



**REPORT C6149 REV A  
JANUARY 2015**

**GEOENVIRONMENTAL APPRAISAL**

**at  
LAND OFF GLEN STREET, HEBBURN, SOUTH TYNESIDE**

**prepared for  
GLEESON DEVELOPMENTS LTD**





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**GEOENVIRONMENTAL APPRAISAL**

**of land off**

**GLEN STREET**

**HEBBURN**

**SOUTH TYNESIDE**

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C6149/02	Site Features Plan Showing Exploratory Hole Locations	1:500
C6149/03	Preliminary Conceptual Site Model	NTS
C6149/04	Revised Conceptual Site Model	NTS
Unreferenced	Indicative proposed development layout plan	NTS

NTS: Not to Scale

**APPENDIX B LANDMARK INFORMATION GROUP ENVIROCHECK REPORT**

**APPENDIX C COAL AUTHORITY MINING REPORT**

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## EXECUTIVE SUMMARY

<b>Introduction</b>	Sirius Geotechnical and Environmental Ltd was commissioned by Gleeson Developments Ltd., to undertake a geoenvironmental appraisal of land adjacent to Glen Street, Hebburn, South Tyneside. It is understood that consideration is being given to developing the site with residential properties.
<b>Site Details</b>	<p>The site is located at National Grid reference NZ 306 644, northwest of Glen Street, west of Station Road and south-east of railway lines, approximately 200m west of Hebburn centre.</p> <p>The site is an irregularly shaped plot of land, comprising approximately 0.9 hectares, primarily occupied by metalwork and engineering workshops and associated stores, offices, and surrounding hard surfaced areas.</p>
<b>Site History</b>	Undeveloped agricultural land until the late 1800s, when the site was partially developed with industrial premises. The site has subsequently been occupied at various times by a timber yard, corporation yard, 'central kitchen' and most recently by metal engineering works. Surrounding land to the west, north and northeast has also been extensively developed with industrial/ engineering premises with extensive 'refuse' heaps recorded periodically. Land to the south and southeast was developed with residential properties around 1900, although some properties on Glen Street have subsequently been occupied by light industrial/ engineering/ commercial facilities.
<b>Fieldwork</b>	<p>Boring of 30 No. window sample boreholes to a maximum depth of 4.0m.</p> <p>Drilling of 21 No. rotary openhole boreholes using water flush techniques to a maximum depth of 38.0m.</p> <p>Hand excavation of 2 No. trial pits to a maximum depth of 0.8m.</p> <p>Gas and groundwater monitoring wells were installed in selected window sample boreholes, and a programme of monitoring is ongoing.</p>
<b>Laboratory Testing</b>	<p>Selected samples of soil were submitted for analysis for a range of metal, other inorganic and organic contaminants.</p> <p>Geotechnical testing was scheduled on selected samples.</p> <p>All testing was undertaken at MCERTS and/ or UKAS accredited laboratories.</p>

<p><b>Ground Conditions</b></p>	<p>Hard surfacing (tarmac or concrete) 0.05m to 0.2m thick (locally absent in southwest and north) overlying horizons of made ground in turn comprising sand and gravel, ash and cinders/ ashy clay and relict topsoil.</p> <p>Glacial till proven at depths of between 0.6m and 2.0m, typically firm and stiff although very locally soft or very soft clay to a maximum of 2.6m depth.</p> <p>Rockhead proven at 12.2m to 19.0m, generally shallowest in the south-east. A thin (0.2m to 0.5m thick) coal seam was encountered at depths of between 16.0m and 20.5m, with a more substantial (1.4m to 1.6m thick) coal seam encountered at depths of between 19.8m and 24.7m, at the majority of locations, although found to be locally washed out in the west.</p> <p>No significant quantities of groundwater were encountered.</p>
<p><b>Ground Stability</b></p>	<p>Made ground and superficial soils should be assumed to be unstable in the short term within excavations, and appropriate support provided to all excavations.</p> <p>There is no record of any shallow coal seams having been worked in the past and on the basis of the information obtained from this investigation the risk of surface instability resulting from unrecorded historical shallow mineworkings is considered to be low.</p>
<p><b>Foundations and Floor Slabs</b></p>	<p>Conventional spread foundations, taken down through made ground and shallow, low strength superficial soils, to bear onto the underlying natural ground of adequate bearing capacity. Based upon current ground levels anticipated foundation depths are between 1.2m and 3.2m, assuming a 600mm capping horizon across the site above current ground levels. It is recommended that an allowance be made to pile 10% of the site.</p> <p>Owing to the thickness of made ground, suspended floor slabs should be adopted across the entire site.</p>
<p><b>Sulphate Class</b></p>	<p>DS-1 and ACEC-1</p>
<p><b>Contamination</b></p>	<p>Elevated concentrations of metals, PAHs and locally asbestos within ashy soils present below depths of between 0.05m and 1.0m, and localised elevated metals in relict topsoil at greater depths, presenting potential risks to human health, construction products and gardens/ landscaping.</p> <p>The site will require a 600mm capping layer of clean inert soil, to incorporate</p>

	a geotextile no dig layer at the base.
<b>Gas Protection</b>	The results of monitoring indicate an NHBC ‘Traffic Light’ classification of ‘Green’ and Characteristic Situation 1, and no specific gas protection measures are considered necessary.  No radon protective measures are required.
<b>Soakaway Drains</b>	The use of soakaway drains is not considered appropriate at this site.

**The executive summary given above is an overview of the key findings and conclusions of the report. There may be further information contained in the body of the report which puts into context the findings of the executive summary. No reliance should be placed on the executive summary until the whole report has been read in full.**



## 1. INTRODUCTION

Sirius Geotechnical and Environmental Ltd (Sirius) was commissioned by Gleeson Developments Ltd to undertake a geoenvironmental appraisal of land off Glen Street, Hebburn, South Tyneside (the “site”). It is understood that consideration is being given to development of the site for a residential with gardens end use. An indicative proposed development layout plan, as prepared by Gleesons, is enclosed within Appendix A.

The objectives of this appraisal were to:

- Establish the historical development of the site and surrounding area from a review of available historical Ordnance Survey (OS) plans.
- Establish the environmental setting of the site.
- Investigate near surface soil and groundwater conditions.
- Determine the potential risks posed by any ground contamination and provide outline recommendations on remedial measures to manage such risks.
- Establish the risks associated with hazardous ground gas.
- Evaluate whether past mining or other extractive industries could have an influence on the site.
- Provide advice relating to geotechnical issues associated with the site.
- Provide outline foundation recommendations.

The desk study element of this investigation includes an assessment of information provided by a Landmark Information Group (LIG) Envirocheck report, the British Geological Survey (BGS) and the Coal Authority (CA).

Fieldwork was undertaken in two phases: Phase 1 from the 01 and 03 October 2014, comprising the drilling of 30 No. window sample boreholes to a maximum depth of 4.0m, drilling of 6 No. rotary openhole boreholes using water flush, to a maximum depth of 38.0m and hand excavation of 2 No. trial pits to a depth of 0.8m; and, Phase 2 from the 10 and 12 November 2014, comprising the drilling of 15 No. rotary openhole boreholes using water flush, to a maximum depth of 27.0m.

Ground gas and groundwater monitoring wells were installed in selected window sample boreholes.

This report presents the factual information available during this appraisal, interpretation of the data obtained and recommendations relevant to the defined objectives.

It has been assumed in the production of this report, that the site is to be developed for a residential with gardens end use. In addition, it is assumed that ground levels will not change substantially from those present at the time of the investigation. If this is not the case, then amendments to the recommendations made in this report may be required.

The comments and opinions presented in this report are based on the findings of the desk study, ground conditions encountered during intrusive investigation works performed by Sirius and the results of tests carried out within one or more laboratories. There may be other conditions prevailing on the site which have not been revealed by this investigation and which have not been taken into account by this report. Responsibility cannot be accepted for any conditions not revealed by this investigation. Any diagram or opinion on the possible configuration of strata, contamination or other spatially variable features between or beyond investigation positions is conjectural and given for guidance only. Confirmation of ground conditions between exploratory holes should be undertaken if deemed necessary.

Evaluation of ground gas and groundwater is based on observations made at the time of the investigation and monitoring visits. It should be noted that ground gas and groundwater levels and quality may vary due to seasonal and other effects.

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## 2. SITE DETAILS AND DESCRIPTION

**Table 2.1 Current Site Overview**

<p><b>Location</b></p>	<p>The site is located approximately 200m south-west of Hebburn centre, to the north-west of Glen Street, west of Station Road, south of Hebburn Metro Station and south-east of railway lines. The site comprises an irregularly shaped area, occupied by metal working and engineering workshops and associated stores and offices, predominantly surrounded by hard surfacing.</p> <p>A site location plan is included as Drawing No. C6149/01 within Appendix A.</p>
<p><b>National Grid Reference</b></p>	<p>NZ 306 644.</p>
<p><b>Topography and Features</b></p>	<p>The site has major dimensions of approximately 190m northeast to southwest and 65m northwest to southeast. The area is relatively level and flat lying, although noted to be raised approximately 0.5m above surrounding ground level to the northeast and above the level of the rail lines to the northwest. The site is at a similar elevation to land to the southeast and southwest, at approximately 35m AOD.</p> <p>At the time of this investigation the majority of the site was occupied by industrial and commercial buildings comprising predominantly brick construction with asbestos cement sheet clad roofs, and occasional metal clad steel framed structures, recently used as metalworking and engineering workshops and associated stores and offices. Although no manufacturing operations were taking place at the time of the investigation, many areas remained in use for storage of materials, tools and machines. Owing to the presence of the buildings and debris in some areas, vehicular access could not be gained to all areas of the site.</p> <p>An area in the northeast is separated from the main part of the site by a metal paling fence. That area was used informally as a public car park.</p>

	<p>An electricity substation is present toward the south of the site.</p> <p>The main site features are shown on Drawing C6149/02 within Appendix A.</p>
<b>Approximate Site Area</b>	0.9Ha.
<b>Current Land Use</b>	Storage of equipment and materials associated with metal working and engineering.
<b>Adjacent Land Uses</b>	<p><b>Northwest:</b> Railway lines, beyond which are residential properties.</p> <p><b>Northeast:</b> Healthcare premises.</p> <p><b>Southeast:</b> Mixed residential and commercial premises along Glen Street.</p> <p><b>Southwest:</b> Commercial/ industrial premises.</p>
<b>Invasive and protected Species</b>	<p>A suspected stand of Japanese Knotweed was observed within the northern corner of the site, to the rear of a row of garages/ storage units.</p> <p>It is recommended that an ecological survey is carried out by a specialist ecologist to confirm the absence or otherwise of invasive plant species or other sensitive or protected species.</p>

The main site features are shown on Drawing No. C6149/02 within Appendix A.

### 3. ENVIRONMENTAL SETTING

#### 3.1. Introduction

Published environmental, geological and historical data relating to the site has been reviewed. A summary of relevant information is provided below and a copy of the LIG Envirocheck report is enclosed within Appendix B. A copy of the Coal Authority Mining Report is enclosed within Appendix C and copies of borehole records obtained from the BGS are enclosed within Appendix D.

#### 3.2. Historical Development

Table 3.1 presents a summary of the site historical development of the site from 1857 to 2014 as indicated on historical OS maps. It is not the intention of this report to describe in detail all of the changes that have occurred on or adjacent to the site, only those pertinent to the proposed development.

**Table 3.1 Site History**

Map Dates	On-Site Features	Off-Site Features (only features within 500m that may affect the site are listed)
1857 – 1896	Undeveloped agricultural land.	Surrounding land comprises open undeveloped agricultural land, with a small stream / ditch rising approximately 20m to the north, flowing west.
1896 – 1916	<p>A large building and chimney was present within the east of the site associated with Hebburn Foundry.</p> <p>A railway line entered the site from the northwest boundary, extending to the eastern corner of the site.</p> <p>Small unlabelled buildings/sheds were recorded in the southern corner</p>	<p>The Newcastle and South Shields railway line, with numerous tracks and sidings, were present immediately adjacent to north-western site boundary.</p> <p>Rail sidings extended from the northern corner of the site, serving Hebburn Foundry to the north-east.</p> <p>Land to the southeast was extensively</p>



Map Dates	On-Site Features	Off-Site Features (only features within 500m that may affect the site are listed)
	of the site.	<p>developed with residential properties.</p> <p>Land northwest of the railway appears to be infilled in places, with the small stream shown to rise in a shallow valley approximately 100m northwest of the site, before sinking below an area annotated as an area of infill / tipping, approximately 170m to the west.</p> <p>Hebburn Colour Works are recorded approximately 40m to the north.</p>
1916 – 1941	An additional building is recorded centrally within the site. Additional buildings are also shown in the southwest.	<p>A Bauxite Works and associated chimney, tanks and railway tracks are shown 80m to the northwest.</p> <p>Hebburn Colour Works is relabelled as an Engineering Works.</p>
1941 – 1957	The site was developed as a timber yard, with numerous buildings present adjacent to the southeastern boundary and centrally within the site. The previous buildings associated with the foundry are no longer shown and presumed demolished. A rail line is recorded within the site.	<p>Hebburn Foundry was no longer shown to the north-east, with the area occupied by a number of small unlabelled structures.</p> <p>Engineering Works to the west are shown to have expanded extensively, across the area previously annotated as an infilled area. The former small stream is no longer shown in the area.</p> <p>An area of refuse / infilling is recorded to the north of the existing Bauxite Works, approximately 120m north.</p>
1957 – 1973	Additional buildings are recorded in the east of the site, labelled 'Central	A Corporation Yard and Builder's Yard are recorded to the immediate north-



<b>Map Dates</b>	<b>On-Site Features</b>	<b>Off-Site Features (only features within 500m that may affect the site are listed)</b>
	<p>Kitchen’.</p> <p>Additional rail tracks and small buildings associated with the timber yard are recorded within the site.</p> <p>By 1967, part of the site was labelled as a Corporation Yard. Railway tracks are no longer recorded, although former timber yard buildings remained. A number of small structures in the north of the site appear to be those present at the time of writing of this report.</p> <p>An electricity substation is shown in the southern corner.</p>	<p>east and south-west respectively.</p> <p>The former Bauxite Works to the north-west is recorded as a Scrap Metal Depot and refuse tip from 1967. The reservoir is recorded as ‘Old’ and appears partially infilled.</p>
<p>1973 – 2006</p>	<p>Large buildings are shown centrally within the south of the site, labelled as an engineering works. These buildings appear to be those present at the time of writing of this report.</p>	<p>The former Bauxite Works and associated partially infilled reservoir and refuse tip appear to have been redeveloped with residential properties in the late 1970s.</p> <p>By the early 1990s, the Engineering Works to the west appear to have been reduced in size, and Government Offices are recorded west of the railway line.</p>
<p>2006-2014</p>	<p>No significant change.</p>	<p>The sites of the former engineering works and government offices, to the northwest of the railway lines have been cleared and are undergoing development with residential properties.</p>

### 3.3. Published Geological Information

A summary of available published geological information is provided in Table 3.2.

**Table 3.2 Geological Summary**

<p><b>Sources of Information</b></p>	<p>LIG Envirocheck Report, Ref. 58659417_1_1, dated 24 July 2014, enclosed within Appendix B.</p> <p>CA coal mining report, Ref. 51000600261001, dated 24 July 2014, enclosed within Appendix C.</p> <p>BGS 1:10,560 scale NZ 36 SW, dated 1973.</p> <p>BGS borehole records, NZ36SW/108A and NZ36SW/108C, drilled in 1969, approximately 85m south of the site, enclosed within Appendix D.</p>
<p><b>Made Ground</b></p>	<p>No made ground is recorded on the site on published maps, although an extensive area of made ground is recorded c.65m to the west of the site adjacent to the River Tyne.</p> <p>Notwithstanding the absence of made ground recorded on BGS maps, it is anticipated that some made ground, associated with the historical development of the site, will be present across the entire area.</p>
<p><b>Drift Geology</b></p>	<p>The site is recorded to be underlain throughout by Devensian Pelaw Clay.</p> <p>BGS borehole records NZ36SW/108A and NZ36SW/108C, record the superficial strata as approximately 9.75m thick comprising stiff grey brown clay.</p>



<p><b>Solid Geology</b></p>	<p>The site is indicated to be underlain by Carboniferous Pennine Middle Coal Measures, comprising sequences of mudstone, siltstone, sandstone and coal seams. The dip of the bedrock is not indicated in the immediate vicinity of the site on the geological maps, although the outcrop pattern of strata suggest strata dip to the south-east.</p> <p>An unnamed thin coal seam is conjectured to subcrop parallel to the north-western site boundary, immediately beyond the railway lines. The subcrop trends southwest to northeast and the seam dips to the south-east beneath the site. The shallowest named coal seam, the Top Hebburn Fell (THF), is conjectured to subcrop approximately 240m west of the site, also dipping to the east. The THF seam is also recorded to be ‘thin’ in the area.</p> <p>The shallowest seam of likely economic workable thickness is considered to be the Bottom Hebburn Fell (BHF), which is recorded as being stratigraphically c.7m below the THF coal seam. The BHF seam is conjectured to subcrop approximately 400m west of the site and also dips to the east. The BHF seam is recorded to be between approximately 1.1m and 1.6m thick.</p> <p>BGS borehole NZ36SW/108A encountered coal at depths of between 10.0m and 10.9m below ground level (0.3m below rockhead), likely to comprise an additional thin seam which subcrops south of the site. BGS record /108C encountered coal between 19.5m and 20.0m below ground level (9.75m below rockhead). It is considered likely that the seam encountered in borehole /108C is the ‘thin’ seam recorded on the BGS map to be cropping out to the west of the site.</p>
<p><b>Faults</b></p>	<p>No faults are recorded within the site boundary.</p>



<p><b>Underground Mining</b></p>	<p><b>Recorded Underground Coal Mining:</b></p> <p>The CA mining report indicates the site is in the likely zone of influence from workings in five seams of coal at 200m to 380m depth, last worked in 1947. The CA state that any ground movement from these workings should have stopped by now.</p> <p>The CA also states that in addition to the recorded workings, the site is in an area where the CA believe there is coal at or close to the surface, which may have been worked at some time in the past.</p> <p><b>Recorded Mine Entries:</b></p> <p>None recorded by the CA within the site or within 20m of the site boundary. However, the CA notes that records may be incomplete, and consequently there may exist in the local area mine entries of which the CA has no knowledge.</p> <p><b>Unrecorded Underground Coal Mining:</b></p> <p>The CA states that it believes there is coal at or close to the surface which may have been worked at some time in the past.</p> <p>Review of the BGS map indicates that the shallowest named seam of significant thickness is the Bottom Hebburn Fell. That seam is recorded to be between 1.1m and 1.6m thick. The depth below rockhead to that seam cannot be accurately determined using the available BGS data, and consequently any workings within that seam beneath the site must be considered at this stage to have the potential to influence the stability of the site.</p> <p>In addition, BGS borehole record /108C encountered a 0.5m thick seam at a depth of 9.75m below rockhead at a location to the south-east of the site. That seam is believed to subcrop immediately west of the railway lines bounding the north-west of the site, and is therefore likely to be at shallow depth below rockhead beneath the site. The presence of unrecorded workings within a 0.5m thick seam, at shallow depth below rockhead beneath the site also cannot be discounted.</p>
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### 3.4. Hydrology and Hydrogeology

A summary of available information pertaining to hydrology and hydrogeology is present in Tables 3.3 to 3.5.

**Table 3.3 Surface Water Features**

	<b>Presence/location</b>	<b>Comments</b>
<b>EA GQA Classified Watercourses (within 500m)</b>	None recorded within 500m.	
<b>Unclassified Watercourses (within 500m)</b>	None recorded	
<b>Licensed Surface Water Abstractions (within 1000m)</b>	None recorded.	The nearest active surface water abstraction licence is held by Amec Process & Energy Ltd, 1.4km to the north.
<b>Surface Water Features (Canals, Ponds, Lakes, etc.) (within 250m)</b>	None recorded within 250m.	
<b>Flood Risk Status</b>	The site is not indicated by the EA to lie within an area at risk of flooding from either rivers or sea.	

**Table 3.4 Groundwater Occurrence and Abstraction**

	<b>Presence/location</b>	<b>Comments</b>
<b>Licensed Abstractions (within 1000m)</b>	None recorded within 1km of the site.	No potable abstractions recorded within 2km.
<b>Private Wells</b>	None identified.	
<b>Source Protection Zones (within 500m)</b>	None recorded.	
<b>Springs</b>	None recorded.	

**Table 3.5 Groundwater Vulnerability Status**

	<b>Environment Agency Classification</b>
<b>Superficial Aquifer Designation</b>	Pelaw Clay is classified as Unproductive Strata.
<b>Bedrock Aquifer Designation</b>	Pennine Middle Coal Measures strata are classified as a Secondary 'A' Aquifer.
<b>Groundwater Vulnerability</b>	<p>Under the Environment Agency's Policy and Practice for the Protection of Groundwater, the site is recorded to be underlain by soils of High Leaching Potential (U).</p> <p>This classification is assigned in urban areas based on fewer observations than elsewhere. The worst case vulnerability classification is assumed until proved otherwise.</p>

### 3.5. Landfilling and Waste Management

**Table 3.6 Waste Management Activities**

	<b>Presence / Location</b>	<b>Comments</b>
<b>Recorded Landfill Sites (within 1500m and of relevance to the site)</b>	Five areas of landfill are recorded within 1000m of the site, of which four are to the south-east of the River Tyne.	The closest area is approximately 265m west of the site, at Prince Consort Road. The site is recorded to have been operational between 1940 and 1973, receiving industrial and household waste.  Other sites are located 440m northwest, 650m southeast and 970m east.
<b>Active Licensed Waste Management Facilities (within 500m)</b>	None recorded within 500m.	
<b>Other Active Waste Transfer or Disposal Sites (within 500m)</b>	None recorded within 500m.	
<b>Walkover Evidence of Fly-Tipping On or Within 250m of Site</b>	On site, adjacent to railway line in northern corner	Comprising mattresses, furniture, wooden pallets, scrap metal, plastics, etc.
<b>Ground Gas Risk Assessment Required?</b>	Yes.	Potential for hazardous ground/mine gases from underground mine workings within underlying coal seams and from areas of made ground associated with historical activities to the north of the site. Historical OS plans show refuse heaps 240m north of the site (although this is now housing so assumed low risk).

### 3.6. Radon Risk

To determine whether the site is at risk from radon gas, the BRE Document “BRE 211 - Radon: Guidance on the protective measures for new dwellings” together with the National Radiological Protection Board (NRPB) “Radon Atlas of England and Wales” have been referenced.

These documents, together with a geological assessment contained within the LIG report, which includes information obtained from the Health Protection Agency and British Geological Survey, state that the site lies within an area in which **no radon protective measures are required**.

### 3.7. Other

Other potentially contaminative activities or environmental constraints are listed below. The entries relate to activities within approximately 500m of the site, with the exception of COMAH facilities where the assessment is extended to a distance of approximately 1km from the site.

- Eighteen active Contemporary Trade Directory Entries are recorded within 500m of the site. The nearest is recorded 19m to the south-east of the site and relates to a printers.
- One permitted Local Authority Pollution Prevention and Control (LAPPC) is recorded 420m to the south of the site at Victoria Road Filling Station Ltd.

#### **4. PREVIOUS INVESTIGATION FINDINGS**

A Phase I Geo-Environmental Assessment of the site was undertaken by 3E Consulting Engineers Ltd (3E), in December 2013, on behalf of Tharsus Engineering Group Ltd. A copy of the report resulting from that assessment, referenced 13768, has been reviewed by Sirius. The 3E report does not contain any additional significant pertinent information not identified by Sirius, and the findings are not discussed further.

## 5. PRELIMINARY CONCEPTUAL MODEL

Based on the desk study, a combined preliminary conceptual site model and conceptual exposure model (CSM) has been developed for the proposed future residential with gardens end use. This model summarises the understanding of surface and sub-surface features, the potential contaminant sources, transport pathways and receptors in order to assess potential pollutant linkages. In assessing the potential contaminants present at the site, reference has also been made to the relevant sections of CLR 11, the Industry Profile report series issued by the Department of the Environment and other relevant supporting documentation.

A qualitative risk assessment was also made of the likelihood of any pollutant linkage operating and its potential significance.

The preliminary CSM is presented in schematic form on Drawing No. C6149/03 within Appendix A.

In summary, the preliminary CSM has identified the following potential pollutant linkages which could result in an unacceptable risk to the proposed end-use:

- Direct and indirect ingestion, inhalation and dermal contact with heavy metals, organic and inorganic contaminants including asbestos, PAHs, volatile and other petroleum hydrocarbon based compounds, in made ground across the site resulting from historical activities, presenting a potential risk to site end users and construction/ maintenance workers.
- Direct and indirect ingestion, inhalation and dermal contact with localised ‘hotspots’ of metal and organic compounds associated with specific site activities including timber treatments and vehicle maintenance areas presenting potential risk to site end users and construction/ maintenance workers.
- Inhalation of fugitive dusts associated with asbestos products within the fabric of existing buildings presenting a potential risk to site end users and demolition workers and possibly also to users of adjacent land.
- Direct contact of construction materials including concrete and plastics with elevated concentrations of sulphides, low/high pH values, or organic compounds presenting a potential risk to the built environment including foundations and buried services.



- Plant uptake of phytotoxic metals and organic compounds presenting a potential risk to plant growth in gardens and soft landscaping.
- Generation and migration of hazardous ground gases (methane and carbon dioxide) from underlying shallow coal seams, made ground on site and nearby areas of infilled ground, presenting a potential risk to site end users, construction workers and the built environment.

The likelihood of a significant pollutant linkage to controlled waters, i.e. the underlying Secondary 'A' Aquifer, from potential leachable heavy metals, inorganic and organic contaminants within on-site made ground, is considered to be low to negligible given the significant thickness of low permeability Pelaw Clay likely to underlie the site.

## **6. FIELDWORK**

### **6.1. Scope of Investigation**

The information contained within this report is limited to areas of land accessible during the investigation as indicated on the site plan presented within Appendix A as Drawing No. C6149/02.

Sirius scoped the intrusive ground investigation using guidance presented in BS 10175:2011+A1 2013, BS 8485:2007, the CLR series of documents (Defra and Environment Agency, 2002a-2002e) and BS EN 1997:2004 and 2007.

The investigation was carried out in two phases. Phase I took place from 01 October 2014 to 03 October 2014, and comprised:

- Drilling of 30 No. window sample boreholes (WS1 to WS30) to a maximum depth of 4.0m, using a tracked window sample drilling rig.
- Drilling of 6 No. rotary openhole boreholes (RO1 to RO6) to a maximum depth of 38.0m.
- Excavation of 2 hand dug trial pits (HDTP1 and HDTP2) in the northern corner of the site, in an area which could not be accessed by traditional mechanical plant.

Permanent monitoring installations for both groundwater and ground gas monitoring were installed in WS1, WS3, WS11, WS16, WS19, WS23, WS27A and WS29, at selected locations outside of existing structures and materials storage areas.

Owing to the findings of the rotary openhole boreholes formed during the first phase of investigation, a second phase of fieldwork was carried out from 10 December to 12 December 2014, comprising:

- Drilling of 15 No. rotary openhole boreholes (RO7 to RO21) to a maximum depth of 27.0m.

Fieldwork was carried out under the full time supervision of a geoenvironmental engineer.

### **6.2. Strata Description**

Detailed descriptions of strata and groundwater observations made during investigation works, together with details of samples recovered and in situ testing, are presented on the exploratory hole records within Appendix E.

Standard strata descriptions are compliant with BS EN ISO 14688:2002 and 2004 and BS EN ISO 14689:2003. The depths of strata on the record sheets are recorded from current ground levels at each location, unless indicated otherwise.

### **6.3. Exploratory Hole Locations**

The locations of exploratory boreholes formed during the first phase of fieldwork were based on the findings of the desk top study and the preliminary conceptual site model in order to target as far as practical, specific areas of interest and achieve a general site coverage. Exploratory holes were positioned on an approximate 15m to 20m grid spacing, adjusted to take account of existing structures and buried service locations. Boreholes formed during the second phase of fieldwork were positioned based on the findings of the first phase of works, taking account the presence of existing buildings and services. Procedures and principals recommended in CLR4 and BS 10175:2011+A1 2013 were followed, as far as existing site features permitted, when determining exploratory hole locations.

Exploratory hole locations are shown on Drawing No. C6149/02 within Appendix A of this report.

### **6.4. Geotechnical Testing**

Geotechnical laboratory testing was carried out on selected samples in accordance with techniques outlined in BS 1377:1990 “Methods of Test for Soils for Civil Engineering Purposes” at the laboratory of Professional Soils Laboratory (PSL), a UKAS accredited laboratory.

Geotechnical and geochemical test results are included within Appendix F of this report.

### **6.5. Chemical Testing**

Selected samples of the made ground and natural soils were tested for a range of potential contaminants under subcontract with Derwentside Environmental Testing Services (DETS), a UKAS and MCERTS accredited laboratory.

The potential contaminants of concern identified by the preliminary conceptual site model were selected as the analytes for the samples recovered from the site. The results of soil analysis, as received from the laboratory, are presented within Appendix F of this report.

## 7. GROUND CONDITIONS AND MATERIAL PROPERTIES

### 7.1. Strata Profile

A summary of the typical strata profile is provided in Table 7.1, with additional comments given below. Descriptions and intermediate depths of superficial deposits, including made ground, are derived from window sample boreholes only, as the method of drilling of rotary openhole boreholes does not permit accurate recording of superficial strata.

**Table 7.1 Strata Profile**

<b>Strata</b>	<b>Depth Range (Thickness Range)</b>	<b>Description and Comments</b>
Made Ground (Hard surfacing)	Ground Level  (0.05m to 0.2m)	Locally absent (WS23, WS27, HDTPs). Typically 0.1m thick.  Comprising asphalt or concrete.
Made Ground (Sand and Gravel)	0m to 0.2m  (0.1m to 1.0m)	Locally absent sporadically across the site. Where present predominantly 0.4m thick.  Generally comprising yellow and brown sand and gravel of dolomitic limestone, although locally comprising sandstone, mudstone, concrete and small quantities of cinder and coal.
Made Ground (Ash and cinders/ ashy clay)	0.05m to 1.0m  (0.3m to 2.0m)	Locally absent (WS1, WS29 and not proven in holes terminated at shallow depth).  Generally of greatest thickness toward centre of site (WS16, WS18, WS20, WS21, WS23).  Predominantly comprising black clayey gravelly sand of ash, cinder, brick, glass, pottery and very locally small quantities of slag, and burnt shale. In some locations in the southwest of the site, the horizon was recorded as black and brown sandy gravelly clay with sand content comprising ash.

<b>Strata</b>	<b>Depth Range (Thickness Range)</b>	<b>Description and Comments</b>
Relict Topsoil	0.4m – 1.7m  (0.2m – 0.5m)	<p>Locally absent sporadically across site. Generally increasing in depth from southern to northern corner</p> <p>Comprising soft and firm dark grey organic slightly sandy, slightly gravelly clay containing occasional inclusions of coal, sandstone, mudstone and infrequently, wood</p>
Glacial Till	0.6m – 2.1m  (13.0m to 19.0m)	<p>Typically firm and stiff, medium strength sandy gravelly clay, generally increasing to high strength with depth.</p> <p>Locally found to be soft (WS3, WS4, WS21) or very soft (WS18, WS22) within the upper 0.3m, although very locally soft to a depth of 2.6m bgl.</p> <p>In the central area (WS13-15), bands of sand or sand and gravel were encountered within the glacial till.</p>
Coal Measures Strata	12.2m – 19.0m  (full thickness not proven)	<p>Typically at shallowest depth in the south-east, increasing in depth to the north and west, comprising interbedded units of mudstone and sandstone with two shallow seams of coal.</p> <p>A thin (0.2m to 0.5m but typically 0.4m or less) seam of coal was encountered at depths of between 16.0m and 20.5m bgl across the majority of the site. This seam is conjectured to be the unnamed ‘thin’ seam recorded by the BGS to subcrop to the north and west of the site.</p> <p>A subjacent seam of coal, typically proven to be 1.4m to 1.6m thick, was also encountered between 19.8m and 24.7m depth bgl, across the majority of the site. The seam was recorded to be reduced in thickness to 0.4m at one location, RO3, toward the centre of the site. This seam is tentatively considered to be the Top Hebburn Fell coal seam.</p> <p>Neither of the two seams of coal was encountered in</p>

Strata	Depth Range (Thickness Range)	Description and Comments
		<p>RO1 or RO2, formed within the west of the site during the first phase of fieldwork, with a unit of mudstone encountered at the anticipated elevation of both seams. It is therefore conjectured that both of the seams may have been subject to localised washout in that area.</p> <p>One borehole, RO8, formed within the east of the site during the second phase of fieldwork encountered an area of soft ground and loss of flush returns between depths of 16.8m and 18.0m bgl, and was terminated in solid strata at 19.0m.</p>

A suspected void was encountered within the made ground in WS22, from 0.2m to 0.7m depth. The cause of the void was not ascertained during the investigation, although a buried service e.g. drainage pipe was discounted as no sample of the pipe material was recovered into the sample tube.

Obstructions preventing further progress of the window sample boreholes were encountered in WS20, WS24, WS24A, WS25, WS26 and WS27, within the north-east of the site, at depths of between 0.1m and 1.0m bgl. These obstructions are considered likely to result from relict foundations and/ or slabs associated with previous phases of development within that area of the site. Boreholes WS20 and WS27 were redrilled adjacent to the original location (WS20A and WS27A), and did not encounter the obstructions.

The area of soft ground and flush loss observed in RO8, within the east of the site appears to potentially coincide with the depth of the shallow, thin (0.3m to 0.4m) coal seam in that area of the site. With consideration to the thickness of that seam and the findings of all other exploratory holes across the site, it is considered extremely unlikely that this loss of flush and soft ground is associated with workings within the thin unnamed seam. The presence of at least 1m thickness of intact, solid strata below the area of soft ground is also considered to confirm that the soft ground is not a result of upward migration of localised workings in the immediate underlying seam, which has also been proven to be intact where encountered in all other boreholes.

It is considered that the soft ground/ flush loss is associated with the strata being locally fractured and/ or the coal being highly weathered and/ or weak in this location.

## **7.2. Material Properties**

### **Made Ground**

Only limited in situ geotechnical testing was undertaken on the made ground, owing to the generally shallow depth of such materials.

The results of in situ SPTs undertaken within the made ground at a depth of 1.0m were variable, ranging between N=2 and N=46 although typically up to N=11, confirming the soils to be of variable strength and relative density, being locally very low strength and very loose relative density.

Water soluble sulphate concentrations of between 34 and 450 mg/kg, together with pH values of between 7.4 and 10.5 have been recorded within the made ground.

### **Glacial Till**

#### *Classification test results*

Soil classification tests were conducted on 7 No. samples. The tested samples were recovered from depths ranging between 1.3m and 2.3m, reflecting the depth to the upper surface of the natural soils. Natural moisture contents of the samples range between 18% and 38%. The samples returned plastic limit values of between 18% and 25%, and liquid limit values of between 33% and 54%. The plasticity indices of the samples are between 15% and 31%. These values indicate the cohesive soils to be typically of intermediate plasticity.

Consistency indices were between 0.46 and 1.1. These values are indicative of soft to very stiff consistencies.

Calculation of the modified plasticity index in accordance with NHBC Chapter 4.2 indicates that the clay has low and medium volume change potential.

Water soluble sulphate concentrations of between 21 and 130 mg/kg, together with pH values of between 8.0 and 8.8 have been recorded within the glacial till.

### *Strength test results*

In situ SPTs undertaken within the cohesive deposits at a depth of 1.0m bgl, typically ranged between N=8 and N=10. Correlation with laboratory plasticity indices indicates mass shear strengths of between 45 and 55kPa. These values are indicative of medium strength soils.

At depths of 2.0m to 4.0m, typical in situ SPT N values ranged between N=10 to N=20, generally increasing with depth. Correlation with laboratory plasticity indices indicates mass shear strengths of between 60 and 120kPa. These values are indicative of medium and high strength soils.

### **7.3. Groundwater**

No groundwater was encountered in any of the exploratory holes during drilling. However, it should be noted that identification of groundwater levels within rotary openhole boreholes was not possible owing to the use of water as a drilling flush medium.

During subsequent monitoring of wells installed in window sample boreholes, groundwater has been recorded at depths of between 0.29m and 2.28m bgl.

### **7.4. Visual / Olfactory Evidence of Contamination**

Organic, peaty (i.e. not hydrocarbon) odours were noted within ashy soils in the south and west of the site, although no evidence of gross hydrocarbon contamination e.g. liquid product or a sheen, was observed on either soils or on groundwater during subsequent monitoring.

Made ground across the site contained variable quantities of ash and cinders. Such materials typical contain elevated concentrations of metals and PAHs.

On the basis of the nature and age of the existing structures, the presence of asbestos containing building materials within all buildings and as shuttering to foundations etc. is possible.



## **8. RESULTS OF CHEMICAL TESTING**

### **8.1. Assessment Methodology**

The laboratory test data for the relevant soil strata were reviewed for completeness and consistency. Those determinands that represent potential contaminants of concern were subject to further evaluation.

For this site, it can be demonstrated that the use of benzo(a)pyrene as a surrogate marker is appropriate. Concentrations of genotoxic PAH species have therefore been assessed using the concentration of benzo(a)pyrene in the samples as a surrogate marker. Further information on this method of assessment is enclosed within Appendix H.

Where the results of laboratory testing permit, for each soil type and averaging area statistical testing was undertaken for the Planning Scenario by the methods described in CL:AIRE & CIEH “Guidance on Comparing Soil Contamination Data with a Critical Concentration”, May 2008. This statistical testing was undertaken to determine whether there was sufficient evidence that the true mean concentration of each determinand was less than the relevant critical concentration for that component.

#### **Data Below the Analytical Limit of Detection**

The proportion of data below the analytical limit of detection (“non-detects”) was reviewed for each determinand. The dataset for each site zone (where applicable) was considered separately.

Non-detect data were given a concentration of half of the relevant limit of detection (LoD) for calculation purposes. In cases where a contaminant dataset for a zone consisted of more than 10-15% of non-detect data, then professional judgement was applied in selecting and applying statistical tests and in interpreting the data.

#### **Assessment of Outliers and Data Distribution**

Assessment of data distribution and the identification of statistical outliers was performed iteratively, applying appropriate data distribution and outlier tests for the complete and outlier-censored datasets.

The presence of outliers was determined using Dixon’s test working with untransformed values for normally distributed data and natural log-transformed values for non-normally distributed data.

The data were tested for normality by at least two of the following methods:

- Probability histogram.
- Probability (q-q) plots.
- Shapiro-Wilk normality test.

Outliers were considered to form part of the overall site dataset *except* when there was clear evidence and justification for their exclusion.

### **Calculation of 95% Upper Confidence Limit of the Sample Mean**

Based upon the normality and outlier tests, the 95% Upper Confidence Limit (US95) of each contaminant of concern was calculated by:

- One-sample t-test for datasets that are normally distributed or close to normal distribution.
- One-sided Chebyshev test for datasets that are significantly non-normal.

The calculated US95s are presented below and compared to the applicable Generic Assessment Criteria.

## **8.2. Soil Analysis**

Results of chemical analysis, as received from the testing laboratory, are presented in full in Appendix F.

For this site, measured values were compared to Generic Assessment Criteria (GAC) derived for a residential with gardens end use. Source data for all GACs are provided in Appendix H. The results of the assessments are presented in Tables 8.1 to 8.3.

**Table 8.1 Summary of Total Soil Concentrations – Sand and Gravel Made Ground**

Determinand	No. of Samples Tested	Range of Results (mg/kg unless specified)	US95	GAC (1% SOM)	No. of Samples >GAC	Outliers
<b>Metals</b>						
Inorganic Arsenic	7	2.1 – 6.5		32	0	
Cadmium	7	0.1 – 0.7		10	0	
Chromium (III)	7	4.1 – 28		3000	0	
Lead	7	11 – 66		200	0	
Inorganic Mercury	7	<0.05		170	0	
Selenium	7	<0.5 – 4.3		350	0	
Copper	7	10 – 26		200	0	
Nickel	7	3.3 – 16.0		130	0	
Zinc	7	32 - 93		450	0	
<b>Inorganics</b>						
pH	7	8.5 – 10.5		<5	0	
Total Sulphate	7	300 – 2000		2400	0	
Water Sol. Sulphate	7	0.039 - 0.450		0.5g/l	0	
<b>Speciated PAH</b>						
Acenaphthene	7	<0.1 – 0.2		200	0	
Anthracene	7	<0.1 – 0.6		2200	0	
Acenaphthylene	7	<0.1		160	0	
Benzo(a)anthracene**	7	<0.1 – 1.1		B(a)P**	**	**
Benzo(b)fluoranthene**	7	<0.1 – 0.8		B(a)P**	**	**
Benzo(k)fluoranthene**	7	<0.1 – 0.7		B(a)P**	**	**
Benzo(g,h,i)perylene**	7	<0.1 – 0.4		B(a)P**	**	**
Benzo(a)pyrene**	7	<0.1 – 0.9		0.83	1	WS11, 0.3m
Chrysene**	7	<0.1 – 1.1		B(a)P**	**	**
Dibenzo(a,h)anthracene**	7	<0.1 – 0.2		B(a)P**	**	**
Fluoranthene	7	<0.1 – 3.0		260	0	
Fluorene	7	<0.1		160	0	
Indeno(1,2,3-cd)pyrene**	7	<0.1 – 0.5		B(a)P**	**	**
Naphthalene	7	<0.1		0.68	0	
Pyrene	7	<0.1 – 2.5		560	0	
Phenanthrene	7	<0.1 – 1.6		92	0	
<b>Others</b>						
Phenol	7	<0.3		180	0	
TOC	7	0.1 – 0.9		3 w/w%	0	
Asbestos	6	NAD		Fibres present	0	

\*\* Assessed using benzo(a)pyrene as a surrogate marker

Table based on a Residential with Gardens end use.

US95 - 95<sup>th</sup> percentile estimate of the mean value; GAC -generic assessment criterion; NA - not applicable.

### *Metals and Metalloids*

No concentrations of metal or metalloid determinands exceeded the relevant GAC.

### *Other Inorganic Analytes*

No concentrations of inorganic determinands exceeded the relevant GAC.

### *Organics*

One sample has returned a concentration of **benzo(a)pyrene** marginally in excess of the chosen GAC.

In former industrialised areas and urban settings, the presence of slightly elevated background concentrations of PAHs (in particular benzo(a)pyrene) can be prevalent in shallow soils. This is particularly the case throughout much of the north-east of England, owing to a long history of atmospheric particulate fall out, for example from coal powered domestic hearths and steam powered industry, including railways, and the presence of coal and coaliferous material within soils naturally in the north-east, associated with Coal Measures strata, and glacial till derived from such source rocks.

The provenance of PAHs within that sample has been considered, based on a source signature double ratio plot. This method is carried out by comparison of the ratios of two pairs of PAHs; benzo(a)anthracene to chrysene, and fluoranthene to pyrene.

Based on the results of the double ratio plot, it would appear that the most likely source of the detected PAHs is from unburnt coal fragments. Although no coal fragments were observed within the material during excavation, it is reasonable to assume that some small fragments may not have been observed. The plot does not indicate a fuel, oil, or combustion (i.e. ash) source, and no evidence of such sources were observed within the material during excavation.

Coal derived PAHs are generally accepted to be less mobile and less of concern to human health than other sources i.e. petroleum hydrocarbons. As a consequence, whilst marginally exceeding the chosen GAC, the concentration is not considered indicative of a significant risk to human health, and is not considered further.

**Table 8.2 Summary of Total Soil Concentrations – Ash/ Ashy Clay Made Ground**

Determinand	No. of Samples Tested	Range of Results (mg/kg unless specified)	US95	GAC (5% SOM)	No. of Samples >GAC	Outliers
<b>Metals</b>						
Inorganic Arsenic	10	6.6 - 290	109.5	32	4	WS7, 0.3m
Cadmium	10	0.8 – 3.8		10	0	
Chromium (III)	10	19 – 88		3000	0	
Lead	10	34 - 410	283	200	5	None
Inorganic Mercury	10	<0.05 – 0.41		170	0	
Selenium	10	<0.5		350	0	
Copper	10	28 - 2300	1299	200	2	WS21, 0.8m WS7, 0.3m
Nickel	10	12 – 82		130	0	
Zinc	10	52 - 2200	1313	450	2	WS21, 0.8m
<b>Inorganic</b>						
pH	10	7.7 – 10.5		<5	0	
Total Sulphate	10	800 - 27,000		2400	3	
Water Sol. Sulphate	10	0.043 – 0.38		0.5g/l	0	
<b>Speciated PAH</b>						
Acenaphthene	10	<0.1 – 56.0		840	0	
Anthracene	10	<0.1 – 74.0		8200	0	
Acenaphthylene	10	<0.1 – 8.7		710	0	
Benzo(a)anthracene**	10	<0.1 – 170.0		B(a)P**	**	
Benzo(b)fluoranthene**	10	<0.1 – 140.0		B(a)P**	**	
Benzo(k)fluoranthene**	10	<0.1 – 68.0		B(a)P**	**	
Benzo(g,h,i)perylene**	10	<0.1 – 120.0		B(a)P**	**	
Benzo(a)pyrene**	10	<0.1 – 140.0	75.6	1.0	5	WS27A, 0.7m
Chrysene**	10	<0.1 – 170.0		B(a)P**	**	
Dibenzo(a,h)anthracene**	10	<0.1 – 45.0		B(a)P**	**	
Fluoranthene	10	<0.1 – 270.0		630	0	
Fluorene	10	<0.1 – 87.0		660	0	
Indeno(1,2,3-cd)pyrene**	10	<0.1 – 110.0		B(a)P**	**	
Naphthalene	10	<0.1 – 37.0	19.9	3.2	1	WS27A, 0.7m
Pyrene	10	<0.1 – 220.0		1500	0	
Phenanthrene	10	<0.1 – 260.0		330	0	
<b>Others</b>						
Phenol	10	<0.3		392	0	
TOC	10	0.2 – 6.5		3 w/w%	7	
Asbestos	5	NAD – Chrysotile		Fibres present	1	WS22, 1.3m
<b>TPH</b>						
Aliphatic EC 5-6	9	<0.01 – 0.04		47	0	
Aliphatic EC >6-8	9	<0.01		150	0	

Determinand	No. of Samples Tested	Range of Results (mg/kg unless specified)	US95	GAC (5% SOM)	No. of Samples >GAC	Outliers
Aliphatic EC >8-10	9	<0.01		42	0	
Aliphatic EC >10-12	9	<1.5		210	0	
Aliphatic EC >12-16	9	<1.2 – 16.0		1600	0	
Aliphatic EC >16-35	9	<4.9 – 417.0		62000	0	
Aromatic EC 5-7	9	<0.01		0.20	0	
Aromatic EC >7-8	9	<0.01		410	0	
Aromatic EC >8-10	9	<0.01		68	0	
Aromatic EC >10-12	9	<0.9		250	0	
Aromatic EC >12-16	9	<0.5 – 3.0		520	0	
Aromatic EC >16-21	9	<0.6 – 59.0		710	0	
Aromatic EC >21-35	9	<1.4 – 360.0		1200	0	

\*\* Assessed using benzo(a)pyrene as a surrogate marker

Table based on a Residential with Gardens end use.

US95 - 95<sup>th</sup> percentile estimate of the mean value; GAC -generic assessment criterion; NA - not applicable.

In addition to the testing detailed in the above table, four samples were also submitted to analysis for a suite of volatile organic compounds (VOCs). Concentrations of all VOC species analysed were found to be below the laboratory limit of detection.

### Metals and Metalloids

Four samples have returned concentrations of **arsenic** in excess of the GAC. Statistical analysis of all results obtained for this material type has identified a US95 value of 109.5mg/kg for arsenic, also considerably in excess of the GAC. Concentrations of arsenic throughout this soil type may therefore be considered to present a potential risk to end users.

Five samples have returned concentrations of **lead** in excess of the GAC. Statistical analysis of all results obtained for this material type has identified a US95 value of 283mg/kg, in excess of the GAC. Concentrations of lead throughout this soil type may therefore be considered to present a potential risk to end users.

Two samples have returned concentrations of **copper** in excess of the GAC, with a maximum recorded concentration of 2,300mg/kg. A US95 of 1299mg/kg has been derived for copper. However, the GAC used for copper has been derived based on potentially phytotoxic effects, based on the Sludge (use in Agriculture) Regulations (SI 1263/1989). The equivalent GAC value for human health is 2,300mg/kg. Concentrations of copper are therefore considered unlikely to present a potential risk to human health, but are likely to inhibit healthy vegetation growth within areas of landscaping and gardens.



Two samples, one of which also returned an elevated concentration of copper, as discussed above, have returned concentrations of **zinc** in excess of the GAC, with a maximum recorded concentration of 2,200mg/kg. A US95 of 1313mg/kg has been derived for zinc. As with copper, the GAC used for zinc has been derived based on potentially phytotoxic effects, based on the Sludge (use in Agriculture) Regulations (SI 1263/1989). The equivalent GAC value for human health is 3700mg/kg. Concentrations of zinc within this soil type are therefore considered unlikely to present a potential risk to human health, but are likely to inhibit healthy vegetation growth within areas of landscaping and gardens.

#### *Other Inorganic Analytes*

Three samples have returned concentrations of **total sulphate** in excess of the GAC. In the absence of any more appropriate human health guidance values, the GACs for this determinand is derived based on the potential for attack of buried concrete products. Sulphates are generally considered to be non-toxic to human health, and this determinand is unlikely to present a significant risk to human health.

One sample, recovered from a depth of 1.3m in WS22, toward the north-east of the site, has been identified to contain **chrysotile asbestos**, described by the laboratory as a bundle of fibres. Whilst other samples of similar material have not identified positive for the presence of asbestos, the potential for asbestos fibres elsewhere within the soils cannot be discounted. The presence of asbestos fibres within this soil type may therefore be considered to present a potential risk to human health.

#### *Organics*

Five samples have returned concentrations of **benzo(a)pyrene** in excess of the chosen GAC. Statistical analysis of all results obtained for this material type has identified a US95 value of 75.6mg/kg for benzo(a)pyrene, considerably exceeding the GAC. Concentrations of benzo(a)pyrene throughout this made ground type may therefore be considered to present a potential risk to end users. As this determinand is also used as a surrogate marker for seven other **genotoxic PAHs**, then those other genotoxic PAHs must also be considered to exceed the GAC in those samples, and may also be considered to present a potential risk to human health.

One sample has returned a concentration of **naphthalene** in excess of the GAC. Statistical analysis of all results obtained for this material type has identified a US95 value of 19.9mg/kg, also exceeding the GAC. It is noted that the individual sample elevated above the GAC, from WS27A,

comprises a statistical outlier i.e. ‘hotspot’. With the exception of that one sample, concentrations of naphthalene elsewhere within the ashy made ground do not exceed the GAC. However, as there is no visual or olfactory marker associated with the elevated concentration of naphthalene in that sample, the presence of other, presently unidentified ‘hotspots’ cannot be discounted, and the calculated US95 should be considered representative of the whole material. Concentrations of naphthalene throughout this soil type may therefore be considered to present a potential risk to human health.

Seven samples have returned concentrations of **TOC** exceeding the GAC. TOC is a measure of organic carbon within the material and is not a determinand that directly poses a risk to human health. These results are used to determine the classification of material for removal from site to a licensed disposal facility. The TOC is also used to derive the relevant SOM for the soils, necessary to derive an appropriate GAC for some organic determinands. TOC is therefore not considered further in respect of human health risk assessment.

**Table 8.3 Summary of Total Soil Concentrations – Relict Topsoil**

Determinand	No. of Samples Tested	Range of Results (mg/kg unless specified)	US95	GAC (2.5% SOM)	No. of Samples >GAC	Outliers
<b>Metals</b>						
Inorganic Arsenic	8	10 - 57	42.6	32	1	WS6, 0.6m
Cadmium	8	0.6 – 0.9		10	0	
Chromium (III)	8	24 – 38		3000	0	
Lead	8	56 – 120		200	0	
Inorganic Mercury	8	0.10 – 0.19		170	0	
Selenium	8	<0.5 – 0.7		350	0	
Copper	8	31 – 65		200	0	
Nickel	8	15 – 24		130	0	
Zinc	8	57 - 150		450	0	
<b>Inorganic</b>						
pH	8	7.4 – 8.8		<5	0	
Total Sulphate	8	600 - 3100		2400	1	WS27A, 1.4m
Water Sol. Sulphate	8	0.034 – 0.230		0.5g/l	0	
<b>Speciated PAH</b>						
Acenaphthene	8	<0.1		840	0	
Anthracene	8	<0.1		8200	0	
Acenaphthylene	8	<0.1		710	0	
Benzo(a)anthracene**	8	<0.1		B(a)P**	**	
Benzo(b)fluoranthene**	8	<0.1		B(a)P**	**	
Benzo(k)fluoranthene**	8	<0.1		B(a)P**	**	





Determinand	No. of Samples Tested	Range of Results (mg/kg unless specified)	US95	GAC (2.5% SOM)	No. of Samples >GAC	Outliers
Benzo(g,h,i)perylene**	8	<0.1		B(a)P**	**	
Benzo(a)pyrene**	8	<0.1		1.0	0	
Chrysene**	8	<0.1		B(a)P**	**	
Dibenzo(a,h)anthracene**	8	<0.1		B(a)P**	**	
Fluoranthene	8	<0.1		630	0	
Fluorene	8	<0.1		660	0	
Indeno(1,2,3-cd)pyrene**	8	<0.1		B(a)P**	**	
Naphthalene	8	<0.1		3.2	0	
Pyrene	8	<0.1 – 0.3		1500	0	
Phenanthrene	8	<0.1 – 0.4		330	0	
<b>Others</b>						
Phenol	8	<0.3		392	0	
TOC	8	1.8 – 3.4		3 w/w%	2	
Asbestos	3	NAD		Fibres present	0	

\*\* Assessed using benzo(a)pyrene as a surrogate marker

Table based on a Residential with Gardens end use.

US95 - 95<sup>th</sup> percentile estimate of the mean value; GAC -generic assessment criterion; NA - not applicable.

### Metals and Metalloids

One sample has returned a concentration of **arsenic** in excess of the GAC. Statistical analysis of all results obtained for this material type has identified a US95 value of 42.6mg/kg, also exceeding the GAC. It is noted that the individual sample elevated above the GAC, from WS6, comprises a statistical outlier i.e. ‘hotspot’. With the exception of that one sample, concentrations of arsenic elsewhere within the relict topsoil do not exceed the GAC. However, as there is no visual or olfactory marker associated with the elevated concentration of arsenic in that sample, the presence of other, presently unidentified ‘hotspots’ cannot be discounted, and the calculated US95 should be considered representative of the whole material. Concentrations of arsenic throughout this soil type may therefore be considered to present a potential risk to human health.

### *Other Inorganic Analytes*

One sample has returned a concentration of total sulphate in excess of the GAC. As previously discussed, the GAC for this determinand is derived based on the potential for attack of buried concrete products, and this determinand is unlikely to present a significant risk to human health. The concentration could, however, be indicative of a potential risk to concrete products.

### *Organics*

Two samples have returned concentrations of TOC exceeding the GAC. As previously discussed, TOC is not a determinand that directly poses a risk to human health, and this determinand is not considered further.

## 9. GROUND GAS

### 9.1. Monitoring Methodology

The gas monitoring was undertaken in accordance with the guidance given in CIRIA Report 151 'Interpreting Measurements of Gas in the Ground' (1995) and CIRIA C665.

In accordance with Tables 5.5a and 5.5b of CIRIA report C665, for a very low generation potential of source and high sensitivity end use, 6 gas monitoring visits have been undertaken over a 3 month period, from October to December 2014.

Monitoring was undertaken at atmospheric pressures ranging between 985mb and 1016mb. Owing to the long term atmospheric trend during the monitoring period, it was only possible to undertake one monitoring visit at an atmospheric pressure of less than 1000mb, although all but one of the visits were carried out at pressures of less than 1010mb. In addition, one monitoring visit was undertaken during a period of falling atmospheric pressure.

### 9.2. Results

No detectable concentrations of methane were detected in any of the monitoring wells during any of the monitoring visits.

A maximum steady state concentration of carbon dioxide of 2.5%v/v was recorded, in WS27A on 15 December 2014. It is noted that this greatest concentration was recorded during a period of rising atmospheric pressure. Lower concentrations of carbon dioxide were recorded in all of the monitoring wells during the monitoring period.

Depleted oxygen concentrations (<18%v/v) were recorded in WS27A on five of the six visits, with one visit recording a concentration at 18.0%v/v. Depleted oxygen concentrations were also detected sporadically in WS19 and WS23. A minimum oxygen concentration of 9.5%v/v was recorded, in WS27A, on 15 October 2014.

No detectable concentrations of carbon monoxide or hydrogen sulphide were recorded in any of the wells during any of the monitoring visits.

A maximum positive peak gas flow, and steady state gas flow, rate of 0.8l/hr was recorded, in WS29 on 17 November 2014, also during a period of rising atmospheric pressure. Lower flow rates were also recorded in other monitoring wells.

A full copy of the ground gas monitoring records is enclosed within Appendix G of this report.

### 9.3. Risk Assessment

This generic quantitative gas risk assessment has been prepared in general accordance with CIRIA Document C665, 2007, “Assessing Risks Posed by Hazardous Ground Gases to Buildings”, and the NHBC document “Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present” 4th Edition, March 2007.

In preparing this risk assessment, it is understood that the development will comprise low rise residential properties. For the purposes of this gas risk assessment, the proposed development is considered to be most appropriately characterised as ‘low rise housing with a ventilated underfloor void (minimum 150mm)’ as defined by CIRIA C665 Situation B.

In accordance with guidance given in CIRIA C665, in the absence of any detectable concentrations of methane, a Gas Screening Value (GSV) has been derived based on the limit of detection of the monitoring equipment. An assumed concentration of 0.1%v/v has therefore been used.

A worst case Gas Screening Value (GSV) of 0.0008l/hr can be derived for methane.

The GSV for carbon dioxide has been derived using the maximum detected concentration of 2.5% and the maximum steady state flow rate of 0.8l/hr. A worst case GSV of 0.02l/hr can be derived for carbon dioxide.

On the basis of the GSVs and detected concentrations of both carbon dioxide and methane, the site may be classified as falling within Traffic Light Classification “Green” as defined in Table 8.7 of CIRIA C665 and as Characteristic Situation CS1, as defined in Table 8.5 of CIRIA C665.

These classifications indicate a negligible gas regime, for which specific gas protection measures are not considered necessary.

Notwithstanding the above, the depleted oxygen concentrations may also be indicative of a high risk to groundworkers working within excavations, or other underground spaces.

It is recommended that controls are adopted for all areas of the site, in order to ensure all works in which workers will access or enter underground structures, chambers, culverts or similar, or where man entry into excavations is possible. It is considered such measures are necessary to ensure such works are in strict adherence with confined spaces regulations in place at the time of the works.

Notwithstanding the requirements of the above regulations, gas monitoring of all excavations and/or underground spaces should be carried out prior to commencement of works requiring man entry into such areas, with continuous monitoring throughout the period of working. Gas monitoring by way of example should include as a minimum: methane, carbon dioxide, carbon monoxide, and oxygen. Gas monitor(s) shall emit both audible and visual warnings. Alarm levels should be set with due regard to the relevant Occupational Exposure Limits given in EH40, 2005, and for low oxygen concentrations. If any anomalous or significantly elevated / depleted gas concentrations are detected, or in the event of a gas alarm sounding, all personnel should immediately evacuate the area and seek the advice of an environmental consultant.

## 10. REVISED CONCEPTUAL MODEL AND GENERIC QUANTITATIVE RISK ASSESSMENT OF POLLUTANT LINKAGES

The preliminary combined conceptual site model and conceptual exposure model, developed from the desk study information and presented in Section 5, has been revised in light of the ground investigation and the chemical analysis results presented above.

The revised conceptual model has been developed for the proposed future land use (residential with gardens). This summarises the understanding of surface and sub-surface features, the potential contaminant sources, transport pathways and receptors.

The revised conceptual model is presented in schematic form in Appendix A, Drawing No. C6149/04.

### 10.1. Summary of Identified Pollutant Linkages

In summary, the revised CSM has identified the following potential pollutant linkages which could result in an unacceptable risk to the proposed end-use, denoted as a moderate or higher significance of potential pollutant linkage on the CSM:

- Direct and indirect ingestion, inhalation and dermal contact with arsenic, lead, benzo(a)pyrene and other genotoxic PAHs and naphthalene in ashy made ground presenting a potential risk to site end users and construction/ maintenance workers.
- Direct and indirect ingestion, inhalation and dermal contact with arsenic in relict topsoil presenting a potential risk to site end users and construction/ maintenance workers. The risk to end users from this stratum is considered to be relatively low owing to the depth at which this soil type was encountered. However, disturbance of soils during development resulting in an increased risk cannot be fully discounted.
- Plant uptake of phytotoxic copper and zinc within ashy made ground presenting a potential risk to areas of landscaping and gardens.
- Direct contact of plastic products e.g. water supply pipes, with PAHs in ashy made ground present a risk to the built environment.
- Inhalation of fugitive dusts associated with asbestos products within the fabric of existing buildings, and locally from within the ashy made ground presenting a potential risk to site

end users and demolition workers and possibly also to users of adjacent land (assuming uncontrolled demolition).

- Reduced oxygen concentrations in soils presenting a potential risk to construction workers entering below ground confined spaces and excavations.

## **11. CONCLUSIONS AND RECOMMENDATIONS**

### **11.1. General**

This geoenvironmental appraisal has been performed for land off Glen Street, Hebburn, South Tyneside.

It has been assumed in the production of this report that the site is to be developed for a residential with gardens end use. In addition, it has been assumed that ground levels will not change significantly from those described in this report. If this is not the case, then amendments to the interpretation and conclusions in this report may be required.

### **11.2. Flood Risk**

The site is not located in an area recorded by the EA to be at risk of flooding from rivers or the sea.

### **11.3. Geotechnical**

#### **Mining and Quarrying**

The Coal Authority holds no records of shallow mineworkings beneath the site, although it is noted that the CA believe coal is present at or near to rockhead, which may have been worked historically.

The intrusive investigation has identified the presence of a thin (0.2m to 0.5m, typically 0.4m or less) coal seam at depths of 0.7m to 4.8m below rockhead, and a subjacent coal seam up to 1.6m thick at depths of between 3.4m and 8.6m below rockhead. No other underlying seams were encountered, with boreholes extending up to 21.9m below rockhead (38m below ground level).

Only one incidence of loss of flush and soft ground below rockhead was recorded in the 21 No. boreholes formed. That anomalous ground condition is at an elevation approximately commensurate with the upper, thin coal seam. However, with cognisance to the findings of all other boreholes formed across the site, it is considered extremely unlikely that this is indicative of localised workings in a coal seam typically 0.3m to 0.4m thick. The soft ground was proven to be underlain by at least 1m of solid, intact strata, and is therefore also considered very unlikely to be associated with upward migration of a void within the underlying seam of coal, which, in turn, has also been proven to be unworked in all 18 No. boreholes in which it was encountered. The soft



ground observed is therefore attributed to a localised area of naturally fractured or excessively weathered strata.

No other evidence of potential workings (i.e. voids, broken or soft ground, or loss of drilling flush) was observed in the other 20 No. boreholes formed within the site. Consequently, the risk of surface instability resulting from historical shallow mineworkings is considered to be low.

No mine entries are known to exist on site although the possibility of encountering unrecorded mine entries can never be completely discounted. If a mine entry is suspected then advice should be immediately sourced from a suitably qualified consultant.

No quarrying activities are known to have taken place on site.

## **Foundations**

The following discussion is given on the understanding that the site is to be developed with standard house types designed by Gleeson, in which structural loads are understood to be relatively light i.e. in the order of 80kN/m run. In addition, the following comments are based on the assumption that ground levels will not change significantly prior to development.

The investigation has identified made ground to depths of between 0.6m and 2.1m and locally, particularly within the north-east, containing buried obstructions which are considered likely to be associated with former building floor slabs and foundations. The made ground is underlain predominantly by firm and stiff medium and high strength clays, although these are locally mantled by approximately 0.3m of soft or very soft, low strength clays, which extend very locally within the centre of the site, to a depth of 2.6m bgl. Cohesive strata have a characteristic minimum undrained shear strength of 45kN/m<sup>2</sup> at likely foundation depth across the site (1.0m or greater), and increasing with depth.

Made ground in its current condition is considered unsuitable as a bearing stratum using conventional shallow spread foundations, due to the anticipated low bearing capacity characteristics and the potential for excessive total and differential settlements. Foundations will therefore be required to extend through made ground to bear onto underlying natural strata of sufficient strength. In addition, foundations should be taken below a line drawn up at 45° from the base of any existing or proposed services. Foundations should also be taken below the base of any previous existing structures / existing structures, these are likely to be significant in number and extent. If relict foundations, floor slabs or other hard surfaces are encountered, then such structures should be broken out beneath the footprint of proposed foundations, and foundations

should extend to bear onto underlying natural soil of suitable strength. This may well require overdeepening of foundations, locally significantly.

The clay soils on this site have been found to have low and medium volume change potential in accordance with NHBC Standards Chapter 4.2. In view of this, foundations placed into natural in-situ clay soils should be a minimum of 900mm deep to mitigate seasonal variation in moisture content. Foundations should be locally deepened within the zone of influence of existing or proposed trees.

It is considered that the most appropriate and cost effective foundation solution, for the anticipated low rise residential development, is the use of spread foundations such as strip or trench fill footings, taken down through any made ground and soft, low strength clays into the underlying medium or higher strength glacial till.

Currently it is anticipated that the average foundation depth (away from any trees) across the site will be in the order of 1.5m to 3.6m allowing for made ground, soft clays, expected obstructions and placement of a capping layer (see below). Clearly there will be areas where foundations are shallower and deeper than this and these depths should be taken as an approximate guide. Due to the possibility of deep structures it would be prudent to allow for 10% of the site to be piled at this stage.

Based upon Eurocode 7 compliant calculations, a 600mm wide strip foundation bearing onto cohesive natural soils of at least medium strength, at a depth of 900mm bgl could support a line load of up to 60kN per linear metre. A 900mm wide foundation of similar dimensions placed onto such strata at a depth of 900mm, could support a line load of up to 80kN/m run.

Where foundations are required to be extended in depth e.g. to penetrate deeper areas of made ground and/ or lower strength soils, then a 600mm wide strip foundation bearing onto cohesive soils of at least medium strength, at a depth of at least 2.0m, could support a line load of up to 80kN/m run.

Taking account the inherent overconsolidated nature of glacial till, it is considered that the application of such a line load would induce long term consolidation settlement of 25mm or less.

All foundations should be taken below a line drawn up at 45° from the base of any existing or proposed services. In addition, whilst not anticipated based upon the findings of the intrusive investigation, if any former basements or other deep structures are encountered during demolition or groundworks, alternative foundation solutions may be required in such affected areas.

**It is recommended that a plot specific foundation schedule is prepared to enable detailed design of individual foundations for the exact line loads anticipated within each plot.**

### **Floor slabs**

In accordance with NHBC Standards 2008 (Chapters 4.2, 4.6 and 5.1), suspended ground floor slabs are required in the following situations:

- Made Ground greater than 600mm thick.
- Where soil swelling may occur.
- Where vibratory ground improvement has been carried out.
- Where the ground has insufficient bearing capacity.

