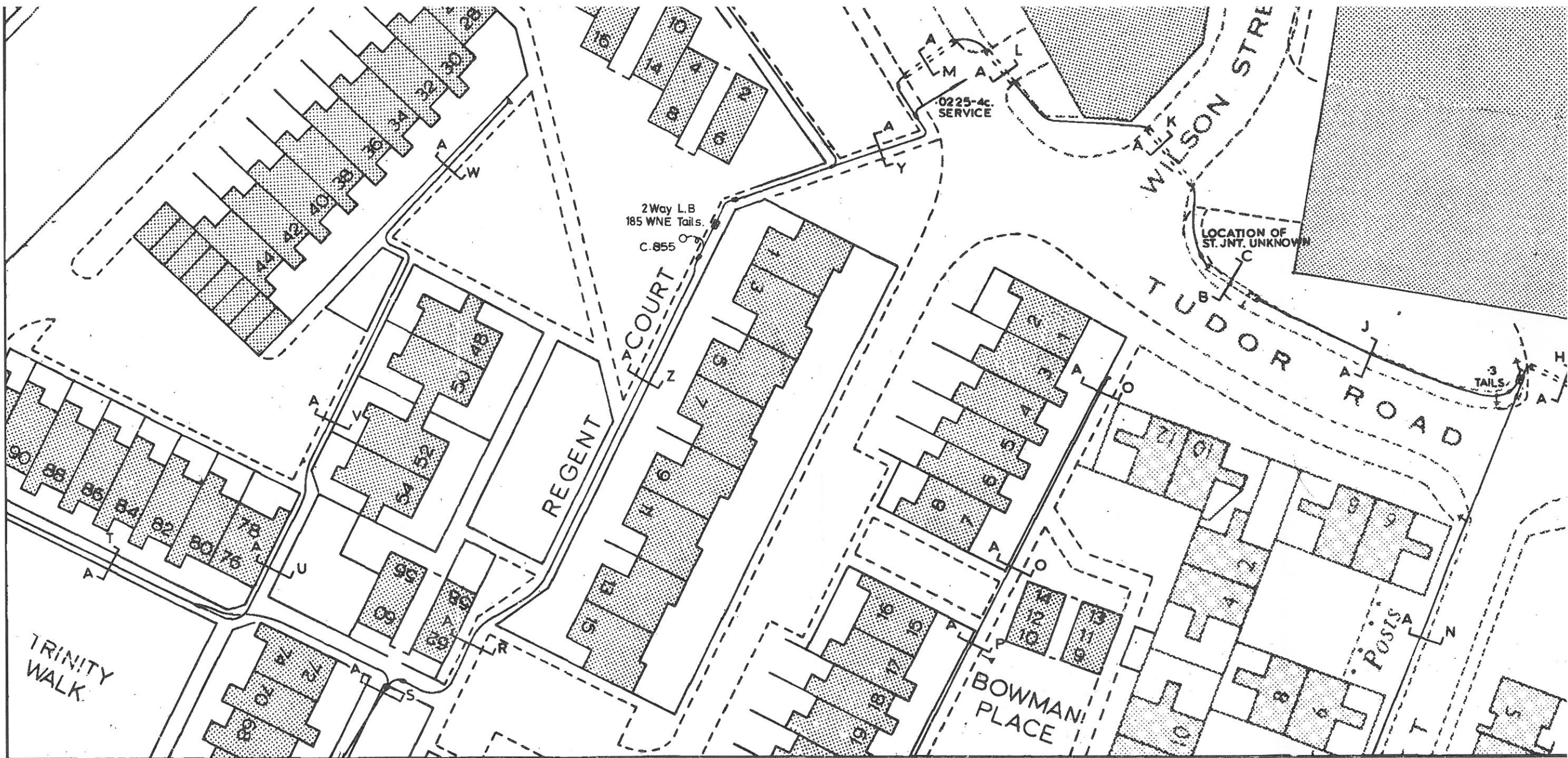
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 Newcastle Upon Tyne. NE1 6AF

ELECTRIC CABLES AND/OR OVERHEAD LINE INFORMATION SHOWN ON THE RECORD PLANS ARE TO BE USED IN ACCORDANCE WITH THE HEALTH & SAFETY EXECUTIVE BOOKLET HS(G)47, "AVOIDING DANGER FROM UNDERGROUND SERVICES", AND GUIDANCE NOTE GS 6, "AVOIDANCE OF DANGER FROM OVERHEAD ELECTRIC LINES". RECORD PLANS DO NOT ALWAYS SHOW OUT OF COMMISSION CABLES OR SERVICE CABLES FROM NORTHERN POWERGRID'S MAINS TO ADJOINING OR CROSS ROAD PLANS DO NOT SHOW LOCAL AUTHORITY OWNED PUBLIC LIGHTING OR SIGN CABLES. THE INFORMATION IS PROVIDED AS A SERVICE BY NORTHERN POWERGRID AND IMPART ANY LEGAL OBLIGATION ON THEIR PART. PERSONS USING IT ARE REMINDED OF THEIR RESPONSIBILITY TO EXECUTE WORKS SAFELY TO AVOID DAMAGING NORTHERN POWERGRID'S APPARATUS. FURTHER ADVICE OR ASSISTANCE IS AVAILABLE FROM THE RECORDS INFORMATION CENTRE ON 0191 2294296 IN AN EMERGENCY OR OUTSIDE NORMAL WORKING HOURS CONTACT OUR CUSTOMER INFORMATION CENTRE ON 0800 668877
 CABLE DEPTHS SHOWN WERE CORRECT AT THE TIME CABLES WERE LAID HOWEVER ALTERATIONS TO GROUND LEVELS OR CABLE DISPOSITION MAY HAVE TAKEN PLACE

Dig Safely ⚡

1. Use Plans
2. Use Cable Locator
3. Hand Dig To Confirm





Scale: 1:500

Map: NZ360664.TIF

Date: 05 Feb 2015

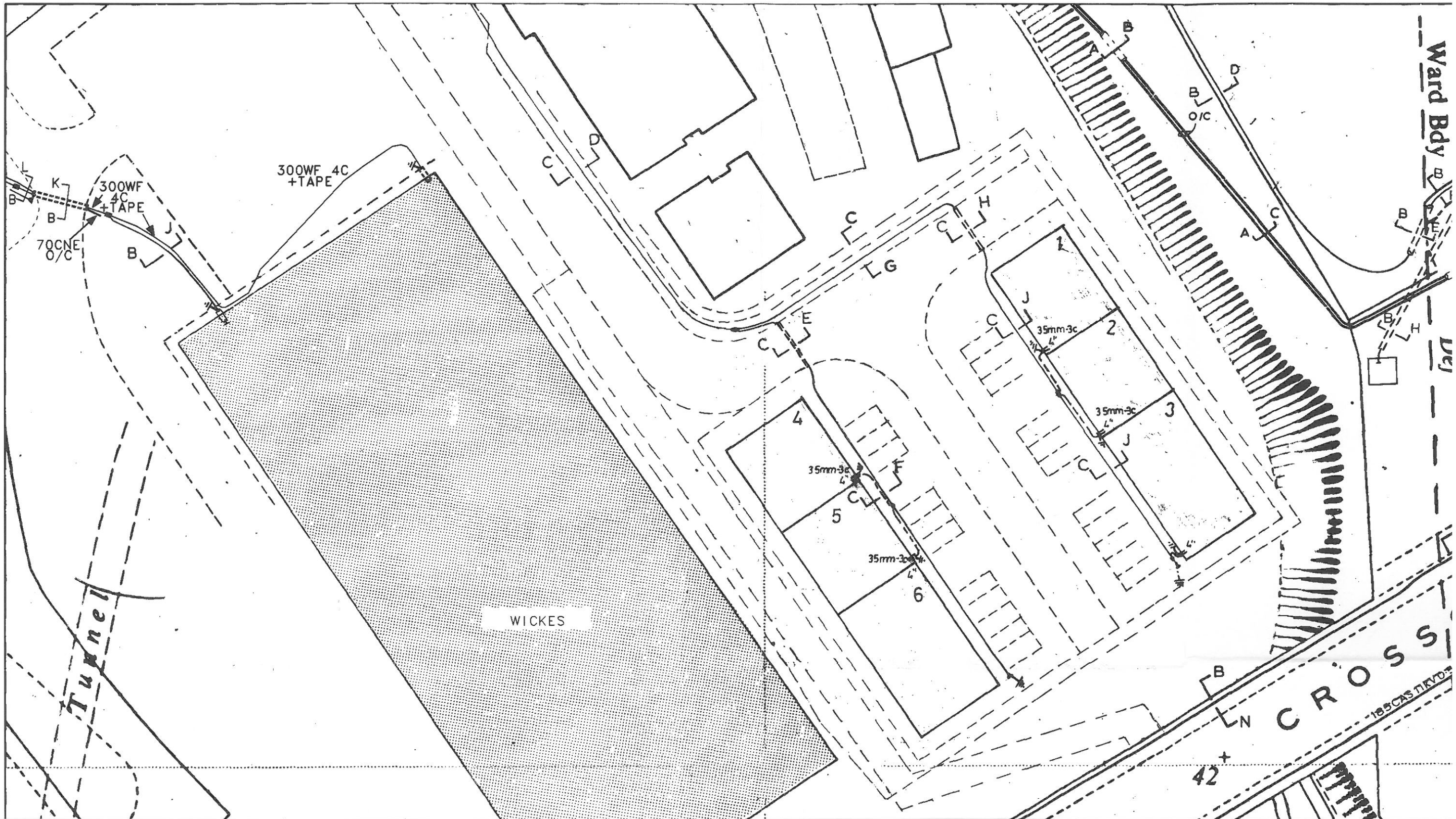
Dig Safely ⚡

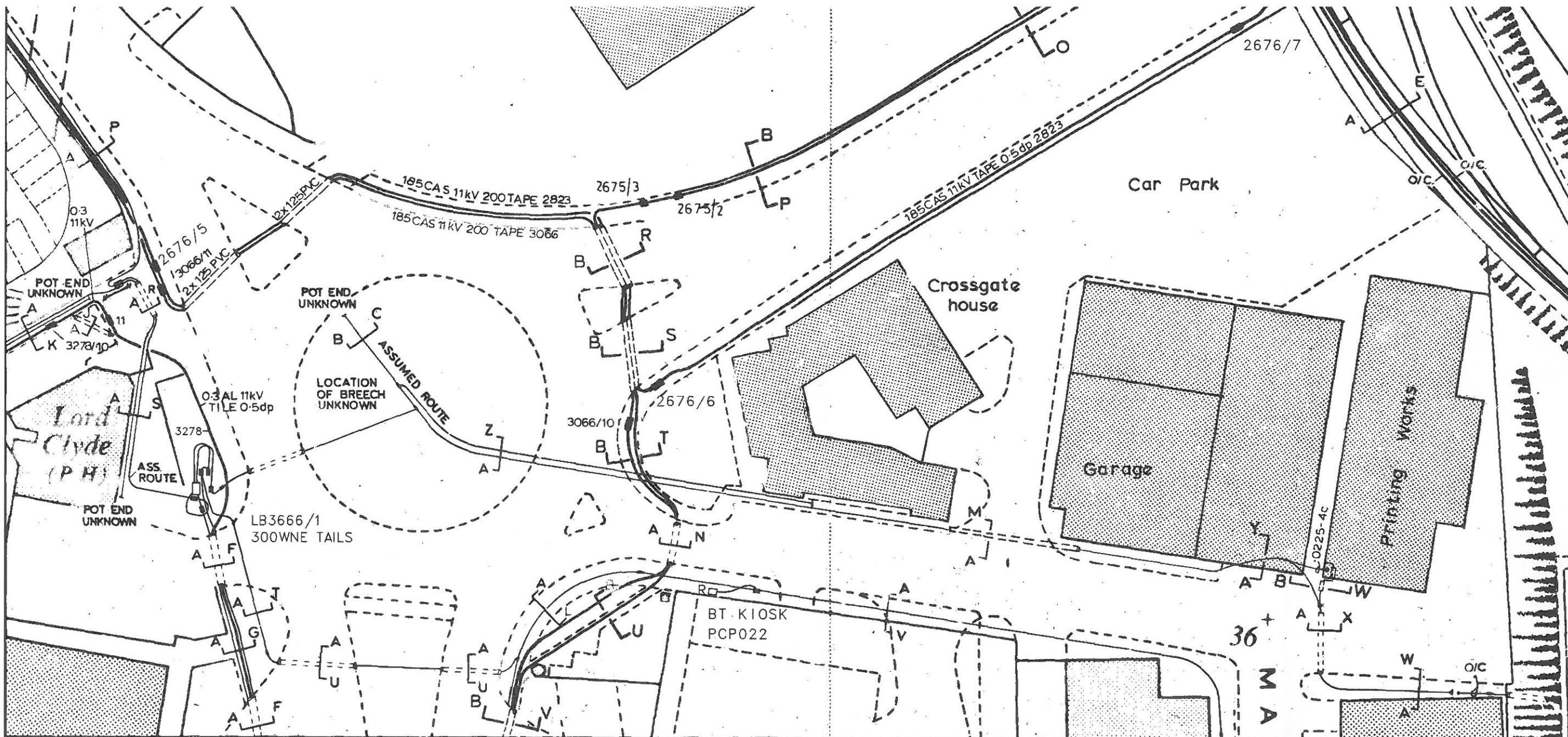
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3. Hand Dig To Confirm



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Scale: 1:500

Map: NZ362666.TIF

Date: 05 Feb 2015

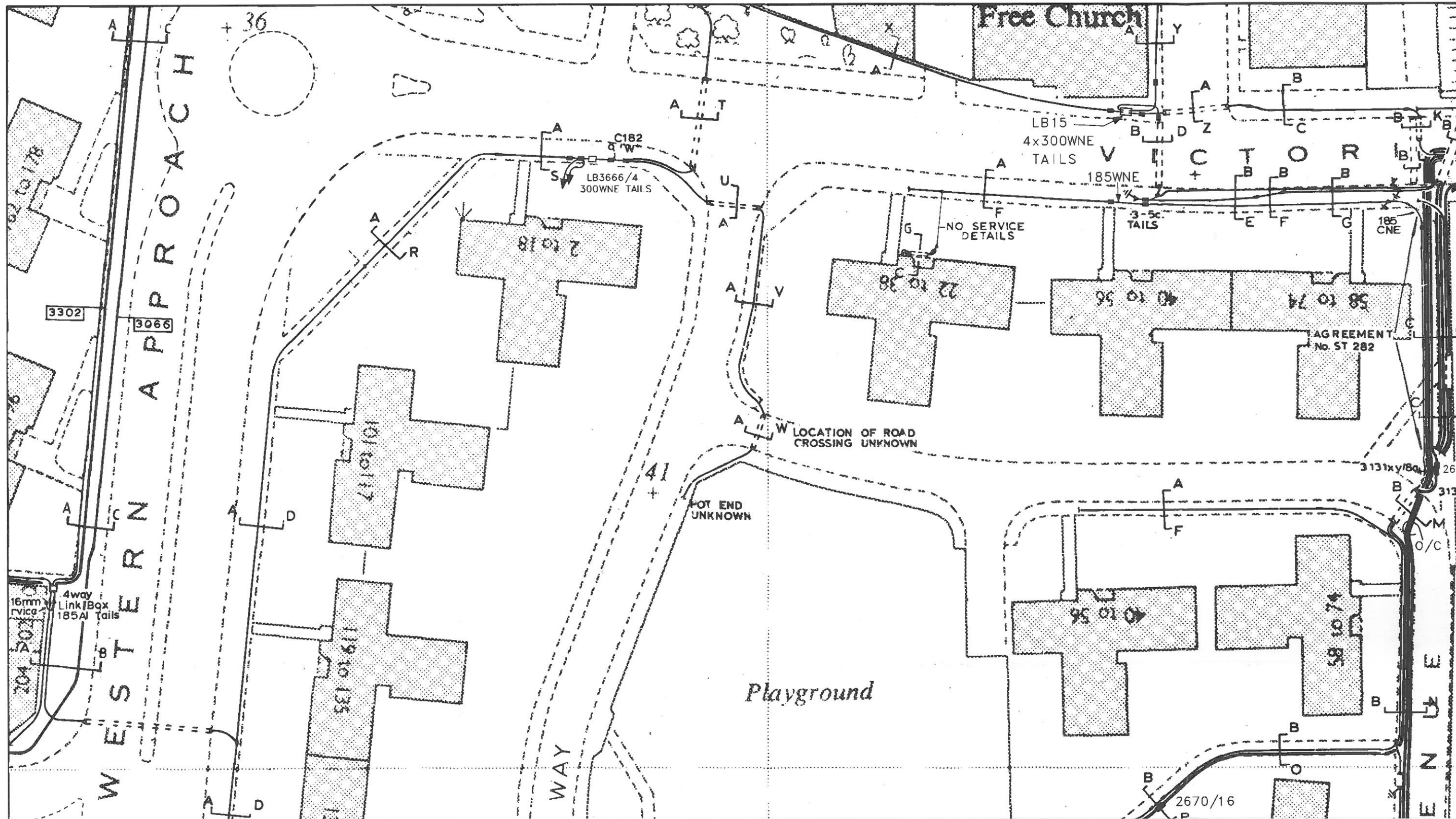


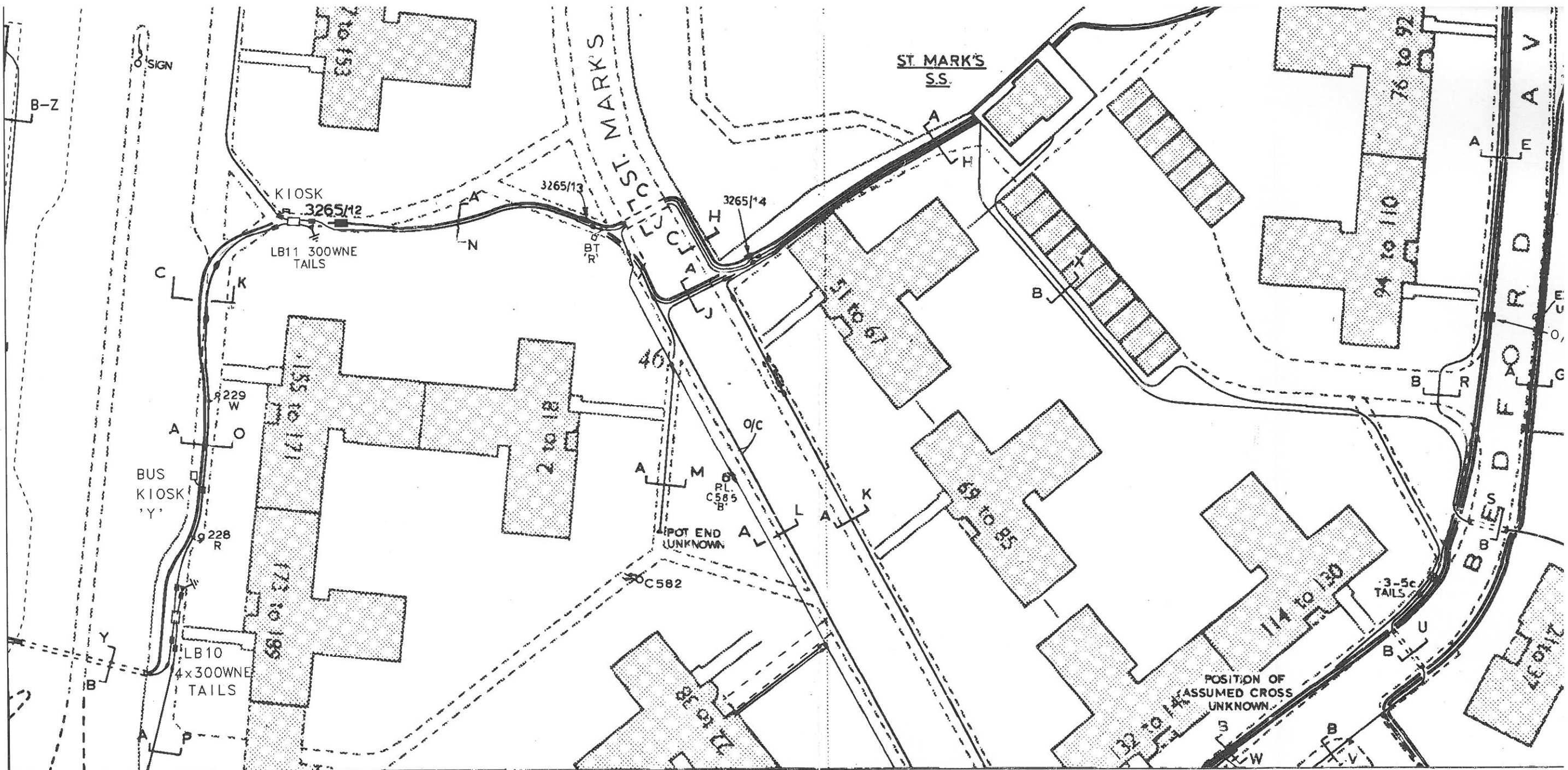
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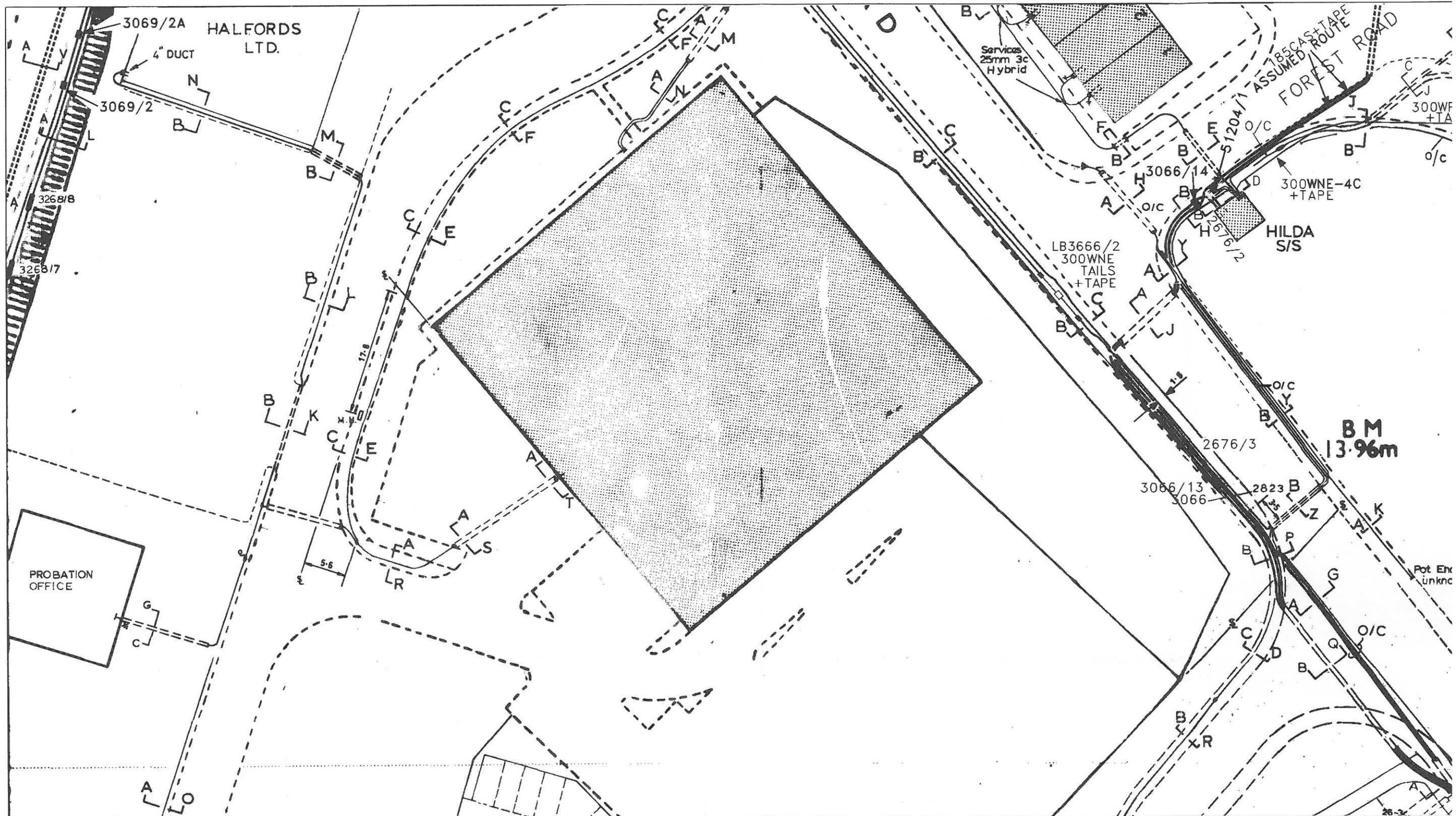
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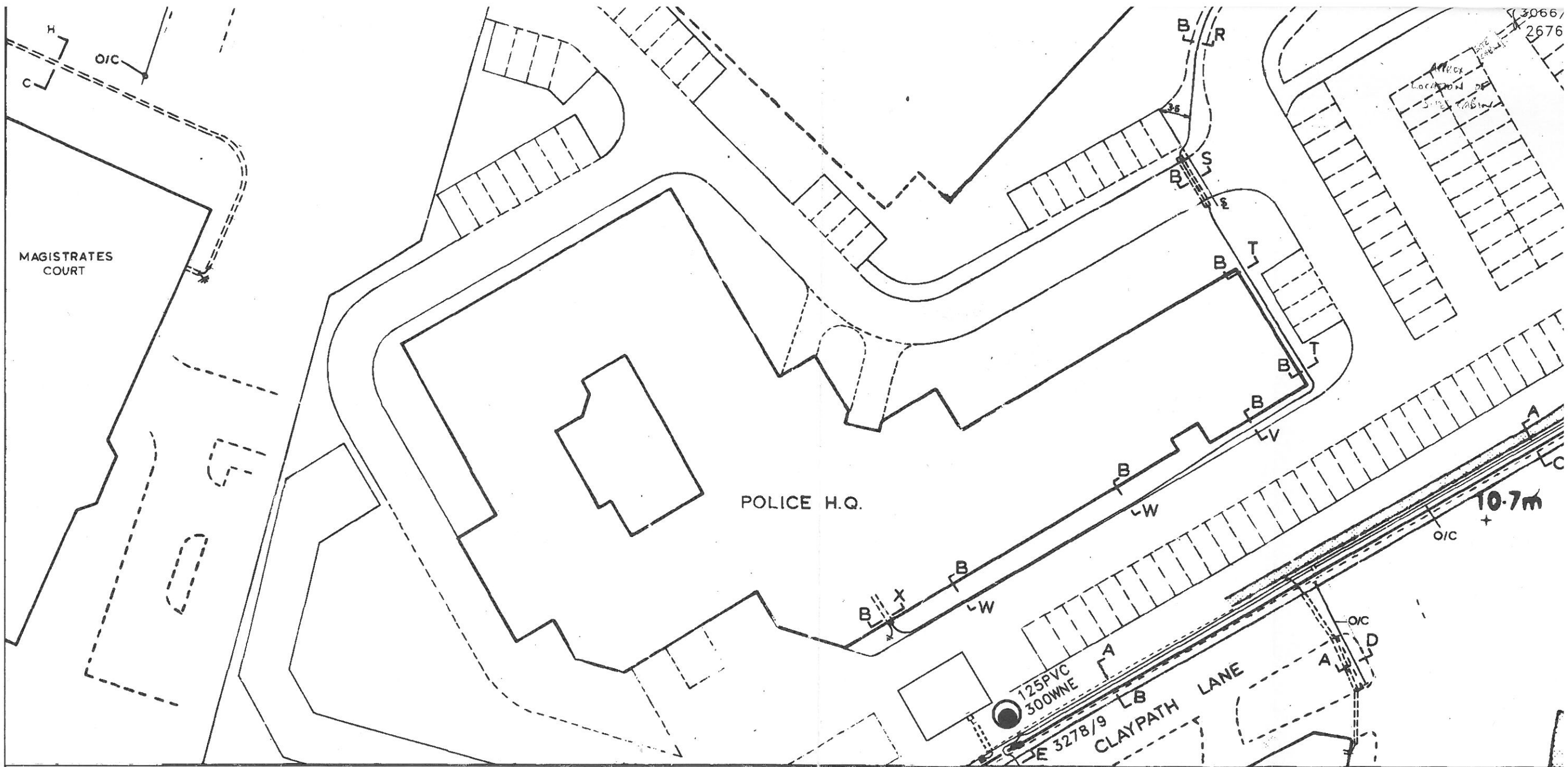
Date: 05 Feb 2015

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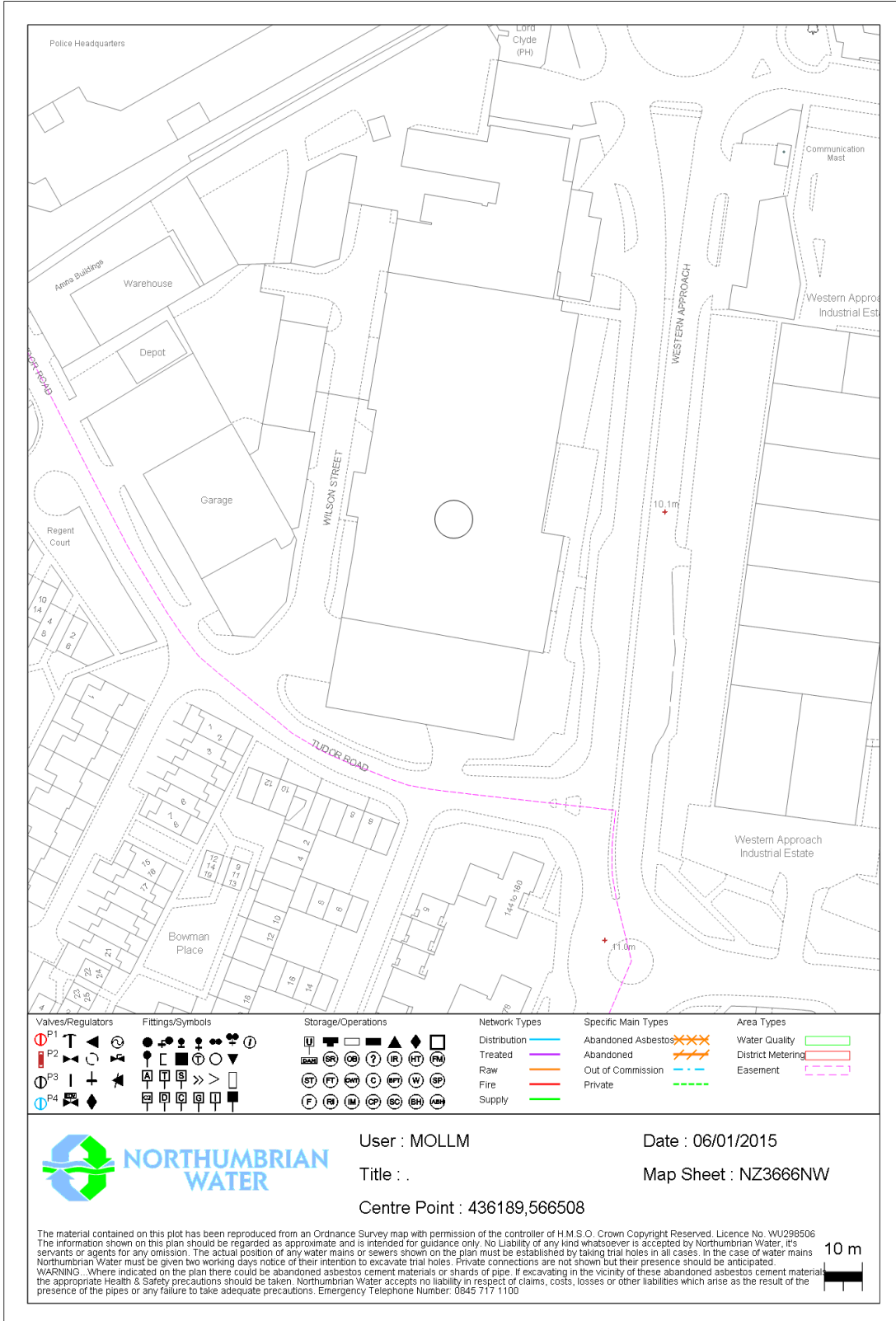
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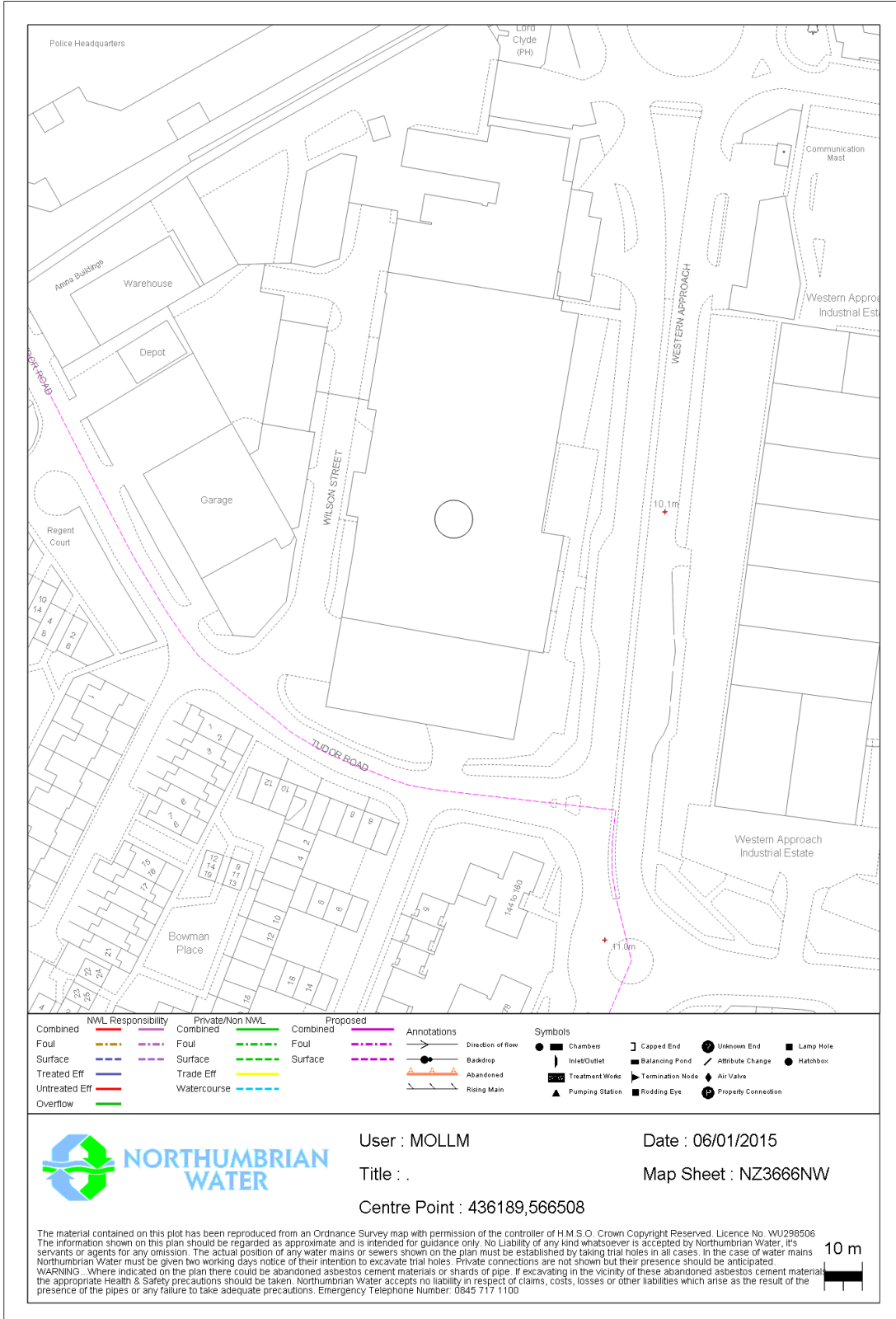


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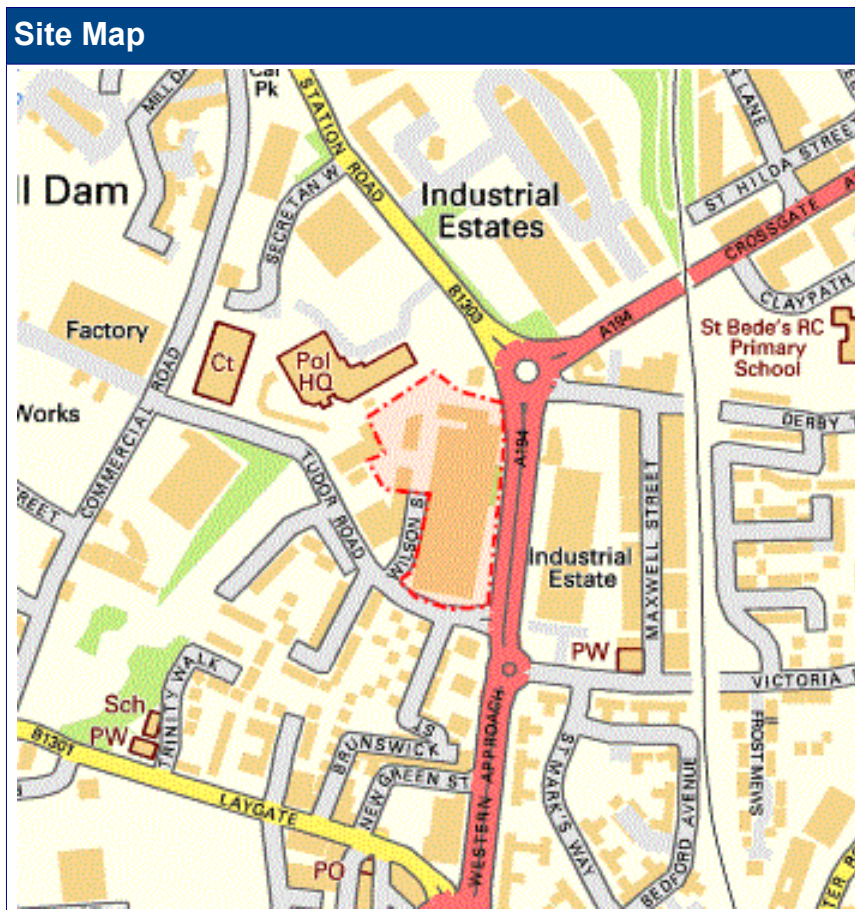




Enquirer			
Name	Mrs R Brown	Phone	01604781877
Company	Soiltechnics Limited	Mobile	Not Supplied
		Fax	Not Supplied
Address	Cedar Barn White Lodge Walgrave Northamptonshire nn6 9PY		
Email	rachel.brown@soiltechnics.net		
Notes	Please ensure your contact details are correct and up to date on the system in case the Asset Owners need to contact you. Where Asset Owners charge for plans they have been requested to send you a quote before proceeding.		

Enquiry Details			
Scheme/Reference	STM3043D		
Enquiry type	Initial Enquiry	Work category	Development Projects
Start date	18/02/2015	Work type	Commercial/industrial
End date	18/02/2015	Site size	14733 metres square
Searched location	XY= 436212, 566539 Easting/Northing	Work type buffer*	25 metres
Confirmed location	436190 566541		

* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen



Asset Owners

Subject always to our standard terms and conditions, this enquiry result is valid for 28 days only from the date of enquiry and is based on the confirmed information you entered. If the location of the work changes then a further enquiry must be made. Should the work not be undertaken within 28 days of the enquiry then a further enquiry must be made.

Where applicable listed below are those registered Asset Owners who have been notified, those to whom you need to send further information and those who have no apparatus within your search area. In addition your response will include other non-registered Asset Owners contact details who have NOT been notified, which may be of interest to you.

Please be aware that the lists below are not exhaustive and that not all Asset Owners are registered with this service. In particular please note that the LineasearchbeforeUdig system only contains information on National Grid's Gas above 2 bar asset and all National Grid Electricity Transmission asset. For National Grid Gas below 2 bar asset information please go to www.beforeudig.nationalgrid.com

If you are required to email additional info please note that we need the following: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.

Asset Owners who DO have assets near your proposed work site.

In the Zone of Interest

No LineasearchbeforeUdig Asset Owners within the Zone of Interest

LineasearchbeforeUdig Asset Owners who DO NOT have assets in the immediate vicinity of your proposed work site.

Not in the Zone of Interest

AWE Pipeline	FibreSpeed Limited	Perenco UK Limited (Purbeck Southampton Pipeline)
BOC Limited (A Member of the Linde Group)	Gamma	Phillips 66
BP Midstream Pipelines	Government Pipelines & Storage System	Premier Transmission Ltd (SNIP)
BPA	Humbly Grove Energy	RWEpower (Little Barford and South Haven)
Centrica Energy	HV Cables	SABIC UK Petrochemicals
Centrica Storage Ltd	IGas Energy	Scottish Power Generation
ConocoPhillips (UK) Ltd	Ineos Enterprises Limited	Seabank Power Ltd
Coryton Energy Co Ltd (Gas Pipeline)	INEOS Manufacturing (Scotland and TSEP)	Shell Pipelines
CSP Fibre c/o Centara	Lark Energy	Spiecapag UK Limited (Carrington)
EirGrid	Mainline Pipelines Limited	Total (Finaline, Colnbrook & Colwick Pipelines)
Electricity North West Limited	Manchester Jetline Limited	Transmission Capital
E-on UK Plc (Gas Pipelines Only)	Marchwood Power Ltd (Gas Pipeline)	Western Power Distribution
ESP Utilities Group	National Grid Gas (above2 bar) and National Grid Electricity Transmission	Wingas Storage UK Ltd
ESSAR	NPower CHP Pipelines	Zayo Group UK Ltd c/o JSM Group Ltd
Esso Petroleum Company Limited	Oikos Storage Limited	

The following Asset Owners are NOT currently members of LineSearchbeforeUdig, however you should contact them before proceeding. Please be aware that this list is not exhaustive and that **IT IS YOUR RESPONSIBILITY TO IDENTIFY AND CONTACT ALL ASSET OWNERS WITHIN YOUR SEARCH AREA.**

Not Notified			
Asset Owner	Preferred contact method	Phone	Status
BskyB Telecommunications	nrswa@bskyb.com	02070323234	Not Notified
BT	https://www.swns.bt.com/pls/mbe/welcome.home	08009173993	Not Notified
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified
Energetics Electricity	plantenquiries@energetics-uk.com	01698404646	Not Notified
Fulcrum	FPLplantprotection@fulcrum.co.uk	03330146455	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified
Instalcom	plantenquiries@instalcom.co.uk	02087314613	Not Notified
Interoute	interoute.enquiries@plancast.co.uk	02070259000	Not Notified
Northern Gas Networks	plantprotection@northerngas.co.uk	01915014349	Not Notified
Northern Powergrid	Safediggingplans@northernpowergrid.com	01912294294	Not Notified
Northumbrian Water	plans@nwl.co.uk	08702417408	Not Notified
Tata, KPN (c/- McNicholas)	plantenquiries@mcnicholas.co.uk	03300558469	Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293611736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified
Vtesse Networks	https://vtplant.vtesse.com	01992532100	Not Notified

Disclaimer

The results of this Enquiry have been provided for the sole use of the Enquirer and no other party. The asset information on which the Enquiry results are based has been provided by LineSearchbeforeUdig members, LineSearchbeforeUdig will provide no guarantee that such information is accurate or reliable nor does it monitor such asset information for accuracy and reliability going forward. There are also asset owners which do not participate in the enquiry service operated by LineSearchbeforeUdig, including but not exclusively those set out above. Therefore, LineSearchbeforeUdig cannot make any representation or give any guarantee or warranty as to the completeness of the information contained in the enquiry results.

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South Tyneside Council

Mr Andrew Fitzpatrick
Soiltechnics
Cedar Barn
Walgrave
Northamptonshire
NN6 9PY

Date: 19/03/215
Our ref: PS/2015/03
Your ref:

Dear Mr Fitzpatrick,

RE: Former Be Modern Premises, Western Approach, South Shields, NE33 5QZ

With reference to your enquiry regarding the above site, I would like to provide you with the following comments.

The above named site has not been designated as Contaminated Land under Part IIA of The Environmental Protection Act (1990), as amended. South Tyneside Council is yet to categorise any of the land in relation to the document 'Environmental Protection Act 1990 Part 2A: Contaminated Land Statutory Guidance (Defra, April 2012). We are therefore unable to provide a risk summary for the site at this time.

A review of historic maps has identified that the site is located in an area previously utilised for heavy industrial use which may have introduced contaminants into the ground including Railway Land (c1993), Factory (c1993).

This site also lies within close proximity to several other sites which have previously been used for heavy industrial use including Claypit (c1862), Quarrying (c1993), Mining & Coal Storage (c1862-1952), Mineral Railway Land (c1862-1993), Infilling (c1993), Chemical Manufacture (Alkali), Heap of unknown constituents (c1862), Railway Land (c1898-1952) and Factory (c1993).

Current guidance suggests that such land use as identified above is often associated with materials or substances that, if found to be present may have an adverse effect on human health, water quality, plant life, and/or building materials and may increase the risk of land contamination. These materials and substances may exist in soils, surface and groundwater, and dust, gases and vapours and may in certain circumstances accumulate in food stuffs grown on site or migrate considerable distances into adjacent land and buildings.

I have checked with our Environmental Health department and they have confirmed that the existing building, formally Be Modern, required a permit to operate under Part B of the Environmental Permitting Regulations 2010. This is due to the operations taking place on site which included the manufacture of fire surrounds, fires and heating equipment. This permit was however revoked within the last 4 years when the business moved premises.

Our Environmental Health department have also added that this site was previously permitted for

timber activities, waste wood combustion and solvent (coating) operations.

It is important to acknowledge that although these operations were regulated, they still may have introduced contaminants to the ground and this should be taken into consideration by the owner, along with other historical uses.

Unfortunately, this department does not hold any records of any ground investigations or remedial works carried out on the site; therefore it is not possible to quantify any risk posed by materials that may lie upon, within or beneath the land.

At this time, South Tyneside Council do not intend to undertake any further investigations at this site under part IIA of the Environmental Protection Act (1990), as amended.

South Tyneside Council are unaware of any pollution incidents that have occurred or are occurring at the site and there are no records of any remediation or statutory notices at this site.

The River Tyne is located approximately 1km to the west of the site and is not located within a Source Protection Zone. I can also confirm that there are no private water supplies within the area, any groundwater abstraction or discharges to ground via a soakaway.