Made ground is typically in excess of 600mm thick, and allowance should be made for the use of suspended floor slabs.

### **Sulphate Attack**

Based on the samples tested, a Design Sulphate Class of DS-1 and an ACEC Class of AC-1 may be adopted for buried concrete structures.

### **Groundworks, Excavation Stability and Groundwater Dewatering**

Excavations into the underlying made ground and natural soils should generally be within the capacity of traditional plant. However, relict structures associated with numerous phases of previous development have been identified within the site. Where encountered, relict structures are likely to require the assistance of hydraulic breakers for removal.

Excavations into existing made ground and the underlying natural soils should be assumed to be unstable. No man entry into unsupported excavations should be allowed without an appropriate risk assessment. Reference to CIRIA report 97 (1983) should be made to establish suitable means of support or battering of excavation sides.

Based on the results of this investigation, groundwater ingress into shallow (i.e. <3m) excavations is anticipated to be very limited in volume, although some ingress should be anticipated. Any groundwater ingress which does occur into such excavations is expected to be adequately controlled via pumping from localised sumps within excavations.

It is recommended that an adequate drainage system for surface water be installed by a competent contractor in order to prevent surface water ponding or collecting both during and post construction, as this may lead to deterioration of the founding stratum.

It is recommended that, in order to reduce the possibility of softening or swelling of cohesive soils at the base of foundation trenches as a result of exposure to, for example rain or groundwater, it should be suitably blinded with concrete. This requirement is only required if the foundation concrete is not poured immediately following excavation of the foundation trench.

## **Pavements and Highways**

Untreated made ground across the site should be assumed to have a CBR value of <2.5% unless proven otherwise via in situ testing. Highways Agency document HD25 Interim Advice Note 73/06 states that where a subgrade has a CBR value lower than 2.5%, it is considered unsuitable support for a pavement foundation since it would tend to deform under construction traffic, and must be improved.

It is recommended that made ground to a depth of at least 1.0m below subgrade level is excavated, sorted and classified in accordance with Series 600 (Earthworks) of the Highways Agency “Specification for Highways Works”. Following the above, any suitable material which can be used as part of highway construction shall be compacted in accordance with the aforementioned earthworks specification.

In the unlikely event that natural cohesive soils are present at proposed formation depth, then for preliminary design purposes, based on Atterberg Limit determinations obtained for glacial till encountered on this site, Highways Agency document HD25 Interim Advice Note 73/06 Revision 1 (2009) indicates that a CBR value of 3% may be used for the glacial till, for construction in “average” conditions assuming a ‘thin’ layered construction (300mm subgrade). The subgrade is however, expected to deteriorate on exposure particularly to rain or groundwater.

Notwithstanding the above, it is recommended that all road design be discussed with the relevant local authority, particularly if highways are to be subject to a Section 38 Agreement.

### **11.4. Asbestos-Containing Materials**

No visual evidence of asbestos containing materials was observed within the soils encountered during this investigation, although it is noted that bundles of chrysotile fibres were encountered at a depth of 1.3m within ashy fill at one location.

It is anticipated that asbestos sheeting and other asbestos containing products will be present within the fabric of the existing buildings on site.

The presence of asbestos sheeting used for example as shuttering, or in fill below floor slabs locally also cannot be entirely discounted.

A Refurbishment / Demolition (former Type 3) asbestos survey should be undertaken by an appropriate consultant prior to commencement of any site clearance or demolition. The results of that survey should be acted upon, and all asbestos products removed from the buildings prior to demolition in accordance with current guidance at the time of the works.

It is recommended that all demolition contractors and groundworkers are advised to maintain a 'watching brief' for the possible presence of unrecorded and/ or unidentified asbestos or asbestos products during site works. In the event any asbestos, or suspected asbestos is identified, then works should cease and advice sought from a suitably qualified consultant.

### **11.5. Soakaways**

This investigation has proven the presence of made ground overlying cohesive glacial till. With cognisance to the cohesive nature of the natural soils, which are present at likely soakaway construction depth, it is expected that they will have relatively low permeability characteristics. Consequently, the use of soakaways is unlikely to be viable at this site.

### **11.6. Soil and Groundwater Contamination**

#### **Risk Evaluation for the Proposed Land Use (residential with gardens)**

The revised CSM has identified potential pollutant linkages which could result in an unacceptable risk to end users and construction workers, associated with concentrations of metals and asbestos. Dependant upon the methods of work adopted during preparatory and construction workers, the risk associated with asbestos could also be extended to members of the public adjacent to the site.

#### *Human Health Receptors*

Elevated concentrations of arsenic, lead and PAHs (and very locally asbestos fibres) have been identified in ashy soils across the site. In addition, elevated concentrations of arsenic have been identified locally within underlying relict topsoil. These elevated concentrations are considered to present potential risk to site end users and construction workers.

As a consequence, those soils are not considered suitable to remain at shallow depth within residential gardens or areas of landscaping and remedial action will be required to break potential pollutant linkages. Consideration will also need to be taken in respect of working practices and the protection of site workers from such soils.

It is however noted that in some areas, particularly within the north of the site, the ashy soils and relict topsoil are already at significant depth below existing ground level, and only limited additional remedial action may be required to adequately break pollutant linkages within those areas.

### *Controlled Waters Receptors*

No significant migratory pathways, or nearby receptors have been identified, and there is no perceived active pollutant linkage. The risks to controlled waters are therefore considered to be negligible.

### *Landscaping/ gardens*

Elevated concentrations of copper and zinc within the ashy soils across the site are considered likely to inhibit the health growth of vegetation. Those soils are also noted to present a potential risk to human health, and any remedial action required to break pollutant linkages to end users will also act to break any linkages associated with phytotoxic metals.

### *Ecological Receptors*

No potential pollutant linkages to ecological receptors have been identified for the site.

### *Utilities*

It is recommended that the results of the chemical testing, details of proposed remedial works and subsequent validation of such works are provided to the appropriate utility companies to determine the necessity for service protection.

With cognisance to the proven presence of PAHs, it is likely that utility suppliers may require the upgrading of buried service pipes.

### *Construction and Maintenance Workers*

Contamination may pose a short-term (acute) or long-term (chronic) risk to workers during construction and maintenance. The potential risks must be specifically assessed as part of the

health and safety evaluation for the works to be performed in accordance with prevailing legislation. Site practices must conform to the specific legislative requirements and follow appropriate guidance (e.g., HSE, 1991; CIRIA, 1996).

On the basis of the results obtained, the revised conceptual site model confirms potential moderate to high risks to construction workers from metals and dispersed asbestos fibres in the ground.

However, the risks can be readily adequately mitigated by appropriate PPE and hygiene precautions and good working and soil management practices. It is recommended that procedures outlined in the HSE document “Protection of Workers and the General Public during Remediation of Contaminated Land” be followed. There will be a requirement to comply with the COSHH (Control of Substances Hazardous to Health) Regulations and the CDM (Construction Design and Management 2007) Regulations during any works.

This report should be forwarded to any organisations undertaking groundworks in order for them to assess the risk to their personnel.

### **Outline Remediation Requirements**

In view of the thickness of made ground beneath the site, excavation and off-site disposal of the entirety of the impacted ashy soils and relict topsoil is not considered to be economically viable, or sustainable. The most effective remedial action is therefore considered to be the construction of a clean cover soil capping layer within areas of gardens and landscaping which will break all pollutant linkages between the end users and the identified contamination.

It is recommended that all garden and landscaped areas are capped, with a minimum 600mm of cover soils overlying the impacted ashy soils and relict topsoil. It is suggested that this includes a minimum 500mm subsoil and 100mm topsoil horizon at the surface, in accordance with NHBC Standards Chapter 9, although an increased thickness of topsoil, and associated commensurate reduction in subsoil could be considered at the discretion of Gleeson. Due to the localised presence of asbestos fibres within the ashy made ground it is further recommended that a layer of geotextile separator membrane (such as CMS90) be placed at the base of the capping layer to act as a no dig layer for future residents.

In respect of the subsoil, it is considered that some portion of the capping horizon could include the shallow, granular soils (the Dolomitic limestone hardcore) already present across much of the site and in which no elevated concentrations of contaminants have been identified by this investigation. Locally, those granular soils have been proven to be in excess of 500mm thick, although this is not

the case throughout the whole site. However, if this option is considered it will have to be ensured that there is no cross contamination from the underlying ashy made ground. As an alternative, these materials could be ‘won’ and used within the construction works themselves e.g. under drives, highways.

Ground levels on this site will present problems in terms of the proposed capping solution. The site boundaries are tied into existing features and in places are already elevated above surrounding ground levels. Demolition of the existing buildings and processing of materials will also create additional fill materials on site. Unless retaining structures are being considered it is probable that there will be surplus materials and disposal off site may be required. Certainly it is unlikely that there will be the potential for accommodate arisings from foundations, sewers etc. on site unless the hardcore and recycled demolition materials are removed. This will require careful consideration.

The above recommendations comprise a general outline of one possible remedial option. A remediation strategy report should be prepared following discussion with Gleeson and with the regulatory authorities prior to commencement of remediation and/ or preparatory works.

It is possible that other contamination will be encountered on site during preparatory earthworks, particularly within the area of farm buildings where very localised variations in shallow ground conditions could be anticipated. If any areas of noxious, odorous, brightly coloured, liquid, fibrous etc. contamination are identified, further advice should be sought from a suitably qualified consultant.

### **11.7. Ground Gas**

On the basis of the recorded flow rates and gas concentrations detected to date, the site falls within the NHBC traffic light classification “Green” and Characteristic Situation 1, indicating a negligible gas regime, for which specific gas protection measures are not considered necessary, assuming development in accordance with Situation B as outlined in CIRIA C665.

Radon protection measures are not required for the proposed development on this site.

Notwithstanding, in light of the depleted oxygen concentrations detected, it is recommended that controls are adopted for all areas of the site, in order to ensure all works in which workers will access or enter underground structures, chambers, culverts or similar, or where man entry into excavations may occur. It is considered such measures are necessary to ensure such works are in strict adherence with confined spaces regulations in place at the time of the works.



Gas monitoring of all excavations and/or underground spaces should be carried out prior to commencement of works, with continuous monitoring throughout the period of working. Gas monitoring by way of example should include as a minimum: methane, carbon dioxide, carbon monoxide, and oxygen. Gas monitor(s) shall emit both audible and visual warnings. Alarm levels should be set with due regard to the relevant Occupational Exposure Limits given in EH40, 2005, and for low oxygen concentrations. If any anomalous or significantly elevated / depleted gas concentrations are detected, or in the event of a gas alarm sounding, all personnel should immediately evacuate the area and seek the advice of an environmental consultant.

### **11.8. Invasive and Protected Species**

A suspected stand of Japanese Knotweed (JKW) was observed in the northern corner of the site. It is recommended that this tentative identification is confirmed by a qualified ecological consultant.

JKW is a non-native invasive species which is capable of propagating profusely; out-competing native species and causing significant damage to property including buried services, hard surfacing and above ground structures. The species can regenerate from very small fragments of vegetation and from rhizomes/ roots, the latter of which can extend within soils up to 7m distance from the nearest above ground growth. The species is governed by UK legislation under which owners of land containing JKW must not allow invasive plants to spread onto adjacent land, nor to plant or encourage the spread of invasive plants outside of the property. This can include the movement of contaminated soil, or incorrectly handling and transporting contaminated material and plant cuttings.

In the event that the tentative identification of this species is confirmed, and if timescales allow, it is recommended that treatment with a suitable herbicide, applied by an appropriately experienced and licenced contractor, to inhibit the further spread of the plant is commenced at the earliest opportunity.

If timescales don't allow this method of treatment, careful excavation of all soils impacted by JKW rhizomes and appropriate encapsulation or disposal of that soil to a licenced disposal facility, together with a possible requirement for a root barrier to prevent reinfestation of the site should rhizomes be found to extend beyond the site boundary will be required. Such solutions will require rigorous controls on site and should only be undertaken by a competent contractor with previous experience of such works, under the supervision and advice of a qualified and experienced invasive species specialist.

No intrusive works should commence on site until further advice is sought from such a specialist, and all areas of soil potentially infested with JKW have been delineated and demarked on site.

It is expected that the presence of confirmed JKW at this location will also influence and impact upon the demolition of the adjacent small stores buildings, and breaking out of associated hard surfaces.

No other evidence of invasive plants or other protected or sensitive plant species was observed by the geoenvironmental engineer at the time of the fieldworks. However, it is recommended that the absence of such species is confirmed or otherwise by a qualified consultant ecologist.

### **11.9. Disposal of Soils**

Any materials removed from site should be undertaken in accordance with the Duty of Care Regulations 1991. There will also be a requirement to classify the waste in accordance with the European Waste Catalogue. The waste should also be subject to Waste Acceptance Criteria (WAC) testing. In light of the new regulations it is recommended that discussion with landfill operators takes place at an early stage.

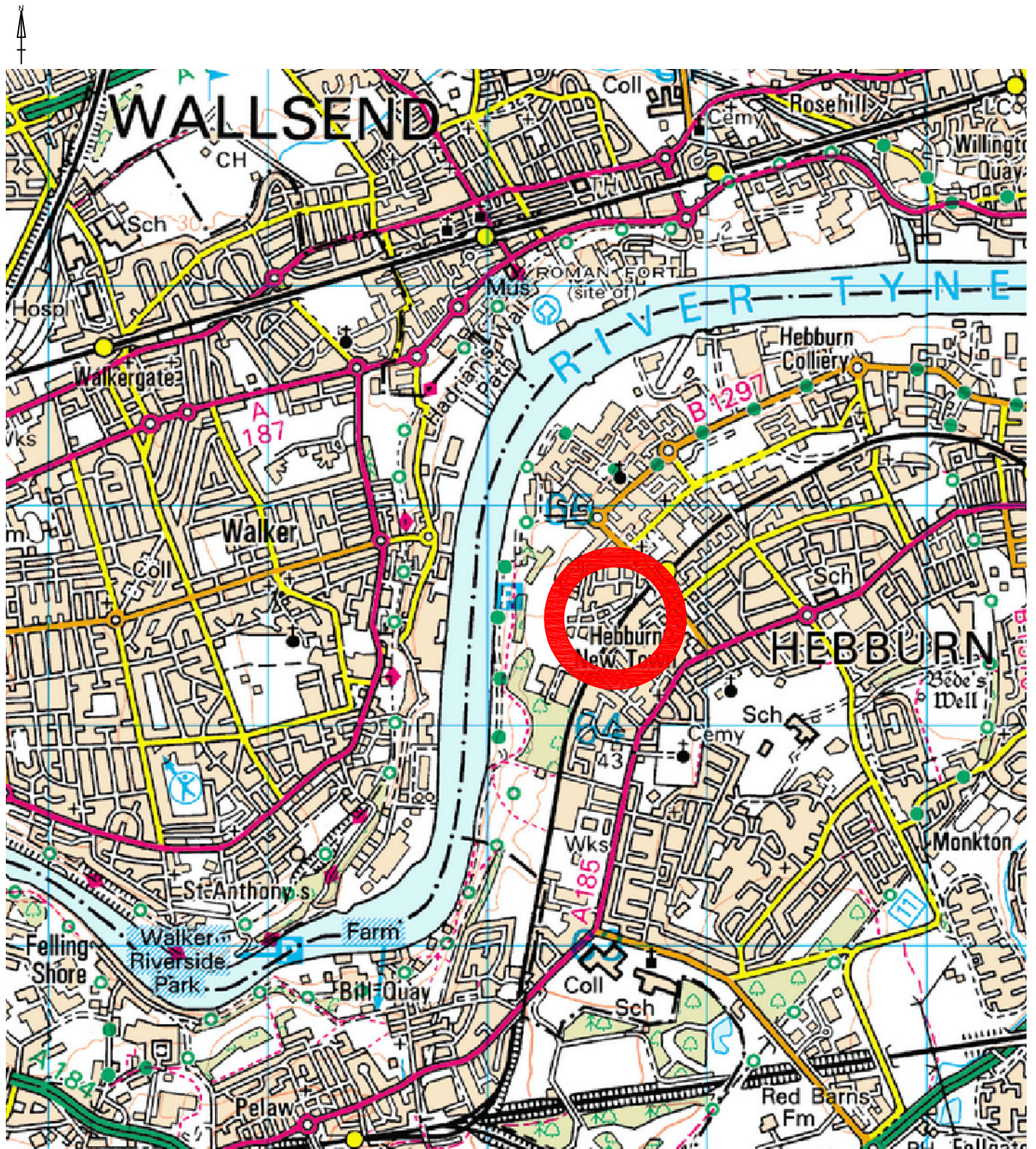
## **12. REGULATORY APPROVALS**

The conclusions and recommendations presented above are considered reasonable based on the findings of the site investigation. However, these cannot be guaranteed to gain regulatory approval and, therefore, the report should be passed to the appropriate regulatory authorities and/or other organisations for their comment and approval prior to undertaking any works on site.





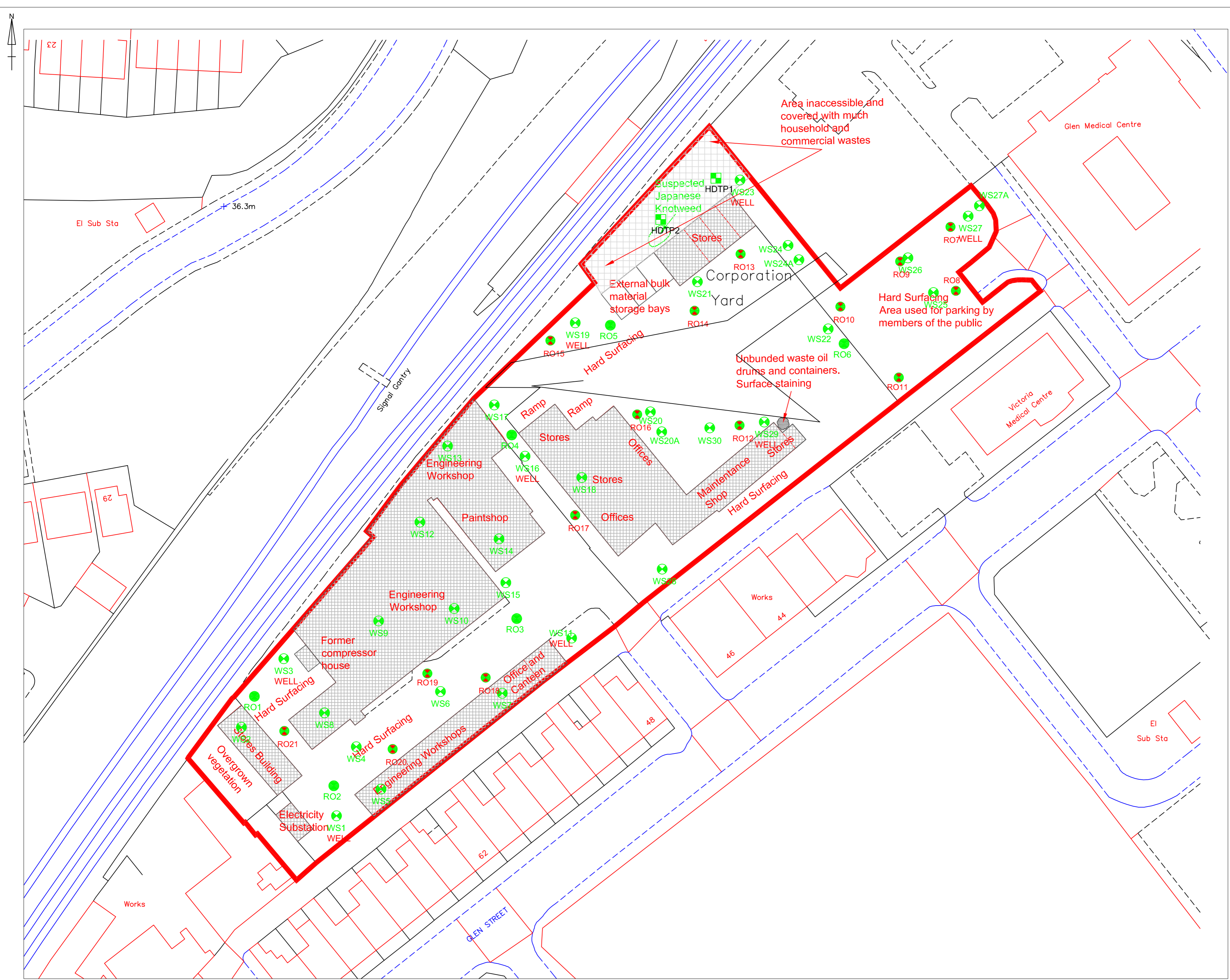
APPENDIX A

FIGURES AND DRAWINGS



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NOTES	REVISION		CLIENT	DRAWING NO.	REVISION NO.	
	 Site Location	D				For information
A		>>				
B		>>				
C		>>				
D		>>	SITE	DRAWN BY	APPROVED BY	
	SIRIUS GEOTECHNICAL & ENVIRONMENTAL Russel House, Mill Lane, Langley Moor Durham DH7 8HJ <a href="http://www.thissitegroup.com">www.thissitegroup.com</a> TEL: 0191 378 9972 FAX: 0191 378 1537		Glen Street, Hebburn, South Tyneside	DT	APC	
			DRAWING TITLE	DATE	SCALE	
			Site Location Plan	Sept 2014	1:25,000	A4



**NOTES**

- Site Boundary
- WS Window Sample Borehole
- RO Rotary Openhole Borehole (October 2014)
- HDTP Hand Dug Trial Pit
- RO Rotary Openhole Borehole (December 2014)

**REVISION**

0	>>
A	Additional Rotary locations added
B	>>
C	>>
D	>>

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 Russel House,  
 Mill Lane,  
 Langley Moor  
 Durham DH7 8HJ  
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 TEL: 0191 378 9972  
 FAX: 0191 378 1537



**CLIENT**

**Gleeson Developments Ltd**

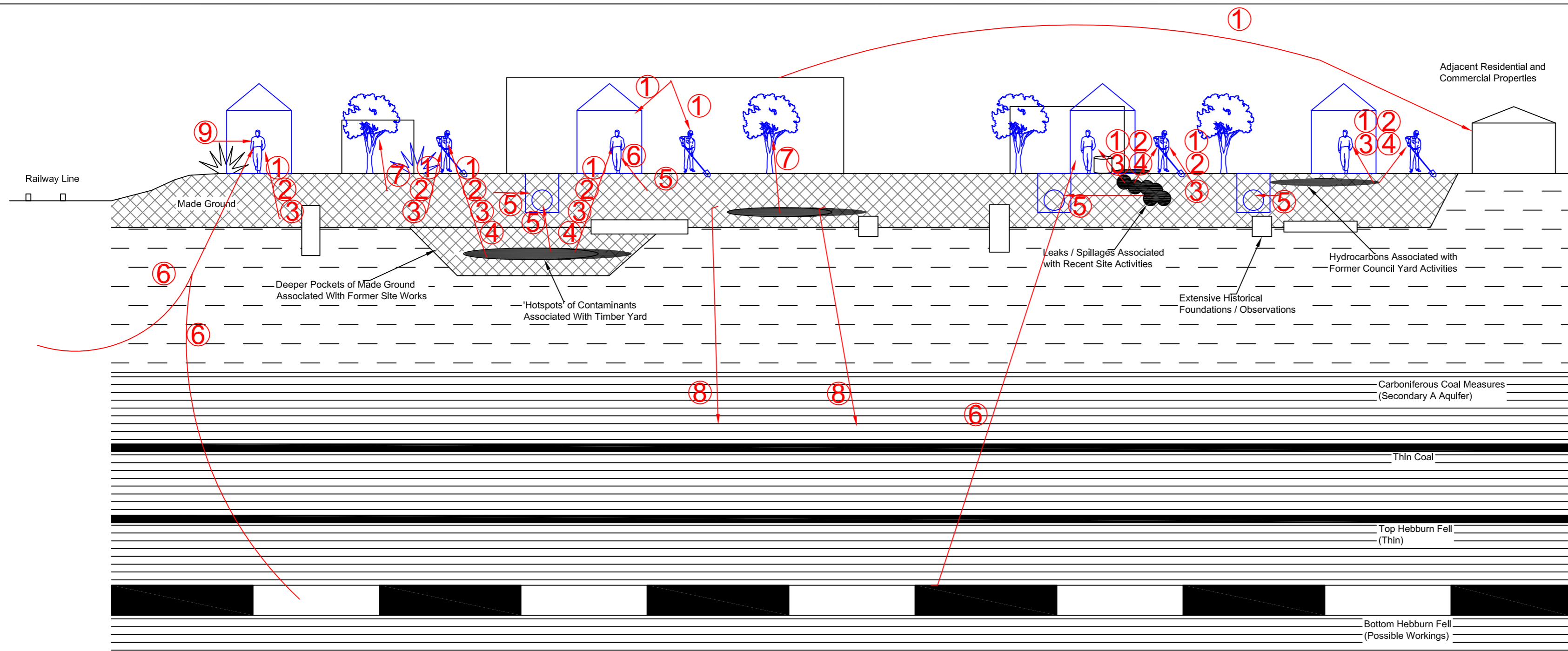
**SITE**

**Glen Street  
 Hebburn  
 South Tyneside**

**DRAWING TITLE**

**Exploratory Hole  
 Location Plan**

DRAWING NO. C6149/02	REVISION NO. A
DRAWN BY DT	APPROVED BY APC
DATE 24.07.14	SCALE 1:500
	PAPER SIZE A2



NOTES

Contaminant source	Contaminant pathways	Potential receptors	Likelihood of Significant Pollutant Linkage
Elevated metal, organic and inorganic contaminants including asbestos in made ground across site	1 Direct / indirect ingestion	Site end users Construction & maintenance workers	High Moderate
	2 Inhalation of contaminated particles / dust	Site end users Construction & maintenance workers	High High
	3 Dermal contact	Site end users. Construction & maintenance workers	Moderate to high High
	5 Attack on buried structures and services	Built environment	Moderate
	6 Generation of hazardous gases and accumulation in indoor spaces	Site end users Construction & maintenance workers	Moderate Low to moderate
	7 Plant Uptake	Soft landscaping/ gardens	High
	8 Leaching to controlled waters.	Controlled waters – underlying Secondary Aquifer	Low
	Localised 'hotspots' of hydrocarbons within made ground associated with former site uses e.g. creosote from Timber Yard and fuel/ lubricating oil from Council Yard and recent site activities.	1 Direct / indirect ingestion	Site end users Construction & maintenance workers
2 Inhalation of contaminated particles / dust		Site end users Construction & maintenance workers	High High
3 Dermal contact		Site end users Construction & maintenance workers	Moderate to high High
4 Inhalation of vapours		Site end users Construction & maintenance workers	Moderate to high Moderate to high
5 Attack on buried structures and services		Built environment	High
7 Plant Uptake		Soft landscaping/ gardens	High
8 Leaching/ direct flow to controlled waters		Controlled waters – underlying Secondary Aquifer	Moderate
Asbestos containing materials within existing buildings		2 Inhalation of contaminated particles / dust	Site end users
	Construction & maintenance workers		High
Generation of hazardous gases from shallow mineworkings and/ or off site landfills / infilled ground.	4 Migration through permeable strata	Adjacent land users	Low to moderate
		Site end users	Moderate to high
		Construction & maintenance workers	Moderate
Invasive plant species (Japanese Knotweed)	9 Physical damage to structures	Built environment	High

REVISION	
0	>>
A	>>
B	>>
C	>>
D	>>

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 TEL: 0113 264 9960  
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**Gleeson Developments Ltd**

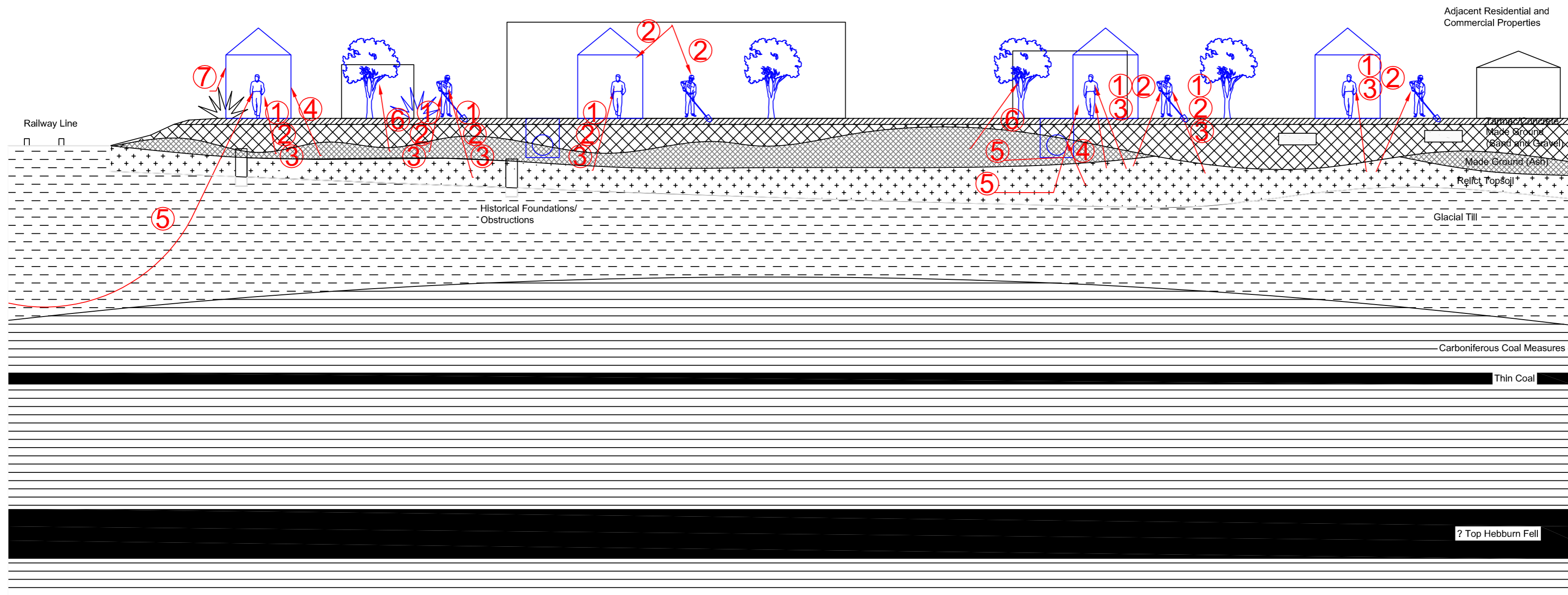
SITE  
**Glen Street,  
Hebburn**

DRAWING TITLE  
**Preliminary Conceptual  
Site Model**

DRAWING NO. C6149/03	REVISION NO. 0
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DRAWN BY DT	APPROVED BY APC
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DATE Oct 2014	SCALE NTS	PAPER SIZE A2
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NOTES

Contaminant source	Contaminant pathways	Potential receptors	Likelihood of Significant Pollutant Linkage
Elevated metals, PAHs and asbestos in ashy made ground	1 Direct / indirect ingestion	Site end users Construction & maintenance workers	Moderate to high Moderate to high
	2 Inhalation of contaminated particles / dust	Site end users Construction & maintenance workers	Moderate High
	3 Dermal contact	Site end users. Construction & maintenance workers	Moderate to high High
	4 Attack on buried structures and services	Built environment	Low (concrete) High (plastics)
	5 Generation of hazardous gases and accumulation in indoor spaces	Site end users Construction & maintenance workers	Low to moderate (to be confirmed) Low (to be confirmed)
	6 Plant Uptake	Soft landscaping/ gardens	High
Elevated arsenic in relict topsoil	1 Direct / indirect ingestion	Site end users Construction & maintenance workers	Moderate High
	2 Inhalation of contaminated particles / dust	Site end users Construction & maintenance workers	Moderate High
	3 Dermal contact	Site end users Construction & maintenance workers	Moderate High
Asbestos containing materials within existing buildings	2 Inhalation of contaminated particles / dust	Site end users	High
		Construction & maintenance workers	High
		Adjacent land users	Low to moderate
Generation of hazardous gases/ depleted oxygen concentrations from off site landfills / infilled ground.	5 Migration through permeable strata	Site end users	Low
		Construction & maintenance workers	Low to moderate
Invasive plant species (Japanese Knotweed)	7 Physical damage to structures	Built environment	High

REVISION

0	>>
A	Updated following second phase of drilling
B	>>
C	>>
D	>>

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 TEL: 0113 264 9960  
 FAX: 0113 264 9962



CLIENT

**Gleeson Developments Ltd**

SITE

**Glen Street,  
Hebburn**

DRAWING TITLE

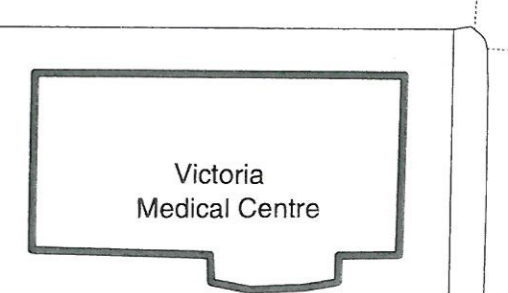
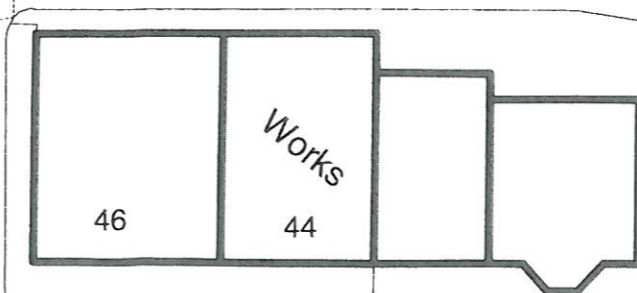
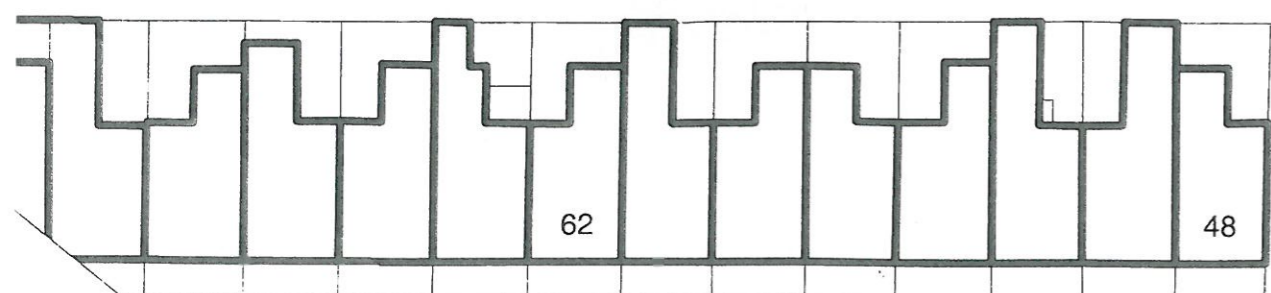
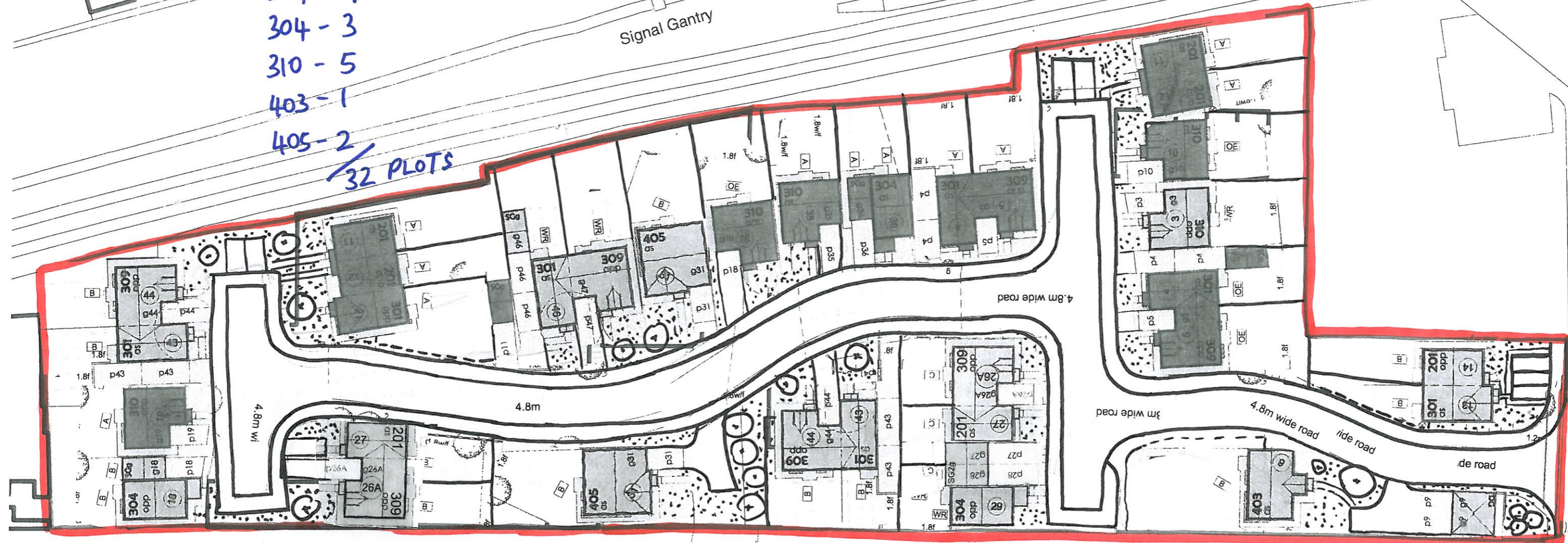
**Revised Conceptual  
Site Model**

DRAWING NO. C6149/04	REVISION NO. A
DRAWN BY DT	APPROVED BY APC
DATE Oct 2014	SCALE NTS
	PAPER SIZE A2

201 - 7  
301 - 7  
309 - 7  
304 - 3  
310 - 5  
403 - 1  
405 - 2

32 PLOTS

Signal Gantry



GLEN STREET

GLEN ST, HEBBURN

HEBBURN

Works

Victoria Medical Centre





## APPENDIX B

# LANDMARK INFORMATION GROUP ENVIROCHECK REPORT



# Envirocheck<sup>®</sup> Report:

## Datasheet

### Order Details:

**Order Number:**

58659417\_1\_1

**Customer Reference:**

C6149 Glen Street Hebburn APC

**National Grid Reference:**

430680, 564490

**Slice:**

A

**Site Area (Ha):**

0.89

**Search Buffer (m):**

1000

### Site Details:

Glen Street

Glen Street

HEBBURN

Tyne and Wear

NE31 1NU

### Client Details:

P Coulson

Sirius Geotechnical & Environmental Ltd

4245 Park Approach

Thorpe Park

Leeds

LS15 8GB

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	18
Hazardous Substances	-
Geological	23
Industrial Land Use	50
Sensitive Land Use	-
Data Currency	58
Data Suppliers	63
Useful Contacts	64

## 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 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 v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Agency &amp; Hydrological</b>					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1				51
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 13				1
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 13		1	2	5
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 15				Yes
Pollution Incidents to Controlled Waters	pg 15			1	1
Prosecutions Relating to Authorised Processes	pg 15				1
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances	pg 15				1
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 15				1
Water Abstractions	pg 15				(*1)
Water Industry Act Referrals	pg 16				4
Groundwater Vulnerability	pg 16	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 16	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 16	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)
<b>Waste</b>					
BGS Recorded Landfill Sites	pg 18			1	
Historical Landfill Sites	pg 18			3	3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 19				5
Local Authority Recorded Landfill Sites					
Registered Landfill Sites	pg 20				1
Registered Waste Transfer Sites	pg 21				3
Registered Waste Treatment or Disposal Sites					
<b>Hazardous Substances</b>					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
<b>Geological</b>					
BGS 1:625,000 Solid Geology	pg 23	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 23	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 48			1	2
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 48	Yes	n/a	n/a	n/a
Mining Instability	pg 48	Yes	n/a	n/a	n/a
Man-Made Mining Cavities	pg 49			1	
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 49	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 49		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 49	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 49		Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 49	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)
<b>Industrial Land Use</b>					
Contemporary Trade Directory Entries	pg 50		26	11	47
Fuel Station Entries	pg 57			1	
<b>Sensitive Land Use</b>					
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><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: Reyrolle Sewer (North) Cso, Hebburn, Tyne &amp; Wear  Authority: Environment Agency, North East Region  Catchment Area: Tyne (Lower)/Team/Don  Reference: 235/1185  Permit Version: 1  Effective Date: 29th October 1992  Issued Date: 29th October 1992  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: New Consent, by Application (Water Resources Act 1991, Section 88)</b>  Positional Accuracy: Located by supplier to within 100m</p>	A12NE (W)	562	1	430040 564490
2	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Trade (Unknown/Other)  Location: Rear (North) Reyrolle Works - D21, Hebburn  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0006  Permit Version: 1  Effective Date: 1st December 1986  Issued Date: 1st December 1986  Revocation Date: 29th October 1992  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12NE (W)	579	1	430030 564540
3	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: Reyrolle Sewer (South) Cso, Hebburn, Tyne &amp; Wear  Authority: Environment Agency, North East Region  Catchment Area: Tyne (Lower)/Team/Don  Reference: 235/1186  Permit Version: 1  Effective Date: 29th October 1992  Issued Date: 29th October 1992  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: New Consent, by Application (Water Resources Act 1991, Section 88)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	605	1	430000 564350
4	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Trade (Unknown/Other)  Location: Rear (South) Reyrolle Works - D22, Hebburn  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0007  Permit Version: 1  Effective Date: 1st December 1986  Issued Date: 1st December 1986  Revocation Date: 29th October 1992  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	622	1	430000 564270



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Trade (Unknown/Other)  Location: Prince Consort Road Outfall, Hebburn, Tyne And Wear  Authority: Environment Agency, North East Region  Catchment Area: Tyne (Lower)/Team/Don  Reference: 235/0440  Permit Version: 1  Effective Date: 13th July 1987  Issued Date: 13th July 1987  Revocation Date: 10th May 2000  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 100m</p>	A17SE (NW)	698	1	430060 564880
5	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Prince Consort Road Pumping Station, Hebburn, Tyne &amp; Wear  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1657  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  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	707	1	430070 564910
5	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Prince Consort Road Pumping Station, Hebburn, Tyne &amp; Wear  Authority: Environment Agency, North East Region  Catchment Area: Tyne (Lower)/Team/Don  Reference: 235/1657  Permit Version: 1  Effective Date: 10th August 1998  Issued Date: 10th 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  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	707	1	430070 564910
6	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Trade (Unknown/Other)  Location: Ellison Street - B23, Hebburn  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0088  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  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	742	1	430380 565230





Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Wincomblee C Pumping Station, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1758  Permit Version: 1  Effective Date: 21st February 2000  Issued Date: 21st February 2000  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Pumping Station - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	781	1	429820 564390
7	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Wincomblee C Pumping Station, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1758  Permit Version: 1  Effective Date: 21st February 2000  Issued Date: 21st February 2000  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	781	1	429820 564390
7	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: Wincomblee Road Cso, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1759  Permit Version: 1  Effective Date: 21st February 2000  Issued Date: 21st February 2000  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	781	1	429820 564390
7	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Ltd  Property Type: Undefined Or Other  Location: White Street/Station Road Cso, NEWCASTLE-UPON-TYNE  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1329  Permit Version: Not Supplied  Effective Date: Not Supplied  Issued Date: Not Supplied  Revocation Date: Not Supplied  Discharge Type: Storm sewage overflow discharge  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Not Supplied</b>  Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	785	1	429815 564405



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: White Street/Station Road Cso, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1329  Permit Version: 1  Effective Date: 16th August 1996  Issued Date: 16th August 1996  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	790	1	429810 564400
7	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: White Street/Station Road Cso, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1330  Permit Version: 1  Effective Date: 16th August 1996  Issued Date: 16th August 1996  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	790	1	429810 564400
7	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Sewerage Network - Sewers - Water Company  Location: White Street/Station Road Cso, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0120  Permit Version: 1  Effective Date: 16th July 1987  Issued Date: 16th July 1987  Revocation Date: 18th May 1993  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	790	1	429810 564400
7	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Sewerage Network - Sewers - Water Company  Location: White Street/Station Road Cso, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/X/0231  Permit Version: 1  Effective Date: 16th July 1987  Issued Date: 16th July 1987  Revocation Date: 16th August 1996  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Manually corrected supplier location</p>	A12SW (W)	790	1	429810 564400



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Sewerage Network - Sewers - Water Company  Location: White Street/Station Road Cso, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/X/0232  Permit Version: 1  Effective Date: 16th July 1987  Issued Date: 16th July 1987  Revocation Date: 16th August 1996  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	790	1	429810 564400
7	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Ltd  Property Type: Undefined Or Other  Location: White Street/Station Road Cso, NEWCASTLE-UPON-TYNE  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1330  Permit Version: Not Supplied  Effective Date: Not Supplied  Issued Date: Not Supplied  Revocation Date: Not Supplied  Discharge Type: Storm sewage overflow discharge  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Not Supplied</b>  Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	790	1	429810 564405
8	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Trade (Unknown/Other)  Location: British Formet Outfall, Walker, Tyne And Wear  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1306  Permit Version: 1  Effective Date: 18th May 1993  Issued Date: 18th May 1993  Revocation Date: 3rd August 2000  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	804	1	429810 564280
8	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Wincomblee B Pumping Station, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1757  Permit Version: 1  Effective Date: 21st February 2000  Issued Date: 21st February 2000  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Pumping Station - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	816	1	429800 564270



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Wincomblee B Pumping Station, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1757  Permit Version: 1  Effective Date: 21st February 2000  Issued Date: 21st February 2000  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	816	1	429800 564270
8	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Trade (Unknown/Other)  Location: British Formet Outfall No.5, Low Walker  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0121  Permit Version: 1  Effective Date: 16th July 1987  Issued Date: 16th July 1987  Revocation Date: 18th May 1993  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	816	1	429800 564270
9	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: Staithe Street Cso, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1756  Permit Version: 1  Effective Date: 21st February 2000  Issued Date: 21st February 2000  Revocation Date: 2nd November 2012  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: Surrendered under EPR 2010</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	817	1	429850 564760
9	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Trade (Unknown/Other)  Location: Staithe Street Outfall, Walker, Tyne And Wear  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1308  Permit Version: 1  Effective Date: 18th May 1993  Issued Date: 18th May 1993  Revocation Date: 3rd August 2000  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	821	1	429850 564770



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Ltd  Property Type: Undefined Or Other  Location: Welbeck Road/Bath Street Cso, WALKER  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1331  Permit Version: Not Supplied  Effective Date: Not Supplied  Issued Date: Not Supplied  Revocation Date: Not Supplied  Discharge Type: Storm sewage overflow discharge  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Not Supplied</b>  Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	823	1	429845 564765
9	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: New Welbeck Road Pumping Station, Staithe Street, Low Walker, Newcastle Upon Tyne, Ne6 4ls  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1755  Permit Version: 2  Effective Date: 11th March 2010  Issued Date: 11th March 2010  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	829	1	429842 564771
9	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: New Welbeck Road Pumping Station, Staithe Street, Low Walker, Newcastle Upon Tyne, Ne6 4ls  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1755  Permit Version: 2  Effective Date: 11th March 2010  Issued Date: 11th March 2010  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Pumping Station - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	829	1	429842 564771
9	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: Welbeck Road/Bath Street Cso, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1331  Permit Version: 1  Effective Date: 4th November 1996  Issued Date: 4th November 1996  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	830	1	429840 564770



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Trade (Unknown/Other)  Location: Staithes Street Outfall, Walker, Tyne And Wear  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0119  Permit Version: 1  Effective Date: 16th July 1987  Issued Date: 16th July 1987  Revocation Date: 18th May 1993  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	830	1	429840 564770
9	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Sewerage Network - Sewers - Water Company  Location: Welbeck Road/Bath Street Cso, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/X/0230  Permit Version: 1  Effective Date: 16th July 1987  Issued Date: 16th July 1987  Revocation Date: 4th November 1996  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	830	1	429840 564770
10	<p><b>Discharge Consents</b></p> <p>Operator: Unknown,  Property Type: Trade (Unknown/Other)  Location: Croda Agricultural Ltd, Low Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/0163  Permit Version: 1  Effective Date: 4th September 1985  Issued Date: 4th September 1985  Revocation Date: 12th September 1990  Discharge Type: Trade Effluent Discharge-Boiler Blowdown  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	840	1	429900 564900
10	<p><b>Discharge Consents</b></p> <p>Operator: Unknown,  Property Type: Trade (Unknown/Other)  Location: Croda Agricultural Ltd, Low Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/0163  Permit Version: 1  Effective Date: 4th September 1985  Issued Date: 4th September 1985  Revocation Date: 12th September 1990  Discharge Type: Miscellaneous Discharges - Surface Water  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	840	1	429900 564900



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: New Welbeck Road Pumping Station, Staithe Street, Low Walker, Newcastle Upon Tyne, Ne6 4ls  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1755  Permit Version: 1  Effective Date: 21st February 2000  Issued Date: 21st February 2000  Revocation Date: 10th March 2010  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	863	1	429860 564880
10	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: New Welbeck Road Pumping Station, Staithe Street, Low Walker, Newcastle Upon Tyne, Ne6 4ls  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1755  Permit Version: 1  Effective Date: 21st February 2000  Issued Date: 21st February 2000  Revocation Date: 10th March 2010  Discharge Type: Sewage Discharges - Pumping Station - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	863	1	429860 564880
10	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Trade (Unknown/Other)  Location: Neptune Yard Outfall No 2, Walker, Tyne And Wear  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1309  Permit Version: 1  Effective Date: 18th May 1993  Issued Date: 18th May 1993  Revocation Date: 3rd August 2000  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	865	1	429870 564900
10	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Trade (Unknown/Other)  Location: Neptune Yard Outfall No.2, Low Walker  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0118  Permit Version: 1  Effective Date: 16th July 1987  Issued Date: 16th July 1987  Revocation Date: 18th May 1993  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	868	1	429860 564890

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	<p><b>Discharge Consents</b></p> <p>Operator: Unknown,  Property Type: Trade (Unknown/Other)  Location: Croda Agricultural, Walker, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0020  Permit Version: 1  Effective Date: 12th January 1987  Issued Date: 12th January 1987  Revocation Date: 12th September 1990  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	879	1	429800 564800
12	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Others  Location: Ellison Street Sewer, Hebburn, Tyne And Wear  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1184  Permit Version: 1  Effective Date: 29th October 1992  Issued Date: 29th October 1992  Revocation Date: 20th November 1992  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	886	1	430280 565340
12	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: Lamport Cso, Hebburn, Tyne &amp; Wear  Authority: Environment Agency, North East Region  Catchment Area: Tyne (Lower)/Team/Don  Reference: 235/1051  Permit Version: 1  Effective Date: 26th March 1991  Issued Date: 26th March 1991  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne (Tidal)  <b>Status: Transferred from Water Act 1989</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	921	1	430260 565370
12	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Ellison Street Pumping Station, Hebburn, Tyne &amp; Wear  Authority: Environment Agency, North East Region  Catchment Area: Tyne (Lower)/Team/Don  Reference: 235/1050  Permit Version: 1  Effective Date: 25th March 1991  Issued Date: 25th March 1991  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Pumping Station - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne (Tidal)  <b>Status: Transferred from Water Act 1989</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	921	1	430260 565370



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: Sso At Sw Corner Of Allotment Garde, Hebburn Riverside Park, Hebburn, Tyne And Wear  Authority: Environment Agency, North East Region  Catchment Area: Tyne (Lower)/Team/Don  Reference: 235/1187  Permit Version: 1  Effective Date: 29th October 1992  Issued Date: 29th October 1992  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: New Consent, by Application (Water Resources Act 1991, Section 88)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A7SW (SW)	886	1	429980 563800
14	<p><b>Discharge Consents</b></p> <p>Operator: Swan Hunter Shipbuilders Ltd  Property Type: Trade (Unknown/Other)  Location: Wallsend Yard Outfall No 1, Wallsend, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1058  Permit Version: 1  Effective Date: 8th April 1991  Issued Date: 8th April 1991  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne (Tidal)  <b>Status: Transferred from Water Act 1989</b>  Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	910	1	429870 564980
14	<p><b>Discharge Consents</b></p> <p>Operator: Swan Hunter Shipbuilders Ltd  Property Type: Trade (Unknown/Other)  Location: Wallsend Yard Outfall No 1, Wallsend, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0424  Permit Version: 1  Effective Date: 30th October 1987  Issued Date: 30th October 1987  Revocation Date: 8th April 1991  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	910	1	429870 564980
15	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Trade (Unknown/Other)  Location: Hebburn Hall Ponds, Hebburn, County Durham  Authority: Environment Agency, North East Region  Catchment Area: Tyne (Lower)/Team/Don  Reference: 235/B/0008  Permit Version: 1  Effective Date: 6th February 1961  Issued Date: 6th February 1961  Revocation Date: 19th May 2000  Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Manually corrected supplier location</p>	A9SW (SE)	920	1	431145 563656

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	<p><b>Discharge Consents</b></p> <p>Operator: Redundant - Northumbrian Water Ltd  Property Type: Trade (Unknown/Other)  Location: South West Corner Of Allotment Gard, Hebburn  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0008  Permit Version: 1  Effective Date: 1st December 1986  Issued Date: 1st December 1986  Revocation Date: 29th October 1992  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A7SW (SW)	949	1	429940 563750
17	<p><b>Discharge Consents</b></p> <p>Operator: Swan Hunter Shipbuilders Ltd  Property Type: Sewage Disposal Works - Other  Location: Swan Hunters Neptune Yard Outfall N, Wallsend, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1043  Permit Version: 1  Effective Date: 8th January 1991  Issued Date: 8th January 1991  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Transferred from Water Act 1989</b>  Positional Accuracy: Located by supplier to within 100m</p>	A17SW (NW)	956	1	429880 565070
17	<p><b>Discharge Consents</b></p> <p>Operator: Swan Hunter Shipbuilders Ltd  Property Type: Sewage Disposal Works - Other  Location: Swan Hunters Neptune Yard Outfall N, Wallsend, Newcastle Upon Tyne  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0425  Permit Version: 1  Effective Date: 30th October 1987  Issued Date: 30th October 1987  Revocation Date: 9th October 1990  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	956	1	429880 565070
18	<p><b>Discharge Consents</b></p> <p>Operator: Northumbrian Water Limited  Property Type: Sewerage Network - Sewers - Water Company  Location: Ellison Street Cso, Hebburn, South Tyneside  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1747  Permit Version: 1  Effective Date: 11th February 2000  Issued Date: 11th February 2000  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: River Tyne Saline Estuary  <b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	965	1	430350 565460

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	<p><b>Discharge Consents</b></p> <p>Operator: Duco Ltd  Property Type: Sewage Disposal Works - Other  Location: Dunlop Coflexclip Umbilicals Walker Riverside, Nelson Road, Walker, Newcastle Upon Tyne, Ne6 3pl  Authority: Environment Agency, North East Region  Catchment Area: Not Given  Reference: 235/1474  Permit Version: 1  Effective Date: 31st March 1994  Issued Date: 31st March 1994  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: New Consent, by Application (Water Resources Act 1991, Section 88)</b>  Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	979	1	429780 563900
20	<p><b>Discharge Consents</b></p> <p>Operator: Swan Hunter Shipbuilders Ltd  Property Type: Trade (Unknown/Other)  Location: Wallsend Yard Outfall No 3, Wallsend  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/1059  Permit Version: 1  Effective Date: 8th April 1991  Issued Date: 8th April 1991  Revocation Date: 21st October 1992  Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne (Tidal)  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	986	1	429890 565130
20	<p><b>Discharge Consents</b></p> <p>Operator: Swan Hunter Shipbuilders Ltd  Property Type: Trade (Unknown/Other)  Location: Wallsend Yard Outfall No 3, Wallsend  Authority: Environment Agency, North East Region  Catchment Area: Not Supplied  Reference: 235/X/0426  Permit Version: 1  Effective Date: 30th October 1987  Issued Date: 30th October 1987  Revocation Date: 8th April 1991  Discharge Type: Unspecified  Discharge: Saline Estuary  Environment:  Receiving Water: Tyne Estuary  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	986	1	429890 565130
21	<p><b>Integrated Pollution Prevention And Control</b></p> <p>Name: Industrial Chemicals Group Limited  Location: Wagonway Works, Waggonway Works, Waggonway Road,, Hebburn, Tyne And Wear, NE31 1SP  Authority: Environment Agency, North East Region  Permit Reference: Ep3630bb  Original Permit Ref: Ep3630bb  Effective Date: 29th March 2006  <b>Status: Effective</b>  Application Type: Application  App. Sub Type: New  Positional Accuracy: Manually positioned to the road within the address or location  Activity Code: 4.2 A(1) (A) (VI)  Activity Description: Inorganic Chemicals; Halogens Etc Or Halogen/Oxygen Compounds Etc  Primary Activity: Y</p>	A19NW (NE)	924	1	431144 565387
22	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Wailes Dove Coatings Plc  Location: Hedgeley Road, HEBBURN, Tyne and Wear, NE31 1EY  Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department  Permit Reference: 043/6.3  Dated: Not Supplied  Process Type: Local Authority Air Pollution Control  Description: PG6/42 Bitumen and tar processes  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NE (NE)	170	2	430911 564625



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Victoria Road Filling Station Ltd            Location: Victoria Road West, HEBBURN, Tyne and Wear, NE32 3UA            Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department            Permit Reference: STC/EPR/001            Dated: 17th May 1999            Process Type: Local Authority Pollution Prevention and Control            Description: PG1/14 Petrol filling station  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A8NE (S)	420	2	430689 563998
24	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Shell Tyne Tunnel            Location: Edward Street, JARROW, Tyne and Wear, NE32 3UA            Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department            Permit Reference: 059/1.4(B)            Dated: Not Supplied            Process Type: Local Authority Air Pollution Control            Description: PG1/14 Petrol filling station  <b>Status: Authorisation revokedRevoked</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A18SW (NW)	450	2	430476 564951
25	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: NEI Reyrolle            Location: Bushing, South Drive, HEBBURN, Tyne and Wear, NE31 1UW            Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department            Permit Reference: 016/6.5(a)            Dated: Not Supplied            Process Type: Local Authority Air Pollution Control            Description: PG6/23 Coating of metal and plastic  <b>Status: Authorisation revokedRevoked</b>            Positional Accuracy: Manually positioned to the address or location</p>	A7SE (SW)	830	2	430318 563639
26	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Nei Reyrolle Switchgear            Location: Victoria Roadwest, HEBBURN, Tyne and Wear, NE31 1UP            Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department            Permit Reference: 024/6.5(A)            Dated: Not Supplied            Process Type: Local Authority Air Pollution Control            Description: PG6/23 Coating of metal and plastic  <b>Status: Authorisation revokedRevoked</b>            Positional Accuracy: Automatically positioned to the address</p>	A8SW (S)	884	2	430455 563544
27	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Richard Hardie (Hebburn) Ltd            Location: Victoria Road East, HEBBURN, Tyne and Wear, NE31 1YA            Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department            Permit Reference: 042/6.5(b)            Dated: Not Supplied            Process Type: Local Authority Air Pollution Control            Description: PG6/34 Respraying of road vehicles  <b>Status: Authorised</b>            Positional Accuracy: Automatically positioned to the address</p>	A15NW (E)	951	2	431719 564583
28	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Arnold Laver &amp; Co            Location: Wagonway Road, Hebburn, Ne31 1sp            Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department            Permit Reference: PPC/08/05            Dated: 27th March 2008            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/2 Manufacture of timber and wood-based products  <b>Status: Permitted</b>            Positional Accuracy: Located by supplier to within 100m</p>	A23SE (N)	982	2	431000 565500
28	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Arnold Laver &amp; Co            Location: Wagonway Road, Hebburn, Ne31 1sp            Authority: South Tyneside Metropolitan Borough Council, Environmental Health Department            Permit Reference: PPC/08/05            Dated: 27th March 2008            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/33 Wood coating  <b>Status: Permitted</b>            Positional Accuracy: Located by supplier to within 100m</p>	A23SE (N)	982	2	431000 565500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Nearest Surface Water Feature</b>	A12SE (W)	570	-	430031 564487
29	<b>Pollution Incidents to Controlled Waters</b> Property Type: Other General Premises Location: Hebburn, NEWCASTLE UPON TYNE Authority: Environment Agency, North East Region Pollutant: Not Given Note: Tyne Estuary Incident Date: 5th November 1993 Incident Reference: 235/002170 Catchment Area: Not Given Receiving Water: Saline Estuary Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	479	1	430200 564700
30	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial: Other Location: Bath Street Trading Estate, NEWCASTLE Authority: Environment Agency, North East Region Pollutant: Not Given Note: No Fish Killed Incident Date: 25th March 1995 Incident Reference: NT950265 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	A12NW (W)	938	1	429700 564700
31	<b>Prosecutions Relating to Authorised Processes</b> Location: Land At Sheperds Yard, Staithe Street, Walker, Newcastle Upon Tyne, Tyne & Wear, Ne6 Prosecution Text: Hospital Waste (Including Syringes) Stored In Trailers On Land Without A Wml Prosecution Act: Epa90 S33(1b) & S33(6) Hearing Date: 12th February 2003 Verdict: Guilty Fine: 100000 Costs: 114818 Positional Accuracy: Manually positioned to the road within the address or location	A12NW (W)	885	1	429749 564680
32	<b>Registered Radioactive Substances</b> Name: Nei Reyrolle Ltd Location: Hebburn, HEBBURN, NE31 1UP Authority: Scottish Environment Protection Agency, Head Office Permit Reference: IPB/3/3/011 Dated: 7th May 1985 Process Type: Registration under S10 RSA for the keeping and use of mobile Radioactive sources (was RSA60 S3) Description: Registration under S7 or S10 RSA for the keeping and use of radioactive material or apparatus for 1 or more tracer test sources dated pre April 1991 <b>Status: Not Given</b> Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	823	3	430323 563644
33	<b>Substantiated Pollution Incident Register</b> Authority: Environment Agency - North East Region, North East Area Incident Date: 4th August 2004 Incident Reference: 256229 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: Specific Waste Materials: Metal Wastes	A15SW (E)	986	1	431741 564361
	<b>Water Abstractions</b> Operator: Amec Process & Energy Ltd Licence Number: 1/23/05/035 Permit Version: 100 Location: River Tyne - Tidal - Wallsend Authority: Environment Agency, North East Region Abstraction: Construction: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Tidal Daily Rate (m3): 5000 Yearly Rate (m3): 1000000 Details: Amec Process And Energy, Wallsend, Tyne & Wear Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 12th April 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NE (N)	1441	1	430800 566000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	<p><b>Water Industry Act Referrals</b></p> <p>Name: Hastings Metal Finishers Ltd            Location: UNIT 8 ,PRINCE CONSORT INDUSTRIAL ESTATE, HEBBURN, TYNE AND WEAR, NE31 1EH            Authority: Environment Agency, North East Region            Permit Reference: AV5284            Dated: 18th April 1996            Process Type: Permissions or amendments to discharge under the Water Industry Act 1991            Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations  <b>Status: Authorisation either revoked or cancelledCancelled</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	704	1	430179 565032
34	<p><b>Water Industry Act Referrals</b></p> <p>Name: Hastings Metal Finishers Ltd            Location: UNIT 8 ,PRINCE CONSORT INDUSTRIAL ESTATE, HEBBURN, TYNE AND WEAR, NE31 1EH            Authority: Environment Agency, North East Region            Permit Reference: AV5292            Dated: 18th April 1996            Process Type: Permissions or amendments to discharge under the Water Industry Act 1991            Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations  <b>Status: Application has been authorised and any conditions apply to the operatorAuthorised</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	704	1	430179 565032
35	<p><b>Water Industry Act Referrals</b></p> <p>Name: Kemkleen International Ltd            Location: 63-65 WHITE STREET,, NEWCASTLE UPON TYNE, TYNE AND WEAR, NE6 3PJ            Authority: Environment Agency, North East Region            Permit Reference: AB7663            Dated: 13th December 1991            Process Type: Permissions or amendments to discharge under the Water Industry Act 1991            Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations  <b>Status: Application cancelled</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A12NW (W)	935	1	429677 564586
35	<p><b>Water Industry Act Referrals</b></p> <p>Name: Kemkleen International Ltd            Location: 63-65 WHITE STREET,, NEWCASTLE UPON TYNE, TYNE AND WEAR, NE6 3PJ            Authority: Environment Agency, North East Region            Permit Reference: AB7671            Dated: 13th December 1991            Process Type: Permissions or amendments to discharge under the Water Industry Act 1991            Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations  <b>Status: Application cancelled</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A12NW (W)	935	1	429677 564586
	<p><b>Groundwater Vulnerability</b></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>	A13NW (NW)	0	1	430681 564489
	<p><b>Drift Deposits</b></p> <p>Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium            Map Sheet: Sheet 5 Tyne and Tees            Scale: 1:100,000</p>	A13NW (NW)	0	1	430681 564489
	<p><b>Bedrock Aquifer Designations</b></p> <p>Aquifer Designation: Secondary Aquifer - A</p>	A13NW (NW)	0	4	430681 564489
	<p><b>Superficial Aquifer Designations</b></p> <p>Aquifer Designation: Unproductive Strata</p>	A13NW (NW)	0	4	430681 564489
	<p><b>Extreme Flooding from Rivers or Sea without Defences</b></p> <p>None</p>				
	<p><b>Flooding from Rivers or Sea without Defences</b></p> <p>None</p>				
	<p><b>Areas Benefiting from Flood Defences</b></p> <p>None</p>				



## Agency & Hydrological

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Flood Water Storage Areas</b> None				
	<b>Flood Defences</b> None				
	<b>Detailed River Network Lines</b> None				
	<b>Detailed River Network Offline Drainage</b> None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	<p><b>BGS Recorded Landfill Sites</b></p> <p>Site Name: Prince Consort Road            Location: HEBBURN, Tyne &amp; Wear            Authority: British Geological Survey, National Geoscience Information Service            Ground Water: Information not available            Surface Water: Information not available            Geology: N/A            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Derived</p>	A13NW (W)	265	4	430357 564544
37	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Not Supplied            Location: Hebburn New Town            Name: Hebburn Quayside            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD06300            First Input Date: 31st December 1940            Last Input Date: 31st December 1973            Specified Waste Type: Deposited Waste included Industrial and Household Waste            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4500/0273            BGS Ref: Not Supplied            Other Ref: ST 023, ST 1</p>	A12SE (W)	397	1	430200 564439
38	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Not Supplied            Location: Prince Consort Road, Hebburn New Town            Name: King Georges Field            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD06299            First Input Date: Not Supplied            Last Input Date: 31st December 1960            Specified Waste Type: Deposited Waste included Inert Waste            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4500/0275            BGS Ref: Not Supplied            Other Ref: ST 022, ST 2</p>	A12NE (NW)	438	1	430294 564759
39	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Not Supplied            Location: Hebburn-New-Town, South Tyneside            Name: Prince Consort Road            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD32551            First Input Date: Not Supplied            Last Input Date: Not Supplied            Specified Waste Type: Deposited Waste included Industrial and Commercial Waste            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: Not Supplied            BGS Ref: 588            Other Ref: Not Supplied</p>	A12SE (W)	476	1	430125 564403
40	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Not Supplied            Location: Campbell Park Road, Hebburn            Name: Campbell Park Road School            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD06550            First Input Date: Not Supplied            Last Input Date: 31st December 1942            Specified Waste Type: Not Supplied            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4500/0267            BGS Ref: Not Supplied            Other Ref: ST 008, ST 3</p>	A14SW (SE)	651	1	431307 564155



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Mr C Keith            Location: Wincomblee Road, Newcastle Upon Tyne, Tyne and Wear            Name: C and J Marine Services            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD06644            First Input Date: Not Supplied            Last Input Date: Not Supplied            Specified Waste: Deposited Waste included Inert Waste            Type:            EA Waste Ref: 0            Regis Ref: YO1/L/KEI001            WRC Ref: Not Supplied            BGS Ref: Not Supplied            Other Ref: TW 349 NC</p>	A12SW (W)	818	1	429806 564236
42	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Not Supplied            Location: Hebburn            Name: Campbell Park            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD06298            First Input Date: Not Supplied            Last Input Date: Not Supplied            Specified Waste: Deposited Waste included Inert and Industrial Waste            Type:            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4500/0266            BGS Ref: Not Supplied            Other Ref: ST 029, ST 4</p>	A9NE (E)	967	1	431654 564139
43	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: 0            Location: Wincomblee Road, Walker, Newcastle Upon Tyne, Tyne &amp; Wear, NE6 3PL            Operator Name: Mr C Keith, C &amp; J Marine Services            Operator Location: Wincomblee Road, Walker, Newcastle Upon Tyne, Tyne &amp; Wear, NE6 3PL            Authority: Environment Agency - North East Region, Northumbria Area            Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction)  <b>Licence Status: Surrendered</b>            Issued: 27th January 1994            Last Modified: Not Supplied            Expires: Not Supplied            Suspended: Not Supplied            Revoked: Not Supplied            Surrendered: 2nd August 1994            IPPC Reference: Not Supplied            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	868	1	429770 564180
43	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: 64570            Location: Wincomblee Road, Walker, Newcastle Upon Tyne, Tyne &amp; Wear, NE6 3PL            Operator Name: Mr C Keith, C &amp; J Marine Services            Operator Location: Not Supplied            Authority: Environment Agency - North East Region, North East Area            Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction)  <b>Licence Status: Surrendered</b>            Issued: 27th January 1994            Last Modified: Not Supplied            Expires: Not Supplied            Suspended: Not Supplied            Revoked: Not Supplied            Surrendered: 2nd August 1994            IPPC Reference: Not Supplied            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	868	1	429770 564180
44	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: 67542            Location: 1 Wincomblee Road, Walker, Newcastle Upon Tyne, Tyne &amp; Wear, NE6 3PL            Operator Name: Jackson &amp; Co            Operator Location: Not Supplied            Authority: Environment Agency - North East Region, North East Area            Site Category: Household, Commercial And Industrial Transfer Stations  <b>Licence Status: Surrendered</b>            Issued: 4th November 1993            Last Modified: Not Supplied            Expires: Not Supplied            Suspended: Not Supplied            Revoked: Not Supplied            Surrendered: 9th June 1998            IPPC Reference: Not Supplied            Positional Accuracy: Located by supplier to within 100m</p>	A12SW (W)	909	1	429700 564300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: 67598            Location: Marys Place, Off White Street, Walker, Newcastle Upon Tyne, Tyne &amp; Wear, NE6 3PZ            Operator Name: Ingham Michael Robert            Operator Location: Not Supplied            Authority: Environment Agency - North East Region, North East Area            Site Category: Household, Commercial And Industrial Transfer Stations  <b>Licence Status: Transferred</b>            Issued: 23rd April 1996            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>	A12NW (W)	938	1	429700 564700
46	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: 67561            Location: Walker Station, Station Road, Walker, Newcastle Upon Tyne, Tyne &amp; Wear, NE6 3PN            Operator Name: Christopher Grieveson &amp; Margaret Grieveson            Operator Location: Not Supplied            Authority: Environment Agency - North East Region, North East Area            Site Category: Metal Recycling Sites (Mixed)  <b>Licence Status: Modified</b>            Issued: 10th September 1997            Last Modified: 19th December 2011            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>	A11SE (W)	1000	1	429600 564400
	<p><b>Local Authority Landfill Coverage</b></p> <p>Name: South Tyneside Metropolitan Borough Council            - Has no landfill data to supply</p>		0	8	430681 564489
	<p><b>Local Authority Landfill Coverage</b></p> <p>Name: City of Newcastle Upon Tyne            - Has supplied landfill data</p>		616	11	429981 564439
47	<p><b>Registered Landfill Sites</b></p> <p>Licence Holder: C Keith C &amp; J Marine Services            Licence Reference: TW 349 NC            Site Location: Wincomblee Road, Walker, NEWCASTLE UPON TYNE, Tyne and Wear, NE6 3PL            Licence Easting: 429770            Licence Northing: 564200            Operator Location: As Site Address            Authority: Environment Agency - North East Region, Northumbria Area            Site Category: Landfill            Max Input Rate: Very Small (Less than 10,000 tonnes per year)            Waste Source: No known restriction on source of waste            Restrictions:            Status: Licence known to be surrenderedSurrendered            Dated: 27th January 1994            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Not Applicable            Authorised Waste: Clean Inert Hardcore/Building Rubble            Max. Total Deposit Permitted            Prohibited Waste: Biodegradable/Putrescible Waste            Hazardous Wastes            Polluting Wastes            Special Wastes            Waste N.O.S.</p>	A12SW (W)	862	1	429770 564200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	<p><b>Registered Waste Transfer Sites</b></p> <p>Licence Holder: Jackson &amp; Co            Licence Reference: TW 348 NC            Site Location: Dobsons Yard, 1 Wincomlee Road, Walker, NEWCASTLE UPON TYNE, Tyne and Wear, NE6 3PL</p> <p>Operator Location: As Site Address            Authority: Environment Agency - North East Region, Northumbria Area            Site Category: Transfer            Max Input Rate: Very Small (Less than 10,000 tonnes per year)            Waste Source: No known restriction on source of waste</p> <p>Restrictions:            Licence Status: Licence known to be surrenderedSurrendered            Dated: 4th November 1993            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Approximate location provided by supplier            Boundary Quality: Not Supplied            Authorised Waste: Construction And Demolition Wastes            General Waste Cat. B            Max.Storage In Licence            Steel            Timber</p> <p>Prohibited Waste: Biodegradable Waste            Difficult Wastes (As In Wmp.26)            Liquid Wastes            Soluble Chemical Wastes            Special Wastes            Waste N.O.S.</p>	A12SW (W)	909	1	429700 564300
49	<p><b>Registered Waste Transfer Sites</b></p> <p>Licence Holder: Frost Skip Hire (Newcastle) Ltd            Licence Reference: TW 453 NC            Site Location: Frost Waste Transfer Station, Marys Place, White Street, NEWCASTLE UPON TYNE, Tyne and Wear, NE6 3PZ</p> <p>Operator Location: 52 Forest Hall Road, Forest Hall, NEWCASTLE UPON TYNE, Tyne and Wear, NE12 0AY</p> <p>Authority: Environment Agency - North East Region, Northumbria Area            Site Category: Transfer            Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year)            Waste Source: No known restriction on source of waste</p> <p>Restrictions:            Licence Status: Operational as far as is knownOperational            Dated: 23rd April 1996            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: Associated Packaging            Cement            Ceramics, Glass            Cured Resinous/Bituminous Mat'ls            Empty Paint Containers            Graphite, Spun Minerals            Light Fittings            Max.Storage In Licence            Max.Waste Permitted By Licence            Metals            Plastic Framew'K/Rainw'R/Sew'Age Goods            Roofing Mat'ls            Timber/Board            Tyne/Wear Wra Cat C Ind.Waste Incl.            Wiring</p> <p>Prohibited Waste: Biodegradable Materials            Clinical Wastes            Soluble Chemical Materials            Spec.Waste (Epa'90:S62/1996 Regs)            Waste N.O.S.</p>	A11NE (W)	986	1	429650 564700



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
49	<p><b>Registered Waste Transfer Sites</b></p> <p>Licence Holder: Chieftain Insulation Ltd            Licence Reference: TW 474 NC            Site Location: White Street, Walker, NEWCASTLE UPON TYNE, Tyne and Wear, NE63 3QH</p> <p>Operator Location: As Site Address            Authority: Environment Agency - North East Region, Northumbria Area            Site Category: Transfer            Max Input Rate: Very Small (Less than 10,000 tonnes per year)            Waste Source: No known restriction on source of waste</p> <p>Restrictions:            Licence Status: Operational as far as is known            Dated: 25th May 1997            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Manually positioned to the address or location            Boundary Quality: Not Supplied            Authorised Waste: Double Bagged Fibrous Asbestos            Double Bagged/Wrapped Hard/Bonded Asb.            Max.Storage In Licence            Max.Waste Permitted By Licence            Prohibited Waste: Spec.Waste (Epa'90:S62/1996 Regs)N.O.S            Waste N.O.S.</p>	A11NE (W)	990	1	429640 564680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS 1:625,000 Solid Geology</b> Description: Westphalian Coal Measures	A13NW (NW)	0	4	430681 564489
	<b>BGS Estimated Soil Chemistry</b> 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	A13NW (NW)	0	5	430681 564489
	<b>BGS Estimated Soil Chemistry</b> 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)	13	5	430644 564518
	<b>BGS Estimated Soil Chemistry</b> 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 (W)	67	5	430539 564488
	<b>BGS Estimated Soil Chemistry</b> 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)	75	5	430629 564612
	<b>BGS Estimated Soil Chemistry</b> 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 (N)	106	5	430634 564642
	<b>BGS Estimated Soil Chemistry</b> 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	A13NW (NW)	141	5	430548 564600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	143	5	430588 564648
	<b>BGS Estimated Soil Chemistry</b> 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)	158	5	430822 564692
	<b>BGS Estimated Soil Chemistry</b> 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 (N)	160	5	430639 564709
	<b>BGS Estimated Soil Chemistry</b> 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 (W)	179	5	430454 564541
	<b>BGS Estimated Soil Chemistry</b> 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 (S)	212	5	430692 564191
	<b>BGS Estimated Soil Chemistry</b> 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)	231	5	431000 564489

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	243	5	430412 564280
	<b>BGS Estimated Soil Chemistry</b> 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)	246	5	430445 564240
	<b>BGS Estimated Soil Chemistry</b> 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)	273	5	430389 564261
	<b>BGS Estimated Soil Chemistry</b> 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)	288	5	430389 564650
	<b>BGS Estimated Soil Chemistry</b> 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)	316	5	430385 564200
	<b>BGS Estimated Soil Chemistry</b> 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)	316	5	430398 564187

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	322	5	430880 564208
	<b>BGS Estimated Soil Chemistry</b> 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)	331	5	431000 564770
	<b>BGS Estimated Soil Chemistry</b> 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)	347	5	430407 564757
	<b>BGS Estimated Soil Chemistry</b> 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)	351	5	430617 564058
	<b>BGS Estimated Soil Chemistry</b> 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)	369	5	430349 564162
	<b>BGS Estimated Soil Chemistry</b> 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)	369	5	430357 564154



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NW (S)	372	5	430615 564037
	<b>BGS Estimated Soil Chemistry</b> 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 (SW)	381	5	430490 564054
	<b>BGS Estimated Soil Chemistry</b> 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)	384	5	431000 564224
	<b>BGS Estimated Soil Chemistry</b> 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 (NE)	393	5	431000 564856
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NE (NW)	397	5	430339 564749
	<b>BGS Estimated Soil Chemistry</b> 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 (SW)	409	5	430390 564074

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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 (SW)	411	5	430373 564085
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NW (S)	412	5	430681 564000
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SE (W)	414	5	430187 564467
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NW (SW)	415	5	430397 564062
	<b>BGS Estimated Soil Chemistry</b> 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 (SW)	421	5	430385 564063
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NE (S)	427	5	430733 564000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	438	5	430681 565000
	<b>BGS Estimated Soil Chemistry</b> 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 (SW)	439	5	430469 564000
	<b>BGS Estimated Soil Chemistry</b> 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)	442	5	430642 565000
	<b>BGS Estimated Soil Chemistry</b> 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)	445	5	430337 564069
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NE (S)	446	5	430791 564000
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SE (W)	475	5	430125 564466

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	479	5	430508 565000
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NW (SW)	483	5	430368 564000
	<b>BGS Estimated Soil Chemistry</b> 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 (NE)	492	5	430951 565000
	<b>BGS Estimated Soil Chemistry</b> 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)	494	5	430203 564141
	<b>BGS Estimated Soil Chemistry</b> 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)	494	5	430312 564026
	<b>BGS Estimated Soil Chemistry</b> 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)	500	5	430216 564114

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SE (W)	508	5	430092 564466
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NE (SE)	509	5	430920 564000
	<b>BGS Estimated Soil Chemistry</b> 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 (NE)	514	5	431000 565000
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NE (NW)	517	5	430164 564727
	<b>BGS Estimated Soil Chemistry</b> 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)	521	5	430302 564000
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NE (W)	543	5	430063 564524

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SE (W)	545	5	430055 564467
	<b>BGS Estimated Soil Chemistry</b> 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)	559	5	430684 565121
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NE (SE)	559	5	431000 564000
	<b>BGS Estimated Soil Chemistry</b> 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)	561	5	430690 565123
	<b>BGS Estimated Soil Chemistry</b> 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:	A17SE (NW)	566	5	430275 564934
	<b>BGS Estimated Soil Chemistry</b> 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)	566	5	431178 564138

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	573	5	430197 564026
	<b>BGS Estimated Soil Chemistry</b> 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)	575	5	431000 565068
	<b>BGS Estimated Soil Chemistry</b> 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:	A17SE (NW)	585	5	430314 565000
	<b>BGS Estimated Soil Chemistry</b> 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)	590	5	430198 564000
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SE (SW)	607	5	430053 564170
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SE (SW)	609	5	430053 564166

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SE (SW)	613	5	430057 564150
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SE (SW)	614	5	430052 564157
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NE (SE)	614	5	431000 563930
	<b>BGS Estimated Soil Chemistry</b> 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)	616	5	431000 563927
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NE (NW)	620	5	430080 564773
	<b>BGS Estimated Soil Chemistry</b> 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)	621	5	430138 564020



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SE (SW)	624	5	430023 564195
	<b>BGS Estimated Soil Chemistry</b> 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)	633	5	430350 565088
	<b>BGS Estimated Soil Chemistry</b> 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:	A17SE (NW)	634	5	430240 565000
	<b>BGS Estimated Soil Chemistry</b> 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:	A8NE (SE)	634	5	431000 563905
	<b>BGS Estimated Soil Chemistry</b> 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:	A14SW (SE)	645	5	431299 564155
	<b>BGS Estimated Soil Chemistry</b> 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)	653	5	430113 564000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	657	5	430107 564000
	<b>BGS Estimated Soil Chemistry</b> 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)	666	5	430041 564072
	<b>BGS Estimated Soil Chemistry</b> 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)	680	5	430090 563984
	<b>BGS Estimated Soil Chemistry</b> 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 30 - 45 mg/kg Concentration:	A7NE (SW)	682	5	430090 563982
	<b>BGS Estimated Soil Chemistry</b> 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)	684	5	431431 564355
	<b>BGS Estimated Soil Chemistry</b> 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)	689	5	431338 564920

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	689	5	431064 563885
	<b>BGS Estimated Soil Chemistry</b> 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:	A17SE (NW)	690	5	430121 564944
	<b>BGS Estimated Soil Chemistry</b> 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)	701	5	430050 564000
	<b>BGS Estimated Soil Chemistry</b> 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:	A18NW (N)	711	5	430609 565267
	<b>BGS Estimated Soil Chemistry</b> 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:	A17SE (NW)	715	5	430134 565000
	<b>BGS Estimated Soil Chemistry</b> 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)	715	5	430032 564000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	726	5	430221 563805
	<b>BGS Estimated Soil Chemistry</b> 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)	728	5	431478 564364
	<b>BGS Estimated Soil Chemistry</b> 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)	749	5	430206 563788
	<b>BGS Estimated Soil Chemistry</b> 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)	756	5	431296 563988
	<b>BGS Estimated Soil Chemistry</b> 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)	756	5	430031 563936
	<b>BGS Estimated Soil Chemistry</b> 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)	757	5	431309 564000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NW (W)	771	5	429840 564589
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SW (W)	771	5	429830 564481
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SW (W)	775	5	429827 564374
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NW (W)	775	5	429844 564613
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NW (W)	779	5	429846 564632
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NW (W)	788	5	429825 564578

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	790	5	430857 563656
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SW (W)	795	5	429817 564295
	<b>BGS Estimated Soil Chemistry</b> 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)	796	5	431205 563860
	<b>BGS Estimated Soil Chemistry</b> 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:	A9NE (SE)	800	5	431368 564000
	<b>BGS Estimated Soil Chemistry</b> 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)	803	5	431194 563843
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SW (W)	811	5	429810 564250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SW (W)	820	5	429806 564226
	<b>BGS Estimated Soil Chemistry</b> 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)	827	5	431450 565000
	<b>BGS Estimated Soil Chemistry</b> 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 30 - 45 mg/kg Concentration:	A12NW (W)	828	5	429801 564653
	<b>BGS Estimated Soil Chemistry</b> 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)	835	5	431414 564000
	<b>BGS Estimated Soil Chemistry</b> 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)	835	5	431000 563668
	<b>BGS Estimated Soil Chemistry</b> 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)	835	5	431414 564000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	839	5	430144 563721
	<b>BGS Estimated Soil Chemistry</b> 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:	A18NE (N)	841	5	430881 565384
	<b>BGS Estimated Soil Chemistry</b> 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)	841	5	431136 563747
	<b>BGS Estimated Soil Chemistry</b> 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:	A9NE (SE)	842	5	431410 563985
	<b>BGS Estimated Soil Chemistry</b> 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 30 - 45 mg/kg Concentration:	A12NW (W)	845	5	429761 564540
	<b>BGS Estimated Soil Chemistry</b> 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:	A9NE (SE)	851	5	431435 564000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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 30 - 45 mg/kg Concentration:	A12NW (W)	858	5	429743 564489
	<b>BGS Estimated Soil Chemistry</b> 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 30 - 45 mg/kg Concentration:	A12SW (W)	867	5	429733 564407
	<b>BGS Estimated Soil Chemistry</b> 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 30 - 45 mg/kg Concentration:	A7SW (SW)	867	5	430000 563806
	<b>BGS Estimated Soil Chemistry</b> 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:	A7SW (SW)	873	5	429999 563798
	<b>BGS Estimated Soil Chemistry</b> 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 30 - 45 mg/kg Concentration:	A12SW (W)	879	5	429732 564293
	<b>BGS Estimated Soil Chemistry</b> 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:	A12SW (W)	879	5	429738 564260

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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 30 - 45 mg/kg Concentration:	A12SW (W)	881	5	429742 564234
	<b>BGS Estimated Soil Chemistry</b> 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:	A18NE (N)	883	5	430900 565423
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NW (W)	884	5	429747 564668
	<b>BGS Estimated Soil Chemistry</b> 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)	890	5	430152 563654
	<b>BGS Estimated Soil Chemistry</b> 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 (N)	897	5	430334 565380
	<b>BGS Estimated Soil Chemistry</b> 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:	A9NE (E)	897	5	431575 564136

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	903	5	429894 565000
	<b>BGS Estimated Soil Chemistry</b> 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:	A12NW (W)	913	5	429741 564746
	<b>BGS Estimated Soil Chemistry</b> 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:	A7NW (SW)	917	5	429792 564000
	<b>BGS Estimated Soil Chemistry</b> 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)	935	5	430517 563483
	<b>BGS Estimated Soil Chemistry</b> 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:	A19NW (NE)	941	5	431101 565424
	<b>BGS Estimated Soil Chemistry</b> 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:	A7NW (W)	945	5	429707 564123

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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 (E)	959	5	431627 564103
	<b>BGS Estimated Soil Chemistry</b> 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:	A7NW (SW)	962	5	429787 563919
	<b>BGS Estimated Soil Chemistry</b> 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:	A11SE (W)	965	5	429655 564235
	<b>BGS Estimated Soil Chemistry</b> 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:	A11SE (W)	969	5	429647 564257
	<b>BGS Estimated Soil Chemistry</b> 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)	971	5	429809 565000
	<b>BGS Estimated Soil Chemistry</b> 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:	A11SE (W)	971	5	429629 564467

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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:	A7SW (SW)	974	5	430000 563661
	<b>BGS Estimated Soil Chemistry</b> 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:	A18NE (N)	979	5	431000 565497
	<b>BGS Estimated Soil Chemistry</b> 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)	983	5	430983 563496
	<b>BGS Estimated Soil Chemistry</b> 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:	A23SE (N)	989	5	431009 565505
	<b>BGS Estimated Soil Chemistry</b> 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)	989	5	431000 563499
	<b>BGS Estimated Soil Chemistry</b> 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:	A9NE (E)	992	5	431681 564139

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> 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)	996	5	431647 565000
	<b>BGS Estimated Soil Chemistry</b> 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)	996	5	430029 563610
50	<b>BGS Recorded Mineral Sites</b> Site Name: Hebburn Clay Pit Location: , Hebburn, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95980 Type: Opencast <b>Status: Ceased</b> Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Pelaw Clay Member Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	293	4	430458 564168
51	<b>BGS Recorded Mineral Sites</b> Site Name: Hebburn Hall Location: , South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 16130 Type: Opencast <b>Status: Ceased</b> 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	A14SE (E)	726	4	431410 564190
52	<b>BGS Recorded Mineral Sites</b> Site Name: Hebburn Colliery Location: , Hebburn, South Shields, Tyne & Wear Source: British Geological Survey, National Geoscience Information Service Reference: 95960 Type: Opencast <b>Status: Ceased</b> Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary Geology: Pelaw Clay Member Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	739	4	431216 565125
	<b>BGS Measured Urban Soil Chemistry</b> No data available				
	<b>BGS Urban Soil Chemistry Averages</b> No data available				
	<b>Coal Mining Affected Areas</b> Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NW (NW)	0	6	430681 564489
	<b>Mining Instability</b> Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (NW)	0	-	430681 564489

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Man-Made Mining Cavities</b> Easting: 430900 Northing: 564800 Distance: 290 Quadrant Reference: A13 Quadrant Reference: NE Bearing Ref: NE Cavity Type: Not supplied Commodity: Fireclay Solid Geology Detail: No Details Superficial Geology No Details Detail:	A13NE (NE)	290	7	430900 564800
	<b>Non Coal Mining Areas of Great Britain</b> No Hazard				
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	4	430681 564489
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	4	430681 564489
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	67	4	430539 564488
	<b>Potential for Ground Dissolution Stability Hazards</b> No Hazard				
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	4	430681 564489
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	4	430681 564489
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	67	4	430539 564488
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	4	430681 564489
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	67	4	430539 564488
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	4	430681 564489
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	4	430681 564489

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	<b>Contemporary Trade Directory Entries</b> Name: A C Pillar Tools Location: Rear Of, Glen Street, Hebburn, Tyne and Wear, NE31 1NU Classification: Precision Engineers <b>Status: Inactive</b> Positional Accuracy: Automatically positioned in the proximity of the address	A13NE (E)	14	-	430745 564493
53	<b>Contemporary Trade Directory Entries</b> Name: Glen Street Mot Ltd Location: 40, Glen Street, Hebburn, Tyne and Wear, NE31 1NU Classification: Mot Testing Centres <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the address or location	A13SE (E)	15	-	430721 564473
53	<b>Contemporary Trade Directory Entries</b> Name: Smiths Bros Location: 44, Glen Street, Hebburn, Tyne and Wear, NE31 1NU Classification: Printers <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	A13SE (SE)	19	-	430714 564463
53	<b>Contemporary Trade Directory Entries</b> Name: Smith Bros (Hebburn & Jarrow) Ltd Location: 44, Glen Street, Hebburn, Tyne and Wear, NE31 1NU Classification: Printers <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	A13SE (SE)	19	-	430714 564463
53	<b>Contemporary Trade Directory Entries</b> Name: Smith Bros Location: 44, Glen Street, Hebburn, Tyne and Wear, NE31 1NU Classification: Printers <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A13SE (SE)	19	-	430714 564463
54	<b>Contemporary Trade Directory Entries</b> Name: Glen Location: 66, Glen Street, Hebburn, Tyne and Wear, NE31 1NG Classification: Pest & Vermin Control <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	A13SW (SW)	16	-	430645 564412
55	<b>Contemporary Trade Directory Entries</b> Name: Morland Motors Location: Rear Of, Glen Street, Hebburn, Tyne and Wear, NE31 1NU Classification: Car Body Repairs <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A13SW (SW)	32	-	430593 564394
56	<b>Contemporary Trade Directory Entries</b> Name: Glenstreet Mot Centre Location: Glen St, Hebburn, Tyne & Wear, NE31 1NU Classification: Garage Services <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the road within the address or location	A13SE (S)	32	-	430694 564430
57	<b>Contemporary Trade Directory Entries</b> Name: Jewson Ltd Location: Station Rd, Hebburn, Tyne and Wear, NE31 1BD Classification: Builders' Merchants <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the road within the address or location	A13NE (E)	72	-	430841 564534
58	<b>Contemporary Trade Directory Entries</b> Name: Willow Garage Location: Glen Street Works, Glen St, Hebburn, Tyne And Wear, NE31 1NE Classification: Garage Services <b>Status: Inactive</b> Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	81	-	430571 564348
59	<b>Contemporary Trade Directory Entries</b> Name: Brag Engineering Ltd Location: 7 Back Glen St, Hebburn, Tyne & Wear, NE31 1NQ Classification: Engineers - General <b>Status: Active</b> Positional Accuracy: Manually positioned within the geographical locality	A13SE (SE)	110	-	430756 564380
60	<b>Contemporary Trade Directory Entries</b> Name: Rotech Location: Unit 4, Robert Frazer Ind Est, Station Rd, Hebburn, Tyne & Wear, NE31 1BD Classification: Distribution Services <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the road within the address or location	A13NE (N)	125	-	430727 564684



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Hogg Mot            Location: Unit 2 Frazer Indust Est, Station Rd, Hebburn, Tyne &amp; Wear, NE31 1BD            Classification: Mot Testing Centres  <b>Status: Active</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A13NE (N)	133	-	430719 564694
60	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Frazer            Location: Station Road, Hebburn, Tyne and Wear, NE31 1BD            Classification: Builders' Merchants  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	157	-	430743 564714
61	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: A1 Upholstery Cleaners            Location: 50, St. Aloysius View, Hebburn, Tyne and Wear, NE31 1RQ            Classification: Carpet, Curtain &amp; Upholstery Cleaners  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NW (W)	128	-	430485 564492
62	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: New Willow            Location: Glen Street Works, Glen Street, Hebburn, Tyne and Wear, NE31 1NE            Classification: Garage Services  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A13SW (SW)	165	-	430524 564278
63	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Crane Express Services Ltd            Location: Unit 3, Station Road, Hebburn, Tyne and Wear, NE31 1BD            Classification: Crane Manufacturers  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	221	-	430765 564774
63	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: A &amp; T Auto Services            Location: Unit 1/2, Woodhouse &amp; Stephenson Yard, Prince Consort Road, Hebburn, Tyne and Wear, NE31 1DT            Classification: Garage Services  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	221	-	430765 564774
63	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Hebburn Building Supplies Ltd            Location: Unit 4, Robert Frazer Industrial Estate, Station Road, Hebburn, Tyne and Wear, NE31 1BD            Classification: Builders' Merchants  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	221	-	430765 564774
63	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: The Painters Ltd            Location: Unit 1-2, Woodhouse &amp; Stephenson Yard, Prince Consort Road, HEBBURN, Tyne and Wear, NE31 1DT            Classification: Powder Coatings  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	221	-	430765 564774
63	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Auto Refinish            Location: Unit 3/4, Woodhouse &amp; Stephenson Yard, Prince Consort Road, Hebburn, Tyne and Wear, NE31 1DT            Classification: Car Painters &amp; Sprayers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	221	-	430765 564774
63	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: J Mulholland            Location: Unit 9, Robert Frazer Industrial Estate, Station Road, Hebburn, Tyne and Wear, NE31 1BD            Classification: Garage Services  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	221	-	430765 564774
63	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Abacos            Location: Unit 3/4, Woodhouse &amp; Stephenson Yard, Prince Consort Road, Hebburn, Tyne and Wear, NE31 1DT            Classification: Furniture Manufacturers - Home &amp; Office  <b>Status: Inactive</b>            Positional Accuracy: Manually positioned to the address or location</p>	A13NE (N)	221	-	430765 564774



## Industrial Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Rotec Industrial Rubber Products            Location: Unit 4, Robert Frazer Industrial Estate, Station Road, Hebburn, Tyne and Wear, NE31 1BD            Classification: Rubber &amp; Plastic Products - Manufacturers  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NE (N)	221	-	430765 564774
63	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Jewson Ltd            Location: Robert Frazer Ind Est, Station Rd, Hebburn, Tyne and Wear, NE31 1BD            Classification: Builders' Merchants  <b>Status: Active</b>            Positional Accuracy: Manually positioned within the geographical locality</p>	A13NE (N)	267	-	430777 564818
64	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: North East Appliance Repairs            Location: 41, Station Road, Hebburn, Tyne and Wear, NE31 1LA            Classification: Electrical Goods Sales, Manufacturers &amp; Wholesalers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A13SE (E)	234	-	430965 564402
65	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: The Poss Tub            Location: 7, St. Johns Precinct, Hebburn, Tyne and Wear, NE31 1LG            Classification: Laundries &amp; Launderettes  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A13SE (SE)	235	-	430880 564319
66	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Deep Star Subsea            Location: 15, Victoria Road West, Hebburn, Tyne and Wear, NE31 1UZ            Classification: Oil &amp; Gas Exploration Supplies &amp; Services  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A13SE (SE)	316	-	430966 564283
67	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Leisure Systems            Location: 19, Troilus Gardens, Hebburn, Tyne and Wear, NE31 1FG            Classification: Swimming Pool Contractors, Repairers &amp; Service  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NE (NE)	319	-	430977 564776
68	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Siemens            Location: 7, North Farm Road, Hebburn, Tyne and Wear, NE31 1LX            Classification: Engineering Services  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NW (S)	326	-	430664 564089
69	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Shaun Lawson            Location: Unit 4, Holystone Trading Estate, Hebburn, Tyne and Wear, NE31 1BJ            Classification: Wrought Ironwork  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	364	-	430820 564907
69	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Mick Abbott Auto Repairs &amp; Tyre Centre Ltd            Location: Unit 5, Holystone Trading Estate, Hebburn, Tyne and Wear, NE31 1BJ            Classification: Garage Services  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	367	-	430816 564911
69	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Elite Enclosures Ltd            Location: Unit 7/8, Holystone Trading Estate, Hebburn, Tyne and Wear, NE31 1BJ            Classification: Manufacturers  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	386	-	430843 564925
70	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Polished Plastics            Location: 28, Bicester Grove, Hebburn, Tyne and Wear, NE31 1AQ            Classification: PVC-U Products - Manufacturers &amp; Suppliers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A18SE (NE)	407	-	430922 564920

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Tharus            Location: 13-14 Holystone Trading Est, Hebburn, Tyne and Wear, NE31 1BJ            Classification: Metal Products - Fabricated            Status: <b>Inactive</b>            Positional Accuracy: Manually positioned to the address or location</p>	A18SE (NE)	424	-	430896 564948
71	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Lane Plastics            Location: Unit 12, Holystone Trading Estate, Hebburn, Tyne and Wear, NE31 1BJ            Classification: Plastic Products - Manufacturers            Status: <b>Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A18SE (N)	437	-	430875 564969
72	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Jet Hebburn Service Station            Location: 94, Victoria Road West, Hebburn, Tyne and Wear, NE31 1LS            Classification: Petrol Filling Stations            Status: <b>Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NW (S)	432	-	430684 563985
73	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Wathom            Location: Unit 6 Prince Consort Rd, Hebburn, Tyne and Wear, NE31 1DS            Classification: Engineers - General            Status: <b>Active</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A18SW (NW)	507	-	430350 564926
74	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Haighs Of Newcastle Ltd            Location: 6, Sullivan Walk, Hebburn, Tyne and Wear, NE31 1YN            Classification: Office Furniture &amp; Equipment            Status: <b>Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A14SW (E)	547	-	431288 564358
75	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: S &amp; R Cars            Location: Unit 19, Prince Consort Ind Est, Hebburn, Tyne and Wear, NE31 1EH            Classification: Car Dealers - Used            Status: <b>Inactive</b>            Positional Accuracy: Manually positioned to the address or location</p>	A17SE (NW)	610	-	430234 564954
75	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Quay Mot            Location: Unit 19, Prince Consort Ind Est, Hebburn, Tyne and Wear, NE31 1EH            Classification: Mot Testing Centres            Status: <b>Inactive</b>            Positional Accuracy: Manually positioned to the address or location</p>	A17SE (NW)	610	-	430234 564954
75	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Quay Coach Works            Location: Unit 19A, Prince Consort Ind Est, Hebburn, Tyne and Wear, NE31 1EH            Classification: Car Body Repairs            Status: <b>Inactive</b>            Positional Accuracy: Manually positioned within the geographical locality</p>	A17SE (NW)	630	-	430245 564994
76	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: A &amp; B Crane &amp; Electrical Services            Location: Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Lifting Equipment            Status: <b>Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	633	-	430103 564828
77	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Warrant Distribution Ltd            Location: Argyle Street, Hebburn, Tyne and Wear, NE31 1BQ            Classification: Distribution Services            Status: <b>Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	633	-	431076 565094

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
78	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Car Care            Location: Prince Consort Ind Est, Hebburn, Tyne &amp; Wear, NE31 1EH            Classification: Garage Services  <b>Status: Inactive</b>            Positional Accuracy: Manually positioned within the geographical locality</p>	A17SE (NW)	649	-	430233 565009
78	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Nordic Marine Ltd            Location: Unit 15, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Engineers - General  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	669	-	430254 565058
78	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Technical Services            Location: Unit 16, Prince Consort Ind Est, Hebburn, Tyne and Wear, NE31 1EH            Classification: Swimming Pool Contractors, Repairers &amp; Service  <b>Status: Inactive</b>            Positional Accuracy: Manually positioned to the address or location</p>	A17SE (NW)	672	-	430232 565042
78	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Fast Fix Fasteners Ltd            Location: Unit 4, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Nuts, Bolts &amp; Fixings  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned in the proximity of the address</p>	A17SE (NW)	691	-	430210 565046
78	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Hastings Metal Finishers Ltd            Location: Unit 7, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Metal Finishing Services  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	704	-	430179 565032
78	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Wright Aluminium Systems Ltd            Location: Unit 9, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Aluminium Fabricators  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	712	-	430192 565059
78	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Beldam Lascar Seals Ltd            Location: Unit 10, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Seal &amp; Joint Manufacturers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	734	-	430198 565094
78	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Auto-Klean Filtration Ltd            Location: Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Filter Manufacturers &amp; Suppliers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	734	-	430198 565094
78	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Bill Quay Precision Engineering &amp; Fabrications Ltd            Location: Unit 10, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Machine Shops  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	734	-	430198 565094
79	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Oak Engineering Co Ltd            Location: Unit 2, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Mechanical Engineers  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	663	-	430161 564951
80	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Turbo Eng Ltd            Location: Unit 14, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Nuts, Bolts &amp; Fixings  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	676	-	430256 565069



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: D Morle            Location: Unit 14, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Swimming Pool Contractors, Repairers &amp; Service  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	676	-	430256 565069
80	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: I T H            Location: Unit 12, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Temperature Monitoring Systems Manufacturers  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	696	-	430257 565096
80	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Alan Heron Ltd            Location: Unit 11, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Joinery Manufacturers  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	718	-	430235 565107
81	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Diamond Cleaning            Location: 143, Hedgeley Road, Hebburn, Tyne and Wear, NE31 1HB            Classification: Cleaning Services - Domestic  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A19SW (NE)	678	-	431350 564882
82	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: D W H Engineering            Location: Unit 5, Prince Consort Industrial Estate, Hebburn, Tyne and Wear, NE31 1EH            Classification: Engineers - General  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A17SE (NW)	686	-	430174 565001
83	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Lloyds British Testing            Location: Wincomblee Road, Walker, NEWCASTLE UPON TYNE, NE6 3QQ            Classification: Lifting Equipment  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A12SW (W)	825	-	429779 564348
83	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Lloyds British Testing Ltd            Location: Wincomblee Road, Walker, Newcastle Upon Tyne, NE6 3QQ            Classification: Lifting Equipment  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A12SW (W)	825	-	429779 564348
83	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Lloyds Hedley Handling Services Ltd            Location: Wincomblee Road, Walker, Newcastle upon Tyne, NE6 3QQ            Classification: Materials Handling Equipment  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A12SW (W)	825	-	429779 564348
84	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Newlook            Location: 27, Barnard Crescent, Hebburn, Tyne and Wear, NE31 1HW            Classification: Carpet, Curtain &amp; Upholstery Cleaners  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A19SE (NE)	832	-	431423 565045
85	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Trench (Uk) Ltd            Location: South Drive, Hebburn, Tyne and Wear, NE31 1UW            Classification: Transformer Manufacturers  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A8SW (S)	836	-	430361 563617
86	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Watson Norie Ltd            Location: Wincomblee Road, NEWCASTLE UPON TYNE, NE6 3PL            Classification: Electrical Engineers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A12SW (W)	930	-	429684 564266

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
87	<b>Contemporary Trade Directory Entries</b> Name: Robertson Rewinds Location: Wincomblee Road, Newcastle upon Tyne, NE6 3QS Classification: Electric Motor Sales & Service <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A11SE (W)	937	-	429663 564402
87	<b>Contemporary Trade Directory Entries</b> Name: Pearson Engineering Ltd Location: Wincomblee Road, Newcastle upon Tyne, NE6 3QS Classification: Engineers - General <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A11SE (W)	937	-	429663 564402
87	<b>Contemporary Trade Directory Entries</b> Name: White Street Garage Location: UNIT 33 White St, Newcastle upon Tyne, Tyne and Wear, NE6 3PJ Classification: Garage Services <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the road within the address or location	A11SE (W)	984	-	429616 564393
88	<b>Contemporary Trade Directory Entries</b> Name: Richard Hardie Location: Victoria Road East, Hebburn, Tyne and Wear, NE31 1YQ Classification: Car Dealers <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A15NW (E)	951	-	431719 564583
89	<b>Contemporary Trade Directory Entries</b> Name: C Rutherford Location: 29, Lambley Crescent, Hebburn, Tyne and Wear, NE31 2NF Classification: Road Haulage Services <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A3NW (S)	957	-	430599 563456
90	<b>Contemporary Trade Directory Entries</b> Name: R B C Engineering Location: Chieftain House, White Street, Newcastle upon Tyne, Tyne and Wear, NE6 3PJ Classification: Recycling Centres <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A11NE (W)	966	-	429641 564554
91	<b>Contemporary Trade Directory Entries</b> Name: A1 Venetian Blinds Ltd Location: Unit 2,10,Wincomblee Workshops,White St, Newcastle upon Tyne, Tyne and Wear, NE6 3PJ Classification: Blinds, Awnings & Canopies <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the road within the address or location	A11SE (W)	969	-	429630 564426
91	<b>Contemporary Trade Directory Entries</b> Name: Quality Commissioning Ltd Location: 63-65 White St, Newcastle Upon Tyne, Northumberland, NE6 3PJ Classification: Blast Cleaning <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the road within the address or location	A11SE (W)	971	-	429628 564422
91	<b>Contemporary Trade Directory Entries</b> Name: Metal Services Location: White St, Newcastle upon Tyne, Tyne and Wear, NE6 3PJ Classification: Aluminium Fabricators <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the road within the address or location	A11SE (W)	976	-	429624 564411
91	<b>Contemporary Trade Directory Entries</b> Name: Willow Tree Country Kitchens Location: Unit 11, Wincomblee Workshops, White Street, NEWCASTLE UPON TYNE, NE6 3PJ Classification: Food Products - Manufacturers <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A11SE (W)	984	-	429616 564453
91	<b>Contemporary Trade Directory Entries</b> Name: A1 Blinds Ltd Location: Wincomblee Workshops, White Street, NEWCASTLE UPON TYNE, NE6 3PJ Classification: Blinds, Awnings & Canopies <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A11SE (W)	984	-	429616 564453



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Custom Print            Location: Unit 7, Wincomblee Workshops, White Street, NEWCASTLE UPON TYNE, NE6 3PJ            Classification: Printers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A11SE (W)	984	-	429616 564453
92	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: North East Coppersmiths Ltd            Location: Marys Place, Newcastle upon Tyne, NE6 3PZ            Classification: Metal Workers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned in the proximity of the address</p>	A12NW (W)	971	-	429687 564768
92	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Caterform Ltd            Location: 4, Marys Place, Newcastle upon Tyne, NE6 3PZ            Classification: Metal Products - Fabricated  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A12NW (W)	992	-	429681 564810
93	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Starling            Location: Wincomblee Rd, Newcastle Upon Tyne, Northumberland, NE6 3PL            Classification: Car Body Repairs  <b>Status: Inactive</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A11SE (W)	971	-	429658 564198
94	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Fantasy Giftware Ltd            Location: Wagonway Rd, Hebburn, Tyne &amp; Wear, NE31 1SP            Classification: Glass Products - Manufacturers  <b>Status: Inactive</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A19NW (NE)	976	-	431208 565413
95	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Shepherd Offshore Services Ltd            Location: Offshore Technology Park, Nelson Road, Newcastle upon Tyne, NE6 3NL            Classification: Oil &amp; Gas Extraction  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A7NW (SW)	983	-	429745 563949
96	<p><b>Fuel Station Entries</b></p> <p>Name: Hebburn Service Station            Location: 94, Victoria Road West, Hebburn, NE31 1LS            Brand: Jet            Premises Type: Petrol Station  <b>Status: Open</b>            Positional Accuracy: Manually positioned to the address or location</p>	A8NE (S)	415	-	430686 564002

Agency & Hydrological	Version	Update Cycle
<b>Contaminated Land Register Entries and Notices</b> City of Newcastle upon Tyne Council - Environmental Health Department Gateshead Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Neighbourhood Services North Tyneside Metropolitan Borough Council - Environmental Health Department Sunderland City Metropolitan Borough Council - Environmental Health Department	January 2013 July 2013 March 2013 October 2013 September 2013	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Bi-Annually
<b>Discharge Consents</b> Environment Agency - North East Region	May 2014	Quarterly
<b>Enforcement and Prohibition Notices</b> Environment Agency - North East Region	March 2013	As notified
<b>Integrated Pollution Controls</b> Environment Agency - North East Region	October 2008	Not Applicable
<b>Integrated Pollution Prevention And Control</b> Environment Agency - North East Region	May 2014	Quarterly
<b>Local Authority Integrated Pollution Prevention And Control</b> North Tyneside Metropolitan Borough Council - Environmental Health Department Gateshead 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 February 2013 July 2012 June 2013 September 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
<b>Local Authority Pollution Prevention and Controls</b> North Tyneside Metropolitan Borough Council - Environmental Health Department Gateshead 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 February 2013 July 2013 June 2013 September 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
<b>Local Authority Pollution Prevention and Control Enforcements</b> North Tyneside Metropolitan Borough Council - Environmental Health Department Gateshead 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 February 2013 July 2013 June 2013 September 2012	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
<b>Nearest Surface Water Feature</b> Ordnance Survey	July 2012	Quarterly
<b>Pollution Incidents to Controlled Waters</b> Environment Agency - North East Region	December 1998	Not Applicable
<b>Prosecutions Relating to Authorised Processes</b> Environment Agency - North East Region	March 2013	As notified
<b>Prosecutions Relating to Controlled Waters</b> Environment Agency - North East Region	March 2013	As notified
<b>Registered Radioactive Substances</b> Scottish Environment Protection Agency - Head Office Environment Agency - North East Region	January 1998 May 2014	Not Applicable Quarterly
<b>River Quality</b> Environment Agency - Head Office	November 2001	Not Applicable
<b>River Quality Biology Sampling Points</b> Environment Agency - Head Office	July 2012	Annually
<b>River Quality Chemistry Sampling Points</b> Environment Agency - Head Office	July 2012	Annually
<b>Substantiated Pollution Incident Register</b> Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	May 2014 May 2014	Quarterly Quarterly















Agency & Hydrological	Version	Update Cycle
<b>Water Abstractions</b> Environment Agency - North East Region	April 2014	Quarterly
<b>Water Industry Act Referrals</b> Environment Agency - North East Region	May 2014	Quarterly
<b>Groundwater Vulnerability</b> Environment Agency - Head Office	January 2011	Not Applicable
<b>Drift Deposits</b> Environment Agency - Head Office	January 1999	Not Applicable
<b>Bedrock Aquifer Designations</b> British Geological Survey - National Geoscience Information Service	October 2012	Annually
<b>Superficial Aquifer Designations</b> British Geological Survey - National Geoscience Information Service	October 2012	Annually
<b>Source Protection Zones</b> Environment Agency - Head Office	April 2014	Quarterly
<b>Extreme Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	May 2014	Quarterly
<b>Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	May 2014	Quarterly
<b>Areas Benefiting from Flood Defences</b> Environment Agency - Head Office	May 2014	Quarterly
<b>Flood Water Storage Areas</b> Environment Agency - Head Office	May 2014	Quarterly
<b>Flood Defences</b> Environment Agency - Head Office	February 2014	Quarterly
<b>Detailed River Network Lines</b> Environment Agency - Head Office	March 2012	Annually
<b>Detailed River Network Offline Drainage</b> Environment Agency - Head Office	March 2012	Annually

Waste	Version	Update Cycle
<b>BGS Recorded Landfill Sites</b> British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
<b>Historical Landfill Sites</b> Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	May 2014 May 2014	Quarterly Quarterly
<b>Integrated Pollution Control Registered Waste Sites</b> Environment Agency - North East Region	October 2008	Not Applicable
<b>Licensed Waste Management Facilities (Landfill Boundaries)</b> Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	February 2014 February 2014	Quarterly Quarterly
<b>Licensed Waste Management Facilities (Locations)</b> Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	May 2014 May 2014	Quarterly Quarterly
<b>Local Authority Landfill Coverage</b> City of Newcastle upon Tyne Council - Environmental Health Department Gateshead Metropolitan Borough Council - Development Control 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 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
<b>Local Authority Recorded Landfill Sites</b> City of Newcastle upon Tyne Council - Environmental Health Department Gateshead Metropolitan Borough Council - Development Control 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 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
<b>Registered Landfill Sites</b> Environment Agency - North East Region - Northumbria Area	March 2003	Not Applicable
<b>Registered Waste Transfer Sites</b> Environment Agency - North East Region - Northumbria Area	March 2003	Not Applicable
<b>Registered Waste Treatment or Disposal Sites</b> Environment Agency - North East Region - Northumbria Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
<b>Control of Major Accident Hazards Sites (COMAH)</b> Health and Safety Executive	March 2014	Bi-Annually
<b>Explosive Sites</b> Health and Safety Executive	November 2013	Bi-Annually
<b>Notification of Installations Handling Hazardous Substances (NIHHS)</b> Health and Safety Executive	November 2000	Not Applicable
<b>Planning Hazardous Substance Enforcements</b> South Tyneside Metropolitan Borough Council - Planning Department Gateshead Metropolitan Borough Council - Development Control Sunderland City Metropolitan Borough Council - Planning City of Newcastle upon Tyne Council North Tyneside Metropolitan Borough Council - Development Function	April 2013 July 2013 March 2014 September 2013 September 2013	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
<b>Planning Hazardous Substance Consents</b> South Tyneside Metropolitan Borough Council - Planning Department Gateshead Metropolitan Borough Council - Development Control Sunderland City Metropolitan Borough Council - Planning City of Newcastle upon Tyne Council North Tyneside Metropolitan Borough Council - Development Function	April 2013 July 2013 March 2014 September 2013 September 2013	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update

<b>Geological</b>	<b>Version</b>	<b>Update Cycle</b>
<b>BGS 1:625,000 Solid Geology</b> British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
<b>BGS Estimated Soil Chemistry</b> British Geological Survey - National Geoscience Information Service	January 2010	Annually
<b>BGS Recorded Mineral Sites</b> British Geological Survey - National Geoscience Information Service	April 2014	Bi-Annually
<b>Brine Compensation Area</b> Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
<b>Coal Mining Affected Areas</b> The Coal Authority - Mining Report Service	December 2013	As notified
<b>Mining Instability</b> Ove Arup & Partners	October 2000	Not Applicable
<b>Non Coal Mining Areas of Great Britain</b> British Geological Survey - National Geoscience Information Service	February 2011	Not Applicable
<b>Potential for Collapsible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	October 2013	Annually
<b>Potential for Compressible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	October 2013	Annually
<b>Potential for Ground Dissolution Stability Hazards</b> British Geological Survey - National Geoscience Information Service	October 2013	Annually
<b>Potential for Landslide Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	October 2013	Annually
<b>Potential for Running Sand Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	October 2013	Annually
<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	October 2013	Annually
<b>Radon Potential - Radon Affected Areas</b> British Geological Survey - National Geoscience Information Service	July 2011	Annually
<b>Radon Potential - Radon Protection Measures</b> British Geological Survey - National Geoscience Information Service	July 2011	Annually
<b>Industrial Land Use</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Contemporary Trade Directory Entries</b> Thomson Directories	May 2014	Quarterly
<b>Fuel Station Entries</b> Catalist Ltd - Experian	March 2014	Quarterly

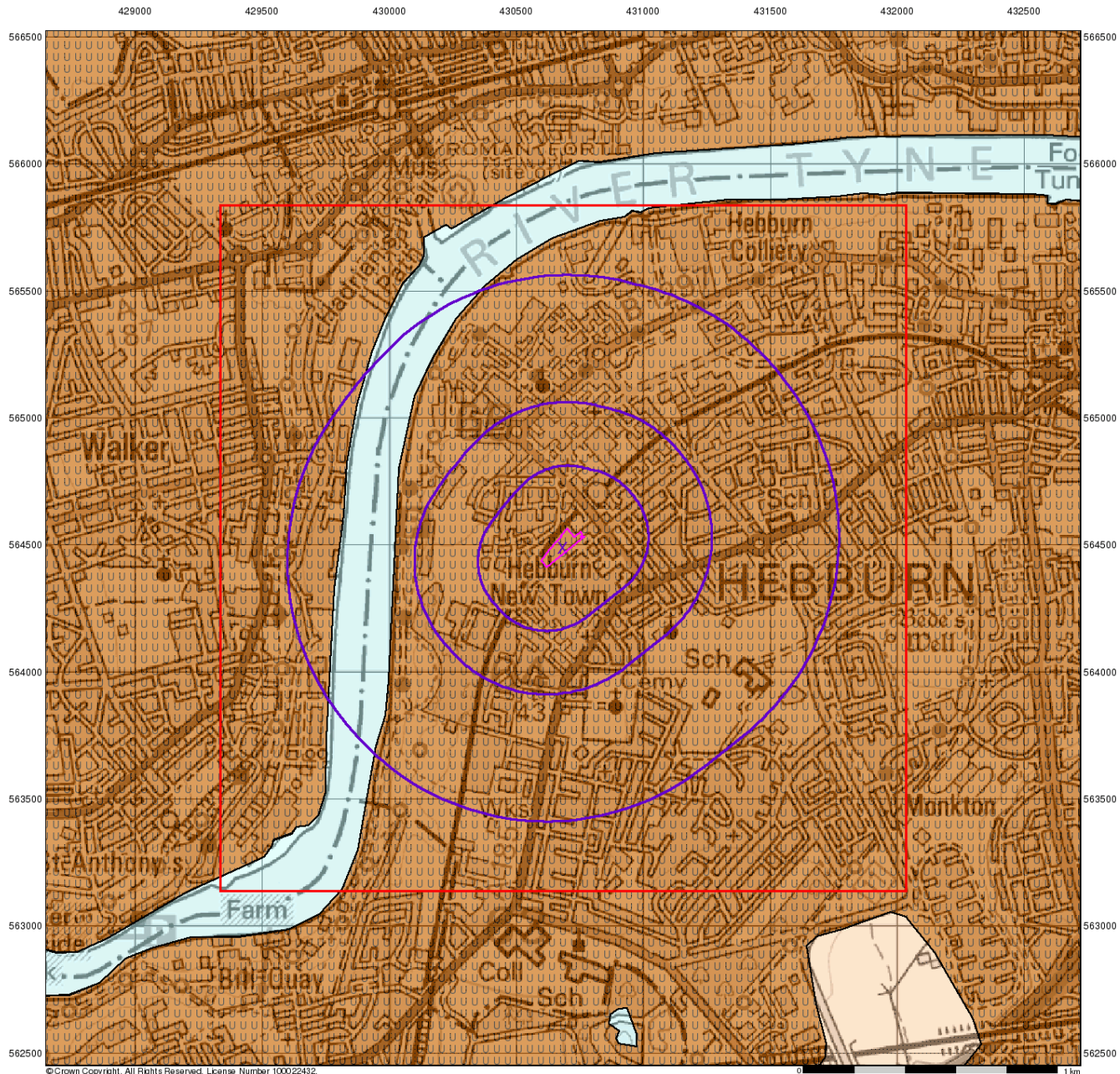
Sensitive Land Use	Version	Update Cycle
<b>Areas of Adopted Green Belt</b>		
City of Newcastle upon Tyne Council	May 2014	As notified
Gateshead Metropolitan Borough Council - Development Control	May 2014	As notified
North Tyneside Metropolitan Borough Council	May 2014	As notified
South Tyneside Metropolitan Borough Council - Planning Department	May 2014	As notified
Sunderland City Metropolitan Borough Council - Planning	May 2014	As notified
<b>Areas of Unadopted Green Belt</b>		
City of Newcastle upon Tyne Council	May 2014	As notified
Gateshead Metropolitan Borough Council - Development Control	May 2014	As notified
North Tyneside Metropolitan Borough Council	May 2014	As notified
South Tyneside Metropolitan Borough Council - Planning Department	May 2014	As notified
Sunderland City Metropolitan Borough Council - Planning	May 2014	As notified
<b>Areas of Outstanding Natural Beauty</b>		
Natural England	January 2014	Bi-Annually
<b>Environmentally Sensitive Areas</b>		
Natural England	July 2013	Annually
<b>Forest Parks</b>		
Forestry Commission	April 1997	Not Applicable
<b>Local Nature Reserves</b>		
Natural England	March 2014	Bi-Annually
<b>Marine Nature Reserves</b>		
Natural England	July 2013	Bi-Annually
<b>National Nature Reserves</b>		
Natural England	March 2014	Bi-Annually
<b>National Parks</b>		
Natural England	January 2014	Bi-Annually
<b>Nitrate Sensitive Areas</b>		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Not Applicable
<b>Nitrate Vulnerable Zones</b>		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	July 2014	Annually
<b>Ramsar Sites</b>		
Natural England	March 2014	Bi-Annually
<b>Sites of Special Scientific Interest</b>		
Natural England	March 2014	Bi-Annually
<b>Special Areas of Conservation</b>		
Natural England	March 2014	Bi-Annually
<b>Special Protection Areas</b>		
Natural England	March 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><b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL</p>
Centre for Ecology and Hydrology	 <p><b>Centre for Ecology &amp; Hydrology</b> NATURAL ENVIRONMENT RESEARCH COUNCIL</p>
Countryside Council for Wales	 <p>CYNGOR CEFN GWLAD CYMRU COUNTRYSIDE COUNCIL FOR WALES</p>
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	<b>Environment Agency - National Customer Contact Centre (NCCC)</b> PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
2	<b>South Tyneside Metropolitan Borough Council - Environmental Health Department</b> 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
3	<b>Scottish Environment Protection Agency - Head Office</b> Erskine Court, The Castle Business Park, Stirling, Stirlingshire, FK9 4TR	Telephone: 01786 457700 Fax: 01786 446885
4	<b>British Geological Survey - Enquiry Service</b> 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	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmark.co.uk Website: www.landmarkinfo.co.uk
6	<b>The Coal Authority - Mining Report Service</b> 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
7	<b>Peter Brett Associates</b> Caversham Bridge House, Waterman Place, Reading, Berkshire, RG1 8DN	Telephone: 0118 950 0761 Fax: 0118 959 7498 Email: reading@pba.co.uk Website: www.pba.co.uk
8	<b>South Tyneside Metropolitan Borough Council - Planning Department</b> 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
9	<b>Gateshead Metropolitan Borough Council - Development Control</b> Civic Centre, Regent Street, Gateshead, Tyne & Wear, NE8 1HH	Telephone: 0191 477 1011 Fax: 0191 478 3495 Website: www.gateshead.gov.uk
10	<b>Natural England</b> Suite D, Unex House, Bourges Boulevard, Peterborough, Cambridgeshire, PE1 1NG	Telephone: 0845 600 3078 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
11	<b>City of Newcastle upon Tyne Council - Environmental Health Department</b> Civic Centre, Barras Bridge, Newcastle-upon-tyne, Tyne And Wear, NE1 8PB	Telephone: 0191 232 8520 Fax: 0191 211 4962 Email: phep@newcastle.gov.uk Website: www.newcastle.gov.uk
-	<b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b> Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	<b>Landmark Information Group Limited</b> 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 / SEPA have a charging policy in place for enquiries.








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
## Groundwater Vulnerability

### General

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

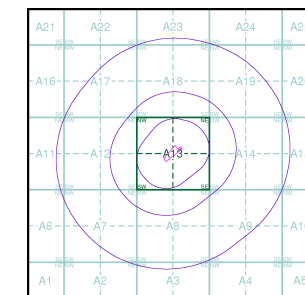
### Agency and Hydrological

#### 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)**
  -  Low
- Water or Sea**
  -  Low
- Drift Deposit**
  -  Low

#### Soil Classes

### Site Sensitivity Context Map - Slice A



### Order Details

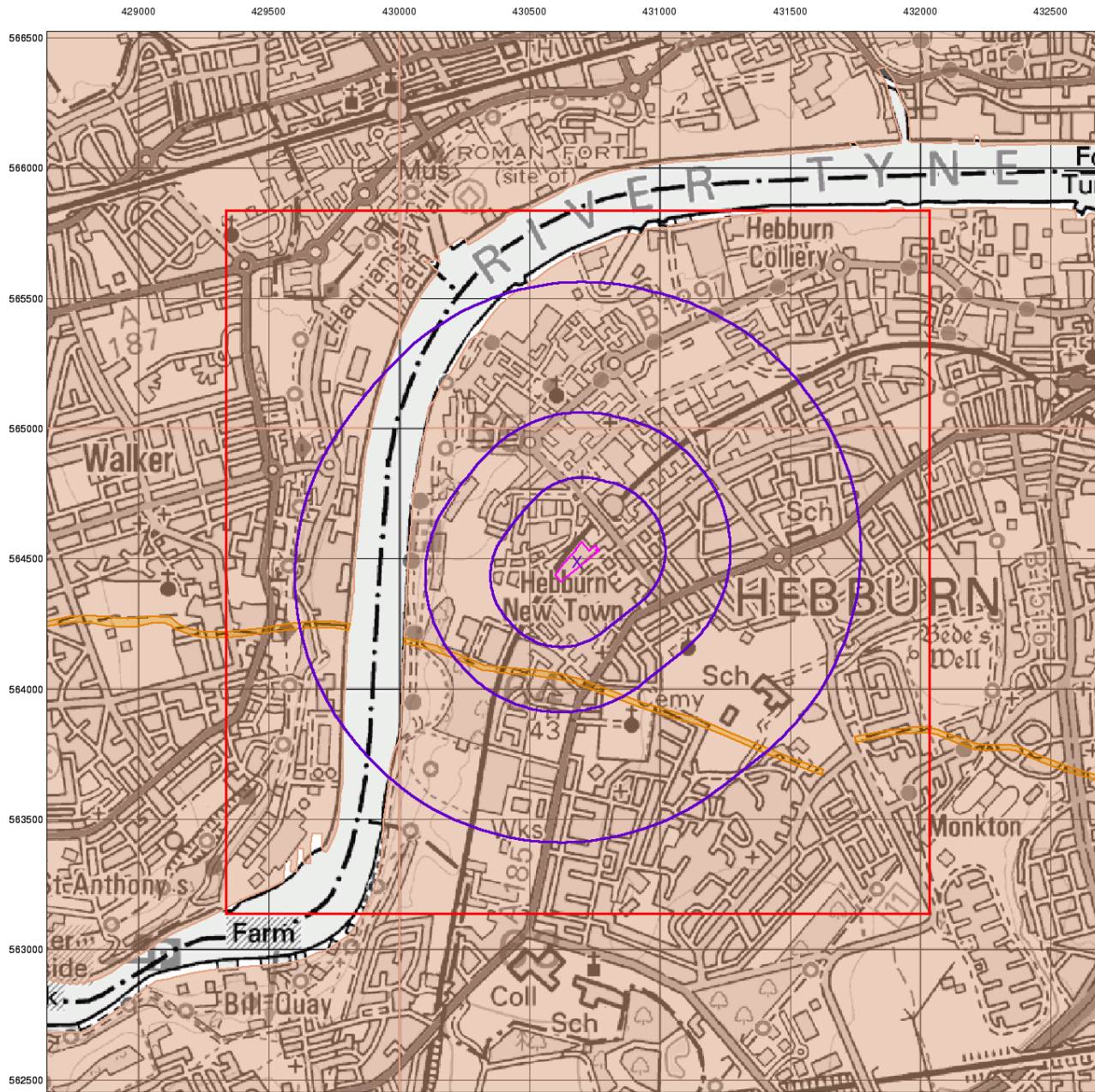
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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## Bedrock Aquifer Designation

### General

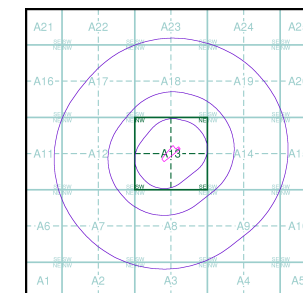
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

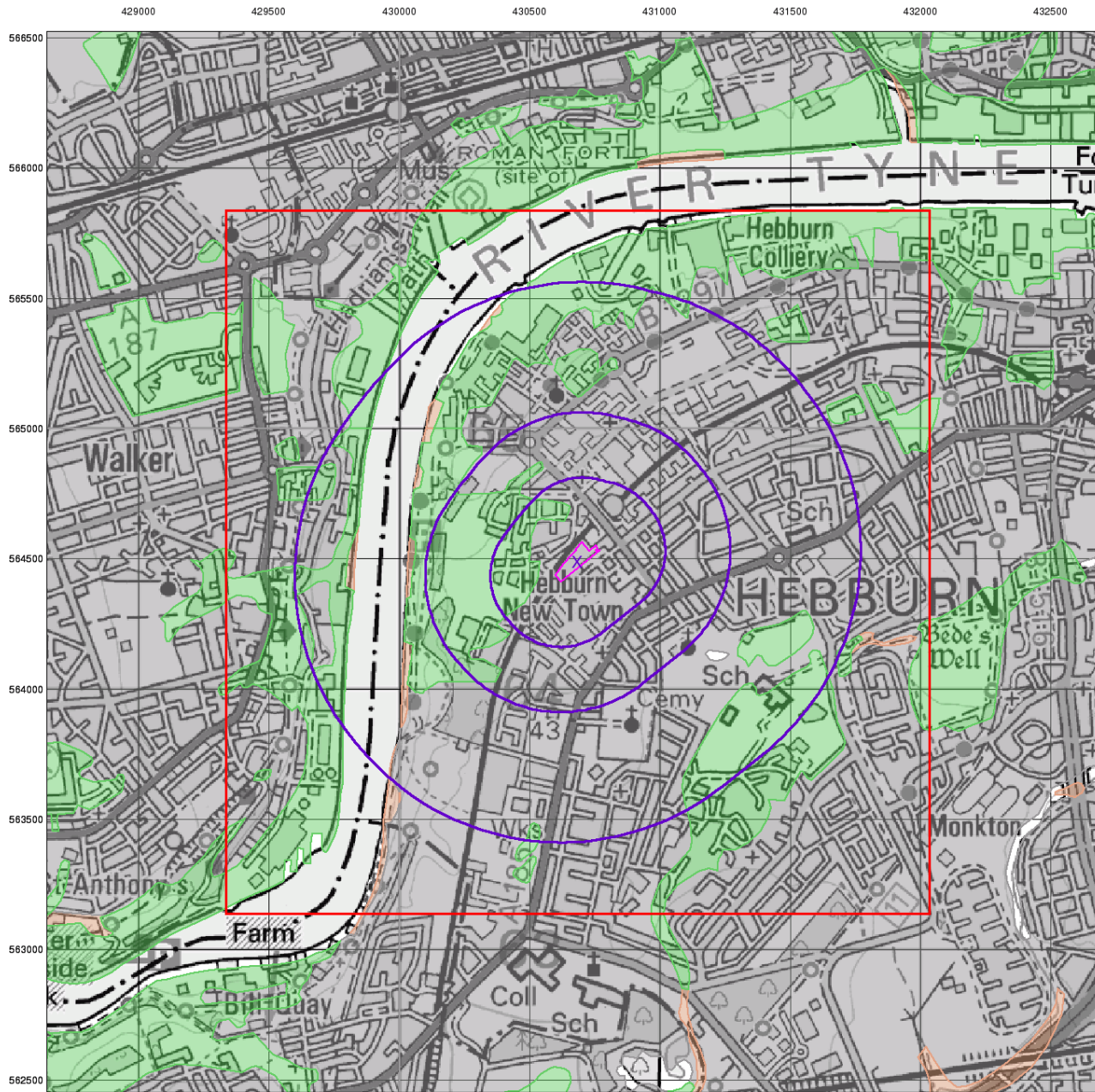
### Site Details

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## Superficial Aquifer Designation

### General

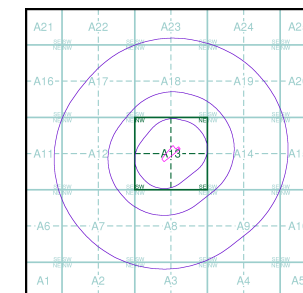
- ✕ Specified Site
- Specified Buffer(s)
- ✕ Bearing Reference Point
- Slice
- Map ID

### 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

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
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## Source Protection Zones

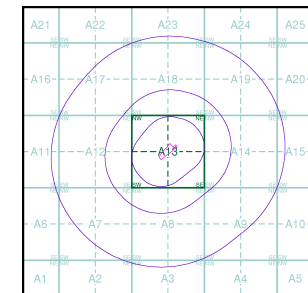
### General

- ◆ Specified Site
- Specified Buffer(s)
- X 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: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

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## Sensitive Land Uses

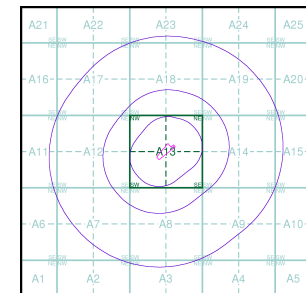
### General

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

### Sensitive Land Uses

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

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
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### Site Details


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

# 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
	PELC	Pelaw Clay Member	Clay	Devensian - Devensian
	GLLDD	Glaciolacustrine Deposits, Devensian	Clay and Silt	Devensian - Devensian
	TILLD	Till, Devensian	Diamicton	Devensian - Devensian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Devensian - Devensian

## Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	HBDY	Hebburn Dyke	Microgabbro	Palaeogene - Palaeogene
	GNP	Grindstone Post Member	Sandstone	Bolsovian - Bolsovian
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Bolsovian - Duckmantian
	PMCM	Pennine Middle Coal Measures Formation	Sandstone	Bolsovian - Duckmantian
	SFP	Seventy Fathom Post Member	Sandstone	Duckmantian - Duckmantian
		Rock Segments		
		Faults		