I trust this is satisfactory however if you have any further queries please do not hesitate to contact me by telephone on (0191) 424 7928 or by email at amy.ridgeon@southtyneside.gov.uk

Yours sincerely



Amy Ridgeon
Environmental Protection Officer

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

64108305_1_1

Customer Reference:

STM3043D

National Grid Reference:

436180, 566540

Slice:

A

Site Area (Ha):

1.55

Search Buffer (m):

1000

Site Details:

TP South Shields

Client Details:

Ms R Brown

Soiltechnics

Cedar Barn

White Lodge

Walgrave

Northampton

NN6 9PY

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Introduction

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

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

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Report Version v49.0

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			23	80
Enforcement and Prohibition Notices					
Integrated Pollution Controls	pg 26			12	
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control	pg 28			1	
Local Authority Pollution Prevention and Controls	pg 28	2	3	7	2
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 30			Yes	
Pollution Incidents to Controlled Waters	pg 30			3	15
Prosecutions Relating to Authorised Processes	pg 33			1	
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances	pg 33		1	1	1
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 34				1
Water Abstractions	pg 34				(*2)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 34	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 35	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 35	Yes	n/a	n/a	n/a
Source Protection Zones					
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

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 36			2	1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 36			1	
Licensed Waste Management Facilities (Locations)	pg 36			3	4
Local Authority Recorded Landfill Sites					
Registered Landfill Sites	pg 38			1	3
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 40		2	2	
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 42			1	
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 42			1	
Planning Hazardous Substance Consents	pg 42			3	
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 43	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 43	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 78		4	2	5
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 80	Yes	n/a	n/a	n/a
Mining Instability	pg 80	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 80	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 80	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 81	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 81	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 81	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 82	2	45	78	93
Fuel Station Entries	pg 101			2	
Sensitive Land Use					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Trade (Unknown/Other) Location: Dalton Lane Depot, Mill Dam, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1380 Permit Version: 1 Effective Date: 29th April 1993 Issued Date: 29th April 1993 Revocation Date: 29th September 1998 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12NE (NW)	392	2	435810 566840
1	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Trade (Unknown/Other) Location: Dalton Lane Police Station, Mill Dam, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1383 Permit Version: 1 Effective Date: 20th April 1993 Issued Date: 20th April 1993 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A17SE (NW)	411	2	435820 566880
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Coronation St Cso, 10 Coronation St, South Shields, Newcastle Upon Tyne, Ne33 1az Authority: Environment Agency, North East Region Catchment Area: South Tyne; Allen; Nent Reference: Eprbp3720xy Permit Version: 1 Effective Date: 14th June 2010 Issued Date: 14th June 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Tyne Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435837 566907
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Tudor Road Cso Near Police Hq & Magistrates Ct, Tudor Road, South Shields, Tyne & Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1905 Permit Version: 1 Effective Date: 24th January 2005 Issued Date: 24th January 2005 Revocation Date: 1st December 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Coronation Street Pumping Station, South Shields, Tyne & Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1906 Permit Version: 1 Effective Date: 24th January 2005 Issued Date: 24th January 2005 Revocation Date: Not Supplied Discharge Type: Sewerage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Coronation Street Pumping Station, South Shields, Tyne & Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1906 Permit Version: 1 Effective Date: 24th January 2005 Issued Date: 24th January 2005 Revocation Date: Not Supplied Discharge Type: Sewerage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Water Company Location: Harton Low Staithes (Mill Dam) Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1907 Permit Version: 1 Effective Date: 24th January 2005 Issued Date: 24th January 2005 Revocation Date: Not Supplied Discharge Type: Sewerage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Tudor Road Cso Near Police Hq & Magistrates Ct, Tudor Road, South Shields, Tyne & Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1905 Permit Version: 2 Effective Date: 2nd December 2010 Issued Date: 24th January 2005 Revocation Date: Not Supplied Discharge Type: Sewerage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Harton Low Staithes Pumping Station, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1638 Permit Version: 1 Effective Date: 20th January 1999 Issued Date: 20th January 1999 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Harton Low Staithes (Mill Dam) Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1636 Permit Version: 1 Effective Date: 19th January 1999 Issued Date: 19th January 1999 Revocation Date: 24th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Trade (Unknown/Other) Location: Harton Low Staithes (Mill Dam), South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1408 Permit Version: 1 Effective Date: 19th July 1993 Issued Date: 19th July 1993 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A18SW (NW)	418	2	435840 566910
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Coronation Street Pumping Station, South Shields, Tyne & Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1173 Permit Version: 1 Effective Date: 10th December 1992 Issued Date: 10th December 1992 Revocation Date: 24th January 2005 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Coronation Street Pumping Station, South Shields, Tyne & Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1173 Permit Version: 1 Effective Date: 10th December 1992 Issued Date: 10th December 1992 Revocation Date: 24th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Trade (Unknown/Other) Location: Harton Low Staithes (Mill Dam), South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1172 Permit Version: 1 Effective Date: 29th October 1992 Issued Date: 29th October 1992 Revocation Date: 19th July 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Tudor Road Cso Near Police Hq & Magistrates Ct, Tudor Road, South Shields, Tyne & Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1171 Permit Version: 1 Effective Date: 2nd September 1992 Issued Date: 2nd September 1992 Revocation Date: 24th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910
2	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Harton Low Staithes (Mill Dam), South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0082 Permit Version: 1 Effective Date: 28th April 1987 Issued Date: 28th April 1987 Revocation Date: 29th October 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Harton Low Staithes (Mill Dam), South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0023 Permit Version: 1 Effective Date: 18th February 1987 Issued Date: 18th February 1987 Revocation Date: 2nd September 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	418	2	435840 566910
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: East Holborn Pumping Station, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1646 Permit Version: 1 Effective Date: 7th August 1998 Issued Date: 7th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	448	2	435670 566620
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: East Holborn East Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1645 Permit Version: 1 Effective Date: 7th August 1998 Issued Date: 7th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	448	2	435670 566620
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: East Holborn West Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1644 Permit Version: 1 Effective Date: 7th August 1998 Issued Date: 7th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	448	2	435670 566620

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewage Disposal Works - Water Company Location: East Holborn Septic Tank, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1647 Permit Version: 1 Effective Date: 7th August 1998 Issued Date: 7th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	448	2	435670 566620
3	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Trade (Unknown/Other) Location: Harton Low Staithes (Middle Dock) S, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1174 Permit Version: 1 Effective Date: 29th October 1992 Issued Date: 29th October 1992 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12NE (W)	449	2	435670 566630
3	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Harton Low Staithes (Middle Dock) S, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0083 Permit Version: 1 Effective Date: 28th April 1987 Issued Date: 28th April 1987 Revocation Date: 29th October 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	449	2	435670 566630
4	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: King Street Cso, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1904 Permit Version: 1 Effective Date: 24th January 2005 Issued Date: 24th January 2005 Revocation Date: 1st April 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	531	2	435910 567090

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Harton Low Staithes Pumping Station, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1638 Permit Version: 1 Effective Date: 20th January 1999 Issued Date: 20th January 1999 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	531	2	435910 567090
4	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Harton Low Staithes Cso, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1169 Permit Version: 1 Effective Date: 29th October 1992 Issued Date: 29th October 1992 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	531	2	435910 567090
4	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: King Street Cso, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1170 Permit Version: 1 Effective Date: 7th September 1992 Issued Date: 7th September 1992 Revocation Date: 24th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A18SW (NW)	531	2	435910 567090
4	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Harton Low Staithes Cso, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0022 Permit Version: 1 Effective Date: 18th February 1987 Issued Date: 18th February 1987 Revocation Date: 7th September 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	531	2	435910 567090

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Harton Low Staithees Cso Near Grass Field And Footpath To, Ferry Terminal, South Shields, South Tyneside</p> <p>Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1908 Permit Version: 1 Effective Date: 25th January 2005 Issued Date: 25th January 2005 Revocation Date: 1st December 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	534	2	435920 567100
4	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Harton Low Staithees Cso Near Grass Field And Footpath To, Ferry Terminal, South Shields, South Tyneside</p> <p>Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1908 Permit Version: 2 Effective Date: 2nd December 2010 Issued Date: 25th January 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	534	2	435920 567100
4	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Harton Low Staithees Cso Near Grass Field And Footpath To, Ferry Terminal, South Shields, South Tyneside</p> <p>Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1637 Permit Version: 1 Effective Date: 20th January 1999 Issued Date: 20th January 1999 Revocation Date: 25th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	534	2	435920 567100
4	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Harton Low Staithees North - B6, South Shields</p> <p>Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0134 Permit Version: 1 Effective Date: 5th June 1987 Issued Date: 5th June 1987 Revocation Date: 10th December 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	548	2	435910 567110

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Harton Low Staithes North - B6, South Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0081 Permit Version: 1 Effective Date: 28th April 1987 Issued Date: 28th April 1987 Revocation Date: 29th October 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	548	2	435910 567110
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street Cso, Junction Of Eldon St & Reed St, South Shields, Tyne & Wear, Ne33 5ax Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1944 Permit Version: 2 Effective Date: 1st April 2010 Issued Date: 29th March 2010 Revocation Date: 1st December 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	595	2	435548 566381
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street Cso, Junction Of Eldon St & Reed St, South Shields, Tyne & Wear, Ne33 5ax Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1944 Permit Version: 3 Effective Date: 2nd December 2010 Issued Date: 29th March 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	595	2	435548 566381
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Temple Street Cso Opposite Junction Of, Temple St West & South Eldon St, South Shields, Tyne & Wear, Ne33 5al Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1943 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 2nd December 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Corstorphine Town Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1941 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 21st September 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street Cso, Junction Of Eldon St & Reed St, South Shields, Tyne & Wear, Ne33 5ax Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1944 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 31st March 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Mitre Place Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1940 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Smith Street Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1942 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 21st September 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Temple Street Cso Opposite Junction Of, Temple St West & South Eldon St, South Shields, Tyne & Wear, Ne33 5al Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1943 Permit Version: 2 Effective Date: 3rd December 2010 Issued Date: 28th January 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1652 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 30th March 2010 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Corstorphine Town Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1649 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Mitre Place Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1650 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Smith Street Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1648 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Trade (Unknown/Other) Location: Harton High Staithes Sewer, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1176 Permit Version: 1 Effective Date: 29th October 1992 Issued Date: 29th October 1992 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street Cso, Junction Of Eldon St & Reed St, South Shields, Tyne & Wear, Ne33 5ax Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1175 Permit Version: 1 Effective Date: 2nd September 1992 Issued Date: 2nd September 1992 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Temple Street Cso Opposite Junction Of, Temple St West & South Eldon St, South Shields, Tyne & Wear, Ne33 5al Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1177 Permit Version: 1 Effective Date: 2nd September 1992 Issued Date: 2nd September 1992 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Eldon Street/Reed Street Sso, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0024 Permit Version: 1 Effective Date: 18th February 1987 Issued Date: 18th February 1987 Revocation Date: 2nd September 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Temple Street, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0025 Permit Version: 1 Effective Date: 18th February 1987 Issued Date: 18th February 1987 Revocation Date: 2nd September 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
5	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Harton High Staithes Sewer, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0040 Permit Version: 1 Effective Date: 11th February 1987 Issued Date: 11th February 1987 Revocation Date: 29th October 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	603	2	435540 566380
6	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Whitehill Point Care Ferry Terminal, Albert Edward Dock, North Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/B/0041 Permit Version: 1 Effective Date: 16th July 1965 Issued Date: 16th July 1965 Revocation Date: 25th December 1965 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	618	2	435500 566500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Others Location: Spring Lane Sewer, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1168 Permit Version: 1 Effective Date: 29th October 1992 Issued Date: 29th October 1992 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	645	2	435930 567230
7	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Spring Lane Outfall G - B5, South Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0080 Permit Version: 1 Effective Date: 28th April 1987 Issued Date: 28th April 1987 Revocation Date: 29th October 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	649	2	435920 567230
8	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Mcnulty Quay, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/0550 Permit Version: 1 Effective Date: 14th January 1988 Issued Date: 14th January 1988 Revocation Date: 25th December 1991 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	697	2	435500 566200
8	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn North Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1946 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 19th March 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SW (SW)	719	2	435470 566220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn South Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1945 Permit Version: 1 Effective Date: 28th January 2005 Issued Date: 28th January 2005 Revocation Date: 31st March 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SW (SW)	719	2	435470 566220
8	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: West Holborn Pumping Station, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1655 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SW (SW)	719	2	435470 566220
8	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn North Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1653 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SW (SW)	719	2	435470 566220
8	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn South Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1654 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th January 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SW (SW)	719	2	435470 566220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Weetman Street Outfall L - B12, South Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0084 Permit Version: 1 Effective Date: 28th April 1987 Issued Date: 28th April 1987 Revocation Date: 29th October 1992 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SW (SW)	719	2	435470 566220
8	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: West Holborn South Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1945 Permit Version: 2 Effective Date: 1st April 2010 Issued Date: 29th March 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SW (SW)	724	2	435466 566216
8	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Others Location: Weetman Street Sewer, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1178 Permit Version: 1 Effective Date: 29th October 1992 Issued Date: 29th October 1992 Revocation Date: 9th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12SW (SW)	728	2	435460 566220
9	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Whitehill Point Pumping Station, Royal Quays, Newcastle Upon Tyne Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1622 Permit Version: 1 Effective Date: 4th March 1998 Issued Date: 4th March 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	743	2	435380 566680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 4, Tyne Commission Quay, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1074 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	747	2	435390 566760
10	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 4, Tyne Commission Quay, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0299 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	747	2	435390 566760
11	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 14, Ro-Ro Berth No 3, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1078 Permit Version: 1 Effective Date: 4th June 1991 Issued Date: 4th June 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	777	2	435340 566630
11	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 15, Ro-Ro Berth No 3, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1809 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	786	2	435330 566610

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 15, Ro-Ro Berth No 3, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1079 Permit Version: 1 Effective Date: 4th June 1991 Issued Date: 4th June 1991 Revocation Date: 22nd May 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	786	2	435330 566620
11	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 15, Ro-Ro Berth No 3, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0311 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 4th June 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	786	2	435330 566620
11	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 14a, Ro-Ro Berth No 3, W, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Tea/Don Reference: 235/1065 Permit Version: 1 Effective Date: 4th June 1991 Issued Date: 4th June 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	787	2	435330 566630
12	<p>Discharge Consents</p> <p>Operator: Mcnulty Offshore Services Limited Property Type: Sewage Disposal Works - Other Location: Mcnulty Marine Services, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/0528 Permit Version: 1 Effective Date: 14th January 1988 Issued Date: 14th January 1988 Revocation Date: 24th July 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A7NW (SW)	781	2	435430 566150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Market Dock Pumping Station, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1639 Permit Version: 1 Effective Date: 20th January 1999 Issued Date: 20th January 1999 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	791	2	435970 567400
14	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 12, Tyne Commission, North Shields Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1076 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	796	2	435400 566940
14	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 12, Tyne Commission, North Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0307 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	796	2	435400 566940
15	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 13, Albert Edward Dock, North Shields Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1077 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	814	2	435330 566800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 13, Albert Edward Dock, North Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0308 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	814	2	435330 566800
15	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Customs Car Examination Shed, Tyne, Albert Edward Dock, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/B/0013 Permit Version: 1 Effective Date: 1st May 1961 Issued Date: 1st May 1961 Revocation Date: 25th December 1965 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	844	2	435300 566800
16	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Howdon Road Cso, Wallsend, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1899 Permit Version: 2 Effective Date: 5th July 2010 Issued Date: 5th July 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tyne, Tributary Of Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	838	2	435480 567140
16	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Trade (Unknown/Other) Location: Outfall At Dock Road South, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1348 Permit Version: 1 Effective Date: 6th November 1995 Issued Date: 6th November 1995 Revocation Date: 3rd August 2000 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	838	2	435480 567140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	<p>Discharge Consents</p> <p>Operator: Redundant - Northumbrian Water Ltd Property Type: Trade (Unknown/Other) Location: Outfall At Dock Road South, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0053 Permit Version: 1 Effective Date: 9th April 1987 Issued Date: 9th April 1987 Revocation Date: 6th November 1995 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	838	2	435480 567140
17	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Port Of Tyne - Albert Edward Dock E, North Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0304 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 3rd May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	844	2	435400 567040
18	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Sewage Disposal Works - Other Location: Outfall No 14a, Ro-Ro Berth No 3, W, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0310 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 4th June 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	849	2	435330 566230
19	<p>Discharge Consents</p> <p>Operator: Mcnulty Offshore Services Limited Property Type: Sewage Disposal Works - Other Location: Mcnulty Marine Services, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/0554 Permit Version: 1 Effective Date: 14th January 1988 Issued Date: 14th January 1988 Revocation Date: 24th July 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A7NW (SW)	893	2	435420 565940

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 16, Ro-Ro Berth No 4, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1808 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	901	2	435220 566450
20	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Outfall No 16, Ro-Ro Berth No 4, Wh, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1066 Permit Version: 1 Effective Date: 4th June 1991 Issued Date: 4th June 1991 Revocation Date: 22nd May 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	901	2	435220 566450
21	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Ballast Hill Ps, Royal Quays, Alber, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1121 Permit Version: 1 Effective Date: 7th February 1992 Issued Date: 7th February 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	908	2	435320 567030
22	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Port Of Tyne - Albert Edward Dock E, North Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0306 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 3rd May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	910	2	435280 566950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Smith St/Costorphine Rd Cso, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1984 Permit Version: 1 Effective Date: 28th February 2005 Issued Date: 28th February 2005 Revocation Date: 21st September 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	915	2	435350 566010
23	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Smith Street/Corstorphine Road Cso, South Shields, South Tyneside Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1651 Permit Version: 1 Effective Date: 10th August 1998 Issued Date: 10th August 1998 Revocation Date: 28th February 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	915	2	435350 566010
23	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1652 Permit Version: 2 Effective Date: 31st March 2010 Issued Date: 31st March 2010 Revocation Date: 2nd December 2010 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	920	2	435345 566008
23	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1652 Permit Version: 2 Effective Date: 31st March 2010 Issued Date: 31st March 2010 Revocation Date: 2nd December 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	920	2	435345 566008

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1652 Permit Version: 3 Effective Date: 3rd December 2010 Issued Date: 31st March 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	920	2	435345 566008
23	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Pumping Station - Water Company Location: Smith Street Pumping Station, Jct Smith St & Corstorphine Town, South Shields, Tyne & Wear, Ne33 1qx Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1652 Permit Version: 3 Effective Date: 3rd December 2010 Issued Date: 31st March 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Saline Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	920	2	435345 566008
24	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Offices Of Lep International/Fred O, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1120 Permit Version: 1 Effective Date: 23rd April 1992 Issued Date: 23rd April 1992 Revocation Date: 5th December 1996 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A17NE (NW)	936	2	435500 567300
24	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Sewage Disposal Works - Other Location: Offices Of Lep International/Fred O, North Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/B/0248 Permit Version: 1 Effective Date: 7th June 1979 Issued Date: 7th June 1979 Revocation Date: 1st April 1992 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	936	2	435500 567300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 10, Albert Edward Dock, North Shields Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1075 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 11th September 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	962	2	435250 567010
25	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 10, Albert Edward Dock, North Shields Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0305 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	962	2	435250 567010
26	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Howdon Road Cso, Wallsend, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1899 Permit Version: 1 Effective Date: 24th January 2005 Issued Date: 24th January 2005 Revocation Date: 5th July 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tyne, Tributary Of Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	974	2	435310 567140
26	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Sewerage Network - Sewers - Water Company Location: Howdon Road Cso, Wallsend, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/X/0033 Permit Version: 1 Effective Date: 11th February 1987 Issued Date: 11th February 1987 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Transferred from COPA 1974 Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	974	2	435310 567140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 18, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/1811 Permit Version: 1 Effective Date: 22nd May 2001 Issued Date: 22nd May 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: River Tyne Saline Estuary Status: Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m</p>	A7SW (SW)	977	2	435390 565840
27	<p>Discharge Consents</p> <p>Operator: Port Of Tyne Authority Property Type: Trade (Unknown/Other) Location: Outfall No 18, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Tyne (Lower)/Team/Don Reference: 235/1080 Permit Version: 1 Effective Date: 21st May 1991 Issued Date: 21st May 1991 Revocation Date: 22nd May 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Saline Estuary Environment: Receiving Water: Tyne (Tidal) Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A7SW (SW)	977	2	435390 565840
27	<p>Discharge Consents</p> <p>Operator: Unknown, Property Type: Trade (Unknown/Other) Location: Outfall No 18, Tyne Dock, South Shields, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 235/X/0314 Permit Version: 1 Effective Date: 24th July 1987 Issued Date: 24th July 1987 Revocation Date: 21st May 1991 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Tyne Estuary Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	A7SW (SW)	977	2	435390 565840
28	<p>Integrated Pollution Controls</p> <p>Name: Tyne Dock Engineering Ltd Location: Po Box 7 Hill Street, SOUTH SHIELDS, Tyne And Wear, NE33 1RN Authority: Environment Agency, North East Region Permit Reference: BD4295 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 6.5 A (A) Coating processes and Printing within Miscellaneous Industries Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned to the road within the address or location</p>	A12SE (W)	332	2	435796 566471
28	<p>Integrated Pollution Controls</p> <p>Name: Tyne Dock Engineering Ltd Location: P O Box 7, Hill Street, SOUTH SHIELDS, Tyne And Wear, NE33 1RN Authority: Environment Agency, North East Region Permit Reference: AU6889 Dated: 11th September 1996 Process Type: IPC new application Description: 6.5 A (A) Coating processes and Printing within Miscellaneous Industries Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Manually positioned to the road within the address or location</p>	A12SE (W)	333	2	435796 566466

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	<p>Integrated Pollution Controls</p> <p>Name: Tyne Dock Engineering Ltd Location: PO Box 7, Hill Street, SOUTH SHIELDS, Tyne and Wear, NE33 1RN Authority: Environment Agency, North East Region Permit Reference: BF5926 Dated: 1st March 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 6.5 A (A) Coating processes and Printing within Miscellaneous Industries Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the road within the address or location</p>	A12SE (W)	397	2	435718 566536
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: BB9687 Dated: 21st December 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	464	2	435821 566127
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: BD6166 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	467	2	435816 566127
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: AV8178 Dated: 30th August 1996 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	467	2	435821 566122
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne and Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: Bu0621 Dated: 5th March 2003 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation revokedRevoked Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	2	435816 566122
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne and Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: BI1703 Dated: 23rd November 2001 Process Type: IPC major (substantial) variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	2	435816 566122
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, South Shields, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: Bj9363 Dated: 20th December 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	2	435816 566122

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: AR1914 Dated: 17th May 1995 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	2	435816 566122
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: A18285 Dated: 11th August 1993 Process Type: IPC new application Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	2	435821 566117
30	<p>Integrated Pollution Controls</p> <p>Name: Circ Realisations Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne And Wear, NE33 5BU Authority: Environment Agency, North East Region Permit Reference: AK3048 Dated: 5th November 1993 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (A) processes involving Halogens within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	475	2	435816 566117
31	<p>Local Authority Integrated Pollution Prevention And Control</p> <p>Name: Circatex Ltd Location: Eldon Street, South Shields, Tyne & Wear, NE33 5BU Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 001/6.4(a) Dated: Not Supplied Process Type: Other Activities Description: Coating plastics Status: Application Not Yet Authorised Positional Accuracy: Manually positioned to the address or location</p>	A7NE (SW)	471	3	435816 566122
32	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Be Modern Ltd Location: Western Approach, SOUTH SHIELDS, Tyne and Wear, NE33 5QZ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: PPC/08/13 Dated: 1st July 1994 Process Type: Local Authority Pollution Prevention and Control Description: PG6/2 Manufacture of timber and wood-based products Status: Permitted Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	0	3	436184 566472
32	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Be Modern Ltd Location: Western Approach, SOUTH SHIELDS, Tyne and Wear, NE33 5QZ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: PPC/08/13 Dated: 1st July 1994 Process Type: Local Authority Pollution Prevention and Control Description: PG1/12 Combustion of fuel manufactured from/or comprised of, solid waste in appliances between 0.4-3MW thermal input Status: Permitted Positional Accuracy: Automatically positioned to the address</p>	A13SE (S)	0	3	436184 566472
33	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Reg Vardy Plc Location: Tudor Road, SOUTH SHIELDS, Tyne and Wear, NE33 4PQ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 021/6.5(B) Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the address or location</p>	A13SW (SW)	24	3	436124 566512

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: J R Selby Location: Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 1RQ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 028/6.5(B) Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the address or location</p>	A13NW (NW)	175	3	435951 566647
35	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Mcnulty Offshore Constuction Ltd Location: Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: PPC/08/3 Dated: 23rd May 1994 Process Type: Local Authority Pollution Prevention and Control Description: PG6/23 Coating of metal and plastic Status: Permitted Positional Accuracy: Located by supplier to within 100m</p>	A13SW (W)	229	3	435887 566533
36	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Tyne Auto Bodies Location: Hill Street, Commercial Road, SOUTH SHIELDS, Tyne an Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 029/6.4(B) Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the road within the address or location</p>	A13SW (W)	298	3	435842 566443
37	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Town Hall Service Station Location: Crossgate, SOUTH SHIELDS, Tyne and Wear, NE33 5QX Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: STC/EPR/005 Dated: 8th September 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station Status: Permitted Positional Accuracy: Manually positioned to the address or location</p>	A13NE (NE)	345	3	436506 566814
38	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Jennings Accident Repair Centre Location: Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 1RW Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 015/6.5(b) Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles Status: Authorisation certificate surrendered by operatorSurrendered Positional Accuracy: Automatically positioned to the address</p>	A12SE (W)	355	3	435790 566421
39	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Posh Wash North East Ltd Location: 168 Sunderland Road, South Shields, Ne33 4hn Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: STC/EPR/052 Dated: 1st September 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Located by supplier to within 100m</p>	A8NE (SE)	369	3	436500 566200
40	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Sutherlands Location: Coronation Street, SOUTH SHIELDS, Tyne and Wear, NE33 1AS Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 070/1.4(B) Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Application Not Yet Authorised Positional Accuracy: Manually positioned to the road within the address or location</p>	A18SW (N)	377	3	436162 567017

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Streamline Garages Ltd Location: Franklin Street, SOUTH SHIELDS, Tyne and Wear, NE33 Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 0.48/6.5(b) Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles Status: Authorised Positional Accuracy: Manually positioned to the road within the address or location</p>	A18SE (NE)	418	3	436425 566991
42	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Circatex Ltd Location: Eldon Street, SOUTH SHIELDS, Tyne and Wear, NE33 5BU Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 001/6.4(A) Dated: 22nd February 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG6/23 Coating of metal and plastic Status: Transferred to LAIPPC Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	3	435816 566122
43	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Dean Clean Location: 174 Dean Road, South Shields, Ne33 4aq Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: STC/EPR/051 Dated: 1st September 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Located by supplier to within 100m</p>	A8NE (SE)	608	3	436500 565900
44	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: C W Taylor & Son Location: Templetown, Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 5SE Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department Permit Reference: 007/2.1(A) Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG2/4 Iron, steel and non-ferrous metal foundry processes Status: Authorised Positional Accuracy: Manually positioned to the address or location</p>	A7SE (SW)	887	3	435590 565766
	Nearest Surface Water Feature	A12NE (NW)	387	-	435796 566812
45	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Water Company Sewage: Surface Water Outfall Location: SOUTH SHIELDS, Tyne And Wear Authority: Environment Agency, North East Region Pollutant: Chemicals - Acid Note: Pollution Found; No Fish Killed Incident Date: 1st October 1996 Incident Reference: NT960270 Catchment Area: Lower Tyne Receiving Water: Coastal Water Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A8NW (SW)	295	2	436000 566200
46	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Vessel Location: West Dock Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Tidal Incident Date: 29th September 1993 Incident Reference: 235/002126 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Oil Boat/Ship Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A12NE (NW)	463	2	435700 566795

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: SOUTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Incident Date: 7th September 1992 Incident Reference: 235/001507 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Other Cause Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12NE (NW)	465	2	435700 566800
47	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: SOUTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Est Incident Date: 2nd September 1990 Incident Reference: 235/000280 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Sewage - Other Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A17SE (NW)	513	2	435800 567000
48	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: River Tyne, Royal Keys Development Shields Authority: Environment Agency, North East Region Pollutant: Other Sewage Note: No Fish Killed Incident Date: 29th August 1995 Incident Reference: NT950184 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12NE (W)	516	2	435600 566600
49	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Miscellaneous Premises: Unknown Location: Jarrow / South Shields Authority: Environment Agency, North East Region Pollutant: Not Given Note: River Tyne Incident Date: 23rd May 1992 Incident Reference: 235/001314 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Other Oil Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12SE (W)	518	2	435600 566500
50	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Vessel Location: S Shields Ferry Landing Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Estuary Incident Date: 28th February 1992 Incident Reference: 235/001126 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Oil Boat/Ship Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A17SE (NW)	681	2	435800 567200
51	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: Albert Edward Dock, NORTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Other Note: No Fish Killed Incident Date: 11th September 1995 Incident Reference: NT950180 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	726	2	435400 566700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Demolition Location: Quayside Of Albert Edward Dock, NORTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Oils - Black Fuel Oil Note: Pollution Found; No Fish Killed Incident Date: 18th September 1996 Incident Reference: NT960259 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	745	2	435400 566795
52	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Vessel Location: Adjacent Albert Edward Dock Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Estuary Incident Date: 3rd November 1990 Incident Reference: 235/000362 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Oil Boat/Ship Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	747	2	435400 566800
53	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: SOUTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Estuary Incident Date: 23rd October 1992 Incident Reference: 235/001584 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Oil General Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A17NE (NW)	768	2	435800 567300
54	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: Albert Edward Dock, NORTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Other Note: No Fish Killed Incident Date: 5th September 1995 Incident Reference: NT950183 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	780	2	435400 566900
55	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Construction Location: Market Dock, SOUTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Inert Suspended Solids Note: Pollution Found; No Fish Killed Incident Date: 30th April 1996 Incident Reference: NT960124 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	809	2	435900 567395
55	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Construction Location: Market Dock, SOUTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Inert Suspended Solids Note: No Fish Killed Incident Date: 30th April 1996 Incident Reference: NT960124 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	814	2	435900 567400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Other General Premises Location: Albert Edward Dock, NORTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Oils - Other Oil Note: No Fish Killed Incident Date: 16th January 1996 Incident Reference: NT960020 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	856	2	435300 566300
56	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Albert Edward Dock, NORTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Oils - Other Oil Note: Pollution Found; No Fish Killed Incident Date: 16th January 1996 Incident Reference: NT960020 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	858	2	435300 566295
57	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Contaminated Land Location: Downstream Of Don Estuary, River Tyne Authority: Environment Agency, North East Region Pollutant: Oils - Gas Oil Note: Pollution Found; No Fish Killed Incident Date: 11th March 1996 Incident Reference: NT960052 Catchment Area: Lower Tyne Receiving Water: Saline Estuary Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	929	2	435200 566400
58	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Highway/Car Park Location: SOUTH SHIELDS Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Estuary Incident Date: 4th October 1992 Incident Reference: 235/001562 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Oil General Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A15SW (E)	969	2	437200 566500
59	<p>Prosecutions Relating to Authorised Processes</p> <p>Location: Eldon Street, South Shield, NEWCASTLE, Tyne & Wear, NE33 5BY Prosecution Text: EA News Release 13/06/1997, Failure to ensure the proper disposal of waste from the business. Prosecution Act: EPA90 Hearing Date: 13th June 1997 Verdict: Guilty Fine: 2400 Costs: 3202 Positional Accuracy: Manually positioned to the road within the address or location</p>	A8NW (SW)	359	2	435909 566188
60	<p>Registered Radioactive Substances</p> <p>Name: Mcnulty Offshore Construction Ltd Location: Commercial Road, South Shields, SOUTH SHIELDS, Tyne And Wear, NE33 1RZ Authority: Environment Agency, North East Region Permit Reference: CC7412 Dated: 2nd September 2008 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA Status: Application has been authorised and any conditions apply to the operatorAuthorised Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NW (NW)	173	2	435953 566648

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	<p>Registered Radioactive Substances</p> <p>Name: Aker McNulty Location: Commercial Road, South Shields, SOUTH SHIELDS, Tyne And Wear, NE33 1RZ Authority: Environment Agency, North East Region Permit Reference: AZ3461 Dated: 25th July 1997 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA Status: Authorisation either revoked or cancelledCancelled Positional Accuracy: Unknown</p>	A18SW (N)	371	2	436100 567000
62	<p>Registered Radioactive Substances</p> <p>Name: Aker McNulty Location: Commercial Road, South Shields, SOUTH SHIELDS, Tyne And Wear, NE33 1RZ Authority: Environment Agency, North East Region Permit Reference: AY4187 Dated: 12th June 1997 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Unknown</p>	A7NE (SW)	675	2	435555 566134
63	<p>Substantiated Pollution Incident Register</p> <p>Authority: Environment Agency - North East Region, North East Area Incident Date: 20th April 2006 Incident Reference: 392016 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Inert Materials And Wastes: Soils And Clay Pollutant: Specific Waste Materials: Commercial Waste Pollutant: Specific Waste Materials: Contaminated Construction & Demolition Material & Waste Pollutant: Specific Waste Materials: Metal Wastes</p>	A7SE (SW)	986	2	435623 565621
	<p>Water Abstractions</p> <p>Operator: Port Of Tyne Licence Number: Ne/023/0003/004 Permit Version: 1 Location: Port Of Tyne Authority: Environment Agency, North East Region Abstraction: Other Industrial/Commercial/Public Services: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 6th January 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A6SW (SW)	1836	2	434488 565673
	<p>Water Abstractions</p> <p>Operator: Port Of Tyne Licence Number: Ne/023/0003/004 Permit Version: 1 Location: Port Of Tyne - Tidal Authority: Environment Agency, North East Region Abstraction: Other Industrial/Commercial/Public Services: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Tidal Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 6th January 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A6SW (SW)	1836	2	434488 565673
	<p>Groundwater Vulnerability</p> <p>Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 5 Tyne and Tees Scale: 1:100,000</p>	A13SE (E)	0	2	436182 566538

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Drift Deposits Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 5 Tyne and Tees Scale: 1:100,000	A13SE (E)	0	2	436182 566538
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (E)	0	4	436182 566538
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13SE (E)	0	4	436182 566538
	Superficial Aquifer Designations Aquifer Designation: Unknown	A13SW (W)	0	4	436139 566539
	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
64	<p>Historical Landfill Sites</p> <p>Licence Holder: West Dock Location: Commercial Road, South Shields, Costerphine Town, Tyne & Wear Name: West Dock Operator Location: Commercial Road, South Shields, Costerphine Town, Tyne & Wear Boundary Accuracy: As Supplied Provider Reference: EAHLD35707 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 67611 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied</p>	A12SE (W)	448	2	435684 566440
65	<p>Historical Landfill Sites</p> <p>Licence Holder: Borough Of South Tyneside Location: Laygate, South Shield, Tyne Wear Name: West Holborn Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06264 First Input Date: 1st March 1983 Last Input Date: 31st March 1983 Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: YO1/L/BOR015 WRC Ref: 4500/0293 BGS Ref: Not Supplied Other Ref: TW 104 ST, ST 038</p>	A12SE (W)	455	2	435676 566441
66	<p>Historical Landfill Sites</p> <p>Licence Holder: Mowlem Northern Limited Location: Wapping Street, The Lawe, South Shield, Tyne Wear Name: Brigham Cowans Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06263 First Input Date: 21st October 1986 Last Input Date: 1st December 1986 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: YO1/L/MOW001 WRC Ref: 4500/0082 BGS Ref: Not Supplied Other Ref: TW 151 ST, ST 047</p>	A18NW (N)	908	2	435971 567522
67	<p>Licensed Waste Management Facilities (Landfill Boundaries)</p> <p>Name: Aker Mc Nulty Ltd Licence Number: 67611 Location: West Dock, Commercial Road, Costerphine Town, South Shields, Tyne & Wear, NE33 1RZ Licence Holder: Aker Mc Nulty Ltd Authority: Environment Agency - North East Region, North East Area Site Category: Landfills Taking Non-biodegradable Wastes (Not Construction) Max Input Rate: Not Supplied Licence Status: Inactive Issued: 25th July 1997 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied</p>	A12SE (W)	448	2	435684 566440
68	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67552 Location: 3 Cone Street, South Shields, Tyne & Wear, NE33 1RE Operator Name: K J Baker & P Baker Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Metal Recycling Sites (Mixed) Licence Status: Surrendered Issued: 27th January 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 29th March 2006 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A12NE (NW)	335	2	435800 566700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67536 Location: Oyston Street, South Shields, Tyne & Wear, NE33 1AT Operator Name: Woodward David Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Metal Recycling Sites (Mixed) Licence Status: Surrendered Issued: 27th April 1995 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 8th February 2002 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A18SW (N)	371	2	436100 567000
70	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67498 Location: 111 Chichester Road, South Shields, Tyne & Wear, NE33 4HE Operator Name: Arthurs Raymond Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Metal Recycling Sites (Mixed) Licence Status: Surrendered Issued: 23rd February 1992 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 23rd December 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A8NE (SE)	441	2	436500 566100
71	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67611 Location: West Dock, Commercial Road, Costerphine Town, South Shields, Tyne & Wear, NE33 1RZ Operator Name: Aker Mc Nulty Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Landfills Taking Non-biodegradable Wastes (Not Construction) Licence Status: Expired Issued: 25th July 1997 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A7NE (SW)	697	2	435500 566200
72	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 67602 Location: Royal Quays - Ballast Hill, Dock Road, North Shields, Tyne & Wear, NE29 6EH Operator Name: Edmund Nuttall Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Transfer Stations Taking Non-biodegradable Wastes Licence Status: Surrendered Issued: 7th June 1996 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 4th June 1998 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	825	2	435300 566700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 0 Location: South Shields, Tyne & Wear, NE33 Operator Name: Mowlem Northern Ltd Operator Location: Saltmeadows Road, East Gateshead Ind Est, Gateshead, Tyne & Wear, NE8 3AH Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfills Taking Non-biodegradable Wastes (Not Construction) Licence Status: Surrendered Issued: 21st October 1986 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	907	2	435900 567500
73	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 64533 Location: South Shields, Tyne & Wear, NE33 Operator Name: Mowlem Northern Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, North East Area Site Category: Landfills Taking Non-biodegradable Wastes (Not Construction) Licence Status: Surrendered Issued: 21st October 1986 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 31st March 1994 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A18NW (N)	907	2	435900 567500
	<p>Local Authority Landfill Coverage</p> <p>Name: South Tyneside Metropolitan Borough Council - Has no landfill data to supply</p>		0	6	436182 566538
	<p>Local Authority Landfill Coverage</p> <p>Name: North Tyneside Metropolitan District Council - Has supplied landfill data</p>		649	10	435479 566714
74	<p>Registered Landfill Sites</p> <p>Licence Holder: South Tyneside Borough Council Licence Reference: TW 104 ST Site Location: Old Electricity Works, West Holburn, Laygate, South Shields, Tyne And Wear Licence Easting: 435650 Licence Northing: 566400 Operator Location: Town Hall, South Shields, Tyne And Wear Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 23rd February 1983 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Max.Waste Permitted By Licence Rock From Clay Substratum Tyne And Wear C -Rubble Tyne And Wear Di -Coh.Inorg Tyne And Wear Dii -Coh.Inorg Tyne And Wear E -Frict.Inorg</p>	A12SE (W)	492	2	435650 566400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
75	<p>Registered Landfill Sites</p> <p>Licence Holder: Aber Mc Nulty Ltd Licence Reference: TW 470 ST Site Location: West Dock, Commercial Road, Corstophine, Sunderland, Tyne And Wear Licence Easting: 435500 Licence Northing: 566200 Operator Location: Commercial Road, SOUTH SHIELDS, Tyne and Wear, NE33 1RZ Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill - with treatment Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Site Closed Dated: 25th July 1997 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Brick, Rock, Broken Concrete, Plaster Constr'N/Demol./Excav. Waste Comprisin Slate, Tiles Sub/Topsoil, Sand, Clay, Shale Total Waste Permitted By Licence Prohibited Waste: Biodegradable Waste Contaminated Waste Spec.Waste (Epa'90:S62/1996 Regs) Steel Timber, Board Waste N.O.S.</p>	A7NE (SW)	697	2	435500 566200
76	<p>Registered Landfill Sites</p> <p>Licence Holder: Edmund Nuttall Ltd Licence Reference: TW 459 NT Site Location: Albert Edward Dock, Royal Quays Development, North Shields, Tyne And Wear Licence Easting: 435300 Licence Northing: 566700 Operator Location: 1 Eagle House, Newcastle Business Park, NEWCASTLE UPON TYNE, Tyne and Wear, NE4 7LN Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 7th June 1996 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Approximate location provided by supplier Boundary Accuracy: Not Applicable Authorised Waste: Clean Concrete, Brick Hardcore, Stone Max.Waste Permitted By Licence Prohibited Waste: Biodegradable Waste Combustible Waste Potentially Polluting Waste Spec.Waste (Epa'90:S62/1996 Regs) Waste N.O.S.</p>	A12NW (W)	725	2	435398 566683

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
77	<p>Registered Landfill Sites</p> <p>Licence Holder: Mowlem Northern Ltd Licence Reference: TW 151 ST Site Location: Brigham & Cowan Dry Dock Yard, South Shields, Tyne And Wear Licence Easting: 435930 Licence Northing: 567600 Operator Location: Saltmeadows Road, Easr Gateshead Industrial Estate, GATESHEAD, Tyne and Wear, NE8 3AH</p> <p>Authority: Environment Agency - North East Region, Northumbria Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence known to be surrenderedSurrendered Dated: 21st October 1986 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Tyne And Wear, Renfrew C -Rubble * Tyne And Wear, Renfrew Di -Coh.Inorg * Tyne And Wear, Renfrew Dii -Coh.Inorg * Tyne And Wear, Renfrew E -FRICT.Inorg * Prohibited Waste: Waste N.O.S</p>	A23SW (N)	994	2	435930 567600
78	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: K J & P Baker t/a Baker Bros Licence Reference: TW 362 ST Site Location: 3 Cone Street, SOUTH SHIELDS, Tyne and Wear, NE33 1RE Operator Location: As Site Address Authority: Environment Agency - North East Region, Northumbria Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 20th December 2000 Preceded By: TW 362 ST Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Maximum Waste Permitted By Licence Metal Waste/Scrap Metal (As In Post'98 E.A.Lics And Equivalent To 23.00.00) Motor Vehicle Batteries Prohibited Waste: Degradable Household/Commercial/Industrial Waste (As In Post'98 E.A.Lics And Equivalent To 22.09.00) Inert Materials (As In Post'98 E.A.Lics And Equivalent To 21.00.00) Other Waste/Waste Not Otherwise Specified Special Waste (As In Epa 1990:S62 Of 1996 Regs) Not Otherwise Specified</p>	A13NW (NW)	234	2	435900 566680
78	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: K J & P Baker t/a Baker Bros Licence Reference: TW 362 ST Site Location: 3 Cone Street, SOUTH SHIELDS, Tyne and Wear, NE33 1RE Operator Location: As Site Address Authority: Environment Agency - North East Region, Northumbria Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 27th January 1994 Preceded By: Not Given Licence: Superseded By: TW 362 ST Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Scrap Metal As In S.M.Dealers Act'64 Prohibited Waste: Asbestos Clinical Wastes Flammable Solvents Liable To Cause Environmental Hazards Medical (Misuse Of Drugs Act '71) Percussive/Explosive/Similar Waste Poisonous, Noxious, Polluting Wastes Spec.Waste (Epa'90:S62/1996 Regs) Transf./Capacitors Assumed/Cont. Pcb's Waste N.O.S.</p>	A13NW (NW)	234	2	435900 566680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: D Woodward Licence Reference: TW 340 ST Site Location: Old Gas Yard, Oyston Street, SOUTH SHIELDS, Tyne and Wear, NE33 1AT Operator Location: 108 Hardie Drive, WEST BOLDON, Tyne and Wear, NE36 0JL Authority: Environment Agency - North East Region, Northumbria Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 27th April 1995 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Motor Vehicles & Assoc.Parts Prohibited Waste: Spec.Waste (Epa'90:S62/1996 Regs)N.O.S Waste N.O.S.</p>	A18SE (N)	310	2	436230 566950
80	<p>Registered Waste Treatment or Disposal Sites</p> <p>Licence Holder: R Arthurs Licence Reference: TW 273 ST Site Location: Chichester Metals, 111 Chichester Road, SOUTH SHIELDS, Tyne and Wear, NE33 4HE Operator Location: 2 Dunnock Drive, Ayton, Washington, Tyne And Wear Authority: Environment Agency - North East Region, Northumbria Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Licence known to be surrenderedSurrendered Dated: 23rd January 1992 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Asbestos Haz.Items Normally Assoc.With Vehicles Normally Less Than Oils Petrol Scrap Metal As In S.M.Dealers Act '64 Such As Batteries Prohibited Waste: Asbestos Capac'Rs/Transformers Cont. Pcb/Pct'S Clinical Wastes Flammable Solvents Liable To Cause Environmental Hazards Liquid/Sludge Wastes Medical (Misuse Of Drugs Act) Percussive/Explosive Waste Radioactive Wastes Special Wastes</p>	A8NE (SE)	390	2	436500 566170

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	<p>Control of Major Accident Hazards Sites (COMAH)</p> <p>Name: Transco Plc Location: South Shields Holder Station, Oyston Street, SOUTH SHIELDS, Tyne & Wear, NE33 1AT Reference: Not Supplied Type: Lower Tier Status: Record Ceased To Be Supplied Under COMAH Regulations Positional Accuracy: Manually positioned to the address or location</p>	A18SE (N)	361	5	436309 566984
82	<p>Notification of Installations Handling Hazardous Substances (NIHHS)</p> <p>Name: Transco. Location: Oyston Street, South Shields, Tyne & Wear, Ne33 1At Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A18SE (N)	364	5	436316 566985
83	<p>Planning Hazardous Substance Consents</p> <p>Name: British Gas Northern Engineering Location: Gas Holder, Oyston Street, South Shields, Tyne & Wear, Ne33 2ht Authority: South Tyneside Metropolitan Borough Council, Planning Department Application Ref: ST/SC/92/02 Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 60 Application date: 19th October 1992 Decision: Deemed Consent Granted Positional Accuracy: Manually positioned to the address or location</p>	A18SE (N)	363	6	436303 566989
83	<p>Planning Hazardous Substance Consents</p> <p>Name: Transco Plc Location: Gas Holder, Oyston Street, South Shields, Tyne And Wear Authority: South Tyneside Metropolitan Borough Council, Planning Department Application Ref: St/0228/01/Dm Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 0 Application date: 14th March 2001 Decision: Unknown at time of report Positional Accuracy: Manually positioned to the address or location</p>	A18SE (N)	370	6	436309 566994
84	<p>Planning Hazardous Substance Consents</p> <p>Name: F Lakes & Son Location: Havelock Street, South Shields, Tyne & Wear, Ne33 5dz Authority: South Tyneside Metropolitan Borough Council, Planning Department Application Ref: St/Sc/92/04/Dm Hazardous Substance: Unknown at time of report Maximum Quantity: 25 Application date: 20th November 1992 Decision: New application refused Positional Accuracy: Manually positioned to the road within the address or location</p>	A7NE (SW)	419	6	435829 566185

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Westphalian Coal Measures	A13SE (E)	0	4	436182 566538
	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	A13SW (W)	0	7	436139 566539
	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: 30 - 45 mg/kg	A13SE (E)	0	7	436182 566538
	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	A13SE (S)	3	7	436202 566434
	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: 30 - 45 mg/kg	A13NW (NW)	33	7	436097 566636
	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: 30 - 45 mg/kg	A13NE (NE)	59	7	436300 566598
	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	A13SW (SW)	73	7	436086 566419

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A13NE (N)	90	7	436237 566721
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13NW (NW)	94	7	436108 566700
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A13NE (NE)	97	7	436326 566638
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13NE (N)	112	7	436177 566753
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A13SW (W)	114	7	436000 566538
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A13SE (S)	114	7	436191 566323

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NE (NE)	114	7	436265 566732
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SW (W)	120	7	436000 566527
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	139	7	435993 566656
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NE (E)	142	7	436370 566604
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SE (SE)	143	7	436303 566324
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NW (NW)	145	7	436000 566681

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SE (SE)	145	7	436306 566324
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NW (NW)	147	7	435997 566681
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SW (SW)	149	7	436000 566461
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SW (SW)	155	7	436000 566412
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SE (SE)	159	7	436354 566353
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SE (SE)	162	7	436329 566322

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13NE (N)	165	7	436218 566805
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13SW (SW)	172	7	436030 566331
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A13SW (SW)	177	7	436040 566316
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13NW (NW)	179	7	435981 566712
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13SW (SW)	192	7	435962 566412
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13NW (NW)	200	7	435959 566718

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SW (SW)	202	7	436000 566318
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SW (SW)	204	7	436000 566316
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SW (SW)	208	7	435994 566316
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NE (NE)	209	7	436390 566743
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NW (NW)	215	7	436007 566782
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	217	7	435968 566753

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NW (NW)	219	7	436000 566782
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	224	7	435986 566778
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	227	7	436032 566821
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	229	7	436000 566793
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SE (SE)	230	7	436410 566310
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18SE (N)	265	7	436210 566906

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SE (E)	272	7	436497 566439
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	277	7	436034 566874
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (N)	277	7	436073 566891
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18SW (N)	280	7	436110 566909
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (N)	283	7	436241 566921
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	285	7	436005 566861

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	285	7	436000 566859
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (N)	286	7	436189 566928
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	300	7	436000 566876
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18SW (N)	310	7	436085 566936
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NE (NE)	315	7	436440 566844
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (NW)	325	7	436000 566905

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A18SW (NW)	352	7	436000 566936
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A18SE (N)	358	7	436182 567000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A18SW (N)	360	7	436156 567000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SW (NW)	370	7	435975 566942
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SE (N)	383	7	436331 567000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SE (N)	390	7	436349 567000

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18SW (NW)	403	7	435960 566971
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18SW (N)	408	7	436000 567000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (N)	409	7	436208 567051
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18SW (N)	415	7	436095 567046
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (N)	416	7	436292 567046
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (N)	416	7	436152 567056

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A18SE (NE)	424	7	436384 567022
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SE (NE)	430	7	436390 567025
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A18SW (NW)	435	7	435946 567000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A8NE (S)	439	7	436182 566000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A8NE (S)	439	7	436229 566000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A8NE (S)	441	7	436262 566000

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SW (E)	445	7	436675 566486
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SW (E)	446	7	436675 566488
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (NE)	448	7	436463 567001
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (NE)	449	7	436466 567000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NW (E)	455	7	436687 566596
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18SW (N)	457	7	436000 567055

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SW (SE)	465	7	436652 566263
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (NE)	468	7	436496 567000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8NW (S)	477	7	436000 566000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (NE)	482	7	436455 567048
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (N)	489	7	436000 567091
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	503	7	436571 566081

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SW (NE)	503	7	436548 567000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (N)	503	7	435979 567096
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (N)	504	7	436216 567145
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	504	7	436567 566075
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SE (NE)	504	7	436482 567056
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A19SW (NE)	518	7	436524 567043

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	530	7	436514 566000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	540	7	436616 566073
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (N)	542	7	436000 567148
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18SW (NW)	544	7	435926 567115
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (NW)	549	7	435929 567122
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	551	7	436551 566000

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (NW)	555	7	435917 567122
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8NE (SE)	556	7	436487 565953
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NW (E)	584	7	436810 566702
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NE (SW)	586	7	435695 566083
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8NE (S)	590	7	436367 565868
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NE (SW)	596	7	435765 566000

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	600	7	436528 565925
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SW (NE)	605	7	436691 567000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A9NW (SE)	606	7	436749 566142
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SW (NE)	630	7	436634 567093
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (SE)	640	7	436485 565858
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SW (NE)	679	7	436829 566926

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	681	7	436796 566076
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	684	7	436252 565756
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SW (NE)	691	7	436689 567125
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	693	7	436919 566409
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	700	7	436927 566436
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14SE (E)	701	7	436928 566443

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	702	7	436908 566287
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	706	7	436798 566033
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	717	7	436786 566000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SE (S)	718	7	436284 565724
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SW (NE)	723	7	436720 567141
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SW (NE)	725	7	436839 567000

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SW (NE)	733	7	436735 567140
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	734	7	436966 566533
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NE (E)	738	7	436971 566557
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NW (W)	738	7	435389 566707
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NW (W)	738	7	435399 566762
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NE (E)	738	7	436971 566557

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14SE (E)	740	7	436958 566344
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic 15 - 25 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14SE (E)	741	7	436963 566378
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A12NW (W)	746	7	435373 566649
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14SE (E)	753	7	436952 566250
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14NE (E)	753	7	436986 566562
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17SW (NW)	756	7	435429 566907

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SE (S)	758	7	436224 565681
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	762	7	436274 565679
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7NE (SW)	762	7	435542 565994
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7NE (SW)	763	7	435537 566000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SE (S)	763	7	436284 565679
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SE (S)	764	7	436362 565689

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NE (E)	767	7	437000 566577
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	767	7	437000 566543
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	767	7	437000 566538
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	768	7	436986 566726
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NE (SE)	770	7	436852 566000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SE (NE)	770	7	436925 566937

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 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SE (E)	771	7	437000 566473
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NE (E)	773	7	437000 566660
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NE (SW)	773	7	435610 565901
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NE (SW)	777	7	435602 565904
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	784	7	437000 566737
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A19SE (NE)	784	7	436900 567013

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A19SE (NE)	787	7	436911 567000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7SE (SW)	794	7	435629 565855
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SE (NE)	794	7	436879 567064
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	797	7	437000 566803
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SE (S)	800	7	436341 565648
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SW (W)	803	7	435313 566519

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A19SE (NE)	805	7	436932 567000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A12SW (W)	807	7	435309 566515
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A19SE (NE)	808	7	436935 567000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A19SE (NE)	812	7	436938 567004
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A19SE (NE)	816	7	436850 567139
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Sediment</p> <p>Arsenic <15 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <150 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A12SW (W)	817	7	435299 566512

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	820	7	435461 567087
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NE (SE)	821	7	437000 566176
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SW (S)	822	7	436056 565630
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	822	7	435446 567070
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	822	7	435465 567096
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	828	7	437043 566769

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8SE (S)	831	7	436238 565608
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A19SW (NE)	834	7	436843 567174
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SW (NW)	839	7	435490 567153
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	842	7	436306 565602
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9SW (SE)	845	7	436586 565678
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NE (SW)	854	7	435511 565888

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19SE (NE)	865	7	437000 567000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	869	7	436349 565580
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	874	7	435374 567055
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NW (SW)	874	7	435402 566000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	874	7	435374 567055
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	874	7	435409 567108

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SW (S)	876	7	436097 565570
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SW (NW)	876	7	435421 567128
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SW (NW)	878	7	435439 567153
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NW (SW)	878	7	435396 566002
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	879	7	435445 567162
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7SE (SW)	879	7	435552 565810

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A19SE (NE)	882	7	437000 567036
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NW (SW)	883	7	435392 566000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SW (NW)	886	7	435470 567201
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	887	7	435305 566951
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	889	7	436253 565550
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NE (SE)	894	7	437000 566000

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NE (E)	901	7	437128 566667
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	902	7	437129 566664
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SW (S)	905	7	436003 565556
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	907	7	435375 567117
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	911	7	437142 566630
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SW (S)	912	7	436000 565549

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17NE (NW)	922	7	435548 567322
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A19SE (NE)	928	7	437000 567124
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A3NW (S)	934	7	436083 565513
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A19SE (NE)	935	7	437000 567138
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17NE (NW)	945	7	435556 567357
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NW (SW)	950	7	435373 565907

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 90 - 120 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A3NW (S)	956	7	436000 565504
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A3NW (S)	959	7	435979 565505
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7SW (SW)	962	7	435438 565807
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SW (NW)	964	7	435296 567099
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A11SE (W)	970	7	435154 566425
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	972	7	435237 567006

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 <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9SE (SE)	985	7	437000 565838
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A19NE (NE)	986	7	437000 567224
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <150 mg/kg Nickel 15 - 30 mg/kg Concentration:	A11SE (W)	998	7	435142 566338
85	BGS Recorded Mineral Sites Site Name: Ballast Hills Brick Field Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 120996 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	119	4	436030 566450
86	BGS Recorded Mineral Sites Site Name: St Hilda'S Colliery Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 128036 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: High Main Coal (Northumberland And Durham) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13NW (N)	175	4	436173 566815
87	BGS Recorded Mineral Sites Site Name: Westoe Location: , Westoe, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95988 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Grindstone Post Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	200	4	436310 566262

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Swinburne'S Brick Field Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 120994 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Glaciolacustrine Deposits, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m</p>	A13NE (N)	244	4	436305 566860
89	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Anderson'S Brick Field Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 120995 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Glaciolacustrine Deposits, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m</p>	A13NE (NE)	267	4	436455 566750
90	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Oyston'S Brick Field Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 120993 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Glaciolacustrine Deposits, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m</p>	A18SE (NE)	426	4	436410 567010
91	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Carston Quarry Location: , Westoe, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95989 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Permian Geology: Raisby Formation (Lower Magnesian Limestone) Commodity: Dolomite Positional Accuracy: Located by supplier to within 10m</p>	A9NW (SE)	618	4	436688 566037
92	<p>BGS Recorded Mineral Sites</p> <p>Site Name: West House Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95994 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Grindstone Post Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m</p>	A8SE (S)	636	4	436355 565818
93	<p>BGS Recorded Mineral Sites</p> <p>Site Name: South Shields Brick And Tile Works Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95987 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m</p>	A19NW (NE)	781	4	436589 567316

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	BGS Recorded Mineral Sites Site Name: Corny Hill Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95995 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A3NE (S)	970	4	436245 565469
95	BGS Recorded Mineral Sites Site Name: Corny Hill Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95996 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A3NW (S)	998	4	436098 565448
	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.	A13SE (E)	0	8	436182 566538
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SE (E)	0	-	436182 566538
	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	A13SE (E)	0	4	436182 566538
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	4	436139 566539
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	0	4	436182 566538
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	33	4	436097 566636
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	59	4	436300 566598
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	139	4	435993 566656
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	143	4	435984 566506
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	143	4	436303 566324
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	179	4	435981 566712

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	188	4	435930 566620
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	207	4	435941 566445
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	0	4	436182 566538
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	0	4	436182 566538
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	0	4	436182 566538
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	59	4	436300 566598
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	143	4	435984 566506
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	159	4	436354 566353
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	188	4	435930 566620
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	207	4	435941 566445
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	0	4	436182 566538
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	4	436139 566539
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	73	4	436086 566419
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	143	4	436303 566324
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	159	4	436354 566353
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	179	4	435981 566712
	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	A13SE (E)	0	4	436182 566538
	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	A13SE (E)	0	4	436182 566538