## Geology 1:50,000 Maps

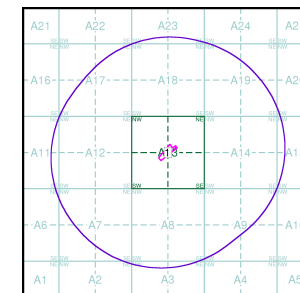
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published 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:	1
Map Sheet No:	021
Map Name:	Sunderland
Map Date:	1978
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

## Geology 1:50,000 Maps - Slice A



## Order Details:

Order Number:	58659417_1_1
Customer Reference:	C6149 Glen Street Hebburn APC
National Grid Reference:	430680, 564490
Slice:	A
Site Area (Ha):	0.89
Search Buffer (m):	1000

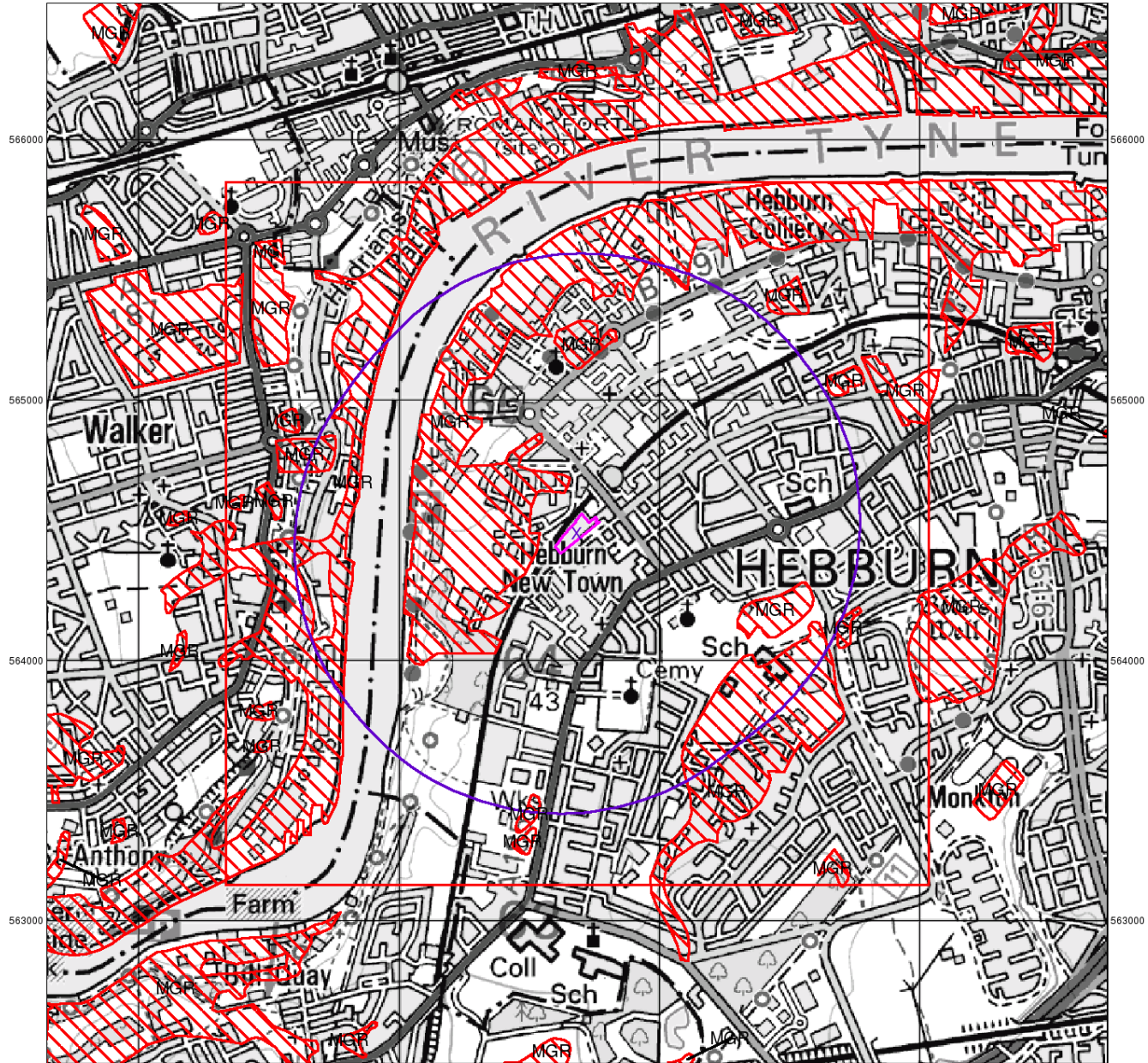
## Site Details:

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### Artificial Ground and Landslip

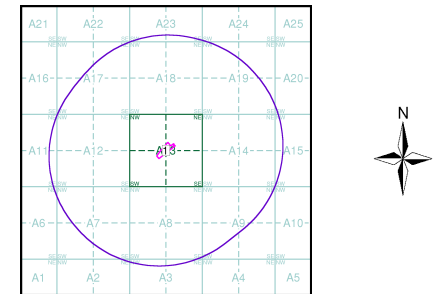
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions 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: 58659417\_1\_1  
 Customer Reference: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

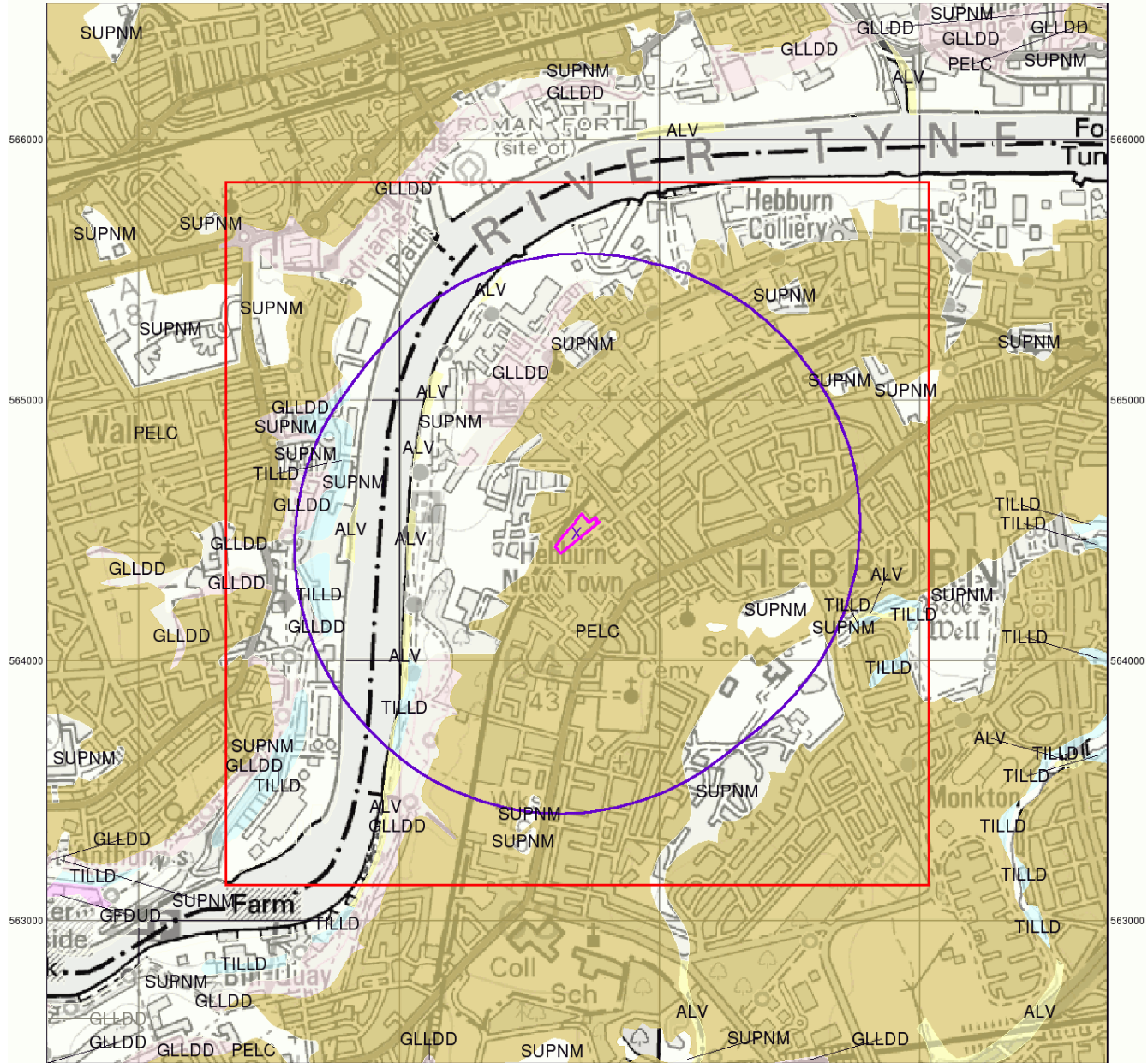
### Site Details:

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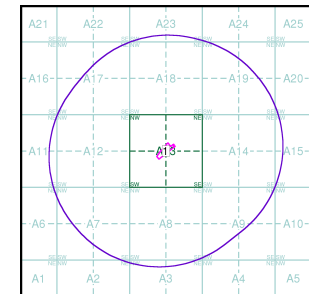
### Superficial Geology

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: 58659417\_1.1  
 Customer Reference: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

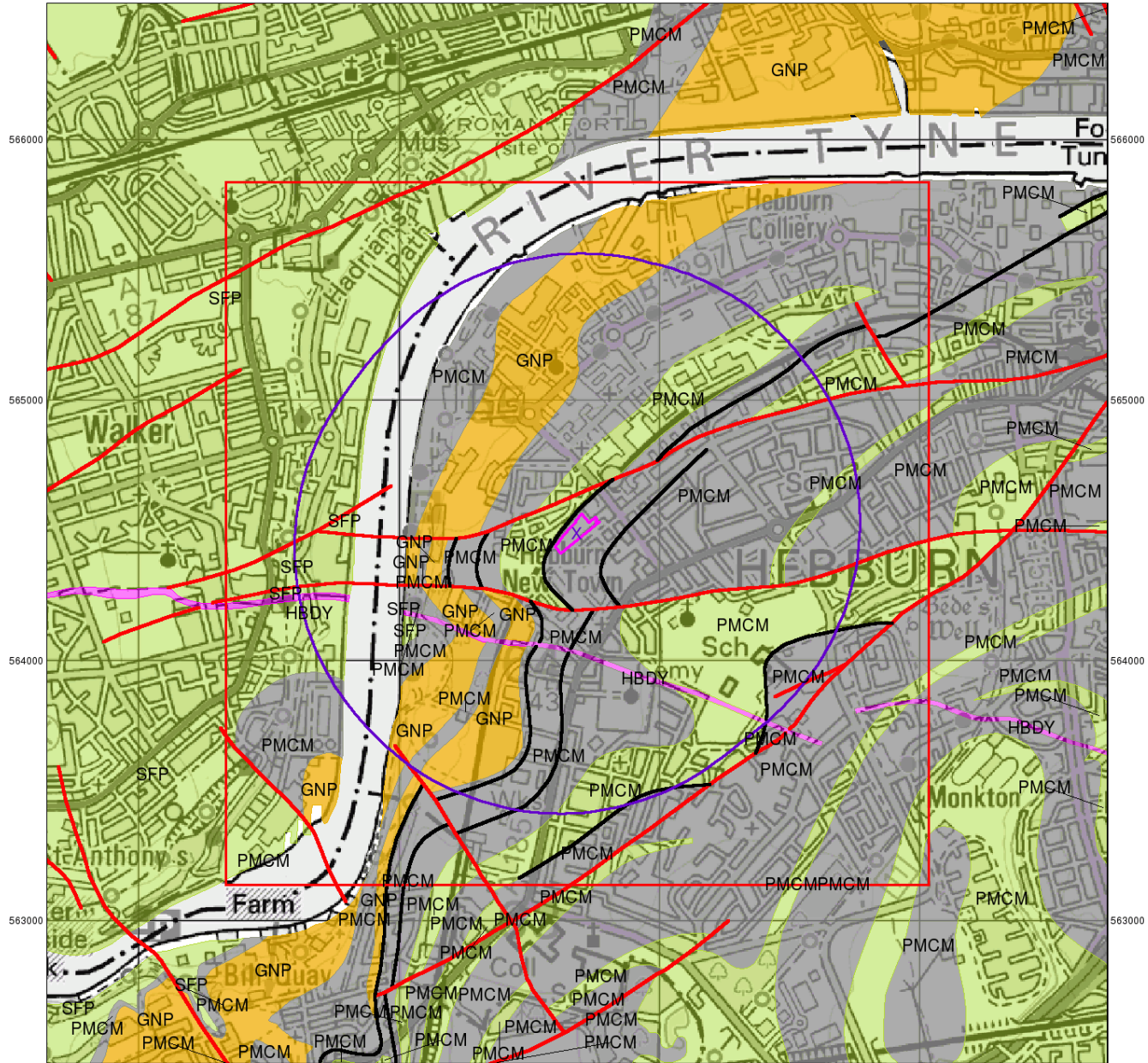
#### Site Details:

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### Bedrock and Faults

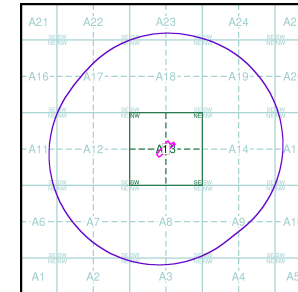
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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: 58659417\_1\_1  
 Customer Reference: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

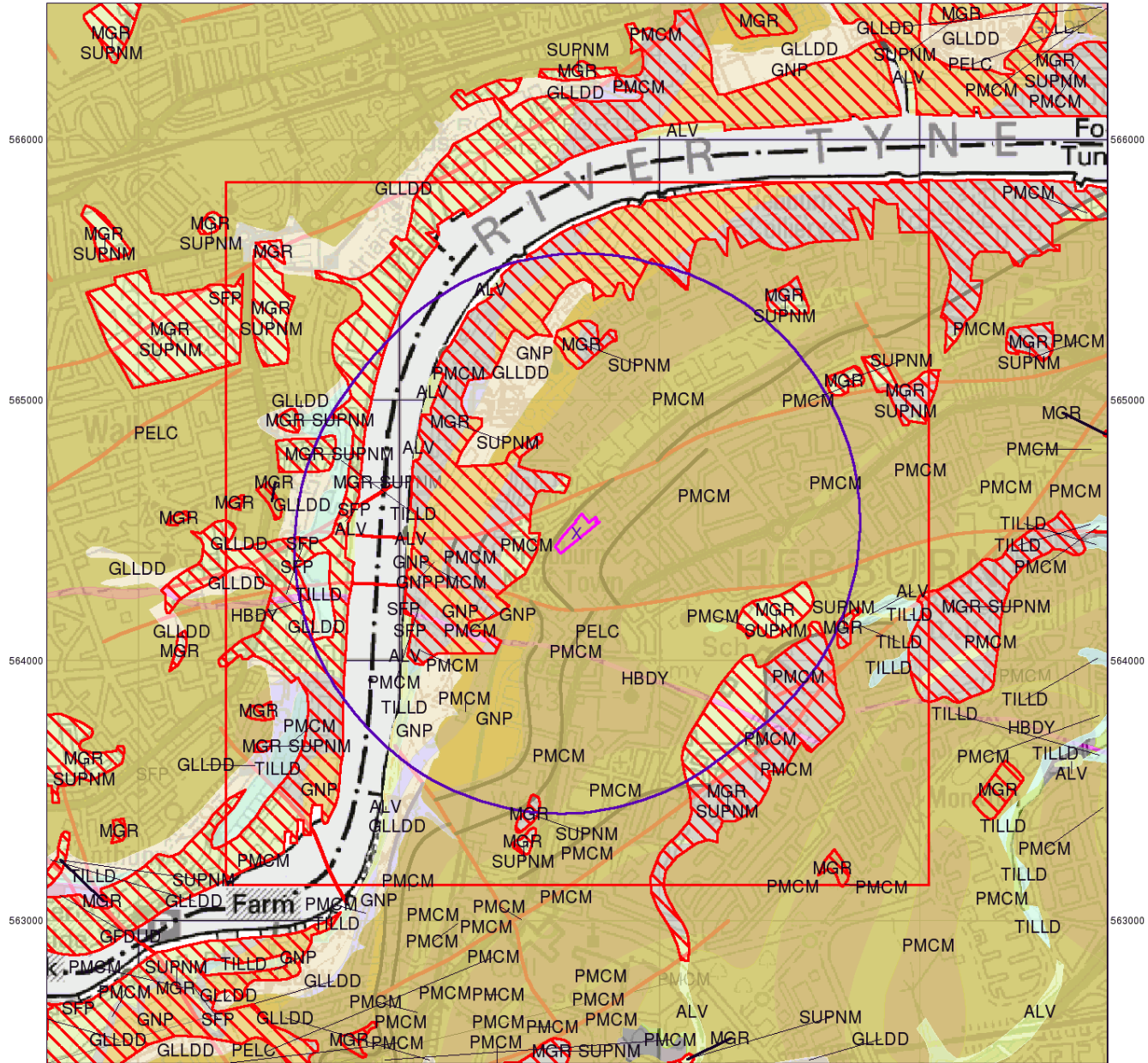
### Site Details:

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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.

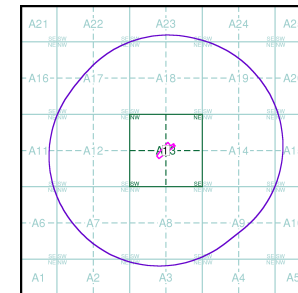
### Additional Information

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: 58659417\_1.1  
 Customer Reference: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
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### Site Details:

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 Fax: 0844 844 9951  
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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 Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

### Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

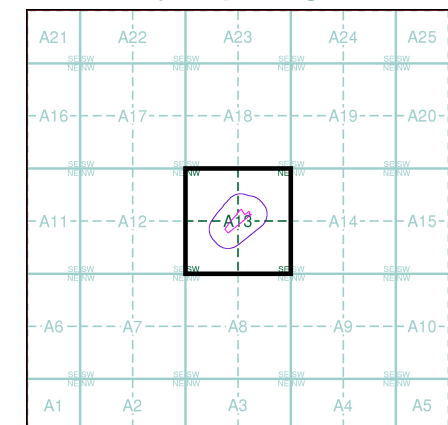
### Geological

- BGS Recorded Mineral Site

### Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

### Site Sensitivity Map - Segment A13



### Order Details

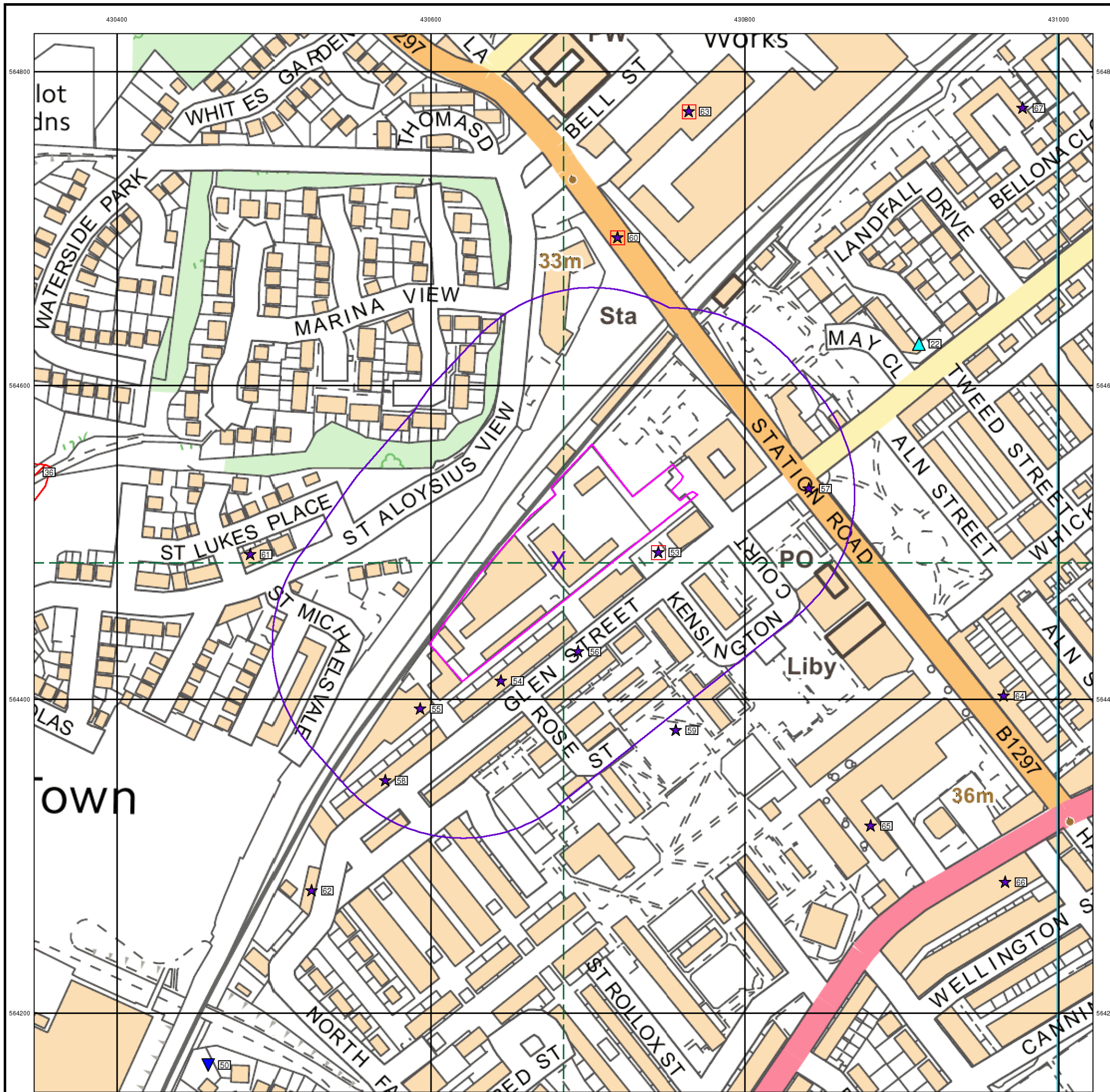
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
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 Site Area (Ha): 0.89

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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)
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- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
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- Licensed Waste Management Facility (Location)
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- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

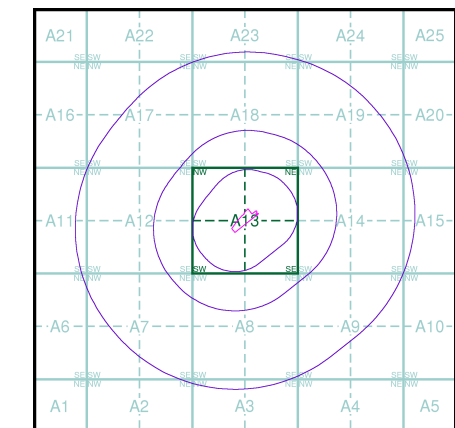
### Geological

- BGS Recorded Mineral Site

### Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

### Site Sensitivity Map - Slice A



### Order Details

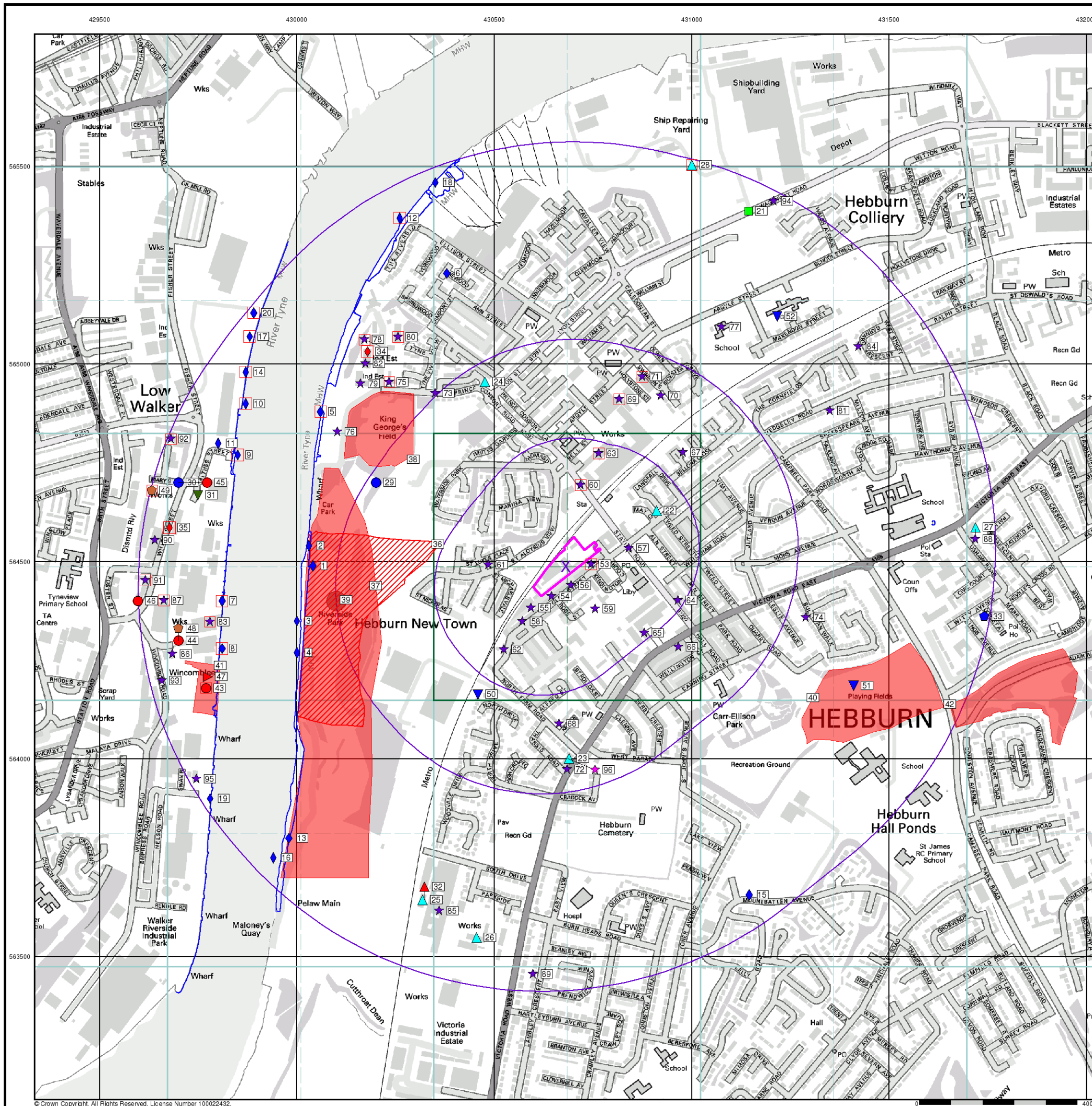
Order Number: 58659417\_1\_1  
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 National Grid Reference: 430680, 564490  
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 Site Area (Ha): 0.89  
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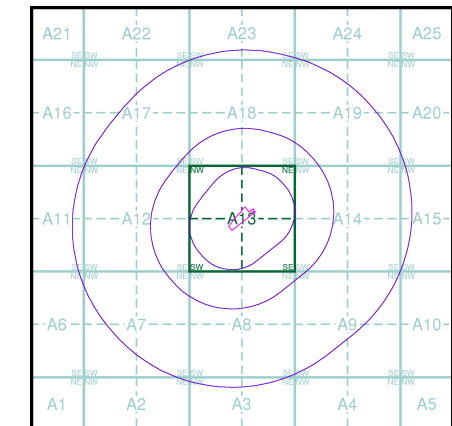
### General

- 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

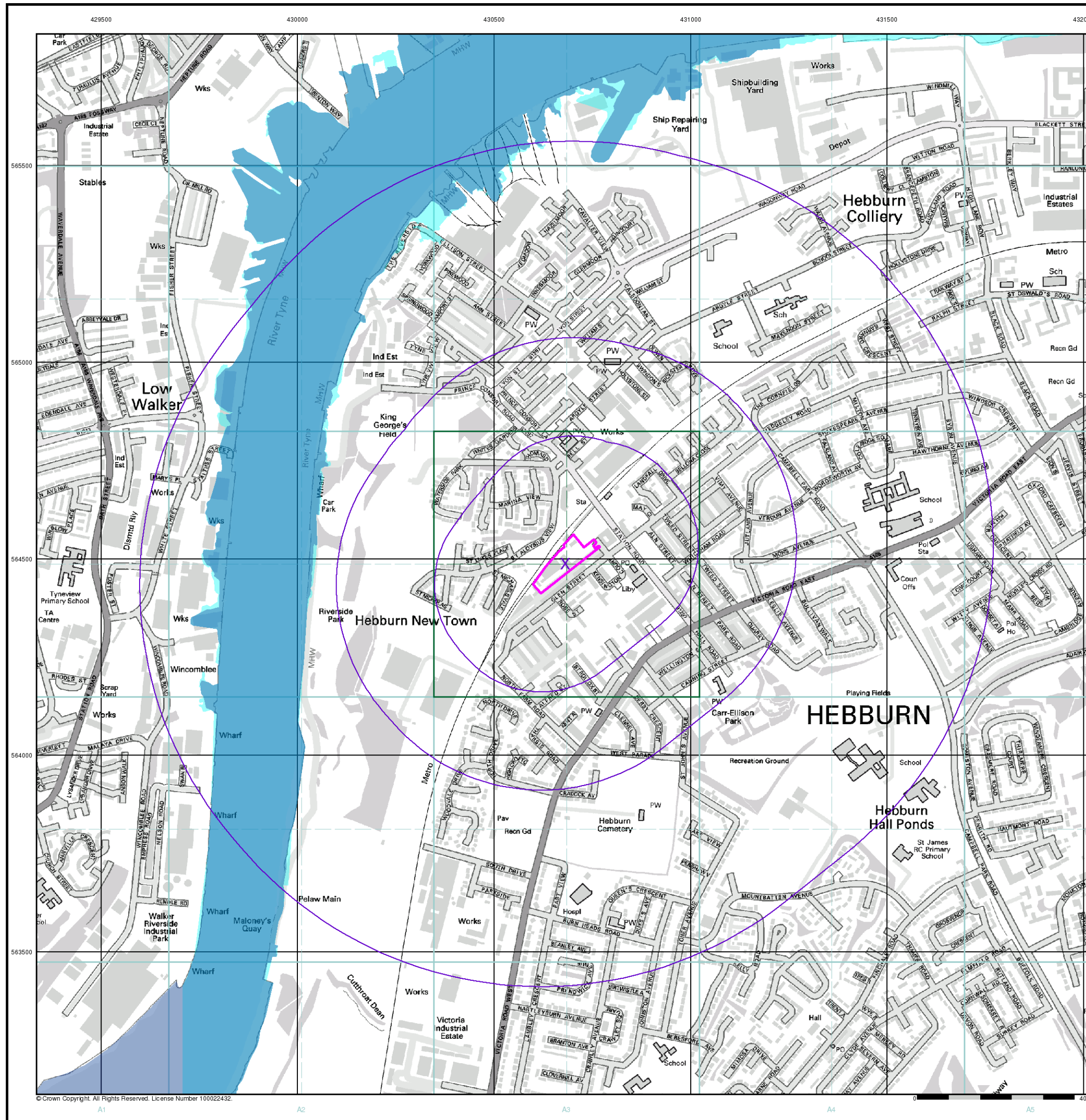
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 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



Tel: 0844 844 9952  
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### General

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

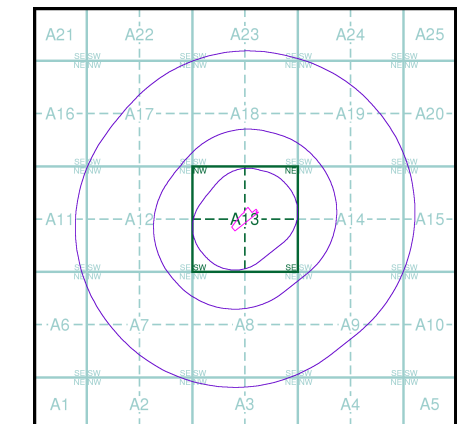
### Agency and Hydrological (Boreholes)

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

For Borehole information please refer to the Borehole datasheet 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](http://www.envirocheck.co.uk).

### Borehole Map - Slice A



### Order Details

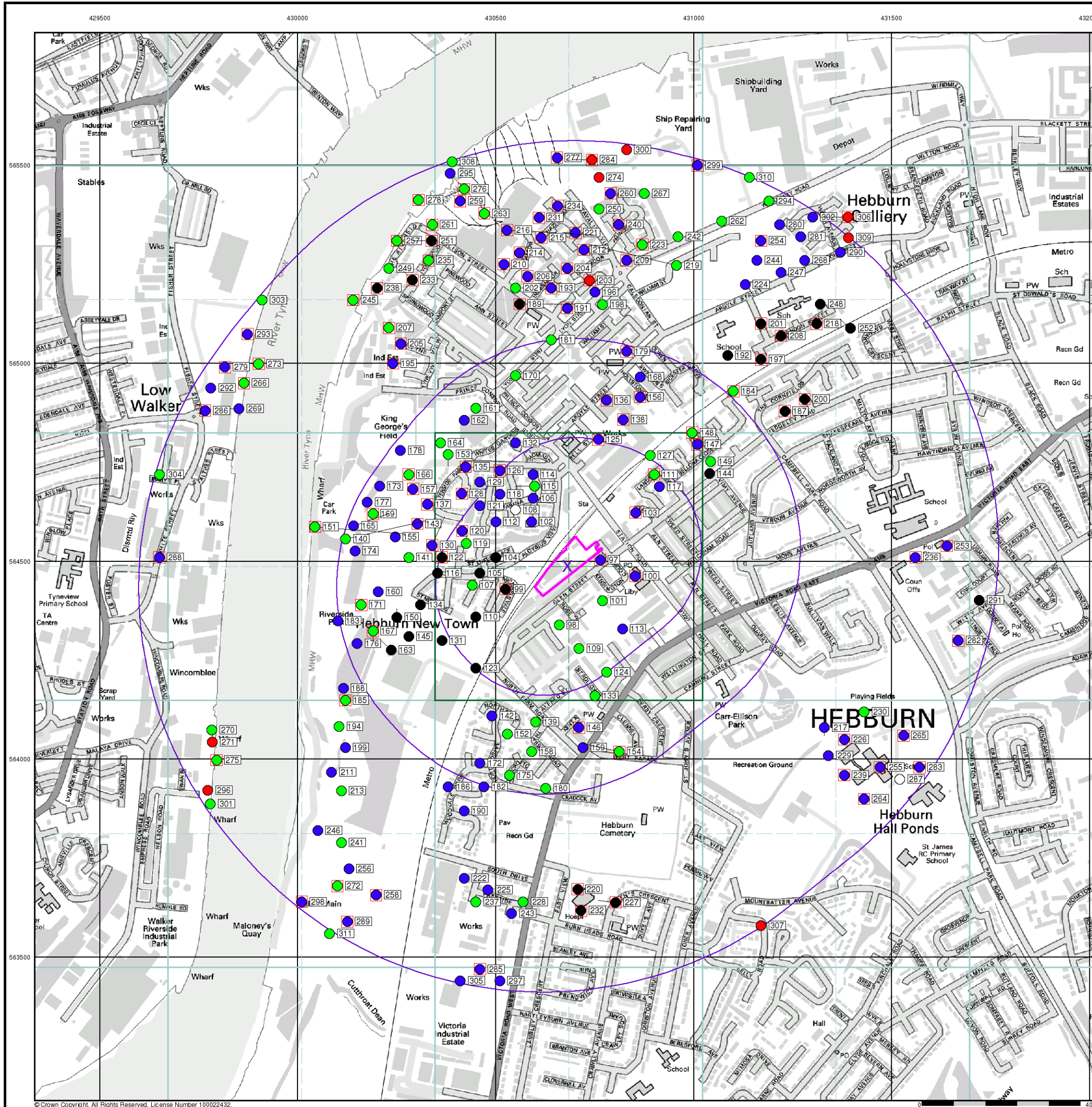
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 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
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### General

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

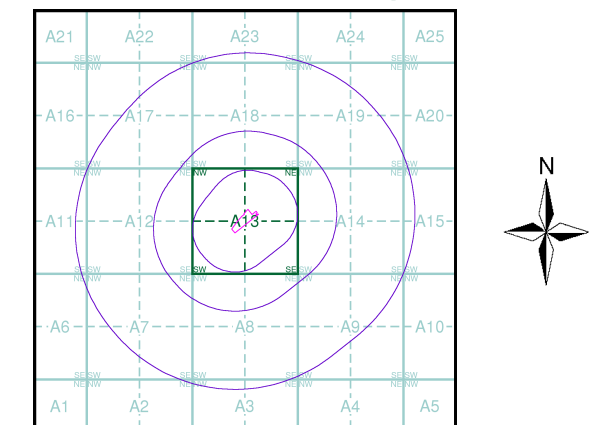
### EA Detailed River Network Data

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

### Contours (height in metres)

- Standard Contour: 105, 100, 95
- Index Contour
- Spot Height: 167.3
- Air Height: 45.8

### EA Detailed River Network Map - Slice A



### Order Details

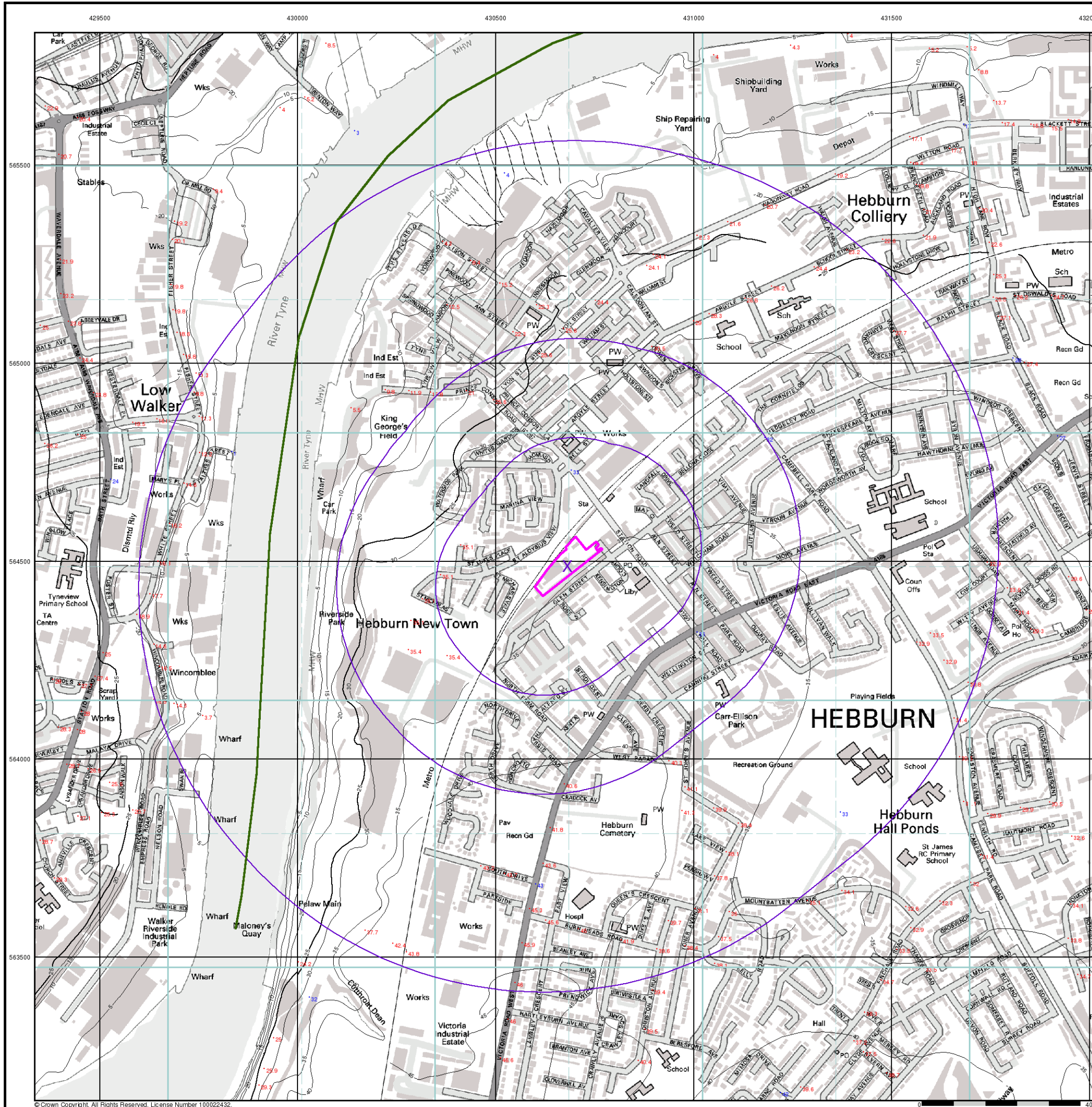
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 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

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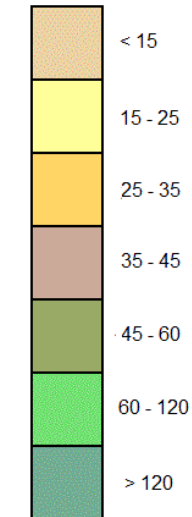


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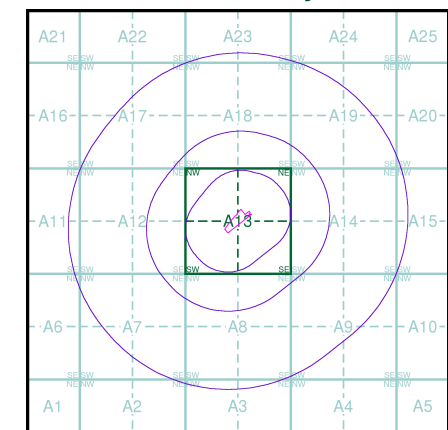
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

### Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



### Estimated Soil Chemistry Arsenic - Slice A



### Order Details

Order Details: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

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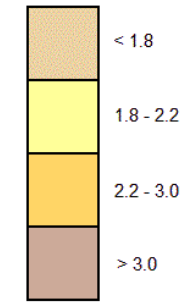


General

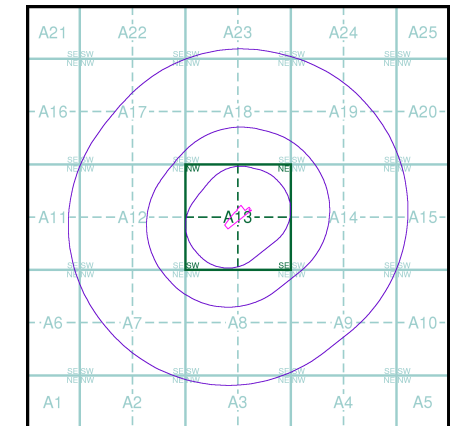
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

Order Details: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

Site Details

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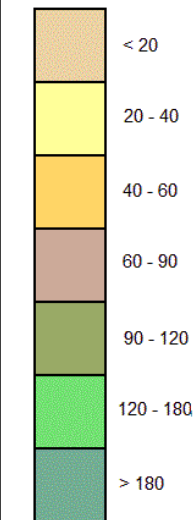


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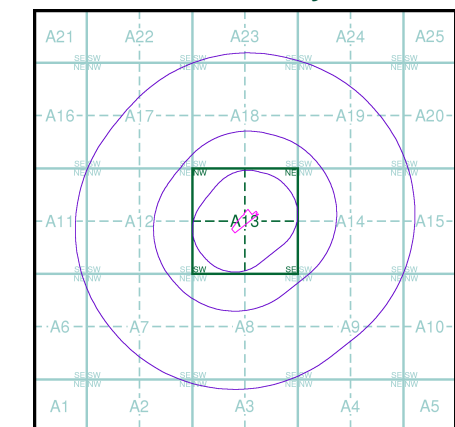
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

### Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



### Estimated Soil Chemistry Chromium - Slice A



### Order Details

Order Details: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

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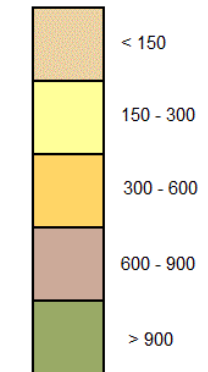


### General

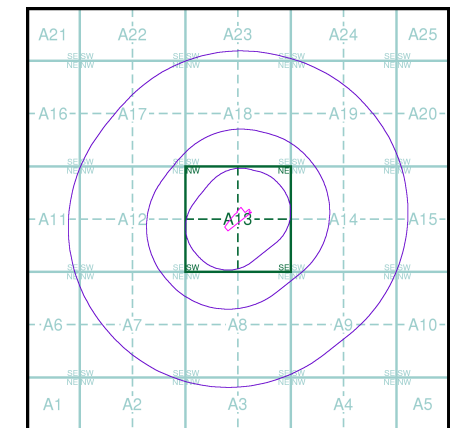
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

### Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



### Estimated Soil Chemistry Lead - Slice A



### Order Details

Order Details: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

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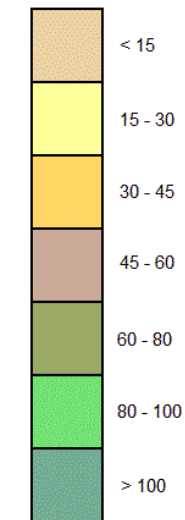


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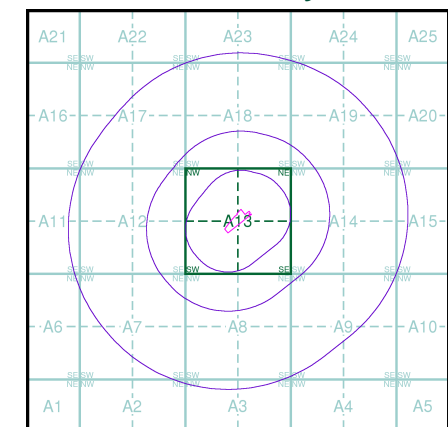
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

### Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



### Estimated Soil Chemistry Nickel - Slice A



### Order Details

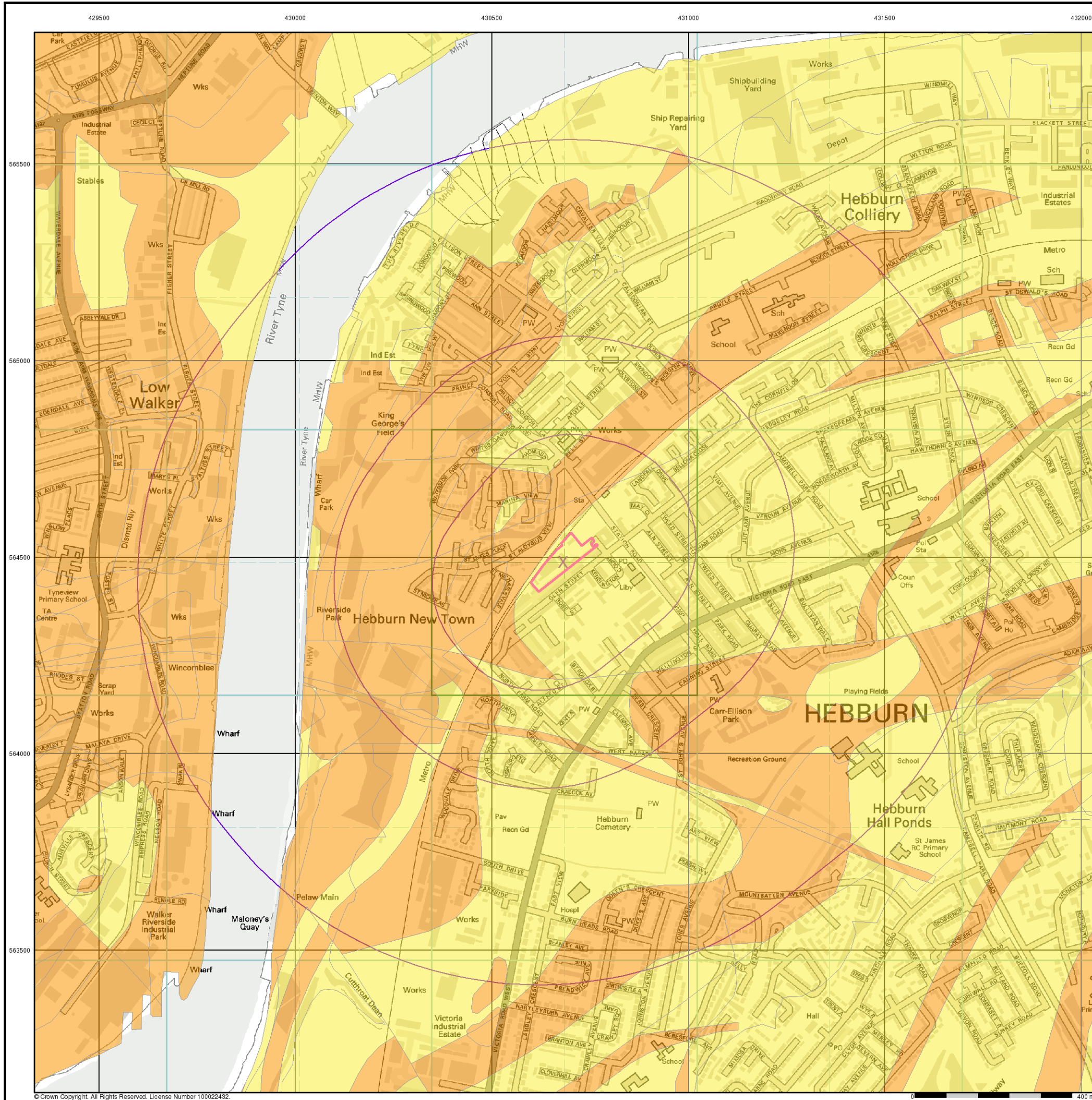
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 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

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# Historical Mapping Legends

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

**Quarry**   **Gravel Pit**   **Sand Pit**  
**Clay Pit**   **Shingle**   **Refuse Heap**  
**Sloping Masonry**   **Flat Rock**  
**Marsh**   **Reeds**   **Osiers**  
**Rough Pasture**   **Furze**   **Wood**  
**Mixed Wood**   **Brushwood**   **Orchard**  
**Fir**   **Ford**   **Stepping Stones**  
**Ferry**   **Waterfall**   **Lock**  
**Trig. Station**   **Altitude at Trig. Station**  
**B.M. 325.9**   **Bench Mark**   **Surface Level**  
**Arrow denotes flow of water**   **Antiquities (site of)**  
**Cutting**   **Embankment**  
**Railway crossing Road**   **Level Crossing**   **Road crossing Railway**  
**Railway crossing River or Canal**   **Road over single stream**   **Road over River or Canal**  
**County Boundary (Geographical)**  
**County & Civil Parish Boundary**  
**Administrative County & Civil Parish Boundary**  
**County Borough Boundary (England)**  
**County Burgh Boundary (Scotland)**  
**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

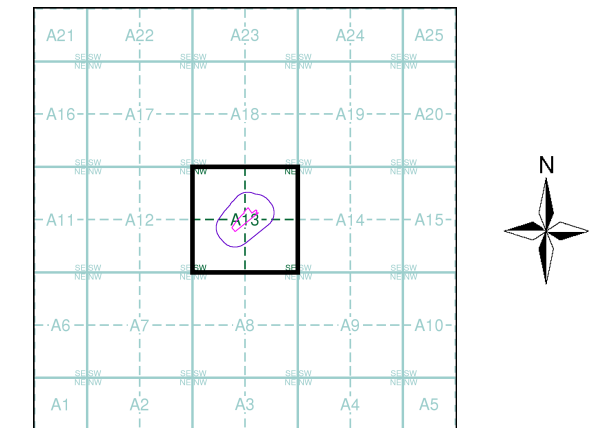
**Cliff**   **Slopes**   **Top**  
**Rock**   **Rock (scattered)**  
**Boulders**   **Boulders (scattered)**  
**Positioned Boulder**   **Scree**  
**Non-Coniferous Tree (surveyed)**   **Coniferous Tree (surveyed)**  
**Non-Coniferous Trees (not surveyed)**   **Coniferous Trees (not surveyed)**  
**Orchard 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	1857 - 1873	2
Northumberland	1:2,500	1859	3
Durham	1:2,500	1897	4
Durham	1:2,500	1916 - 1917	5
Durham	1:2,500	1941 - 1942	6
Ordnance Survey Plan	1:1,250	1957 - 1958	7
Ordnance Survey Plan	1:2,500	1958	8
Additional SIMs	1:1,250	1958 - 1991	9
Ordnance Survey Plan	1:1,250	1967 - 1975	10
Ordnance Survey Plan	1:2,500	1970	11
Supply of Unpublished Survey Information	1:1,250	1973 - 1974	12
Supply of Unpublished Survey Information	1:1,250	1974 - 1975	13
Ordnance Survey Plan	1:1,250	1975 - 1984	14
Supply of Unpublished Survey Information	1:1,250	1975	15
Additional SIMs	1:1,250	1982 - 1984	16
Ordnance Survey Plan	1:1,250	1985	17
Additional SIMs	1:1,250	1991 - 1992	18
Large-Scale National Grid Data	1:1,250	1993	19
Large-Scale National Grid Data	1:1,250	1996	20

## Historical Map - Segment A13



## Order Details

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

## Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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## Durham

Published 1857 - 1873

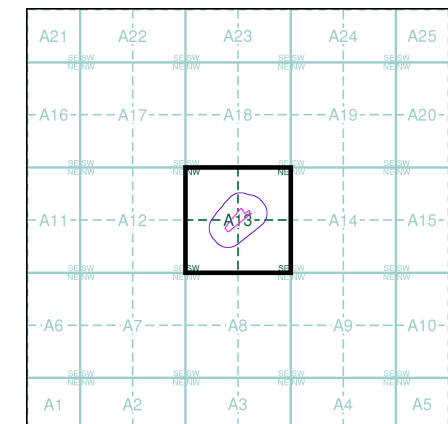
Source map scale - 1:2,500

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

### Map Name(s) and Date(s)

003_10 1857 1:2,500	003_11 1857 1:2,500
003_14 1857 1:2,500	003_15 1873 1:2,500

### Historical Map - Segment A13



### Order Details

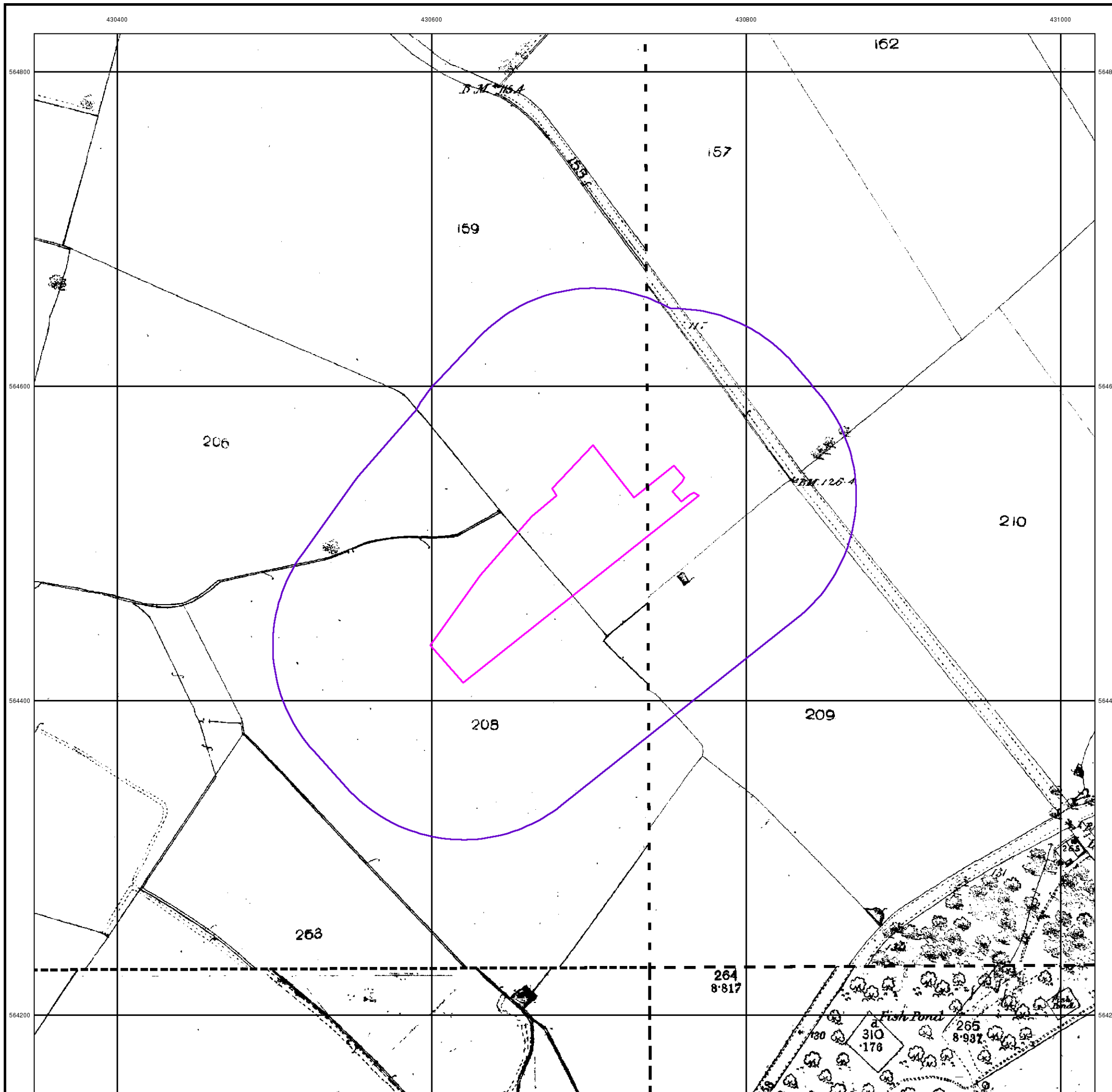
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

### Site Details

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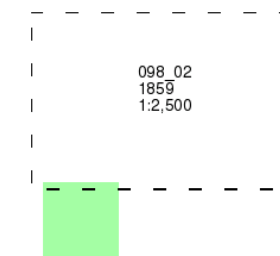
## Northumberland

Published 1859

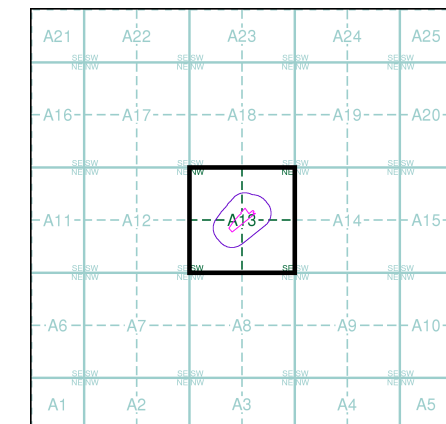
Source map scale - 1:2,500

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

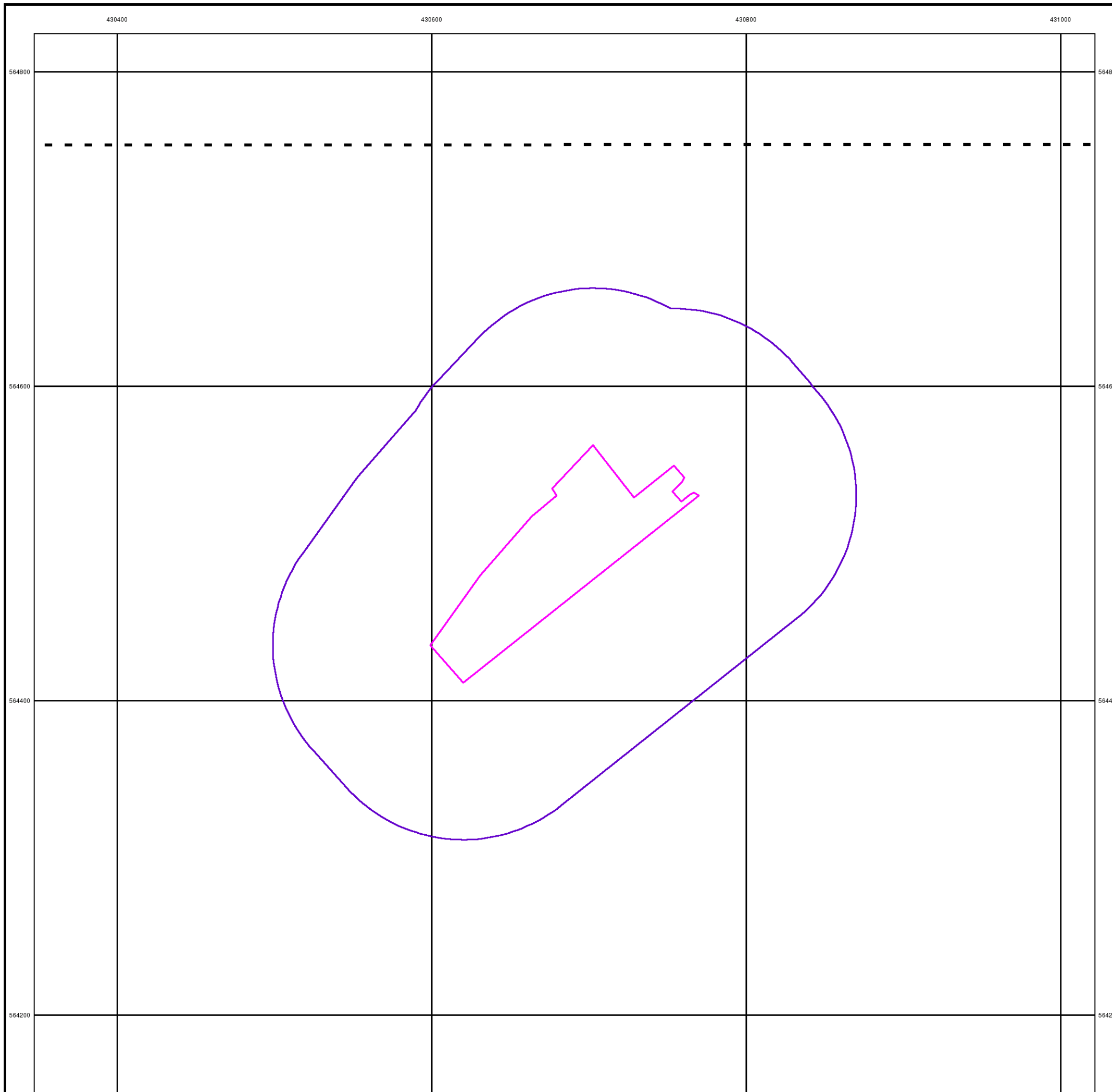
Order Number: 58659417\_1\_1  
Customer Ref: C6149 Glen Street Hebburn APC  
National Grid Reference: 430680, 564490  
Slice: A  
Site Area (Ha): 0.89  
Search Buffer (m): 100

### Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



Tel: 0844 844 9952  
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Durham

Published 1897

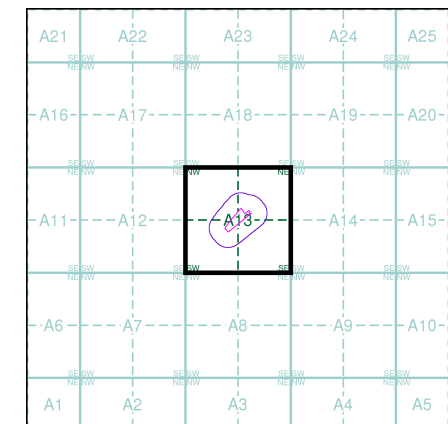
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

003_10 1897 1:2,500	003_11 1897 1:2,500
003_14 1897 1:2,500	003_15 1897 1:2,500

Historical Map - Segment A13



Order Details

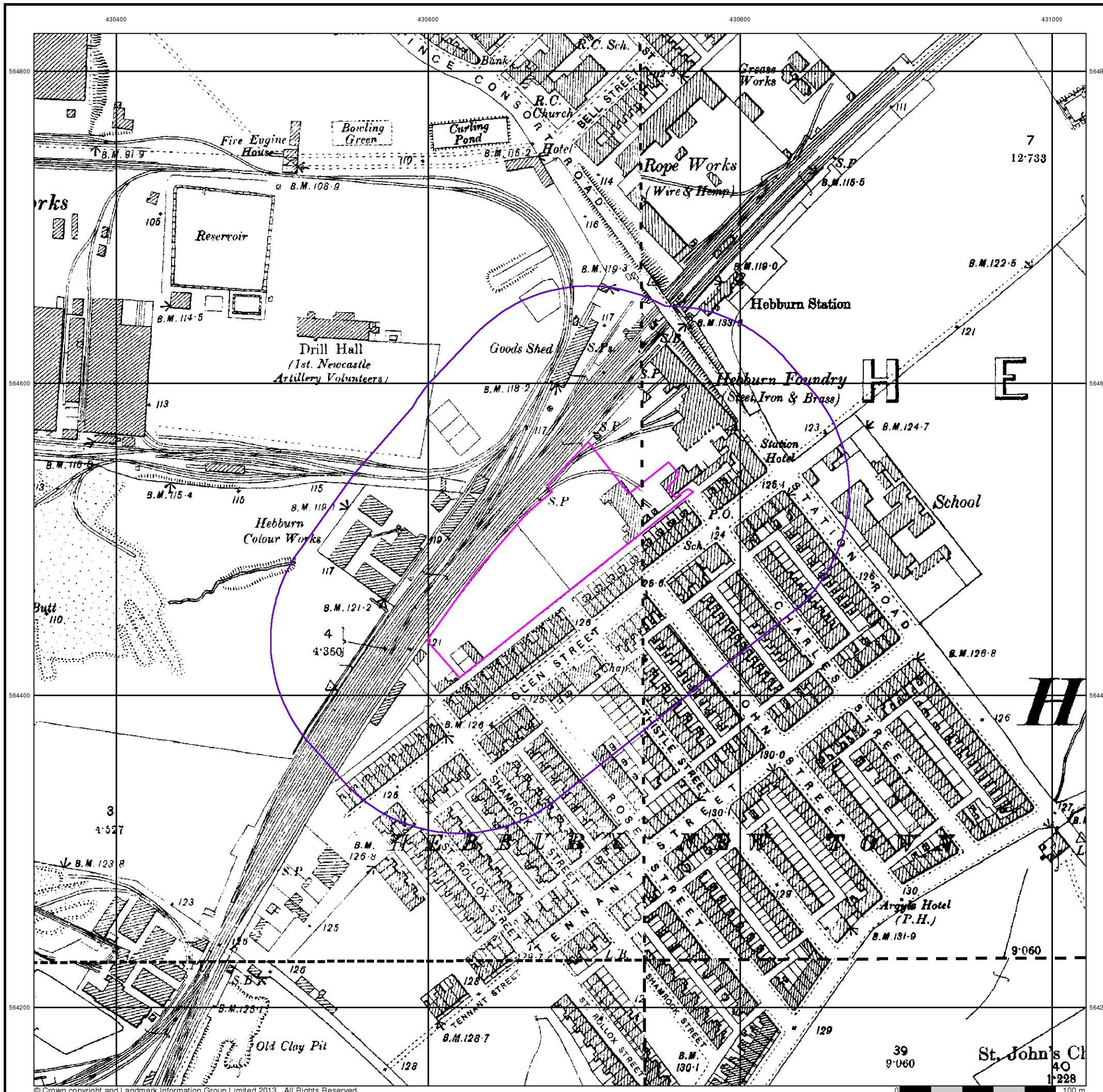
Order Number: 58659417\_1\_1  
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 National Grid Reference: 430680, 564490  
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 Site Area (Ha): 0.89  
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Site Details