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
96	Contemporary Trade Directory Entries Name: Be Modern Ltd Location: Western Approach, South Shields, Tyne and Wear, NE33 5QZ Classification: Fireplaces & Mantelpieces Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (S)	0	-	436184 566472
96	Contemporary Trade Directory Entries Name: North Eastern Distribution Location: Western Approach, South Shields, Tyne and Wear, NE33 5QZ Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (S)	0	-	436184 566472
96	Contemporary Trade Directory Entries Name: Tandem Beck Location: Amne Buildings, Tudor Rd, South Shields, Tyne and Wear, NE33 5RD Classification: Textile Manufacturing Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13SW (S)	5	-	436152 566448
97	Contemporary Trade Directory Entries Name: The Plastic Trim Centre Location: Crown House, 4, Western Approach, South Shields, Tyne and Wear, NE33 5QU Classification: Builders' Merchants Status: Active Positional Accuracy: Automatically positioned to the address	A13NE (NE)	5	-	436222 566580
98	Contemporary Trade Directory Entries Name: Ats Euromaster Ltd Location: Western Approach, South Shields, Tyne & Wear, NE33 5QU Classification: Tyre Dealers Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A13SE (SE)	14	-	436244 566504
98	Contemporary Trade Directory Entries Name: Crown Location: Crown House, 4 Western Approach, South Shields, Tyne and Wear, NE33 5QU Classification: PVC-U Products - Manufacturers & Suppliers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13NE (E)	17	-	436249 566548
98	Contemporary Trade Directory Entries Name: Arndale Engineering Location: D-E, Unit, Western Approach, South Shields, Tyne and Wear, NE33 5NN Classification: Nuts, Bolts & Fixings Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (E)	54	-	436285 566519
99	Contemporary Trade Directory Entries Name: Harkers Mot Location: Tudor Road, South Shields, Tyne and Wear, NE33 4PQ Classification: Mot Testing Centres Status: Active Positional Accuracy: Automatically positioned to the address	A13SW (W)	16	-	436128 566519
99	Contemporary Trade Directory Entries Name: Tyneside Car Sales Ltd Location: Tudor Road, South Shields, Tyne and Wear, NE33 5RD Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (SW)	29	-	436126 566496
99	Contemporary Trade Directory Entries Name: Tyneside Car Sales Location: Tudor Road, South Shields, Tyne and Wear, NE33 5RD Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (SW)	29	-	436126 566496
99	Contemporary Trade Directory Entries Name: Tudor Road Garage Location: Tudor Rd, South Shields, Tyne & Wear, NE33 4PQ Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13SW (W)	39	-	436092 566522

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
100	Contemporary Trade Directory Entries Name: South Tyneside Auto Electrics Location: 1 Maxwell St, South Shields, Tyne and Wear, NE33 4PU Classification: Electronic Engineers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13NE (NE)	88	-	436314 566620
101	Contemporary Trade Directory Entries Name: Maxwell Street Motors Location: 32, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (E)	102	-	436332 566490
101	Contemporary Trade Directory Entries Name: Performance Cars Location: 29-35, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (E)	140	-	436371 566513
102	Contemporary Trade Directory Entries Name: Toney Minchella Ltd Location: 18-20, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Ice Cream Manufacturers & Suppliers Status: Active Positional Accuracy: Automatically positioned to the address	A13NE (E)	103	-	436337 566565
102	Contemporary Trade Directory Entries Name: N P S Services Location: 14, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Wrought Ironwork Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NE (E)	104	-	436334 566589
102	Contemporary Trade Directory Entries Name: M A P Engineering (Ne) Ltd Location: Maxwell St, South Shields, Tyne & Wear, NE33 4PU Classification: Mechanical Engineers Status: Active Positional Accuracy: Manually positioned to the address or location	A13SE (E)	104	-	436336 566540
102	Contemporary Trade Directory Entries Name: Tyneside Tyre Services Location: 26, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (E)	104	-	436336 566540
102	Contemporary Trade Directory Entries Name: Euro Hire & Sales Ltd Location: Maxwell St, South Shields, Tyne and Wear, NE33 4PU Classification: Corrosion Prevention & Control Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13NE (E)	119	-	436352 566576
103	Contemporary Trade Directory Entries Name: Smh Products Ltd Location: 29-35, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Glass Fibre Moulding, Materials & Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (SE)	107	-	436327 566416
103	Contemporary Trade Directory Entries Name: C V N Print Location: 42, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (SE)	107	-	436331 566436
103	Contemporary Trade Directory Entries Name: Henderson Motors Location: Maxwell St, South Shields, Tyne and Wear, NE33 4PU Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13SE (SE)	127	-	436354 566464
103	Contemporary Trade Directory Entries Name: G & N'S Location: Maxwell St, South Shields, Tyne & Wear, NE33 4PU Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13SE (SE)	128	-	436354 566454

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	<p>Contemporary Trade Directory Entries</p> <p>Name: Beacon Safety Showers Location: Beacon House, Maxwell St, South Shields, Tyne and Wear, NE33 4PU Classification: Glass Fibre Moulding, Materials & Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A13SE (SE)	130	-	436355 566446
103	<p>Contemporary Trade Directory Entries</p> <p>Name: Gary Tuck Workshops Ltd Location: 37-38, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Car Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (E)	137	-	436364 566469
103	<p>Contemporary Trade Directory Entries</p> <p>Name: Lees Cleaning Services Location: 43 Maxwell St, South Shields, Tyne & Wear, NE33 4PU Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A13SE (SE)	142	-	436364 566418
104	<p>Contemporary Trade Directory Entries</p> <p>Name: Decorative Shades 2 Location: 14, New Green Street, SOUTH SHIELDS, Tyne and Wear, NE33 5DL Classification: Painting & Decorating Supplies Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SW (S)	125	-	436168 566318
105	<p>Contemporary Trade Directory Entries</p> <p>Name: Harlow Printing Ltd Location: 7-21, Maxwell Street, South Shields, Tyne and Wear, NE33 4PU Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	138	-	436363 566633
106	<p>Contemporary Trade Directory Entries</p> <p>Name: The Plastics Centre Location: Unit 4, Holman Court, Henry Robson Way, South Shields, Tyne and Wear, NE33 1RL Classification: PVC-U Products - Manufacturers & Suppliers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	145	-	436312 566729
106	<p>Contemporary Trade Directory Entries</p> <p>Name: Tool Repair Centre Location: Unit 4/6, Holman Court, Henry Robson Way, South Shields, Tyne and Wear, NE33 1RL Classification: Tool Sharpening, Repairing & Servicing Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	145	-	436312 566729
106	<p>Contemporary Trade Directory Entries</p> <p>Name: Pressit Location: Unit 306, Tedco Business Works, Henry Robson Way, South Shields, Tyne and Wear, NE33 1RF Classification: Ironing & Home Laundry Services Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A13NE (NE)	165	-	436296 566772
107	<p>Contemporary Trade Directory Entries</p> <p>Name: Osborne Motor Transport Ltd Location: Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Road Haulage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NW (W)	148	-	435968 566541
108	<p>Contemporary Trade Directory Entries</p> <p>Name: G W Foreman Location: Unit 2, St. Hilda Industrial Estate, Station Road, South Shields, Tyne and Wear, NE33 1RA Classification: Metal Workers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (N)	161	-	436144 566795
108	<p>Contemporary Trade Directory Entries</p> <p>Name: Templetown Canopies Ltd Location: Unit 4, St. Hilda Industrial Estate, Station Road, South Shields, Tyne and Wear, NE33 1RA Classification: Glass Fibre Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NW (N)	176	-	436137 566808

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
108	<p>Contemporary Trade Directory Entries</p> <p>Name: Wizz Print Location: Unit 5, St. Hilda Industrial Estate, Station Road, South Shields, Tyne and Wear, NE33 1RA Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (N)	184	-	436132 566815
108	<p>Contemporary Trade Directory Entries</p> <p>Name: Halfords Autocentre Location: Station Rd, South Shields, Tyne and Wear, NE33 1ED Classification: Garage Services Status: Active Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NW (N)	188	-	436108 566808
108	<p>Contemporary Trade Directory Entries</p> <p>Name: Washington Patterns Ltd Location: Unit 8, St. Hilda Industrial Estate, Station Road, South Shields, Tyne and Wear, NE33 1RA Classification: Wood Products, Except Furniture - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (N)	215	-	436112 566841
109	<p>Contemporary Trade Directory Entries</p> <p>Name: Malac Trading Ltd Location: Commercial Rd, South Shields, Tyne and Wear, NE33 1RP Classification: Marine Engineers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NW (NW)	173	-	435956 566656
110	<p>Contemporary Trade Directory Entries</p> <p>Name: Maxi Flow Location: Unit 208, Tedco Business Works, Henry Robson Way, South Shields, Tyne and Wear, NE33 1RF Classification: Engineering Materials Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A13NE (N)	214	-	436246 566850
110	<p>Contemporary Trade Directory Entries</p> <p>Name: B-Able Ltd Location: Unit 201, Tedco Business Works, Henry Robson Way, South Shields, Tyne and Wear, NE33 1RF Classification: Disability Equipment - Manufacturers & Suppliers Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A13NE (N)	216	-	436246 566852
110	<p>Contemporary Trade Directory Entries</p> <p>Name: Levant Office Interiors Location: Unit 313, Tedco Business Works, Henry Robson Way, South Shields, Tyne and Wear, NE33 1RF Classification: Office Furniture & Equipment Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A18SE (N)	257	-	436254 566892
111	<p>Contemporary Trade Directory Entries</p> <p>Name: J R Selby Coachworks Ltd Location: Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Commercial Vehicle Bodybuilders & Repairers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SW (W)	218	-	435913 566481
111	<p>Contemporary Trade Directory Entries</p> <p>Name: J R Selby Engineering Ltd Location: Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Sheet Metal Work Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SW (W)	218	-	435913 566481
111	<p>Contemporary Trade Directory Entries</p> <p>Name: Trinity Motors Location: A, 140, Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SW (W)	219	-	435899 566523
111	<p>Contemporary Trade Directory Entries</p> <p>Name: Stans Location: 140a, Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Mechanical Engineers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SW (W)	219	-	435899 566523

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
111	<p>Contemporary Trade Directory Entries</p> <p>Name: Stan'S Car Sales Location: A, 140, Commercial Road, South Shields, Tyne and Wear, NE33 1RQ Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SW (W)	219	-	435899 566523
112	<p>Contemporary Trade Directory Entries</p> <p>Name: Aa Service Centre Location: Station Road, South Shields, Tyne and Wear, NE33 1ED Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (NW)	227	-	436038 566814
113	<p>Contemporary Trade Directory Entries</p> <p>Name: Falcon Engineering Location: 4, Cone Street, South Shields, Tyne and Wear, NE33 1RE Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NW (W)	247	-	435876 566639
113	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyne Slipway & Engineering Location: Commercial Rd, South Shields, Tyne and Wear, NE33 1RP Classification: Ship Builders, Repairs & Fittings Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A13NW (NW)	251	-	435880 566675
114	<p>Contemporary Trade Directory Entries</p> <p>Name: Community Design & Print Location: 9-13, Frederick Street, South Shields, Tyne and Wear, NE33 5DY Classification: Photocopiers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8NW (S)	263	-	436123 566186
114	<p>Contemporary Trade Directory Entries</p> <p>Name: Buyproducts Location: 17, Frederick Street, South Shields, Tyne and Wear, NE33 5DY Classification: Hardware Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8NW (S)	291	-	436117 566159
115	<p>Contemporary Trade Directory Entries</p> <p>Name: C J Print Location: Riverside Ho, Commercial Rd, South Shields, Tyne & Wear, NE33 1RW Classification: Printers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A13SW (W)	266	-	435862 566480
116	<p>Contemporary Trade Directory Entries</p> <p>Name: Bede Furnishings Ltd Location: Unit 1/5, Redhead Buildings, Garden Lane, South Shields, Tyne and Wear, NE33 1PS Classification: Upholstery Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	271	-	436405 566816
116	<p>Contemporary Trade Directory Entries</p> <p>Name: Lawnmower & Power Tool Repair Centre Location: Unit 8, Redhead Buildings, Garden Lane, South Shields, Tyne and Wear, NE33 1PS Classification: Lawnmowers & Garden Machinery - Sales & Service Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	271	-	436405 566816
116	<p>Contemporary Trade Directory Entries</p> <p>Name: Ocean Laundry Services Location: Unit 6/7, Redhead Buildings, Garden Lane, South Shields, Tyne and Wear, NE33 1PS Classification: Laundries & Launderettes Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	271	-	436405 566816
116	<p>Contemporary Trade Directory Entries</p> <p>Name: A C Wrought Iron Location: Unit 1-5, Redhead Buildings, Garden Lane, South Shields, Tyne and Wear, NE33 1PS Classification: Wrought Ironwork Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	271	-	436405 566816

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
116	<p>Contemporary Trade Directory Entries</p> <p>Name: Speciality Mirror Shop Location: 9, St. Hilda Street, South Shields, Tyne and Wear, NE33 1QD Classification: Mirrors & Decorative Glass Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	285	-	436435 566807
116	<p>Contemporary Trade Directory Entries</p> <p>Name: Speciality Mirror Shop Location: 9, St. Hilda Street, South Shields, Tyne and Wear, NE33 1QD Classification: Picture & Picture Frame Renovating & Restoring Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	285	-	436435 566807
117	<p>Contemporary Trade Directory Entries</p> <p>Name: Bizzy (Uk) Location: 129, Victoria Road, South Shields, Tyne and Wear, NE33 4LP Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SE (E)	282	-	436506 566419
117	<p>Contemporary Trade Directory Entries</p> <p>Name: Bizzy Location: 129, Victoria Road, South Shields, Tyne and Wear, NE33 4LP Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SE (E)	282	-	436506 566419
118	<p>Contemporary Trade Directory Entries</p> <p>Name: Steward Site Engineering Ltd Location: 28, Frost Mews, South Shields, Tyne and Wear, NE33 4AL Classification: Agricultural Engineers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (SE)	298	-	436463 566267
119	<p>Contemporary Trade Directory Entries</p> <p>Name: C M C Location: 1, Forest Road, South Shields, Tyne and Wear, NE33 1PT Classification: Photocopiers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	300	-	436320 566914
120	<p>Contemporary Trade Directory Entries</p> <p>Name: D Woodward Location: Car Dismantlers, Oyston Street, South Shields, Tyne and Wear, NE33 1AT Classification: Scrap Metal Merchants Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	A18SE (N)	303	-	436236 566943
121	<p>Contemporary Trade Directory Entries</p> <p>Name: Peterson Printers Location: 12, Laygate, South Shields, Tyne and Wear, NE33 5RP Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SW (SW)	311	-	435883 566293
122	<p>Contemporary Trade Directory Entries</p> <p>Name: Blades Location: Unit 8, 12, Nile Street, South Shields, Tyne and Wear, NE33 1RH Classification: Tool Sharpening, Repairing & Servicing Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A12NE (W)	313	-	435801 566551
122	<p>Contemporary Trade Directory Entries</p> <p>Name: Bm Screen Location: Unit 8, 12, Nile Street, South Shields, Tyne and Wear, NE33 1RH Classification: Screen Process Printers Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A12NE (W)	314	-	435801 566551
122	<p>Contemporary Trade Directory Entries</p> <p>Name: I T C Location: Nile Street, South Shields, Tyne and Wear, NE33 1RH Classification: Waste Disposal Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A12NE (W)	317	-	435798 566575
123	<p>Contemporary Trade Directory Entries</p> <p>Name: Steve'S Auto Sprays Location: 62, Garden Lane, South Shields, Tyne and Wear, NE33 1PS Classification: Car Body Repairs Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A18SE (NE)	316	-	436402 566881

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
123	Contemporary Trade Directory Entries Name: Truewood Furniture & Joinery Ltd Location: 62, Garden Lane, South Shields, Tyne and Wear, NE33 1PS Classification: Furniture Manufacturers - Home & Office Status: Inactive Positional Accuracy: Manually positioned to the address or location	A18SE (NE)	316	-	436402 566881
123	Contemporary Trade Directory Entries Name: Rolls Location: 62, Garden Lane, South Shields, Tyne and Wear, NE33 1PS Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (NE)	316	-	436402 566881
123	Contemporary Trade Directory Entries Name: R Cars Location: 52-56, Garden Lane, South Shields, Tyne and Wear, NE33 1PS Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (NE)	333	-	436399 566906
124	Contemporary Trade Directory Entries Name: Tyne Auto Location: Hill Street, South Shields, Tyne and Wear, NE33 1RN Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	329	-	435811 566436
124	Contemporary Trade Directory Entries Name: Jennings Of South Shields Location: Commercial Road, South Shields, Tyne and Wear, NE33 1RW Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	355	-	435790 566421
125	Contemporary Trade Directory Entries Name: Timber Line (Diy) Ltd Location: 38, Frederick Street, South Shields, Tyne and Wear, NE33 5EA Classification: Fencing Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (S)	330	-	436070 566132
126	Contemporary Trade Directory Entries Name: Colourclear Location: 3-4 Forest Rd, South Shields, Tyne and Wear, NE33 1PT Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A18SE (N)	334	-	436338 566944
126	Contemporary Trade Directory Entries Name: Automotive Maintenance Co Location: 4 Forest Rd, South Shields, Tyne and Wear, NE33 1PT Classification: Garage Services Status: Active Positional Accuracy: Manually positioned to the address or location	A18SE (NE)	349	-	436355 566952
126	Contemporary Trade Directory Entries Name: Vechicle Diagnostics Location: 4 Forest Rd, South Shields, Tyne and Wear, NE33 1PT Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned to the address or location	A18SE (NE)	349	-	436355 566952
126	Contemporary Trade Directory Entries Name: Colourclear Ltd Location: 3-4, Forest Road, South Shields, Tyne and Wear, NE33 1PT Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (NE)	350	-	436356 566953
127	Contemporary Trade Directory Entries Name: 3d Location: 51, Newmarket Walk, South Shields, Tyne and Wear, NE33 4NP Classification: Breakdown and Recovery Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (E)	337	-	436564 566449
128	Contemporary Trade Directory Entries Name: Garage & Recovery Location: 6, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A12SE (SW)	341	-	435835 566323

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
128	<p>Contemporary Trade Directory Entries</p> <p>Name: Mvh Motors Location: 6, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A12SE (SW)	341	-	435835 566323
128	<p>Contemporary Trade Directory Entries</p> <p>Name: D M Auto Services Location: 6, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Mechanical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A12SE (SW)	341	-	435835 566323
128	<p>Contemporary Trade Directory Entries</p> <p>Name: Premier Motor Co Location: 6, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A12SE (SW)	341	-	435835 566323
128	<p>Contemporary Trade Directory Entries</p> <p>Name: John Nicol Location: 4, Laygate, South Shields, Tyne and Wear, NE33 1SH Classification: Wrought Ironwork Status: Active Positional Accuracy: Automatically positioned to the address</p>	A12SE (SW)	346	-	435829 566325
129	<p>Contemporary Trade Directory Entries</p> <p>Name: Charles W Taylor & Son Ltd Location: 30 Hill St, South Shields, Tyne & Wear, NE33 1RN Classification: Foundries Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A12SE (W)	344	-	435781 566480
129	<p>Contemporary Trade Directory Entries</p> <p>Name: Baps Location: Hill Street, South Shields, Tyne and Wear, NE33 1RN Classification: Packaging & Wrapping Equipment & Supplies Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	A12SE (W)	356	-	435763 566512
129	<p>Contemporary Trade Directory Entries</p> <p>Name: Cammell Laird Location: Hill St, South Shields, Tyne & Wear, NE33 1RN Classification: Ship Builders, Repairs & Fittings Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A12SE (W)	357	-	435765 566490
130	<p>Contemporary Trade Directory Entries</p> <p>Name: Town Hall Service Station Location: Town Hall Filling Station, Crossgate, South Shields, Tyne and Wear, NE33 5QX Classification: Petrol Filling Stations - 24 Hour Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A13NE (NE)	345	-	436506 566814
131	<p>Contemporary Trade Directory Entries</p> <p>Name: Mill Dam Location: Mill Dam, South Shields, Tyne and Wear, NE33 1EQ Classification: Garage Services Status: Active Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NW (NW)	355	-	435884 566864
132	<p>Contemporary Trade Directory Entries</p> <p>Name: Leighton Location: 14, Franklin Street, South Shields, Tyne and Wear, NE33 1PR Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	380	-	436412 566953
132	<p>Contemporary Trade Directory Entries</p> <p>Name: Vts Location: 12, Franklin Street, South Shields, Tyne and Wear, NE33 1PR Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	389	-	436408 566967

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
132	Contemporary Trade Directory Entries Name: Motoreay Services Location: 8, Franklin Street, South Shields, Tyne and Wear, NE33 1PR Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (NE)	410	-	436407 566993
132	Contemporary Trade Directory Entries Name: Dean Printing Works Location: 11, Franklin Street, South Shields, Tyne and Wear, NE33 1PR Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (NE)	413	-	436444 566971
132	Contemporary Trade Directory Entries Name: Eddie Burke Location: 5, Franklin Street, South Shields, Tyne and Wear, NE33 1PR Classification: Car Body Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A18SE (NE)	429	-	436436 566997
133	Contemporary Trade Directory Entries Name: Kwik-Fit Location: 134, Laygate, South Shields, Tyne and Wear, NE33 4JD Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A8NE (S)	386	-	436282 566058
134	Contemporary Trade Directory Entries Name: Sutherlands Location: Coronation St, South Shields, Tyne & Wear, NE33 1AZ Classification: Tyre Dealers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A18SE (N)	393	-	436296 567022
135	Contemporary Trade Directory Entries Name: Select Car Centre Location: Commercial Rd, South Shields, Tyne & Wear, NE33 1SE Classification: Car Dealers - Used Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A12SE (SW)	400	-	435776 566310
136	Contemporary Trade Directory Entries Name: Ironing Maids Location: 26 Westoe Rd, South Shields, Tyne and Wear, NE33 4LZ Classification: Ironing & Home Laundry Services Status: Inactive Positional Accuracy: Manually positioned to the address or location	A14NW (E)	401	-	436629 566629
136	Contemporary Trade Directory Entries Name: Gas Trade Centre Ltd Location: 48-50, Westoe Road, South Shields, Tyne and Wear, NE33 4NA Classification: Boilers - Servicing, Replacements & Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A14NW (E)	414	-	436646 566587
137	Contemporary Trade Directory Entries Name: Snug Fit Doors & Windows Location: 2-6 Franklin St, South Shields, Tyne and Wear, NE33 1PR Classification: Window Frames - Sales & Service Status: Inactive Positional Accuracy: Manually positioned to the address or location	A18SE (NE)	432	-	436404 567020
137	Contemporary Trade Directory Entries Name: The Window Fitter Warehouse Location: 2-8, Franklin Street, South Shields, Tyne and Wear, NE33 1PR Classification: Window Frames - Sales & Service Status: Active Positional Accuracy: Automatically positioned to the address	A18SE (NE)	432	-	436404 567020
138	Contemporary Trade Directory Entries Name: Newcoats Location: 77, Frederick Street, South Shields, Tyne and Wear, NE33 5ED Classification: Plaster Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (S)	438	-	436097 566013
138	Contemporary Trade Directory Entries Name: New Coates Location: 77 Frederick St, South Shields, Tyne And Wear, NE33 5ED Classification: Plaster Manufacturers & Suppliers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A8NW (S)	459	-	436092 565992

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
138	<p>Contemporary Trade Directory Entries</p> <p>Name: The Creations Workshop Location: 89, Frederick Street, SOUTH SHIELDS, Tyne and Wear, NE33 5ED Classification: Wrought Ironwork Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8NW (S)	459	-	436092 565992
139	<p>Contemporary Trade Directory Entries</p> <p>Name: Hi Spec Fabrication Location: Havelock Street, South Shields, Tyne and Wear, NE33 5DZ Classification: Window Frames - Sales & Service Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	441	-	435832 566149
139	<p>Contemporary Trade Directory Entries</p> <p>Name: Hedley (Engineering Services) Ltd Location: Havelock Street, South Shields, Tyne and Wear, NE33 5DZ Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	-	435816 566122
139	<p>Contemporary Trade Directory Entries</p> <p>Name: Eldon Street Factory The Location: Eldon Street, South Shields, Tyne and Wear, NE33 5BU Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	-	435816 566122
139	<p>Contemporary Trade Directory Entries</p> <p>Name: Circatex Location: Eldon Street, South Shields, Tyne and Wear, NE33 5BU Classification: Printed Circuit Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	-	435816 566122
139	<p>Contemporary Trade Directory Entries</p> <p>Name: Punjab Kitchen Location: Eldon Street, South Shields, Tyne and Wear, NE33 5BU Classification: Food Products - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	471	-	435816 566122
139	<p>Contemporary Trade Directory Entries</p> <p>Name: East Coast Fibreglass Supplies Location: Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Glass Fibre Moulding, Materials & Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8NW (SW)	474	-	435842 566094
139	<p>Contemporary Trade Directory Entries</p> <p>Name: C-Tech North East Location: Unit 2, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A7NE (SW)	492	-	435802 566107
139	<p>Contemporary Trade Directory Entries</p> <p>Name: Hi Spec Location: West Walpole St, South Shields, Tyne And Wear, NE33 5BY Classification: Mould Manufacturers Status: Active Positional Accuracy: Manually positioned to the road within the address or location</p>	A7NE (SW)	493	-	435830 566079
139	<p>Contemporary Trade Directory Entries</p> <p>Name: East Coast Fibreglass Supplies Location: West Walpole St, South Shields, Tyne And Wear, NE33 5BY Classification: Glass Fibre Manufacturers Status: Active Positional Accuracy: Manually positioned to the road within the address or location</p>	A7NE (SW)	494	-	435829 566079
140	<p>Contemporary Trade Directory Entries</p> <p>Name: N Print & Design Local Location: 41, Westoe Road, South Shields, Tyne and Wear, NE33 4LU Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	446	-	436673 566635

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
140	<p>Contemporary Trade Directory Entries</p> <p>Name: Websitesandprint.Com Location: 49, Westoe Road, South Shields, Tyne and Wear, NE33 4LU Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14NW (E)	450	-	436679 566626
141	<p>Contemporary Trade Directory Entries</p> <p>Name: The Fireplace Centre Location: 106, Fowler Street, South Shields, Tyne and Wear, NE33 1PZ Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	455	-	436523 566957
141	<p>Contemporary Trade Directory Entries</p> <p>Name: The Heating Efficiency Showroom Location: 108-110, Fowler Street, South Shields, Tyne and Wear, NE33 1PZ Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	455	-	436528 566953
141	<p>Contemporary Trade Directory Entries</p> <p>Name: Frame Clean Location: 100-102, Fowler Street, South Shields, Tyne and Wear, NE33 1PD Classification: Cleaning Services - Commercial Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	469	-	436517 566983
141	<p>Contemporary Trade Directory Entries</p> <p>Name: Fireplace Centre Location: 100-102, Fowler Street, South Shields, Tyne and Wear, NE33 1PD Classification: Distribution Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	469	-	436517 566983
142	<p>Contemporary Trade Directory Entries</p> <p>Name: Gordon Briggs Location: Domestic Appliance Centre, 87, Westoe Road, South Shields, Tyne and Wear, NE33 4LX Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SW (E)	490	-	436721 566516
142	<p>Contemporary Trade Directory Entries</p> <p>Name: Walter Metcalfe Location: 101, Westoe Road, South Shields, Tyne and Wear, NE33 4LX Classification: Wallpapers & Wall Coverings Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14SW (E)	494	-	436724 566487
143	<p>Contemporary Trade Directory Entries</p> <p>Name: General Laboratory Services Location: Unit 1b, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Sheet Metal Work Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8NW (SW)	493	-	435887 566038
144	<p>Contemporary Trade Directory Entries</p> <p>Name: Frank Lake & Sons Ltd Location: 86, Fowler Street, South Shields, Tyne and Wear, NE33 1PD Classification: Hardware Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	494	-	436512 567022
144	<p>Contemporary Trade Directory Entries</p> <p>Name: Re-Design 4 U Location: 84-86, Fowler Street, South Shields, Tyne and Wear, NE33 1PD Classification: Recycling Centres Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	494	-	436512 567022
144	<p>Contemporary Trade Directory Entries</p> <p>Name: Homefair Blinds Location: 4 Fowler St, South Shields, Tyne And Wear, NE33 1PD Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Manually positioned within the geographical locality</p>	A19SW (NE)	495	-	436512 567022

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
144	<p>Contemporary Trade Directory Entries</p> <p>Name: Super-Tech International Location: 80-82, Fowler Street, South Shields, Tyne and Wear, NE33 1PD Classification: Mobile Phone Accessories and Car Kits Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	504	-	436508 567037
144	<p>Contemporary Trade Directory Entries</p> <p>Name: Flair Blinds Ltd Location: 83, Fowler Street, South Shields, Tyne and Wear, NE33 1NT Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	528	-	436547 567036
145	<p>Contemporary Trade Directory Entries</p> <p>Name: Currys Digital Location: 111, King Street, South Shields, Tyne and Wear, NE33 1DP Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SW (N)	502	-	436134 567140
145	<p>Contemporary Trade Directory Entries</p> <p>Name: M I Dickson Ltd Location: 107, King Street, South Shields, Tyne and Wear, NE33 1DP Classification: Meat Product Manufacturers & Wholesalers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SW (N)	543	-	436128 567181
146	<p>Contemporary Trade Directory Entries</p> <p>Name: Newlife Cleaning Systems Ltd Location: 7, Beach Road, South Shields, Tyne and Wear, NE33 2QA Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	502	-	436608 566939
146	<p>Contemporary Trade Directory Entries</p> <p>Name: Orchid Games Studios Location: 7 Beach Rd, South Shields, Tyne and Wear, NE33 2QA Classification: Toys, Games & Sporting Goods - Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A19SW (NE)	502	-	436608 566939
146	<p>Contemporary Trade Directory Entries</p> <p>Name: At Your Service Location: 7, Beach Road, South Shields, Tyne and Wear, NE33 2QA Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	502	-	436608 566939
146	<p>Contemporary Trade Directory Entries</p> <p>Name: South Shields Printing Location: 13, Beach Road, South Shields, Tyne and Wear, NE33 2QA Classification: Printers Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A19SW (NE)	524	-	436628 566950
146	<p>Contemporary Trade Directory Entries</p> <p>Name: Dentures Direct Location: 17a, Beach Road, South Shields, Tyne and Wear, NE33 2QA Classification: Medical & Dental Laboratories Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	538	-	436641 566955
147	<p>Contemporary Trade Directory Entries</p> <p>Name: John Carey Location: 8, William Street, South Shields, Tyne and Wear, NE33 1PQ Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	507	-	436406 567103
148	<p>Contemporary Trade Directory Entries</p> <p>Name: Home Style Location: Fowler St, South Shields, Tyne And Wear, NE33 1NU Classification: Cookers - Sales & Service Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A19SW (NE)	509	-	436558 566998

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
149	<p>Contemporary Trade Directory Entries</p> <p>Name: W M Bertram & Son Ltd Location: Unit 5, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Boilers - Servicing, Replacements & Repairs Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	518	-	435761 566112
150	<p>Contemporary Trade Directory Entries</p> <p>Name: Currys Location: 87, King Street, South Shields, Tyne and Wear, NE33 1DP Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	528	-	436197 567170
151	<p>Contemporary Trade Directory Entries</p> <p>Name: Photo-Fast Location: 64, Fowler Street, South Shields, Tyne and Wear, NE33 1PG Classification: Photographic Processors Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	534	-	436485 567091
151	<p>Contemporary Trade Directory Entries</p> <p>Name: Photo Fast Location: 64, Fowler Street, South Shields, Tyne and Wear, NE33 1PG Classification: Photographic Processors Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	534	-	436485 567091
152	<p>Contemporary Trade Directory Entries</p> <p>Name: Lister Mouldings Ltd Location: Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Plastics - Injection Moulding Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	540	-	435810 566035
152	<p>Contemporary Trade Directory Entries</p> <p>Name: Dinamic Enterprise Location: Rekendyke Ind Est, South Shields, Tyne And Wear, NE33 5BZ Classification: Manufacturers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A7NE (SW)	555	-	435824 566005
152	<p>Contemporary Trade Directory Entries</p> <p>Name: Collin Sinclair Location: Unit 10D, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	555	-	435824 566005
152	<p>Contemporary Trade Directory Entries</p> <p>Name: Daves Carcare Centre Location: Unit 10C, Rekendyke Ind Est, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A7NE (SW)	561	-	435816 566004
152	<p>Contemporary Trade Directory Entries</p> <p>Name: Ian'S Location: Unit 10B, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	565	-	435809 566004
152	<p>Contemporary Trade Directory Entries</p> <p>Name: Mike Jermy Motors Location: Unit 10A, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	569	-	435802 566004
152	<p>Contemporary Trade Directory Entries</p> <p>Name: Box Clever Location: Unit 11A, Rekendyke Ind Est, South Shields, Tyne and Wear, NE33 5BZ Classification: Boxes & Cartons Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A7NE (SW)	590	-	435822 565964

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyne & Wear Access Location: Plot C Portberry Way, South Shields, Tyne and Wear, NE33 1SB Classification: Scaffolding & Work Platforms Status: Active Positional Accuracy: Manually positioned to the road within the address or location</p>	A7NE (SW)	561	-	435690 566132
153	<p>Contemporary Trade Directory Entries</p> <p>Name: Ford & Vauxhall Spares Location: Portberry St, South Shields, Tyne & Wear, NE33 1QX Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A7NE (SW)	598	-	435666 566102
154	<p>Contemporary Trade Directory Entries</p> <p>Name: Klick Location: 50, Fowler Street, South Shields, Tyne and Wear, NE33 1PG Classification: Photographic Processors Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	567	-	436483 567131
154	<p>Contemporary Trade Directory Entries</p> <p>Name: The Jewellery Repair Centre Location: 44, Fowler Street, South Shields, Tyne and Wear, NE33 1PG Classification: Jewellery Manufacturers & Repairers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	576	-	436477 567143
155	<p>Contemporary Trade Directory Entries</p> <p>Name: Decorflair Location: 39-41, King Street, South Shields, Tyne and Wear, NE33 1DA Classification: Wallpapers & Wall Coverings Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	584	-	436312 567214
156	<p>Contemporary Trade Directory Entries</p> <p>Name: Westoe Electricals Location: 1, Madeira Terrace, South Shields, Tyne and Wear, NE33 3AQ Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SW (E)	598	-	436816 566358
157	<p>Contemporary Trade Directory Entries</p> <p>Name: Sutherlands Location: Unit A, Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	600	-	435689 566070
157	<p>Contemporary Trade Directory Entries</p> <p>Name: Denz Performance Location: Unit B, Portberry St, South Shields, Tyne and Wear, NE33 1QX Classification: Car Engine Tuning & Diagnostic Services Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A7NE (SW)	609	-	435684 566062
157	<p>Contemporary Trade Directory Entries</p> <p>Name: Tgs Industrial Supplies Ltd Location: Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Gas Suppliers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	645	-	435669 566024
157	<p>Contemporary Trade Directory Entries</p> <p>Name: South Tyne Building Supplies Location: Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Builders' Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	645	-	435669 566024
157	<p>Contemporary Trade Directory Entries</p> <p>Name: Millway Location: Unit 4 Portberry St, South Shields, Tyne & Wear, NE33 1QX Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A7NE (SW)	689	-	435641 565990
158	<p>Contemporary Trade Directory Entries</p> <p>Name: Merry Maids Location: 130, Westoe Road, South Shields, Tyne and Wear, NE33 3PF Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SW (SE)	606	-	436807 566278

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
158	Contemporary Trade Directory Entries Name: Merry Maids Location: 130, Westoe Road, South Shields, Tyne and Wear, NE33 3PF Classification: Cleaning Services - Domestic Status: Active Positional Accuracy: Automatically positioned to the address	A14SW (SE)	606	-	436807 566278
158	Contemporary Trade Directory Entries Name: Servicemaster Contract Services Location: 130, Westoe Road, South Shields, Tyne and Wear, NE33 3PF Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address	A14SW (SE)	606	-	436807 566278
159	Contemporary Trade Directory Entries Name: Eclipse Technology UK Ltd Location: 27, Smithy Street, South Shields, Tyne and Wear, NE33 1BT Classification: Computer Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NE (N)	610	-	436364 567228
159	Contemporary Trade Directory Entries Name: Klick Photopoint Location: 24, King Street, South Shields, Tyne and Wear, NE33 1HT Classification: Photographic Processors Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NE (N)	640	-	436346 567264
159	Contemporary Trade Directory Entries Name: Klick Location: 24, King Street, South Shields, Tyne and Wear, NE33 1HT Classification: Photographic Processors Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NE (N)	640	-	436346 567264
160	Contemporary Trade Directory Entries Name: Dean Clean Location: 174, Dean Road, South Shields, Tyne and Wear, NE33 4AQ Classification: Laundries & Launderettes Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	614	-	436539 565916
160	Contemporary Trade Directory Entries Name: Country Appara Location: 172, Dean Road, South Shields, Tyne and Wear, NE33 4AQ Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	617	-	436547 565917
161	Contemporary Trade Directory Entries Name: Marias Location: 76, Dacre Street, South Shields, Tyne and Wear, NE33 5QB Classification: Ironing & Home Laundry Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	621	-	436329 565828
162	Contemporary Trade Directory Entries Name: Foremost Auto Centre Ltd Location: Pan Bank, Commercial Road, South Shields, Tyne and Wear, NE33 1RT Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	634	-	435572 566193
162	Contemporary Trade Directory Entries Name: Foremost Tyres & Exhausts Location: Pan Bank, Commercial Road, South Shields, Tyne and Wear, NE33 1RT Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	634	-	435572 566193
162	Contemporary Trade Directory Entries Name: Mcnulty Offshore Construction Ltd Location: 16-17, Corstorphine Town, South Shields, Tyne and Wear, NE33 1RZ Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	675	-	435540 566164
163	Contemporary Trade Directory Entries Name: Johnson Cleaners (UK) Ltd Location: 17, Denmark Centre, South Shields, Tyne and Wear, NE33 2LR Classification: Dry Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (NE)	636	-	436487 567207

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
164	<p>Contemporary Trade Directory Entries</p> <p>Name: Bizzy Uk Cleaning Services Location: 146 Westoe Rd, South Shields, Tyne & Wear, NE33 3PH Classification: Cleaning Services - Commercial Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A14SW (SE)	646	-	436836 566236
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Ken Oates Location: Unit 8C, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	665	-	435697 565968
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Ken Oates Location: Unit 8c, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	665	-	435697 565968
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Kompass Plastics Location: Unit 8A, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: PVC-U Products - Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	685	-	435697 565941
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Tyneside Fabrications Location: Unit 8a, Rekendyke Industrial Estate, South Shields, Tyne and Wear, NE33 5BZ Classification: Door Manufacturers - Industrial Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	685	-	435697 565941
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Mitre Joinery Location: Portberry House, Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Joinery Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	710	-	435660 565941
165	<p>Contemporary Trade Directory Entries</p> <p>Name: Sutherlands Location: Portberry House, Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Tyre Dealers Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A7NE (SW)	710	-	435660 565941
166	<p>Contemporary Trade Directory Entries</p> <p>Name: Motortune Location: Rear Of, 35, Beach Road, South Shields, Tyne and Wear, NE33 2QU Classification: Car Engine Tuning & Diagnostic Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	666	-	436740 567037
167	<p>Contemporary Trade Directory Entries</p> <p>Name: Supasnaps Location: 2, Denmark Centre, South Shields, Tyne and Wear, NE33 2LR Classification: Photographic Processors Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18NE (N)	669	-	436450 567261
168	<p>Contemporary Trade Directory Entries</p> <p>Name: T W Holdsworth Location: 134, Dean Road, South Shields, Tyne and Wear, NE33 4AP Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	672	-	436662 565935
168	<p>Contemporary Trade Directory Entries</p> <p>Name: Laundrymat Location: 126, Dean Road, South Shields, Tyne and Wear, NE33 4AW Classification: Laundries & Launderettes Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	681	-	436674 565934

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
169	<p>Contemporary Trade Directory Entries</p> <p>Name: South Tyne Building Supplies Ltd Location: Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Builders' Merchants Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	692	-	435605 566028
169	<p>Contemporary Trade Directory Entries</p> <p>Name: Doyle Bros Location: 5-7, Corstorphine Town, South Shields, Tyne and Wear, NE33 1RZ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	710	-	435593 566013
169	<p>Contemporary Trade Directory Entries</p> <p>Name: C C C Manufacturing Location: 7, Portberry Street, South Shields, Tyne and Wear, NE33 1QX Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	710	-	435593 566013
169	<p>Contemporary Trade Directory Entries</p> <p>Name: R N M Autos Location: 7, Portberry Street, SOUTH SHIELDS, Tyne and Wear, NE33 1QX Classification: Mot Testing Centres Status: Active Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	710	-	435593 566013
170	<p>Contemporary Trade Directory Entries</p> <p>Name: Stagecoach Location: Dean Road, South Shields, Tyne and Wear, NE33 4HZ Classification: Bus & Coach Operators & Stations Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	695	-	436350 565756
170	<p>Contemporary Trade Directory Entries</p> <p>Name: Stagecoach Location: Dean Road, South Shields, Tyne and Wear, NE33 4HZ Classification: Bus & Coach Operators & Stations Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	695	-	436350 565756
171	<p>Contemporary Trade Directory Entries</p> <p>Name: Baldwins Industrial Services Plc Location: Corstorphine Town, South Shields, Tyne & Wear, NE33 1RZ Classification: Crane Hire, Sales & Service Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A7NE (SW)	700	-	435558 566080
172	<p>Contemporary Trade Directory Entries</p> <p>Name: The Direct Group Ltd Location: 7, Broad Landing, South Shields, Tyne and Wear, NE33 1JL Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18NW (N)	712	-	435997 567326
173	<p>Contemporary Trade Directory Entries</p> <p>Name: Mulheron Interiors Location: 94, Dean Road, South Shields, Tyne and Wear, NE33 4AR Classification: Soft Furnishings - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	726	-	436743 565938
174	<p>Contemporary Trade Directory Entries</p> <p>Name: Warm Protection Ltd Location: 51, Beach Road, South Shields, Tyne and Wear, NE33 2QU Classification: Roller Shutter Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	731	-	436811 567050
174	<p>Contemporary Trade Directory Entries</p> <p>Name: Warm Protection Location: 51, Beach Road, South Shields, Tyne and Wear, NE33 2QU Classification: Roller Shutter Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	731	-	436811 567050
174	<p>Contemporary Trade Directory Entries</p> <p>Name: Warm Protection Location: 51, Beach Road, South Shields, Tyne and Wear, NE33 2QU Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	731	-	436811 567050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
174	<p>Contemporary Trade Directory Entries</p> <p>Name: L A Autos Location: 57, Beach Road, South Shields, Tyne and Wear, NE33 2QU Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	754	-	436832 567062
175	<p>Contemporary Trade Directory Entries</p> <p>Name: Osbrow Engineering Services Ltd Location: 21, Osborne Avenue, South Shields, Tyne and Wear, NE33 3DQ Classification: Mechanical Engineers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14SE (E)	742	-	436969 566431
176	<p>Contemporary Trade Directory Entries</p> <p>Name: Top Clean Location: 81, Broughton Road, South Shields, Tyne and Wear, NE33 2RR Classification: Laundries & Launderettes Status: Active Positional Accuracy: Automatically positioned to the address</p>	A19SE (NE)	746	-	436877 566977
177	<p>Contemporary Trade Directory Entries</p> <p>Name: 1st Call Cleaning Services Location: Westoe Rd, South Shields, Tyne and Wear, NE33 3PW Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A9NE (SE)	764	-	436931 566154
178	<p>Contemporary Trade Directory Entries</p> <p>Name: Dean Garages (South Shields) Ltd Location: Dean Road, South Shields, Tyne and Wear, NE33 5PY Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	778	-	436275 565663
179	<p>Contemporary Trade Directory Entries</p> <p>Name: Intertank Services Ltd Location: 16, Mowbray Road, South Shields, Tyne and Wear, NE33 3AU Classification: Tank Cleaning & Repairing Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14SE (E)	826	-	437038 566299
180	<p>Contemporary Trade Directory Entries</p> <p>Name: Parkins Motors Location: 16, Hartington Terrace, South Shields, Tyne and Wear, NE33 4DF Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	830	-	436770 565819
181	<p>Contemporary Trade Directory Entries</p> <p>Name: Team Hawk International Ltd Location: International Ferry Terminal, Royal Quays, North Shields, Tyne & Wear, NE29 6EE Classification: Freight Forwarders Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A12NW (W)	863	-	435252 566586
182	<p>Contemporary Trade Directory Entries</p> <p>Name: Abc Motor Co Location: 14-16, Dean Road, South Shields, Tyne and Wear, NE33 3PT Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	878	-	436992 566020
182	<p>Contemporary Trade Directory Entries</p> <p>Name: Picture This Location: 14-16, Dean Road, South Shields, Tyne and Wear, NE33 3PT Classification: Printers Textile Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	878	-	436992 566020
183	<p>Contemporary Trade Directory Entries</p> <p>Name: Charles W Taylor & Son Ltd Location: Templetown, South Shields, Tyne and Wear, NE33 5SE Classification: Foundries Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A7SE (SW)	882	-	435591 565772

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
184	Contemporary Trade Directory Entries Name: Napier Motors Location: 4, Albany Street West, South Shields, Tyne and Wear, NE33 4BE Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	888	-	436593 565634
184	Contemporary Trade Directory Entries Name: R G Motors Location: 4, Albany Street West, South Shields, Tyne and Wear, NE33 4BE Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	888	-	436593 565634
185	Contemporary Trade Directory Entries Name: Plastic Cladding Centre Location: 60, Stanhope Road, South Shields, Tyne and Wear, NE33 4BS Classification: Cladding Suppliers & Installers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A9SW (S)	904	-	436529 565590
185	Contemporary Trade Directory Entries Name: Stanhope Electricals Location: 60, Stanhope Road, South Shields, Tyne and Wear, NE33 4BS Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (S)	904	-	436529 565590
186	Contemporary Trade Directory Entries Name: Applied Mechanical Scotland Ltd Location: Albert Edward Dock, North Shields, Tyne and Wear, NE29 6EE Classification: Engineering Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	933	-	435181 566579
186	Contemporary Trade Directory Entries Name: Dfds Transport Location: Albert Edward Dock, North Shields, Tyne and Wear, NE29 6EE Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	933	-	435181 566579
186	Contemporary Trade Directory Entries Name: D S D F Transport (Uk) Ltd Location: Albert Edward Dock, North Shields, Tyne and Wear, NE29 6EE Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	933	-	435181 566579
186	Contemporary Trade Directory Entries Name: Port Of Tyne Authority Location: Coble Dene, Albert Edward Dock, North Shields, Tyne And Wear, NE29 6EE Classification: Ports, Docks & Harbours Status: Active Positional Accuracy: Manually positioned within the geographical locality	A12NW (W)	933	-	435181 566579
187	Contemporary Trade Directory Entries Name: Ford Component Manufacturing Ltd Location: East Side, Tyne Dock, South Shields, Tyne and Wear, NE33 5ST Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7SW (SW)	939	-	435493 565783
188	Contemporary Trade Directory Entries Name: S & G Cleaning Location: 67, Stanhope Road, South Shields, Tyne and Wear, NE33 4BQ Classification: Carpet, Curtain & Upholstery Cleaners Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (S)	956	-	436571 565551
189	Contemporary Trade Directory Entries Name: Riverview Cars Ltd Location: Templetown, South Shields, Tyne And Wear, NE33 5TE Classification: Car Dealers - Used Status: Active Positional Accuracy: Manually positioned within the geographical locality	A7SE (SW)	973	-	435564 565677
189	Contemporary Trade Directory Entries Name: Durham Sheet Metal Works Ltd Location: Progress House, Templetown, South Shields, Tyne and Wear, NE33 5TE Classification: Sheet Metal Work Status: Active Positional Accuracy: Automatically positioned to the address	A7SE (SW)	973	-	435564 565677

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
190	<p>Contemporary Trade Directory Entries</p> <p>Name: Soapsuds Location: 147-151, Coston Drive, South Shields, Tyne and Wear, NE33 2DU Classification: Laundries & Launderettes Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19NW (N)	987	-	436593 567545
191	<p>Fuel Station Entries</p> <p>Name: Rss Town Hall Location: Cross Gate, South Shields, Tyne & Wear, NE33 5QX Brand: Esso Premises Type: Petrol Station Status: Open Positional Accuracy: Manually positioned to the address or location</p>	A13NE (NE)	345	-	436508 566812
192	<p>Fuel Station Entries</p> <p>Name: Garden Lane Service Station Location: Garden Lane, South SHIELDS, Tyne & Wear, NE33 1PS Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Manually positioned to the address or location</p>	A18SE (N)	394	-	436297 567023

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices South Tyneside Metropolitan Borough Council - Neighbourhood Services North Tyneside Metropolitan Borough Council - Environmental Health Department City of Newcastle upon Tyne Council - Environmental Health Department Sunderland City Metropolitan Borough Council - Environmental Health Department	December 2014 October 2013 October 2014 September 2013	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annually
Discharge Consents Environment Agency - North East Region	November 2014	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	November 2014	Quarterly
Local Authority Integrated Pollution Prevention And Control North Tyneside Metropolitan Borough Council - Environmental Health Department Sunderland City Metropolitan Borough Council - Environmental Health Department City of Newcastle upon Tyne Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Environmental Health Department	April 2014 July 2013 June 2013 September 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Controls North Tyneside Metropolitan Borough Council - Environmental Health Department Sunderland City Metropolitan Borough Council - Environmental Health Department City of Newcastle upon Tyne Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Environmental Health Department	April 2014 July 2013 June 2013 September 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements North Tyneside Metropolitan Borough Council - Environmental Health Department City of Newcastle upon Tyne Council - Environmental Health Department Sunderland City Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Environmental Health Department	April 2014 January 2015 July 2013 September 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - North East Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - North East Region	March 2013	As notified
Prosecutions Relating to Controlled Waters Environment Agency - North East Region	March 2013	As notified
Registered Radioactive Substances Environment Agency - North East Region	November 2014	Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	November 2014 November 2014	Quarterly Quarterly
Water Abstractions Environment Agency - North East Region	October 2014	Quarterly
Water Industry Act Referrals Environment Agency - North East Region	November 2014	Quarterly

Agency & Hydrological	Version	Update Cycle
Groundwater Vulnerability Environment Agency - Head Office	January 2011	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	December 2014	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	October 2014	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	October 2014	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	October 2014	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	October 2014	Quarterly
Flood Defences Environment Agency - Head Office	October 2014	Quarterly
Detailed River Network Lines Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	August 2014 August 2014	Quarterly Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North East Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	August 2014 August 2014	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	November 2014 November 2014	Quarterly Quarterly
Local Authority Landfill Coverage City of Newcastle upon Tyne Council - Environmental Health Department North Tyneside Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites City of Newcastle upon Tyne Council - Environmental Health Department North Tyneside Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Registered Landfill Sites Environment Agency - North East Region - Northumbria Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency - North East Region - Northumbria Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - North East Region - Northumbria Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	January 2015	Bi-Annually
Explosive Sites Health and Safety Executive	October 2014	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 City of Newcastle upon Tyne Council North Tyneside Metropolitan Borough Council - Development Function	December 2014 March 2014 September 2013 September 2013	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Planning City of Newcastle upon Tyne Council North Tyneside Metropolitan Borough Council - Development Function	December 2014 March 2014 September 2013 September 2013	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	August 1996	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	October 2014	Bi-Annually
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	December 2013	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 2014	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	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	November 2014	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2014	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt City of Newcastle upon Tyne Council North Tyneside Metropolitan Borough Council South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Planning	November 2014 November 2014 November 2014 November 2014	As notified As notified As notified As notified
Areas of Unadopted Green Belt City of Newcastle upon Tyne Council North Tyneside Metropolitan Borough Council South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Planning	November 2014 November 2014 November 2014 November 2014	As notified As notified As notified As notified
Areas of Outstanding Natural Beauty Natural England	August 2014	Bi-Annually
Environmentally Sensitive Areas Natural England	August 2014	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	October 2014	Bi-Annually
Marine Nature Reserves Natural England	July 2013	Bi-Annually
National Nature Reserves Natural England	September 2014	Bi-Annually
National Parks Natural England	August 2014	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	July 2014	Annually
Ramsar Sites Natural England	March 2014	Bi-Annually
Sites of Special Scientific Interest Natural England	September 2014	Bi-Annually
Special Areas of Conservation Natural England	March 2014	Bi-Annually
Special Protection Areas Natural England	September 2014	Bi-Annually

A selection of organisations who provide data within this report


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

Contact	Name and Address	Contact Details
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	Health and Safety Executive 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.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	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmark.co.uk Website: www.landmark.co.uk
8	The Coal Authority - Mining Report Service 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
9	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
10	North Tyneside Metropolitan Borough Council - Environmental Health Department D1 Quadrant 1L, Quadrant East, Silverlink North,, Cobalt Business Park, North Tyneside, North Shields, NE27 0BY	Telephone: 0345 2000 101 Email: contact.us@northtyneside.gov.uk Website: www.northtyneside.gov.uk
-	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.

Geology 1:50,000 Maps Legends








Artificial Ground and Landslip




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

Superficial Geology

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

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	RML	Raisby Formation	Dolostone	Late Permian - Late Permian
	ROD	Roker Formation	Dolostone	Late Permian - Late Permian
	YWS	Yellow Sands Formation	Sandstone	Late Permian - Cisuralian
	GNP	Grindstone Post Member	Sandstone	Bolsovia - Bolsovia
	PUCM	Pennine Upper Coal Measures Formation	Mudstone, Siltstone and Sandstone	Westphalian D - Bolsovia
	SFP	Seventy Fathom Post Member	Sandstone	Duckmantian - Duckmantian
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Bolsovia - Duckmantian

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	PMCM	Pennine Middle Coal Measures Formation	Sandstone	Bolsovia - Duckmantian
		Faults		
		Rock Segments		

Geology 1:50,000 Maps

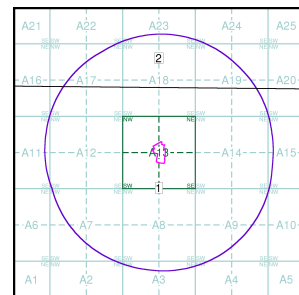
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	2	Map ID:	1
Map Sheet No:	015	Map Sheet No:	021
Map Name:	Tynemouth	Map Name:	Sunderland
Map Date:	1975	Map Date:	1978
Bedrock Geology:	Available	Bedrock Geology:	Available
Superficial Geology:	Available	Superficial Geology:	Available
Artificial Geology:	Available	Artificial Geology:	Available
Faults:	Not Supplied	Faults:	Not Supplied
Landslip:	Not Available	Landslip:	Available
Rock Segments:	Not Supplied	Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A

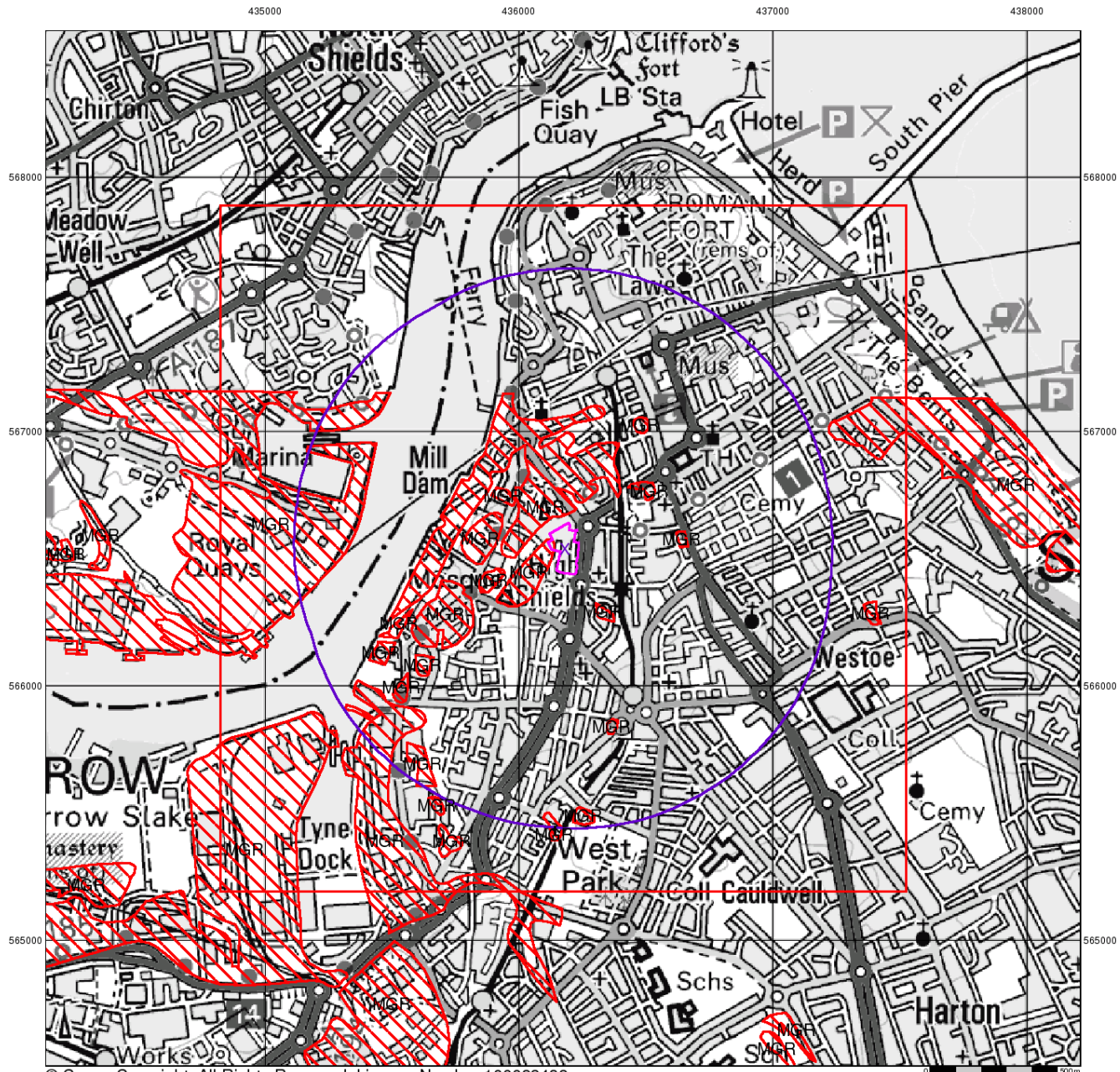


Order Details:

Order Number: 64108305_1_1
Customer Reference: STM3043D
National Grid Reference: 436180, 566540
Slice: A
Site Area (Ha): 1.55
Search Buffer (m): 1000

Site Details:

TP South Shields



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Artificial Ground and Landslip

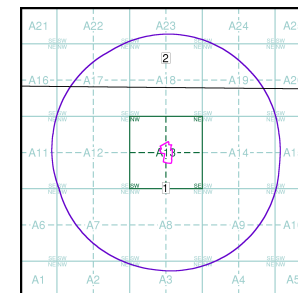
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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

Artificial ground includes:

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

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

Artificial Ground and Landslip Map - Slice A



Order Details:

Order Number:	64108305_1.1
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Site:	A
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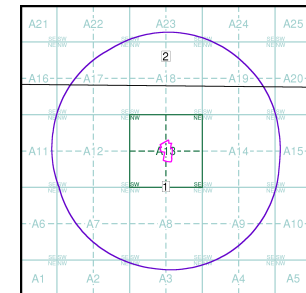
Superficial Geology

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

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

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

Superficial Geology Map - Slice A



Order Details:

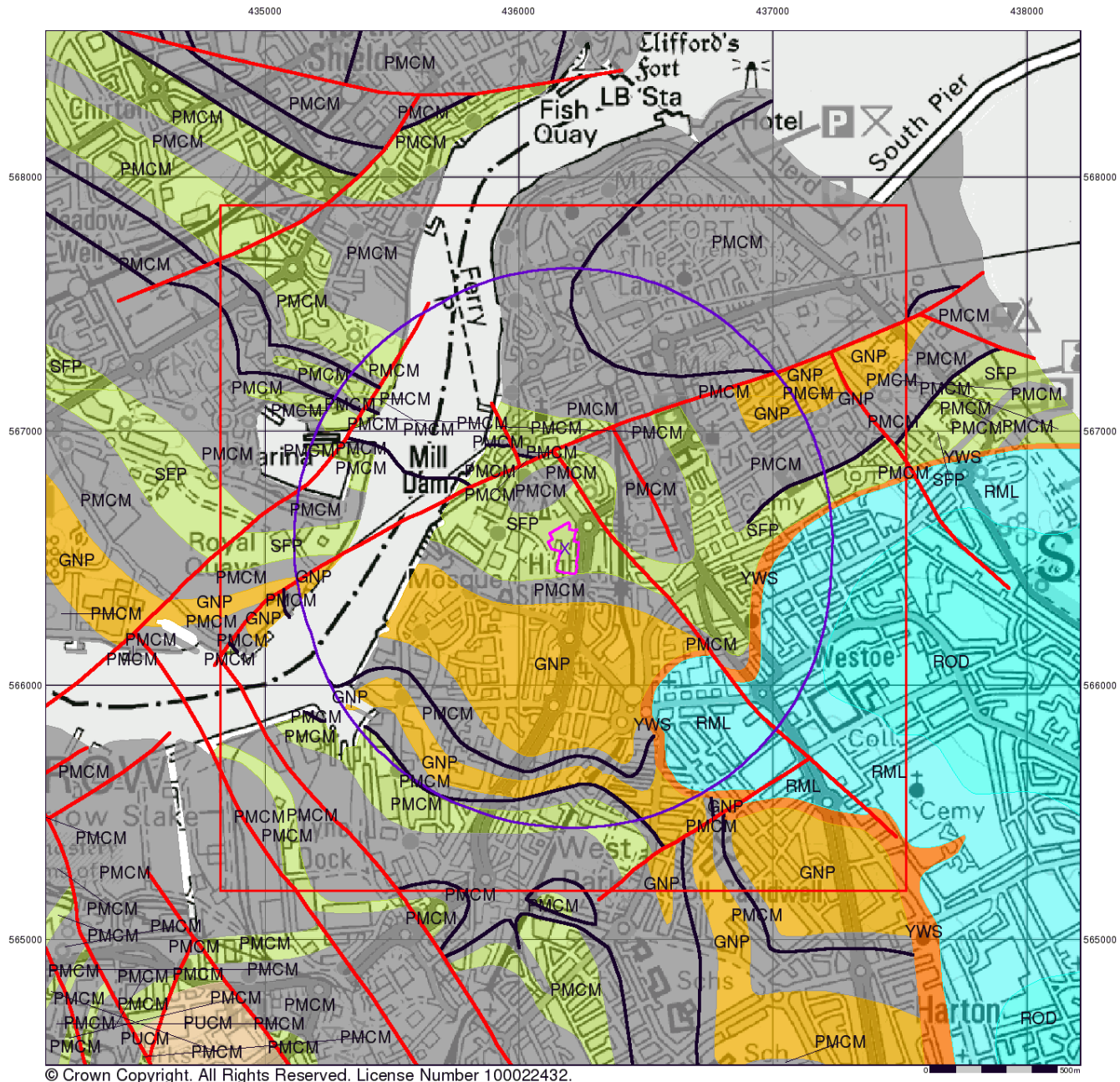
Order Number: 64108305_1.1
 Customer Reference: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
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Bedrock and Faults

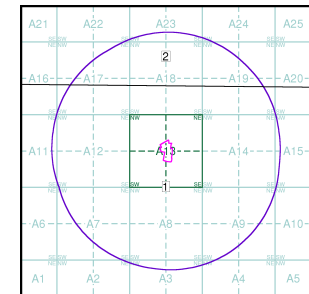
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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

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

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



Order Details:

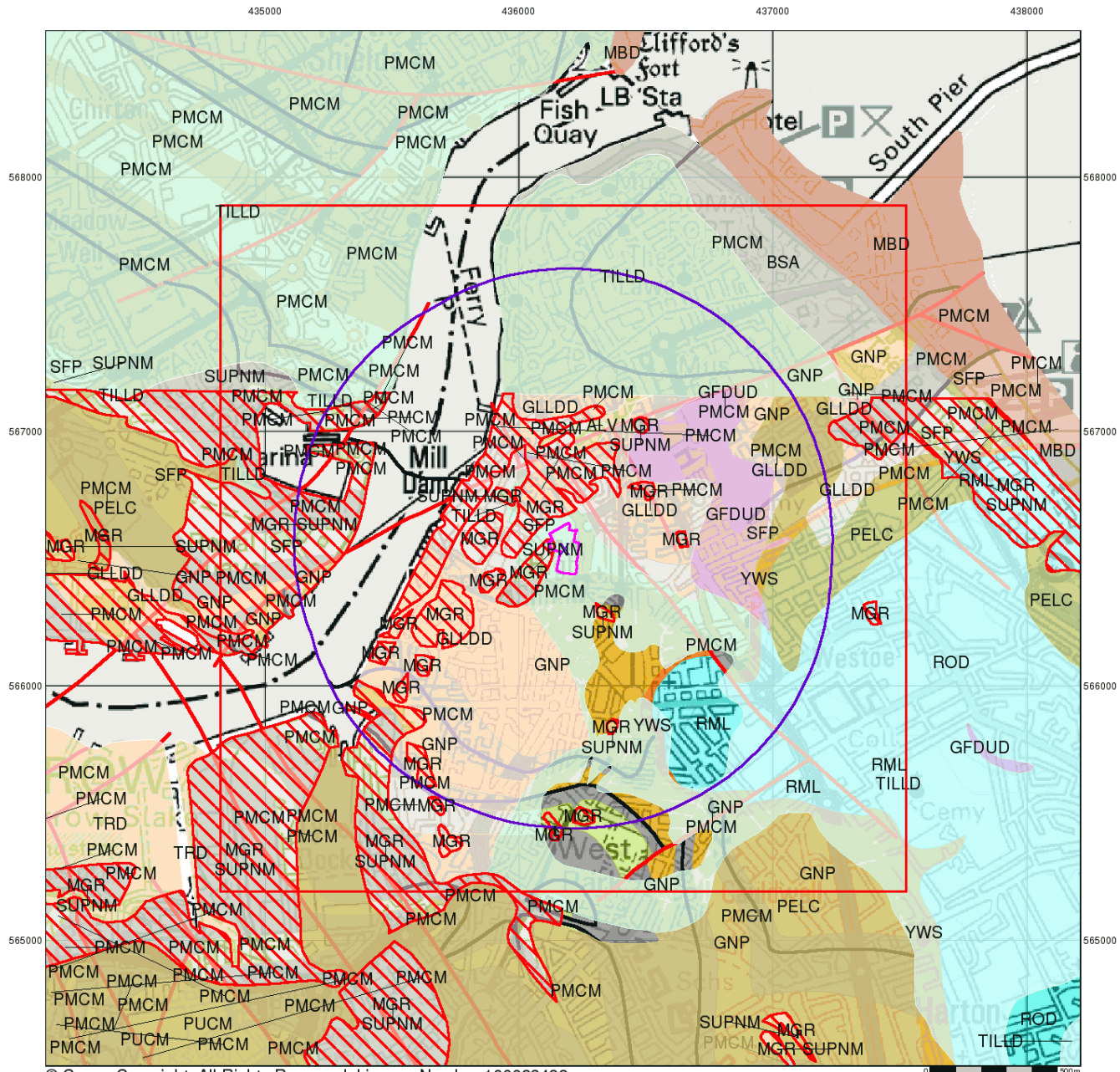
Order Number: 64108305_1.1
 Customer Reference: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
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Combined Surface Geology

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

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

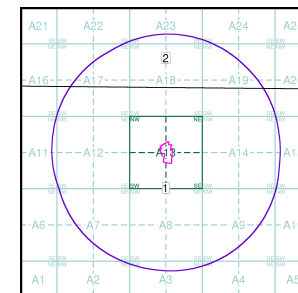
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

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

Combined Geology Map - Slice A



Order Details:

Order Number: 64108305_1.1
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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

Ms R Brown, Soiltechnics, Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY

Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

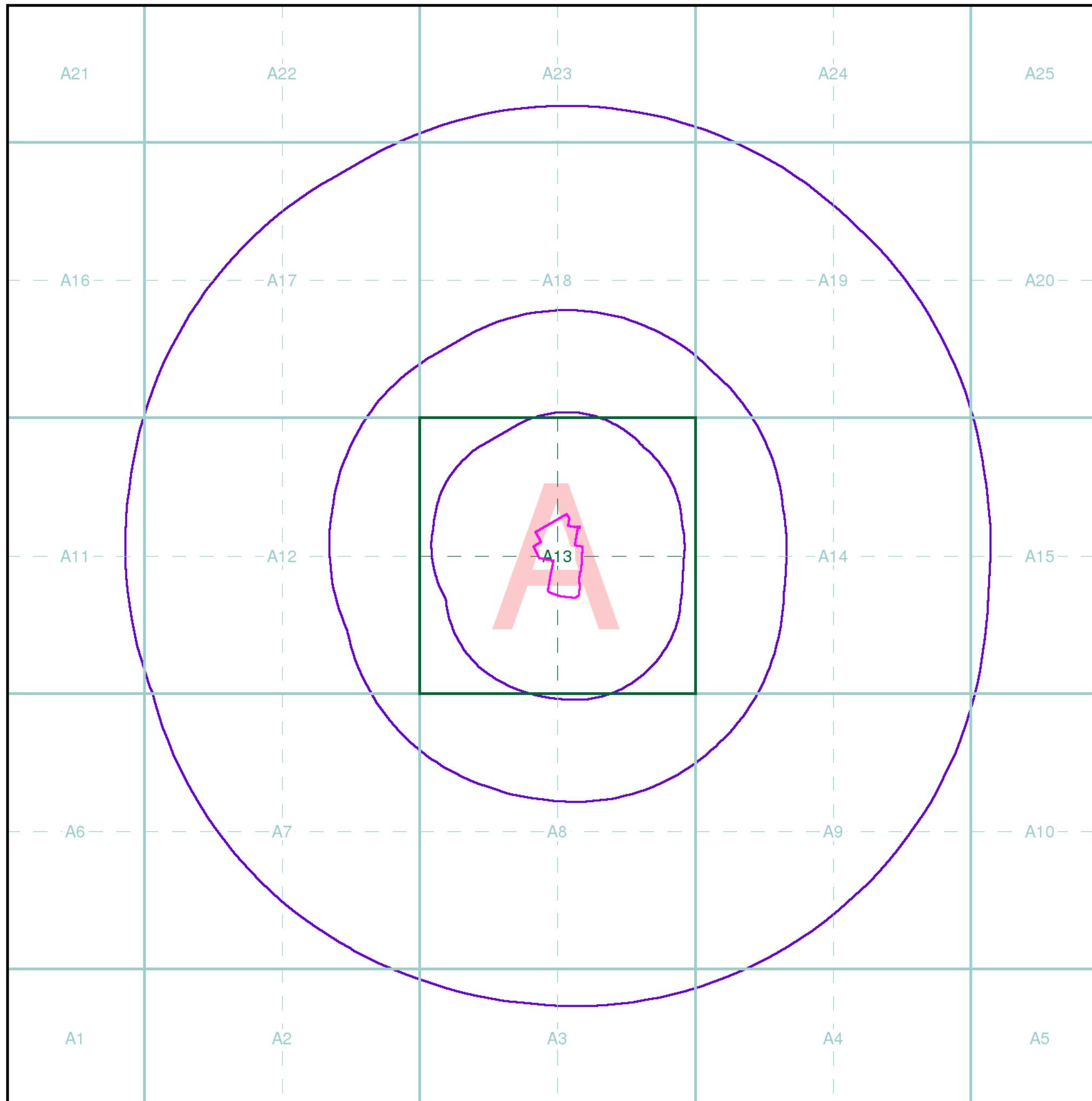
Site Details

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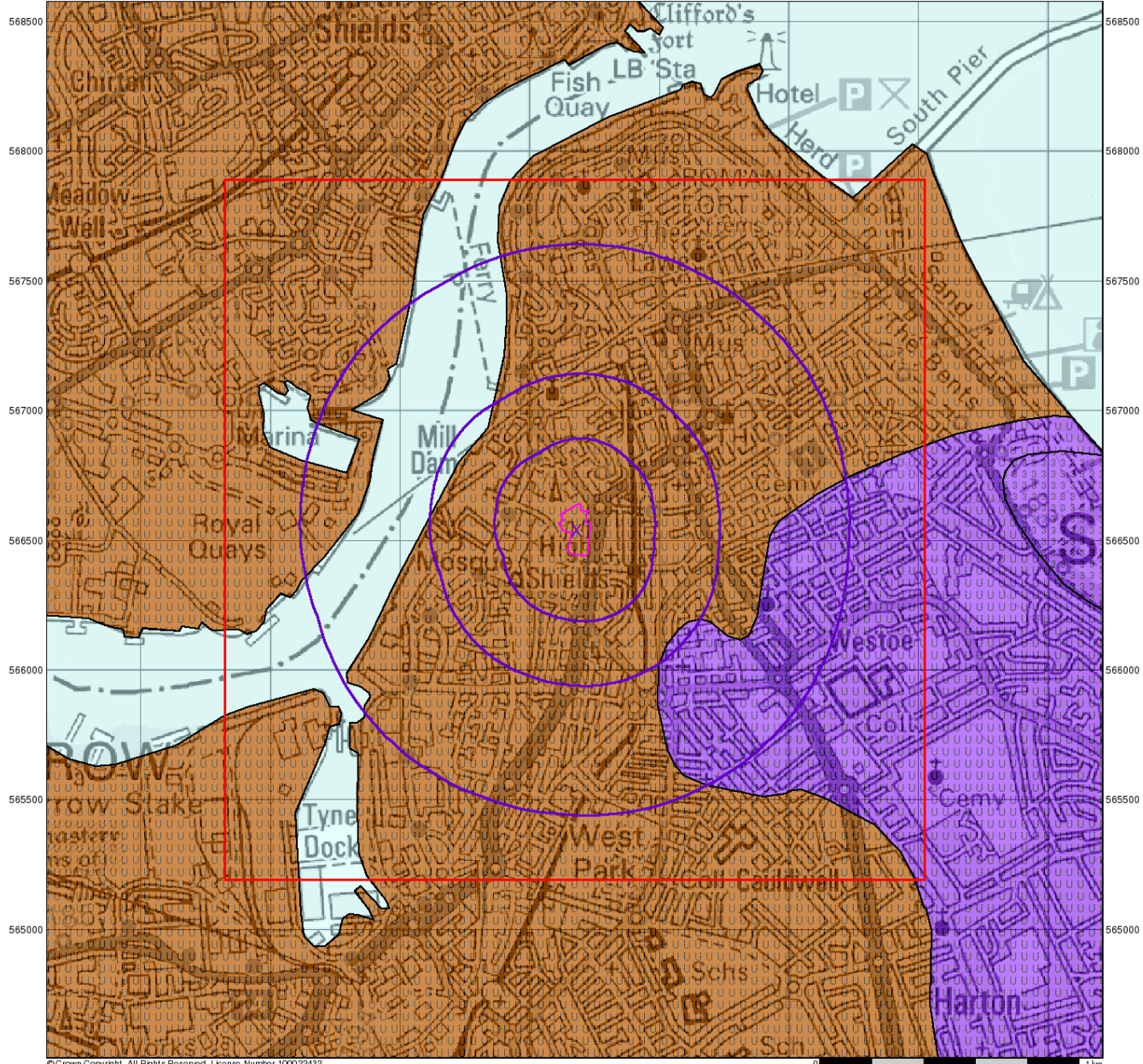
Full Terms and Conditions can be found on the following link:
<http://www.landmarkinfo.co.uk/Terms/Show/515>



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434500 435000 435500 436000 436500 437000 437500 438000



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0 1 km

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Groundwater Vulnerability

General

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

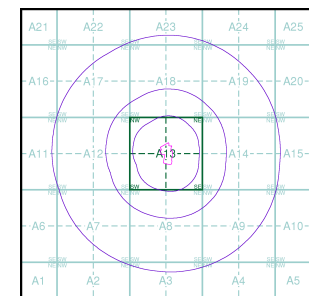
Agency and Hydrological

Geological Classes

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

Soil Classes

Site Sensitivity Context Map - Slice A



Order Details

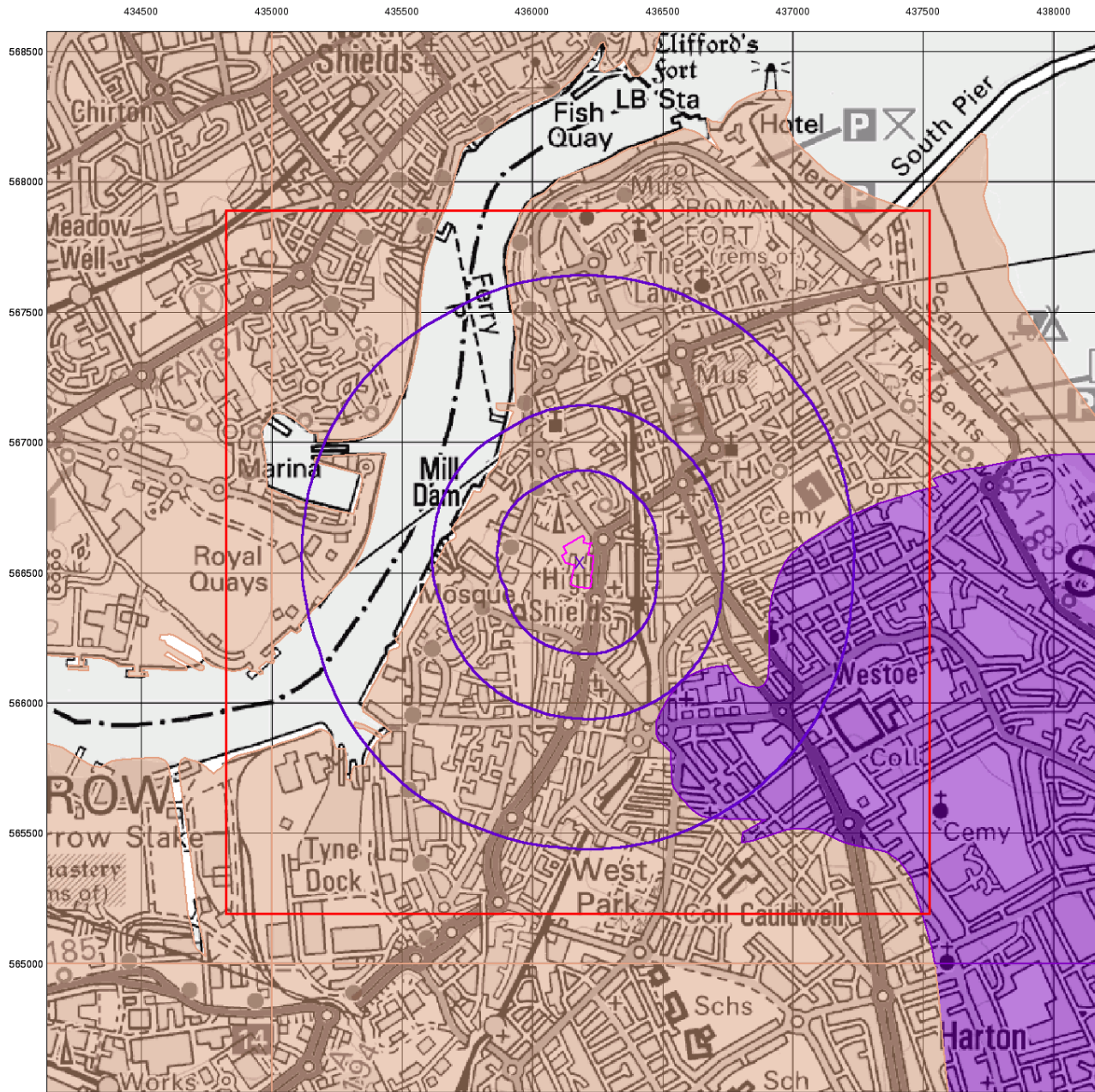
Order Number: 64108305_1.1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

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0 1 km

Bedrock Aquifer Designation

General

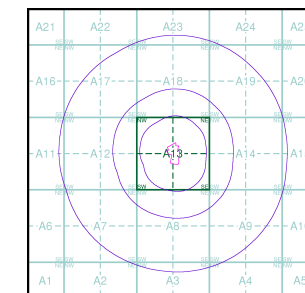
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A

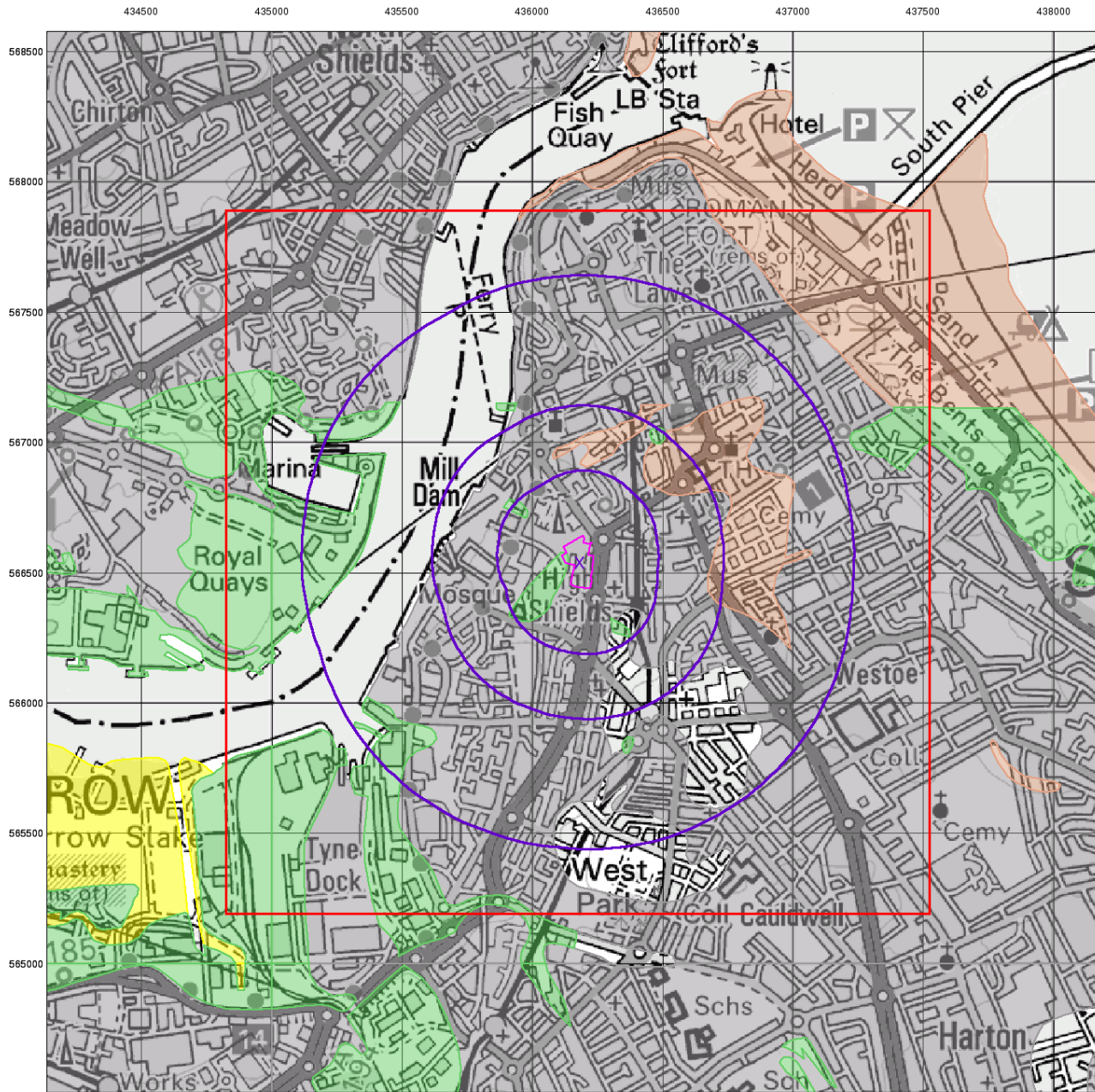


Order Details

Order Number: 64108305_1.1
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Site Details

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0 1 km

Superficial Aquifer Designation

General

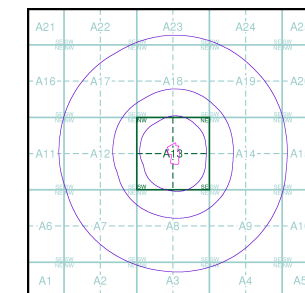
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A

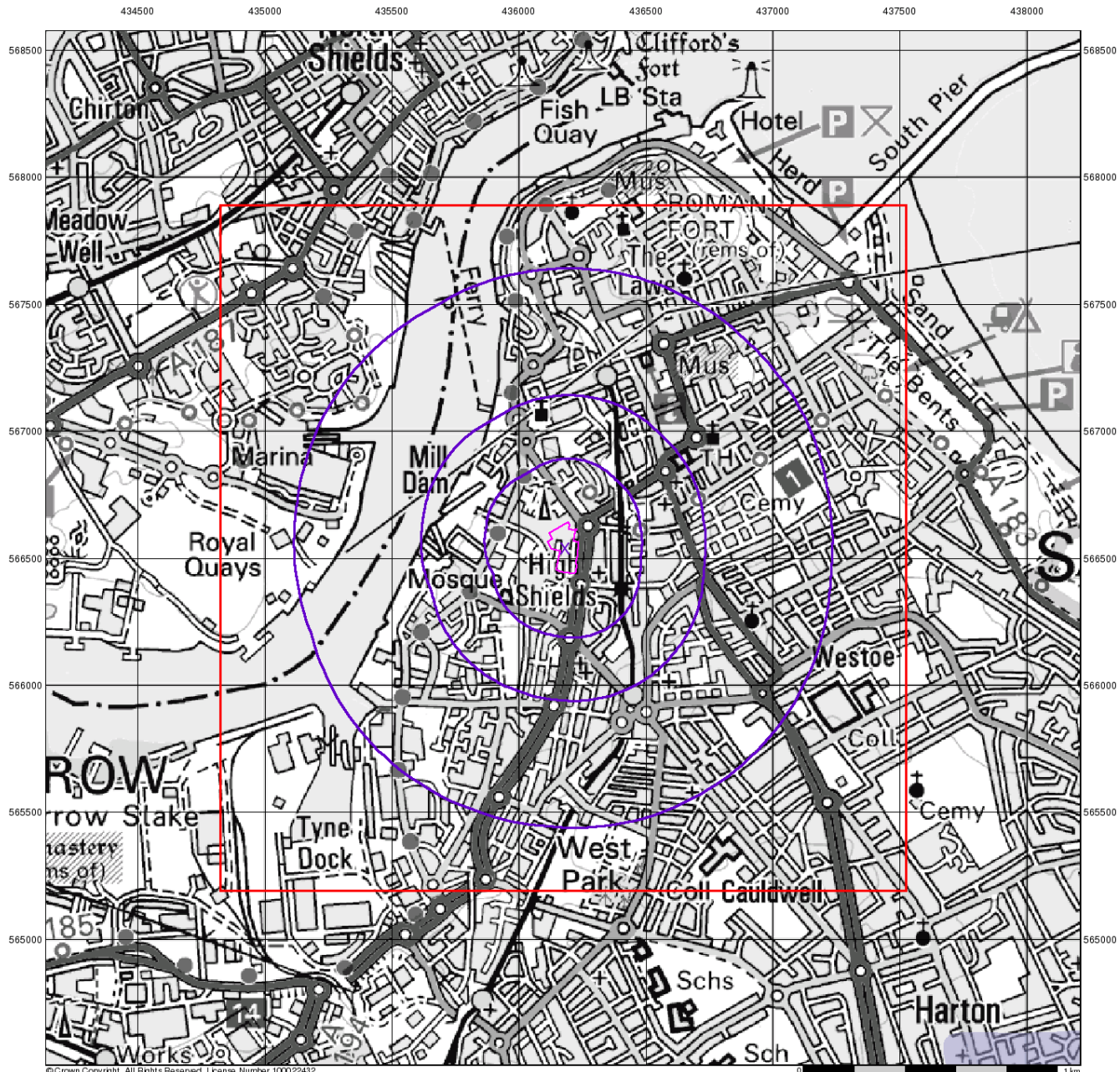


Order Details

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 Customer Ref: STM3043D
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 Slice: A
 Site Area (Ha): 1.55
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Site Details

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Source Protection Zones

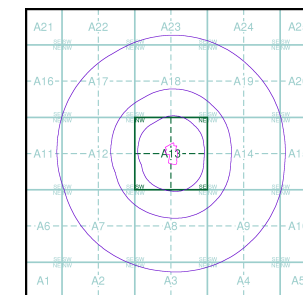
General

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

Agency and Hydrological

- Source Protection Zone I
- Source Protection Zone II
- Source Protection Zone III
- Zone of Special Interest
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A

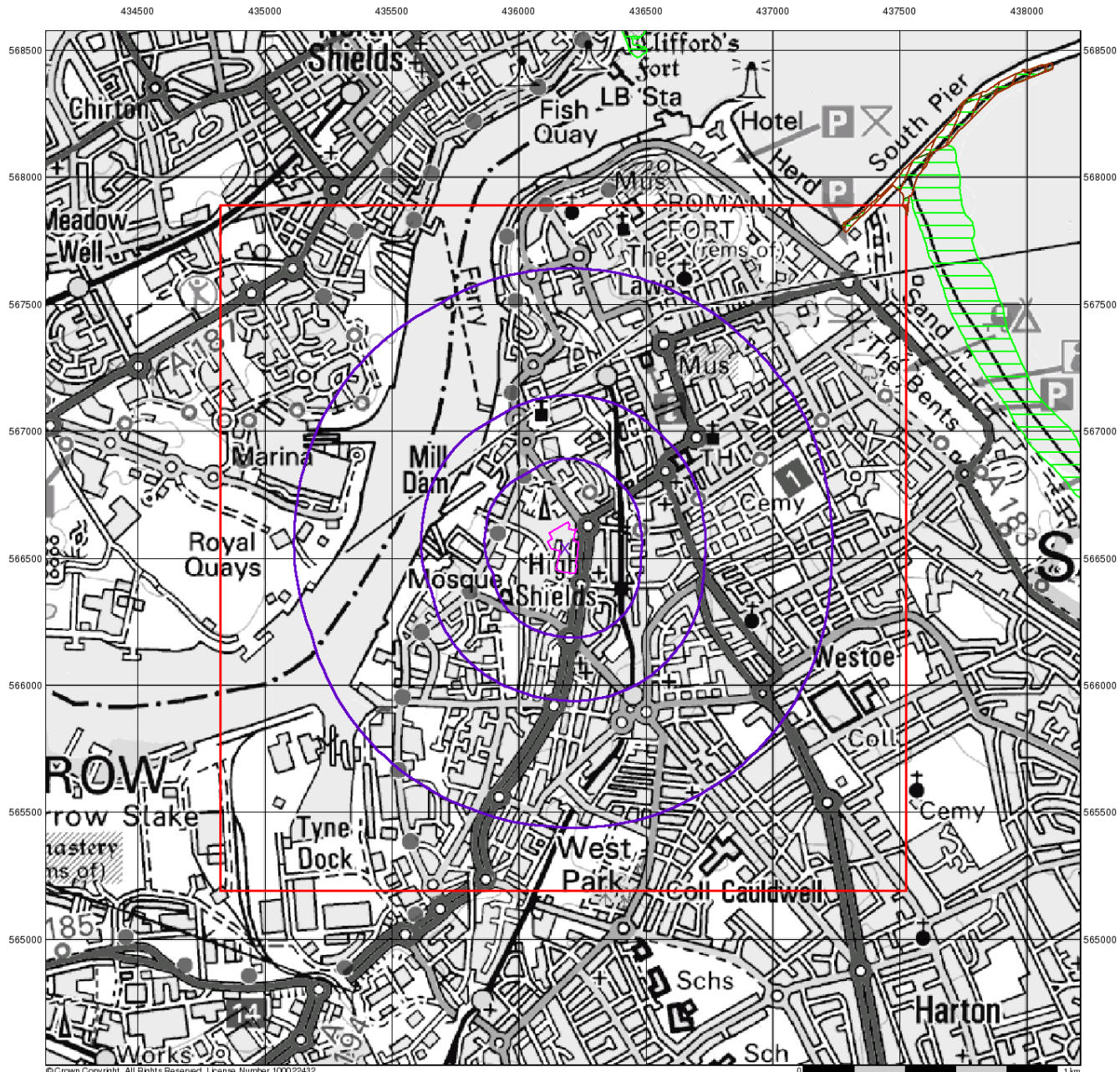


Order Details

Order Number: 64108305_1_1
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 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
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Site Details

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Sensitive Land Uses

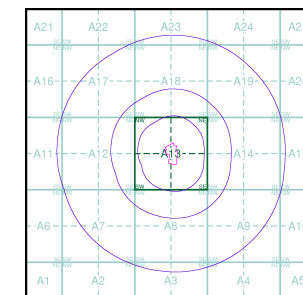
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



Order Details

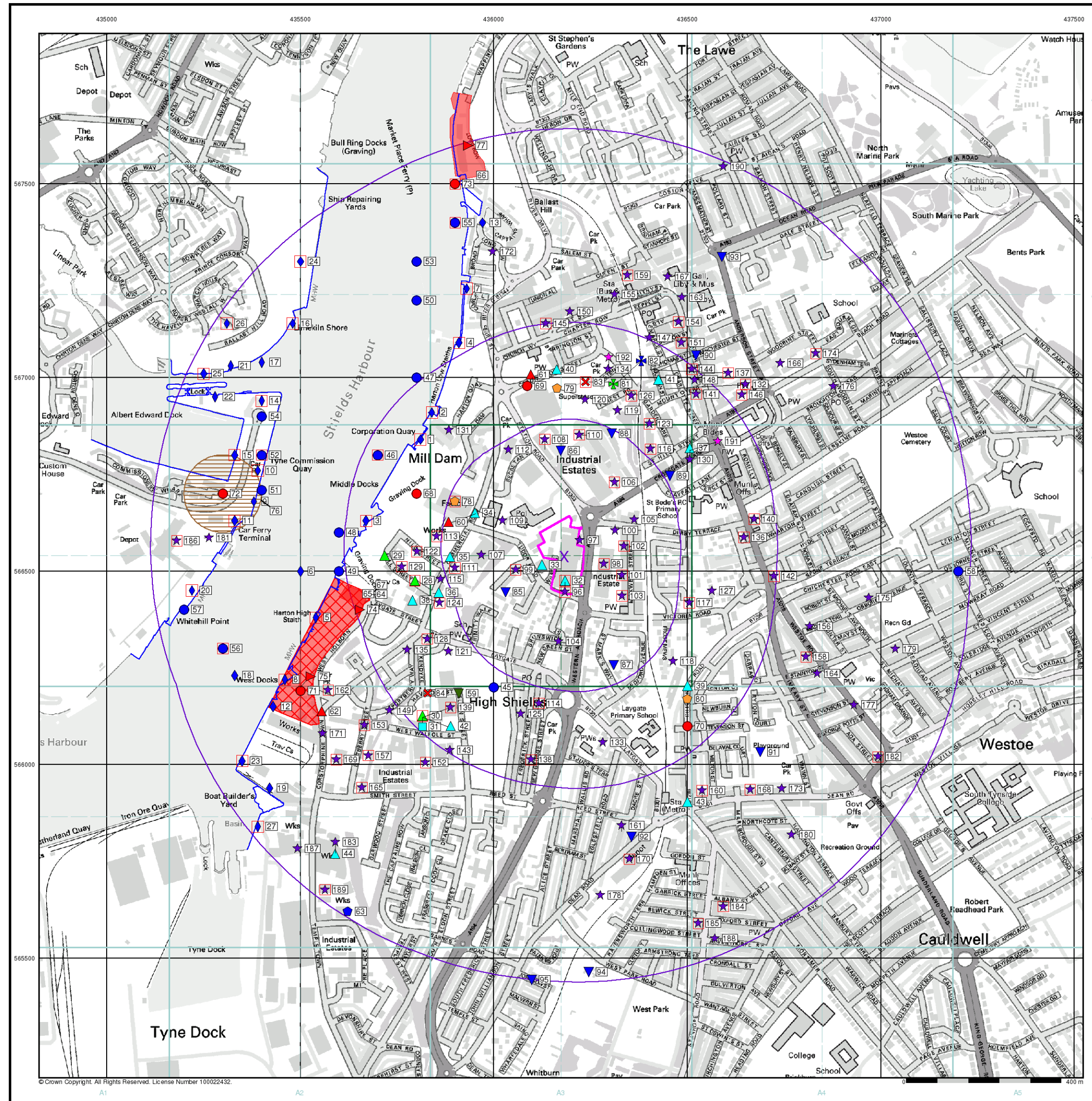
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Site Details

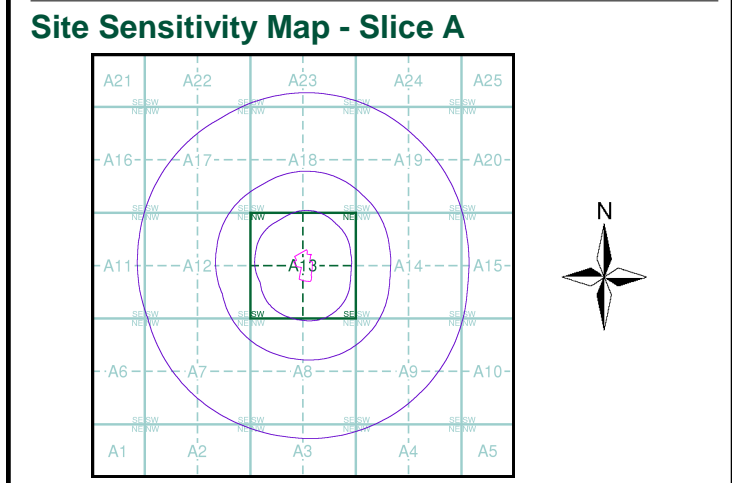
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- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice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






Order Details






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 Slice: A
 Site Area (Ha): 1.55
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Site Details
 TP South Shields

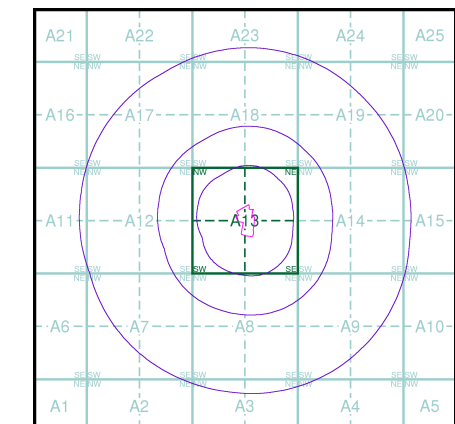
General

-  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

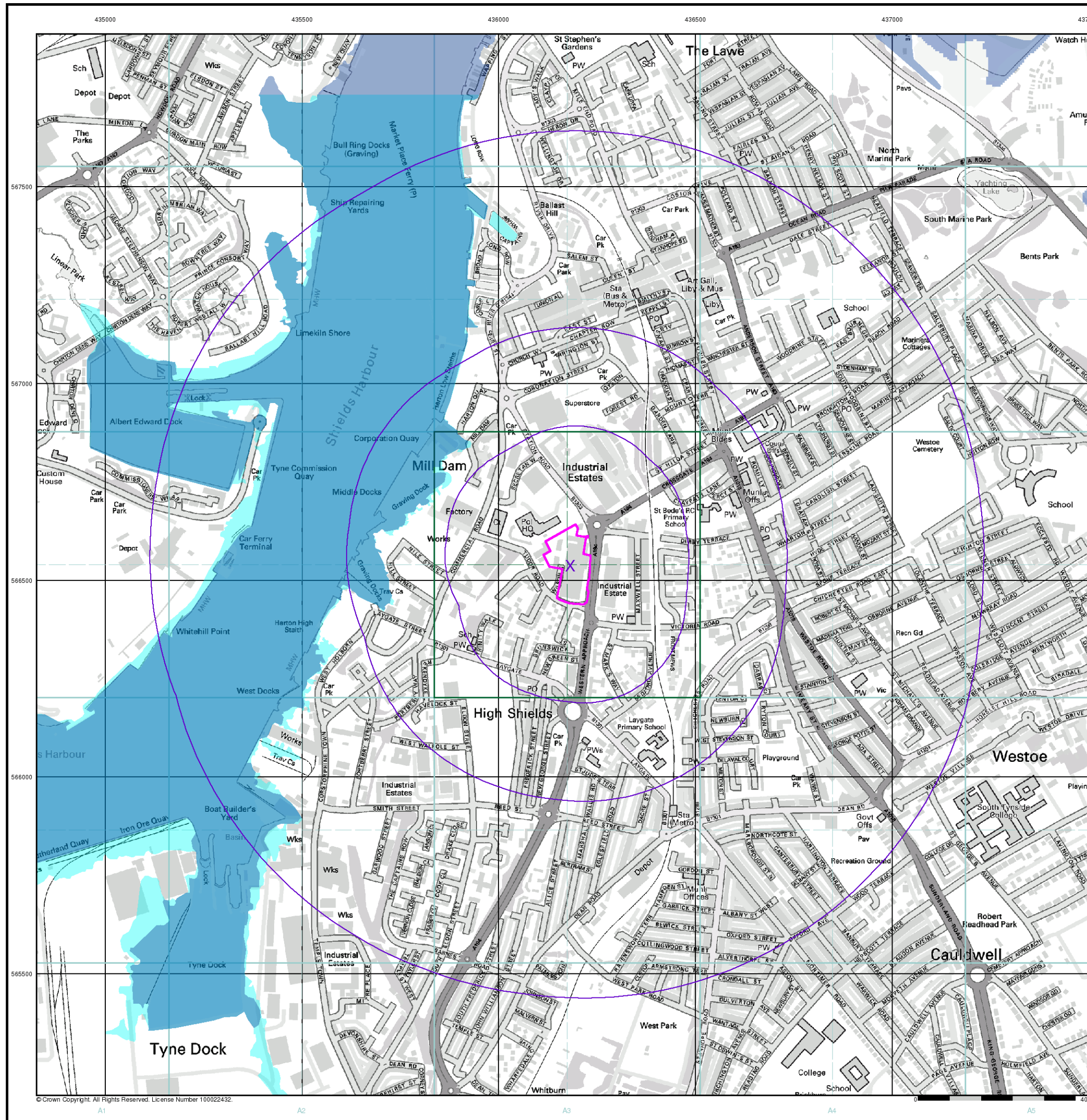


Order Details

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 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

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General

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

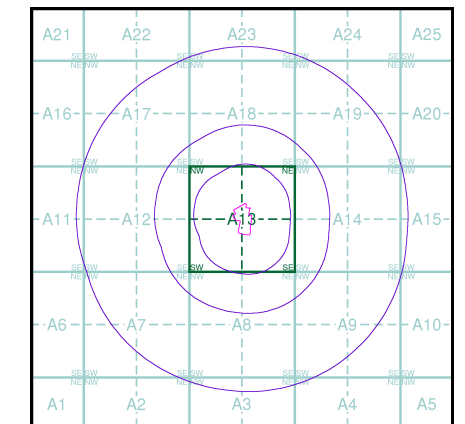
Agency and Hydrological (Boreholes)