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Durham

Published 1916 - 1917

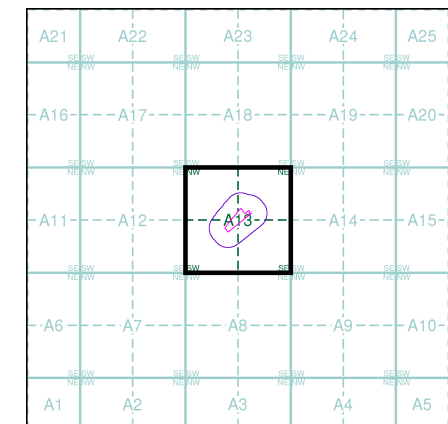
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

003_10 1916 1:2,500	003_11 1917 1:2,500
003_14 1916 1:2,500	003_15 1916 1:2,500

Historical Map - Segment A13



Order Details

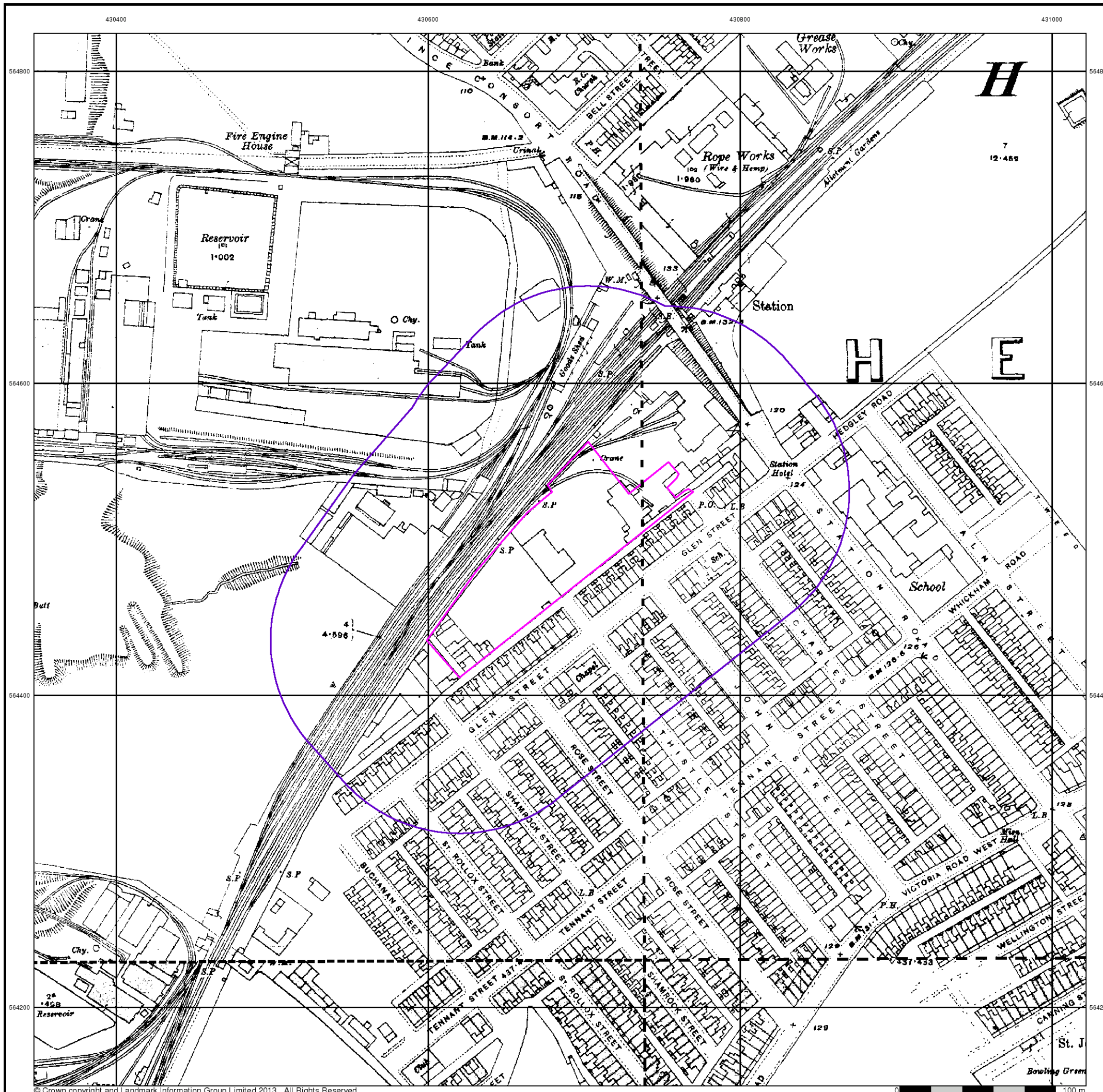
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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





Durham

Published 1941 - 1942

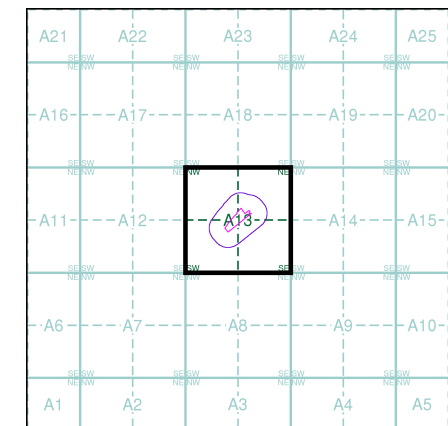
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

003_10 1941 1:2,500	003_11 1942 1:2,500
003_14 1941 1:2,500	003_15 1941 1:2,500

Historical Map - Segment A13



Order Details

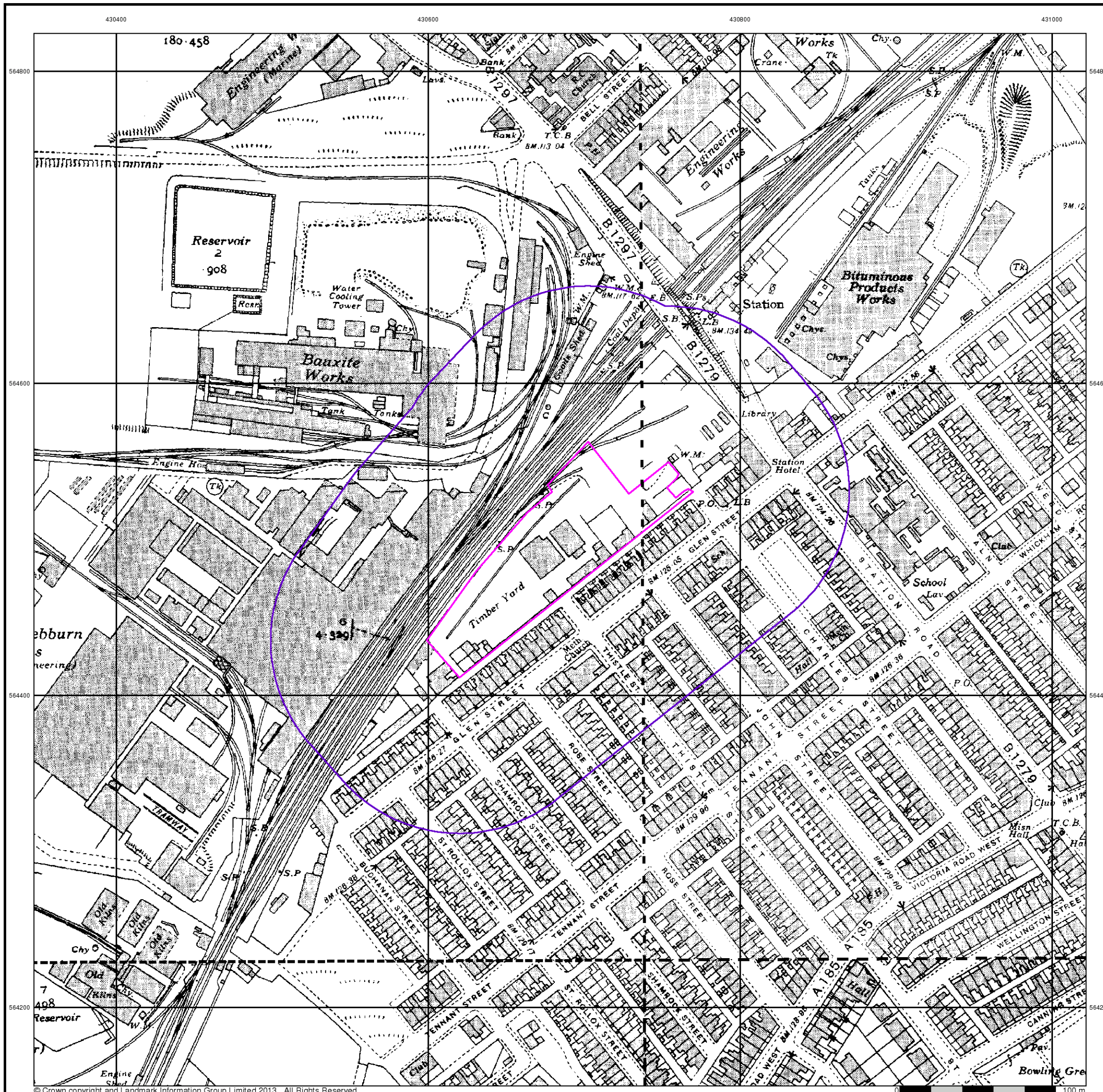
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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## Ordnance Survey Plan

Published 1957 - 1958

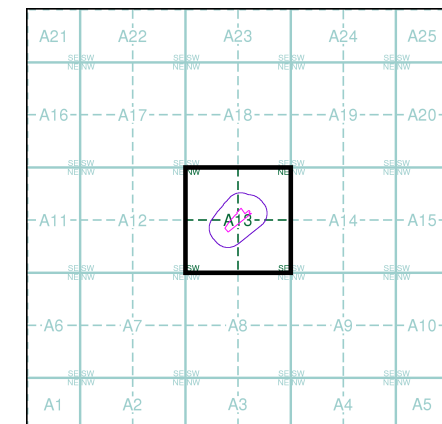
Source map scale - 1:1,250

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

### Map Name(s) and Date(s)

NZ3064NW 1957 1:1,250	NZ3064NE 1957 1:1,250	NZ3164NW 1958 1:1,250
NZ3064SW 1957 1:1,250	NZ3064SE 1957 1:1,250	NZ3164SW 1958 1:1,250

### Historical Map - Segment A13



### Order Details

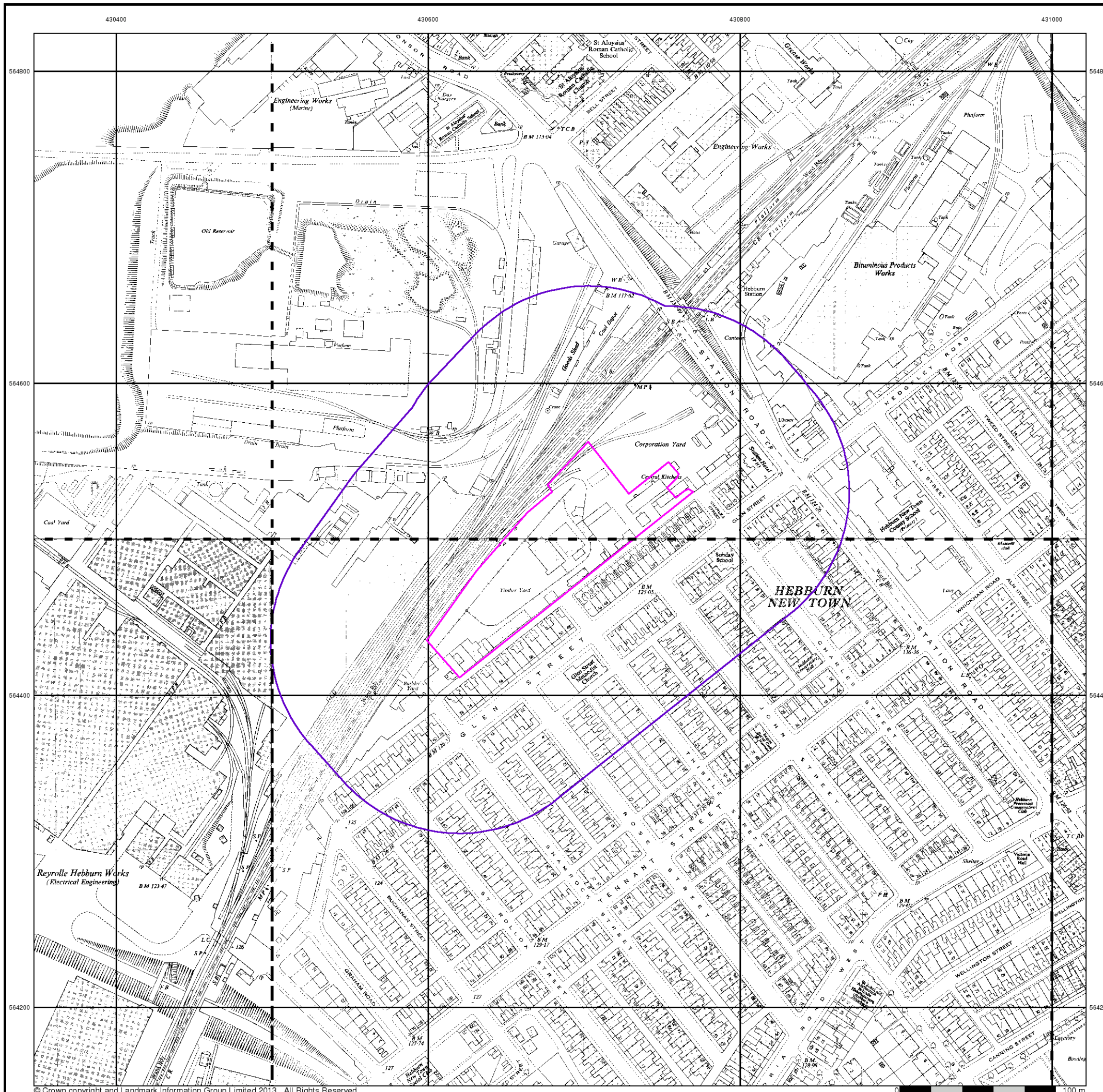
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

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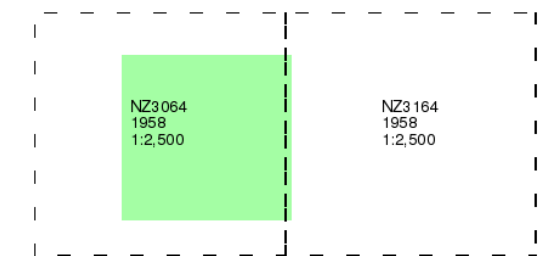
### Ordnance Survey Plan

Published 1958

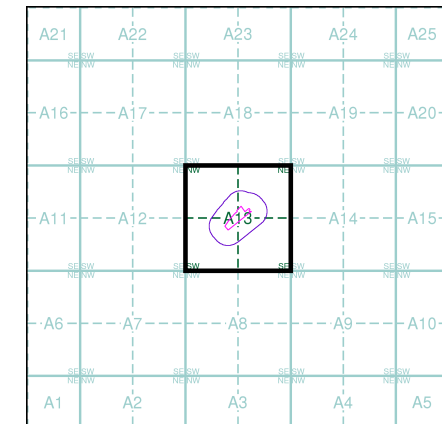
Source map scale - 1:2,500

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: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

### Site Details

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### Additional SIMs

Published 1958 - 1991

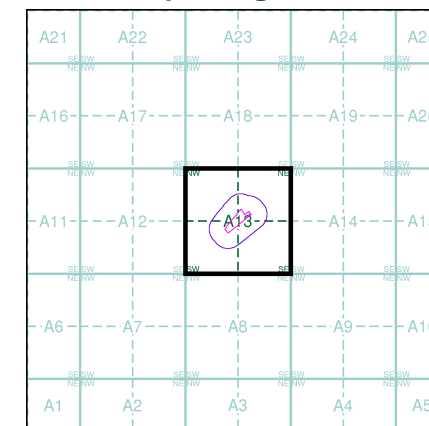
Source map scale - 1:1,250

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)

NZ3064NW 1991 1:1,250	NZ3064NE 1980 1:1,250	NZ3164NW 1958 1:1,250
NZ3064SW 1991 1:1,250	NZ3064SE 1985 1:1,250	NZ3164SW 1958 1:1,250

### Historical Map - Segment A13



### Order Details

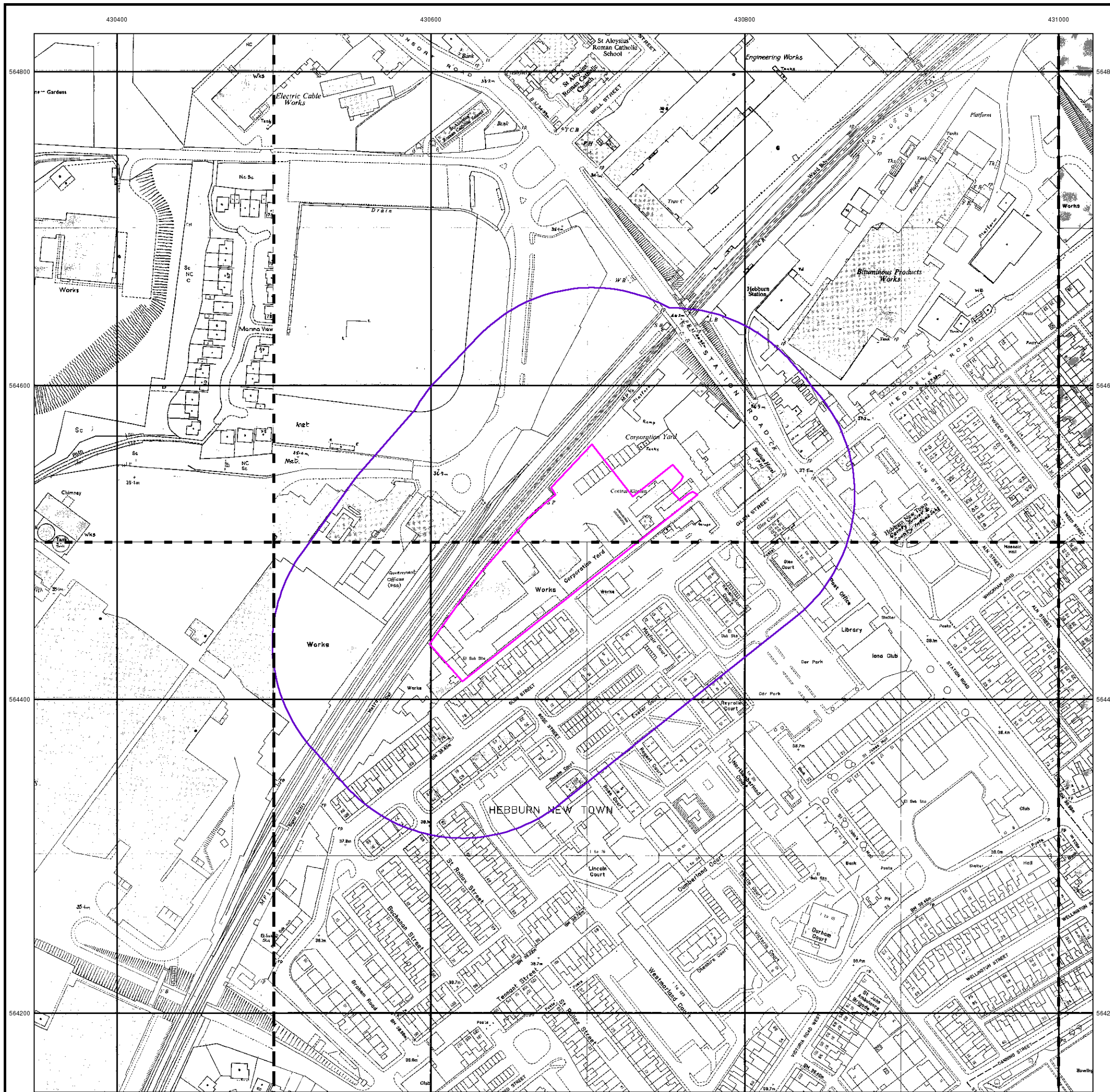
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

### Site Details

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## Ordnance Survey Plan

Published 1967 - 1975

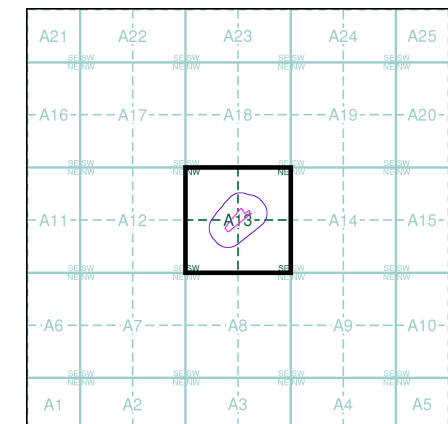
Source map scale - 1:1,250

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)

NZ3064NW 1975 1:1,250	NZ3064NE 1967 1:1,250
NZ3064SW 1967 1:1,250	NZ3064SE 1968 1:1,250

### Historical Map - Segment A13



### Order Details

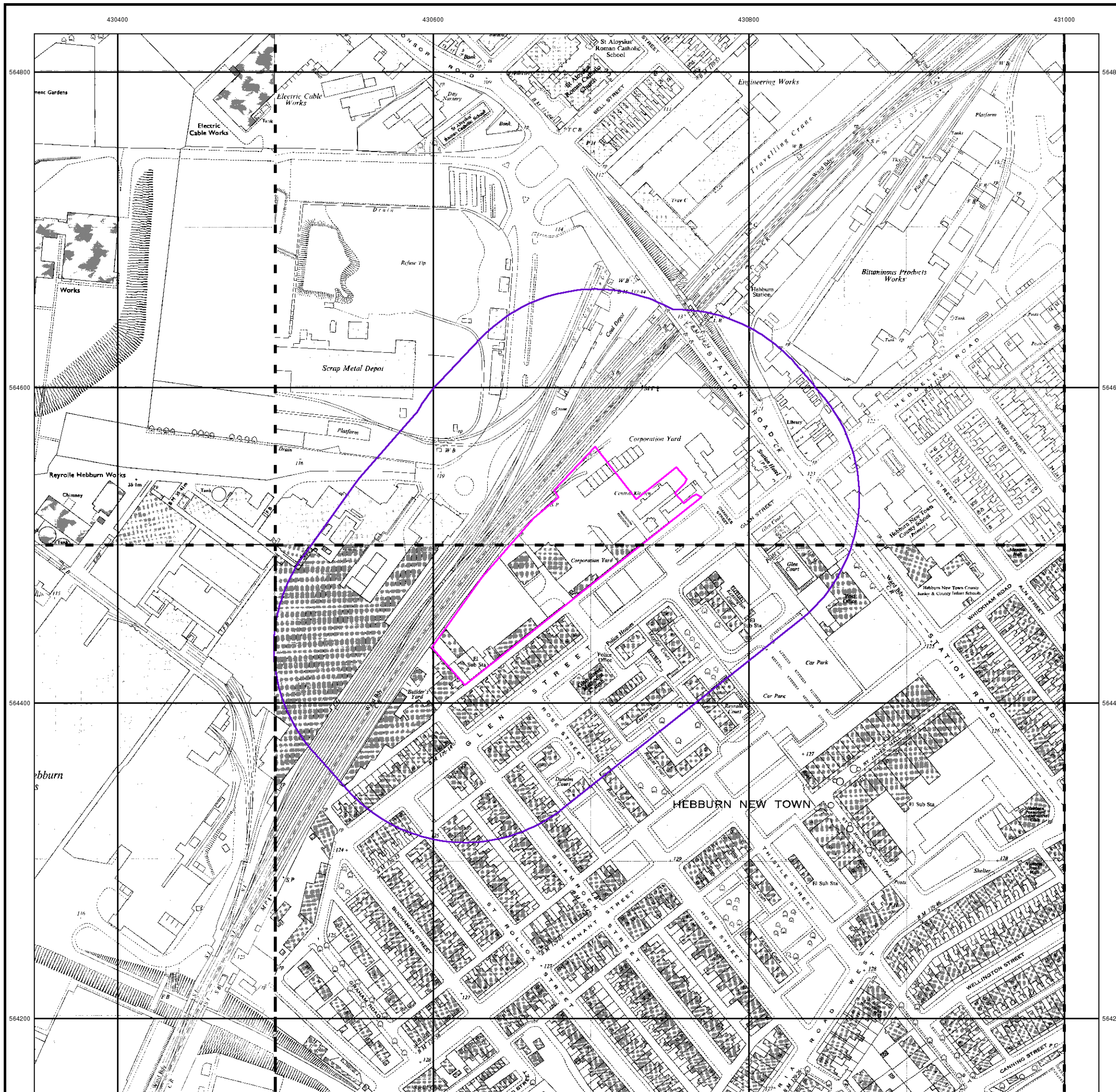
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

### Site Details

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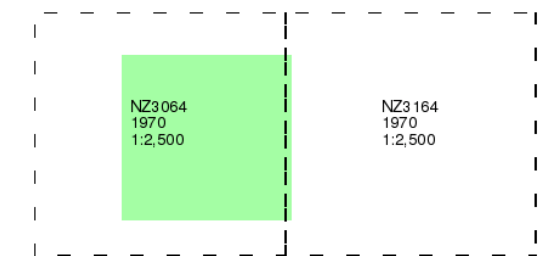
### Ordnance Survey Plan

Published 1970

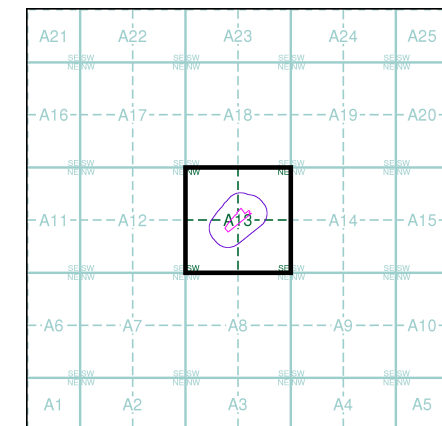
Source map scale - 1:2,500

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

### Map Name(s) and Date(s)



### Historical Map - Segment A13



### Order Details

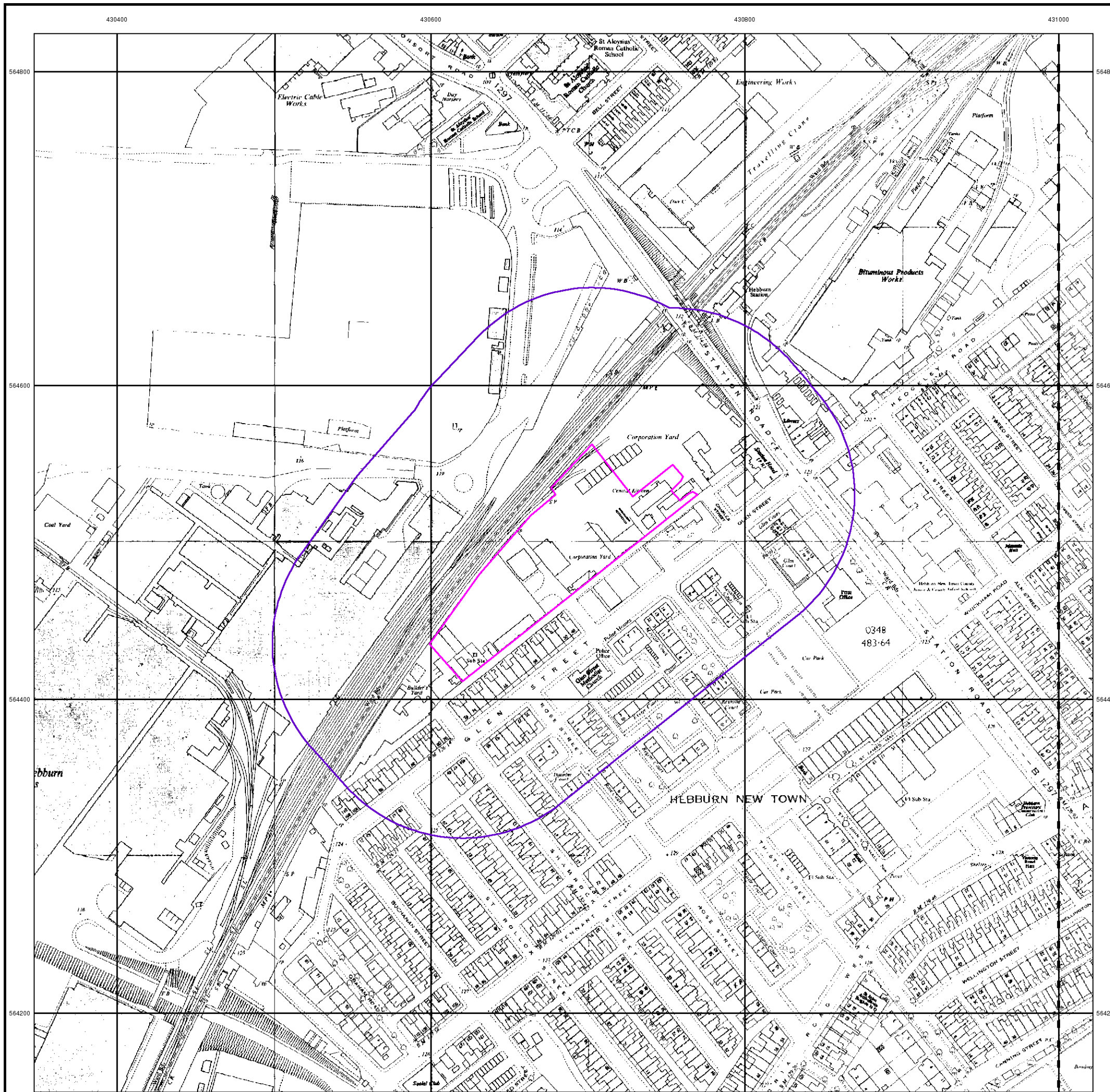
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

### Site Details

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## Supply of Unpublished Survey Information

Published 1973 - 1974

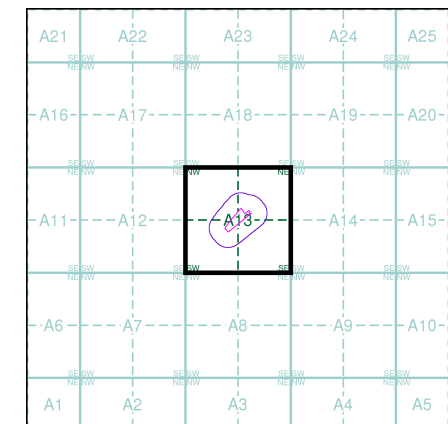
Source map scale - 1:1,250

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)

NZ3064NW 1974 1:1,250	NZ3064NE 1973 1:1,250	NZ3164NW 1974 1:1,250
		NZ3164SW 1974 1:1,250

### Historical Map - Segment A13



### Order Details

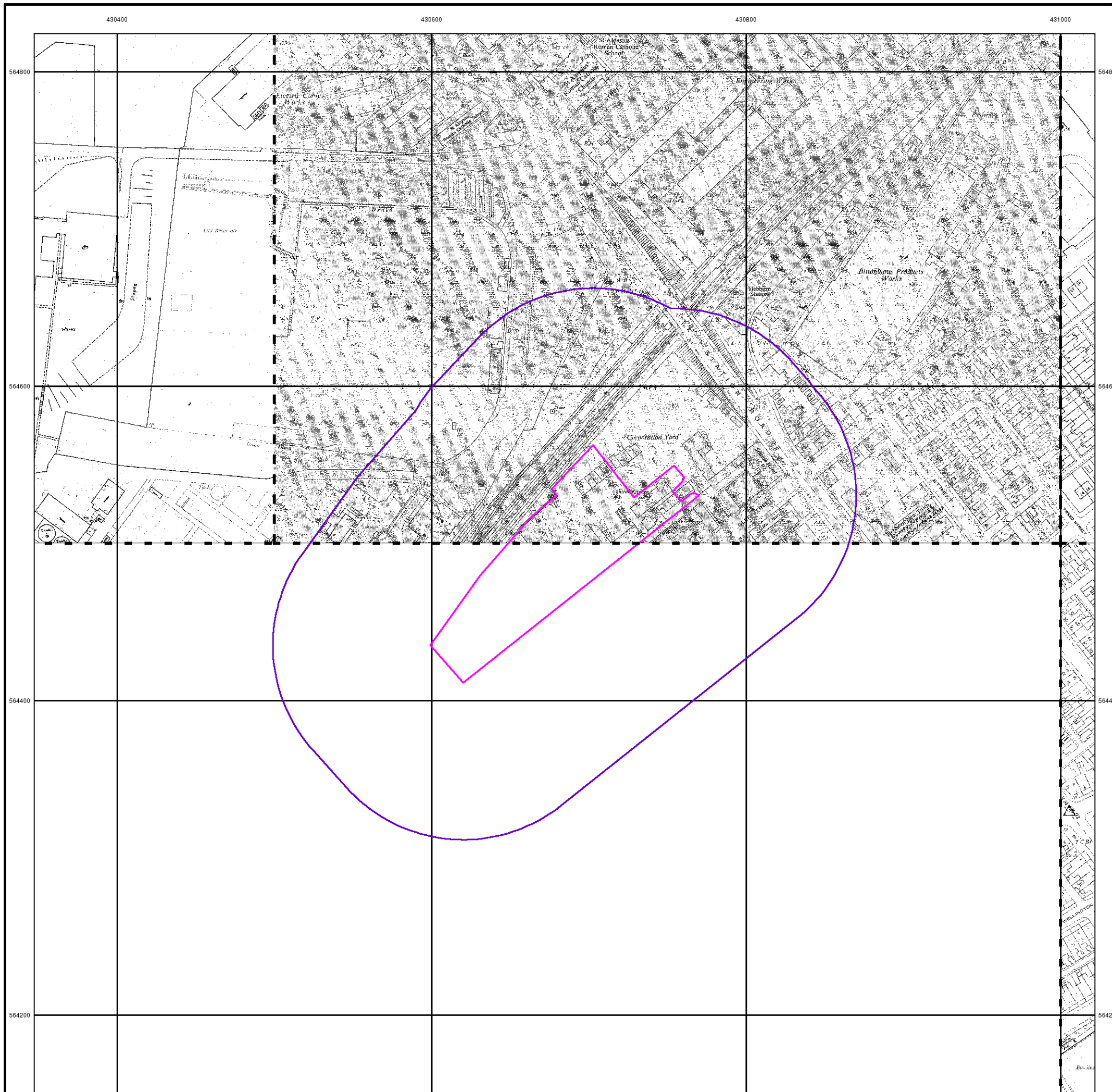
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

### Site Details

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## Supply of Unpublished Survey Information

Published 1974 - 1975

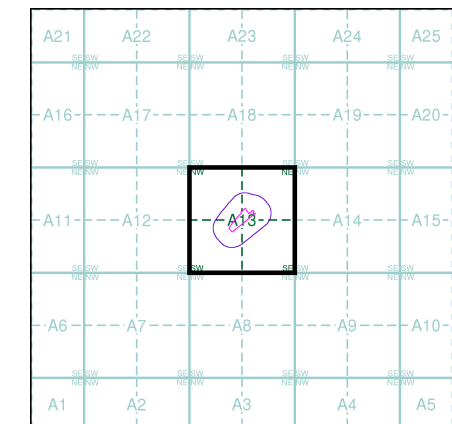
Source map scale - 1:1,250

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)

NZ3064NE	NZ3164NW
1974	1975
1:1,250	1:1,250
	NZ3164SW
	1975
	1:1,250

### Historical Map - Segment A13



### Order Details

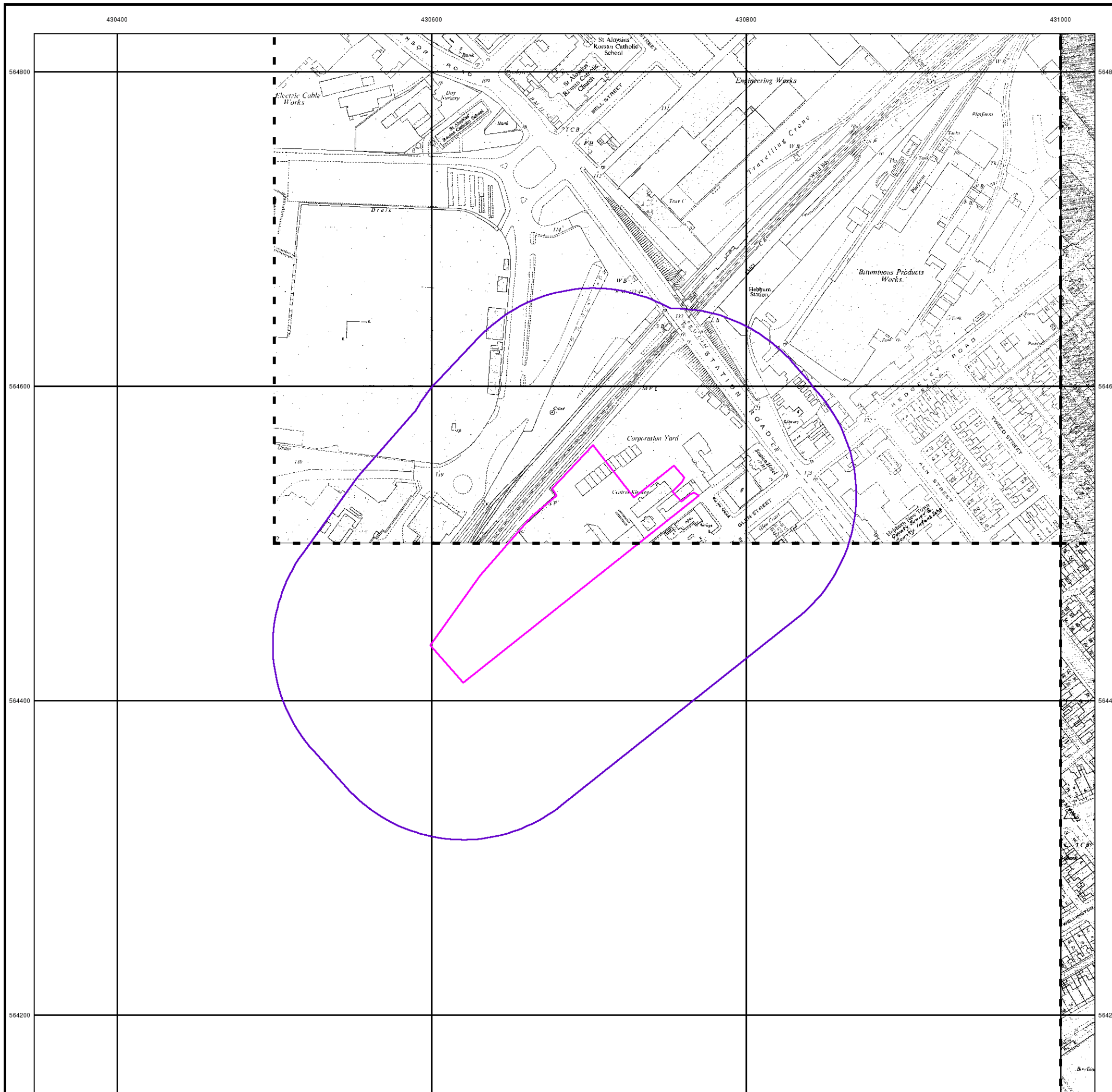
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

### Site Details

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### Ordnance Survey Plan

Published 1975 - 1984

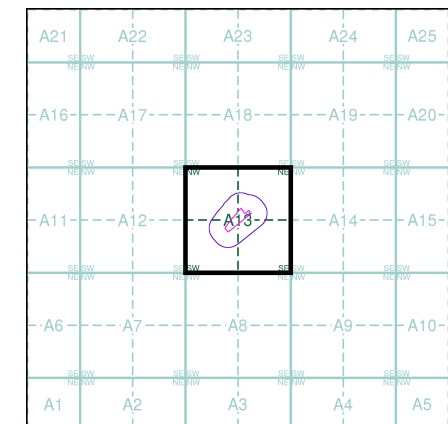
Source map scale - 1:1,250

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)

NZ3064NE	1984	1:1,250
NZ3064SE	1975	1:1,250

### Historical Map - Segment A13



### Order Details

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

### Site Details

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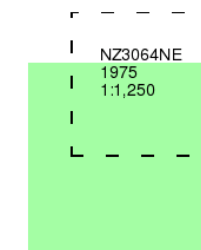
## Supply of Unpublished Survey Information

Published 1975

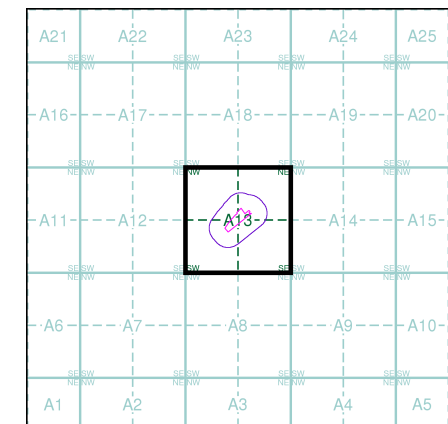
Source map scale - 1:1,250

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### Map Name(s) and Date(s)



### Historical Map - Segment A13



### Order Details

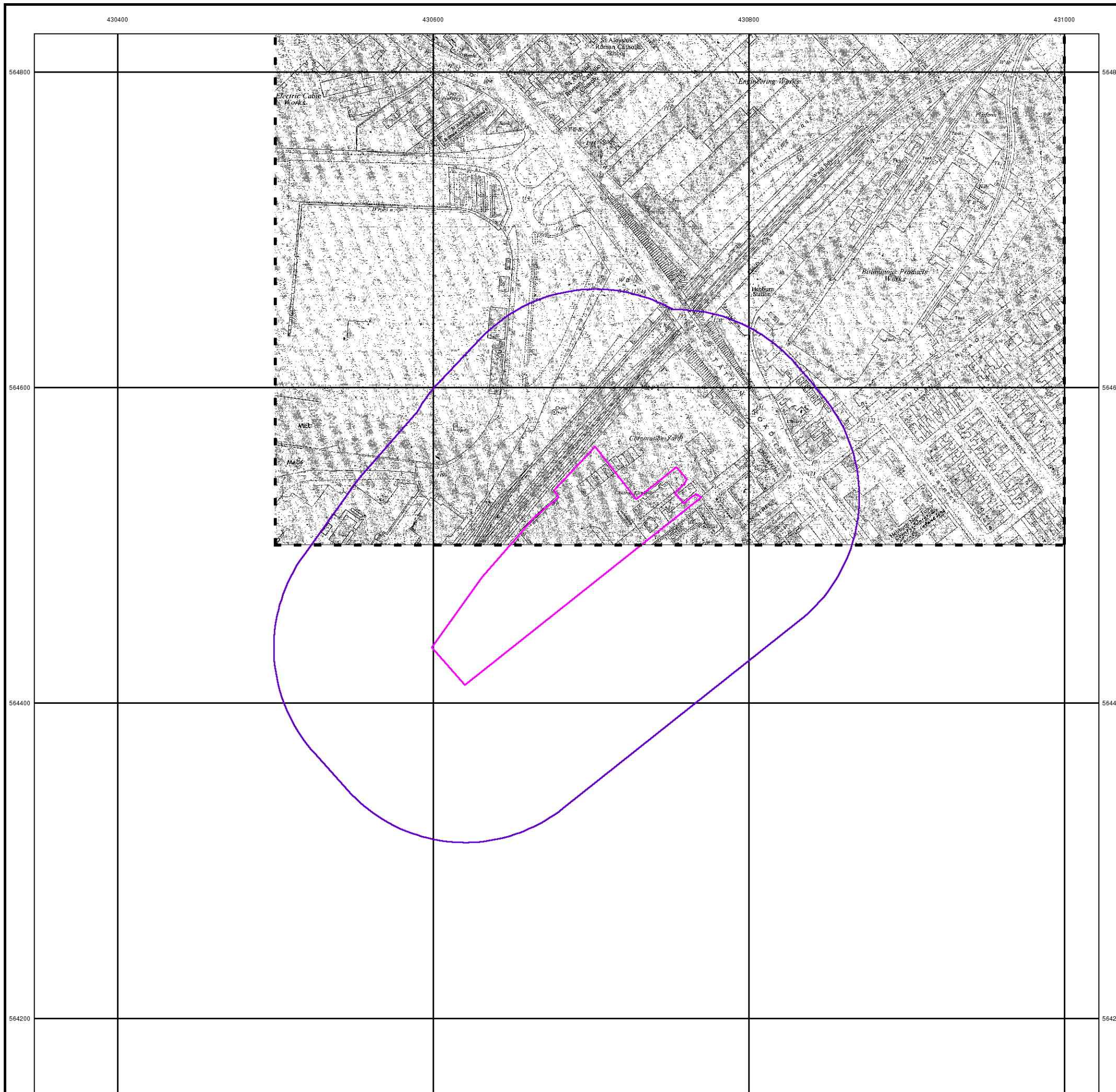
Order Number: 58659417\_1\_1  
Customer Ref: C6149 Glen Street Hebburn APC  
National Grid Reference: 430680, 564490  
Slice: A  
Site Area (Ha): 0.89  
Search Buffer (m): 100

### Site Details

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### Additional SIMs

Published 1982 - 1984

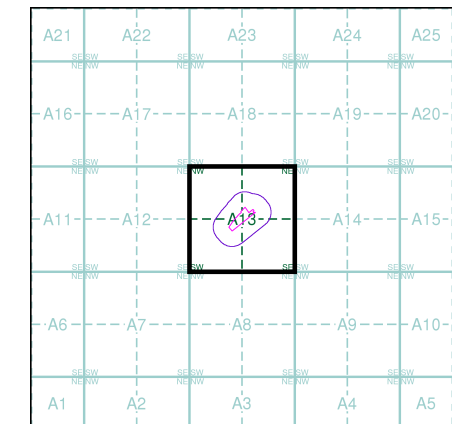
Source map scale - 1:1,250

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)

NZ3064NE 1984 1:1,250	NZ3164NW 1984 1:1,250
	NZ3164SW 1982 1:1,250

### Historical Map - Segment A13



### Order Details

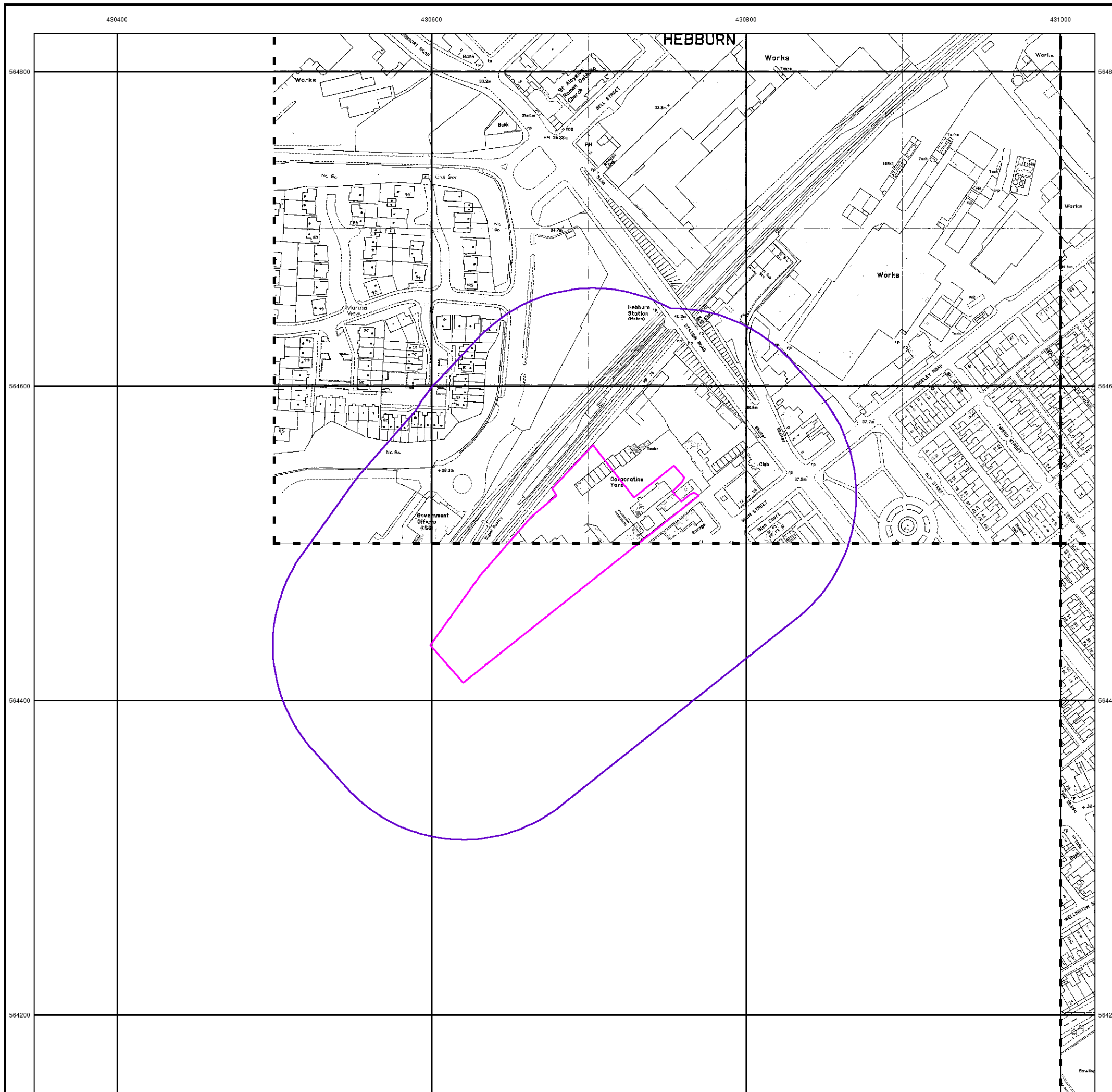
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

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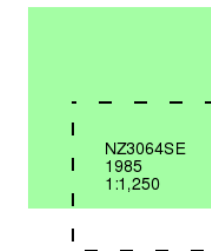
### Ordnance Survey Plan

Published 1985

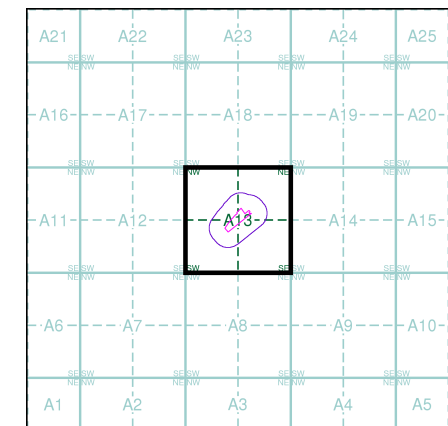
Source map scale - 1:1,250

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### Map Name(s) and Date(s)



### Historical Map - Segment A13



### Order Details

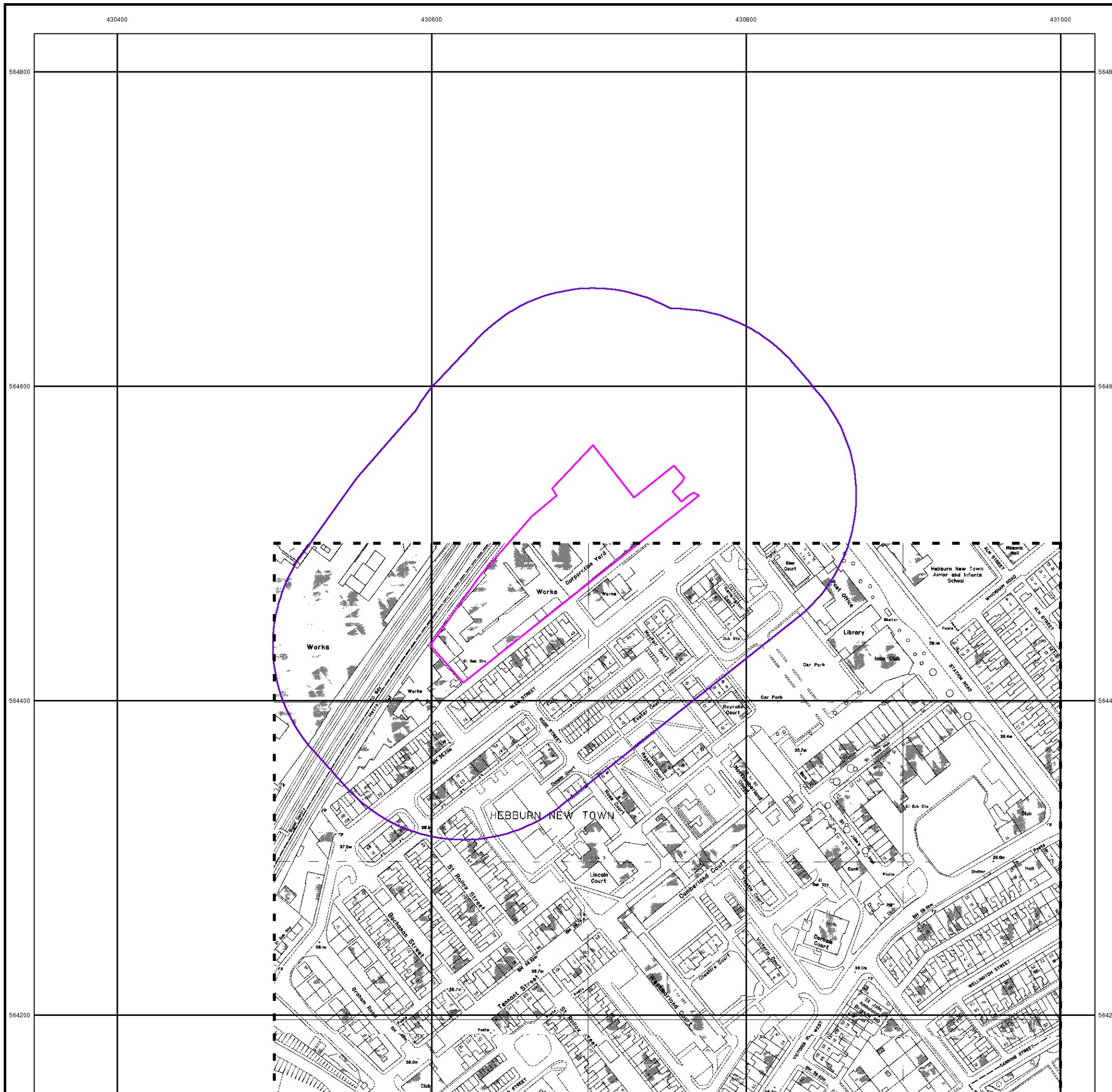
Order Number: 58659417\_1\_1  
Customer Ref: C6149 Glen Street Hebburn APC  
National Grid Reference: 430680, 564490  
Slice: A  
Site Area (Ha): 0.89  
Search Buffer (m): 100

### Site Details

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### Additional SIMs

Published 1991 - 1992

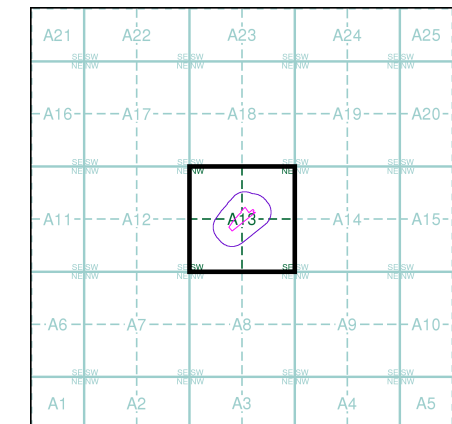
Source map scale - 1:1,250

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)

	NZ3164NW 1992 1:1,250
	NZ3164SW 1991 1:1,250

### Historical Map - Segment A13



### Order Details

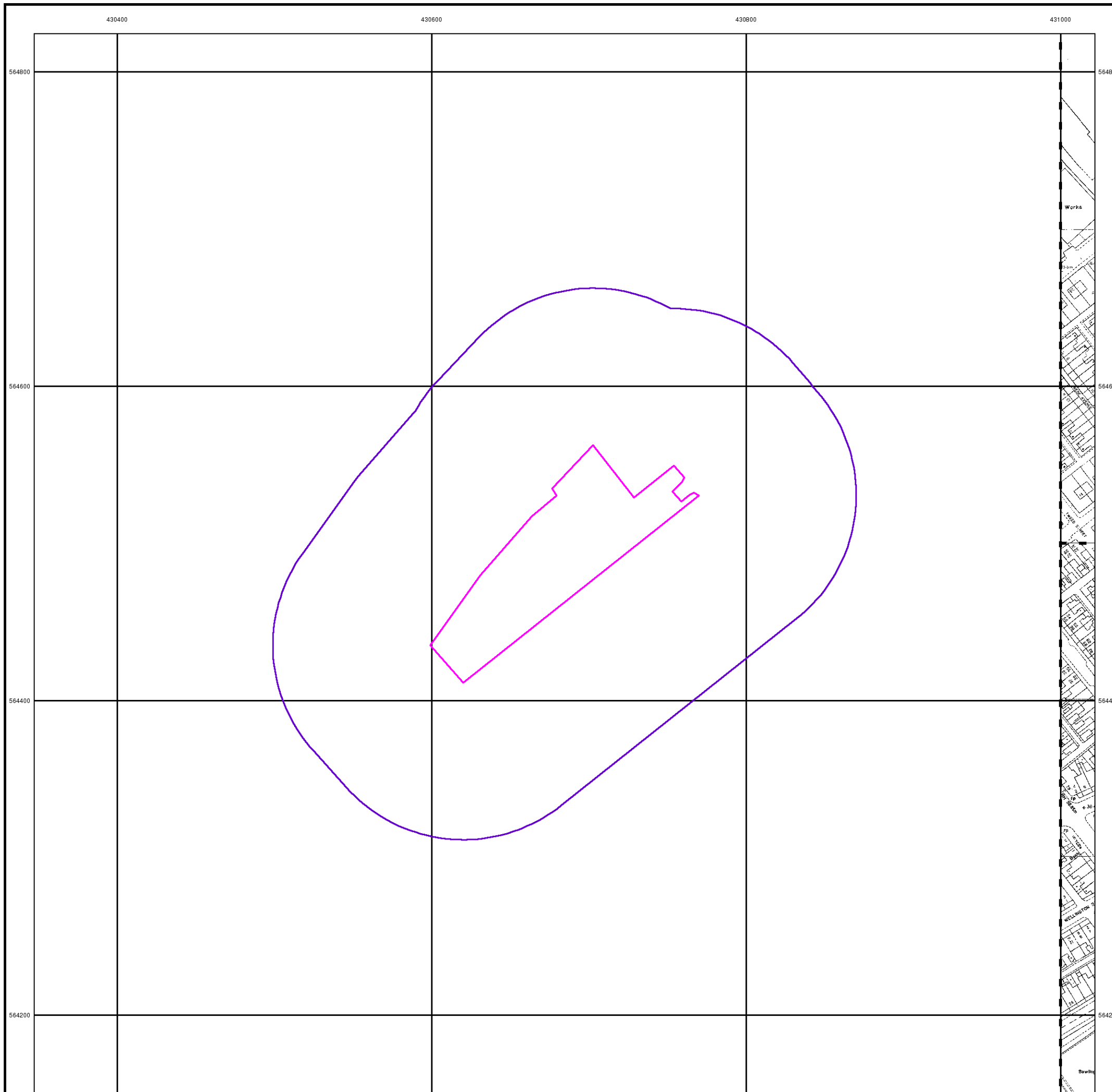
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

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## Large-Scale National Grid Data

Published 1993

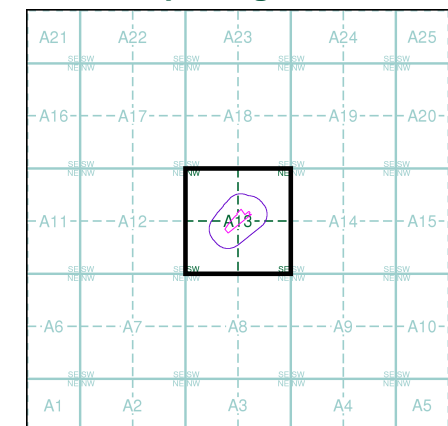
Source map scale - 1:1,250

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

### Map Name(s) and Date(s)

NZ3064NW 1993 1:1,250	NZ3064NE 1993 1:1,250	NZ3164NW 1993 1:1,250
NZ3064SW 1993 1:1,250	NZ3064SE 1993 1:1,250	NZ3164SW 1993 1:1,250

### Historical Map - Segment A13



### Order Details

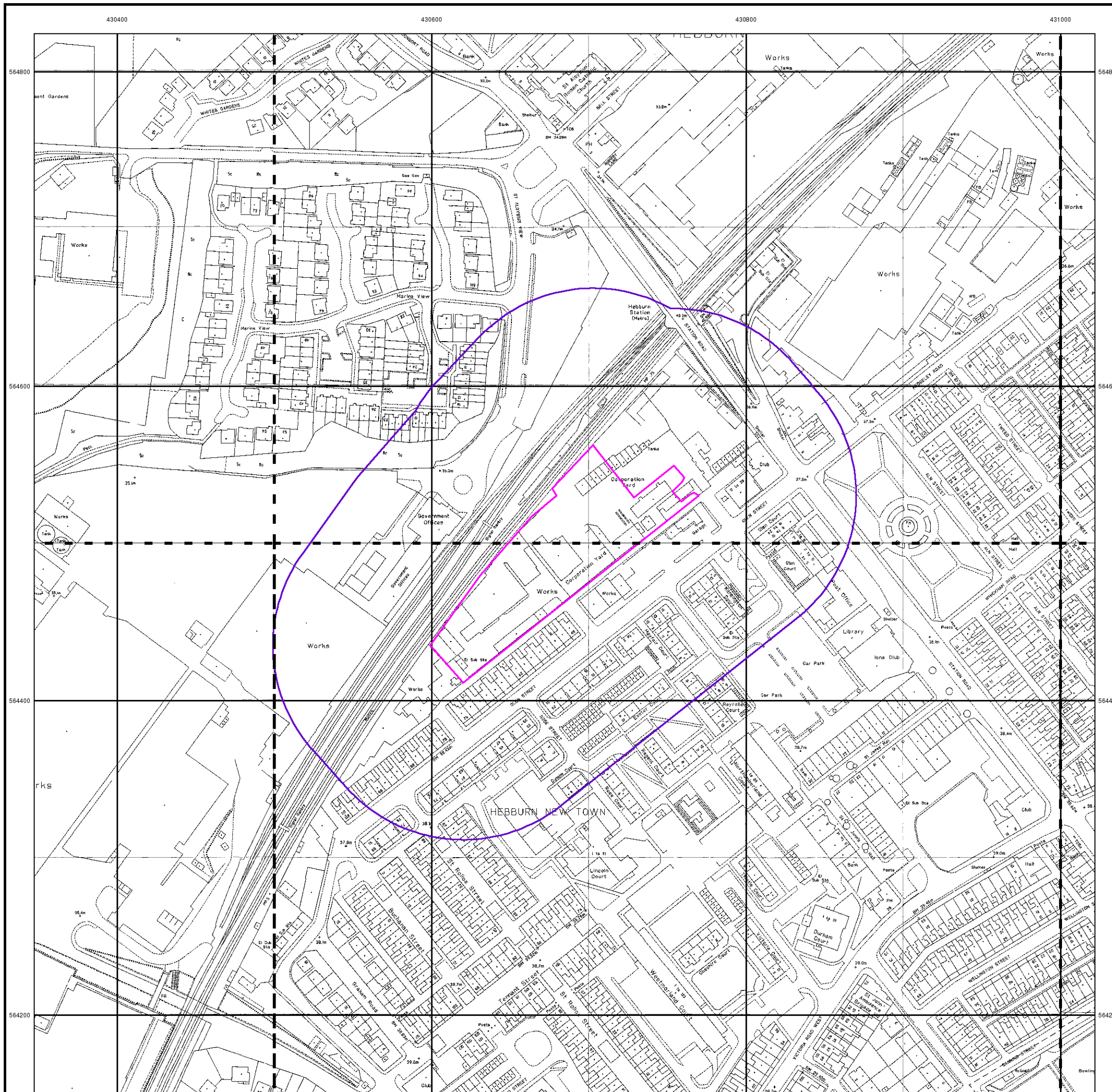
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 100

### 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		
	<b>-285</b> Surface Level				
	Sketched Contour		Instrumental Contour		
	Main Roads		Minor Roads		
	Sunken Road		Raised Road		
	Road over Railway		Railway over River		
	Railway over Road		Level Crossing		
	Road over River or Canal		Road over Stream		
	Road over Stream				
	County Boundary (Geographical)				
	County & Civil Parish Boundary				
	Administrative County & Civil Parish Boundary				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	Rural District Boundary				
	Civil Parish Boundary				

## Ordnance Survey Plan 1:10,000

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

## 1:10,000 Raster Mapping

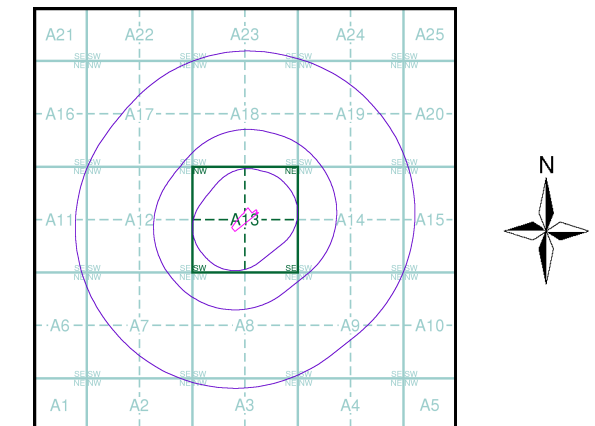
	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil,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



## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:10,560	1862	3
Northumberland	1:10,560	1864	4
Durham	1:10,560	1898	5
Northumberland	1:10,560	1899	6
Durham	1:10,560	1921	7
Northumberland	1:10,560	1921	8
Durham	1:10,560	1938	9
Durham	1:10,560	1938	10
Northumberland	1:10,560	1938	11
Ordnance Survey Plan	1:10,000	1951 - 1952	12
Ordnance Survey Plan	1:10,000	1957	13
Ordnance Survey Plan	1:10,000	1958	14
Ordnance Survey Plan	1:10,000	1967 - 1968	15
Ordnance Survey Plan	1:10,000	1973 - 1979	16
Newcastle-upon-Tyne	1:25,000	1977	17
Ordnance Survey Plan	1:10,000	1982 - 1988	18
Ordnance Survey Plan	1:10,000	1991 - 1995	19
10K Raster Mapping	1:10,000	2006	20
VectorMap Local	1:10,000	2014	21

## Historical Map - Slice A



## Order Details

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

## Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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# 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

**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)

<b>А а (A)</b>	<b>З з (Z)</b>	<b>П п (P)</b>	<b>Ч ч (CH)</b>
<b>Б б (B)</b>	<b>И и (I)</b>	<b>Р р (R)</b>	<b>Ш ш (SH)</b>
<b>В в (V)</b>	<b>Й й (Y)</b>	<b>С с (S)</b>	<b>Щ щ (SHCH)</b>
<b>Г г (G)</b>	<b>К к (K)</b>	<b>Т т (T)</b>	<b>Ъ (-)</b>
<b>Д д (D)</b>	<b>Л л (L)</b>	<b>У у (U)</b>	<b>Ы (Y)</b>
<b>Е е (E)</b>	<b>М м (M)</b>	<b>Ф ф (F)</b>	<b>Ь (')</b>
<b>Ё ё (YO)</b>	<b>Н н (N)</b>	<b>Х х (KH)</b>	<b>Э э (E)</b>
<b>Ж ж (ZH)</b>	<b>О о (O)</b>	<b>Ц ц (TS)</b>	<b>Ю ю (YU or IU)</b>
			<b>Я я (YA or IA)</b>