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

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

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

Borehole Map - Slice A

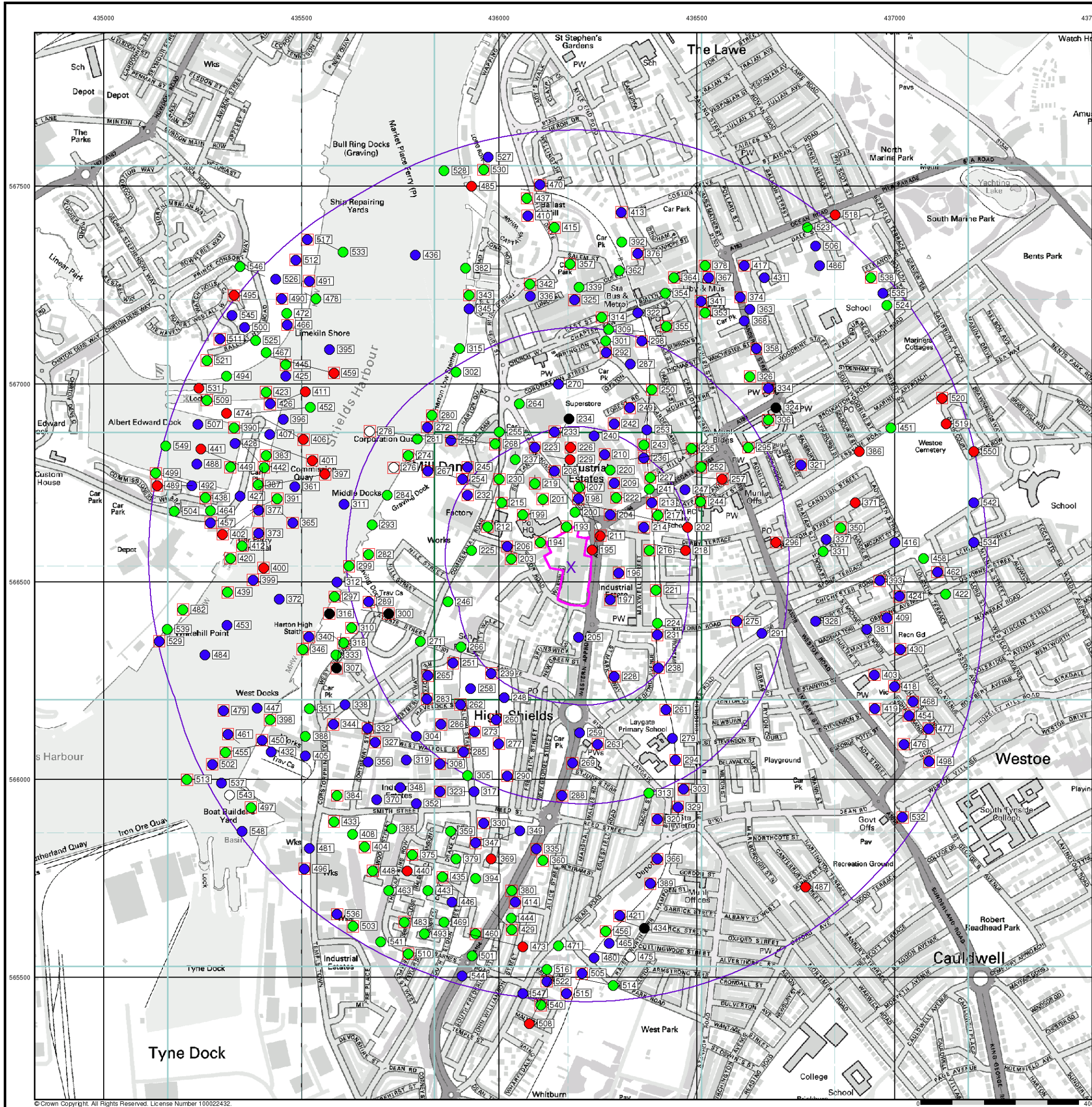


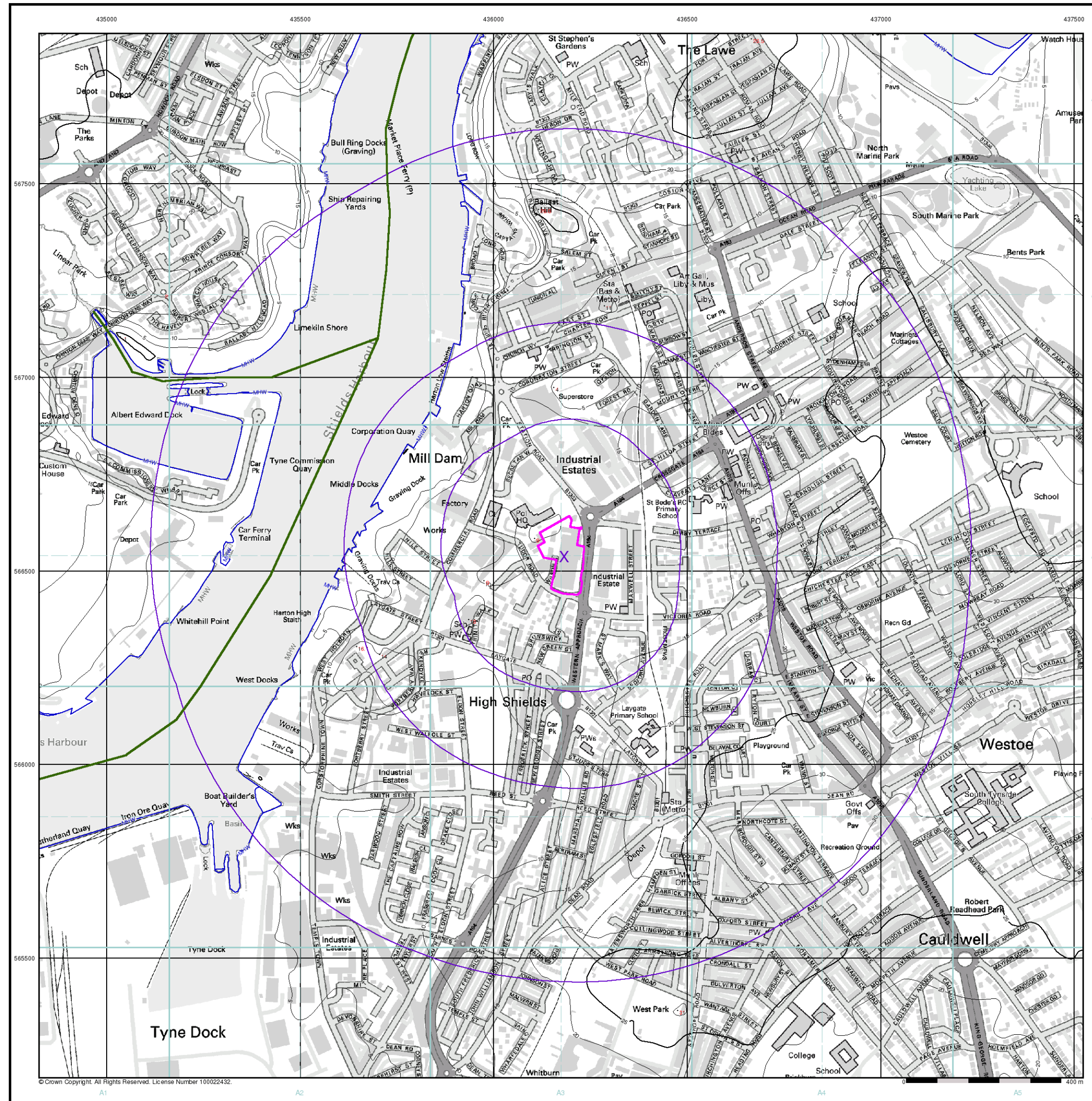
Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields





General

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

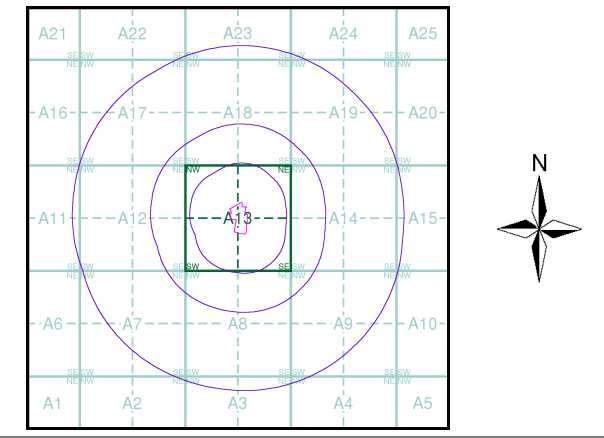
Detailed River Network Data

- 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
- Master Contour 100
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

EANRW Detailed River Network Map - Slice A

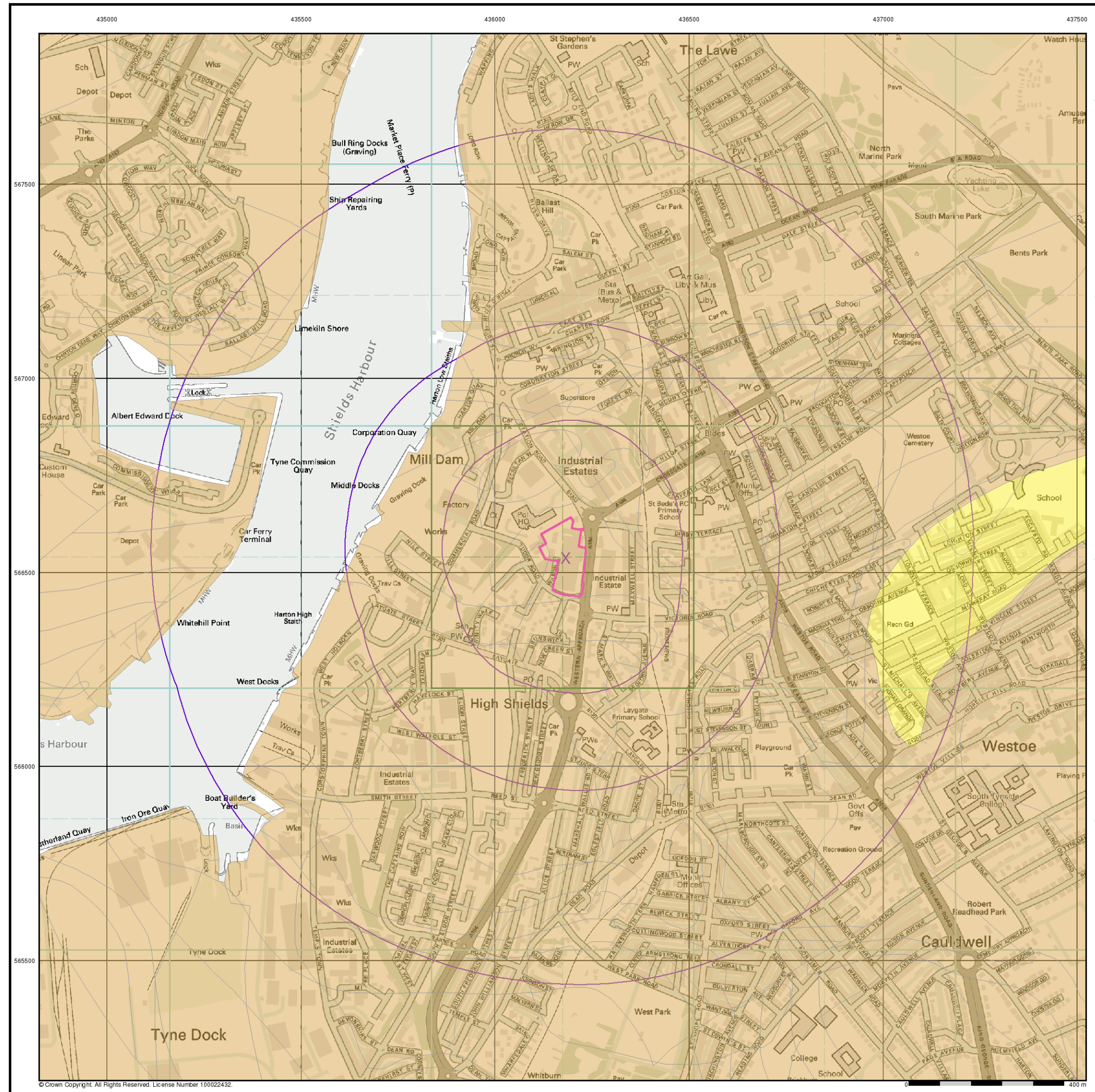


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields

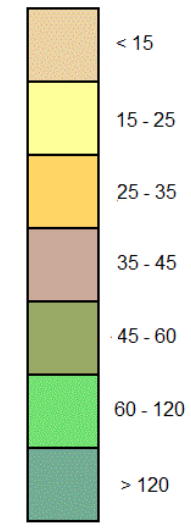


General

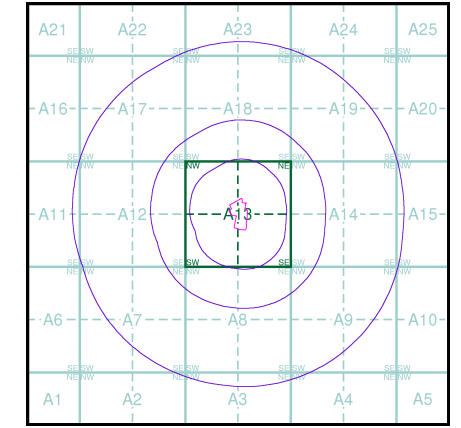
- X Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A



Order Details

Order Details: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
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Site Details

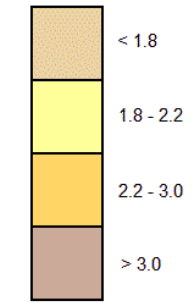
TP South Shields

General

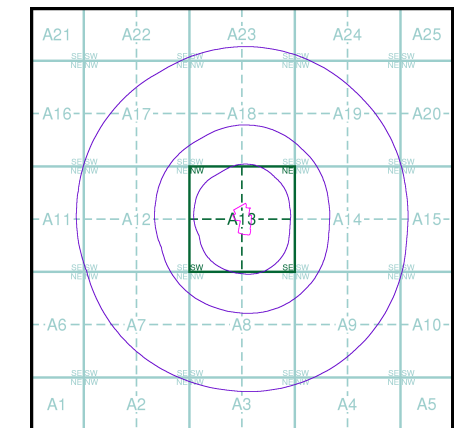
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A

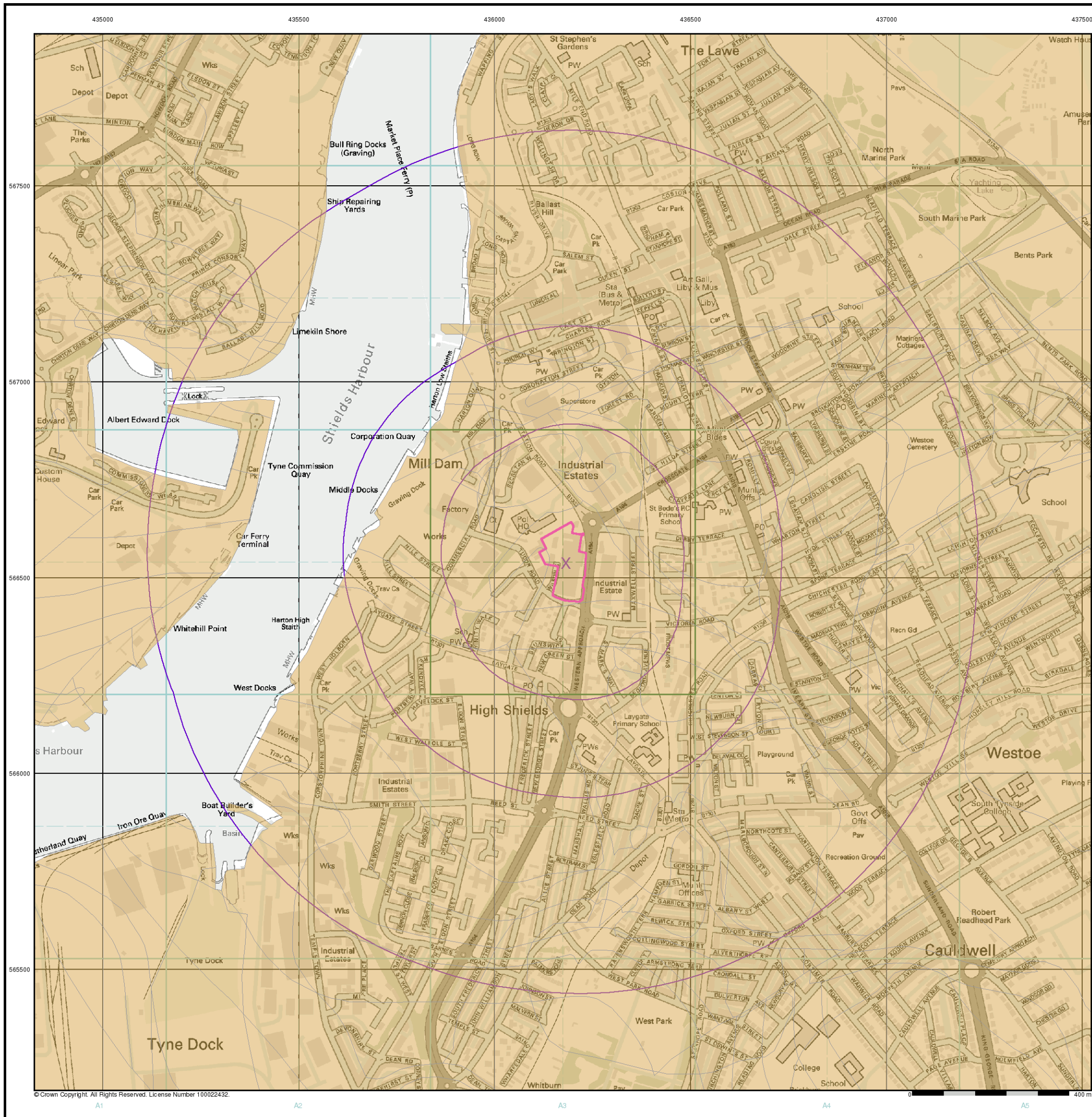


Order Details

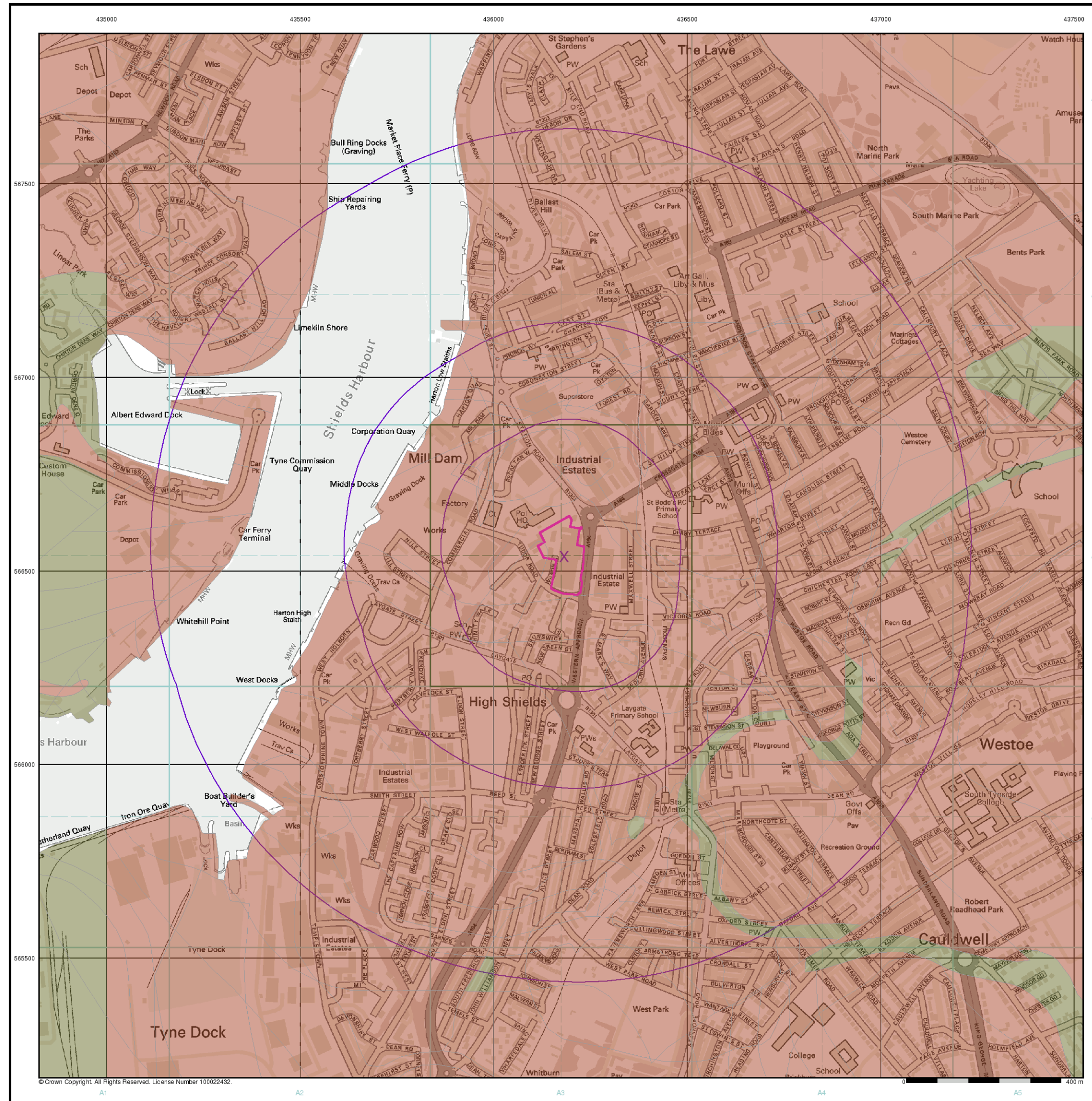
Order Details: 64108305_1_1
 Customer Ref: STM3043D
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 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields



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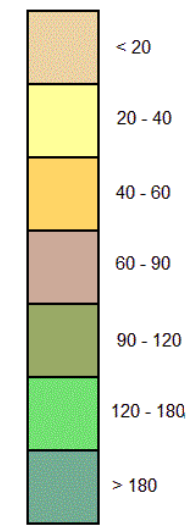


General

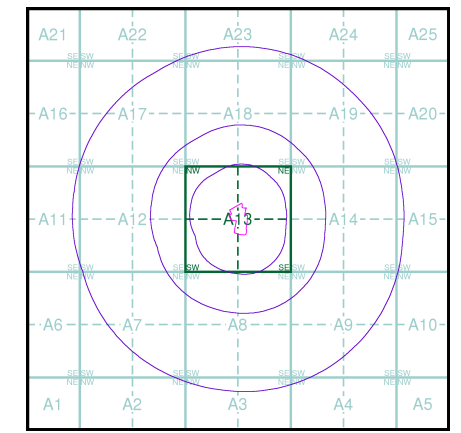
- X Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A



Order Details

Order Details: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

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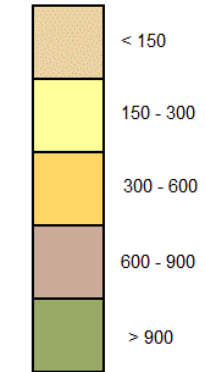
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

General

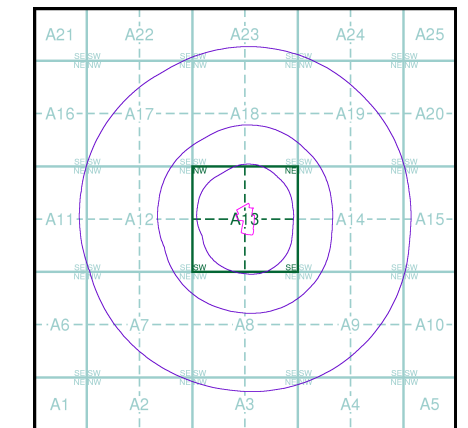
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A

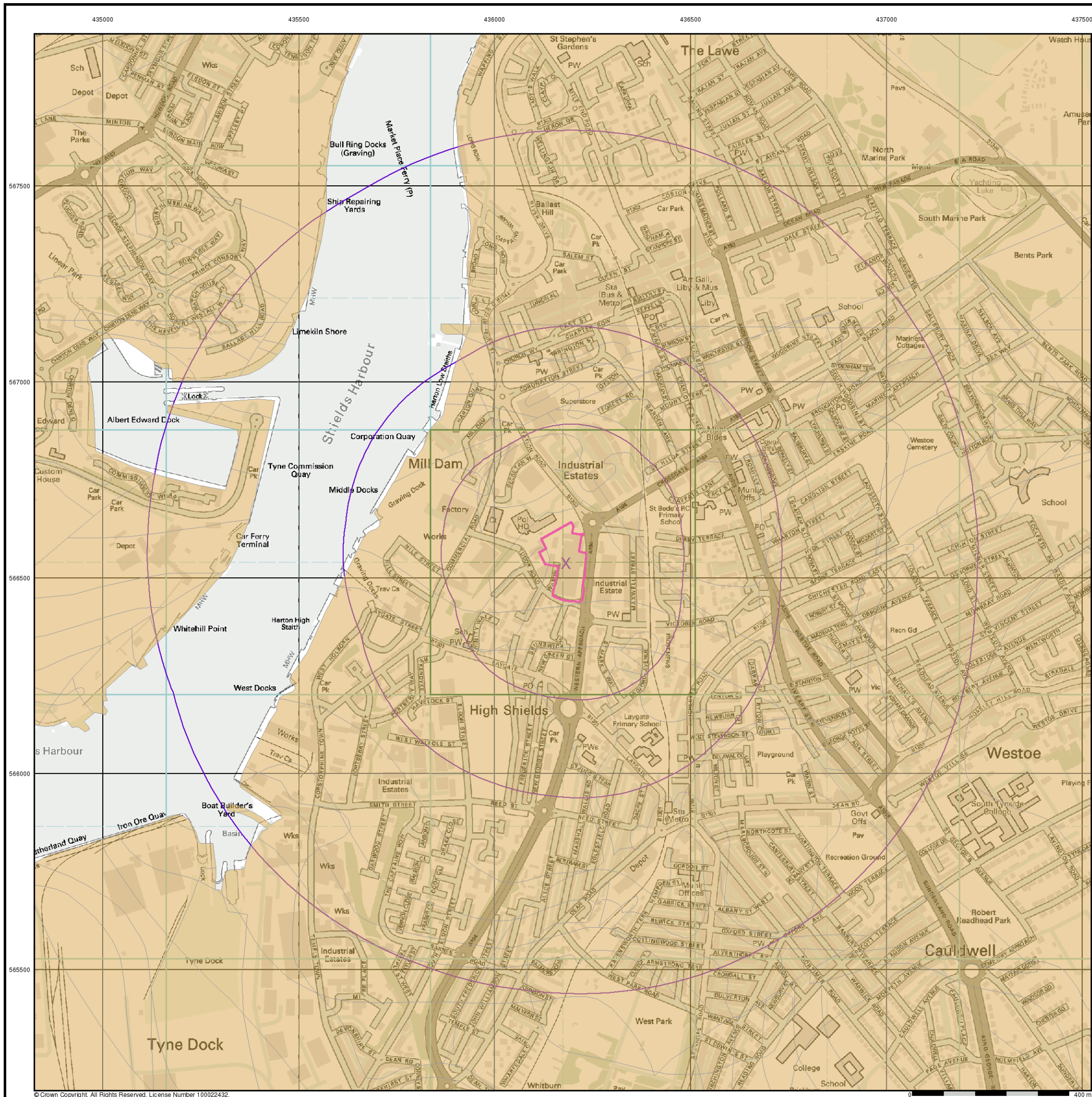


Order Details

Order Details: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000




Site Details

TP South Shields



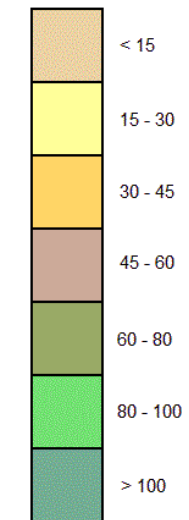
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General

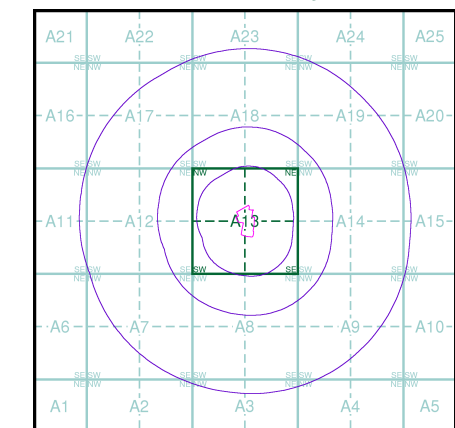
-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A



Order Details

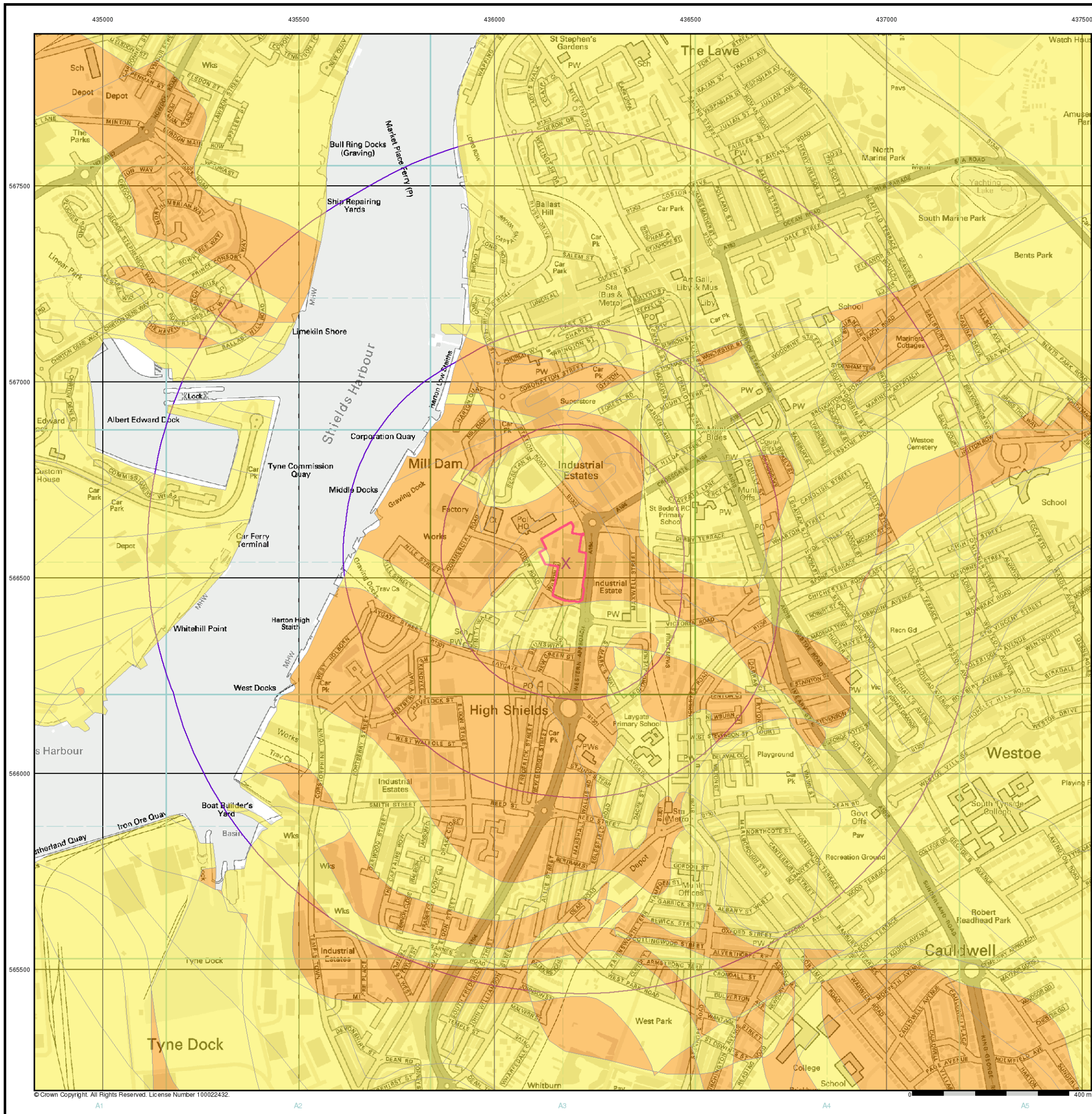
Order Details: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
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Site Details

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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

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

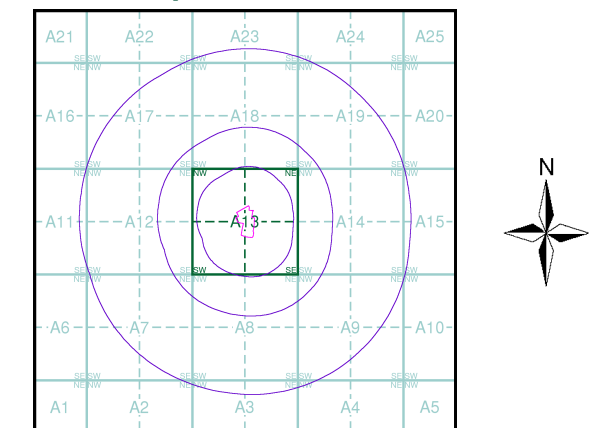
1:10,000 Raster Mapping

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

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:10,560	1862	3
Northumberland	1:10,560	1864 - 1865	4
Durham	1:10,560	1898	5
Northumberland	1:10,560	1899	6
Durham	1:10,560	1921	7
Durham	1:10,560	1938	8
Ordnance Survey Plan	1:10,000	1951 - 1952	9
Ordnance Survey Plan	1:10,000	1957	10
Ordnance Survey Plan	1:10,000	1967	11
Ordnance Survey Plan	1:10,000	1973 - 1976	12
Newcastle-upon-Tyne	1:25,000	1977	13
Ordnance Survey Plan	1:10,000	1982 - 1986	14
Ordnance Survey Plan	1:10,000	1993 - 1995	15
VectorMap Local	1:10,000	2014	16

Historical Map - Slice A



Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Fireproof Building		Prominent Fireproof Building
	Non-fireproof Building		Non-fireproof Building (non-dwelling)
	Factory, mill, and flour mill, with chimneys		Factory, mill, and flour mill, without chimneys
	Power Station, drawn to scale		Hydroelectric Power Station
	Radio Station, drawn to scale		Telephone Station, drawn to scale
	Abandoned Open-pit Mine or Quarry		Open-pit Salt Mine
	Pit		Oil Deposit or Well
	Oil Seepage		Natural Gas Tank
	Tailings Pile		Fuel Storage Tanks
	Bench Mark		Drill Hole
	Burial Mound		Triangulation Point on Burial Mound
	Single-track Railroad		Double-track Railroad
	Small Bridge		Tunnel
	Pipe (Culvert)		Railroad and Station Building
	Coniferous Forest		Deciduous Forest
	Mixed Forest		Lawns
	Citrus Orchard		Wet Ground
	Scattered Vegetation		

243,8 Values for prominent elevations
186.0 Numbers for spot elevations, depth soundings, contour lines, etc.
0,2 Velocity of the current, width of river bed, depth of river
180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	Ъ (-)
Д д (D)	Л л (L)	У у (U)	Ы (Y)
Е е (E)	М м (M)	Ф ф (F)	Ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Partly Demolished Buildings		Demolished Buildings
	Built-Up Area with Fireproof Buildings Predominant		Built-Up Area with Non-Fireproof Buildings Predominant
	Individual Fireproof Building		Prominent Industrial Building
	Individual Dwelling, Fireproof		Ruins of an Individual Dwelling
	Factory or Mill Chimney		Factory or Mill with Chimney
	Factory or Mill without Chimney		Mine or Open Pit Mine
	Operating Shaft or Mine		Non-Operating Shaft or Mine
	Salt Mine		Tailings Pile
	Pit		Stone Quarry
	Gas Pump or Service Station		Fuel Storage or Natural Gas Tank
	Oil or Natural Gas Derrick		Small Hydroelectric Power Station
	Power Station		Transformer Station
	Cemetery		Burial Mound (height in metres)
	Triangulation Point on Burial Mound		Triangulation Point
	Bench Mark		Bench Mark (monumented)
	Telegraph Office		Telephone Station
	Radio Station		Radio Tower
	Airfield or Seaplane Base		Landing Strip
	Cut		Fill
	Km Post		Plantings
	Telegraph/Telephone Lines		Main Highway
	Highway under Construction		Improved Dirt Road (former truck road)
	Steep Grade		Width of Road
	Small Bridge		Pipe (Culvert)
	Tunnel		Dismantled Railroad
	Double-track Railroad with First Class Station		Railroad Under Construction
	Shore Embankment		River or Ditch with Embankment
	Water Reservoir or Rain Water Pit		Spring
	Well		Isobath with value
	Heavy (Index) Contour Line		Half Contour Line
	Contour Line and Value		Spot Elevation Value
	Coniferous		Deciduous
	Mixed		Scrub

Key to Numbers on Mapping

NZ36_Newcastle

No.	Description
39	Factory (Metal Works)
64	Factory (Ship Repairs)
71	Factory (Ship Building)
132	Council/Government Buildings/Courts
142	Warehouses (Use Unknown) And Port Buildings
147	Railway Station (Freight)

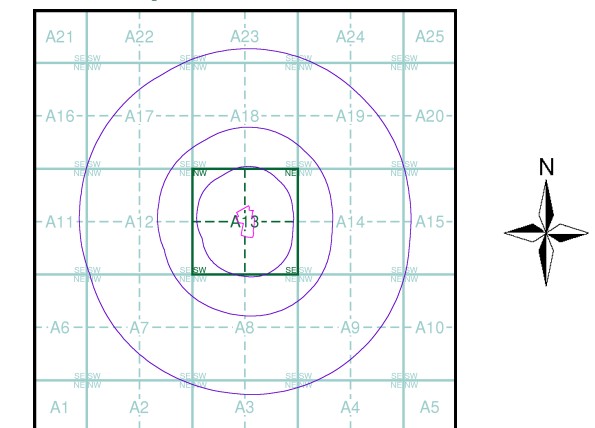
soiltechnics

environmental and geotechnical consultants

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:10,560	1862	3
Northumberland	1:10,560	1864 - 1865	4
Durham	1:10,560	1898	5
Northumberland	1:10,560	1899	6
Durham	1:10,560	1921	7
Durham	1:10,560	1938	8
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Ordnance Survey Plan	1:10,000	1982 - 1986	14
Ordnance Survey Plan	1:10,000	1993 - 1995	15
VectorMap Local	1:10,000	2014	16

Russian Map - Slice A



Order Details

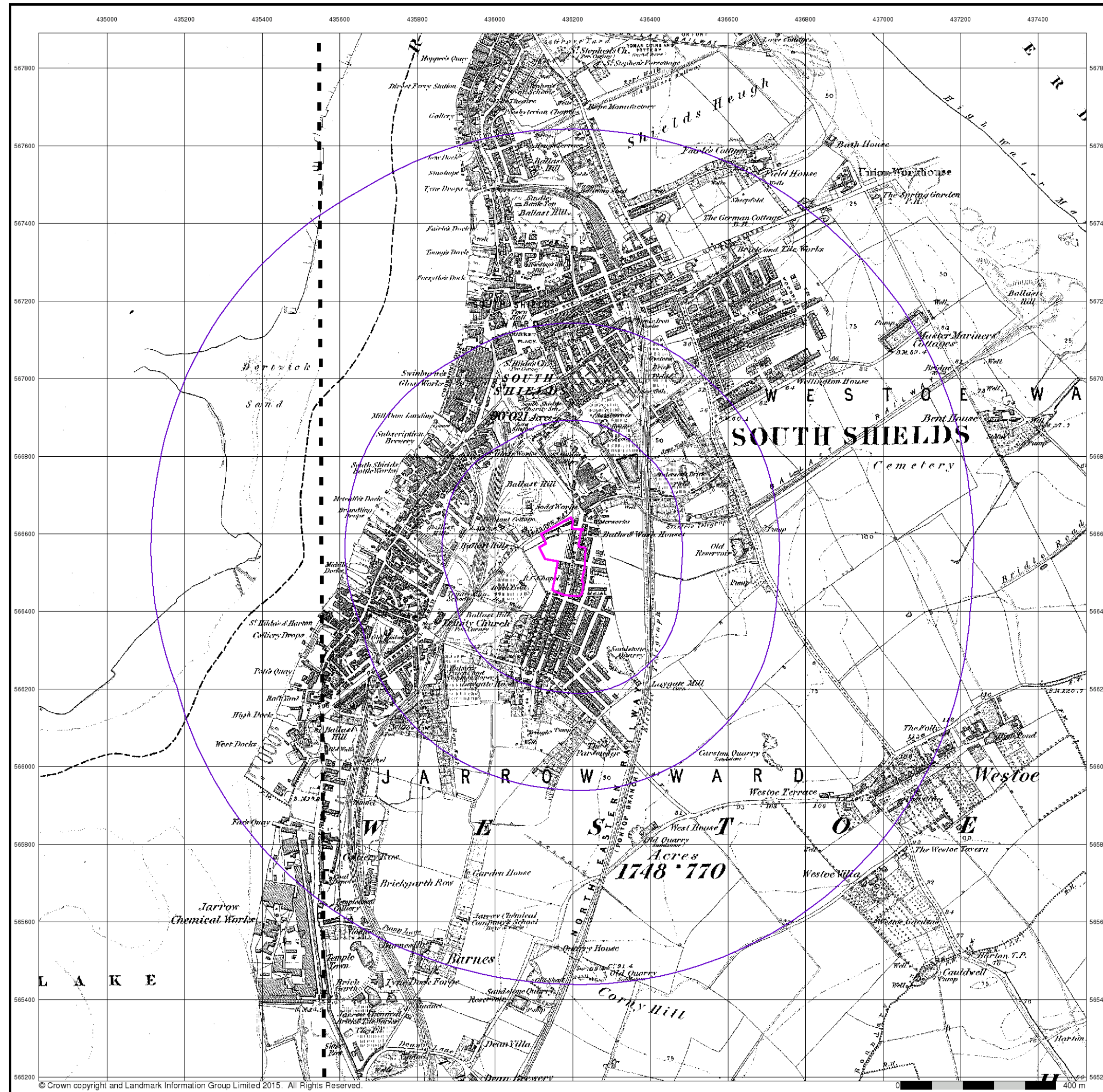
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 Customer Ref: STM3043D
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 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

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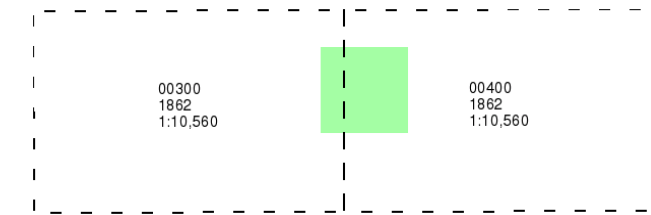
Durham

Published 1862

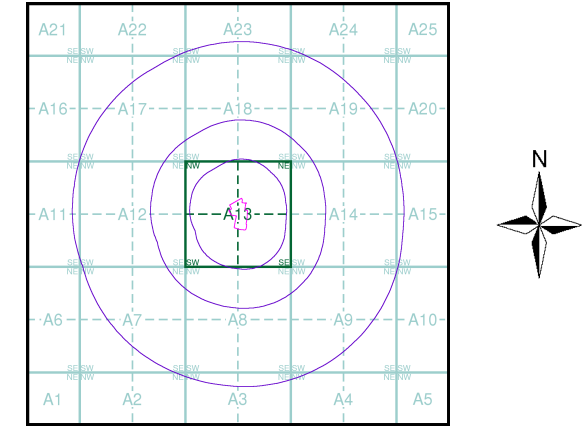
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A

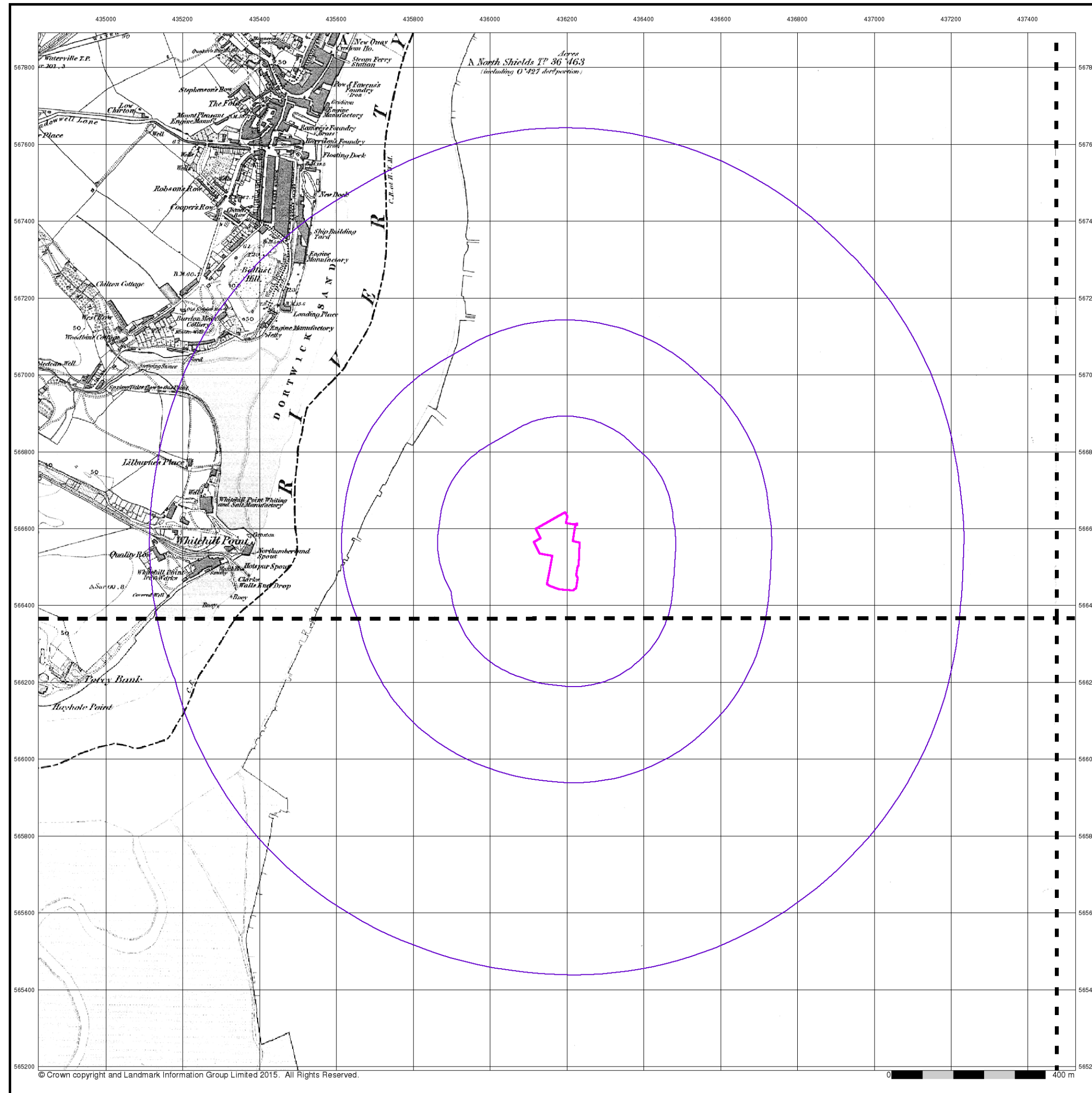


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
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 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

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Northumberland

Published 1864 - 1865

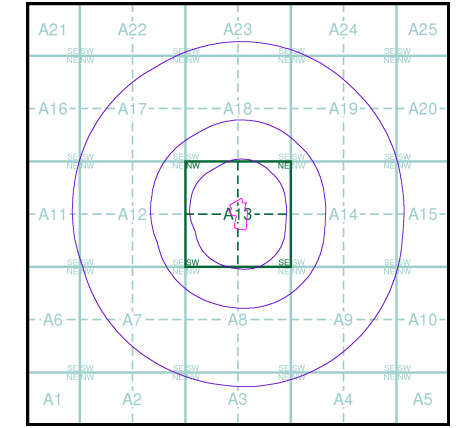
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

08900 1865 1:10,560	09000 1865 1:10,560
09800 1864 1:10,560	

Historical Map - Slice A



Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields

Durham

Published 1898

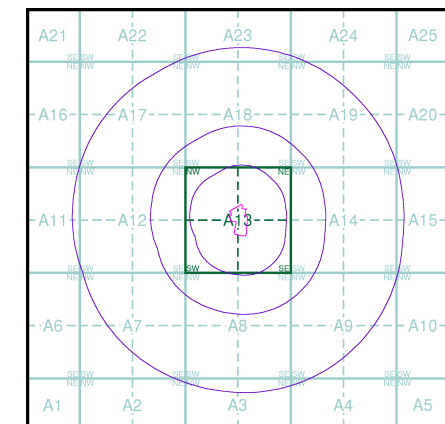
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

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

Historical Map - Slice A



Order Details

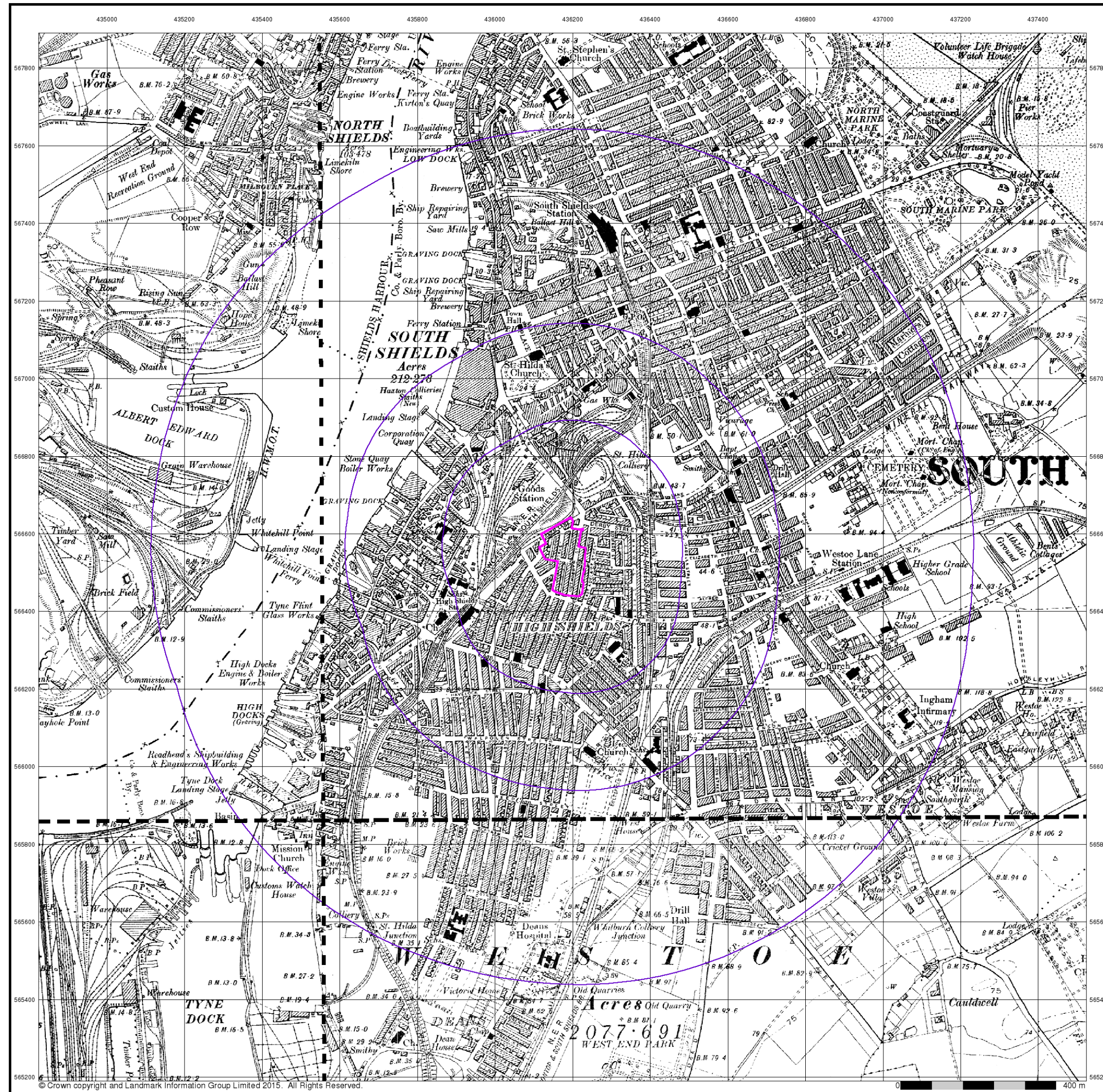
Order Number: 64108305_1_1
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 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

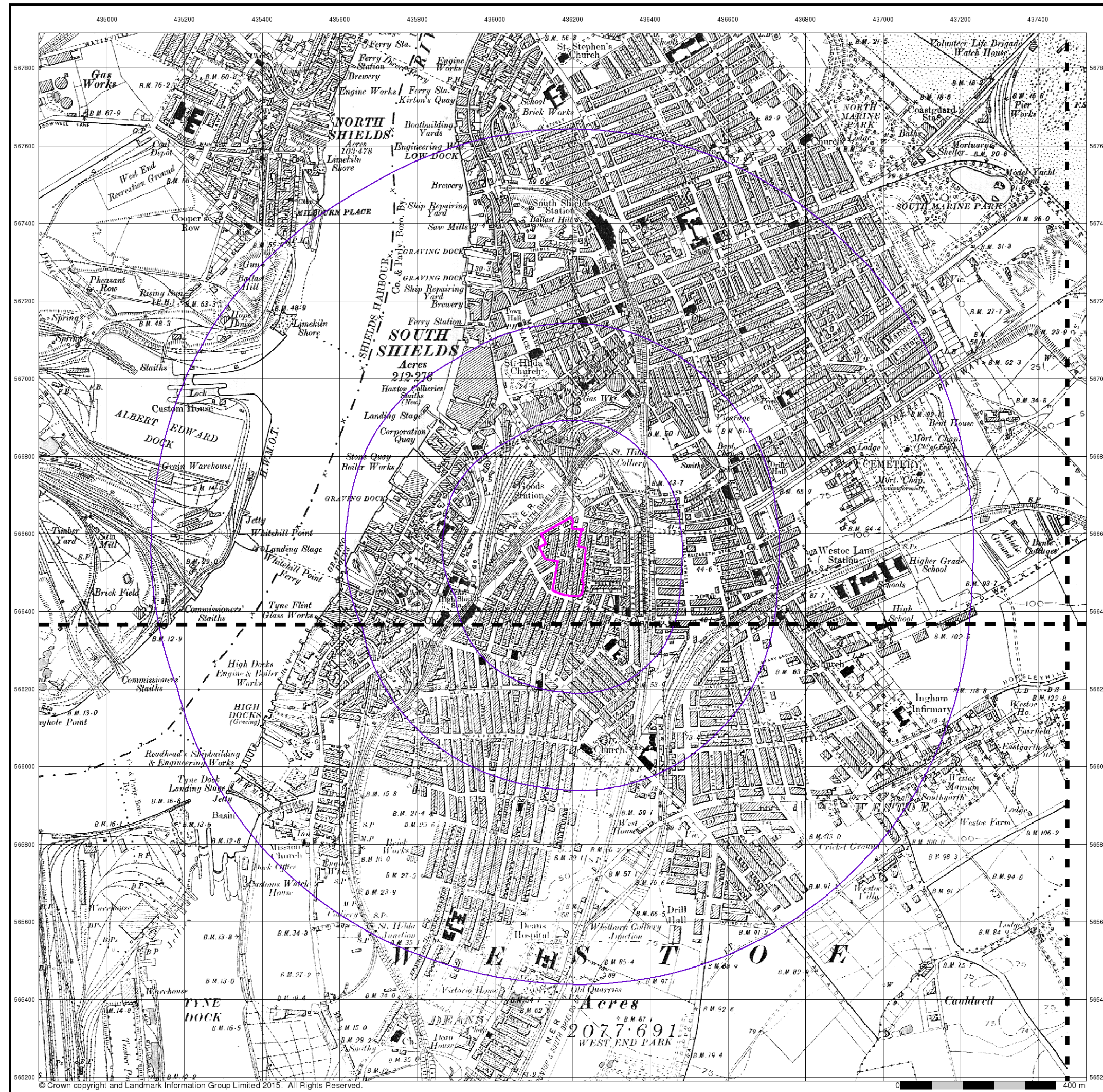
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Northumberland

Published 1899

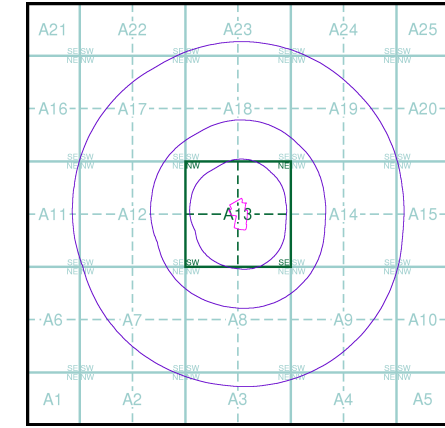
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

089SE 1899 1:10,560	090SW 1899 1:10,560
098NE 1899 1:10,560	

Historical Map - Slice A



Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
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Site Details

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Durham

Published 1921

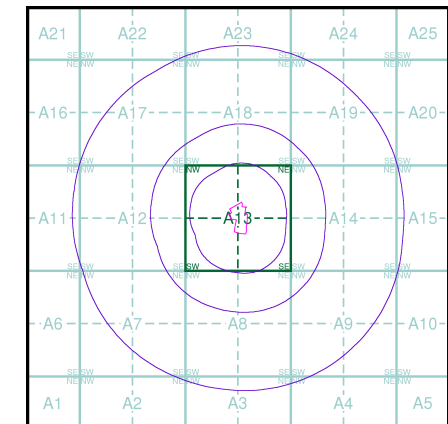
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

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

Historical Map - Slice A

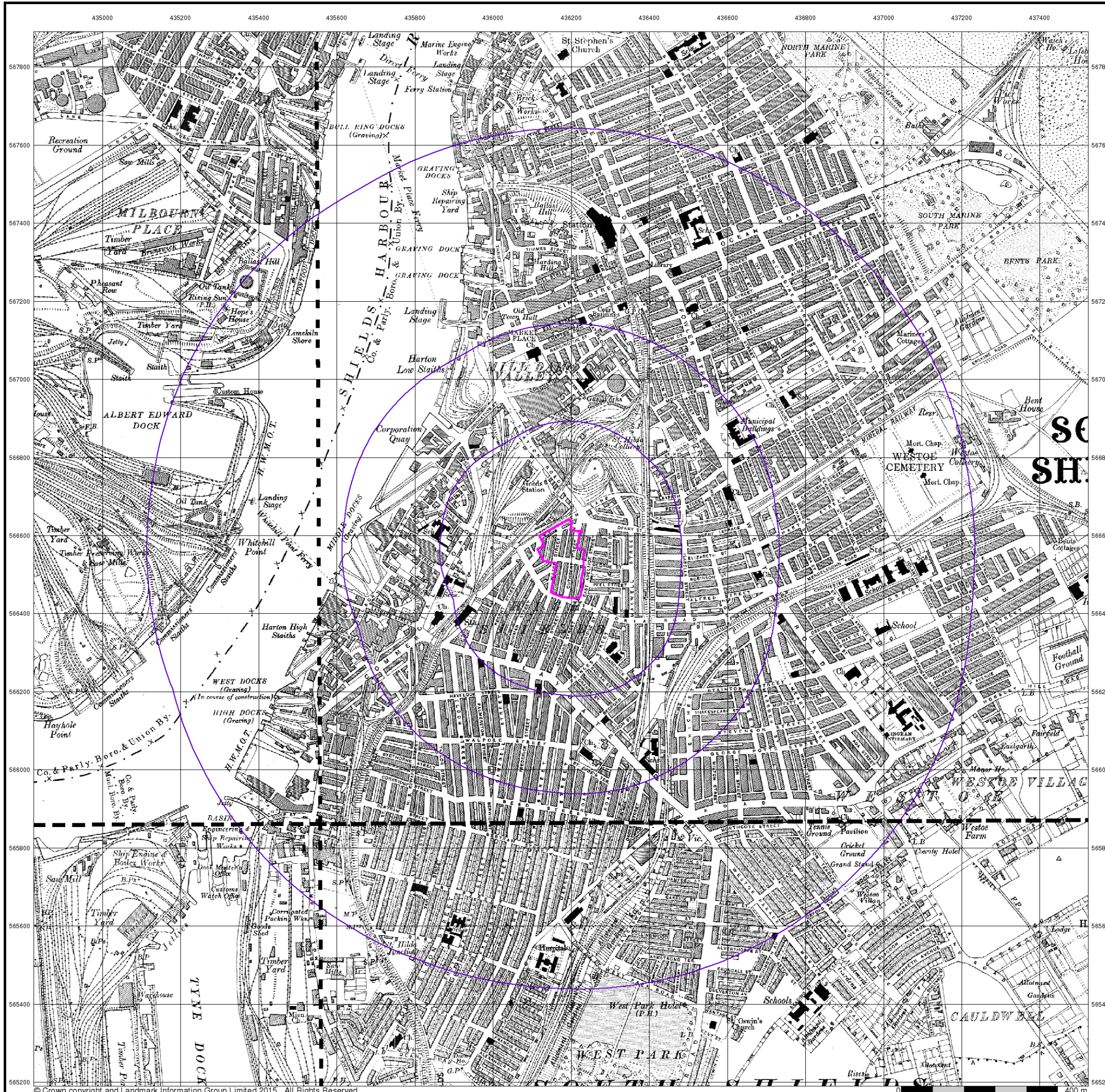


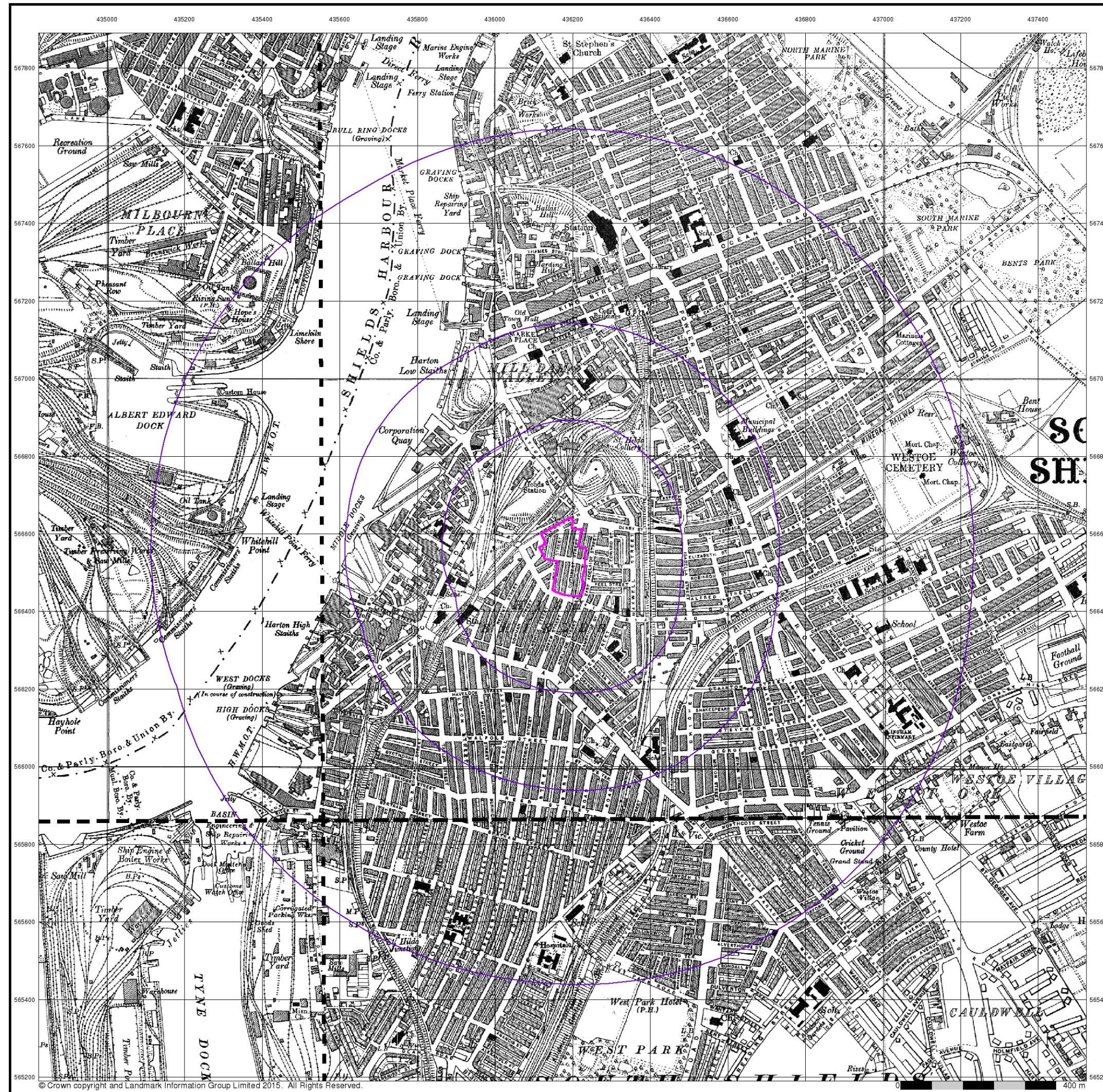
Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields





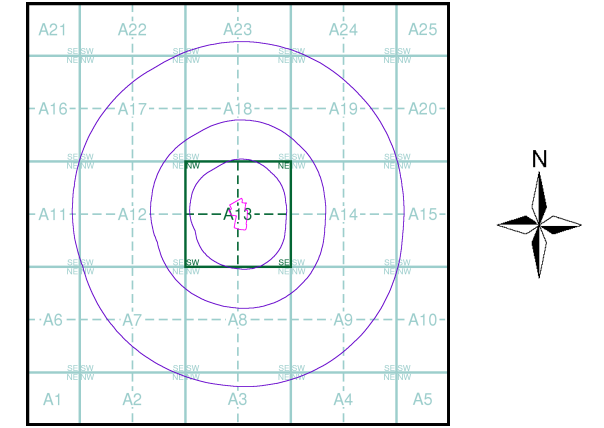
Durham
Published 1938
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

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

Historical Map - Slice A



Order Details
 Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details
 TP South Shields

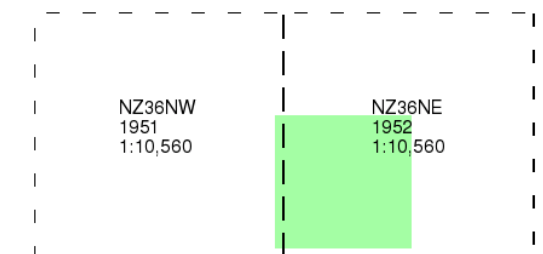
Ordnance Survey Plan

Published 1951 - 1952

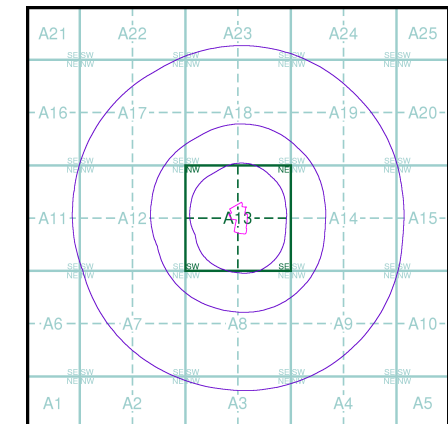
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields



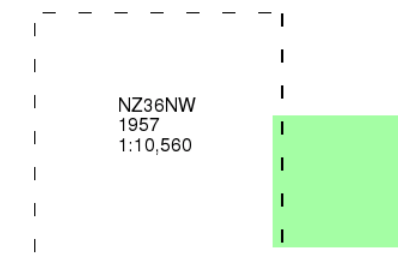
Ordnance Survey Plan

Published 1957

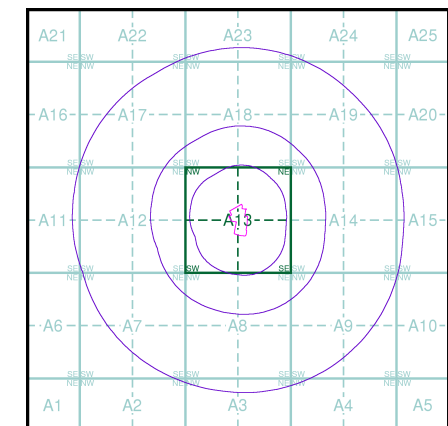
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A

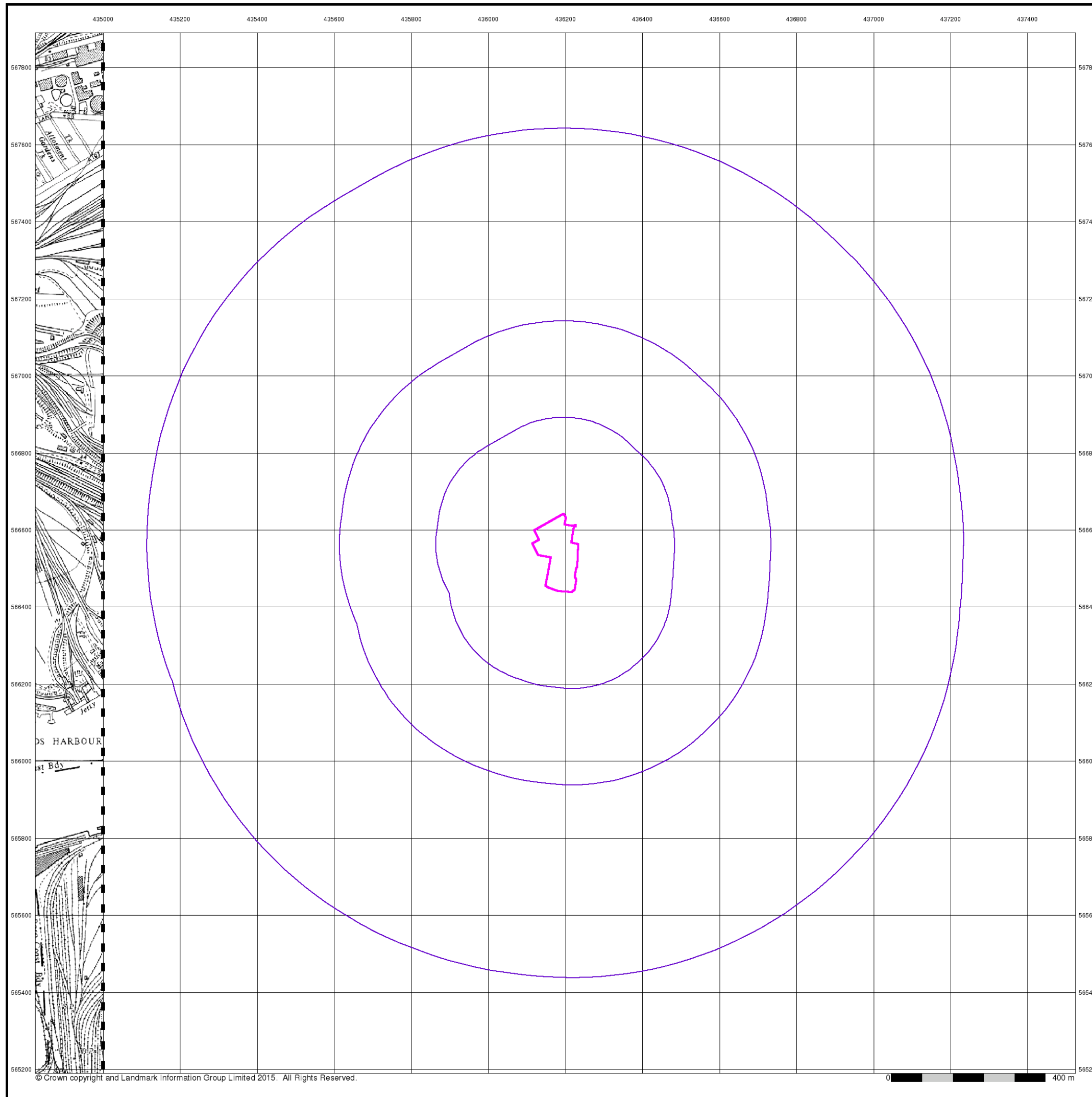


Order Details

Order Number: 64108305_1_1
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 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields



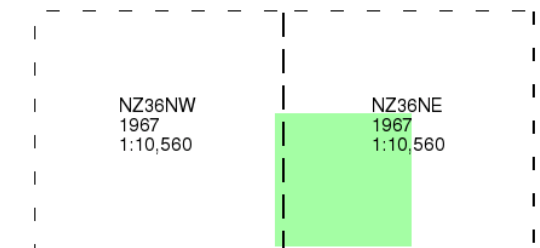
Ordnance Survey Plan

Published 1967

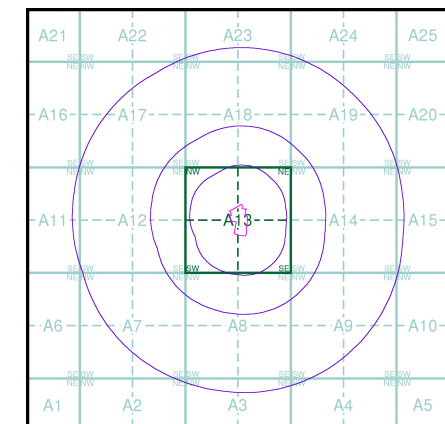
Source map scale - 1:10,000

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



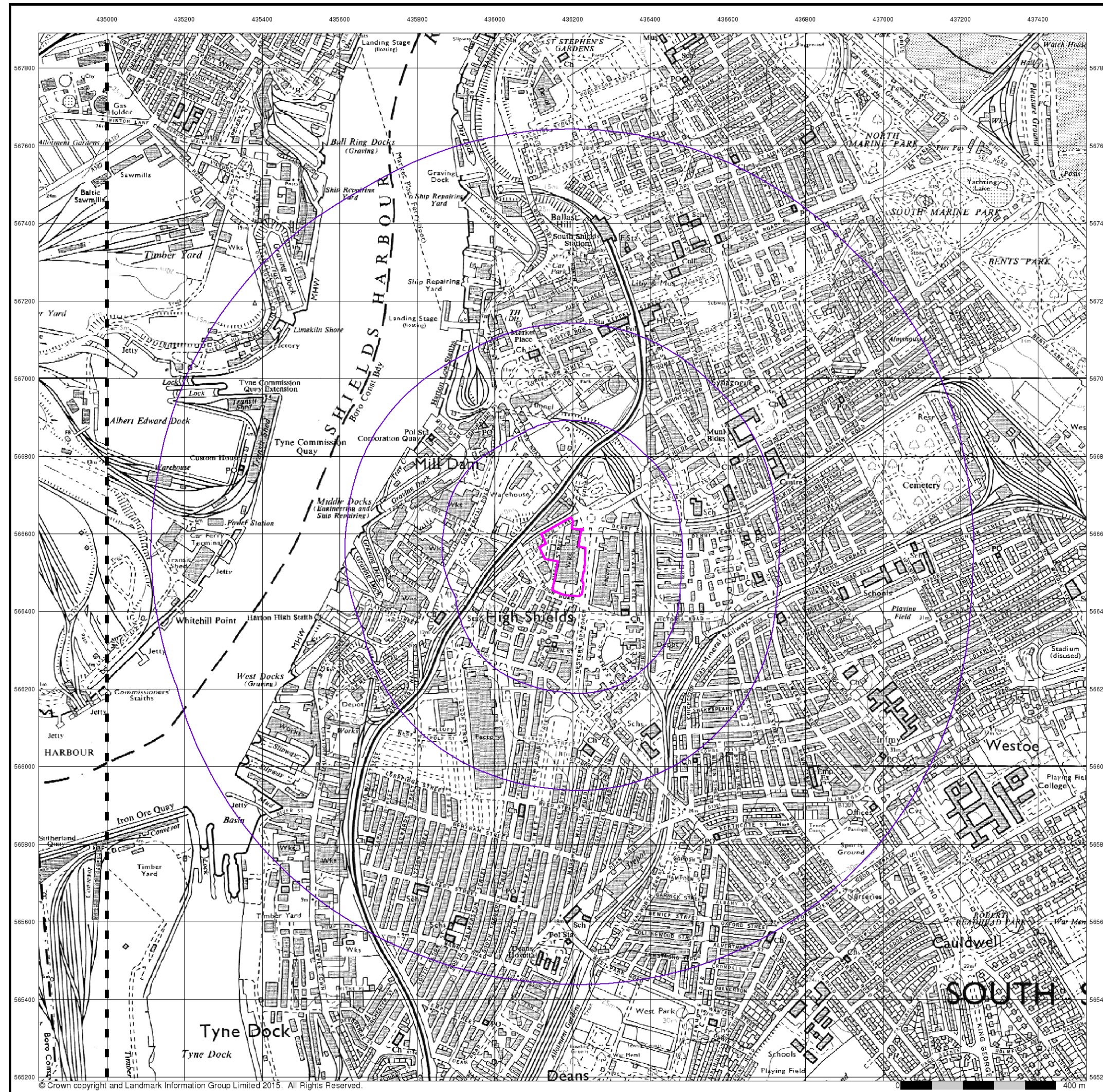
Order Details

Order Number: 64108305_1_1
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 National Grid Reference: 436180, 566540
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Site Details

TP South Shields

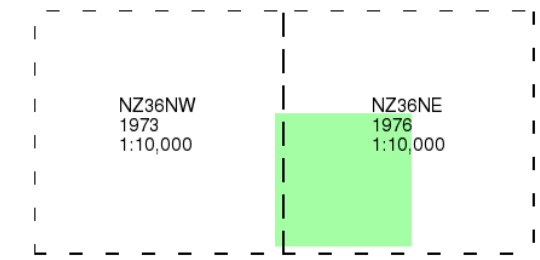




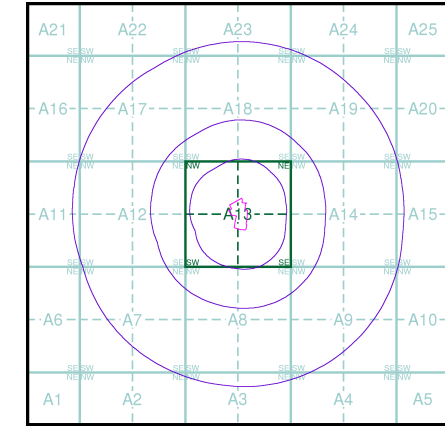
Ordnance Survey Plan Published 1973 - 1976 Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details
 Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details
 TP South Shields

Newcastle-upon-Tyne

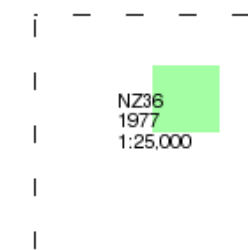
Published 1977

Source map scale - 1:25,000

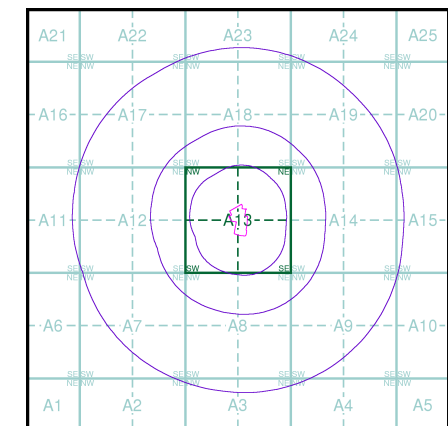
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A



Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields



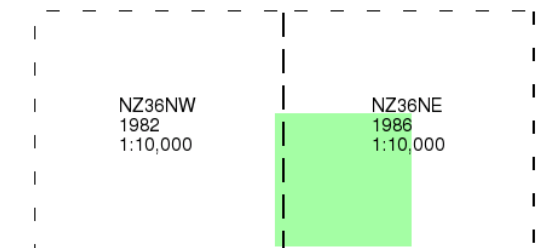
Ordnance Survey Plan

Published 1982 - 1986

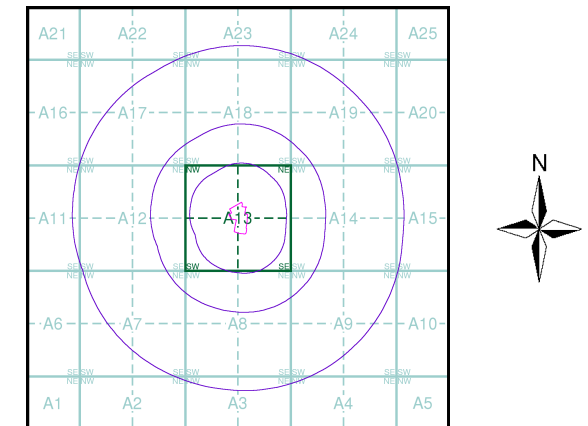
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A

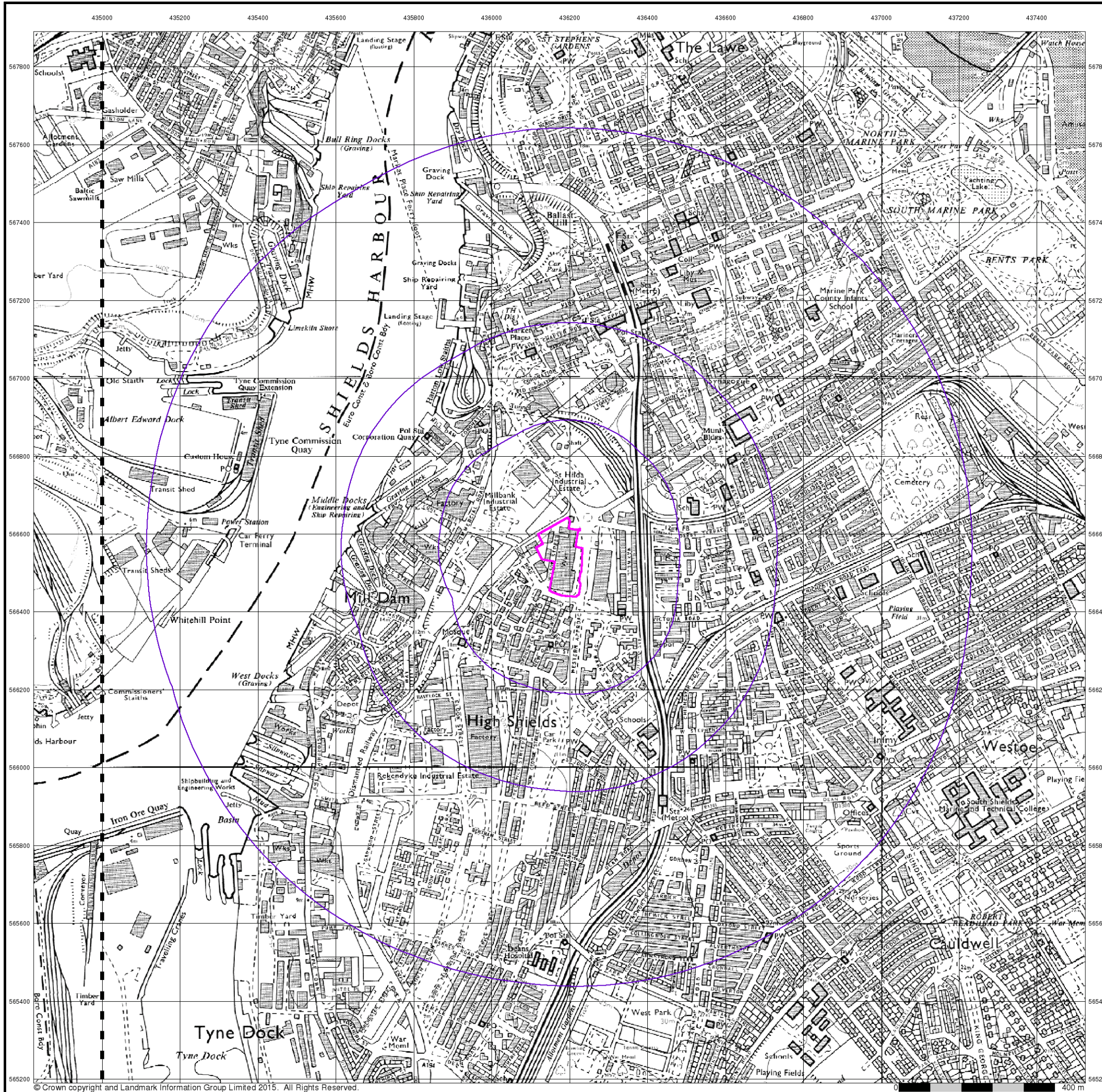


Order Details

Order Number: 64108305_1_1
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 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields



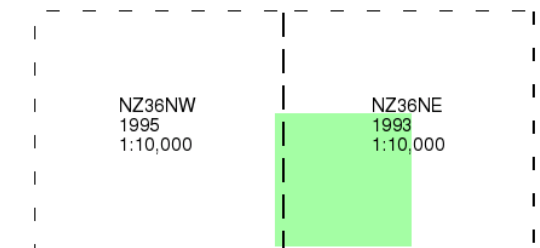
Ordnance Survey Plan

Published 1993 - 1995

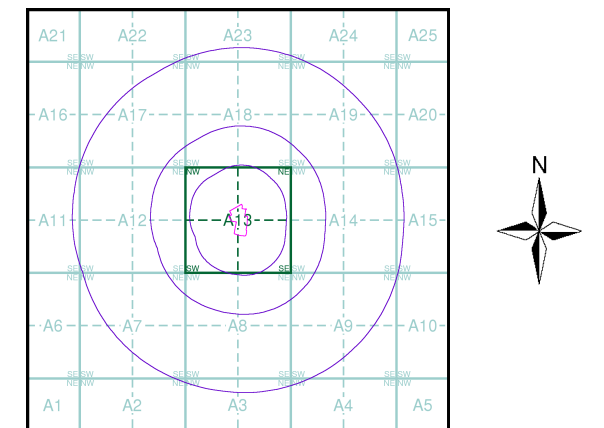
Source map scale - 1:10,000

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

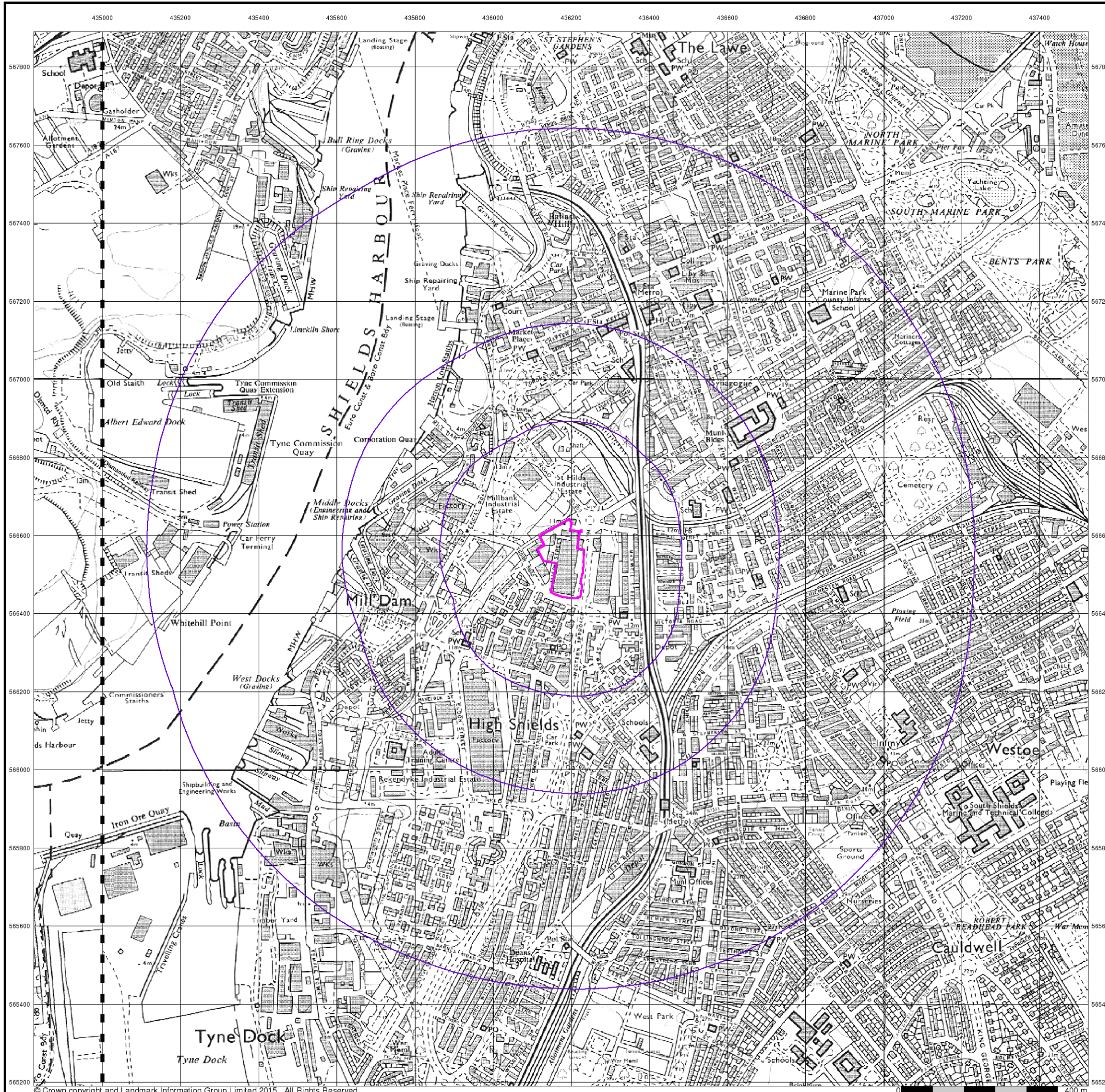


Order Details

Order Number: 64108305_1_1
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 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields



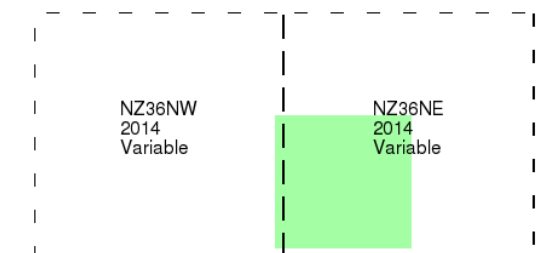
VectorMap Local

Published 2014

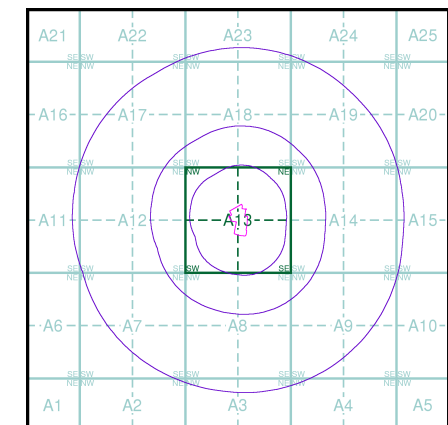
Source map scale - 1:10,000

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: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 1000

Site Details

TP South Shields



Historical Mapping Legends

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

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

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

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

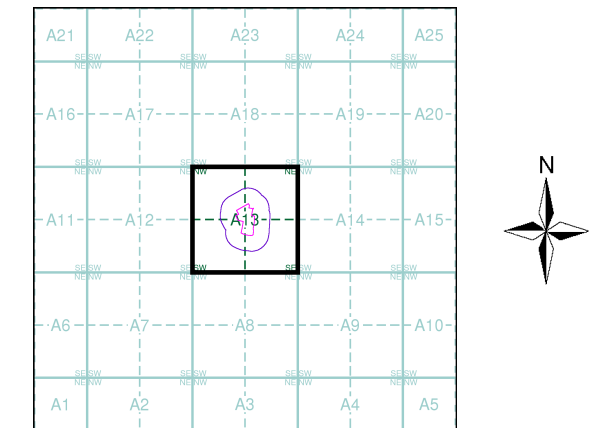
Large-Scale National Grid Data 1:2,500 and 1:1,250

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

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:2,500	1858	2
Northumberland	1:2,500	1861	3
Durham	1:2,500	1897	4
Durham	1:2,500	1915	5
Ordnance Survey Plan	1:1,250	1956	6
Ordnance Survey Plan	1:2,500	1956	7
Ordnance Survey Plan	1:1,250	1963 - 1975	8
Ordnance Survey Plan	1:1,250	1968 - 1989	9
Ordnance Survey Plan	1:2,500	1970	10
Supply of Unpublished Survey Information	1:1,250	1974 - 1975	11
Ordnance Survey Plan	1:1,250	1975 - 1989	12
Additional SIMs	1:1,250	1980 - 1989	13
Additional SIMs	1:1,250	1989 - 1991	14
Additional SIMs	1:1,250	1992	15
Large-Scale National Grid Data	1:1,250	1993	16
Large-Scale National Grid Data	1:1,250	1994 - 1995	17
Large-Scale National Grid Data	1:1,250	1994	18
Large-Scale National Grid Data	1:1,250	1996	19

Historical Map - Segment A13

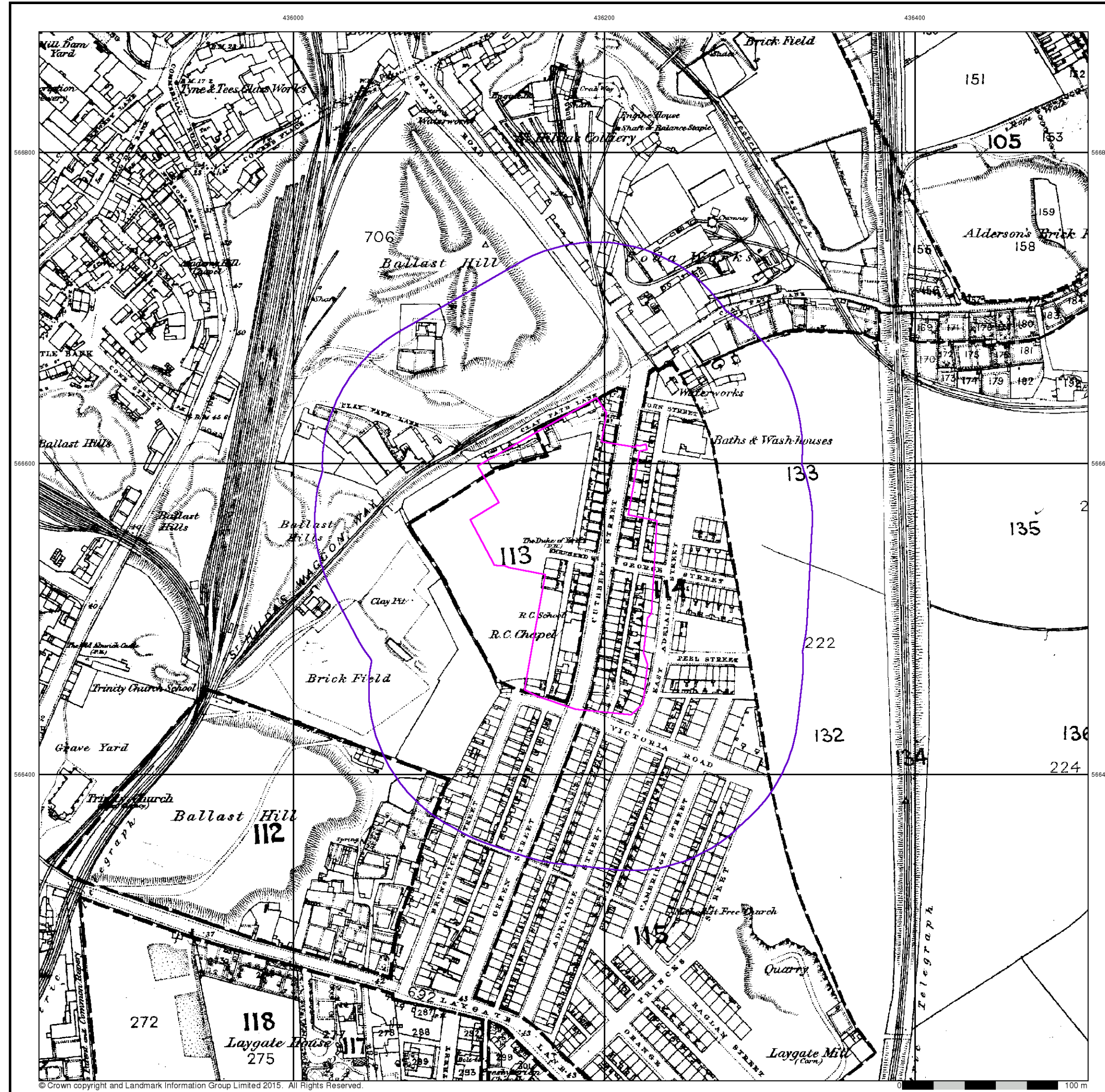


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields



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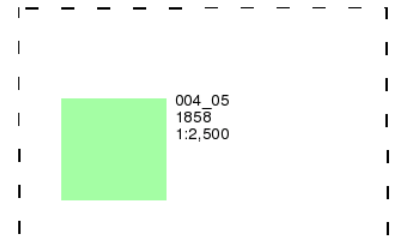
soiltechnics

environmental and geotechnical consultants

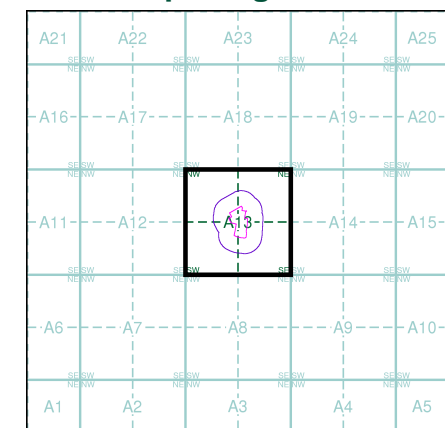
Durham
Published 1858
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details
 Order Number: 64108305_1_1
 Customer Ref: STM3043D
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 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details
 TP South Shields

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

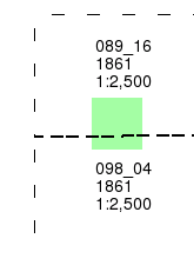
Northumberland

Published 1861

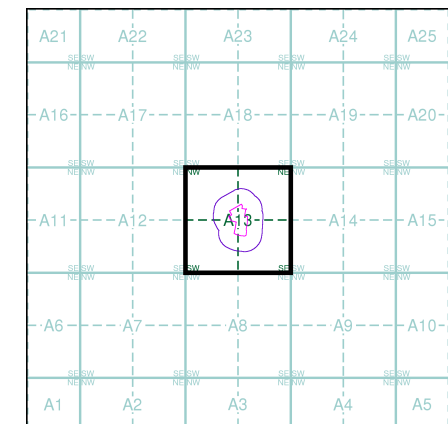
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

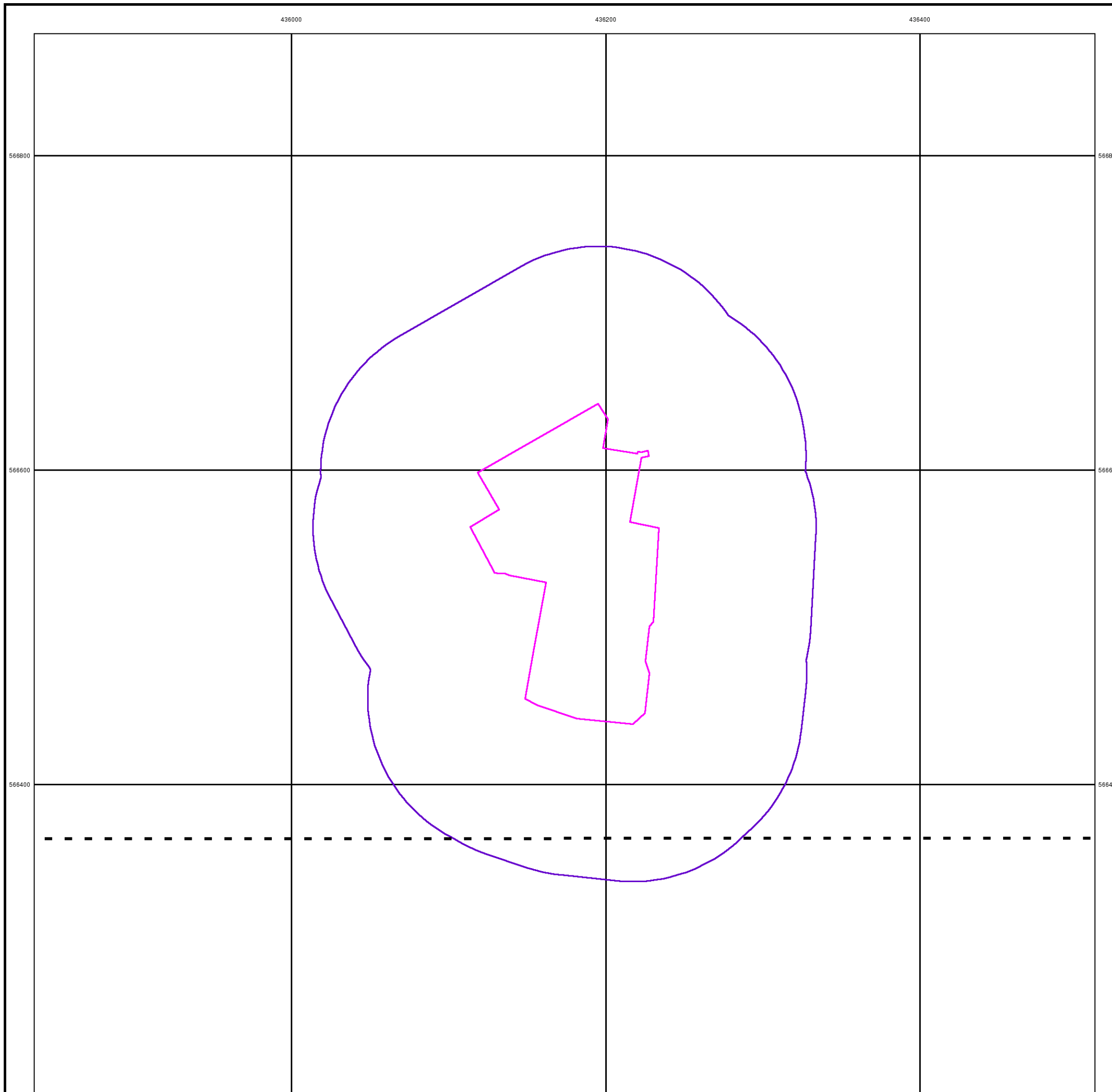


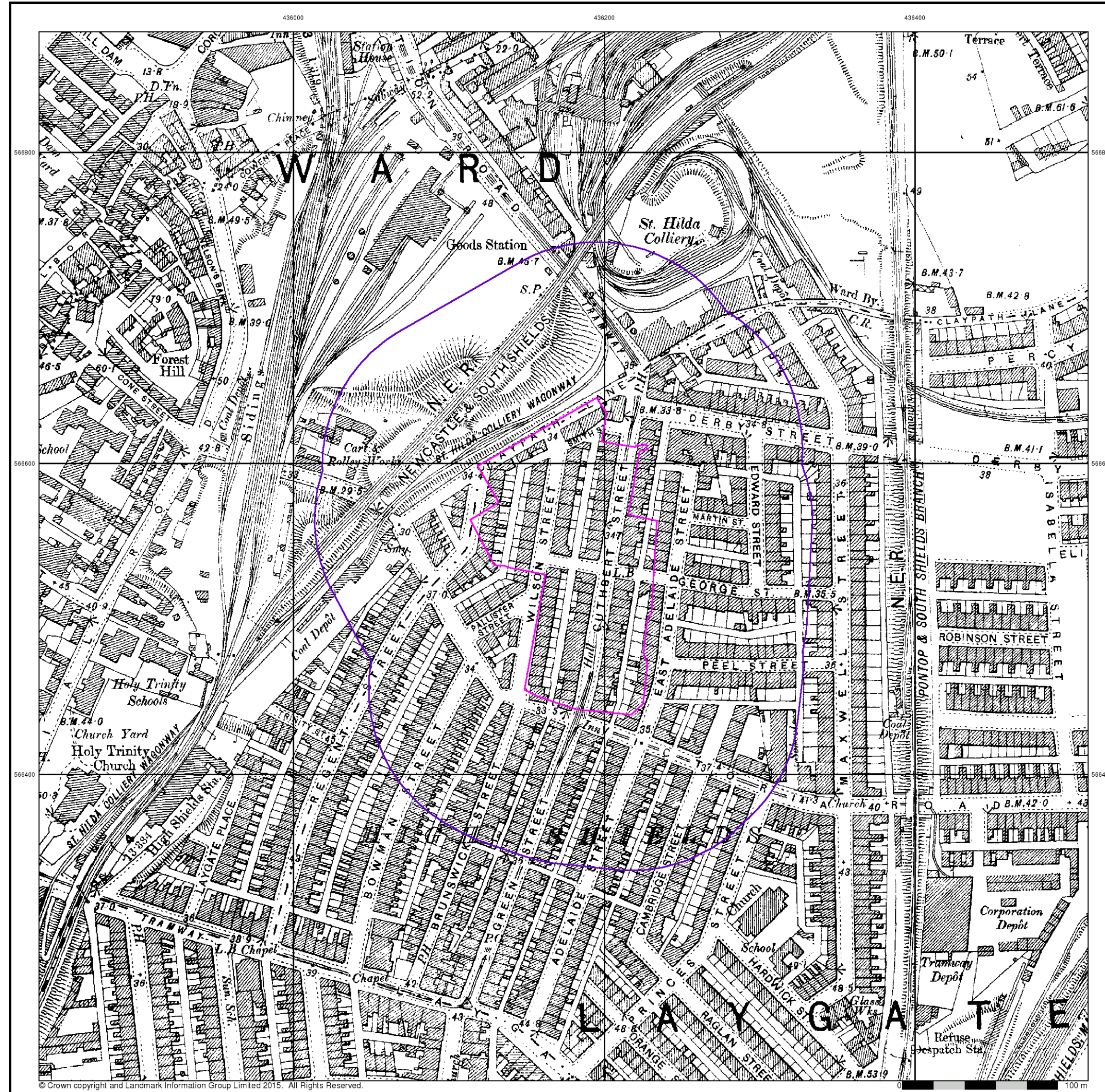
Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields





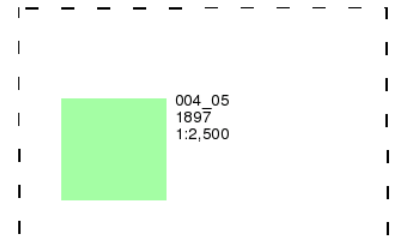
soiltechnics

environmental and geotechnical consultants

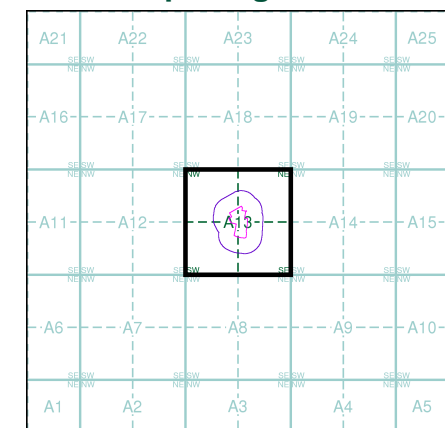
Durham
Published 1897
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details
 Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details
 TP South Shields