## 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		Salt Mine
	Mine or Open Pit Mine		Tailings Pile
	Operating Shaft or Mine		Non-Operating Shaft or Mine
	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
	Isobath with value		Water Gauge
	Direction and velocity of current		Water Level Mark
	Well		Contour Line and Value
	Half Contour Line		Spot Elevation Value
	Coniferous		Deciduous
	Mixed		Scrub

## Key to Numbers on Mapping

### NZ26\_Newcastle

No.	Description
74	Factory (Ship Building)

### NZ36\_Newcastle

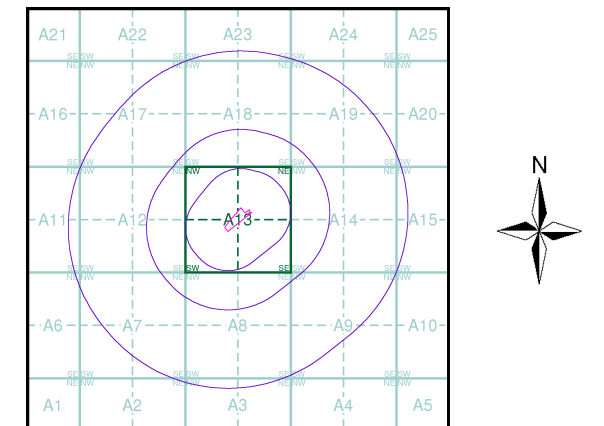
No.	Description
36	Factory (Copper Smelting)
66	Factory (Ship Repairs)
73	Factory (Ship Building)



## Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:10,560	1862	3
Northumberland	1:10,560	1864	4
Durham	1:10,560	1898	5
Northumberland	1:10,560	1899	6
Durham	1:10,560	1921	7
Northumberland	1:10,560	1921	8
Durham	1:10,560	1938	9
Durham	1:10,560	1938	10
Northumberland	1:10,560	1938	11
Ordnance Survey Plan	1:10,000	1951 - 1952	12
Ordnance Survey Plan	1:10,000	1957	13
Ordnance Survey Plan	1:10,000	1958	14
Ordnance Survey Plan	1:10,000	1967 - 1968	15
Ordnance Survey Plan	1:10,000	1973 - 1979	16
Newcastle-upon-Tyne	1:25,000	1977	17
Ordnance Survey Plan	1:10,000	1982 - 1988	18
Ordnance Survey Plan	1:10,000	1991 - 1995	19
10K Raster Mapping	1:10,000	2006	20
VectorMap Local	1:10,000	2014	21

## Russian Map - Slice A



## Order Details

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

## Site Details

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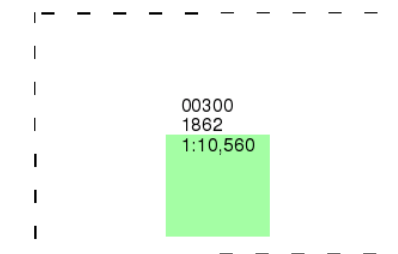
Durham

Published 1862

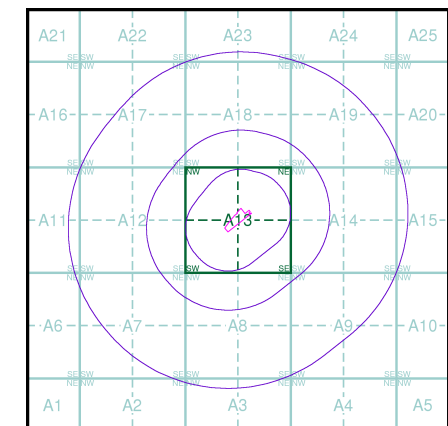
Source map scale - 1:10,560

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

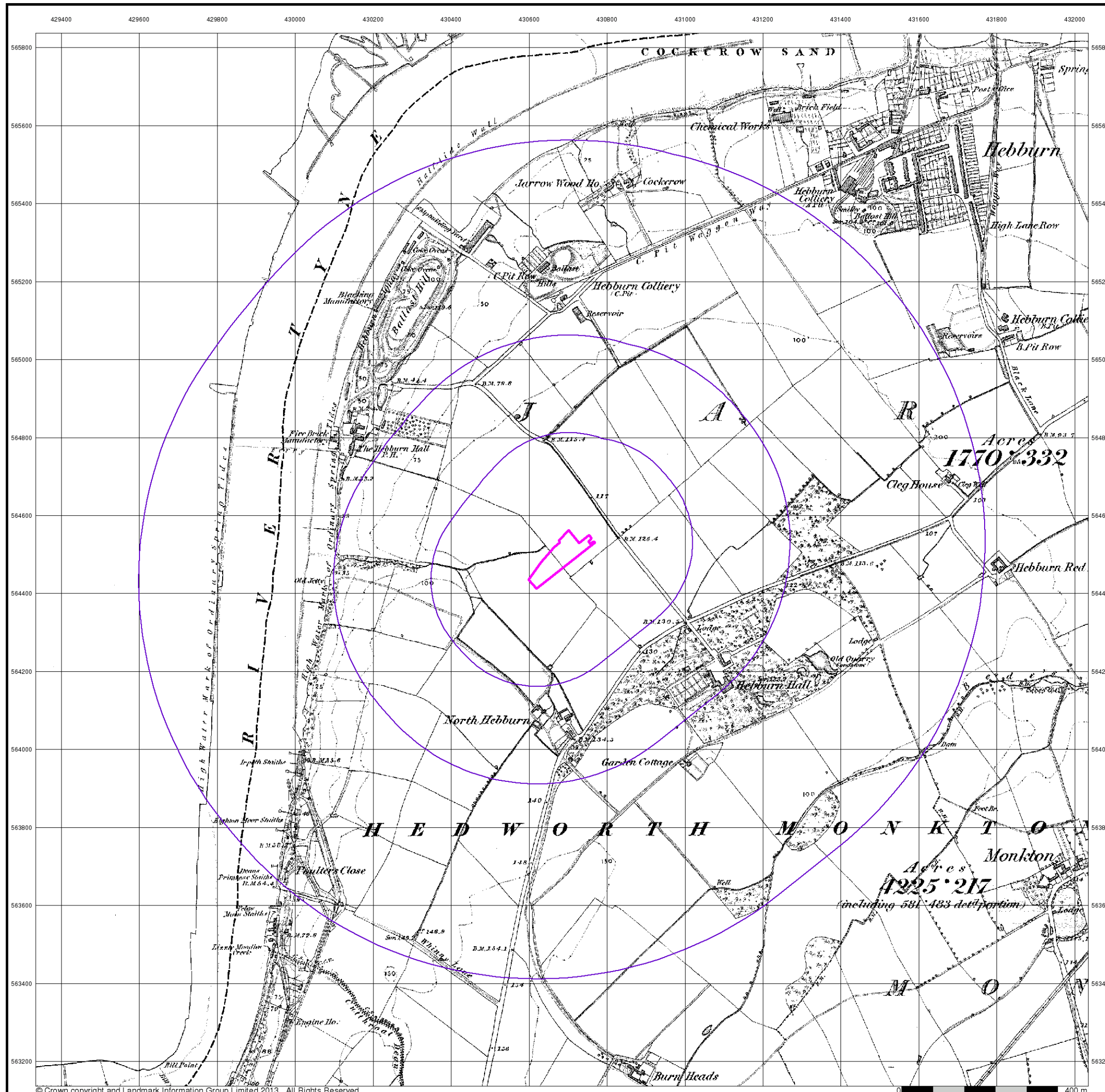
Order Number: 58659417\_1\_1
Customer Ref: C6149 Glen Street Hebburn APC
National Grid Reference: 430680, 564490
Slice: A
Site Area (Ha): 0.89
Search Buffer (m): 1000

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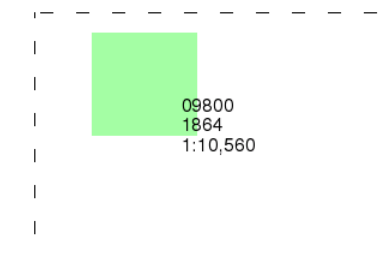
## Northumberland

Published 1864

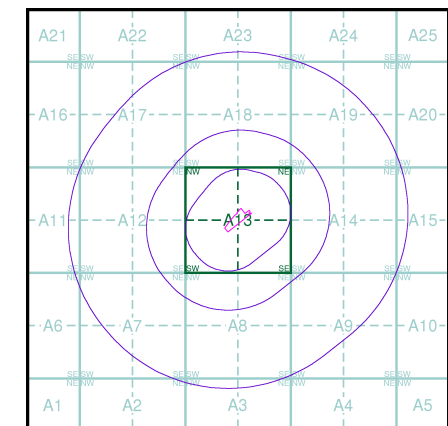
Source map scale - 1:10,560

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: 58659417\_1\_1  
Customer Ref: C6149 Glen Street Hebburn APC  
National Grid Reference: 430680, 564490  
Slice: A  
Site Area (Ha): 0.89  
Search Buffer (m): 1000

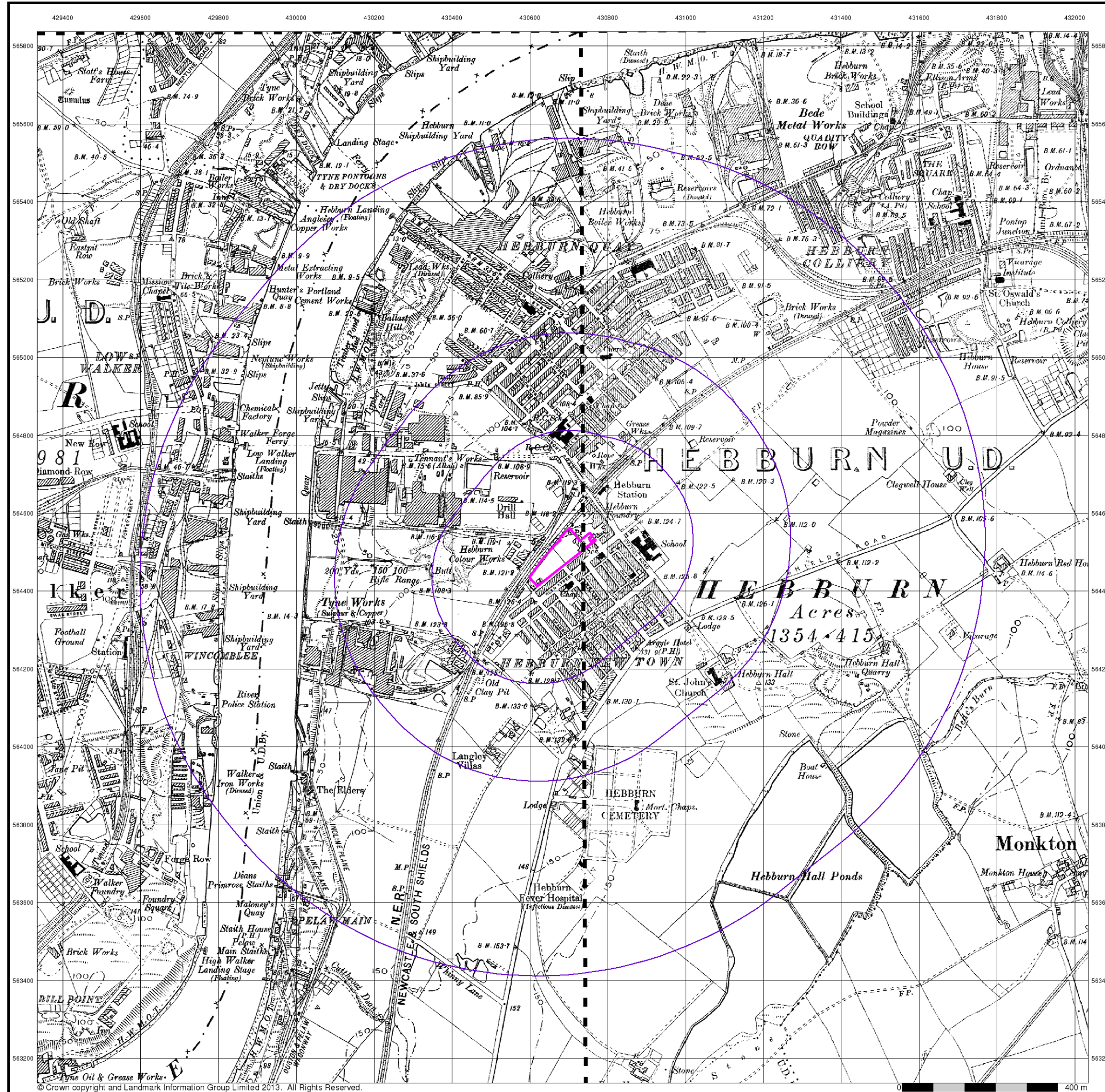
### Site Details

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**Durham**

**Published 1898**

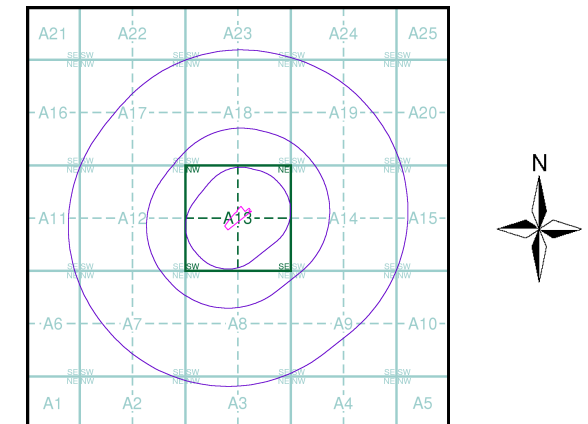
**Source map scale - 1:10,560**

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

**Map Name(s) and Date(s)**

003SW 1898 1:10,560	003SE 1898 1:10,560
---------------------------	---------------------------

**Historical Map - Slice A**



**Order Details**

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

**Site Details**

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## Northumberland

Published 1899

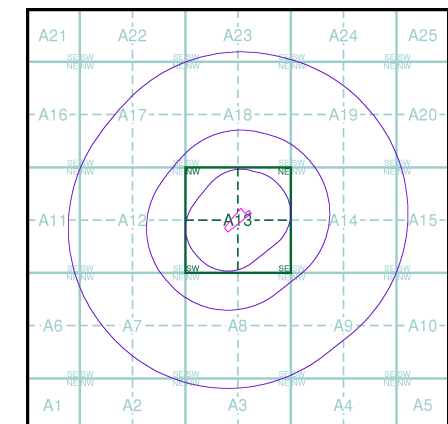
Source map scale - 1:10,560

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)

098NW	1899	1:10,560
098SW	1899	1:10,560

### Historical Map - Slice A



### Order Details

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

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Durham

Published 1921

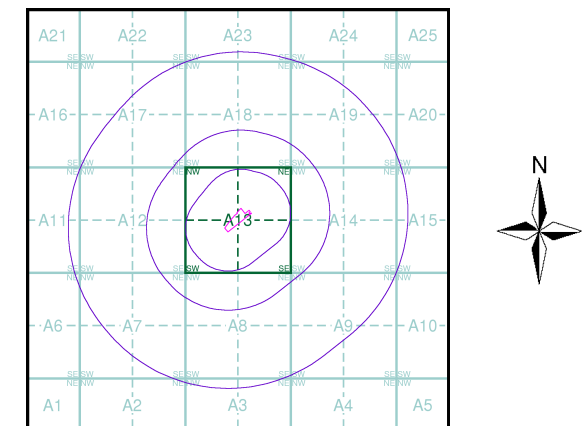
Source map scale - 1:10,560

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)

003SW 1921 1:10,560		003SE 1921 1:10,560
---------------------------	--	---------------------------

Historical Map - Slice A



Order Details

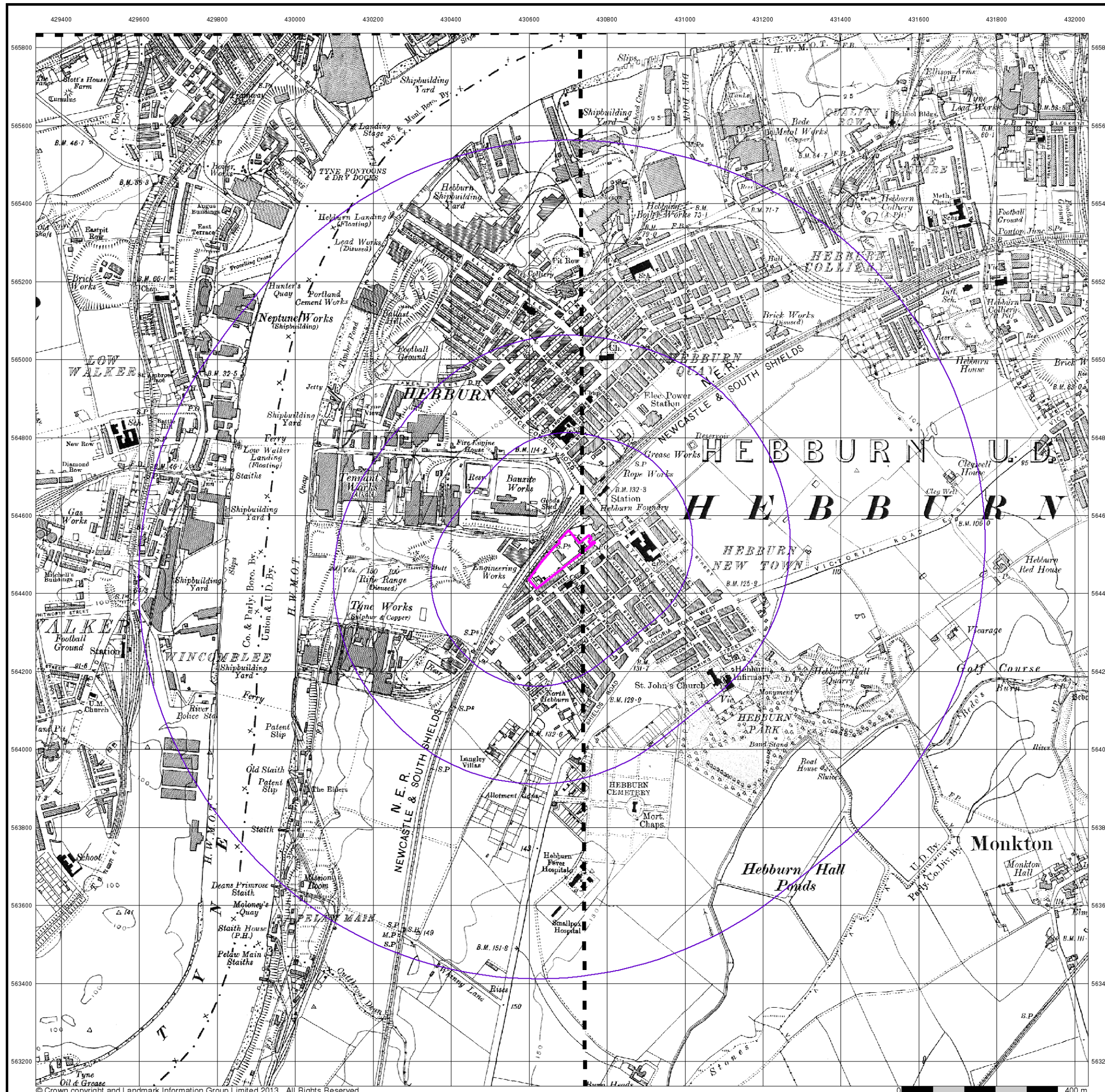
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

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## Northumberland

Published 1921

Source map scale - 1:10,560

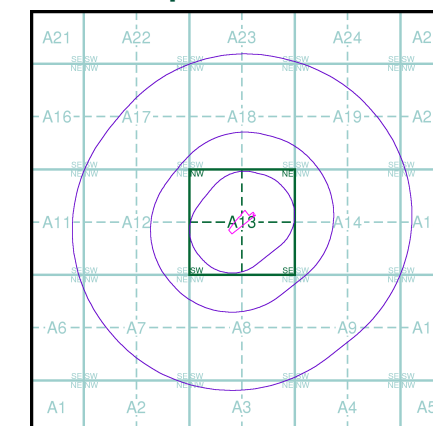
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

095NW  
1921  
1:10,560



### Historical Map - Slice A



### Order Details

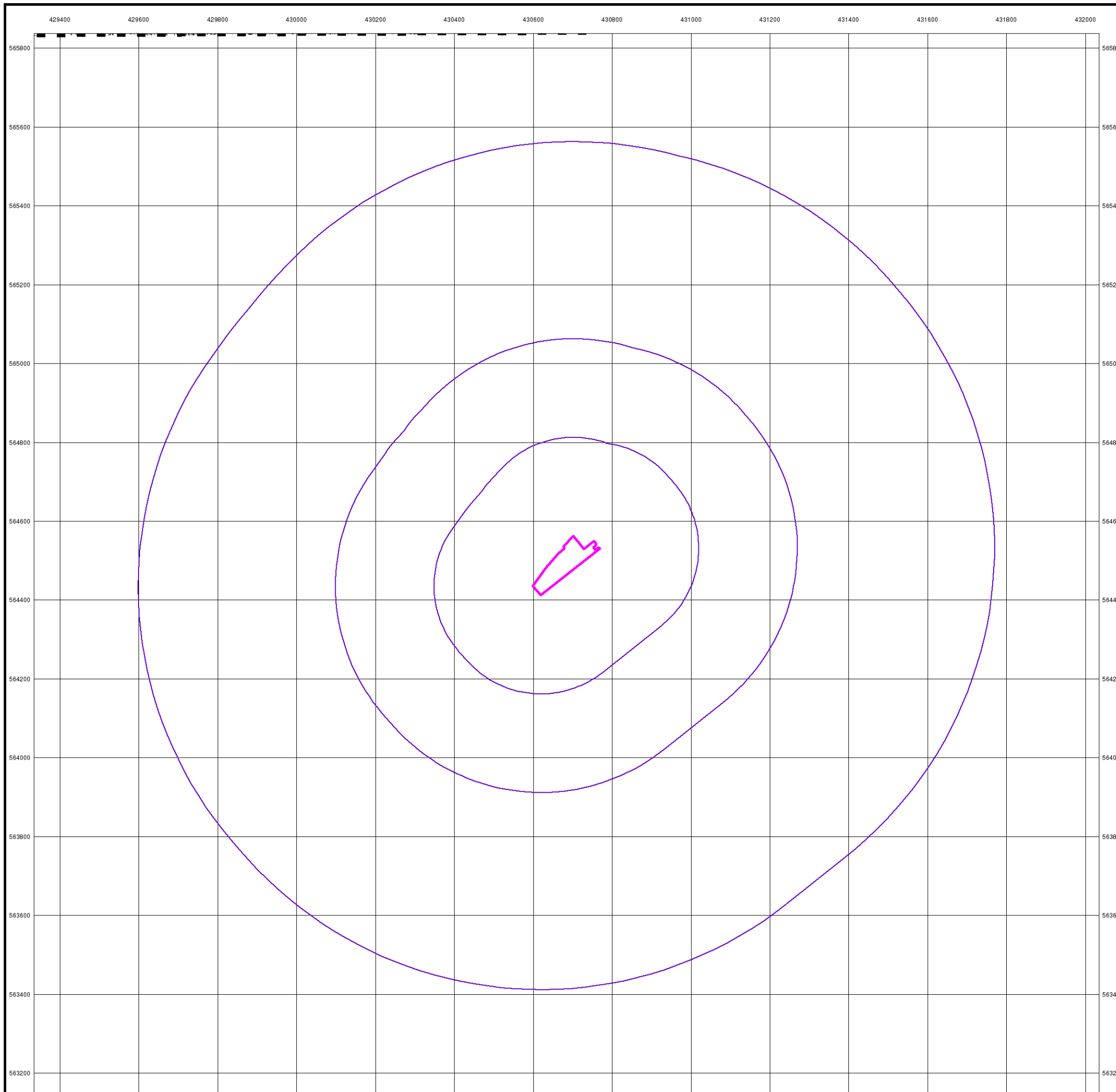
Order Number: 58659417\_1\_1  
Customer Ref: C6149 Glen Street Hebburn APC  
National Grid Reference: 430680, 564490  
Slice: A  
Site Area (Ha): 0.89  
Search Buffer (m): 1000

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Durham

Published 1938

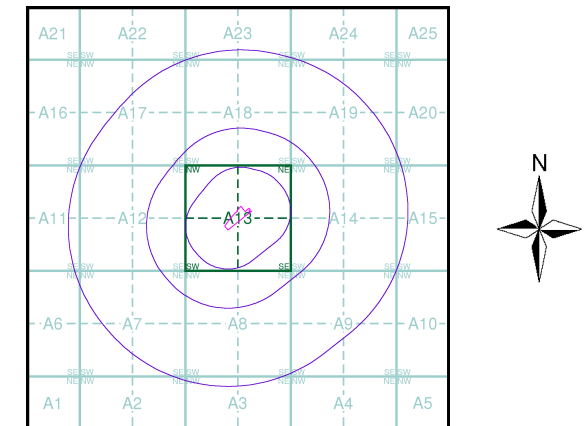
Source map scale - 1:10,560

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)

003SW 1938 1:10,560	003SE 1938 1:10,560
---------------------------	---------------------------

Historical Map - Slice A



Order Details

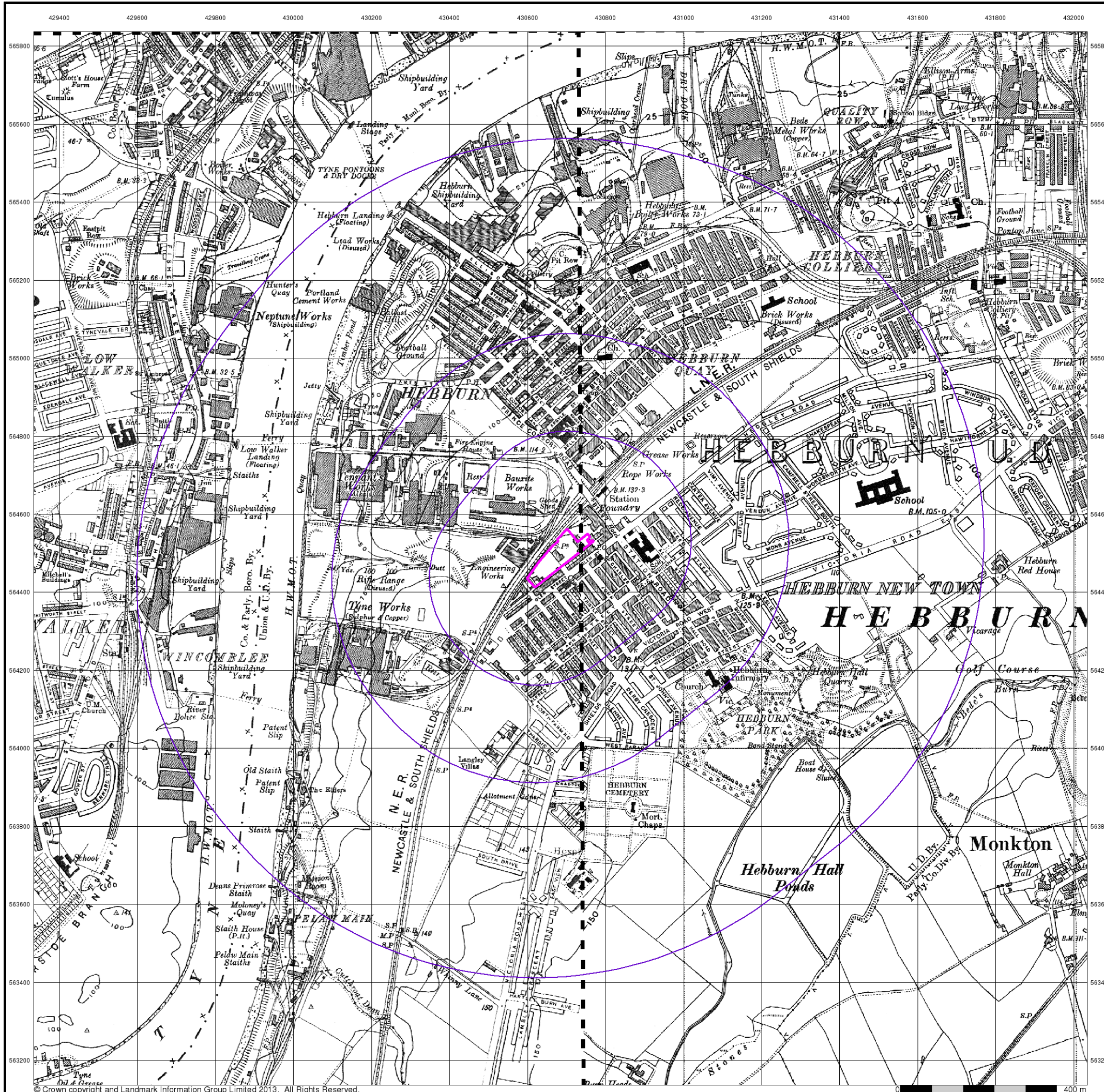
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

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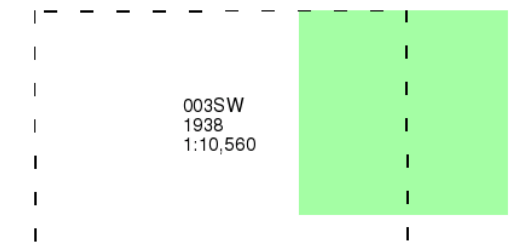
Durham

Published 1938

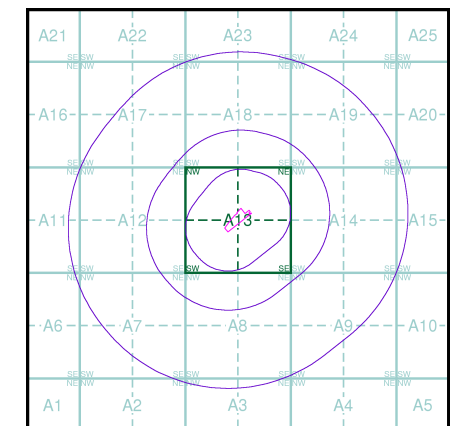
Source map scale - 1:10,560

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)



Historical Map - Slice A



Order Details

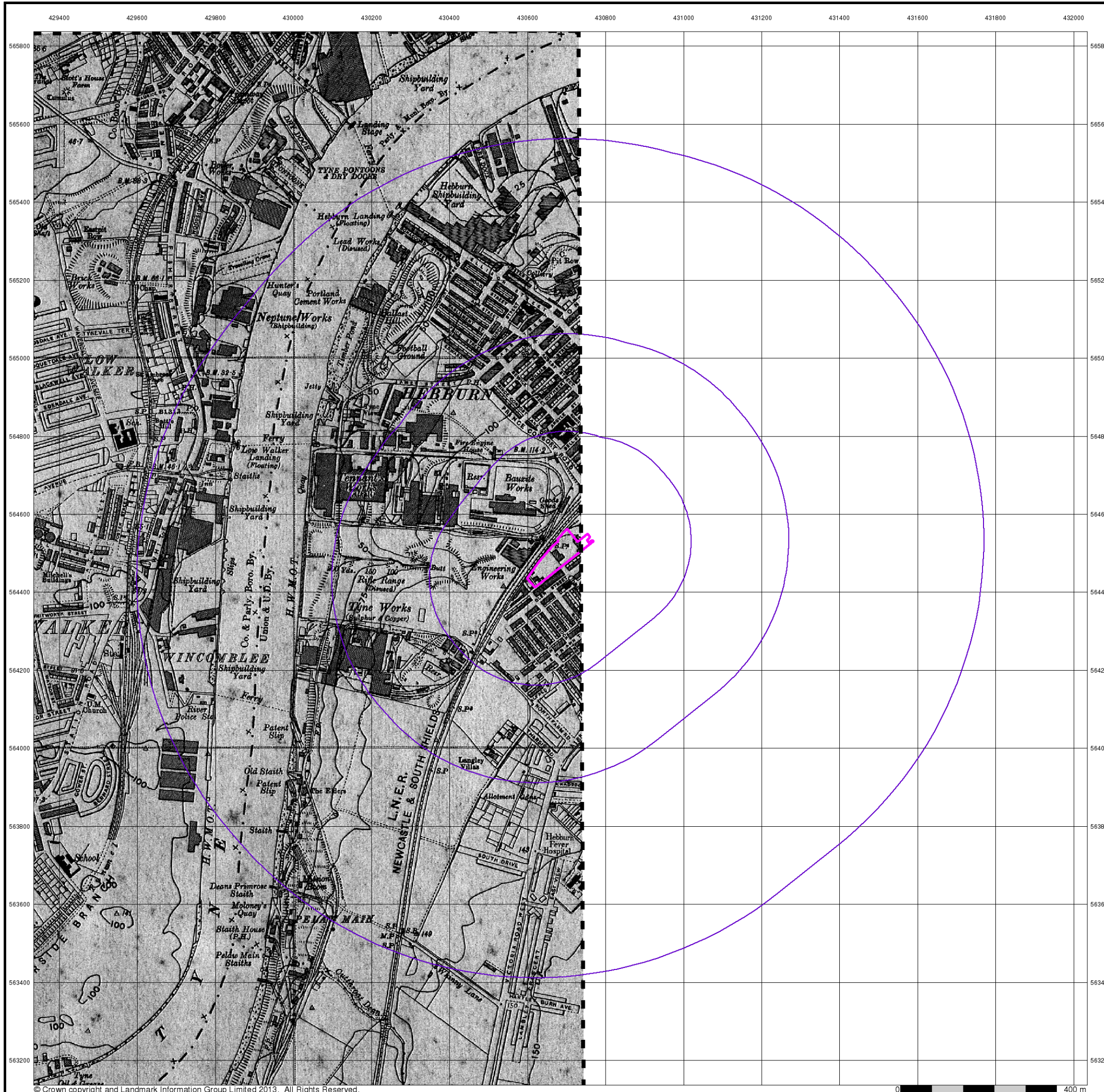
Order Number: 58659417\_1\_1
Customer Ref: C6149 Glen Street Hebburn APC
National Grid Reference: 430680, 564490
Slice: A
Site Area (Ha): 0.89
Search Buffer (m): 1000

Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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







## Northumberland

Published 1938

Source map scale - 1:10,560

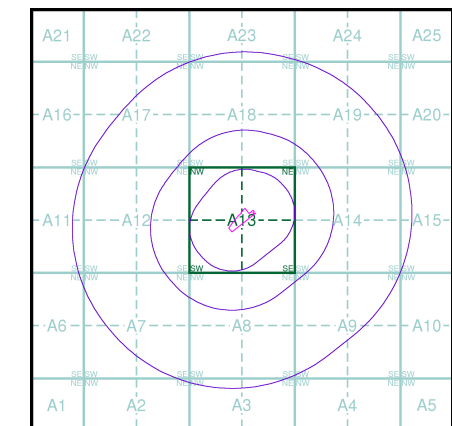
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

095NW  
1938  
1:10,560



### Historical Map - Slice A



### Order Details

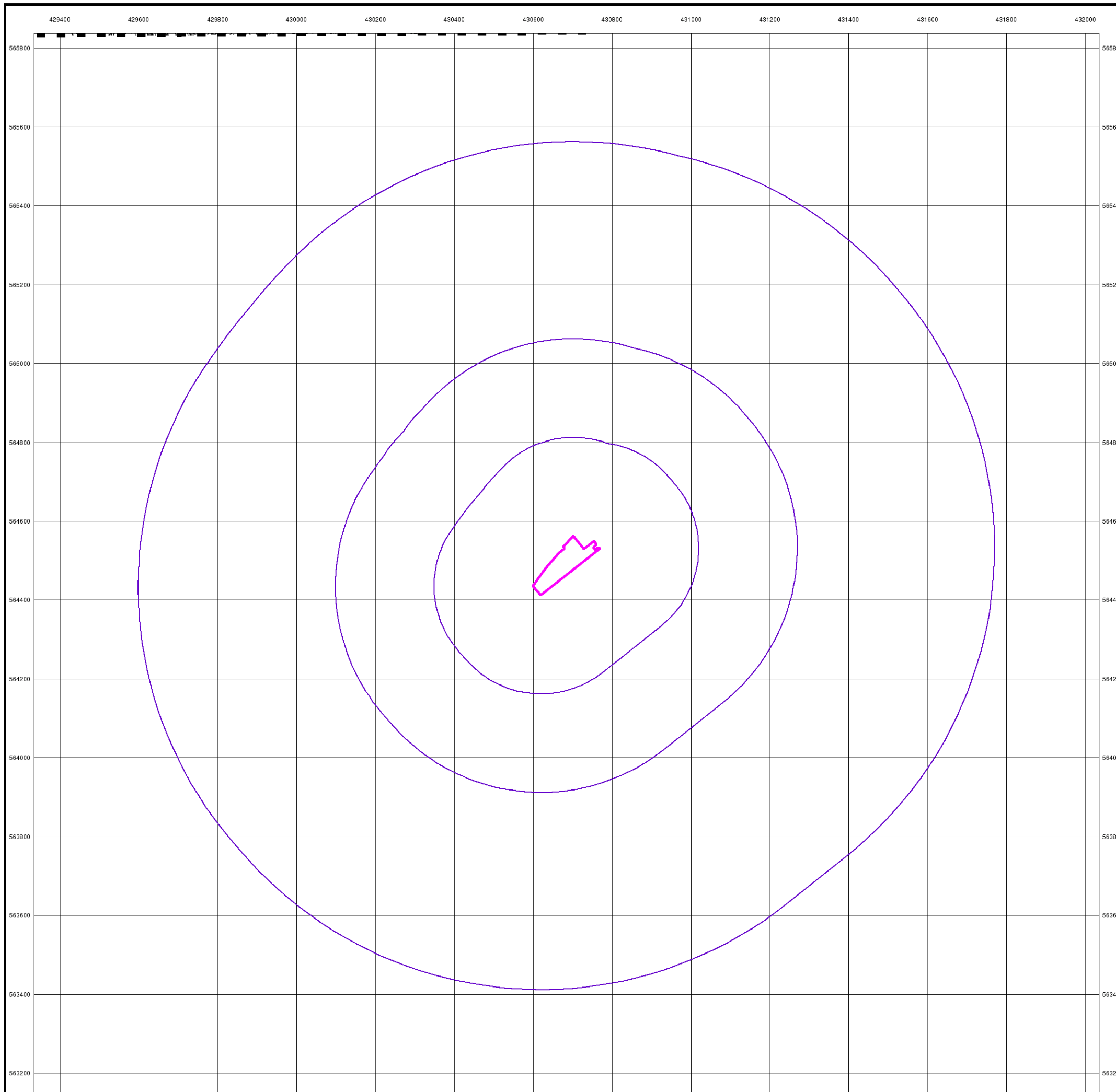
Order Number: 58659417\_1\_1  
Customer Ref: C6149 Glen Street Hebburn APC  
National Grid Reference: 430680, 564490  
Slice: A  
Site Area (Ha): 0.89  
Search Buffer (m): 1000

### Site Details

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### Ordnance Survey Plan

Published 1951 - 1952

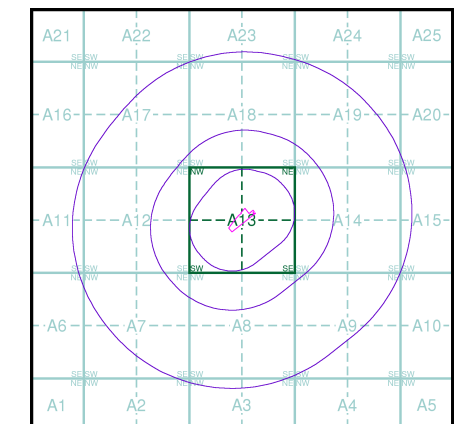
Source map scale - 1:10,000

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

### Map Name(s) and Date(s)

NZ26NE	NZ36NW
1952	1951
1:10,560	1:10,560
NZ26SE	NZ36SW
1951	1952
1:10,560	1:10,560

### Historical Map - Slice A



### Order Details

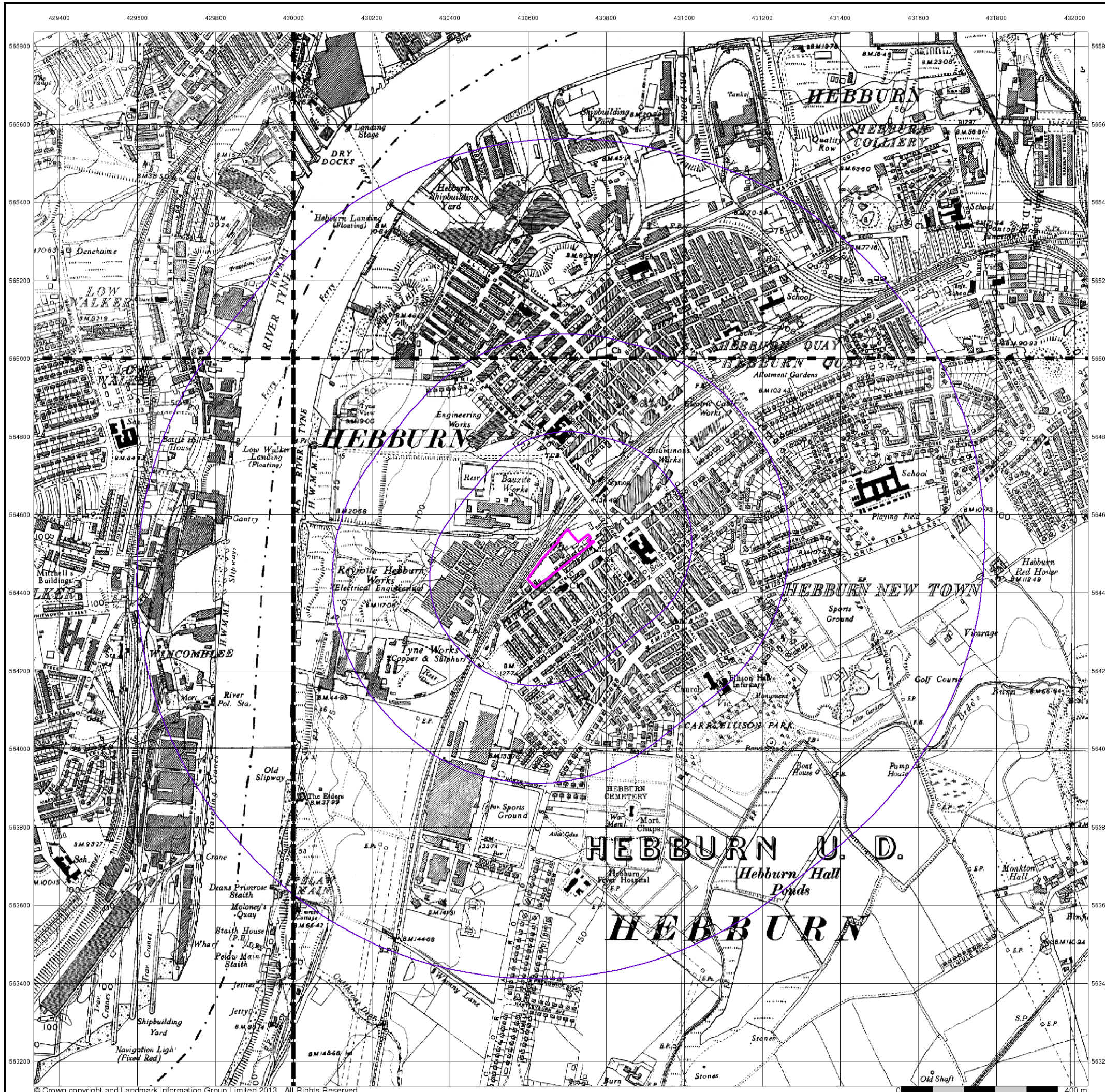
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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





### Ordnance Survey Plan

Published 1957

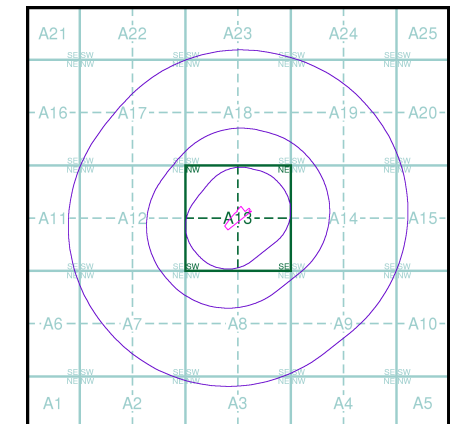
Source map scale - 1:10,000

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)

NZ26NE	NZ36NW
1957	1957
1:10,560	1:10,560
NZ26SE	
1957	
1:10,560	

### Historical Map - Slice A



### Order Details

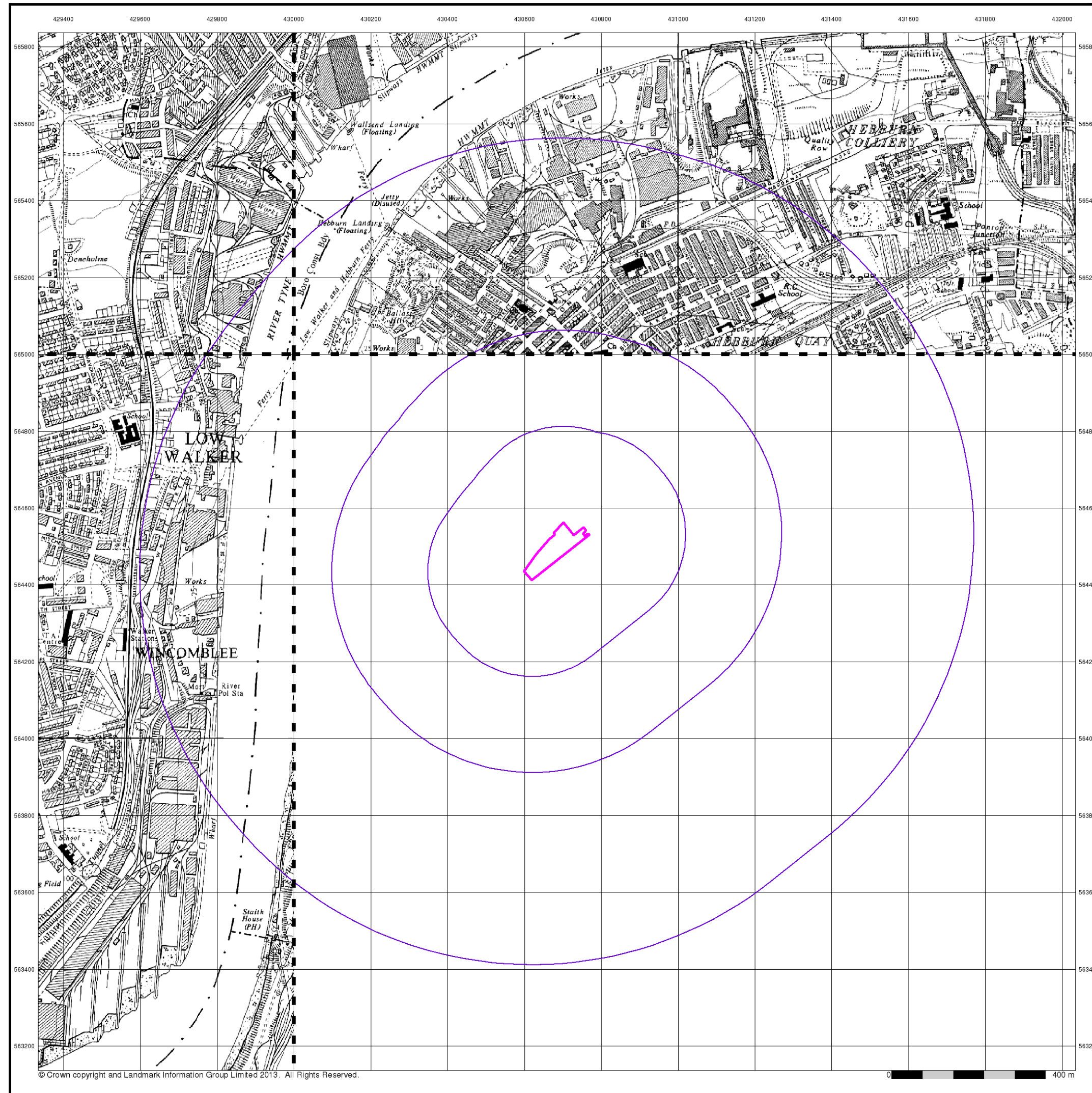
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

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 Fax: 0844 844 9951  
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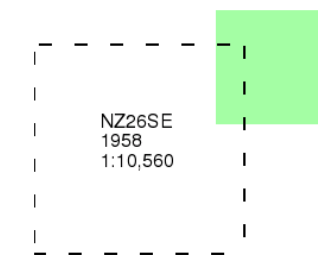
## Ordnance Survey Plan

Published 1958

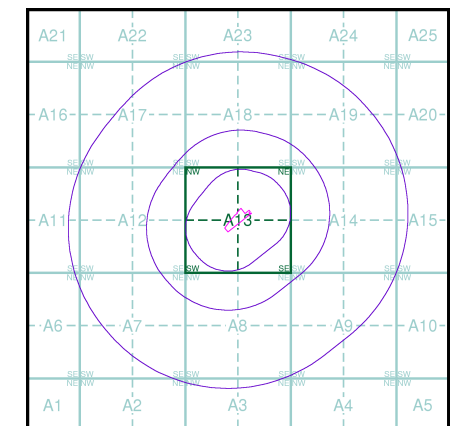
Source map scale - 1:10,000

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

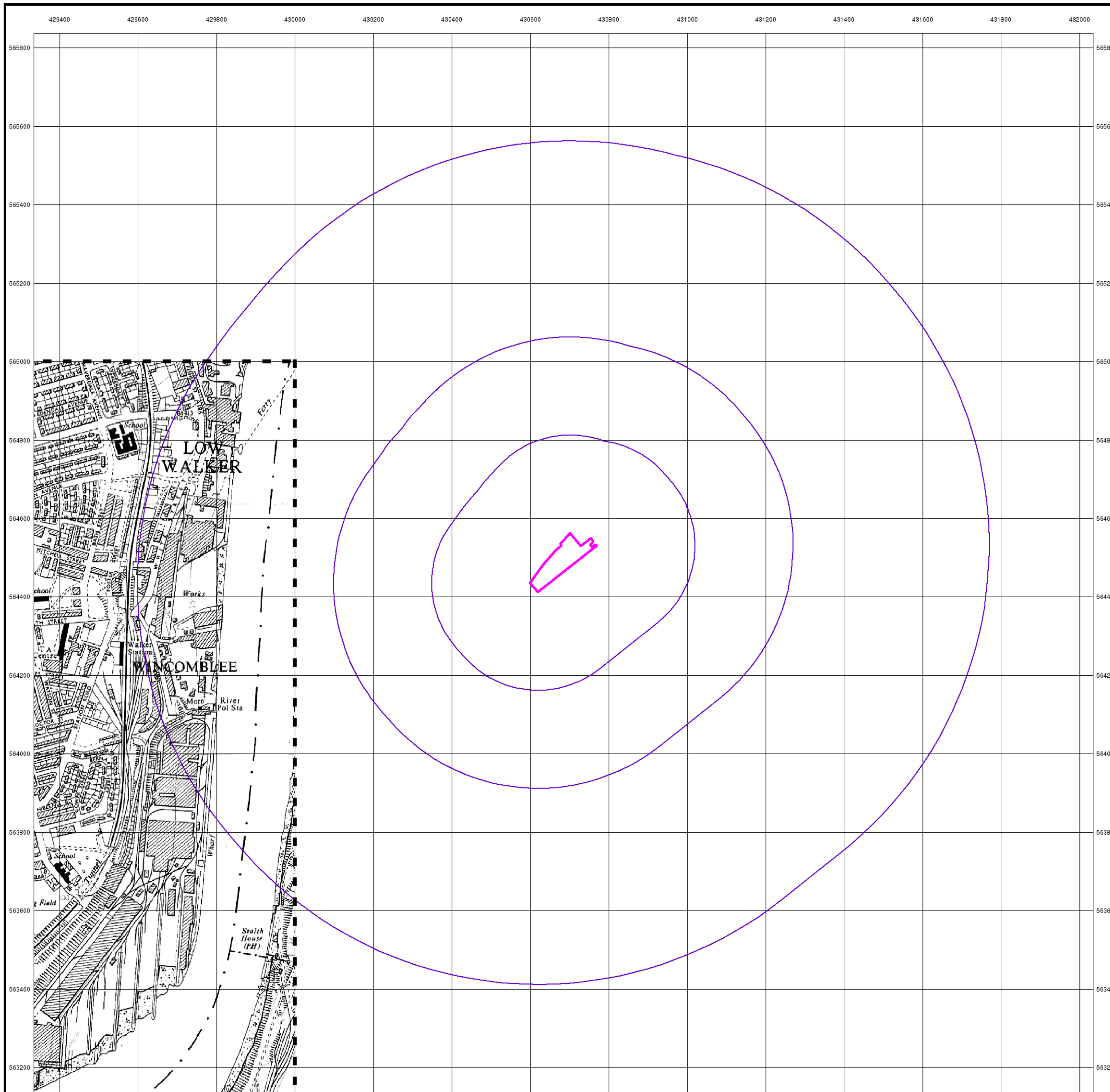
Order Number: 58659417\_1\_1  
Customer Ref: C6149 Glen Street Hebburn APC  
National Grid Reference: 430680, 564490  
Slice: A  
Site Area (Ha): 0.89  
Search Buffer (m): 1000

### Site Details

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### Ordnance Survey Plan

Published 1967 - 1968

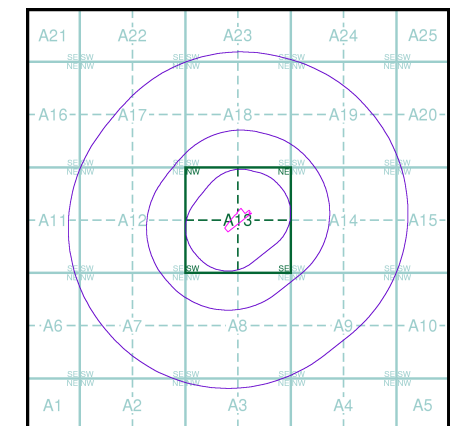
Source map scale - 1:10,000

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

### Map Name(s) and Date(s)

NZ26NE	NZ36NW
1968	1967
1:10,560	1:10,560
	NZ36SW
	1967
	1:10,560

### Historical Map - Slice A



### Order Details

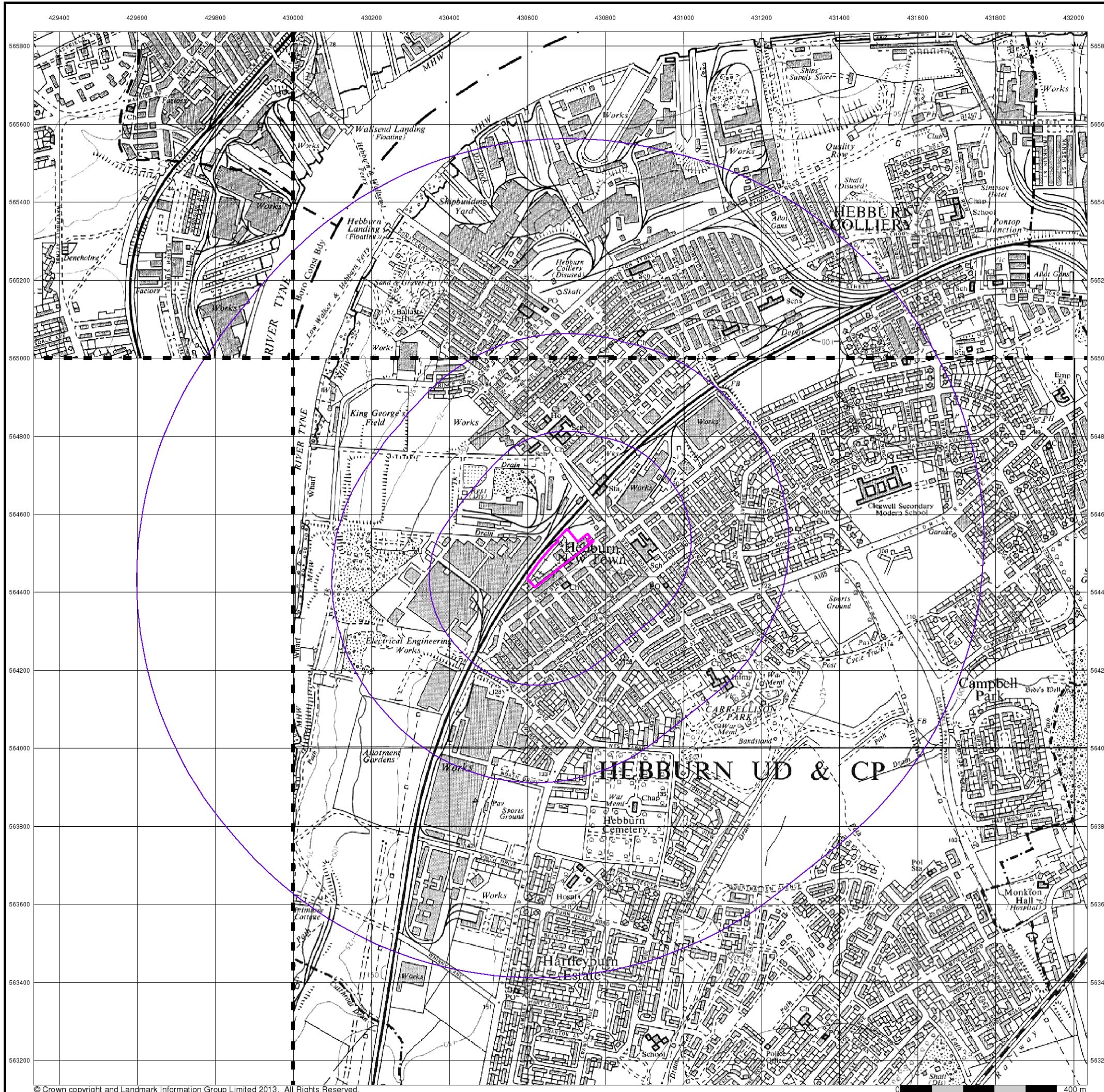
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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### Ordnance Survey Plan

Published 1973 - 1979

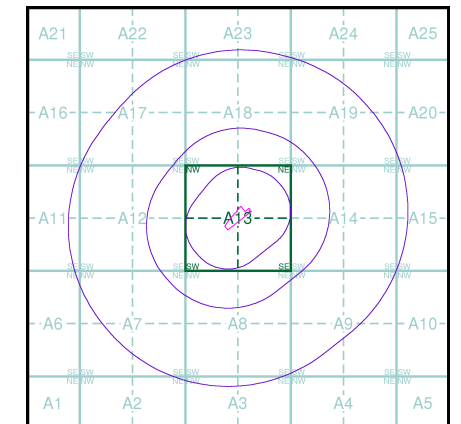
Source map scale - 1:10,000

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)

NZ26NE	NZ36NW
1979	1973
1:10,000	1:10,000
NZ26SE	NZ36SW
1973	1975
1:10,000	1:10,000

### Historical Map - Slice A



### Order Details

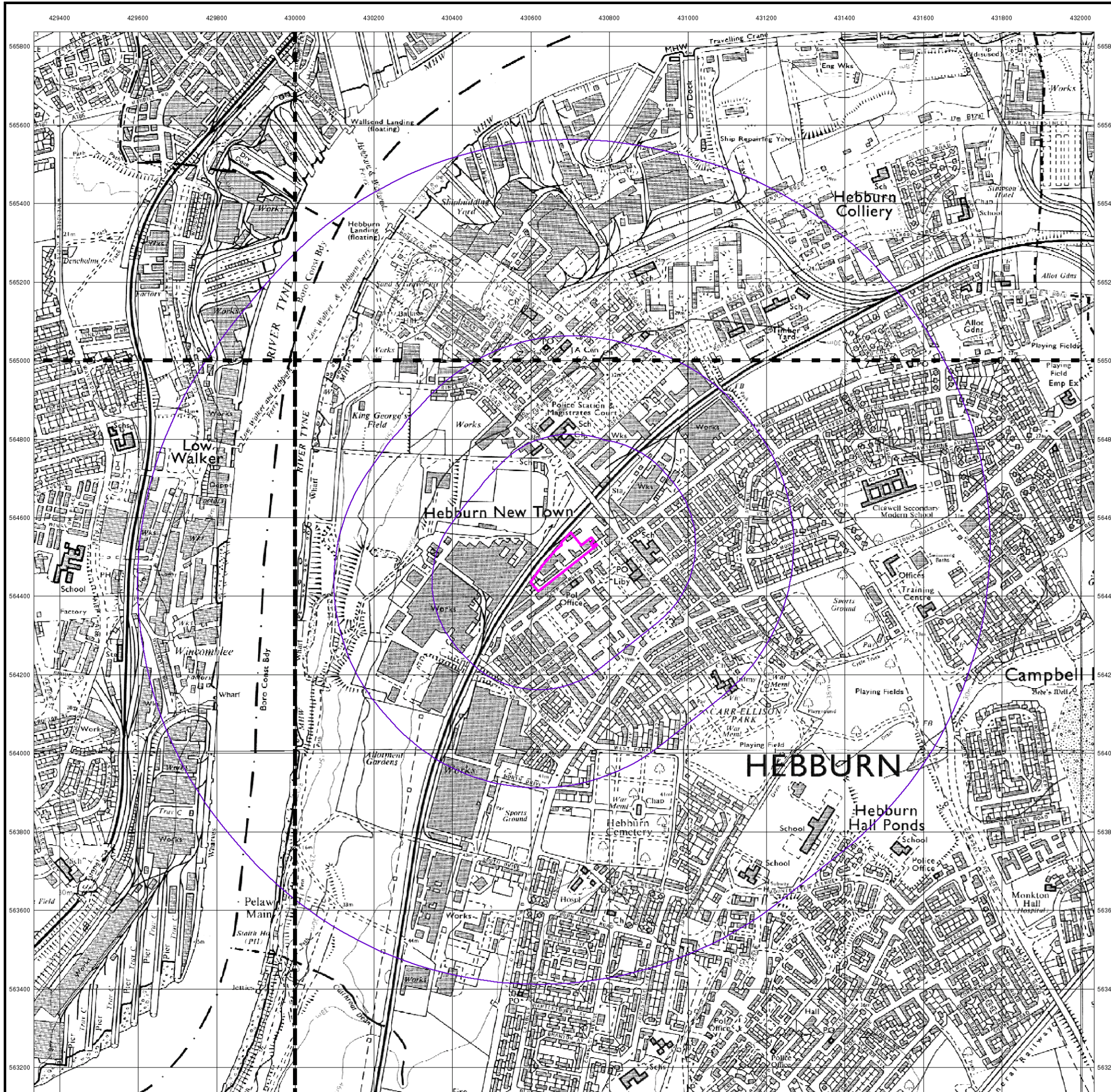
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

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## Newcastle-upon-Tyne

Published 1977

Source map scale - 1:25,000

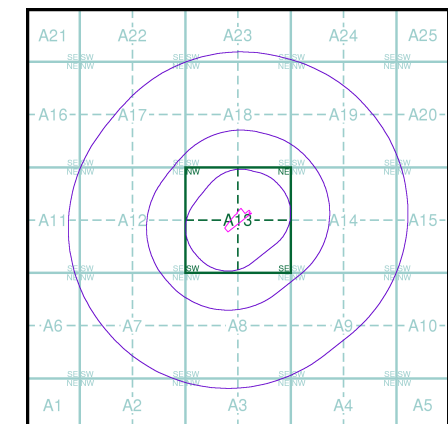
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed 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)

NZ26 1977 1:25,000	NZ36 1977 1:25,000
--------------------------	--------------------------

### Russian Map - Slice A



### Order Details

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

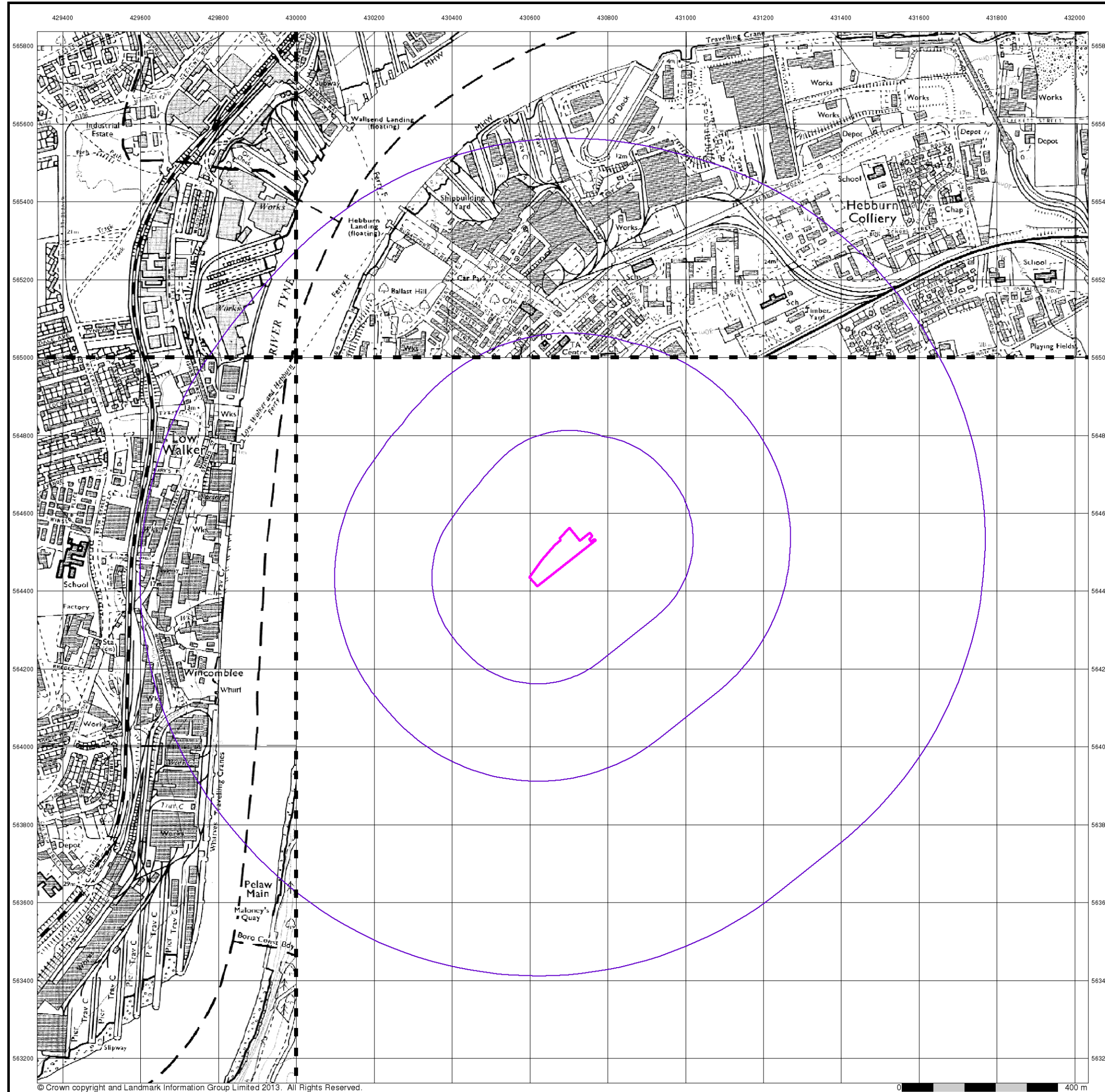
### Site Details

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 Web: www.envirocheck.co.uk





## Ordnance Survey Plan

Published 1982 - 1988

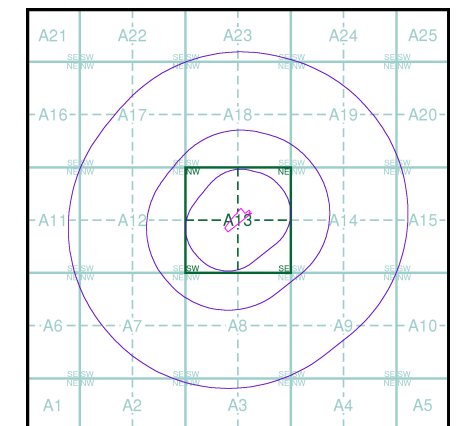
Source map scale - 1:10,000

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)