436000

436200

436400

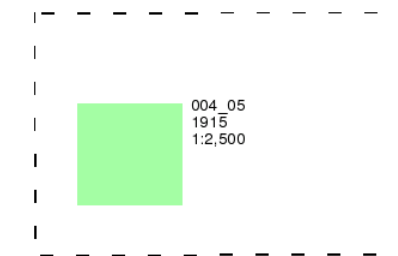
Durham

Published 1915

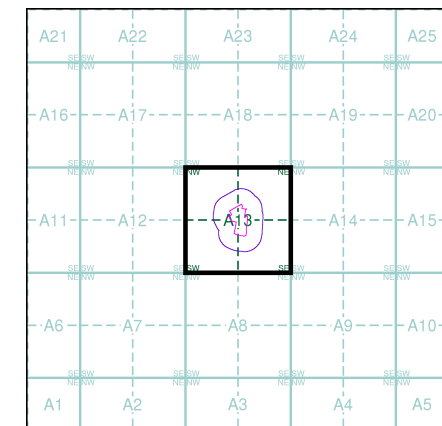
Source map scale - 1:2,500

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

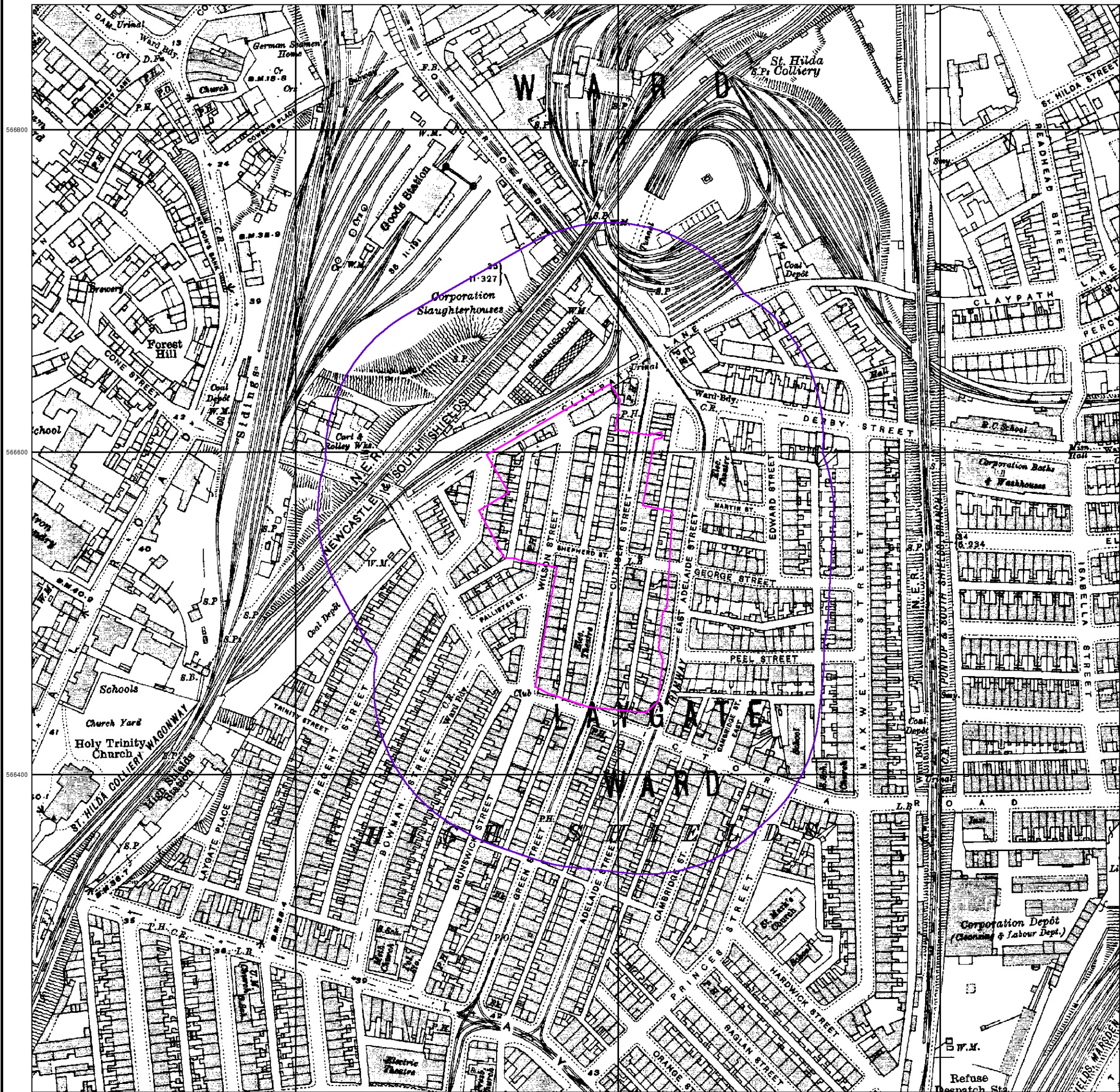
Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

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Ordnance Survey Plan

Published 1956

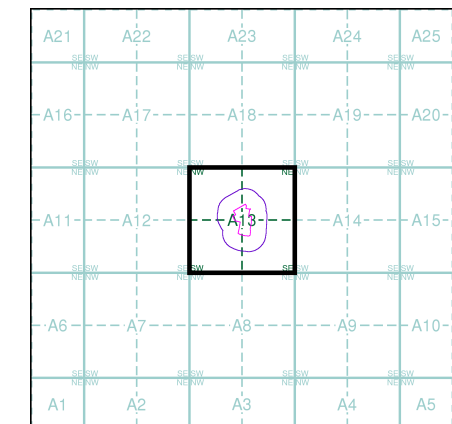
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

NZ3566NE 1956 1:1,250	NZ3666NW 1956 1:1,250	NZ3666NE 1956 1:1,250
NZ3566SE 1956 1:1,250	NZ3666SW 1956 1:1,250	NZ3666SE 1956 1:1,250

Historical Map - Segment A13



Order Details

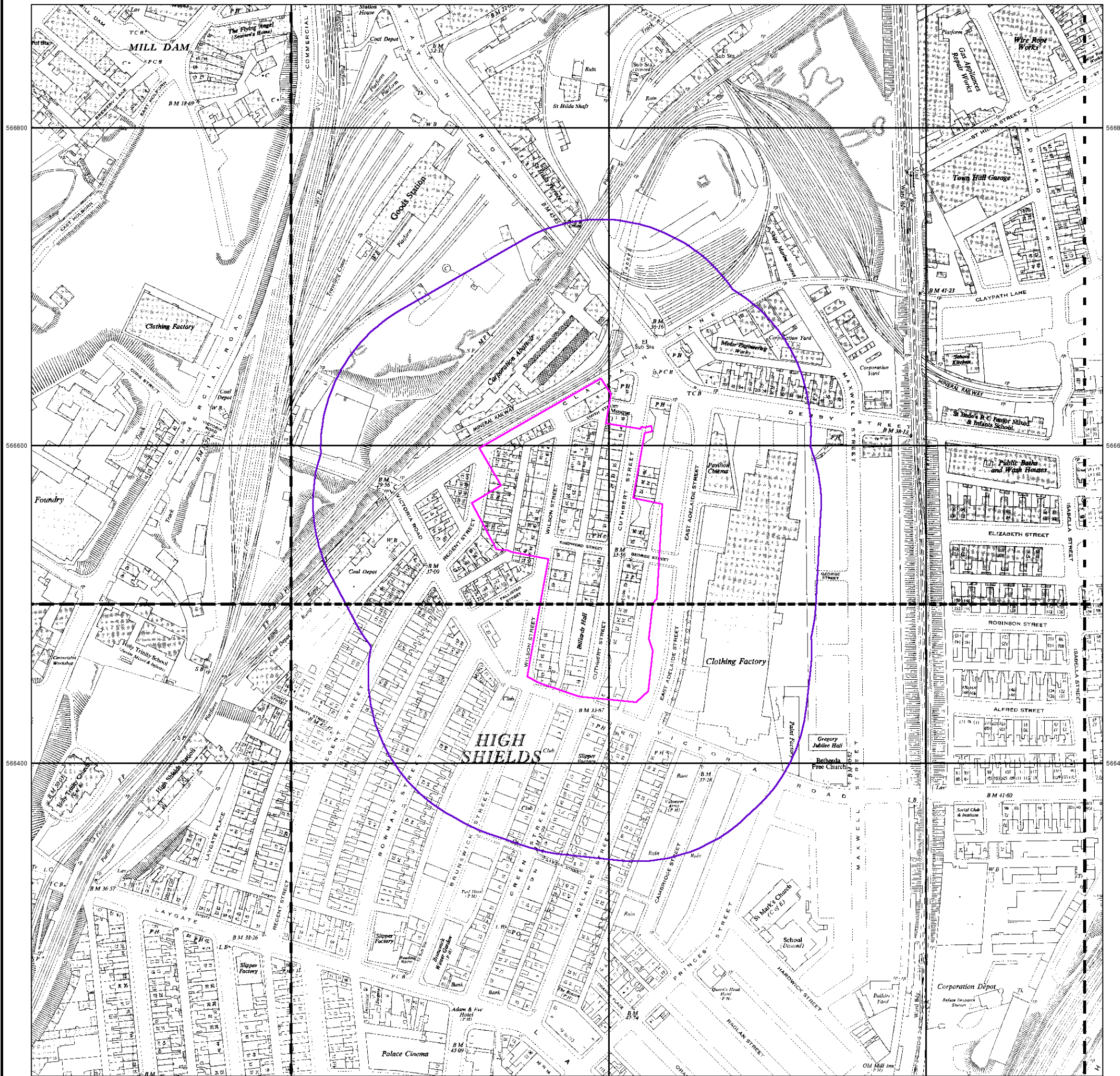
Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

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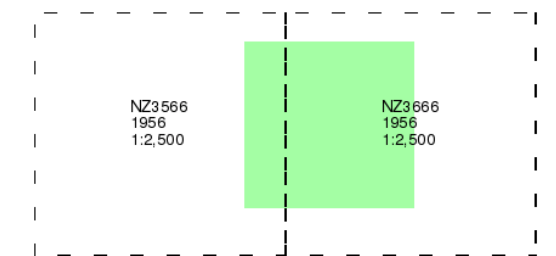
Ordnance Survey Plan

Published 1956

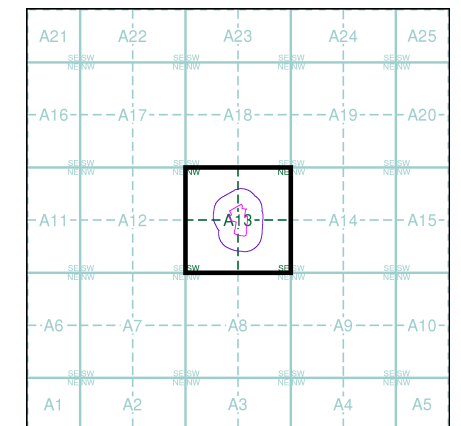
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

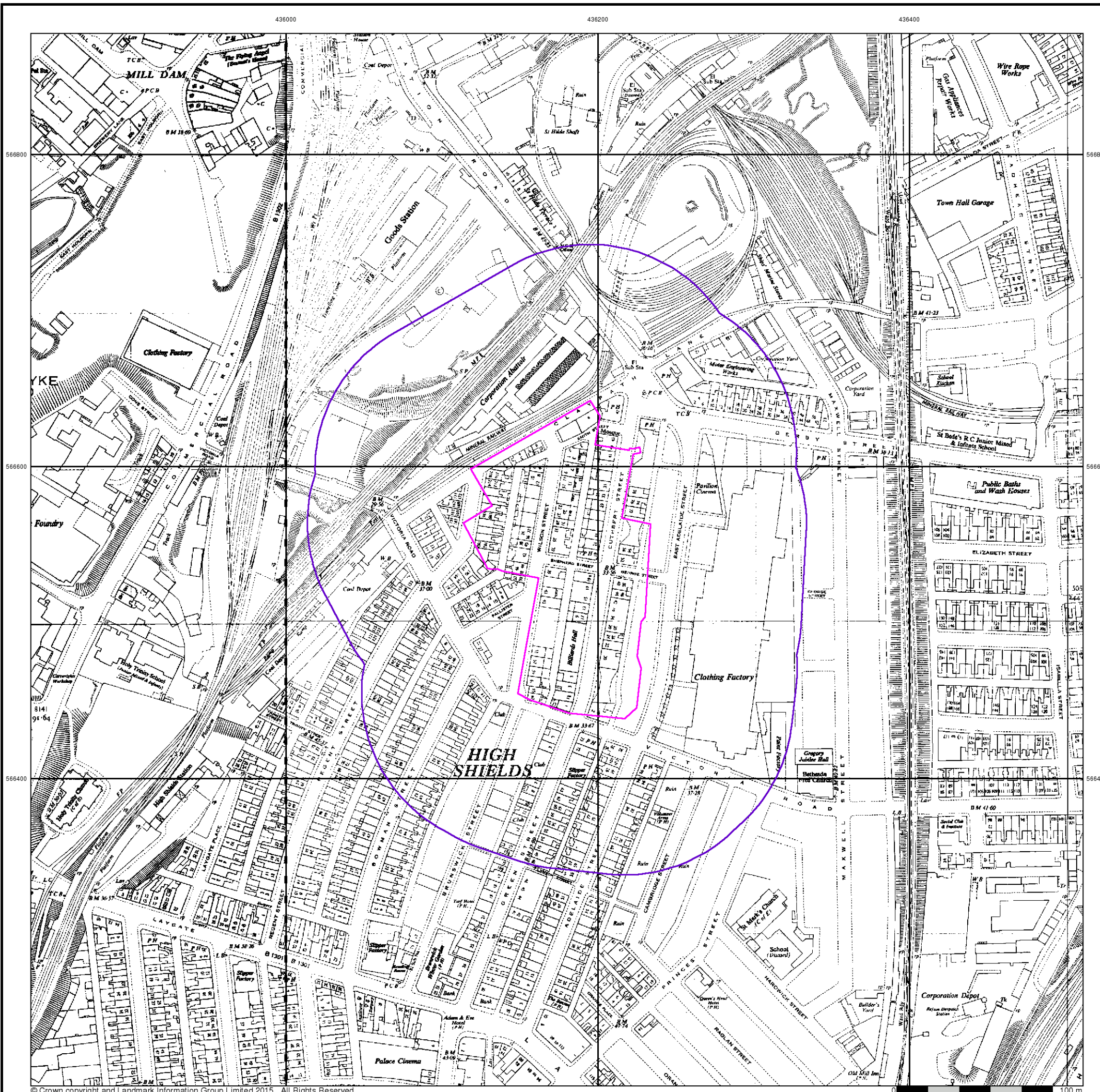


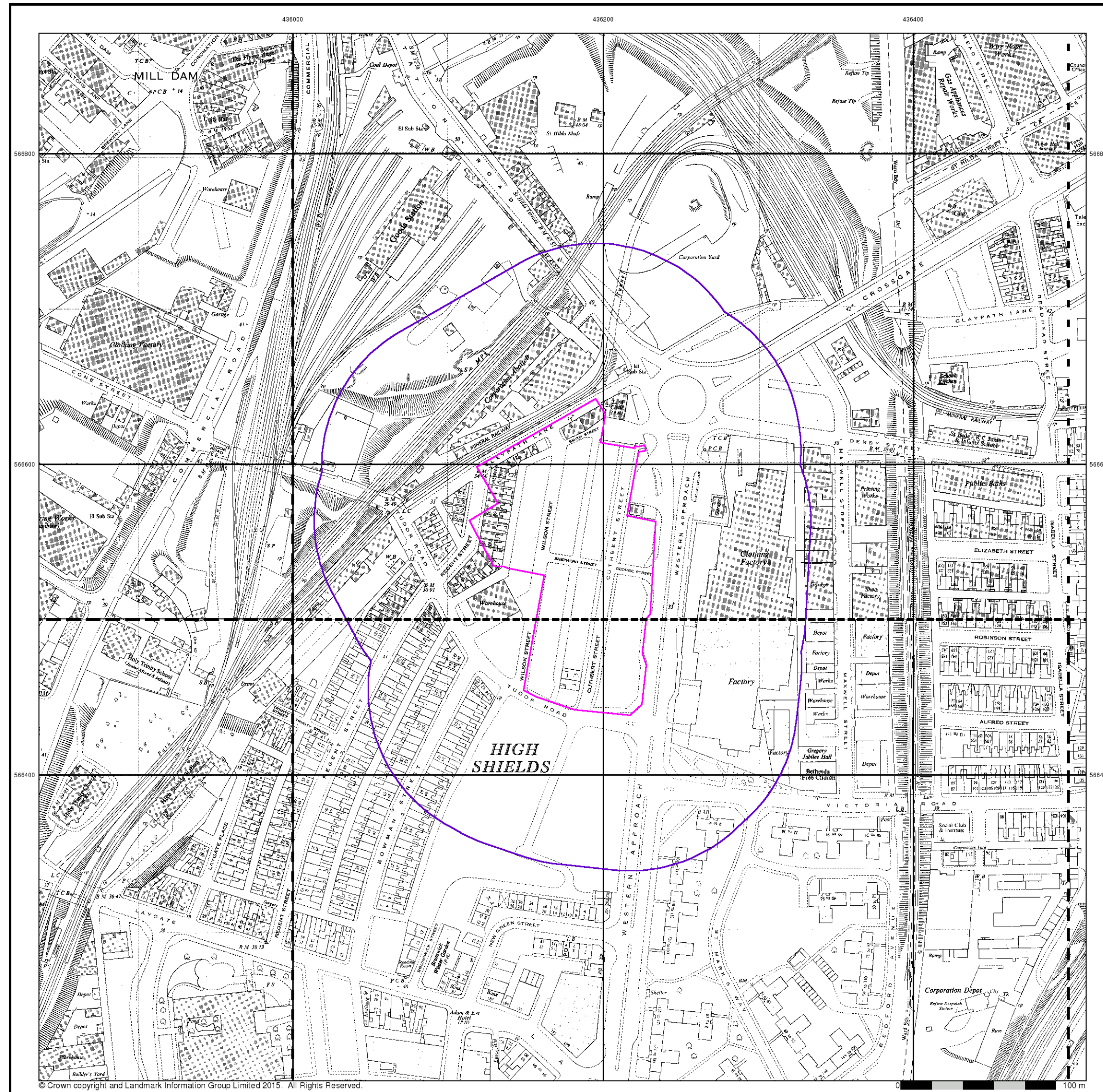
Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields





Ordnance Survey Plan

Published 1963 - 1975

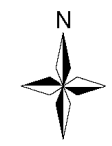
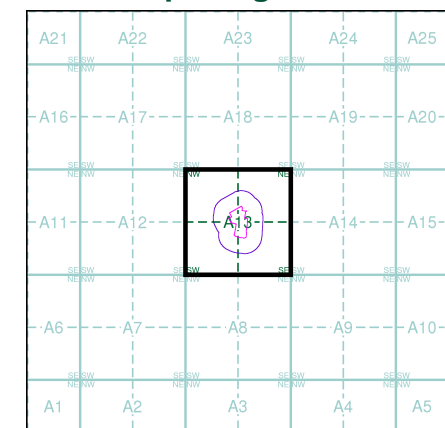
Source map scale - 1:1,250

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)

NZ3566NE 1968 1:1,250	NZ3666NW 1967 1:1,250	NZ3666NE 1975 1:1,250
NZ3566SE 1968 1:1,250	NZ3666SW 1963 1:1,250	NZ3666SE 1975 1:1,250

Historical Map - Segment A13



Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields

436000

436200

436400

Ordnance Survey Plan

Published 1968 - 1989

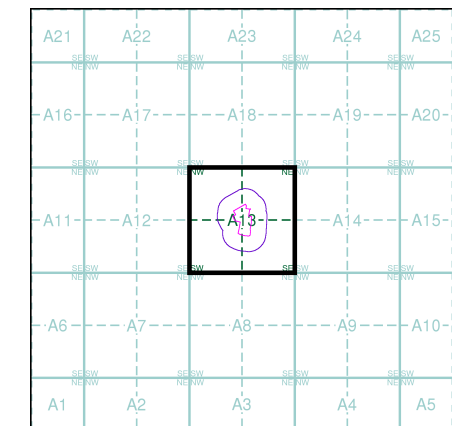
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

	NZ3666NW 1975 1:1,250	
NZ3566SE 1989 1:1,250	NZ3666SW 1968 1:1,250	NZ3666SE 1983 1:1,250

Historical Map - Segment A13

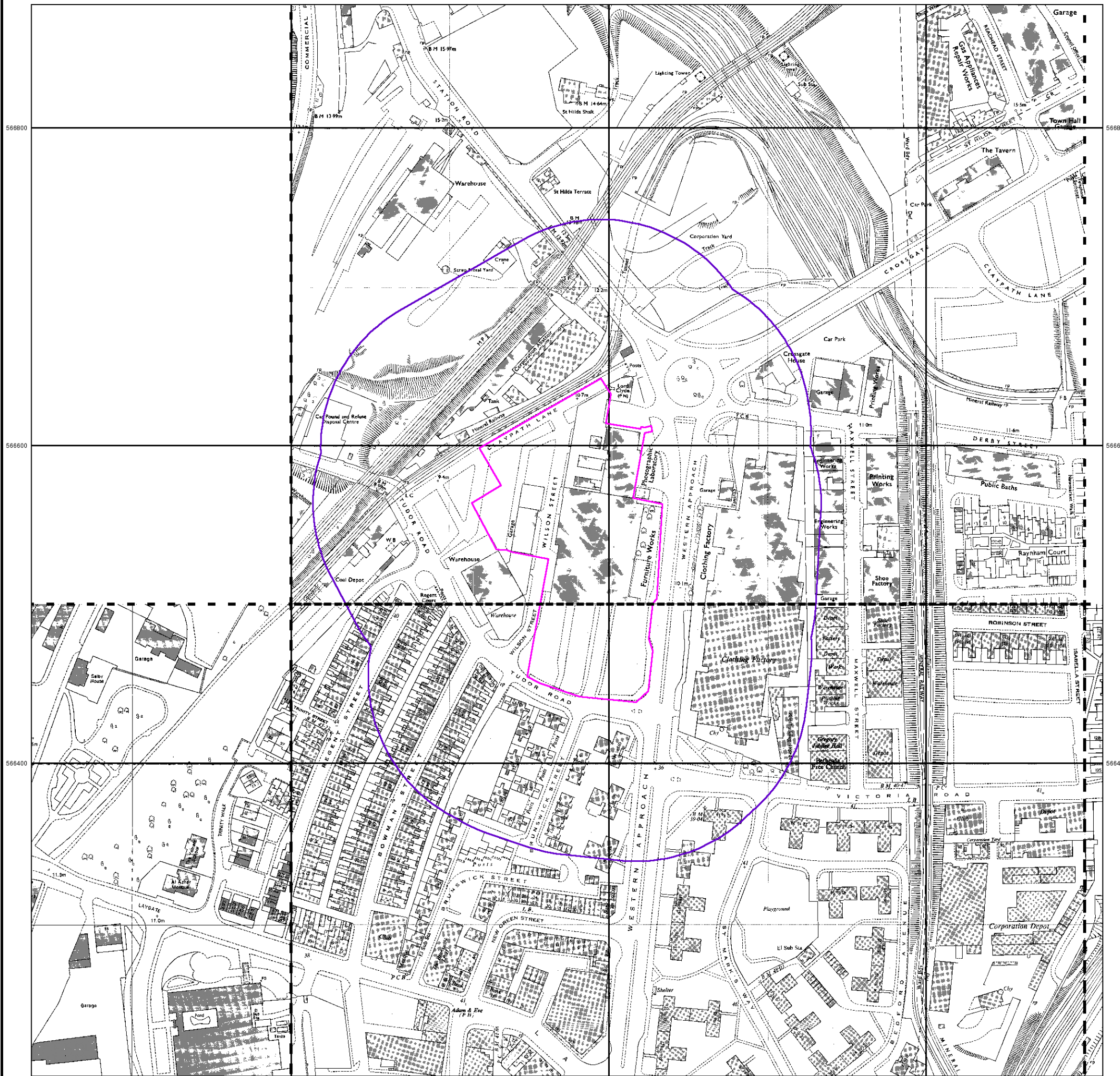


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields



436000

436200

436400

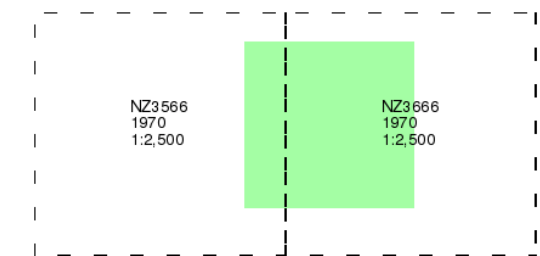
Ordnance Survey Plan

Published 1970

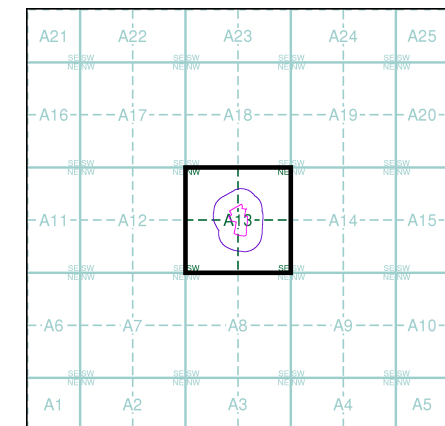
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

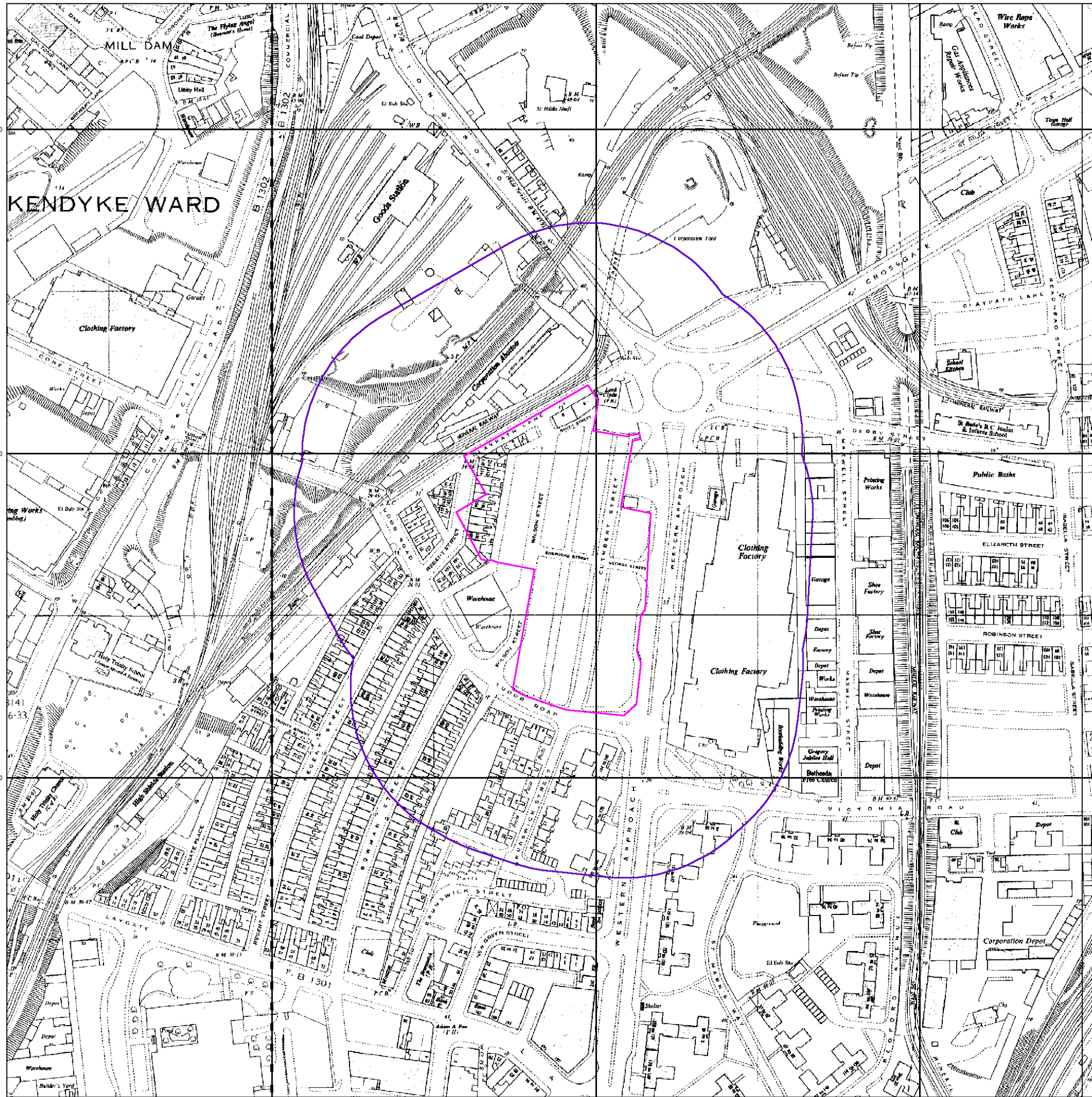


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields



Supply of Unpublished Survey Information

Published 1974 - 1975

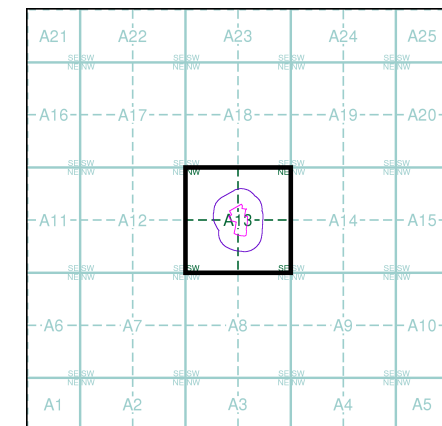
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

NZ3566NE 1975 1:1,250	NZ3666NW 1974 1:1,250	NZ3666NE 1974 1:1,250
NZ3566SE 1974 1:1,250	NZ3666SW 1974 1:1,250	NZ3666SE 1974 1:1,250

Historical Map - Segment A13

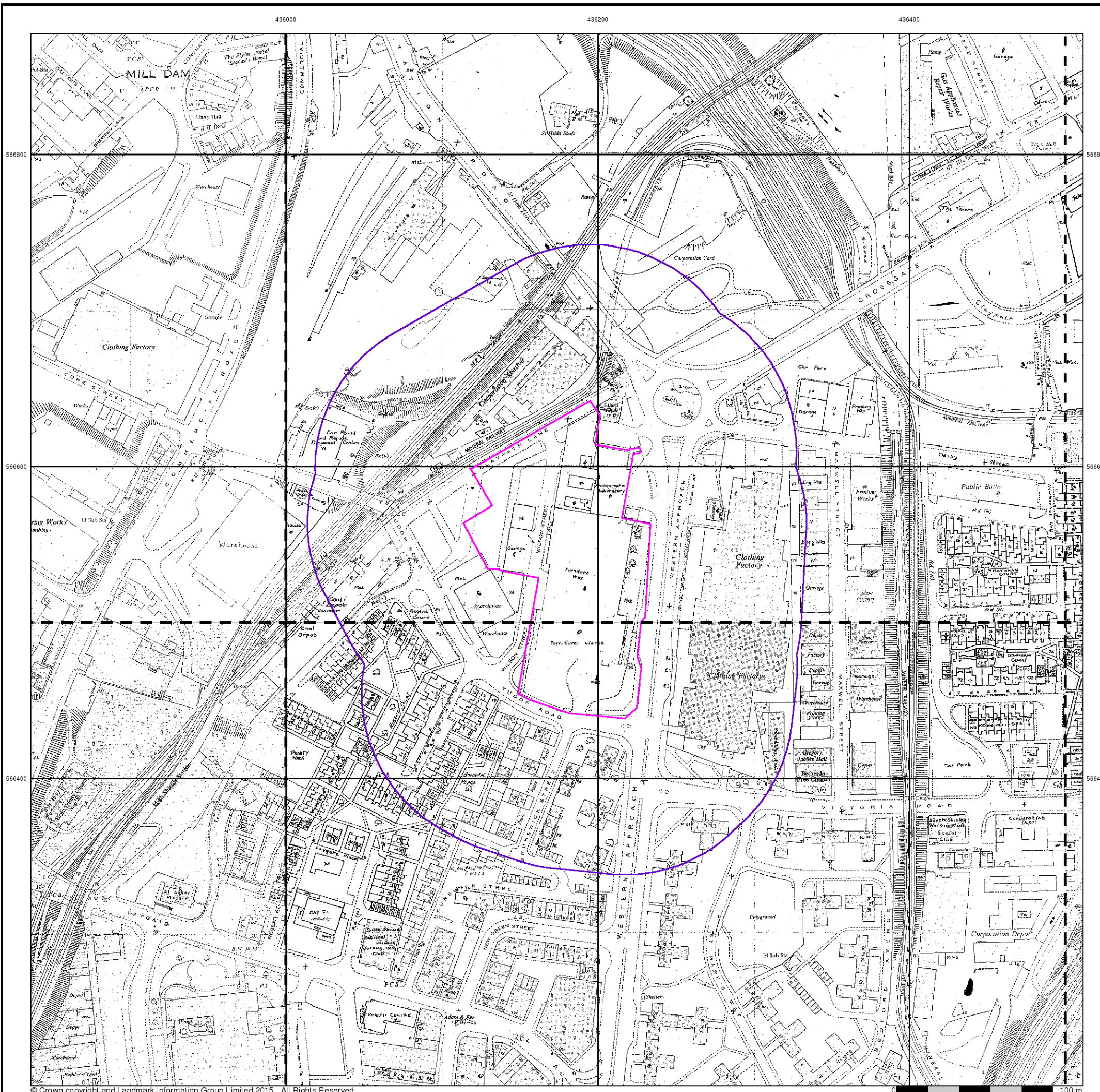


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields



Ordnance Survey Plan

Published 1975 - 1989

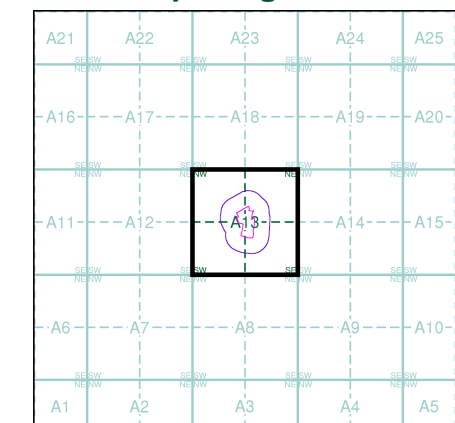
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

NZ3666NW
1989
1:1,250
NZ3666SW
1975
1:1,250

Historical Map - Segment A13

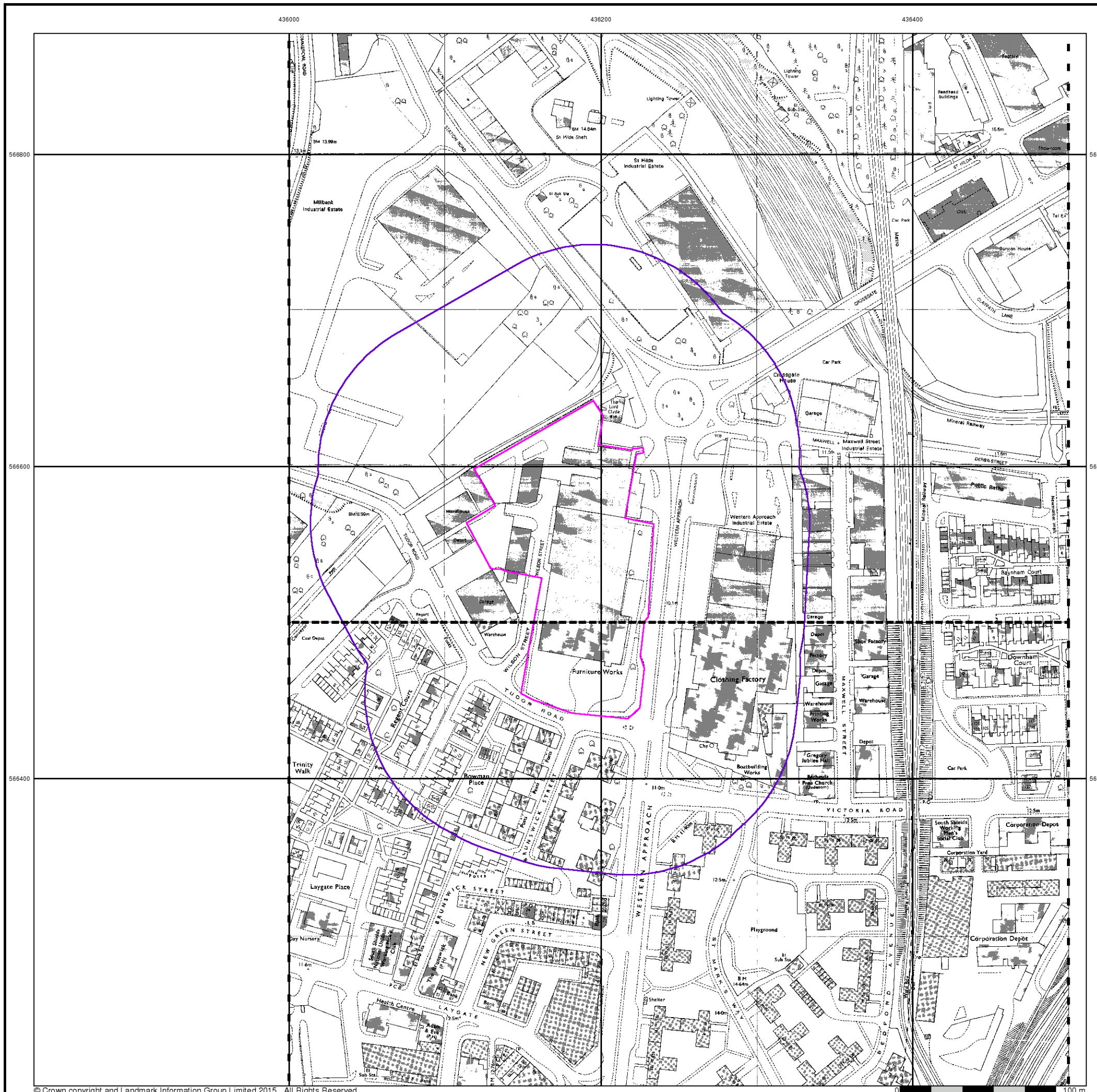


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields



Additional SIMs

Published 1980 - 1989

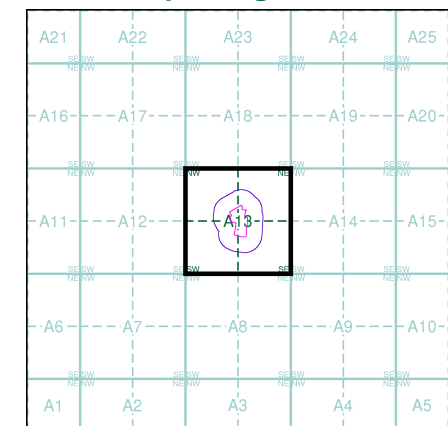
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

NZ3566NE 1989 1:1,250		NZ3666NE 1982 1:1,250
NZ3566SE 1982 1:1,250		NZ3666SW 1986 1:1,250
		NZ3666SE 1980 1:1,250

Historical Map - Segment A13

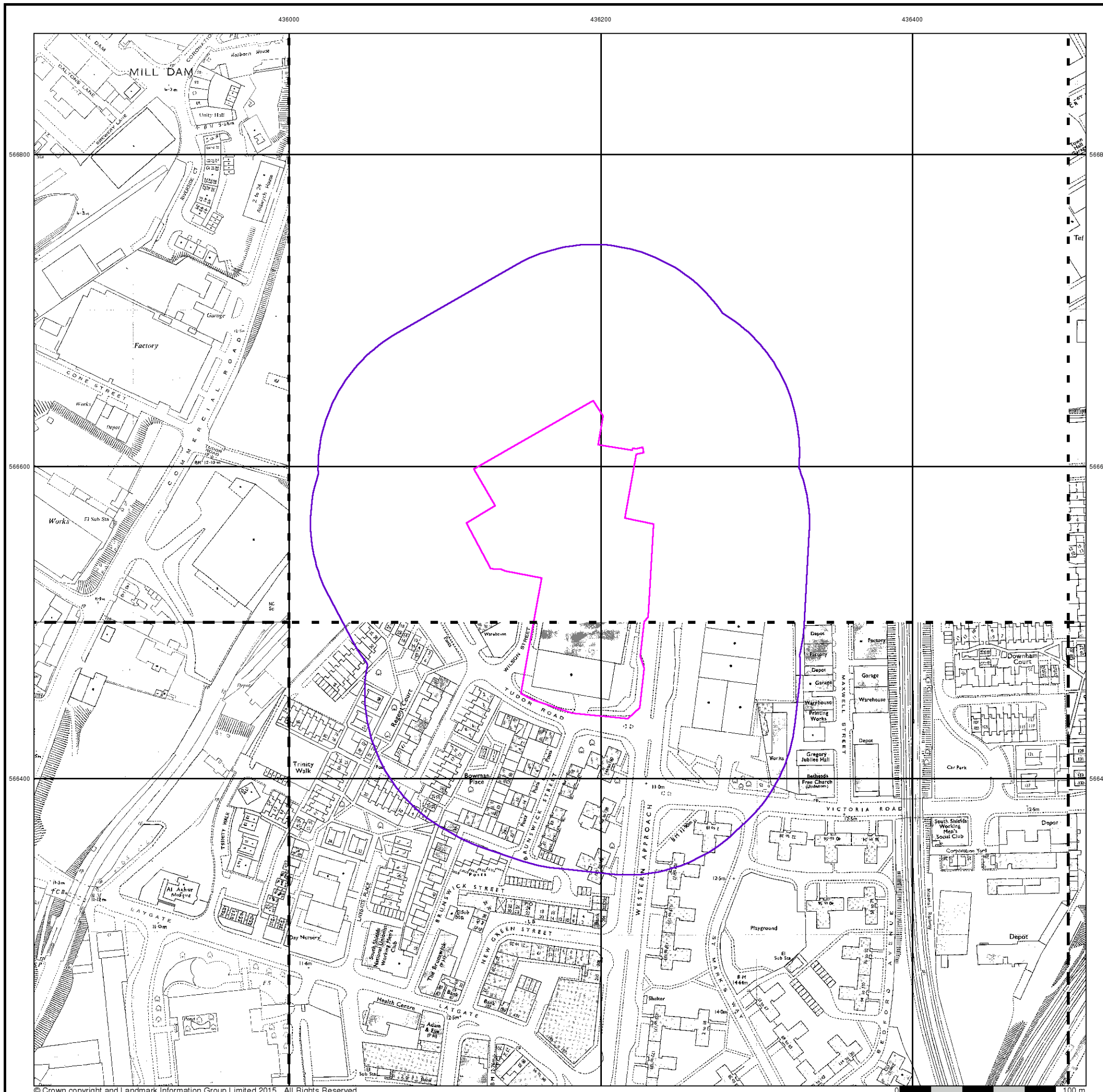


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields



436000

436200

436400

Additional SIMs

Published 1989 - 1991

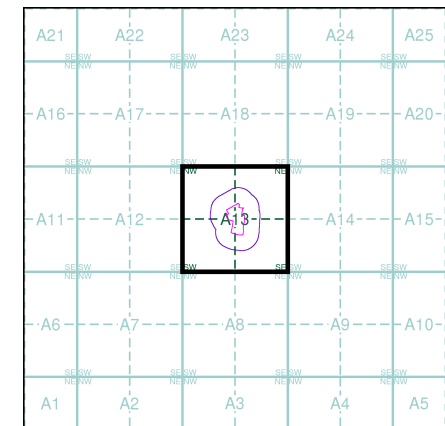
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

NZ3666NE	NZ3666NE
1991	1991
1:1,250	1:1,250
NZ3666SW	NZ3666SE
1989	1991
1:1,250	1:1,250

Historical Map - Segment A13



Order Details

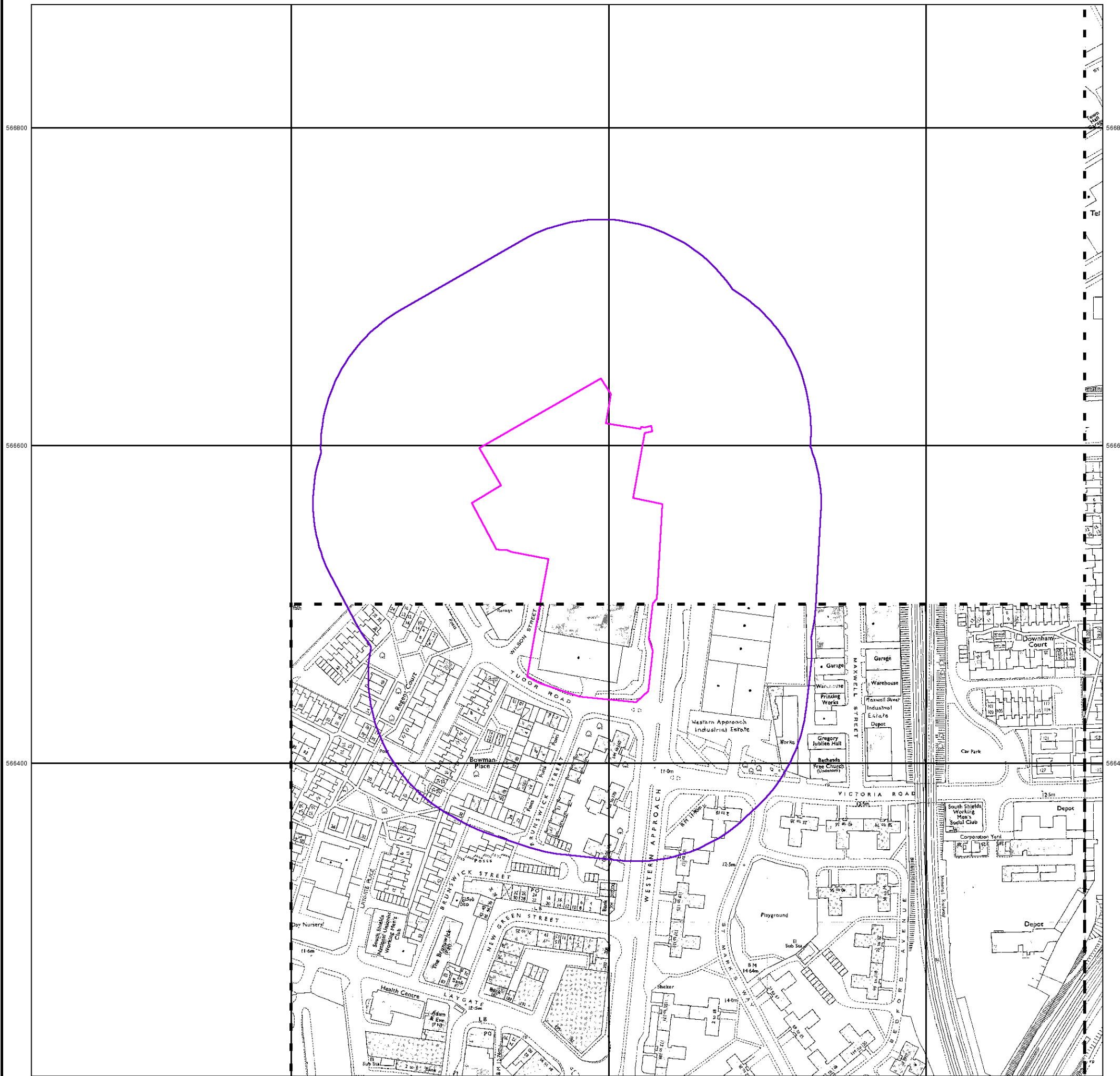
Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

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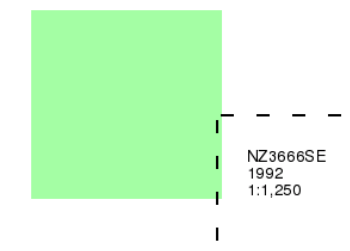
Additional SIMs

Published 1992

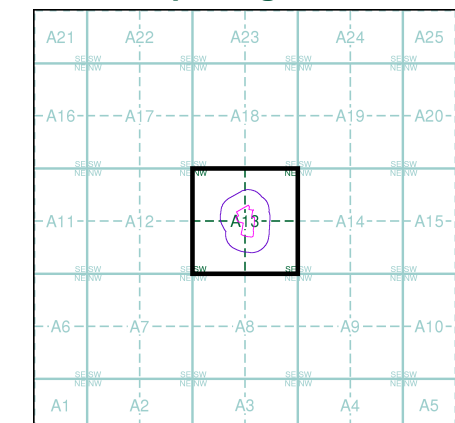
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13

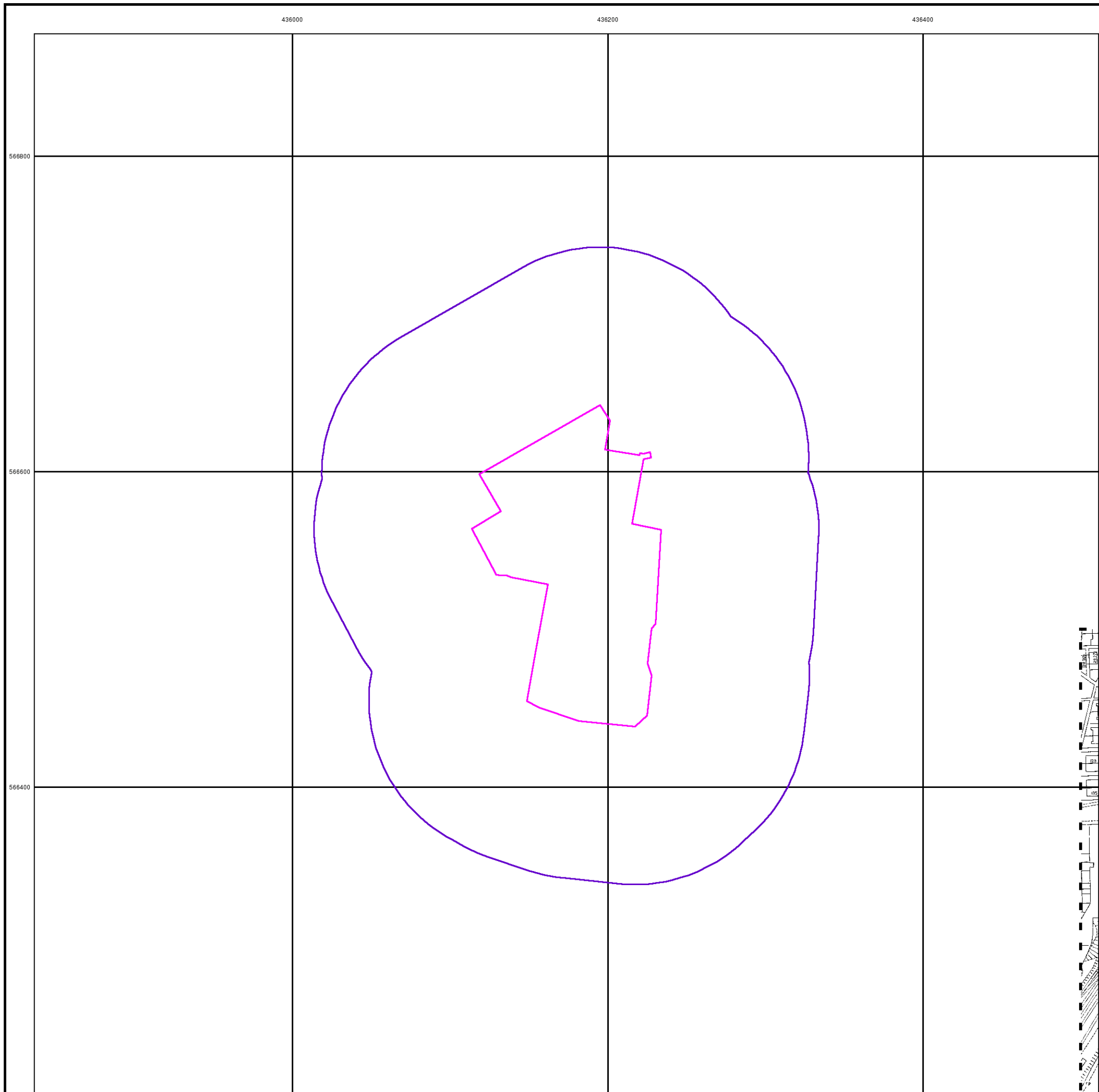


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields



Large-Scale National Grid Data

Published 1993

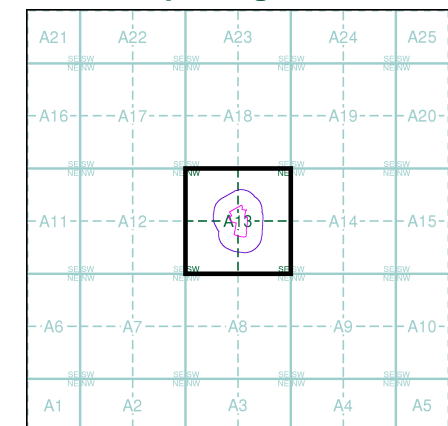
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

NZ3566NE 1993 1:1,250	NZ3666NW 1993 1:1,250	NZ3666NE 1993 1:1,250
NZ3566SE 1993 1:1,250	NZ3666SW 1993 1:1,250	NZ3666SE 1993 1:1,250

Historical Map - Segment A13

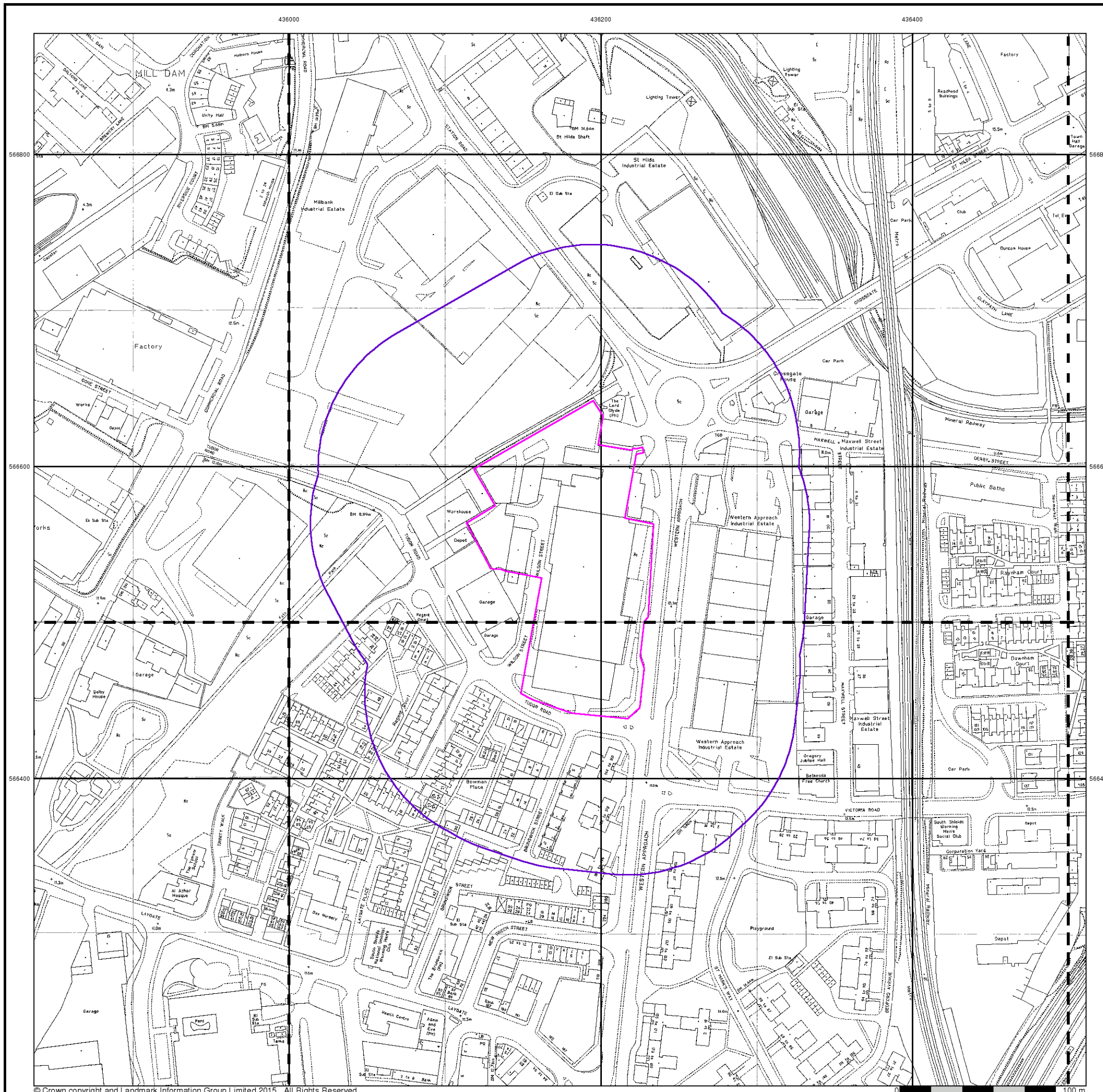


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields



Large-Scale National Grid Data

Published 1994 - 1995

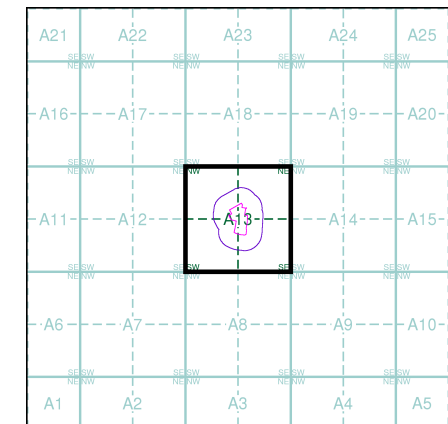
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

NZ3566NE 1994 1:1,250	NZ3666NW 1995 1:1,250
NZ3666SW 1994 1:1,250	

Historical Map - Segment A13

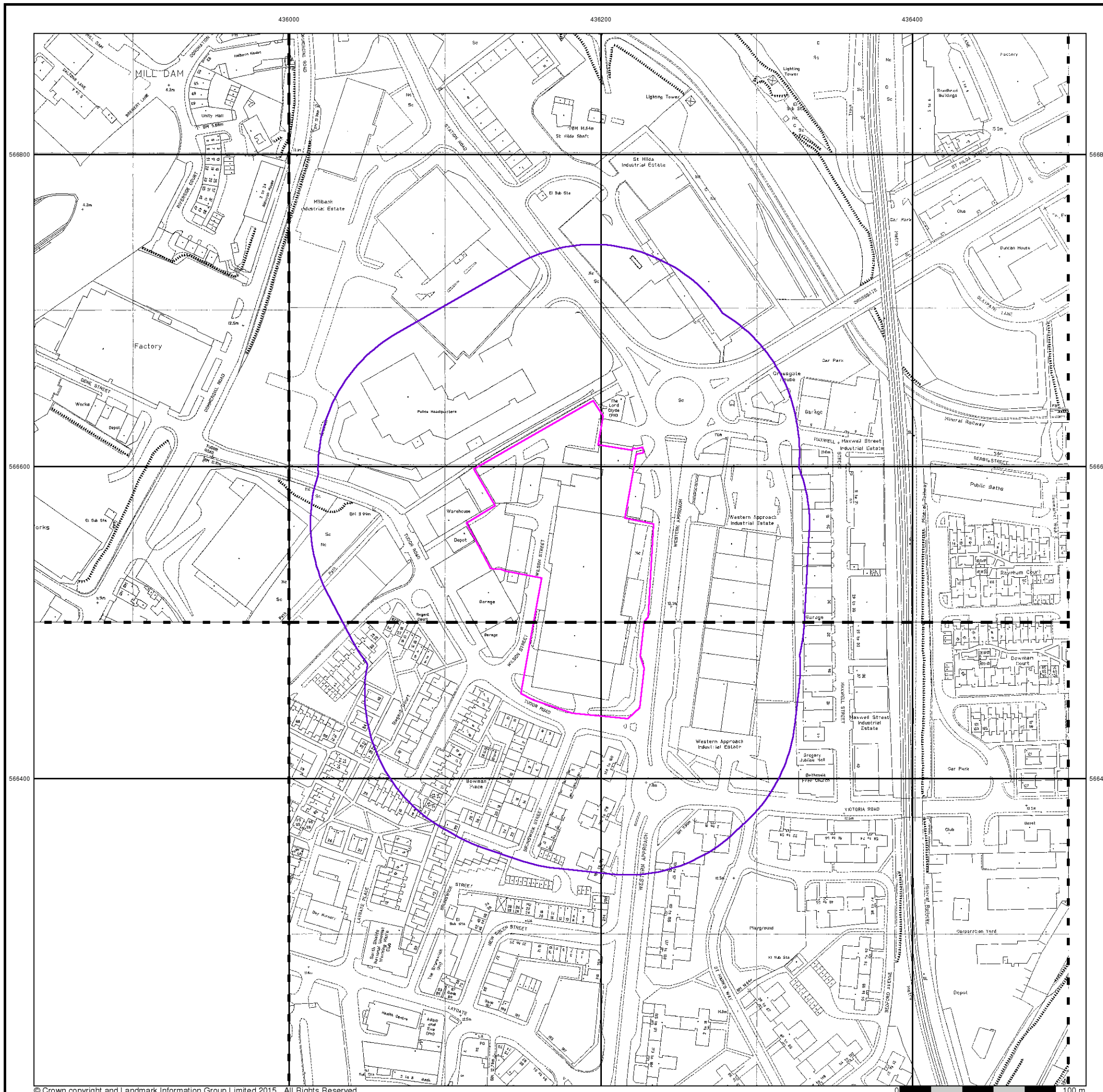


Order Details

Order Number: 64108305_1_1
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 National Grid Reference: 436180, 566540
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 Site Area (Ha): 1.55
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Site Details

TP South Shields



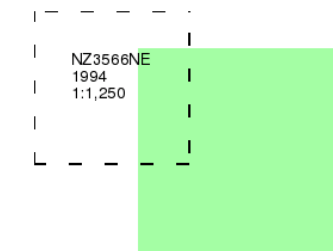
Large-Scale National Grid Data

Published 1994

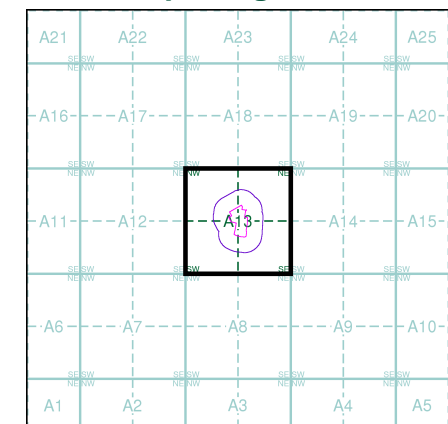
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13

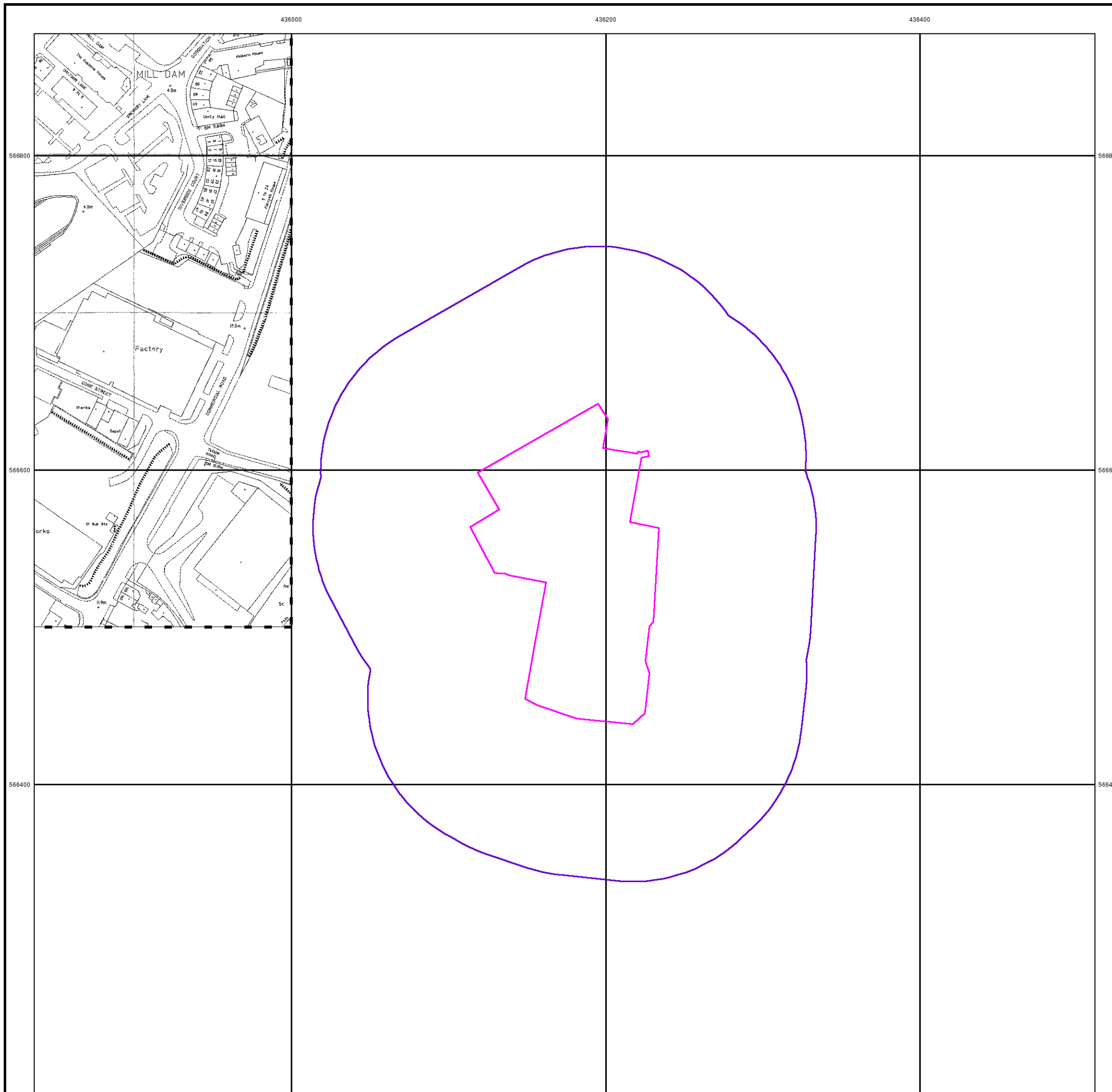


Order Details

Order Number: 64108305_1_1
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 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 100

Site Details

TP South Shields



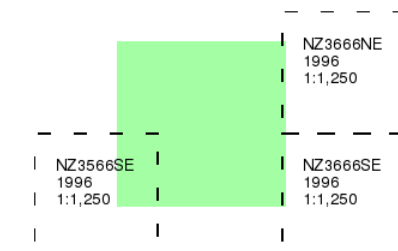
Large-Scale National Grid Data

Published 1996

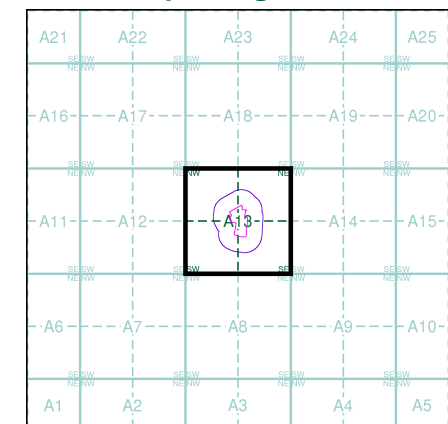
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13

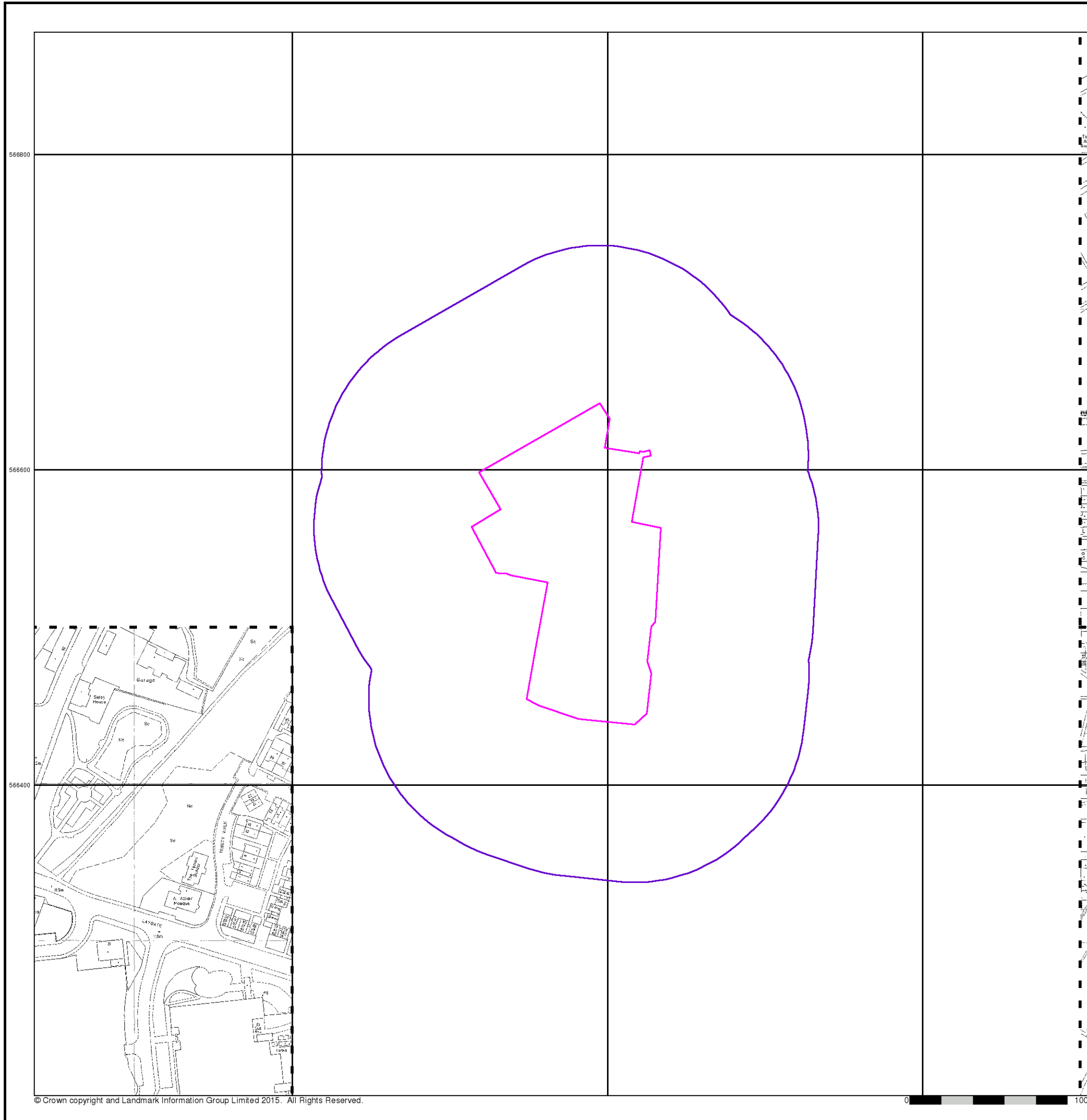


Order Details

Order Number: 64108305_1_1
Customer Ref: STM3043D
National Grid Reference: 436180, 566540
Slice: A
Site Area (Ha): 1.55
Search Buffer (m): 100

Site Details

TP South Shields



Northumberland

Published 1857 - 1858

Source map scale - 1:528

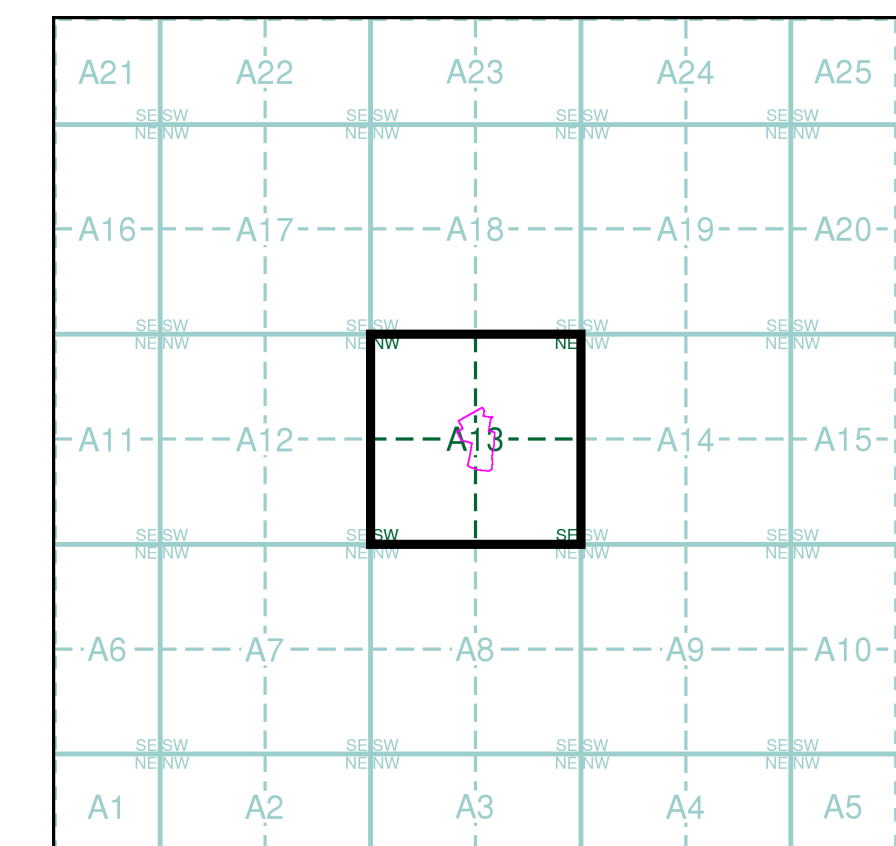
The 1:528 scale Ordnance Survey mapping was adopted in 1850 as an alternative to the 1:1056 scale, that had been deemed to be inadequate for sanitary planning, which had come very much to the fore following the passing of the Public Health Act of 1948. Around 29 towns in England and Wales were surveyed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

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

Map Name(s) and Date(s)

000_00_038	000_00_039	000_00_040
1858	1857	1857
1:528	1:528	1:528
000_00_042	000_00_043	
1857	1857	
1:528	1:528	
000_00_045	000_00_046	
1857	1857	
1:528	1:528	

Historical Town Plan - Segment A13

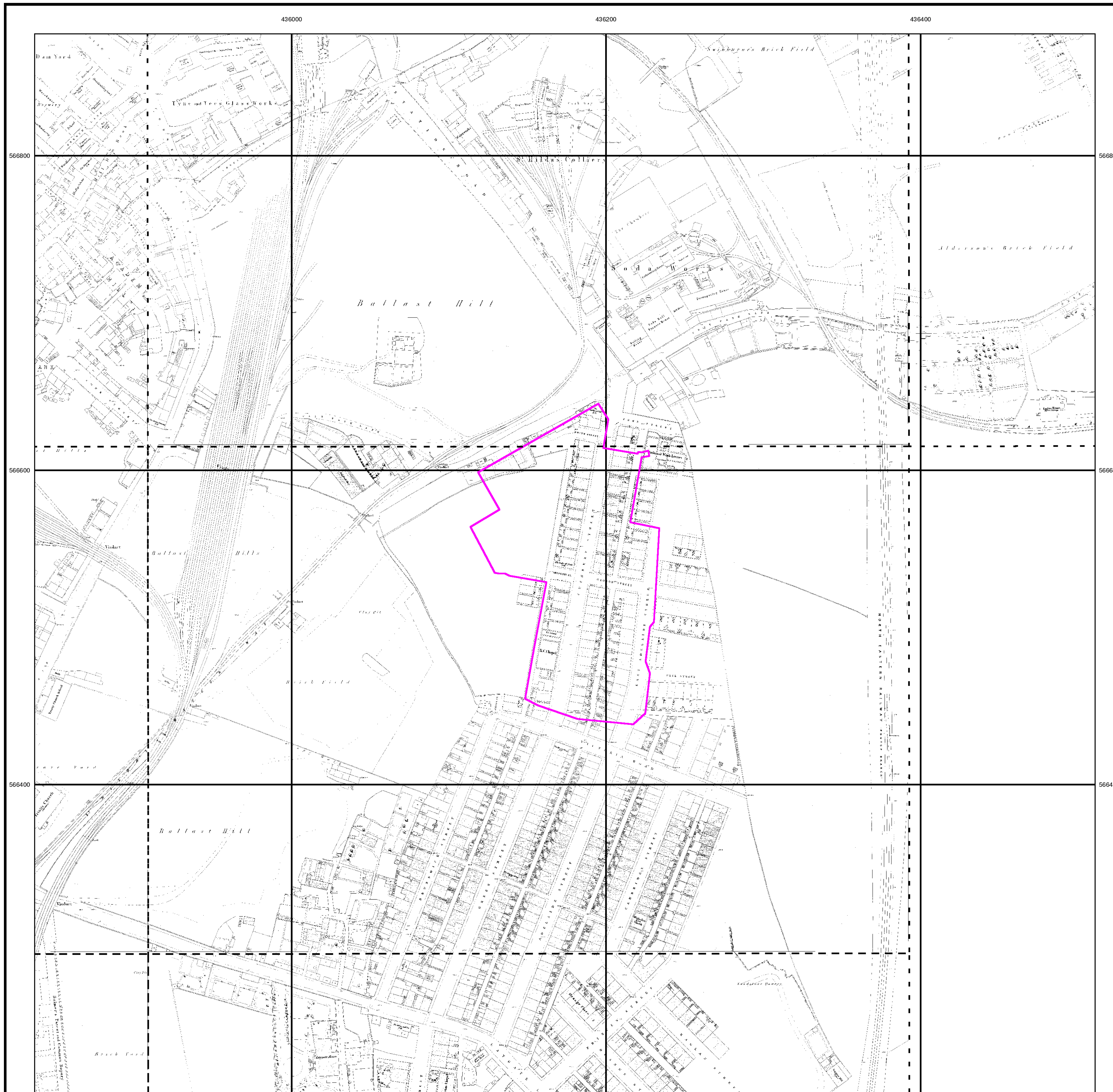


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 0

Site Details

TP South Shields



Northumberland

Published 1896

Source map scale - 1:500

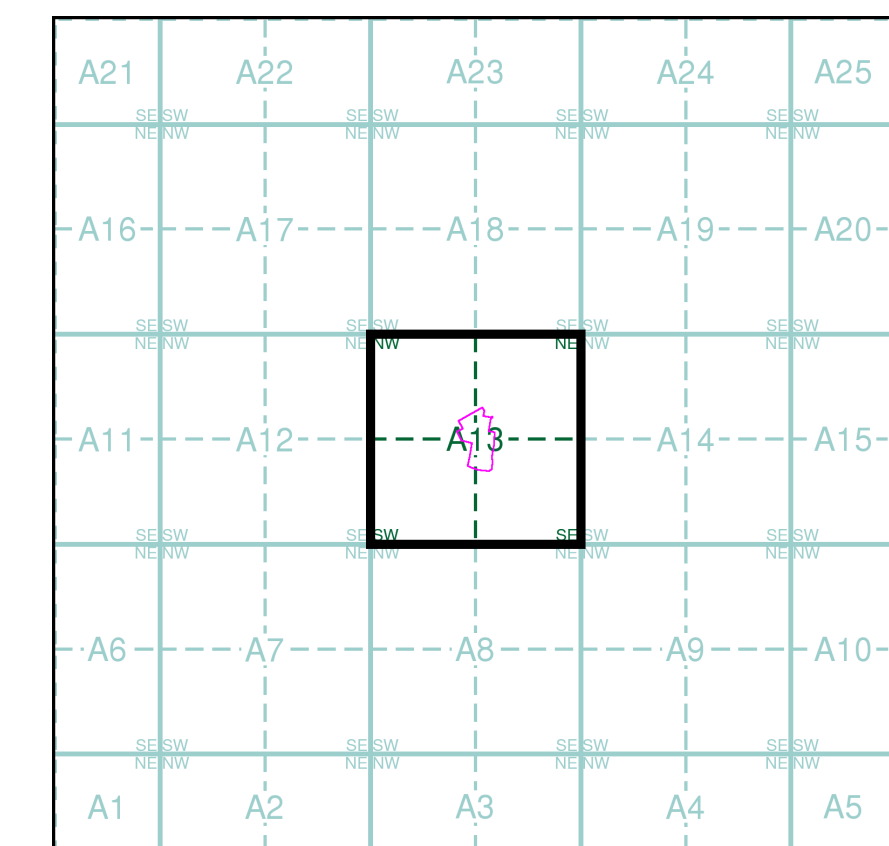
The 1:500 scale Ordnance Survey mapping was introduced in 1855 as a replacement for the 1:528 scale and to compliment the 1:2500 scale that had been implemented in 1853. By 1895, the 1:500 scale covered most towns over a population of about 4000 at the time of survey, although very few towns were mapped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

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

Map Name(s) and Date(s)

000_00_044	000_00_045	000_00_046
1896	1896	1896
1:500	1:500	1:500
000_00_048	000_00_049	000_00_050
1896	1896	1896
1:500	1:500	1:500
000_00_052	000_00_053	000_00_054
1896	1896	1896
1:500	1:500	1:500

Historical Town Plan - Segment A13

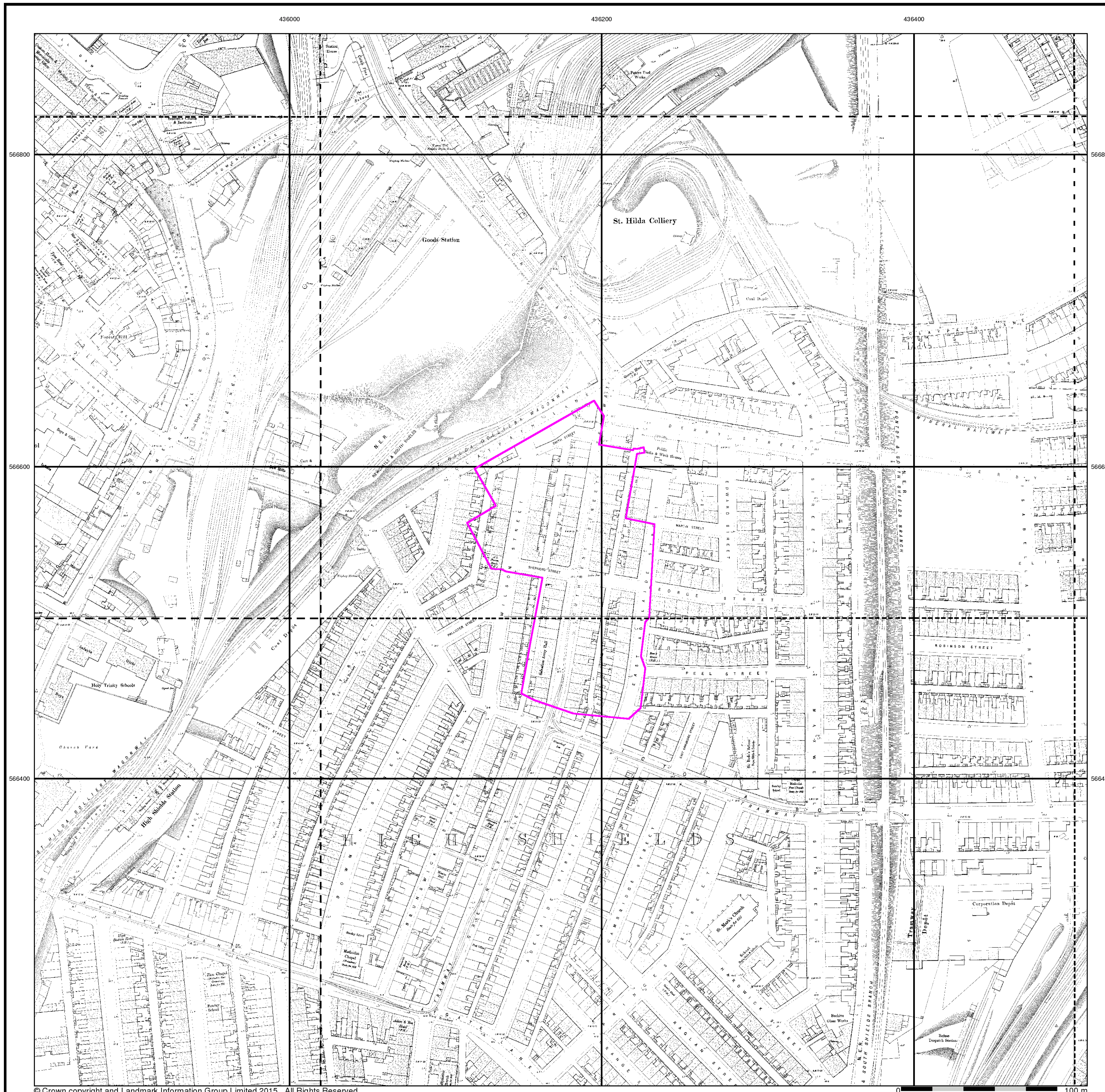


Order Details

Order Number: 64108305_1_1
 Customer Ref: STM3043D
 National Grid Reference: 436180, 566540
 Slice: A
 Site Area (Ha): 1.55
 Search Buffer (m): 0

Site Details

TP South Shields





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

**SEVERN TRENT SEARCHES
PO BOX 6187 NOTTINGHAM
NOTTINGHAMSHIRE
NG5 1LE**

Our reference: **51000742795001**
Your reference: **50332997**
Date of your enquiry: **06 January 2015**
Date we received your enquiry: **06 January 2015**
Date of issue: **06 January 2015**

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

Non-Residential Coal Authority Mining Report

WESTERN APPROACH, SOUTH SHIELDS, TYNE & WEAR, NE33 5QZ

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 6 seams of coal at 160m to 340m depth, and last worked in 1955.

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

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

Location map



Approximate position of property

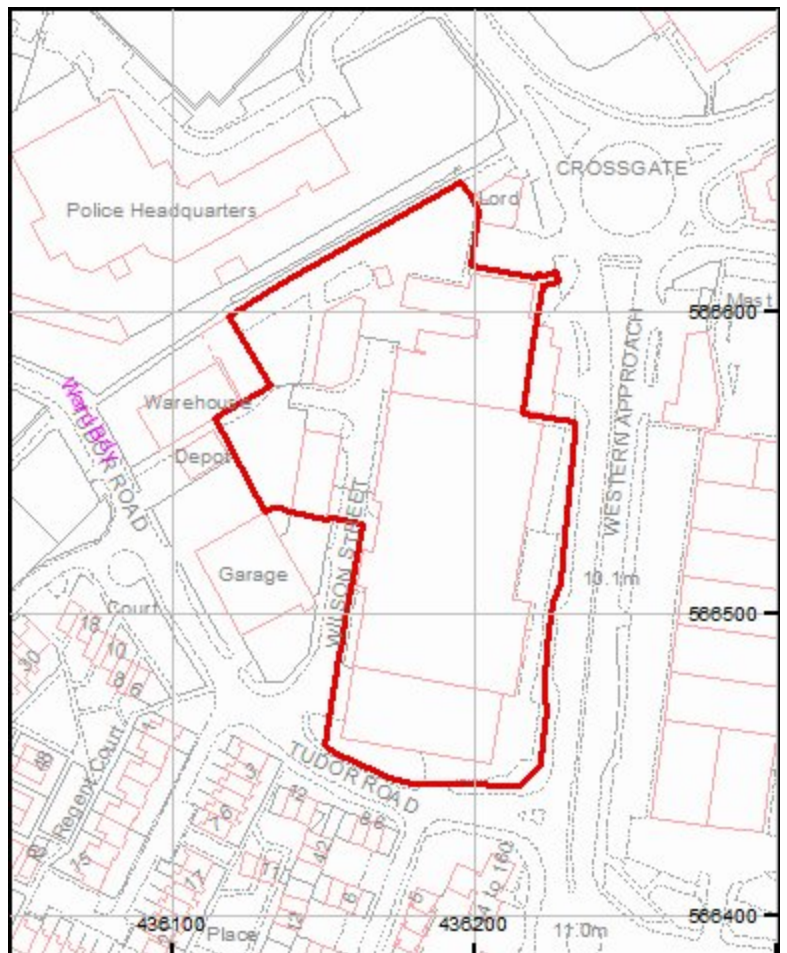


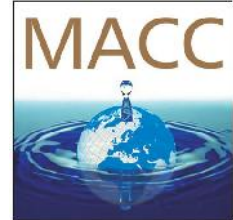
Enquiry boundary

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Key

Approximate position of enquiry boundary shown





MACC International Ltd, Camilla Court, Nacton, Ipswich, Suffolk, IP10 0EU, UK

Ms Rachel Brown
Administrator
Soiltechnics Ltd

Your Reference:

Our Reference: JM/3536/31

Email 1st Instance: Rachel.Brown@soiltechnics.net

Date: 17th February 2015

Unexploded Ordnance Preliminary Risk Review
South Shields Wilson Street NE33 5QZ

MACC International Ltd (MACC) has conducted a preliminary risk review for the site footprint. The review has drawn on open source and in-house information, references have been provided where available. (See Annex A)

The review has been conducted to provide Soiltechnics Geotechnical Engineers with a review of the risk which may be posed by UXO while conducting investigations on the site.

This document has been produced in the United Kingdom by MACC International Limited and has been provided solely as an aid in decision making. It is not intended to be used by any person for any purpose other than that specified. Any liability arising out of use by a third party of this document for purposes not wholly connected with the above shall be the responsibility of that party, who shall indemnify MACC International Limited against all claims, costs, damages and losses arising out of such use.

Records did show bomb strikes in the vicinity with indications that two HW HE bombs strikes within the site footprint.

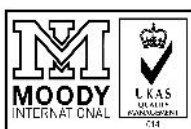
Whilst considering the nature of the work to be undertaken, the following conclusions have been reached:

- It is considered that there is a credible (Medium) UXO risk on this site.
- It is considered prudent to recommend that all site personnel should be provided with a UXO safety awareness talk and that all intrusive works are carried out under specialist UXO safety supervision.

I trust this document has provided you with sufficient information to meet your immediate needs, should you require anything further, please contact me directly.

Yours Sincerely

John Morrison
Operations Manager

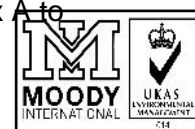


ISO 9001:2008

Tel: +44 (0)1473 655127 Fax: +44 (0)1473 655098
E-mail: info@macc-eod.com Web: www.macc-eod.com

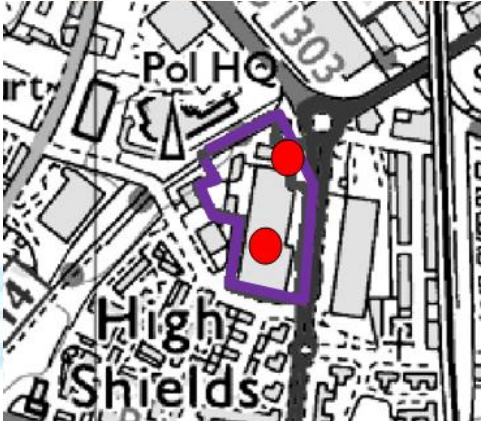

Registered in England: No. 3014471

Annex A to



ISO 14001:2004

Unexploded Ordnance Preliminary Risk Review

<p>Site location</p>	<p>Wilson Street South Shields NE33 5QZ</p>
<p>Scope of Intended works</p>	<p>Preliminary review of the risk that may be posed by UXO to geotechnical investigations.</p>
<p>History</p>	<p>Military Activity:</p> <ul style="list-style-type: none"> • Non recorded • Fixed HAA and Mobile AA Gun Batteries were positioned to defend the City and surrounding area.
<p>Wartime History</p>	<p>Annotated Site Map (Showing recorded HE bomb strikes)</p>  <p>Bomb Strikes Record HO193/63</p> 
<p>Unexploded Ordnance (UXO) Finds</p>	<p>No Records were found to indicate that items of UXO have been found or recovered from the site.</p>
<p>Post War Development</p>	<p>The surrounding area has undergone extensive redevelopment since 1945.</p>

Record of in-situ gas and water level monitoring results

Date/Time	Location	Atmospheric pressure (mB)	Temperature (°C)	Methane, CH ₄ (%v/v) Chg		Carbon Dioxide, CO ₂ (%v/v) Chg		Oxygen, O ₂ (%v/v)		Balance (%v/v)	Lower Explosive Limit (% LEL)	Gas Flow (q) (l/Hr)	Peak hazardous gas flow rate Qhgs		Steady hazardous gas flow rate Qhgs		NHBC Guideline (Peak)	NHBC Guideline (Steady)	Characteristic gas situation	Potentially Explosive	Water Level (m)
				Peak	Steady	Peak	Steady	Minimum	Average				CH ₄	CO ₂	CH ₄	CO ₂					
15/05/2015 12:45	DTS01	1018	14.0	0.1	0.1	1.0	1.0	19.2	19.2	79.7	2.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	3.01
15/05/2015 12:27	DTS02	1018	14.0	0.1	0.0	1.0	0.9	17.0	17.1	82.0	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	3.6
15/05/2015 12:08	DTS09	1018	14.0	0.0	0.0	3.0	3.0	14.9	14.9	82.1	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	2.15
18/05/2015 11:10	DTS01	996	10.0	0.0	0.0	0.5	0.5	19.4	19.4	80.1	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	3.06
18/05/2015 11:29	DTS02	996	10.0	0.0	0.0	1.1	1.1	17.0	17.0	81.9	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	3.63
18/05/2015 11:49	DTS09	995	10.0	0.0	0.0	3.1	2.9	16.5	17.9	79.2	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	2.51
03/06/2015 15:57	DTS01	1020	18.0	0.0	0.0	1.1	1.0	19.5	19.6	79.4	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	3.09
03/06/2015 15:39	DTS02	1019	18.0	0.0	0.0	0.9	0.9	17.7	17.7	81.4	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	3.62
03/06/2015 15:12	DTS09	1019	18.0	0.0	0.0	2.9	2.9	18.7	18.7	78.4	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	2.37
				0.1	0.1	3.1	3.0	14.9	14.9	82.1	2.0	0.10	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	Worst case scenario	
				0.0	0.0	1.6	1.6	17.3	17.6	80.8	0.3	0.10	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	Average site scenario	

Additional considerations:

Notes:

Gas Screening Value (GSV) derived by multiplying the peak gas concentration (%) by the peak flow rate (l/h).

The gas analyser is capable of measuring flow to an accuracy of 0.1l/h. Below this value the analyser records zero flow. Adopting a precautionary approach we have used a flow rate of 0.1l/h when the analyser records zero with this flow rate used to determine the gas screening value.

Title	Revision
Record of in-situ gas monitoring results.	Final

Report: STM3043D-G01
Revision 0

February 2016
Appendix S

Record of in-situ gas and water level monitoring results

Date/Time	Location	Atmospheric pressure (mB)	Temperature (°C)	Methane, CH ₄ (%v/v) Chg		Carbon Dioxide, CO ₂ (%v/v) Chg		Oxygen, O ₂ (%v/v)		Balance (%v/v)	Lower Explosive Limit (% LEL)	Gas Flow (q) (l/Hr)	Peak hazardous gas flow rate Qhgs		Steady hazardous gas flow rate Qhgs		NHBC Guideline (Peak)	NHBC Guideline (Steady)	Characteristic gas situation	Potentially Explosive	Water Level (m)
				Peak	Steady	Peak	Steady	Minimum	Average				CH ₄	CO ₂	CH ₄	CO ₂					
15/05/2015 12:53	AUTO-LOC	1018	0.0	0.1	0.1	0.0	0.0	19.5	19.8	80.1	2.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 13:08	AUTO-LOC	1017	0.0	0.1	0.1	0.0	0.0	20.4	20.7	79.2	2.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 13:23	AUTO-LOC	1017	0.0	0.1	0.1	0.0	0.0	20.7	20.9	79.0	2.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 13:38	AUTO-LOC	1016	0.0	0.1	0.1	0.0	0.0	20.7	20.8	79.1	2.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 13:53	AUTO-LOC	1016	0.0	0.1	0.1	0.0	0.0	20.6	20.7	79.2	2.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 14:08	AUTO-LOC	1016	0.0	0.1	0.1	0.0	0.0	20.5	20.6	79.3	2.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 14:23	AUTO-LOC	1016	0.0	0.0	0.0	0.0	0.0	20.5	20.5	79.5	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 14:38	AUTO-LOC	1015	0.0	0.0	0.0	0.0	0.0	20.4	20.5	79.5	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 14:53	AUTO-LOC	1015	0.0	0.0	0.0	0.0	0.0	20.4	20.4	79.6	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 15:08	AUTO-LOC	1015	0.0	0.0	0.0	0.0	0.0	20.3	20.4	79.6	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 15:23	AUTO-LOC	1015	0.0	0.0	0.0	0.0	0.0	20.3	20.4	79.6	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 15:38	AUTO-LOC	1014	0.0	0.0	0.0	0.0	0.0	20.3	20.4	79.6	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 15:53	AUTO-LOC	1014	0.0	0.0	0.0	0.0	0.0	20.3	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 16:08	AUTO-LOC	1014	0.0	0.0	0.0	0.0	0.0	20.3	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 16:23	AUTO-LOC	1014	0.0	0.0	0.0	0.0	0.0	20.3	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 16:38	AUTO-LOC	1014	0.0	0.0	0.0	0.0	0.0	20.3	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 16:53	AUTO-LOC	1014	0.0	0.0	0.0	0.0	0.0	20.3	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 17:09	AUTO-LOC	1014	0.0	0.0	0.0	0.0	0.0	20.3	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 17:24	AUTO-LOC	1014	0.0	0.0	0.0	0.0	0.0	20.2	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 17:39	AUTO-LOC	1014	0.0	0.0	0.0	0.0	0.0	20.2	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 17:54	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 18:09	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 18:24	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 18:39	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 18:54	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 19:09	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 19:24	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 19:39	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.3	79.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 19:54	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 20:09	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 20:24	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 20:39	AUTO-LOC	1013	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 20:54	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 21:09	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 21:24	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 21:39	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 21:54	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 22:09	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 22:24	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 22:39	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 22:54	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 23:09	AUTO-LOC	1012	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 23:24	AUTO-LOC	1011	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 23:39	AUTO-LOC	1011	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
15/05/2015 23:54	AUTO-LOC	1011	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
16/05/2015 00:09	AUTO-LOC	1011	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
16/05/2015 00:24	AUTO-LOC	1011	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0

18/05/2015 09:43	AUTO-LOC	997	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
18/05/2015 09:58	AUTO-LOC	997	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
18/05/2015 10:13	AUTO-LOC	997	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
18/05/2015 10:28	AUTO-LOC	997	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
18/05/2015 10:43	AUTO-LOC	996	0.0	0.0	0.0	0.0	0.0	20.2	20.2	79.8	0.0	0.0	0.00	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	0
			0.1	0.1	0.0	0.0		19.5	19.8	80.1	2.0	0.10	0.00	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	Worst case scenario	
			0.0	0.0	0.0	0.0		20.2	20.2	79.8	0.1	0.10	0.00	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	Average site scenario	

Additional considerations:

Notes:

Gas Screening Value (GSV) derived by multiplying the peak gas concentration (%) by the peak flow rate (l/h).

The gas analyser is capable of measuring flow to an accuracy of 0.1l/h. Below this value the analyser records zero flow. Adopting a precautionary approach we have used a flow rate of 0.1l/h when the analyser records zero with this flow rate used to determine the gas screening value.

Title	Revision
Record of in-situ gas monitoring results.	Final

Report: STM3043D-G01
Revision 0

February 2016
Appendix S

Health and Safety Notes:
 The following key residual health and safety risks have not been eliminated by design and are identified below:
 - Refer to Design Risk Assessment ref: 2015052
 Safe methods and systems of work remain the responsibility of the contractor.
 This drawing is to be read in conjunction with the following specification: 2015052-SP-001 Site preparation and Earthworks

FOUNDATIONS IN THIS AREA TO REMAIN. SUBSTRUCTURE BLOCKWORK TO BE REMOVED TO FOUNDATION LEVEL. FLOORS AS TO BE REMOVED. PREVIOUSLY BURNT OFF COLUMNS TO BE REMOVED TO FOUNDATION LEVEL.

FOUNDATIONS AND REMAINS OF SUBSTRUCTURE BRICKWORK TO BE REMOVED. PREVIOUSLY BURNT OFF COLUMNS TO BE REMOVED TO FOUNDATION LEVEL.

BLOCK PAVING TO BE REMOVED

TARMAC TO BE REMOVED

TARMAC TO BE REMOVED AND RESTORATED TO LOCAL HIGHWAY AUTHORITY'S SATISFACTION.

PAVING SLABS TO BE REMOVED

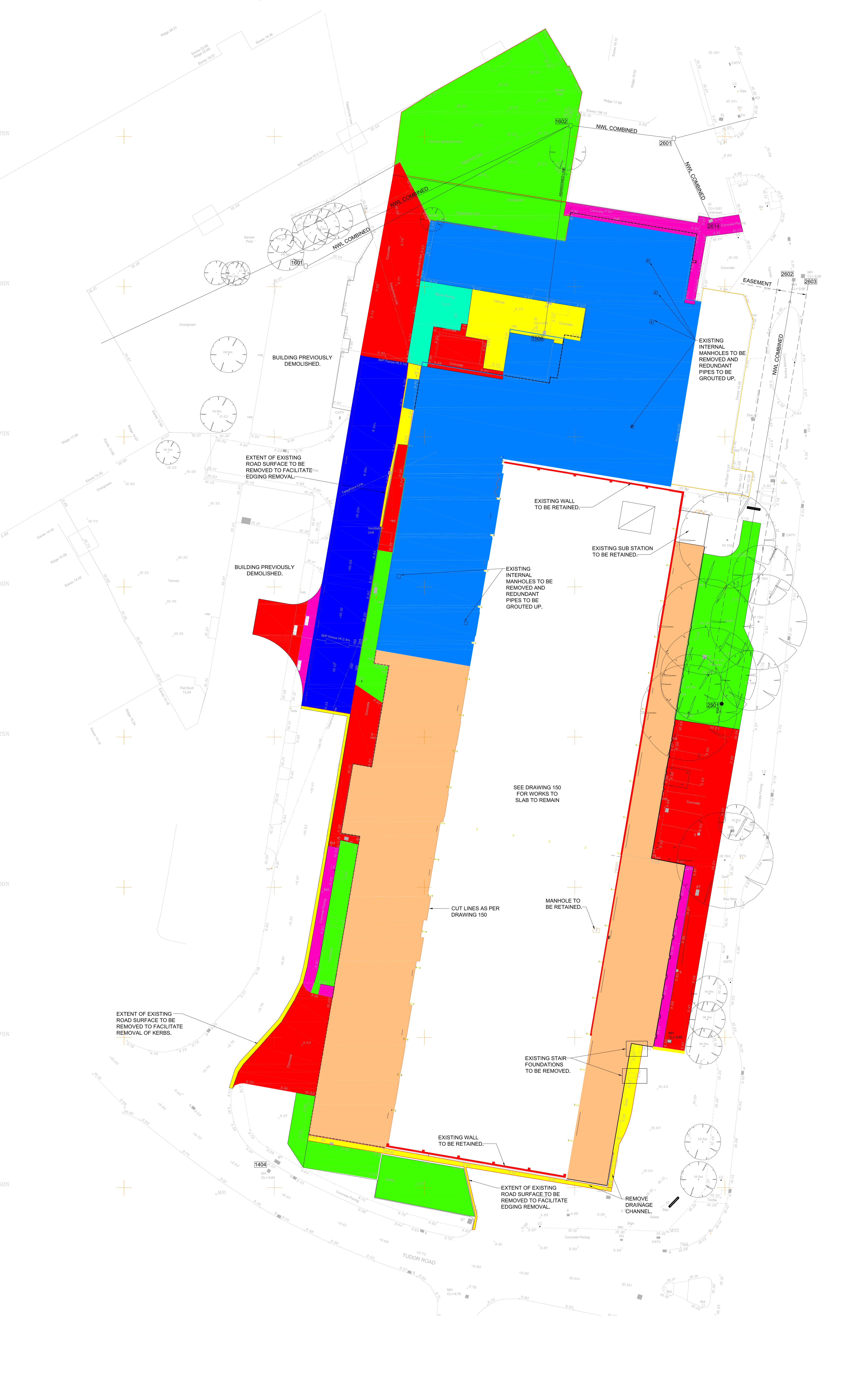
CONCRETE TO BE REMOVED

SOFT LANDSCAPING TO BE REMOVED (REFER TO HSSP FOR DETAILS OF TREES TO BE RETAINED).

NOTE:
 WHERE EXISTING HARD SURFACES ARE TO BE REMOVED, THE EXISTING SUB BASE IS TO BE RETAINED WHERE IT DOES NOT CONTAIN EXPANSIVE MATERIALS (e.g. RED SHALE). AREAS OF SUBBASE MAY ALSO NEED TO BE REMOVED TO SUIT PROPOSED LEVELS AS PER DRAWING 002.

SEE HSSP DRAWINGS FOR DETAILS OF TREES TO BE REMOVED.

REFER TO DRAINAGE DRAWING 005 FOR DETAILS OF MANHOLE COVERS TO BE RESET. OTHER SERVICE CHAMBER COVERS MAY ALSO NEED TO BE RESET TO SUIT LEVEL MODIFICATIONS



A	Tender Issue	MG	MG	MG	09/10/15
B	Preliminary Issue	DJS	MG	MG	08/10/15
Rev.	Description	By	CHK	App	Date

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Client: **Travis Perkins**

Project: **Proposed Trade Park
 Western Approach
 South Shields**

Drawing Title: **Site Preparation**

Scale	1:200	Sheet Size	A0
Drawn By	DJS	Checked By	MG
Approved By	MG	Date	06/10/15
Drawing Status	Tender		
Project No.	2015052	Drawing No.	001
Revision	A		

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