NZ26NE	NZ36NW
1988	1982
1:10,000	1:10,000
NZ26SE	
1984	
1:10,000	

### Historical Map - Slice A



### Order Details

Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

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### Ordnance Survey Plan

Published 1991 - 1995

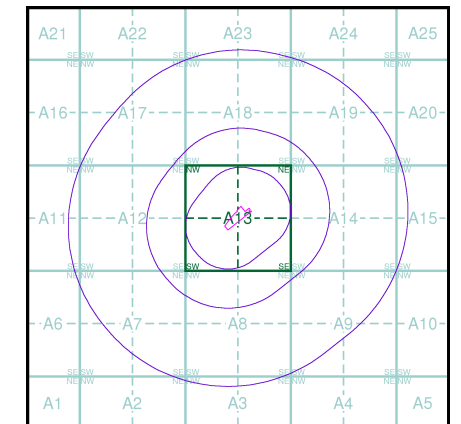
Source map scale - 1:10,000

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

### Map Name(s) and Date(s)

NZ36NW	1995	1:10,000
NZ26SE	1991	1:10,000
NZ36SW	1992	1:10,000

### Historical Map - Slice A



### Order Details

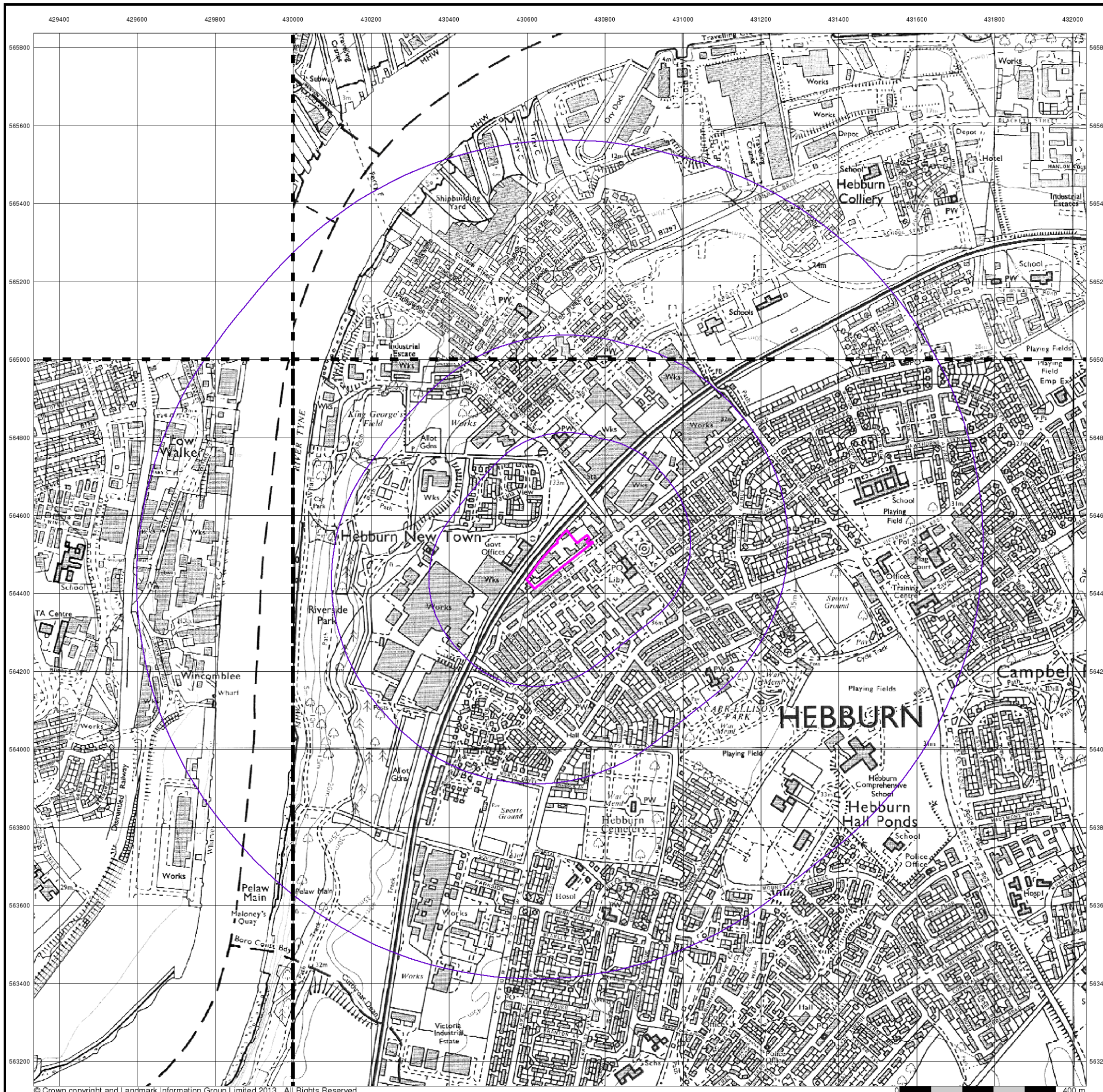
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

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### 10k Raster Mapping

Published 2006

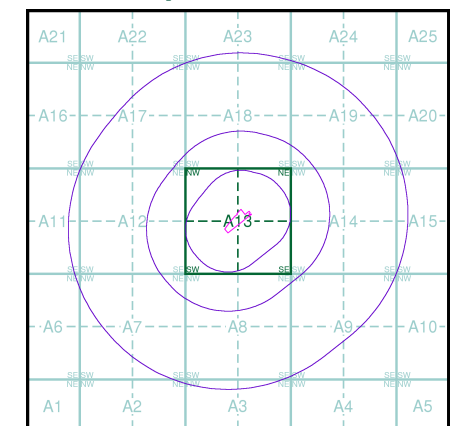
Source map scale - 1:10,000

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

### Map Name(s) and Date(s)

NZ26NE 2006 1:10,000	NZ36NW 2006 1:10,000
NZ26SE 2006 1:10,000	NZ36SW 2006 1:10,000

### Historical Map - Slice A



### Order Details

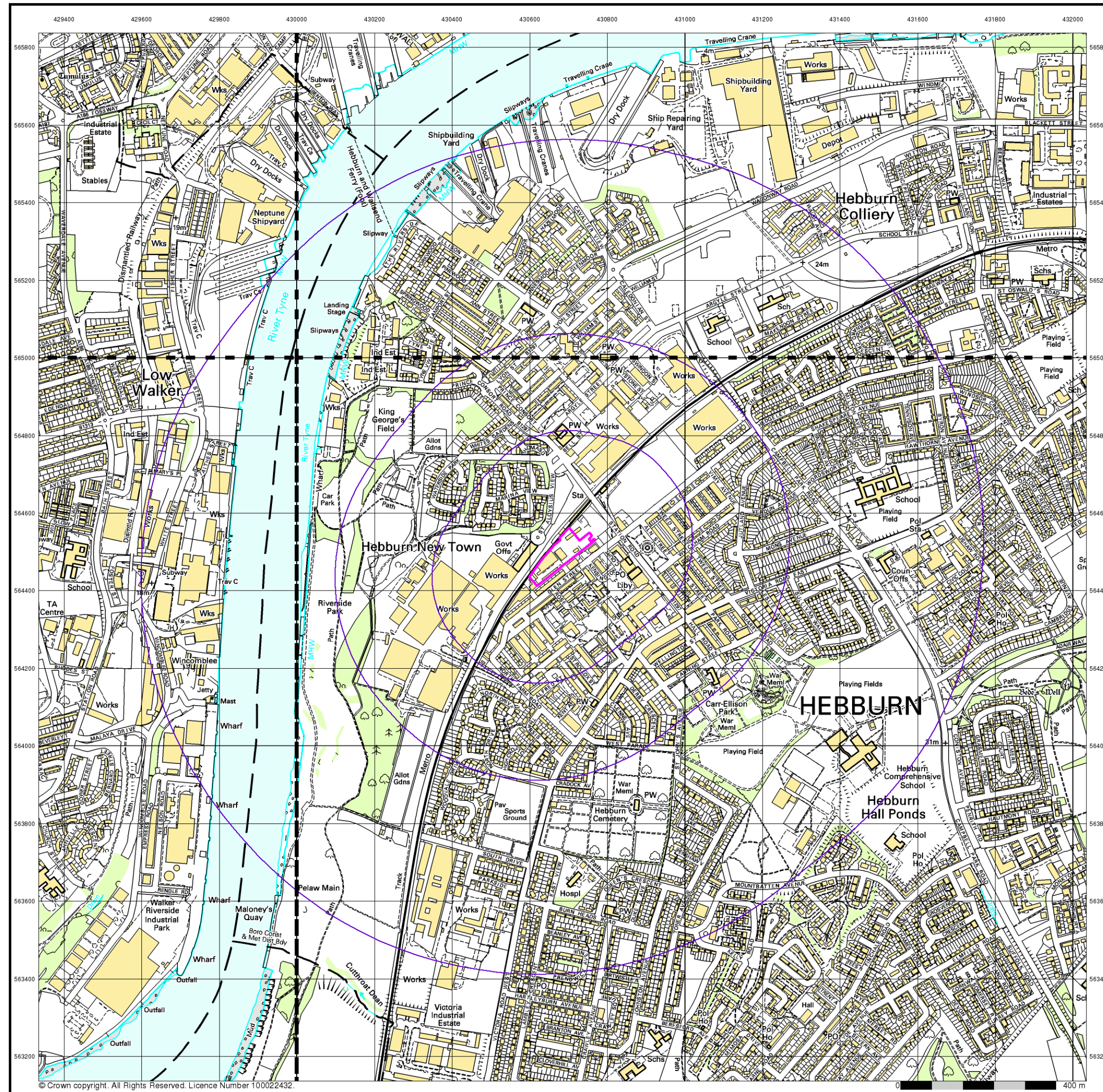
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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### VectorMap Local

Published 2014

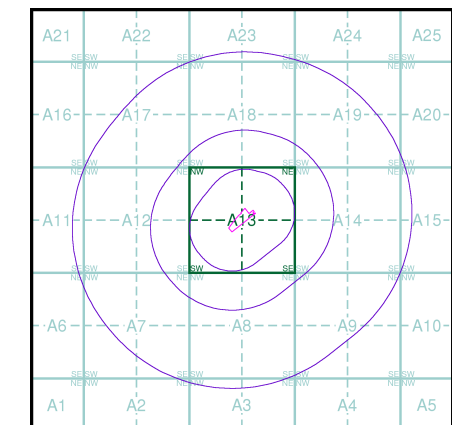
Source map scale - 1:10,000

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)

NZ26NE 2014 Variable	NZ36NW 2014 Variable
NZ26SE 2014 Variable	NZ36SW 2014 Variable

### Historical Map - Slice A



### Order Details

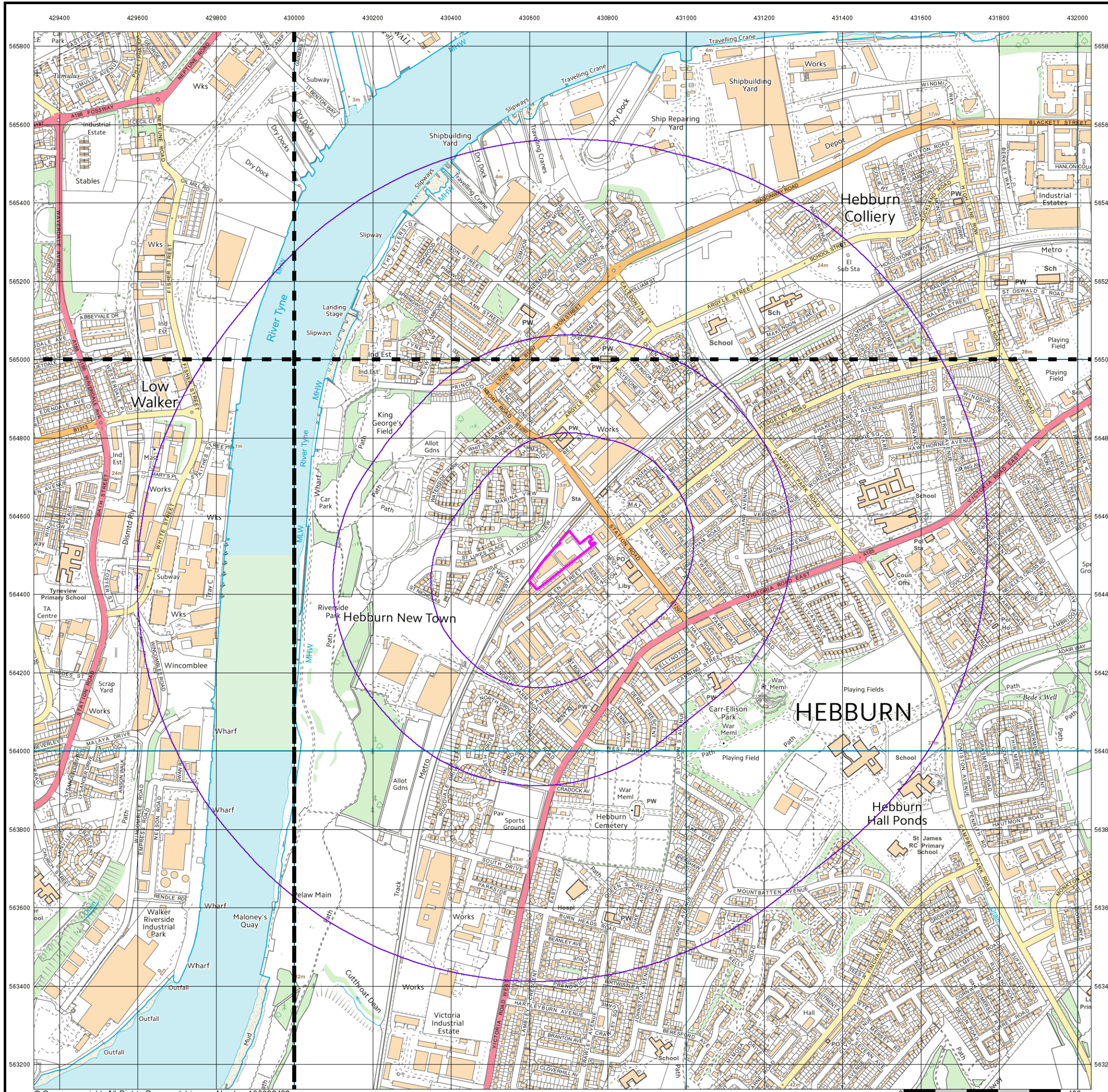
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 1000

### Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU



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## Northumberland

Published 1896

Source map scale - 1:500

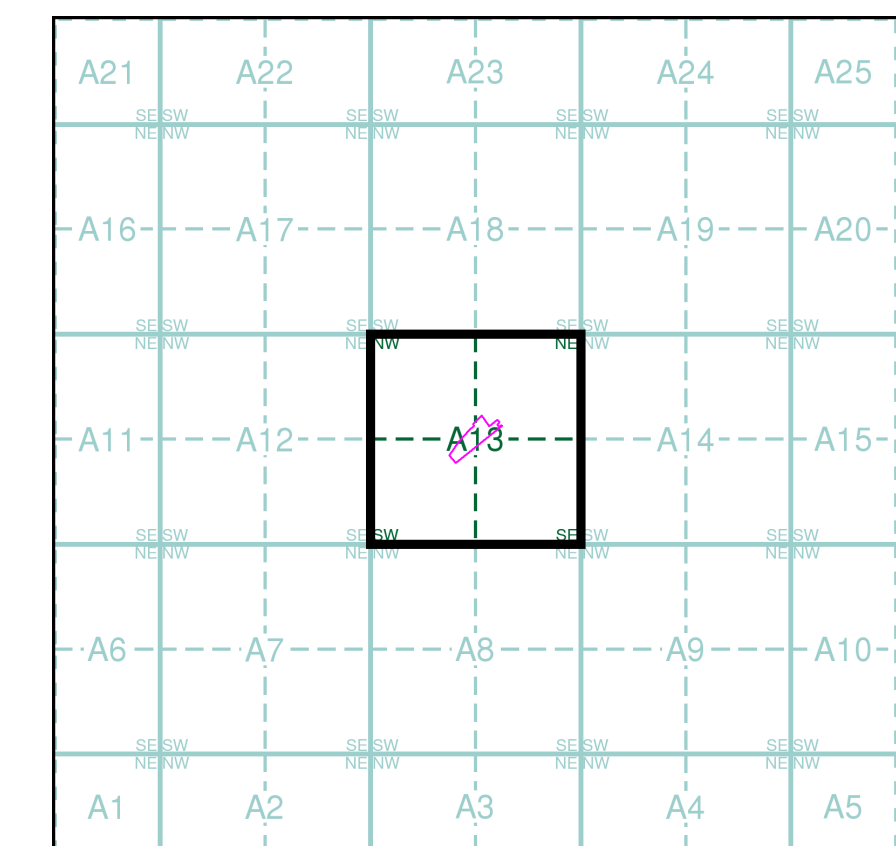
The 1:500 scale Ordnance Survey mapping was introduced in 1855 as a replacement for the 1:528 scale and to compliment the 1:2500 scale that had been implemented in 1853. By 1895, the 1:500 scale covered most towns over a population of about 4000 at the time of survey, although very few towns were mapped 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)

003_10_020	003_11_016
1896	1896
1:500	1:500
003_10_025	003_11_021
1896	1896
1:500	1:500

### Historical Town Plan - Segment A13



### Order Details

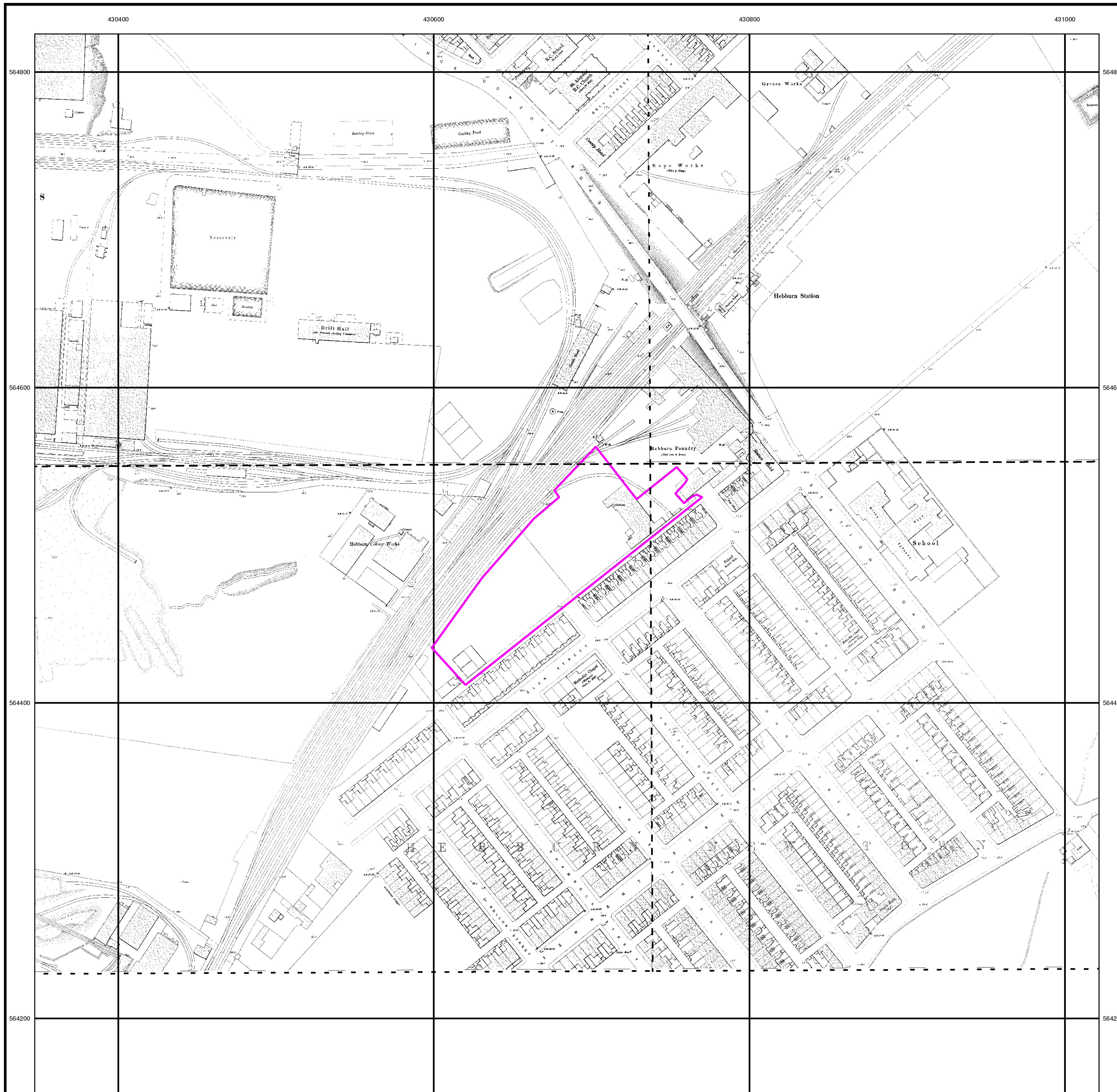
Order Number: 58659417\_1\_1  
 Customer Ref: C6149 Glen Street Hebburn APC  
 National Grid Reference: 430680, 564490  
 Slice: A  
 Site Area (Ha): 0.89  
 Search Buffer (m): 0

### Site Details

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





## Envirocheck<sup>®</sup> Report:

### BGS Boreholes Datasheet

#### Order Details:

**Order Number:**

58659417\_1\_1

**Customer Reference:**

C6149 Glen Street Hebburn APC

**National Grid Reference:**

430680, 564490

**Slice:**

A

**Site Area (Ha):**

0.89

**Borehole Search Buffer (m):**

1000

#### Site Details:

Glen Street

Glen Street

HEBBURN

Tyne and Wear

NE31 1NU

#### Client Details:

P Coulson

Sirius Geotechnical & Environmental Ltd

4245 Park Approach

Thorpe Park

Leeds

LS15 8GB



# BGS Boreholes Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
BGS Boreholes	pg 1	None	39	101	404

## 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 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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A copy of the BGS Borehole Ordering Form is available to download from the Support section of [www.envirocheck.co.uk](http://www.envirocheck.co.uk).

## Report Version v47.0



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	<b>BGS Boreholes</b> BGS Reference: Nz36sw839 Drilled Length (m): 5 Borehole Name: Surgery, Glen St, Hebburn 1 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18508954/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18508954/</a>	A13NE (E)	18	4	430764 564504
97	<b>BGS Boreholes</b> BGS Reference: Nz36sw840 Drilled Length (m): 5 Borehole Name: Surgery, Glen St, Hebburn 2 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18508955/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18508955/</a>	A13NE (E)	19	4	430773 564509
98	<b>BGS Boreholes</b> BGS Reference: Nz36sw108/C Drilled Length (m): 22.4 Borehole Name: Central Area Redevelopment 3 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840942/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840942/</a>	A13SW (S)	82	4	430660 564340
99	<b>BGS Boreholes</b> BGS Reference: Nz36sw764 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 7 Link to Borehole Scan: Not Available	A13SW (W)	89	4	430510 564430
99	<b>BGS Boreholes</b> BGS Reference: Nz36sw770 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 19a Link to Borehole Scan: Not Available	A13SW (SW)	109	4	430500 564390
100	<b>BGS Boreholes</b> BGS Reference: Nz36sw846 Drilled Length (m): 8.5 Borehole Name: Post Office & Sorting Office, Station Rd Hebburn 1 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18561850/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18561850/</a>	A13SE (E)	92	4	430842 564474
100	<b>BGS Boreholes</b> BGS Reference: Nz36sw849 Drilled Length (m): .8 Borehole Name: Post Office & Sorting Office, Station Rd Hebburn Tp1 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18561853/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18561853/</a>	A13NE (E)	93	4	430857 564499
100	<b>BGS Boreholes</b> BGS Reference: Nz36sw850 Drilled Length (m): .77 Borehole Name: Post Office & Sorting Office, Station Rd Hebburn Tp3 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18561854/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18561854/</a>	A13SE (E)	103	4	430841 564457
100	<b>BGS Boreholes</b> BGS Reference: Nz36sw847 Drilled Length (m): 8.3 Borehole Name: Post Office & Sorting Office, Station Rd Hebburn 2 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18561851/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18561851/</a>	A13SE (E)	107	4	430852 564463
100	<b>BGS Boreholes</b> BGS Reference: Nz36sw848 Drilled Length (m): .88 Borehole Name: Post Office & Sorting Office, Station Rd Hebburn Tp2 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18561852/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18561852/</a>	A13SE (E)	108	4	430844 564453
101	<b>BGS Boreholes</b> BGS Reference: Nz36sw108/A Drilled Length (m): 23.93 Borehole Name: Central Area Redevelopment Bh1 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840940/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840940/</a>	A13SE (SE)	103	4	430770 564400
102	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/13 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 13 Link to Borehole Scan: Not Available	A13NW (NW)	109	4	430590 564600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	<b>BGS Boreholes</b> BGS Reference: Nz36sw284 Drilled Length (m): 5.79 Borehole Name: Wailes-Dove, Hebburn Link to Borehole: Not Available Scan:	A13NE (NE)	123	4	430853 564623
103	<b>BGS Boreholes</b> BGS Reference: Nz36sw285 Drilled Length (m): 6.09 Borehole Name: Wailes-Dove, Hebburn Link to Borehole: Not Available Scan:	A13NE (NE)	169	4	430880 564661
104	<b>BGS Boreholes</b> BGS Reference: Nz36sw760 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 5 Link to Borehole: Not Available Scan:	A13NW (W)	124	4	430500 564510
105	<b>BGS Boreholes</b> BGS Reference: Nz36sw761 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 5a Link to Borehole: Not Available Scan:	A13SW (W)	142	4	430460 564460
106	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/12 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 12 Link to Borehole: Not Available Scan:	A13NW (NW)	149	4	430590 564660
107	<b>BGS Boreholes</b> BGS Reference: Nz36sw106/A Drilled Length (m): 10.06 Borehole Name: Hebburn:Reyrolles Foundation Bh1 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840927/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840927/</a> Scan:	A13SW (W)	159	4	430440 564440
108	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/10 Drilled Length (m): Not Supplied Borehole Name: Hebburn Station Road 10 Link to Borehole: Not Available Scan:	A13NW (NW)	159	4	430550 564630
109	<b>BGS Boreholes</b> BGS Reference: Nz36sw108/D Drilled Length (m): 12.8 Borehole Name: Central Area Redevelopment 4 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840943/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840943/</a> Scan:	A13SE (S)	160	4	430710 564280
110	<b>BGS Boreholes</b> BGS Reference: Nz36sw768 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 12a Link to Borehole: Not Available Scan:	A13SW (SW)	167	4	430450 564360
111	<b>BGS Boreholes</b> BGS Reference: Nz36sw104/2 Drilled Length (m): 12.19 Borehole Name: Wailes,Dove Hebburn Bh2 Link to Borehole: Not Available Scan:	A13NE (NE)	172	4	430888 564656
111	<b>BGS Boreholes</b> BGS Reference: Nz36sw287 Drilled Length (m): 10.66 Borehole Name: Wailes-Dove, Hebburn Link to Borehole: Not Available Scan:	A13NE (NE)	208	4	430877 564717
111	<b>BGS Boreholes</b> BGS Reference: Nz36sw104/1 Drilled Length (m): 12.34 Borehole Name: Wailes,Dove Hebburn Bh1 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840921/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840921/</a> Scan:	A13NE (NE)	210	4	430900 564700





## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
111	<b>BGS Boreholes</b> BGS Reference: Nz36sw104/3 Drilled Length (m): 12.19 Borehole Name: Wailes, Dove Hebburn Bh3 Link to Borehole: Not Available Scan:	A13NE (NE)	216	4	430921 564686
112	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/8 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 8 Link to Borehole: Not Available Scan:	A13NW (NW)	178	4	430500 564600
113	<b>BGS Boreholes</b> BGS Reference: Nz36sw108/B Drilled Length (m): 8.53 Borehole Name: Central Area Redevelopment Bh2 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840941/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840941/</a> Scan:	A13SE (SE)	189	4	430820 564330
114	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/11 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 11 Link to Borehole: Not Available Scan:	A13NW (N)	194	4	430590 564720
115	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/9 Drilled Length (m): 20 Borehole Name: Hebburn Station Road 9 Link to Borehole: Not Available Scan:	A13NW (NW)	199	4	430550 564690
116	<b>BGS Boreholes</b> BGS Reference: Nz36sw762 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 6 Link to Borehole: Not Available Scan:	A13SW (W)	211	4	430390 564460
117	<b>BGS Boreholes</b> BGS Reference: Nz36sw286 Drilled Length (m): 6.09 Borehole Name: Wailes-Dove, Hebburn Link to Borehole: Not Available Scan:	A13NE (NE)	212	4	430913 564689
118	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/7 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 7 Link to Borehole: Not Available Scan:	A13NW (NW)	215	4	430510 564670
119	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/20 Drilled Length (m): 10.06 Borehole Name: Durham China Clay Company Ltd 20 Link to Borehole: Not Available Scan:	A13NW (W)	224	4	430425 564577
120	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/3 Drilled Length (m): 6.1 Borehole Name: Durham China Clay Company Ltd 3 Link to Borehole: Not Available Scan:	A13NW (W)	233	4	430415 564577
120	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/3 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 3 Link to Borehole: Not Available Scan:	A13NW (NW)	248	4	430420 564610
120	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/17 Drilled Length (m): 8.54 Borehole Name: Durham China Clay Company Ltd 17 Link to Borehole: Not Available Scan:	A13NW (W)	261	4	430380 564577



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
121	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/5 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 5 Link to Borehole: Not Available Scan:	A13NW (NW)	235	4	430460 564640
122	<b>BGS Boreholes</b> BGS Reference: Nz36sw763 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 6a Link to Borehole: Not Available Scan:	A13NW (W)	236	4	430370 564490
122	<b>BGS Boreholes</b> BGS Reference: Nz36sw759 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 4 Link to Borehole: Not Available Scan:	A13NW (W)	257	4	430360 564530
123	<b>BGS Boreholes</b> BGS Reference: Nz36sw767 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 11 Link to Borehole: Not Available Scan:	A13SW (SW)	249	4	430450 564230
124	<b>BGS Boreholes</b> BGS Reference: Nz36sw108/E Drilled Length (m): 26.06 Borehole Name: Central Area Redevelopment 5 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840944/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840944/</a> Scan:	A13SE (S)	250	4	430780 564220
125	<b>BGS Boreholes</b> BGS Reference: Nz36sw542 Drilled Length (m): 1.6 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 3 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298067/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298067/</a> Scan:	A13NE (N)	253	4	430759 564808
125	<b>BGS Boreholes</b> BGS Reference: Nz36sw543 Drilled Length (m): 1.8 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 4 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298068/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298068/</a> Scan:	A18SE (N)	270	4	430751 564828
126	<b>BGS Boreholes</b> BGS Reference: Nz36sw14465/Tp4 Drilled Length (m): 2 Borehole Name: Hebburn Prince Consort Rd Tp4 Link to Borehole: Not Available Scan:	A13NW (NW)	255	4	430530 564750
126	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/6 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 6 Link to Borehole: Not Available Scan:	A13NW (NW)	256	4	430510 564730
126	<b>BGS Boreholes</b> BGS Reference: Nz36sw14465/Tp3 Drilled Length (m): 2 Borehole Name: Hebburn Prince Consort Rd Tp3 Link to Borehole: Not Available Scan:	A13NW (NW)	291	4	430500 564770
127	<b>BGS Boreholes</b> BGS Reference: Nz36sw288 Drilled Length (m): 10.66 Borehole Name: Wailes-Dove, Hebburn Link to Borehole: Not Available Scan:	A13NE (NE)	258	4	430890 564768
128	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/19 Drilled Length (m): 6.71 Borehole Name: Durham China Clay Company Ltd 19 Link to Borehole: Not Available Scan:	A13NW (NW)	260	4	430434 564649



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
128	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/11 Drilled Length (m): 8.23 Borehole Name: Durham China Clay Company Ltd 11 Link to Borehole: Not Available Scan:	A13NW (NW)	261	4	430425 564639
128	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/2 Drilled Length (m): 6.1 Borehole Name: Durham China Clay Company Ltd 2 Link to Borehole: Not Available Scan:	A13NW (NW)	290	4	430414 564671
128	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/2 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 2 Link to Borehole: Not Available Scan:	A13NW (NW)	291	4	430420 564680
129	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/4 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 4 Link to Borehole: Not Available Scan:	A13NW (NW)	273	4	430460 564700
130	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/13 Drilled Length (m): 7.32 Borehole Name: Durham China Clay Company Ltd 13 Link to Borehole: Not Available Scan:	A13NW (W)	274	4	430361 564571
130	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/16 Drilled Length (m): 7.01 Borehole Name: Durham China Clay Company Ltd 16 Link to Borehole: Not Available Scan:	A13NW (W)	282	4	430357 564579
130	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/12 Drilled Length (m): 8.23 Borehole Name: Durham China Clay Company Ltd 12 Link to Borehole: Not Available Scan:	A13NW (W)	289	4	430371 564613
131	<b>BGS Boreholes</b> BGS Reference: Nz36sw766 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 10 Link to Borehole: Not Available Scan:	A13SW (SW)	275	4	430360 564300
132	<b>BGS Boreholes</b> BGS Reference: Nz36sw14465/Tp5 Drilled Length (m): 2 Borehole Name: Hebburn Prince Consort Rd Tp5 Link to Borehole: Not Available Scan:	A13NW (NW)	283	4	430550 564800
133	<b>BGS Boreholes</b> BGS Reference: Nz36sw108/F Drilled Length (m): 14.78 Borehole Name: Central Area Redevelopment 6 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840945/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840945/</a> Scan:	A13SE (S)	284	4	430750 564160
134	<b>BGS Boreholes</b> BGS Reference: Nz36sw758 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 3 Link to Borehole: Not Available Scan:	A12SE (W)	293	4	430310 564390
135	<b>BGS Boreholes</b> BGS Reference: Nz36sw14465/Tp2 Drilled Length (m): 2 Borehole Name: Hebburn Prince Consort Rd Tp2 Link to Borehole: Not Available Scan:	A13NW (NW)	306	4	430460 564750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
135	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/18 Drilled Length (m): 8.23 Borehole Name: Durham China Clay Company Ltd 18 Link to Borehole: Not Available Scan:	A13NW (NW)	325	4	430424 564739
135	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/1 Drilled Length (m): 9 Borehole Name: Hebburn Station Road 1 Link to Borehole: Not Available Scan:	A13NW (NW)	329	4	430420 564740
135	<b>BGS Boreholes</b> BGS Reference: Nz36sw14465/Tp1 Drilled Length (m): 2 Borehole Name: Hebburn Prince Consort Rd Tp1 Link to Borehole: Not Available Scan:	A13NW (NW)	334	4	430440 564770
136	<b>BGS Boreholes</b> BGS Reference: Nz36sw545 Drilled Length (m): 2 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 6 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298070/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298070/</a> Scan:	A18SE (N)	307	4	430753 564865
136	<b>BGS Boreholes</b> BGS Reference: Nz36sw546 Drilled Length (m): 1.7 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 7 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298071/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298071/</a> Scan:	A18SE (N)	319	4	430794 564868
136	<b>BGS Boreholes</b> BGS Reference: Nz36sw541 Drilled Length (m): 2.5 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 2 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298066/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298066/</a> Scan:	A18SE (N)	336	4	430754 564894
136	<b>BGS Boreholes</b> BGS Reference: Nz36sw548 Drilled Length (m): 1.7 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 9 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298073/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298073/</a> Scan:	A18SE (N)	342	4	430806 564888
136	<b>BGS Boreholes</b> BGS Reference: Nz36sw540 Drilled Length (m): 2.4 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 1 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298065/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298065/</a> Scan:	A18SE (N)	354	4	430780 564907
137	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/6 Drilled Length (m): 7.32 Borehole Name: Durham China Clay Company Ltd 6 Link to Borehole: Not Available Scan:	A13NW (W)	313	4	430347 564620
137	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/1 Drilled Length (m): 9.14 Borehole Name: Durham China Clay Company Ltd 1 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840776/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840776/</a> Scan:	A12NE (NW)	343	4	430327 564644
137	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/8 Drilled Length (m): 5.79 Borehole Name: Durham China Clay Company Ltd 8 Link to Borehole: Not Available Scan:	A12NE (W)	353	4	430303 564626
137	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/10 Drilled Length (m): 2.74 Borehole Name: Durham China Clay Company Ltd 10 Link to Borehole: Not Available Scan:	A12NE (W)	361	4	430293 564626



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
137	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/14 Drilled Length (m): 7.77 Borehole Name: Durham China Clay Company Ltd 14 Link to Borehole: Not Available Scan:	A12NE (NW)	362	4	430331 564682
138	<b>BGS Boreholes</b> BGS Reference: Nz36sw544 Drilled Length (m): 2.1 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 5 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298069/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298069/</a> Scan:	A18SE (N)	316	4	430822 564858
138	<b>BGS Boreholes</b> BGS Reference: Nz36sw547 Drilled Length (m): 2 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 8 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298072/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298072/</a> Scan:	A18SE (NE)	348	4	430848 564884
139	<b>BGS Boreholes</b> BGS Reference: Nz36sw611 Drilled Length (m): 22 Borehole Name: Reyrolle Site, Hebburn J Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17685909/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17685909/</a> Scan:	A8NW (S)	319	4	430600 564094
140	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/7 Drilled Length (m): 11.58 Borehole Name: Durham China Clay Company Ltd 7 Link to Borehole: Not Available Scan:	A12NE (W)	323	4	430324 564603
141	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/G Drilled Length (m): 21.64 Borehole Name: Jarrow To Ryton Sewerage Scheme D28a Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841011/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841011/</a> Scan:	A12NE (W)	328	4	430280 564510
142	<b>BGS Boreholes</b> BGS Reference: Nz36sw612 Drilled Length (m): 6.2 Borehole Name: Old Reyrolle Factory Site, Hebburn A. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17724603/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17724603/</a> Scan:	A8NW (SW)	329	4	430490 564110
143	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/9 Drilled Length (m): 6.4 Borehole Name: Durham China Clay Company Ltd 9 Link to Borehole: Not Available Scan:	A12NE (W)	330	4	430311 564595
143	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/9a Drilled Length (m): .91 Borehole Name: Durham China Clay Company Ltd 9a Link to Borehole: Not Available Scan:	A12NE (W)	330	4	430311 564595
143	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/4 Drilled Length (m): 5.49 Borehole Name: Durham China Clay Company Ltd 4 Link to Borehole: Not Available Scan:	A12NE (W)	338	4	430302 564595
143	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/4a Drilled Length (m): .91 Borehole Name: Durham China Clay Company Ltd 4a Link to Borehole: Not Available Scan:	A12NE (W)	338	4	430302 564595
143	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/15 Drilled Length (m): 5.79 Borehole Name: Durham China Clay Company Ltd 15 Link to Borehole: Not Available Scan:	A12NE (W)	350	4	430286 564591



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
144	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/B4 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road B4 Link to Borehole: Not Available Scan:	A14NW (NE)	336	4	431040 564730
145	<b>BGS Boreholes</b> BGS Reference: Nz36sw765 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 9 Link to Borehole: Not Available Scan:	A12SE (SW)	343	4	430280 564310
146	<b>BGS Boreholes</b> BGS Reference: Nz36sw189 Drilled Length (m): 5 Borehole Name: Kent Avenue- Hebburn Tyne & Wear 1 Link to Borehole: Not Available Scan:	A8NE (S)	344	4	430710 564080
146	<b>BGS Boreholes</b> BGS Reference: Nz36sw193 Drilled Length (m): 5 Borehole Name: Kent Avenue- Hebburn Tyne & Wear 5 Link to Borehole: Not Available Scan:	A8NE (S)	359	4	430690 564060
146	<b>BGS Boreholes</b> BGS Reference: Nz36sw190 Drilled Length (m): 5 Borehole Name: Kent Avenue- Hebburn Tyne & Wear 2 Link to Borehole: Not Available Scan:	A8NE (S)	366	4	430720 564060
146	<b>BGS Boreholes</b> BGS Reference: Nz36sw192 Drilled Length (m): 5 Borehole Name: Kent Avenue- Hebburn Tyne & Wear 4 Link to Borehole: Not Available Scan:	A8NE (S)	381	4	430700 564040
147	<b>BGS Boreholes</b> BGS Reference: Nz36sw382 Drilled Length (m): 8.22 Borehole Name: Bicc-Pyrottenax Factory, Hebburn Bh6 Link to Borehole: Not Available Scan:	A13NE (NE)	346	4	431018 564772
147	<b>BGS Boreholes</b> BGS Reference: Nz36sw380 Drilled Length (m): 9.93 Borehole Name: Bicc-Pyrottenax Factory, Hebburn Bh4 Link to Borehole: Not Available Scan:	A13NE (NE)	347	4	431003 564790
147	<b>BGS Boreholes</b> BGS Reference: Nz36sw381 Drilled Length (m): 9.14 Borehole Name: Bicc-Pyrottenax Factory, Hebburn Bh5 Link to Borehole: Not Available Scan:	A14NW (NE)	354	4	431024 564777
147	<b>BGS Boreholes</b> BGS Reference: Nz36sw379 Drilled Length (m): 9.93 Borehole Name: Bicc-Pyrottenax Factory, Hebburn Bh3 Link to Borehole: Not Available Scan:	A13NE (NE)	355	4	431009 564795
148	<b>BGS Boreholes</b> BGS Reference: Nz36sw378 Drilled Length (m): 10.24 Borehole Name: Bicc-Pyrottenax Factory, Hebburn Bh2 Link to Borehole: Not Available Scan:	A13NE (NE)	347	4	430988 564805
148	<b>BGS Boreholes</b> BGS Reference: Nz36sw377 Drilled Length (m): 10.85 Borehole Name: Bicc-Pyrottenax Factory, Hebburn Bh1 Link to Borehole: Not Available Scan:	A13NE (NE)	358	4	430996 564812



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
149	<b>BGS Boreholes</b> BGS Reference: Nz36sw383 Drilled Length (m): 10.24 Borehole Name: Bicc-Pyrotex Factory, Hebburn Bh7 Link to Borehole: Not Available Scan:	A14NW (NE)	351	4	431042 564752
150	<b>BGS Boreholes</b> BGS Reference: Nz36sw769 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 14a Link to Borehole: Not Available Scan:	A12SE (W)	354	4	430250 564380
151	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/20 Drilled Length (m): 12 Borehole Name: Hebburn Station Road 20 Link to Borehole: Not Available Scan:	A12NE (W)	356	4	430270 564570
151	<b>BGS Boreholes</b> BGS Reference: Nz36sw503 Drilled Length (m): 12 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 32 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295755/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295755/</a> Scan:	A12NE (W)	391	4	430227 564554
152	<b>BGS Boreholes</b> BGS Reference: Nz36sw609 Drilled Length (m): 19.8 Borehole Name: Reyrolle Site, Hebburn H Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17685907/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17685907/</a> Scan:	A8NW (S)	360	4	430529 564064
153	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/D Drilled Length (m): 17.98 Borehole Name: Jarrow To Ryton Sewerage Scheme D26a Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841008/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841008/</a> Scan:	A13NW (NW)	361	4	430380 564740
154	<b>BGS Boreholes</b> BGS Reference: Nz36sw188 Drilled Length (m): 20.05 Borehole Name: Kent Avenue- Hebburn Tyne & Wear R2 Link to Borehole: Not Available Scan:	A8NE (S)	361	4	430700 564060
154	<b>BGS Boreholes</b> BGS Reference: Nz36sw187 Drilled Length (m): 15.4 Borehole Name: Kent Avenue- Hebburn Tyne & Wear R1 Link to Borehole: Not Available Scan:	A8NE (S)	385	4	430720 564040
155	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/21 Drilled Length (m): 9.45 Borehole Name: Durham China Clay Company Ltd 21 Link to Borehole: Not Available Scan:	A12NE (W)	375	4	430246 564562
156	<b>BGS Boreholes</b> BGS Reference: Nz36sw549 Drilled Length (m): 1.9 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 10 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298074/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298074/</a> Scan:	A18SE (N)	380	4	430856 564915
156	<b>BGS Boreholes</b> BGS Reference: Nz36sw551 Drilled Length (m): 1.7 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 12 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298076/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298076/</a> Scan:	A18SE (NE)	406	4	430902 564927
156	<b>BGS Boreholes</b> BGS Reference: Nz36sw550 Drilled Length (m): 2 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 11 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298075/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298075/</a> Scan:	A18SE (NE)	408	4	430878 564938



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
157	<b>BGS Boreholes</b> BGS Reference: Nz36sw504 Drilled Length (m): 10 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 33 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295756/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295756/</a> Scan:	A12NE (NW)	383	4	430320 564702
157	<b>BGS Boreholes</b> BGS Reference: Nz36sw66/5 Drilled Length (m): 6.4 Borehole Name: Durham China Clay Company Ltd 5 Link to Borehole Not Available Scan:	A12NE (NW)	395	4	430291 564683
158	<b>BGS Boreholes</b> BGS Reference: Nz36sw610 Drilled Length (m): 21 Borehole Name: Reyrolle Site, Hebburn I Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17685908/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17685908/</a> Scan:	A8NW (S)	394	4	430591 564019
159	<b>BGS Boreholes</b> BGS Reference: Nz36sw191 Drilled Length (m): 5 Borehole Name: Kent Avenue- Hebburn Tyne & Wear 3 Link to Borehole Not Available Scan:	A8NE (S)	395	4	430720 564030
160	<b>BGS Boreholes</b> BGS Reference: Nz36sw516 Drilled Length (m): 2 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Th 10 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295775/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295775/</a> Scan:	A12SE (W)	396	4	430203 564424
161	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/B Drilled Length (m): 14.63 Borehole Name: Jarrow To Ryton Sewerage Scheme D25 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841006/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841006/</a> Scan:	A18SW (NW)	406	4	430450 564880
162	<b>BGS Boreholes</b> BGS Reference: Nz36sw519 Drilled Length (m): 2.37 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Th 13 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295778/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295778/</a> Scan:	A18SW (NW)	409	4	430420 564857
163	<b>BGS Boreholes</b> BGS Reference: Nz36sw757 Drilled Length (m): Not Supplied Borehole Name: North Farm Road Hebburn 1 Link to Borehole Not Available Scan:	A12SE (W)	412	4	430210 564300
164	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/C Drilled Length (m): 13.72 Borehole Name: Jarrow To Ryton Sewerage Scheme D26 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841007/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841007/</a> Scan:	A13NW (NW)	413	4	430360 564800
165	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/18 Drilled Length (m): 5 Borehole Name: Hebburn Station Road 18 Link to Borehole Not Available Scan:	A12NE (W)	413	4	430230 564620
166	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/16 Drilled Length (m): 13 Borehole Name: Hebburn Station Road 16 Link to Borehole Not Available Scan:	A12NE (NW)	416	4	430270 564690
166	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/E Drilled Length (m): 15.39 Borehole Name: Jarrow To Ryton Sewerage Scheme D27 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841009/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841009/</a> Scan:	A12NE (NW)	426	4	430280 564720





## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
166	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/14 Drilled Length (m): 15 Borehole Name: Hebburn Station Road 14 Link to Borehole: Not Available Scan:	A12NE (NW)	454	4	430260 564740
167	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/J Drilled Length (m): 25 Borehole Name: Jarrow To Ryton Sewerage Scheme D30a Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841014/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841014/</a> Scan:	A12SE (W)	431	4	430190 564300
167	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/K Drilled Length (m): 15.11 Borehole Name: Jarrow To Ryton Sewerage Scheme D31 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841015/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841015/</a> Scan:	A12SE (W)	475	4	430150 564280
168	<b>BGS Boreholes</b> BGS Reference: Nz36sw552 Drilled Length (m): 1.7 Borehole Name: Argyle Street/Coquet Street, Hebburn. Th 13 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298077/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298077/</a> Scan:	A18SE (N)	432	4	430865 564966
169	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/19 Drilled Length (m): 20 Borehole Name: Hebburn Station Road 19 Link to Borehole: Not Available Scan:	A12NE (W)	434	4	430190 564580
169	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/F Drilled Length (m): 14.78 Borehole Name: Jarrow To Ryton Sewerage Scheme D28 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841010/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841010/</a> Scan:	A12NE (W)	449	4	430190 564620
169	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/17 Drilled Length (m): 11 Borehole Name: Hebburn Station Road 17 Link to Borehole: Not Available Scan:	A12NE (W)	481	4	430160 564630
170	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/A Drilled Length (m): 15.24 Borehole Name: Jarrow To Ryton Sewerage Scheme D24 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841005/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841005/</a> Scan:	A18SW (N)	436	4	430550 564970
171	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/I Drilled Length (m): 24.23 Borehole Name: Jarrow To Ryton Sewerage Scheme D30 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841013/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841013/</a> Scan:	A12SE (W)	442	4	430160 564390
171	<b>BGS Boreholes</b> BGS Reference: Nz36sw502 Drilled Length (m): 21 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 31 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295754/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295754/</a> Scan:	A12SE (W)	451	4	430148 564428
172	<b>BGS Boreholes</b> BGS Reference: Nz36sw613 Drilled Length (m): 7 Borehole Name: Old Reyrolle Factory Site, Hebburn B. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17724604/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17724604/</a> Scan:	A8NW (SW)	451	4	430460 563990
173	<b>BGS Boreholes</b> BGS Reference: Nz36sw13699/15 Drilled Length (m): 10 Borehole Name: Hebburn Station Road 15 Link to Borehole: Not Available Scan:	A12NE (NW)	457	4	430220 564690



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
174	<b>BGS Boreholes</b> BGS Reference: Nz36sw517 Drilled Length (m): 2.15 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Th 11 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295776/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295776/</a>	A12NE (W)	464	4	430144 564526
175	<b>BGS Boreholes</b> BGS Reference: Nz36sw608 Drilled Length (m): 19.7 Borehole Name: Reyrolle Site, Hebburn G Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17685906/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17685906/</a>	A8NW (S)	467	4	430534 563953
176	<b>BGS Boreholes</b> BGS Reference: Nz36sw501 Drilled Length (m): 10 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 30 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295753/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295753/</a>	A12SE (W)	471	4	430150 564293
177	<b>BGS Boreholes</b> BGS Reference: Nz36sw518 Drilled Length (m): 2.37 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Th 12 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295777/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295777/</a>	A12NE (W)	476	4	430175 564650
178	<b>BGS Boreholes</b> BGS Reference: Nz36sw505 Drilled Length (m): 6 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 34 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295757/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295757/</a>	A12NE (NW)	478	4	430259 564780
179	<b>BGS Boreholes</b> BGS Reference: Nz36nw693 Drilled Length (m): 6 Borehole Name: Proposed New Vicarage St Cuthberts Hebburn 1 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/16248461/">http://scans.bgs.ac.uk/sobi_scans/boreholes/16248461/</a>	A18SE (N)	485	4	430830 565030
179	<b>BGS Boreholes</b> BGS Reference: Nz36nw694 Drilled Length (m): 6 Borehole Name: Proposed New Vicarage St Cuthberts Hebburn 2 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/16248464/">http://scans.bgs.ac.uk/sobi_scans/boreholes/16248464/</a>	A18SE (N)	490	4	430810 565040
180	<b>BGS Boreholes</b> BGS Reference: Nz36sw607 Drilled Length (m): 21.3 Borehole Name: Reyrolle Site, Hebburn F Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17685905/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17685905/</a>	A8NW (S)	485	4	430626 563927
181	<b>BGS Boreholes</b> BGS Reference: Nz36nw299/X Drilled Length (m): 15.85 Borehole Name: Jarrow To Ryton Sewerage Scheme D23 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/914135/">http://scans.bgs.ac.uk/sobi_scans/boreholes/914135/</a>	A18SW (N)	502	4	430640 565060
182	<b>BGS Boreholes</b> BGS Reference: Nz36sw615 Drilled Length (m): 3 Borehole Name: Old Reyrolle Factory Site, Hebburn D. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17724606/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17724606/</a>	A8NW (S)	505	4	430470 563930
183	<b>BGS Boreholes</b> BGS Reference: Nz36sw515 Drilled Length (m): 2.2 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Th 9 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295774/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295774/</a>	A12SE (W)	506	4	430101 564350
184	<b>BGS Boreholes</b> BGS Reference: Nz36sw213 Drilled Length (m): 22.5 Borehole Name: Cambell Park Road Hebburn 2 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/15952397/">http://scans.bgs.ac.uk/sobi_scans/boreholes/15952397/</a>	A19SW (NE)	509	4	431080 564940



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
184	<b>BGS Boreholes</b> BGS Reference: Nz36sw212 Drilled Length (m): 20 Borehole Name: Cambell Park Road Hebburn 1 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/15952396/">http://scans.bgs.ac.uk/sobi_scans/boreholes/15952396/</a>	A19SW (NE)	515	4	431100 564930
185	<b>BGS Boreholes</b> BGS Reference: Nz36sw500 Drilled Length (m): 11 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 29 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295752/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295752/</a>	A12SE (SW)	526	4	430150 564162
185	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/L Drilled Length (m): 14.63 Borehole Name: Jarrow To Ryton Sewerage Scheme D32 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841016/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841016/</a>	A12SE (SW)	553	4	430120 564160
186	<b>BGS Boreholes</b> BGS Reference: Nz36sw614 Drilled Length (m): 4 Borehole Name: Old Reyrolle Factory Site, Hebburn C. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17724605/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17724605/</a>	A8NW (SW)	539	4	430380 563930
187	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/Ws2 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road Ws2 Link to Borehole Scan: Not Available	A19SW (NE)	542	4	431200 564860
187	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/Ws3 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road Ws3 Link to Borehole Scan: Not Available	A19SW (NE)	544	4	431210 564850
187	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/Ws1 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road Ws1 Link to Borehole Scan: Not Available	A19SW (NE)	548	4	431200 564870
187	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/B1 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road B1 Link to Borehole Scan: Not Available	A19SW (NE)	578	4	431230 564880
187	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/B3 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road B3 Link to Borehole Scan: Not Available	A19SW (NE)	580	4	431240 564870
187	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/Ws4 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road Ws4 Link to Borehole Scan: Not Available	A19SW (NE)	580	4	431240 564870
187	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/B2 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road B2 Link to Borehole Scan: Not Available	A19SW (NE)	580	4	431240 564870
188	<b>BGS Boreholes</b> BGS Reference: Nz36sw514 Drilled Length (m): 2.35 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Th 8 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295773/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295773/</a>	A12SE (SW)	548	4	430115 564179

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
189	<b>BGS Boreholes</b> BGS Reference: Nz36nw1741 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 6 Tp D Link to Borehole: Not Available Scan:	A18SE (N)	548	4	430690 565110
189	<b>BGS Boreholes</b> BGS Reference: Nz36nw1740 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 6 Tp C Link to Borehole: Not Available Scan:	A18SE (N)	568	4	430690 565130
189	<b>BGS Boreholes</b> BGS Reference: Nz36nw1743 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 6 Tp F Link to Borehole: Not Available Scan:	A18SE (N)	568	4	430700 565130
189	<b>BGS Boreholes</b> BGS Reference: Nz36nw1739 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 6 Tp B Link to Borehole: Not Available Scan:	A18SE (N)	578	4	430710 565140
189	<b>BGS Boreholes</b> BGS Reference: Nz36nw1742 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 6 Tp E Link to Borehole: Not Available Scan:	A18SW (N)	579	4	430680 565140
189	<b>BGS Boreholes</b> BGS Reference: Nz36nw1738 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 6 Tp A Link to Borehole: Not Available Scan:	A18SE (N)	588	4	430700 565150
190	<b>BGS Boreholes</b> BGS Reference: Nz36sw616 Drilled Length (m): 3 Borehole Name: Old Reyrolle Factory Site, Hebburn E. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17724607/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17724607/</a> Scan:	A8NW (SW)	578	4	430420 563870
191	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/4 Drilled Length (m): 10 Borehole Name: Hebburn Vickers Works Bh4 Link to Borehole: Not Available Scan:	A18SW (N)	579	4	430680 565140
191	<b>BGS Boreholes</b> BGS Reference: Nz36nw1616 Drilled Length (m): 7.5 Borehole Name: Hebburn Village Phase 2b 1. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973115/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973115/</a> Scan:	A18NW (N)	609	4	430670 565170
191	<b>BGS Boreholes</b> BGS Reference: Nz36nw1630 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 2b A. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973129/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973129/</a> Scan:	A18NW (N)	610	4	430650 565170
191	<b>BGS Boreholes</b> BGS Reference: Nz36nw1631 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 2b B. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973130/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973130/</a> Scan:	A18NW (N)	620	4	430660 565180
191	<b>BGS Boreholes</b> BGS Reference: Nz36nw1632 Drilled Length (m): 6 Borehole Name: Hebburn Village Phase 2b C. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973131/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973131/</a> Scan:	A18NW (N)	620	4	430660 565180

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
192	<b>BGS Boreholes</b> BGS Reference: Nz36nw1546 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp14 Link to Borehole: Not Available Scan:	A19SW (NE)	585	4	431100 565020
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1647 Drilled Length (m): 3.2 Borehole Name: Hebburn Village Phase 2b R. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973146/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973146/</a> Scan:	A18SW (N)	604	4	430620 565160
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1634 Drilled Length (m): 7.5 Borehole Name: Hebburn Village Phase 2b E. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973133/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973133/</a> Scan:	A18NW (N)	622	4	430630 565180
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1620 Drilled Length (m): 7 Borehole Name: Hebburn Village Phase 2b 5. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973119/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973119/</a> Scan:	A18NW (N)	624	4	430620 565180
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1646 Drilled Length (m): 4 Borehole Name: Hebburn Village Phase 2b Q. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973145/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973145/</a> Scan:	A18NW (N)	625	4	430610 565180
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1621 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b 6. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973120/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973120/</a> Scan:	A18NW (N)	627	4	430600 565180
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1633 Drilled Length (m): 3.5 Borehole Name: Hebburn Village Phase 2b D. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973132/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973132/</a> Scan:	A18NW (N)	629	4	430670 565190
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1617 Drilled Length (m): 6 Borehole Name: Hebburn Village Phase 2b 2. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973116/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973116/</a> Scan:	A18NW (N)	631	4	430640 565190
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1635 Drilled Length (m): 8 Borehole Name: Hebburn Village Phase 2b F. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973134/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973134/</a> Scan:	A18NW (N)	631	4	430640 565190
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1638 Drilled Length (m): 7 Borehole Name: Hebburn Village Phase 2b I. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973137/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973137/</a> Scan:	A18NW (N)	634	4	430620 565190
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1648 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b S. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973147/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973147/</a> Scan:	A18NW (N)	636	4	430600 565190
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1639 Drilled Length (m): 6 Borehole Name: Hebburn Village Phase 2b J. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973138/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973138/</a> Scan:	A18NW (N)	643	4	430620 565200



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1619 Drilled Length (m): 5.5 Borehole Name: Hebburn Village Phase 2b 4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973118/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973118/</a>	A18NW (N)	652	4	430630 565210
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1640 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 2b K. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973139/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973139/</a>	A18NW (N)	652	4	430630 565210
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1643 Drilled Length (m): 8.4 Borehole Name: Hebburn Village Phase 2b N. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973142/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973142/</a>	A18NW (N)	655	4	430610 565210
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1642 Drilled Length (m): 7.5 Borehole Name: Hebburn Village Phase 2b M. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973141/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973141/</a>	A18NW (N)	656	4	430600 565210
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1644 Drilled Length (m): 6.5 Borehole Name: Hebburn Village Phase 2b O. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973143/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973143/</a>	A18NW (N)	665	4	430610 565220
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1645 Drilled Length (m): 4.5 Borehole Name: Hebburn Village Phase 2b P. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973144/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973144/</a>	A18NW (N)	673	4	430620 565230
193	<b>BGS Boreholes</b> BGS Reference: Nz36nw1622 Drilled Length (m): 8 Borehole Name: Hebburn Village Phase 2b 7. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973121/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973121/</a>	A18NW (N)	675	4	430610 565230
194	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/H Drilled Length (m): 23.18 Borehole Name: Jarrow To Ryton Sewerage Scheme D29 Link to Borehole Scan: Not Available	A7NE (SW)	608	4	430104 564083
195	<b>BGS Boreholes</b> BGS Reference: Nz36sw13779/15 Drilled Length (m): 10 Borehole Name: Hebburn Prince Consort Road Bh15 Link to Borehole Scan: Not Available	A17SE (NW)	616	4	430250 564980
195	<b>BGS Boreholes</b> BGS Reference: Nz36nw13779/13 Drilled Length (m): 7 Borehole Name: Hebburn Prince Consort Road Bh13 Link to Borehole Scan: Not Available	A17SE (NW)	637	4	430240 565000
195	<b>BGS Boreholes</b> BGS Reference: Nz36sw13779/12 Drilled Length (m): 10 Borehole Name: Hebburn Prince Consort Road Bh12 Link to Borehole Scan: Not Available	A17SE (NW)	645	4	430220 564990
196	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/5 Drilled Length (m): 10 Borehole Name: Hebburn Vickers Works Bh5 Link to Borehole Scan: Not Available	A18NE (N)	620	4	430750 565180



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
197	<b>BGS Boreholes</b> BGS Reference: Nz36nw1545 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp13 Link to Borehole: Not Available Scan:	A19SW (NE)	621	4	431170 565010
197	<b>BGS Boreholes</b> BGS Reference: Nz36nw1551 Drilled Length (m): Not Supplied Borehole Name: Former Timber Yard Hebburn Tp5 Link to Borehole: Not Available Scan:	A19SW (NE)	621	4	431180 565000
198	<b>BGS Boreholes</b> BGS Reference: Nz36nw299/W Drilled Length (m): 17.37 Borehole Name: Jarrow To Ryton Sewerage Scheme D22 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/914134/">http://scans.bgs.ac.uk/sobi_scans/boreholes/914134/</a> Scan:	A18NE (N)	622	4	430770 565180
199	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/M Drilled Length (m): 9.45 Borehole Name: Jarrow To Ryton Sewerage Scheme D33 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841017/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841017/</a> Scan:	A7NE (SW)	628	4	430120 564030
200	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/Ws5 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road Ws5 Link to Borehole: Not Available Scan:	A19SW (NE)	630	4	431280 564900
200	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/Ws7 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road Ws7 Link to Borehole: Not Available Scan:	A19SW (NE)	633	4	431290 564890
200	<b>BGS Boreholes</b> BGS Reference: Nz36sw16774/Ws6 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hedgeley Road Ws6 Link to Borehole: Not Available Scan:	A19SW (NE)	638	4	431290 564900
201	<b>BGS Boreholes</b> BGS Reference: Nz36nw1552 Drilled Length (m): Not Supplied Borehole Name: Former Timber Yard Hebburn Tp6 Link to Borehole: Not Available Scan:	A19SW (NE)	633	4	431140 565050
201	<b>BGS Boreholes</b> BGS Reference: Nz36nw1544 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp12 Link to Borehole: Not Available Scan:	A19SW (NE)	675	4	431170 565080
202	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/1 Drilled Length (m): 15 Borehole Name: Hebburn Vickers Works Bh1 Link to Borehole: Not Available Scan:	A18NW (N)	634	4	430620 565190
203	<b>BGS Boreholes</b> BGS Reference: Nz36nw40 Drilled Length (m): 205.53 Borehole Name: Hebburn Colliery Pit C Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913536/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913536/</a> Scan:	A18NE (N)	638	4	430700 565200
203	<b>BGS Boreholes</b> BGS Reference: Nz36nw62 Drilled Length (m): 319.63 Borehole Name: Hebburn Colliery Pit C Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913558/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913558/</a> Scan:	A18NE (N)	638	4	430700 565200



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1636 Drilled Length (m): 4 Borehole Name: Hebburn Village Phase 2b G. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973135/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973135/</a>	A18NW (N)	640	4	430650 565200
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1637 Drilled Length (m): 4 Borehole Name: Hebburn Village Phase 2b H. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973136/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973136/</a>	A18NW (N)	640	4	430650 565200
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1618 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b 3. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973117/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973117/</a>	A18NW (N)	659	4	430660 565220
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1641 Drilled Length (m): 4 Borehole Name: Hebburn Village Phase 2b L. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973140/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973140/</a>	A18NW (N)	661	4	430640 565220
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/2 Drilled Length (m): 10 Borehole Name: Hebburn Vickers Works Bh2 Link to Borehole Scan: Not Available	A18NW (N)	678	4	430680 565240
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1583 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 9/2. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973068/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973068/</a>	A18NE (N)	678	4	430710 565240
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1582 Drilled Length (m): 4 Borehole Name: Hebburn Village Phase 3a 9/1. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973067/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973067/</a>	A18NE (N)	686	4	430715 565248
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1585 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 9/4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973070/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973070/</a>	A18NE (N)	691	4	430690 565253
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1584 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 9/3. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973069/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973069/</a>	A18NE (N)	698	4	430695 565260
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1587 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 9/6. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973072/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973072/</a>	A18NW (N)	704	4	430670 565265
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1586 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 9/5. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973071/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973071/</a>	A18NW (N)	713	4	430675 565274
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1605 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973090/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973090/</a>	A18NE (N)	720	4	430700 565282



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
204	<b>BGS Boreholes</b> BGS Reference: Nz36nw1606 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R5. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973091/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973091/</a>	A18NW (N)	728	4	430675 565289
205	<b>BGS Boreholes</b> BGS Reference: Nz36nw13779/14 Drilled Length (m): 10 Borehole Name: Hebburn Prince Consort Road Bh14 Link to Borehole Scan: Not Available	A17SE (NW)	644	4	430250 565020
205	<b>BGS Boreholes</b> BGS Reference: Nz36nw13779/10 Drilled Length (m): 3 Borehole Name: Hebburn Prince Consort Road Bh10 Link to Borehole Scan: Not Available	A17SE (NW)	659	4	430260 565050
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1649 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b T. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973148/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973148/</a>	A18NW (N)	650	4	430580 565200
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1623 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 2b 8. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973122/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973122/</a>	A18NW (N)	669	4	430580 565220
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1651 Drilled Length (m): 6.5 Borehole Name: Hebburn Village Phase 2b X2. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974691/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974691/</a>	A18NW (N)	681	4	430570 565230
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1683 Drilled Length (m): 6.5 Borehole Name: Hebburn Village Phase 2b X2. Link to Borehole Scan: Not Available	A18NW (N)	681	4	430570 565230
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1650 Drilled Length (m): 4.5 Borehole Name: Hebburn Village Phase 2b X1. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974690/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974690/</a>	A18NW (N)	683	4	430560 565230
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1682 Drilled Length (m): 4.5 Borehole Name: Hebburn Village Phase 2b X1. Link to Borehole Scan: Not Available	A18NW (N)	683	4	430560 565230
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1669 Drilled Length (m): 4.5 Borehole Name: Hebburn Village Phase 2b X20. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974709/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974709/</a>	A18NW (N)	685	4	430550 565230
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1701 Drilled Length (m): 4.5 Borehole Name: Hebburn Village Phase 2b X20. Link to Borehole Scan: Not Available	A18NW (N)	685	4	430550 565230
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1652 Drilled Length (m): 8 Borehole Name: Hebburn Village Phase 2b X3. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974692/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974692/</a>	A18NW (N)	691	4	430570 565240



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1684 Drilled Length (m): 8 Borehole Name: Hebburn Village Phase 2b X3. Link to Borehole Scan: Not Available	A18NW (N)	691	4	430570 565240
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1668 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 2b X19. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974708/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974708/</a>	A18NW (N)	693	4	430560 565240
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1700 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 2b X19. Link to Borehole Scan: Not Available	A18NW (N)	693	4	430560 565240
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1625 Drilled Length (m): 2 Borehole Name: Hebburn Village Phase 2b 10. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973124/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973124/</a>	A18NW (N)	697	4	430590 565250
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1624 Drilled Length (m): 5.5 Borehole Name: Hebburn Village Phase 2b 9. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973123/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973123/</a>	A18NW (N)	699	4	430580 565250
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1653 Drilled Length (m): 4.5 Borehole Name: Hebburn Village Phase 2b X4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974693/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974693/</a>	A18NW (N)	699	4	430580 565250
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1685 Drilled Length (m): 4.5 Borehole Name: Hebburn Village Phase 2b X4. Link to Borehole Scan: Not Available	A18NW (N)	699	4	430580 565250
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1667 Drilled Length (m): 5.5 Borehole Name: Hebburn Village Phase 2b X18. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974707/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974707/</a>	A18NW (N)	703	4	430560 565250
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1699 Drilled Length (m): 5.5 Borehole Name: Hebburn Village Phase 2b X18. Link to Borehole Scan: Not Available	A18NW (N)	703	4	430560 565250
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1654 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X5. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974694/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974694/</a>	A18NW (N)	707	4	430590 565260
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1655 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X6. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974695/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974695/</a>	A18NW (N)	707	4	430590 565260
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1686 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X5. Link to Borehole Scan: Not Available	A18NW (N)	707	4	430590 565260



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1687 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X6. Link to Borehole: Not Available Scan:	A18NW (N)	707	4	430590 565260
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1665 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X16. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974705/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974705/</a> Scan:	A18NW (N)	709	4	430580 565260
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1697 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X16. Link to Borehole: Not Available Scan:	A18NW (N)	709	4	430580 565260
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1666 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 2b X17. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974706/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974706/</a> Scan:	A18NW (N)	711	4	430570 565260
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1698 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 2b X17. Link to Borehole: Not Available Scan:	A18NW (N)	711	4	430570 565260
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1664 Drilled Length (m): 2.3 Borehole Name: Hebburn Village Phase 2b X15. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974704/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974704/</a> Scan:	A18NW (N)	719	4	430580 565270
206	<b>BGS Boreholes</b> BGS Reference: Nz36nw1696 Drilled Length (m): 2.3 Borehole Name: Hebburn Village Phase 2b X15. Link to Borehole: Not Available Scan:	A18NW (N)	719	4	430580 565270
207	<b>BGS Boreholes</b> BGS Reference: Nz36nw13779/10a Drilled Length (m): 12 Borehole Name: Hebburn Prince Consort Road Bh10a Link to Borehole: Not Available Scan:	A17SE (NW)	666	4	430250 565050
207	<b>BGS Boreholes</b> BGS Reference: Nz36nw13779/7 Drilled Length (m): 15 Borehole Name: Hebburn Prince Consort Road Bh7 Link to Borehole: Not Available Scan:	A17SE (NW)	680	4	430230 565050
207	<b>BGS Boreholes</b> BGS Reference: Nz36nw13779/8 Drilled Length (m): 15 Borehole Name: Hebburn Prince Consort Road Bh8 Link to Borehole: Not Available Scan:	A17SE (NW)	687	4	430240 565070
207	<b>BGS Boreholes</b> BGS Reference: Nz36nw13779/9 Drilled Length (m): 13 Borehole Name: Hebburn Prince Consort Road Bh9 Link to Borehole: Not Available Scan:	A17SE (NW)	697	4	430260 565100
207	<b>BGS Boreholes</b> BGS Reference: Nz36nw13779/6 Drilled Length (m): 14 Borehole Name: Hebburn Prince Consort Road Bh6 Link to Borehole: Not Available Scan:	A17SE (NW)	709	4	430230 565090



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
208	<b>BGS Boreholes</b> BGS Reference: Nz36nw1543 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp11 Link to Borehole: Not Available Scan:	A19SW (NE)	671	4	431200 565050
208	<b>BGS Boreholes</b> BGS Reference: Nz36nw1538 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp6 Link to Borehole: Not Available Scan:	A19SW (NE)	699	4	431220 565070
208	<b>BGS Boreholes</b> BGS Reference: Nz36nw1550 Drilled Length (m): Not Supplied Borehole Name: Former Timber Yard Hebburn Tp4 Link to Borehole: Not Available Scan:	A19SW (NE)	705	4	431260 565040
208	<b>BGS Boreholes</b> BGS Reference: Nz36nw1553 Drilled Length (m): Not Supplied Borehole Name: Former Timber Yard Hebburn Tp7 Link to Borehole: Not Available Scan:	A19SW (NE)	727	4	431240 565090
208	<b>BGS Boreholes</b> BGS Reference: Nz36nw1539 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp7 Link to Borehole: Not Available Scan:	A19SW (NE)	741	4	431260 565090
208	<b>BGS Boreholes</b> BGS Reference: Nz36nw1540 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp8 Link to Borehole: Not Available Scan:	A19SW (NE)	749	4	431250 565110
209	<b>BGS Boreholes</b> BGS Reference: Nz36nw936 Drilled Length (m): .75 Borehole Name: Lyon Street - Caledonian Street, Hebburn. Th 2 Link to Borehole: Not Available Scan:	A18NE (N)	672	4	430830 565222
209	<b>BGS Boreholes</b> BGS Reference: Nz36nw938 Drilled Length (m): .7 Borehole Name: Lyon Street - Caledonian Street, Hebburn. Th 4 Link to Borehole: Not Available Scan:	A18NE (N)	679	4	430815 565232
209	<b>BGS Boreholes</b> BGS Reference: Nz36nw935 Drilled Length (m): .9 Borehole Name: Lyon Street - Caledonian Street, Hebburn. Th 1 Link to Borehole: Not Available Scan:	A18NE (N)	697	4	430848 565244
209	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/6 Drilled Length (m): 10 Borehole Name: Hebburn Vickers Works Bh6 Link to Borehole: Not Available Scan:	A18NE (N)	710	4	430830 565260
209	<b>BGS Boreholes</b> BGS Reference: Nz36nw937 Drilled Length (m): .8 Borehole Name: Lyon Street - Caledonian Street, Hebburn. Th 3 Link to Borehole: Not Available Scan:	A18NE (N)	710	4	430846 565257
210	<b>BGS Boreholes</b> BGS Reference: Nz36nw1680 Drilled Length (m): 2 Borehole Name: Hebburn Village Phase 2b X31. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974720/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974720/</a> Scan:	A18NW (N)	693	4	430520 565230



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
210	<b>BGS Boreholes</b> BGS Reference: Nz36nw1712 Drilled Length (m): 2 Borehole Name: Hebburn Village Phase 2b X31. Link to Borehole: Not Available Scan:	A18NW (N)	693	4	430520 565230
210	<b>BGS Boreholes</b> BGS Reference: Nz36nw1681 Drilled Length (m): 2.2 Borehole Name: Hebburn Village Phase 2b X32. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974721/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974721/</a> Scan:	A18NW (N)	717	4	430500 565250
210	<b>BGS Boreholes</b> BGS Reference: Nz36nw1713 Drilled Length (m): 2.2 Borehole Name: Hebburn Village Phase 2b X32. Link to Borehole: Not Available Scan:	A18NW (N)	717	4	430500 565250
211	<b>BGS Boreholes</b> BGS Reference: Nz36sw499 Drilled Length (m): 5.5 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 28 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295751/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295751/</a> Scan:	A7NE (SW)	695	4	430085 563968
212	<b>BGS Boreholes</b> BGS Reference: Nz36nw1604 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R3. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973089/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973089/</a> Scan:	A18NE (N)	704	4	430727 565265
212	<b>BGS Boreholes</b> BGS Reference: Nz36nw1593 Drilled Length (m): 4 Borehole Name: Hebburn Village Phase 3a 10/6. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973078/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973078/</a> Scan:	A18NE (N)	725	4	430722 565287
213	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/N Drilled Length (m): 10.97 Borehole Name: Jarrow To Ryton Sewerage Scheme D34 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841018/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841018/</a> Scan:	A7NE (SW)	709	4	430110 563920
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1670 Drilled Length (m): 5.5 Borehole Name: Hebburn Village Phase 2b X21. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974710/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974710/</a> Scan:	A18NW (N)	709	4	430530 565250
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1702 Drilled Length (m): 5.5 Borehole Name: Hebburn Village Phase 2b X21. Link to Borehole: Not Available Scan:	A18NW (N)	709	4	430530 565250
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1656 Drilled Length (m): 2.2 Borehole Name: Hebburn Village Phase 2b X7. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974696/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974696/</a> Scan:	A18NW (N)	716	4	430600 565270
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1688 Drilled Length (m): 2.2 Borehole Name: Hebburn Village Phase 2b X7. Link to Borehole: Not Available Scan:	A18NW (N)	716	4	430600 565270
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1671 Drilled Length (m): 8.5 Borehole Name: Hebburn Village Phase 2b X22. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974711/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974711/</a> Scan:	A18NW (N)	717	4	430540 565260



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1703 Drilled Length (m): 8.5 Borehole Name: Hebburn Village Phase 2b X22. Link to Borehole: Not Available Scan:	A18NW (N)	717	4	430540 565260
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1673 Drilled Length (m): 3.75 Borehole Name: Hebburn Village Phase 2b X24. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974713/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974713/</a> Scan:	A18NW (N)	724	4	430550 565270
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1705 Drilled Length (m): 3.75 Borehole Name: Hebburn Village Phase 2b X24. Link to Borehole: Not Available Scan:	A18NW (N)	724	4	430550 565270
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1672 Drilled Length (m): 6 Borehole Name: Hebburn Village Phase 2b X23. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974712/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974712/</a> Scan:	A18NW (N)	727	4	430540 565270
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1704 Drilled Length (m): 6 Borehole Name: Hebburn Village Phase 2b X23. Link to Borehole: Not Available Scan:	A18NW (N)	727	4	430540 565270
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1628 Drilled Length (m): 4 Borehole Name: Hebburn Village Phase 2b 13. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973127/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973127/</a> Scan:	A18NW (N)	732	4	430560 565280
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1674 Drilled Length (m): 3.5 Borehole Name: Hebburn Village Phase 2b X25. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974714/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974714/</a> Scan:	A18NW (N)	732	4	430560 565280
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1706 Drilled Length (m): 3.5 Borehole Name: Hebburn Village Phase 2b X25. Link to Borehole: Not Available Scan:	A18NW (N)	732	4	430560 565280
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1675 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X26. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974715/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974715/</a> Scan:	A18NW (N)	742	4	430560 565290
214	<b>BGS Boreholes</b> BGS Reference: Nz36nw1707 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X26. Link to Borehole: Not Available Scan:	A18NW (N)	742	4	430560 565290
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1626 Drilled Length (m): 2 Borehole Name: Hebburn Village Phase 2b 11. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973125/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973125/</a> Scan:	A18NW (N)	713	4	430620 565270
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1573 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 6/2. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973058/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973058/</a> Scan:	A18NW (N)	716	4	430640 565275



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1575 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 6/4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973060/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973060/</a>	A18NW (N)	720	4	430633 565279
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1627 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b 12. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973126/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973126/</a>	A18NW (N)	725	4	430600 565280
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1657 Drilled Length (m): 2.25 Borehole Name: Hebburn Village Phase 2b X8. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974697/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974697/</a>	A18NW (N)	725	4	430600 565280
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1689 Drilled Length (m): 2.25 Borehole Name: Hebburn Village Phase 2b X8. Link to Borehole Scan: Not Available	A18NW (N)	725	4	430600 565280
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1663 Drilled Length (m): 2.2 Borehole Name: Hebburn Village Phase 2b X14. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974703/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974703/</a>	A18NW (N)	727	4	430590 565280
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1695 Drilled Length (m): 2.2 Borehole Name: Hebburn Village Phase 2b X14. Link to Borehole Scan: Not Available	A18NW (N)	727	4	430590 565280
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1572 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 6/1. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973057/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973057/</a>	A18NW (N)	729	4	430649 565289
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1658 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X9. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974698/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974698/</a>	A18NW (N)	734	4	430610 565290
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1690 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X9. Link to Borehole Scan: Not Available	A18NW (N)	734	4	430610 565290
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1574 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 6/3. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973059/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973059/</a>	A18NW (N)	735	4	430642 565294
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1662 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X13. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974702/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974702/</a>	A18NW (N)	737	4	430590 565290
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1694 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X13. Link to Borehole Scan: Not Available	A18NW (N)	737	4	430590 565290



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1610 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R9. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973095/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973095/</a>	A18NW (N)	738	4	430621 565295
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1659 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X10. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974699/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974699/</a>	A18NW (N)	743	4	430620 565300
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1691 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X10. Link to Borehole Scan: Not Available	A18NW (N)	743	4	430620 565300
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1568 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 5/3. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973053/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973053/</a>	A18NW (N)	744	4	430603 565299
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1660 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X11. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974700/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974700/</a>	A18NW (N)	744	4	430610 565300
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1692 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X11. Link to Borehole Scan: Not Available	A18NW (N)	744	4	430610 565300
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1661 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X12. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974701/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974701/</a>	A18NW (N)	745	4	430600 565300
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1693 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X12. Link to Borehole Scan: Not Available	A18NW (N)	745	4	430600 565300
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1577 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 7/2. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973062/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973062/</a>	A18NW (N)	748	4	430659 565309
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1571 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 5/6. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973056/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973056/</a>	A18NW (N)	749	4	430597 565303
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1609 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R8. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973094/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973094/</a>	A18NW (N)	750	4	430630 565308
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1676 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X27. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974716/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974716/</a>	A18NW (N)	750	4	430570 565300





## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1708 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X27. Link to Borehole Scan: Not Available	A18NW (N)	750	4	430570 565300
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1579 Drilled Length (m): 4 Borehole Name: Hebburn Village Phase 3a 7/4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973064/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973064/</a>	A18NW (N)	754	4	430652 565314
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1678 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X29. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974718/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974718/</a>	A18NW (N)	758	4	430580 565310
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1710 Drilled Length (m): 2.5 Borehole Name: Hebburn Village Phase 2b X29. Link to Borehole Scan: Not Available	A18NW (N)	758	4	430580 565310
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1629 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b 14. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973128/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973128/</a>	A18NW (N)	758	4	430580 565310
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1677 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X28. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974717/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974717/</a>	A18NW (N)	760	4	430570 565310
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1709 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 2b X28. Link to Borehole Scan: Not Available	A18NW (N)	760	4	430570 565310
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1567 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 5/2. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973052/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973052/</a>	A18NW (N)	761	4	430615 565318
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1679 Drilled Length (m): 2.2 Borehole Name: Hebburn Village Phase 2b X30. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17974719/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17974719/</a>	A18NW (N)	766	4	430590 565320
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1711 Drilled Length (m): 2.2 Borehole Name: Hebburn Village Phase 2b X30. Link to Borehole Scan: Not Available	A18NW (N)	766	4	430590 565320
215	<b>BGS Boreholes</b> BGS Reference: Nz36nw1570 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 5/5. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973055/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973055/</a>	A18NW (N)	767	4	430608 565323
216	<b>BGS Boreholes</b> BGS Reference: Nz36nw1592 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 10/5. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973077/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973077/</a>	A18NE (N)	722	4	430729 565283

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
216	<b>BGS Boreholes</b> BGS Reference: Nz36nw1591 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 10/4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973076/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973076/</a>	A18NE (N)	739	4	430732 565300
216	<b>BGS Boreholes</b> BGS Reference: Nz36nw1590 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 10/3. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973075/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973075/</a>	A18NE (N)	742	4	430743 565303
216	<b>BGS Boreholes</b> BGS Reference: Nz36nw1603 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R2. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973088/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973088/</a>	A18NE (N)	747	4	430718 565309
216	<b>BGS Boreholes</b> BGS Reference: Nz36nw1588 Drilled Length (m): 4 Borehole Name: Hebburn Village Phase 3a 10/1. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973073/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973073/</a>	A18NE (N)	764	4	430756 565324
216	<b>BGS Boreholes</b> BGS Reference: Nz36nw1589 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 10/2. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973074/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973074/</a>	A18NE (N)	768	4	430750 565328
216	<b>BGS Boreholes</b> BGS Reference: Nz36nw1602 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R1. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973087/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973087/</a>	A18NE (N)	779	4	430746 565340
216	<b>BGS Boreholes</b> BGS Reference: Nz36nw1594 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 11/1. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973079/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973079/</a>	A18NE (N)	784	4	430721 565346
217	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/67 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 67 Link to Borehole Scan: Not Available	A9NW (SE)	732	4	431330 564060
218	<b>BGS Boreholes</b> BGS Reference: Nz36nw1537 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp5 Link to Borehole Scan: Not Available	A19SW (NE)	734	4	431280 565060
218	<b>BGS Boreholes</b> BGS Reference: Nz36nw1535 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp3 Link to Borehole Scan: Not Available	A19SW (NE)	776	4	431290 565110
218	<b>BGS Boreholes</b> BGS Reference: Nz36nw1533 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp1 Link to Borehole Scan: Not Available	A19SW (NE)	783	4	431310 565100
218	<b>BGS Boreholes</b> BGS Reference: Nz36nw1534 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp2 Link to Borehole Scan: Not Available	A19SW (NE)	784	4	431280 565130



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
218	<b>BGS Boreholes</b> BGS Reference: Nz36nw1549 Drilled Length (m): Not Supplied Borehole Name: Former Timber Yard Hebburn Tp3 Link to Borehole: Not Available Scan:	A19SW (NE)	784	4	431330 565080
218	<b>BGS Boreholes</b> BGS Reference: Nz36nw1536 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp4 Link to Borehole: Not Available Scan:	A19SW (NE)	812	4	431350 565100
218	<b>BGS Boreholes</b> BGS Reference: Nz36nw1542 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp10 Link to Borehole: Not Available Scan:	A19SW (NE)	819	4	431310 565150
218	<b>BGS Boreholes</b> BGS Reference: Nz36nw1547 Drilled Length (m): Not Supplied Borehole Name: Former Timber Yard Hebburn Tp1 Link to Borehole: Not Available Scan:	A19SW (NE)	825	4	431330 565140
219	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/7 Drilled Length (m): 15 Borehole Name: Hebburn Vickers Works Bh7 Link to Borehole: Not Available Scan:	A18NE (N)	739	4	430740 565300
220	<b>BGS Boreholes</b> BGS Reference: Nz36sw642 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp3 Link to Borehole: Not Available Scan:	A8SE (S)	739	4	430718 563680
220	<b>BGS Boreholes</b> BGS Reference: Nz36sw647 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp8 Link to Borehole: Not Available Scan:	A8SE (S)	744	4	430753 563680
220	<b>BGS Boreholes</b> BGS Reference: Nz36sw637 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields 1 Link to Borehole: Not Available Scan:	A8SE (S)	745	4	430707 563672
220	<b>BGS Boreholes</b> BGS Reference: Nz36sw641 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp2 Link to Borehole: Not Available Scan:	A8SE (S)	757	4	430703 563660
220	<b>BGS Boreholes</b> BGS Reference: Nz36sw646 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp7 Link to Borehole: Not Available Scan:	A8SE (S)	768	4	430743 563654
220	<b>BGS Boreholes</b> BGS Reference: Nz36sw640 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp1 Link to Borehole: Not Available Scan:	A8SE (S)	770	4	430689 563645
220	<b>BGS Boreholes</b> BGS Reference: Nz36sw645 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp6 Link to Borehole: Not Available Scan:	A8SE (S)	774	4	430729 563646



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
220	<b>BGS Boreholes</b> BGS Reference: Nz36sw644 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp5 Link to Borehole: Not Available Scan:	A8SE (S)	787	4	430717 563631
220	<b>BGS Boreholes</b> BGS Reference: Nz36sw643 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp4 Link to Borehole: Not Available Scan:	A8SE (S)	794	4	430705 563623
221	<b>BGS Boreholes</b> BGS Reference: Nz36nw1580 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 8/1. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973065/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973065/</a> Scan:	A18NE (N)	739	4	430702 565301
221	<b>BGS Boreholes</b> BGS Reference: Nz36nw1581 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 8/2. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973066/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973066/</a> Scan:	A18NE (N)	747	4	430688 565309
221	<b>BGS Boreholes</b> BGS Reference: Nz36nw1576 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 7/1. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973061/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973061/</a> Scan:	A18NW (N)	769	4	430672 565330
221	<b>BGS Boreholes</b> BGS Reference: Nz36nw1578 Drilled Length (m): .65 Borehole Name: Hebburn Village Phase 3a 7/3. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973063/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973063/</a> Scan:	A18NW (N)	773	4	430665 565334
221	<b>BGS Boreholes</b> BGS Reference: Nz36nw1607 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R6. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973092/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973092/</a> Scan:	A18NE (N)	777	4	430688 565339
221	<b>BGS Boreholes</b> BGS Reference: Nz36nw1595 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 11/2. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973080/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973080/</a> Scan:	A18NE (N)	778	4	430717 565340
221	<b>BGS Boreholes</b> BGS Reference: Nz36nw1597 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 11/4. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973082/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973082/</a> Scan:	A18NE (N)	791	4	430697 565353
221	<b>BGS Boreholes</b> BGS Reference: Nz36nw1596 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 11/3. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973081/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973081/</a> Scan:	A18NE (N)	798	4	430701 565360
222	<b>BGS Boreholes</b> BGS Reference: Nz36sw14477/4 Drilled Length (m): 6 Borehole Name: Hebburn Victoria Road 4 Link to Borehole: Not Available Scan:	A8SW (S)	740	4	430420 563700
223	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/12 Drilled Length (m): 25 Borehole Name: Hebburn Vickers Works Bh12 Link to Borehole: Not Available Scan:	A18NE (N)	749	4	430880 565290



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
223	<b>BGS Boreholes</b> BGS Reference: Nz36nw299/V Drilled Length (m): 14.02 Borehole Name: Jarrow To Ryton Sewerage Scheme D21 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/914133/">http://scans.bgs.ac.uk/sobi_scans/boreholes/914133/</a> Scan:	A18NE (N)	757	4	430870 565300
224	<b>BGS Boreholes</b> BGS Reference: Nz36nw1523 Drilled Length (m): 1.9 Borehole Name: Argyle/School Street, Hebburn Tp9 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935743/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935743/</a> Scan:	A19NW (NE)	752	4	431130 565200
225	<b>BGS Boreholes</b> BGS Reference: Nz36sw14477/2 Drilled Length (m): 6 Borehole Name: Hebburn Victoria Road 2 Link to Borehole: Not Available Scan:	A8SW (S)	755	4	430480 563670
226	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/63 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 63 Link to Borehole: Not Available Scan:	A9NW (SE)	767	4	431350 564030
226	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/1 Drilled Length (m): 5 Borehole Name: Hebburn Glegwell School 1 Link to Borehole: Not Available Scan:	A9NE (SE)	777	4	431380 564050
226	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/62 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 62 Link to Borehole: Not Available Scan:	A9NE (SE)	802	4	431380 564010
226	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/66 Drilled Length (m): 5 Borehole Name: Hebburn Glegwell School 66 Link to Borehole: Not Available Scan:	A9NE (SE)	821	4	431420 564030
227	<b>BGS Boreholes</b> BGS Reference: Nz36sw650 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp11 Link to Borehole: Not Available Scan:	A8SE (S)	767	4	430773 563660
227	<b>BGS Boreholes</b> BGS Reference: Nz36sw649 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp10 Link to Borehole: Not Available Scan:	A8SE (S)	781	4	430759 563643
228	<b>BGS Boreholes</b> BGS Reference: Nz36sw14477/3 Drilled Length (m): 15 Borehole Name: Hebburn Victoria Road 3 Link to Borehole: Not Available Scan:	A8SW (S)	770	4	430510 563650
229	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/64 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 64 Link to Borehole: Not Available Scan:	A9NW (SE)	772	4	431340 564010
230	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/2 Drilled Length (m): 13 Borehole Name: Hebburn Glegwell School 2 Link to Borehole: Not Available Scan:	A9NE (SE)	778	4	431430 564120



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
231	<b>BGS Boreholes</b> BGS Reference: Nz36nw1566 Drilled Length (m): .75 Borehole Name: Hebburn Village Phase 3a 5/1. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973051/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973051/</a>	A18NW (N)	779	4	430627 565337
231	<b>BGS Boreholes</b> BGS Reference: Nz36nw1569 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 5/4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973054/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973054/</a>	A18NW (N)	783	4	430620 565341
231	<b>BGS Boreholes</b> BGS Reference: Nz36nw1563 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 3/4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973048/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973048/</a>	A18NW (N)	814	4	430610 565371
231	<b>BGS Boreholes</b> BGS Reference: Nz36nw1562 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 3a 3/3. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973047/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973047/</a>	A18NW (N)	821	4	430609 565378
231	<b>BGS Boreholes</b> BGS Reference: Nz36nw1615 Drilled Length (m): 4.5 Borehole Name: Hebburn Village Phase 3a R14. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973100/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973100/</a>	A18NW (N)	829	4	430603 565385
232	<b>BGS Boreholes</b> BGS Reference: Nz36sw639 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields 3 Link to Borehole Scan: Not Available	A8SE (S)	780	4	430749 563643
232	<b>BGS Boreholes</b> BGS Reference: Nz36sw648 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields Tp9 Link to Borehole Scan: Not Available	A8SE (S)	793	4	430731 563627
232	<b>BGS Boreholes</b> BGS Reference: Nz36sw638 Drilled Length (m): Not Supplied Borehole Name: Hebburn Hospital South Shields 2 Link to Borehole Scan: Not Available	A8SE (S)	800	4	430715 563618
233	<b>BGS Boreholes</b> BGS Reference: Nz36nw1734 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp7 Link to Borehole Scan: Not Available	A17NE (NW)	782	4	430250 565200
233	<b>BGS Boreholes</b> BGS Reference: Nz36nw1727 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 3 Link to Borehole Scan: Not Available	A17NE (NW)	794	4	430230 565200
233	<b>BGS Boreholes</b> BGS Reference: Nz36nw1733 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp6 Link to Borehole Scan: Not Available	A17NE (NW)	808	4	430280 565250
233	<b>BGS Boreholes</b> BGS Reference: Nz36nw1726 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 2 Link to Borehole Scan: Not Available	A17NE (NW)	810	4	430260 565240



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
233	<b>BGS Boreholes</b> BGS Reference: Nz36nw1736 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp9 Link to Borehole: Not Available Scan:	A17NE (NW)	810	4	430230 565220
233	<b>BGS Boreholes</b> BGS Reference: Nz36nw1737 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp10 Link to Borehole: Not Available Scan:	A17NE (NW)	813	4	430240 565230
233	<b>BGS Boreholes</b> BGS Reference: Nz36nw1729 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp2 Link to Borehole: Not Available Scan:	A17NE (NW)	818	4	430230 565230
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1608 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R7. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973093/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973093/</a> Scan:	A18NW (N)	789	4	430656 565350
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1565 Drilled Length (m): 3.5 Borehole Name: Hebburn Village Phase 3a 4/2. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973050/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973050/</a> Scan:	A18NW (N)	798	4	430632 565357
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1564 Drilled Length (m): 3.5 Borehole Name: Hebburn Village Phase 3a 4/1. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973049/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973049/</a> Scan:	A18NW (N)	800	4	430642 565360
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1599 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 12/2. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973084/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973084/</a> Scan:	A18NW (N)	801	4	430682 565363
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1561 Drilled Length (m): 3.5 Borehole Name: Hebburn Village Phase 3a 3/2. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973046/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973046/</a> Scan:	A18NW (N)	804	4	430624 565362
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1601 Drilled Length (m): 1 Borehole Name: Hebburn Village Phase 3a 12/4. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973086/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973086/</a> Scan:	A18NW (N)	806	4	430675 565367
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1611 Drilled Length (m): 1.4 Borehole Name: Hebburn Village Phase 3a R10. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973096/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973096/</a> Scan:	A18NW (N)	807	4	430657 565368
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1560 Drilled Length (m): 3.5 Borehole Name: Hebburn Village Phase 3a 3/1. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973045/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973045/</a> Scan:	A18NW (N)	811	4	430628 565369
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1598 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 12/1. Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973083/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973083/</a> Scan:	A18NE (N)	825	4	430698 565387

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1600 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a 12/3. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973085/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973085/</a>	A18NE (N)	830	4	430690 565392
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1555 Drilled Length (m): 3.2 Borehole Name: Hebburn Village Phase 3a 1/2. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973040/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973040/</a>	A18NW (N)	832	4	430653 565392
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1557 Drilled Length (m): 3.5 Borehole Name: Hebburn Village Phase 3a 2/2. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973042/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973042/</a>	A18NW (N)	835	4	430638 565394
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1612 Drilled Length (m): 3 Borehole Name: Hebburn Village Phase 3a R11. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973097/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973097/</a>	A18NW (N)	835	4	430675 565396
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1554 Drilled Length (m): 3.2 Borehole Name: Hebburn Village Phase 3a 1/1. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973039/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973039/</a>	A18NW (N)	837	4	430657 565398
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1614 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 3a R13. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973099/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973099/</a>	A18NW (N)	839	4	430615 565396
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1556 Drilled Length (m): 3.5 Borehole Name: Hebburn Village Phase 3a 2/1. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973041/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973041/</a>	A18NW (N)	842	4	430638 565401
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1559 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 3a 2/4. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973044/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973044/</a>	A18NW (N)	845	4	430625 565403
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1558 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 3a 2/3. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973043/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973043/</a>	A18NW (N)	851	4	430626 565409
234	<b>BGS Boreholes</b> BGS Reference: Nz36nw1613 Drilled Length (m): 5 Borehole Name: Hebburn Village Phase 3a R12. Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17973098/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17973098/</a>	A18NW (N)	856	4	430619 565414
235	<b>BGS Boreholes</b> BGS Reference: Nz36nw251/23 Drilled Length (m): 15.24 Borehole Name: Hawthorne Leslies Hebburn Yard 23 Link to Borehole Scan: Not Available	A17NE (NW)	791	4	430330 565260
235	<b>BGS Boreholes</b> BGS Reference: Nz36nw251/24 Drilled Length (m): 19.81 Borehole Name: Hawthorne Leslies Hebburn Yard 24 Link to Borehole Scan: Not Available	A17NE (NW)	837	4	430290 565290





## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
235	<b>BGS Boreholes</b> BGS Reference: Nz36nw251/21 Drilled Length (m): 15.24 Borehole Name: Hawthorne Leslies Hebburn Yard 21 Link to Borehole: Not Available Scan:	A17NE (NW)	841	4	430300 565300
236	<b>BGS Boreholes</b> BGS Reference: Nz36sw110/A Drilled Length (m): 7.62 Borehole Name: Proposed Baths Hebburn 1 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840953/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840953/</a> Scan:	A14NE (E)	791	4	431560 564510
236	<b>BGS Boreholes</b> BGS Reference: Nz36sw110/B Drilled Length (m): 7.32 Borehole Name: Proposed Baths Hebburn 2 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840954/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840954/</a> Scan:	A14NE (E)	811	4	431580 564520
236	<b>BGS Boreholes</b> BGS Reference: Nz36sw110/D Drilled Length (m): 9.14 Borehole Name: Proposed Baths Hebburn 4 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840956/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840956/</a> Scan:	A14SE (E)	812	4	431580 564480
236	<b>BGS Boreholes</b> BGS Reference: Nz36sw110/C Drilled Length (m): 6.71 Borehole Name: Proposed Baths Hebburn 3 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840955/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840955/</a> Scan:	A14NE (E)	832	4	431600 564490
237	<b>BGS Boreholes</b> BGS Reference: Nz36sw14477/1a Drilled Length (m): 17 Borehole Name: Hebburn Victoria Road 1a Link to Borehole: Not Available Scan:	A8SW (S)	791	4	430450 563640
238	<b>BGS Boreholes</b> BGS Reference: Nz36nw1735 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp8 Link to Borehole: Not Available Scan:	A17NE (NW)	792	4	430220 565190
238	<b>BGS Boreholes</b> BGS Reference: Nz36nw1728 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp1 Link to Borehole: Not Available Scan:	A17NE (NW)	805	4	430200 565190
239	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/65 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 65 Link to Borehole: Not Available Scan:	A9NW (SE)	793	4	431340 563980
239	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/50 Drilled Length (m): 1 Borehole Name: Hebburn Glegwell School 50 Link to Borehole: Not Available Scan:	A9NE (SE)	836	4	431380 563960
239	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/52 Drilled Length (m): 3 Borehole Name: Hebburn Glegwell School 52 Link to Borehole: Not Available Scan:	A9NE (SE)	845	4	431410 563980
239	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/54 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 54 Link to Borehole: Not Available Scan:	A9NE (SE)	865	4	431420 563960

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
240	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/8 Drilled Length (m): 10 Borehole Name: Hebburn Vickers Works Bh8 Link to Borehole Scan: Not Available	A18NE (N)	795	4	430810 565350
240	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/11 Drilled Length (m): 10 Borehole Name: Hebburn Vickers Works Bh11 Link to Borehole Scan: Not Available	A18NE (N)	821	4	430850 565370
241	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/Q Drilled Length (m): 15.24 Borehole Name: Jarrow To Ryton Sewerage Scheme D35 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841020/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841020/</a>	A7SE (SW)	797	4	430110 563800
242	<b>BGS Boreholes</b> BGS Reference: Nz36nw299/U Drilled Length (m): 12.8 Borehole Name: Jarrow To Ryton Sewerage Scheme D20 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/914132/">http://scans.bgs.ac.uk/sobi_scans/boreholes/914132/</a>	A18NE (N)	798	4	430960 565320
243	<b>BGS Boreholes</b> BGS Reference: Nz36sw14477/5 Drilled Length (m): 6 Borehole Name: Hebburn Victoria Road 5 Link to Borehole Scan: Not Available	A8SW (S)	806	4	430540 563610
244	<b>BGS Boreholes</b> BGS Reference: Nz36nw1524 Drilled Length (m): 2.2 Borehole Name: Argyle/School Street, Hebburn Tp10 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935744/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935744/</a>	A19NW (NE)	810	4	431160 565250
245	<b>BGS Boreholes</b> BGS Reference: Nz36nw290/C Drilled Length (m): 14.02 Borehole Name: Portland Cement Quay Hebburn Bh3 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/914084/">http://scans.bgs.ac.uk/sobi_scans/boreholes/914084/</a>	A17SE (NW)	813	4	430141 565150
245	<b>BGS Boreholes</b> BGS Reference: Nz36nw290/B Drilled Length (m): 14.02 Borehole Name: Portland Cement Quay Hebburn Bh2 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/914083/">http://scans.bgs.ac.uk/sobi_scans/boreholes/914083/</a>	A17SE (NW)	814	4	430148 565158
245	<b>BGS Boreholes</b> BGS Reference: Nz36nw290/A Drilled Length (m): 15.24 Borehole Name: Portland Cement Quay Hebburn Bh1 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/914082/">http://scans.bgs.ac.uk/sobi_scans/boreholes/914082/</a>	A17SE (NW)	821	4	430140 565160
246	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/P Drilled Length (m): 8.99 Borehole Name: Jarrow To Ryton Sewerage Scheme D34a Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841019/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841019/</a>	A7NE (SW)	822	4	430050 563820
247	<b>BGS Boreholes</b> BGS Reference: Nz36nw1522 Drilled Length (m): 2.2 Borehole Name: Argyle/School Street, Hebburn Tp8 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935742/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935742/</a>	A19NW (NE)	825	4	431220 565230
248	<b>BGS Boreholes</b> BGS Reference: Nz36nw1541 Drilled Length (m): Not Supplied Borehole Name: Makendon Terrace Hebburn Tp9 Link to Borehole Scan: Not Available	A19SW (NE)	826	4	431320 565150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
249	<b>BGS Boreholes</b> BGS Reference: Nz36nw251/27 Drilled Length (m): 15.24 Borehole Name: Hawthorne Leslies Hebburn Yard 27 Link to Borehole: Not Available Scan:	A17NE (NW)	827	4	430230 565240
250	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/9 Drilled Length (m): 25 Borehole Name: Hebburn Vickers Works Bh9 Link to Borehole: Not Available Scan:	A18NE (N)	830	4	430760 565390
251	<b>BGS Boreholes</b> BGS Reference: Nz36nw1732 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp5 Link to Borehole: Not Available Scan:	A17NE (NW)	832	4	430300 565290
251	<b>BGS Boreholes</b> BGS Reference: Nz36nw1730 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp3 Link to Borehole: Not Available Scan:	A17NE (NW)	835	4	430260 565270
251	<b>BGS Boreholes</b> BGS Reference: Nz36nw1725 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 1 Link to Borehole: Not Available Scan:	A17NE (NW)	854	4	430290 565310
251	<b>BGS Boreholes</b> BGS Reference: Nz36nw1731 Drilled Length (m): Not Supplied Borehole Name: Hebburn Village Phase 5 Tp4 Link to Borehole: Not Available Scan:	A17NE (NW)	858	4	430300 565320
252	<b>BGS Boreholes</b> BGS Reference: Nz36nw1548 Drilled Length (m): Not Supplied Borehole Name: Former Timber Yard Hebburn Tp2 Link to Borehole: Not Available Scan:	A19SE (NE)	833	4	431370 565110
253	<b>BGS Boreholes</b> BGS Reference: Nz36sw538 Drilled Length (m): 1.83 Borehole Name: Police Section Station, Hebburn. Th 2 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298063/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298063/</a> Scan:	A14NE (E)	838	4	431607 564544
253	<b>BGS Boreholes</b> BGS Reference: Nz36sw537 Drilled Length (m): 1.83 Borehole Name: Police Section Station, Hebburn. Th 1 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17298062/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17298062/</a> Scan:	A14NE (E)	870	4	431639 564539
254	<b>BGS Boreholes</b> BGS Reference: Nz36nw1526 Drilled Length (m): 2.5 Borehole Name: Argyle/School Street, Hebburn Tp12 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935746/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935746/</a> Scan:	A19NW (NE)	840	4	431130 565300
254	<b>BGS Boreholes</b> BGS Reference: Nz36nw1525 Drilled Length (m): 2.3 Borehole Name: Argyle/School Street, Hebburn Tp11 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935745/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935745/</a> Scan:	A19NW (NE)	867	4	431170 565310
255	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/53 Drilled Length (m): 3 Borehole Name: Hebburn Glegwell School 53 Link to Borehole: Not Available Scan:	A9NE (SE)	841	4	431430 564010



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
255	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/56 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 56 Link to Borehole: Not Available Scan:	A9NE (SE)	869	4	431450 563990
255	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/55 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 55 Link to Borehole: Not Available Scan:	A9NE (SE)	874	4	431440 563970
255	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/57 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 57 Link to Borehole: Not Available Scan:	A9NE (SE)	887	4	431480 564000
255	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/3 Drilled Length (m): 5 Borehole Name: Hebburn Glegwell School 3 Link to Borehole: Not Available Scan:	A9NE (SE)	891	4	431470 563980
255	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/60 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 60 Link to Borehole: Not Available Scan:	A9NE (SE)	901	4	431450 563940
255	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/58 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 58 Link to Borehole: Not Available Scan:	A9NE (SE)	911	4	431480 563960
255	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/61 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 61 Link to Borehole: Not Available Scan:	A9NE (SE)	915	4	431500 563980
255	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/59 Drilled Length (m): 4 Borehole Name: Hebburn Glegwell School 59 Link to Borehole: Not Available Scan:	A9NE (SE)	925	4	431490 563950
256	<b>BGS Boreholes</b> BGS Reference: Nz36sw498 Drilled Length (m): 6 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 27 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295750/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295750/</a> Scan:	A7SE (SW)	845	4	430129 563724
257	<b>BGS Boreholes</b> BGS Reference: Nz36nw251/26 Drilled Length (m): 15.24 Borehole Name: Hawthorne Leslies Hebburn Yard 26 Link to Borehole: Not Available Scan:	A17NE (NW)	857	4	430220 565270
257	<b>BGS Boreholes</b> BGS Reference: Nz36nw251/25 Drilled Length (m): 15.24 Borehole Name: Hawthorne Leslies Hebburn Yard 25 Link to Borehole: Not Available Scan:	A17NE (NW)	874	4	430250 565310
258	<b>BGS Boreholes</b> BGS Reference: Nz36sw497 Drilled Length (m): 10 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 26a Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295749/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295749/</a> Scan:	A7SE (SW)	857	4	430195 563668

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
258	<b>BGS Boreholes</b> BGS Reference: Nz36sw397 Drilled Length (m): 10 Borehole Name: Hebburn Industrial Site (Cutthroat Dene). Bh 26a Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17291796/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17291796/</a>	A7SE (SW)	865	4	430198 563657
259	<b>BGS Boreholes</b> BGS Reference: Nz36nw72 Drilled Length (m): 7.62 Borehole Name: Hawthorne Leslies Yard Hebburn C Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913568/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913568/</a>	A18NW (N)	861	4	430426 565377
259	<b>BGS Boreholes</b> BGS Reference: Nz36nw71 Drilled Length (m): 6.1 Borehole Name: Hawthorne Leslies Yard Hebburn B Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913567/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913567/</a>	A18NW (N)	893	4	430400 565402
259	<b>BGS Boreholes</b> BGS Reference: Nz36nw65 Drilled Length (m): 7.92 Borehole Name: Hawthorne Leslies Hebburn Bh3 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913561/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913561/</a>	A18NW (N)	897	4	430410 565410
259	<b>BGS Boreholes</b> BGS Reference: Nz36nw74 Drilled Length (m): 6.32 Borehole Name: Hawthorne Leslies Yard Hebburn Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913570/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913570/</a>	A18NW (N)	933	4	430401 565445
260	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/3a Drilled Length (m): 5 Borehole Name: Hebburn Vickers Works Bh3a Link to Borehole Scan: Not Available	A18NE (N)	864	4	430800 565420
260	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/3 Drilled Length (m): 4 Borehole Name: Hebburn Vickers Works Bh3 Link to Borehole Scan: Not Available	A18NE (N)	873	4	430790 565430
261	<b>BGS Boreholes</b> BGS Reference: Nz36nw251/20 Drilled Length (m): 15.39 Borehole Name: Hawthorne Leslies Hebburn Yard 20 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913857/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913857/</a>	A17NE (N)	868	4	430340 565350
261	<b>BGS Boreholes</b> BGS Reference: Nz36nw251/22 Drilled Length (m): 15.24 Borehole Name: Hawthorne Leslies Hebburn Yard 22 Link to Borehole Scan: Not Available	A17NE (NW)	885	4	430320 565360
262	<b>BGS Boreholes</b> BGS Reference: Nz36nw299/T Drilled Length (m): 12.21 Borehole Name: Jarrow To Ryton Sewerage Scheme D19 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/914131/">http://scans.bgs.ac.uk/sobi_scans/boreholes/914131/</a>	A19NW (NE)	870	4	431070 565360
263	<b>BGS Boreholes</b> BGS Reference: Nz36nw38 Drilled Length (m): 14.25 Borehole Name: Hawthorne Leslies Hebburn 3 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913534/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913534/</a>	A18NW (N)	871	4	430471 565401
263	<b>BGS Boreholes</b> BGS Reference: Nz36nw39 Drilled Length (m): 12.19 Borehole Name: Hawthorne Leslies Hebburn 4 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913535/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913535/</a>	A18NW (N)	908	4	430441 565431



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
264	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/51 Drilled Length (m): 3 Borehole Name: Hebburn Glegwell School 51 Link to Borehole: Not Available Scan:	A9NE (SE)	871	4	431400 563930
264	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/4 Drilled Length (m): 5 Borehole Name: Hebburn Glegwell School 4 Link to Borehole: Not Available Scan:	A9NE (SE)	913	4	431430 563900
264	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/5 Drilled Length (m): 3 Borehole Name: Hebburn Glegwell School 5 Link to Borehole: Not Available Scan:	A9NE (SE)	929	4	431470 563920
265	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/10 Drilled Length (m): 2 Borehole Name: Hebburn Glegwell School 10 Link to Borehole: Not Available Scan:	A9NE (SE)	872	4	431490 564040
265	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/9 Drilled Length (m): 5 Borehole Name: Hebburn Glegwell School 9 Link to Borehole: Not Available Scan:	A9NE (SE)	894	4	431530 564060
266	<b>BGS Boreholes</b> BGS Reference: Nz26se221/C Drilled Length (m): 15 Borehole Name: Swan Hunter Neptune Yard Walker Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/980066/">http://scans.bgs.ac.uk/sobi_scans/boreholes/980066/</a> Scan:	A17SW (NW)	879	4	429860 564910
266	<b>BGS Boreholes</b> BGS Reference: Nz26se2398 Drilled Length (m): 27.4 Borehole Name: Neptune Quay Refurbishment Newcastle Upon Tyne 101 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18049444/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18049444/</a> Scan:	A17SW (NW)	879	4	429860 564910
266	<b>BGS Boreholes</b> BGS Reference: Nz26se221/B Drilled Length (m): 16 Borehole Name: Swan Hunter Neptune Yard Walker Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/980065/">http://scans.bgs.ac.uk/sobi_scans/boreholes/980065/</a> Scan:	A17SW (NW)	901	4	429860 564950
267	<b>BGS Boreholes</b> BGS Reference: Nz36nw13899/10 Drilled Length (m): 15 Borehole Name: Hebburn Vickers Works Bh10 Link to Borehole: Not Available Scan:	A18NE (N)	882	4	430860 565430
268	<b>BGS Boreholes</b> BGS Reference: Nz36nw1520 Drilled Length (m): 1.7 Borehole Name: Argyle/School Street, Hebburn Tp6 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935740/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935740/</a> Scan:	A19NW (NE)	885	4	431280 565260
269	<b>BGS Boreholes</b> BGS Reference: Nz26se3010 Drilled Length (m): 2.4 Borehole Name: Former Neptune Yard Tp 03 Link to Borehole: Not Available Scan:	A17SW (NW)	893	4	429829 564886
270	<b>BGS Boreholes</b> BGS Reference: Nz26se924 Drilled Length (m): 25 Borehole Name: Walker Quay North I08a Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/15939031/">http://scans.bgs.ac.uk/sobi_scans/boreholes/15939031/</a> Scan:	A7NW (SW)	893	4	429783 564074



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
271	<b>BGS Boreholes</b> BGS Reference: Nz26se916 Drilled Length (m): 34 Borehole Name: Walker Public Quay Ground Investigation 09 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/15939019/">http://scans.bgs.ac.uk/sobi_scans/boreholes/15939019/</a>	A7NW (SW)	896	4	429784 564064
272	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/R Drilled Length (m): 20.73 Borehole Name: Jarrow To Ryton Sewerage Scheme D36 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841021/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841021/</a>	A7SE (SW)	898	4	430100 563680
272	<b>BGS Boreholes</b> BGS Reference: Nz36sw408 Drilled Length (m): 20.72 Borehole Name: Hebburn Industrial Site (Cutthroat Dene). D 36 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17291810/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17291810/</a>	A7SE (SW)	913	4	430110 563655
273	<b>BGS Boreholes</b> BGS Reference: Nz26se221/A Drilled Length (m): 18 Borehole Name: Swan Hunter Neptune Yard Walker Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/980064/">http://scans.bgs.ac.uk/sobi_scans/boreholes/980064/</a>	A17SW (NW)	910	4	429884 564999
273	<b>BGS Boreholes</b> BGS Reference: Nz26ne915 Drilled Length (m): 27.4 Borehole Name: Neptune Quay Refurbishment Newcastle Upon Tyne 102 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18049446/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18049446/</a>	A17SW (NW)	931	4	429880 565030
274	<b>BGS Boreholes</b> BGS Reference: Nz36nw268/I Drilled Length (m): 37.03 Borehole Name: Palmer'S Yard Hebburn 10 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913946/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913946/</a>	A18NE (N)	910	4	430760 565470
275	<b>BGS Boreholes</b> BGS Reference: Nz26se915 Drilled Length (m): 23.8 Borehole Name: Walker Public Quay Ground Investigation 08 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/15939018/">http://scans.bgs.ac.uk/sobi_scans/boreholes/15939018/</a>	A7NW (SW)	915	4	429795 563998
275	<b>BGS Boreholes</b> BGS Reference: Nz26se923 Drilled Length (m): 23.4 Borehole Name: Walker Quay North I07 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/15939030/">http://scans.bgs.ac.uk/sobi_scans/boreholes/15939030/</a>	A7NW (SW)	939	4	429781 563974
276	<b>BGS Boreholes</b> BGS Reference: Nz36nw70 Drilled Length (m): 15.09 Borehole Name: Hawthorne Leslies Yard Hebburn A Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913566/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913566/</a>	A18NW (N)	916	4	430385 565421
276	<b>BGS Boreholes</b> BGS Reference: Nz36nw36 Drilled Length (m): 10.06 Borehole Name: Hawthorne Leslies Hebburn 1 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913532/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913532/</a>	A18NW (N)	921	4	430371 565421
276	<b>BGS Boreholes</b> BGS Reference: Nz36nw64 Drilled Length (m): 14.35 Borehole Name: Hawthorne Leslies Hebburn Bh2 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913560/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913560/</a>	A18NW (N)	923	4	430390 565430
276	<b>BGS Boreholes</b> BGS Reference: Nz36nw63 Drilled Length (m): 22.86 Borehole Name: Hawthorne Leslies Hebburn Bh1 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913559/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913559/</a>	A18NW (N)	965	4	430350 565460

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
277	<b>BGS Boreholes</b> BGS Reference: Nz36nw942 Drilled Length (m): 9.14 Borehole Name: No 1 Berth, Hawthorn Leslie, Hebburn. Bh 4 Link to Borehole: Not Available Scan:	A18NW (N)	920	4	430665 565481
277	<b>BGS Boreholes</b> BGS Reference: Nz36nw941 Drilled Length (m): 9.14 Borehole Name: No 1 Berth, Hawthorn Leslie, Hebburn. Bh 3 Link to Borehole: Not Available Scan:	A23SW (N)	959	4	430655 565520
278	<b>BGS Boreholes</b> BGS Reference: Nz36nw37 Drilled Length (m): 10.67 Borehole Name: Hawthorne Leslies Hebburn 2 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913533/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913533/</a> Scan:	A17NE (N)	921	4	430344 565410
278	<b>BGS Boreholes</b> BGS Reference: Nz36nw32 Drilled Length (m): 15.55 Borehole Name: Hawthorne Leslies Hebburn 3 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913528/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913528/</a> Scan:	A17NE (N)	939	4	430305 565413
278	<b>BGS Boreholes</b> BGS Reference: Nz36nw61 Drilled Length (m): 15.85 Borehole Name: Hawthorne Leslies Yard Hebburn E Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913557/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913557/</a> Scan:	A17NE (N)	944	4	430310 565420
279	<b>BGS Boreholes</b> BGS Reference: Nz26se3014 Drilled Length (m): 2 Borehole Name: Former Neptune Yard Tp 14 Link to Borehole: Not Available Scan:	A17SW (NW)	924	4	429855 564982
279	<b>BGS Boreholes</b> BGS Reference: Nz26se3011 Drilled Length (m): 2.2 Borehole Name: Former Neptune Yard Tp 05 Link to Borehole: Not Available Scan:	A17SW (NW)	961	4	429816 564991
280	<b>BGS Boreholes</b> BGS Reference: Nz36nw1518 Drilled Length (m): 1.6 Borehole Name: Argyle/School Street, Hebburn Tp4 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935738/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935738/</a> Scan:	A19NW (NE)	927	4	431220 565350
281	<b>BGS Boreholes</b> BGS Reference: Nz36nw1519 Drilled Length (m): 2.5 Borehole Name: Argyle/School Street, Hebburn Tp5 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935739/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935739/</a> Scan:	A19NW (NE)	928	4	431270 565320
282	<b>BGS Boreholes</b> BGS Reference: Nz36sw775 Drilled Length (m): 3.15 Borehole Name: St. Cuthbert'S Vicarage, Hebburn 1 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18192067/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18192067/</a> Scan:	A14SE (E)	928	4	431668 564300
282	<b>BGS Boreholes</b> BGS Reference: Nz36sw776 Drilled Length (m): 4.5 Borehole Name: St. Cuthbert'S Vicarage, Hebburn 2 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18192068/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18192068/</a> Scan:	A14SE (E)	954	4	431685 564262
282	<b>BGS Boreholes</b> BGS Reference: Nz36sw777 Drilled Length (m): 3.6 Borehole Name: St. Cuthbert'S Vicarage, Hebburn 3 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18192069/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18192069/</a> Scan:	A15SW (E)	970	4	431706 564277



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
283	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/8 Drilled Length (m): 5 Borehole Name: Hebburn Glegwell School 8 Link to Borehole: Not Available Scan:	A9NE (SE)	933	4	431550 564020
283	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/7 Drilled Length (m): 6 Borehole Name: Hebburn Glegwell School 7 Link to Borehole: Not Available Scan:	A9NE (SE)	972	4	431570 563980
284	<b>BGS Boreholes</b> BGS Reference: Nz36nw268/A Drilled Length (m): 33.07 Borehole Name: Palmer'S Yard Hebburn 1 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913938/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913938/</a> Scan:	A23SE (N)	938	4	430700 565500
284	<b>BGS Boreholes</b> BGS Reference: Nz36nw239/A Drilled Length (m): 33.07 Borehole Name: New Dock Palmers Yard Hebburn 1 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913828/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913828/</a> Scan:	A23SE (N)	952	4	430695 565514
285	<b>BGS Boreholes</b> BGS Reference: Nz36sw79/A Drilled Length (m): 9.14 Borehole Name: Reyrolle Hebburn Bha Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840871/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840871/</a> Scan:	A8SW (S)	939	4	430440 563490
285	<b>BGS Boreholes</b> BGS Reference: Nz36sw79/F Drilled Length (m): 7.62 Borehole Name: Reyrolle Hebburn Bhf Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840876/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840876/</a> Scan:	A3NW (S)	961	4	430490 563460
285	<b>BGS Boreholes</b> BGS Reference: Nz36sw79/D Drilled Length (m): 3.81 Borehole Name: Reyrolle Hebburn Bhd Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840874/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840874/</a> Scan:	A3NW (S)	965	4	430460 563460
286	<b>BGS Boreholes</b> BGS Reference: Nz26se3009 Drilled Length (m): 1.8 Borehole Name: Former Neptune Yard Tp 01 Link to Borehole: Not Available Scan:	A17SW (NW)	945	4	429766 564881
286	<b>BGS Boreholes</b> BGS Reference: Nz26se3013 Drilled Length (m): 2.8 Borehole Name: Former Neptune Yard Tp 07 Link to Borehole: Not Available Scan:	A17SW (NW)	969	4	429763 564925
287	<b>BGS Boreholes</b> BGS Reference: Nz36sw13782/6 Drilled Length (m): Not Supplied Borehole Name: Hebburn Glegwell School 6 Link to Borehole: Not Available Scan:	A9NE (SE)	949	4	431520 563950
288	<b>BGS Boreholes</b> BGS Reference: Nz26se185/1 Drilled Length (m): 9.14 Borehole Name: R Blakett Charlton Low Walker Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/979910/">http://scans.bgs.ac.uk/sobi_scans/boreholes/979910/</a> Scan:	A11NE (W)	952	4	429650 564510
288	<b>BGS Boreholes</b> BGS Reference: Nz26se185/2 Drilled Length (m): 9.14 Borehole Name: R Blakett Charlton Low Walker Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/979911/">http://scans.bgs.ac.uk/sobi_scans/boreholes/979911/</a> Scan:	A11NE (W)	971	4	429630 564500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
289	<b>BGS Boreholes</b> BGS Reference: Nz36sw496 Drilled Length (m): 6 Borehole Name: Heworth - Hebburn (Riverside Route). Industrial Relief Road. Bh 26 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17295748/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17295748/</a> Scan:	A7SE (SW)	953	4	430123 563599
289	<b>BGS Boreholes</b> BGS Reference: Nz36sw396 Drilled Length (m): 6 Borehole Name: Hebburn Industrial Site (Cutthroat Dene). Bh 26 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17291795/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17291795/</a> Scan:	A7SE (SW)	960	4	430125 563590
290	<b>BGS Boreholes</b> BGS Reference: Nz36nw1521 Drilled Length (m): 2.1 Borehole Name: Argyle/School Street, Hebburn Tp7 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935741/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935741/</a> Scan:	A19NW (NE)	953	4	431340 565300
291	<b>BGS Boreholes</b> BGS Reference: Nz36sw15112/Tp1 Drilled Length (m): Not Supplied Borehole Name: Hebburn, Bedewell Ind. Est Tp1 Link to Borehole: Not Available Scan:	A15SW (E)	960	4	431721 564402
292	<b>BGS Boreholes</b> BGS Reference: Nz26se3012 Drilled Length (m): 3 Borehole Name: Former Neptune Yard Tp 06 Link to Borehole: Not Available Scan:	A17SW (NW)	961	4	429780 564938
293	<b>BGS Boreholes</b> BGS Reference: Nz26ne1186 Drilled Length (m): 2.9 Borehole Name: Former Neptune Yard Tp 15 Link to Borehole: Not Available Scan:	A17SW (NW)	964	4	429873 565074
293	<b>BGS Boreholes</b> BGS Reference: Nz26ne1187 Drilled Length (m): 2.7 Borehole Name: Former Neptune Yard Tp 16 Link to Borehole: Not Available Scan:	A17SW (NW)	984	4	429880 565115
294	<b>BGS Boreholes</b> BGS Reference: Nz36nw299/S Drilled Length (m): 11.29 Borehole Name: Jarrow To Ryton Sewerage Scheme D18 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/914130/">http://scans.bgs.ac.uk/sobi_scans/boreholes/914130/</a> Scan:	A19NW (NE)	965	4	431190 565410
295	<b>BGS Boreholes</b> BGS Reference: Nz36nw73 Drilled Length (m): 8.53 Borehole Name: Hawthorne Leslies Yard Hebburn D Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913569/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913569/</a> Scan:	A18NW (N)	972	4	430385 565480
296	<b>BGS Boreholes</b> BGS Reference: Nz26se914 Drilled Length (m): 35.25 Borehole Name: Walker Public Quay Ground Investigation 07 Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/15939017/">http://scans.bgs.ac.uk/sobi_scans/boreholes/15939017/</a> Scan:	A7NW (SW)	973	4	429773 563922
297	<b>BGS Boreholes</b> BGS Reference: Nz36sw79/I Drilled Length (m): 3.35 Borehole Name: Reyrolle Hebburn Bhi Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840879/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840879/</a> Scan:	A3NW (S)	978	4	430510 563440
298	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/S Drilled Length (m): 8.23 Borehole Name: Jarrow To Ryton Sewerage Scheme D36a Link to Borehole: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841022/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841022/</a> Scan:	A7SE (SW)	984	4	430010 563640



## BGS Boreholes Detail

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
298	<b>BGS Boreholes</b> BGS Reference: Nz36sw409 Drilled Length (m): 8.23 Borehole Name: Hebburn Industrial Site (Cutthroat Dene). D 36 A Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17291811/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17291811/</a> Scan:	A7SE (SW)	992	4	430013 563628
299	<b>BGS Boreholes</b> BGS Reference: Nz36nw269/A Drilled Length (m): 2.67 Borehole Name: No1 Dry Dock Palmers Hebburn 1 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913951/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913951/</a> Scan:	A23SE (N)	985	4	431010 565500
299	<b>BGS Boreholes</b> BGS Reference: Nz36nw269/B Drilled Length (m): 9.14 Borehole Name: No1 Dry Dock Palmers Hebburn 1a Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913952/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913952/</a> Scan:	A23SE (N)	988	4	431020 565500
300	<b>BGS Boreholes</b> BGS Reference: Nz36nw268/J Drilled Length (m): 31.09 Borehole Name: Palmer'S Yard Hebburn 11 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913947/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913947/</a> Scan:	A23SE (N)	986	4	430830 565540
301	<b>BGS Boreholes</b> BGS Reference: Nz26se922 Drilled Length (m): 29.2 Borehole Name: Walker Quay North I06 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/15939029/">http://scans.bgs.ac.uk/sobi_scans/boreholes/15939029/</a> Scan:	A7NW (SW)	986	4	429779 563888
302	<b>BGS Boreholes</b> BGS Reference: Nz36nw1517 Drilled Length (m): 1.8 Borehole Name: Argyle/School Street, Hebburn Tp3 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/17935737/">http://scans.bgs.ac.uk/sobi_scans/boreholes/17935737/</a> Scan:	A19NW (NE)	986	4	431300 565370
303	<b>BGS Boreholes</b> BGS Reference: Nz26ne916 Drilled Length (m): 26.15 Borehole Name: Neptune Quay Refurbishment Newcastle Upon Tyne 103 Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/18049447/">http://scans.bgs.ac.uk/sobi_scans/boreholes/18049447/</a> Scan:	A17SW (NW)	990	4	429910 565160
304	<b>BGS Boreholes</b> BGS Reference: Nz26se202/A Drilled Length (m): 16 Borehole Name: Walker 66kv Sub-Station Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/980013/">http://scans.bgs.ac.uk/sobi_scans/boreholes/980013/</a> Scan:	A11NE (W)	991	4	429650 564720
305	<b>BGS Boreholes</b> BGS Reference: Nz36sw79/B Drilled Length (m): 9.14 Borehole Name: Reyrolle Hebburn Bhb Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840872/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840872/</a> Scan:	A3NW (S)	994	4	430410 563440
306	<b>BGS Boreholes</b> BGS Reference: Nz36nw131 Drilled Length (m): 352.98 Borehole Name: Jarrow Colliery Pit E Or Deep Pit Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913629/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913629/</a> Scan:	A19NW (NE)	997	4	431320 565370
306	<b>BGS Boreholes</b> BGS Reference: Nz36nw135 Drilled Length (m): 232.07 Borehole Name: Alfred Pit Jarrow Colliery Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913633/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913633/</a> Scan:	A19NW (NE)	997	4	431320 565370
307	<b>BGS Boreholes</b> BGS Reference: Nz36sw1 Drilled Length (m): 48.46 Borehole Name: Staple Pit Hebburn Hall Ponds U/G Bh Link to Borehole <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/840678/">http://scans.bgs.ac.uk/sobi_scans/boreholes/840678/</a> Scan:	A9SW (SE)	997	4	431170 563580



## BGS Boreholes Detail

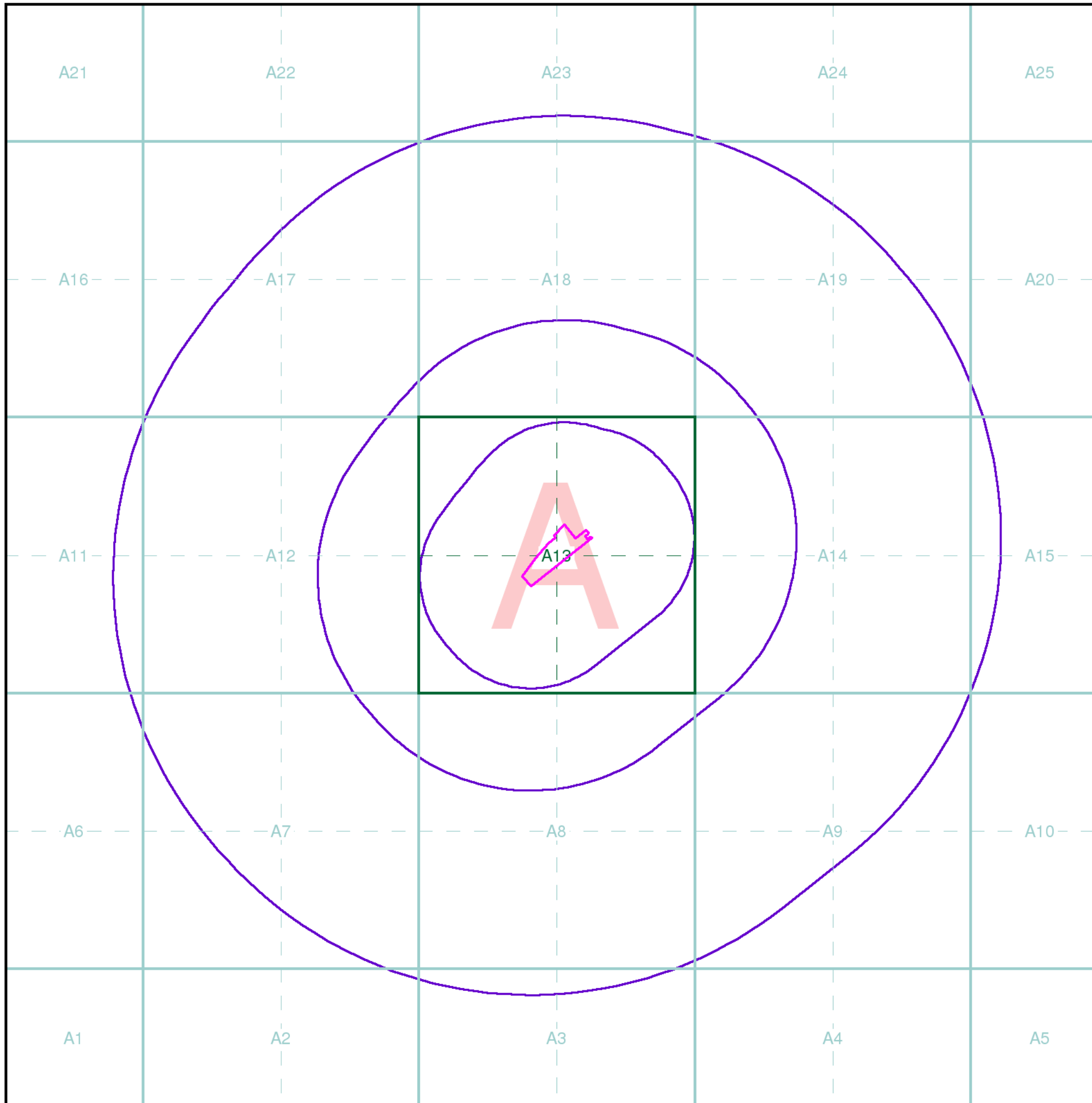
Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
308	<b>BGS Boreholes</b> BGS Reference: Nz36nw60 Drilled Length (m): 15.24 Borehole Name: Hawthorne Leslies Yard Hebburn D Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913556/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913556/</a>	A23SW (N)	998	4	430390 565510
309	<b>BGS Boreholes</b> BGS Reference: Nz36nw136 Drilled Length (m): 587.57 Borehole Name: Staple & In Pit A Hebburn Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913635/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913635/</a>	A19NE (NE)	998	4	431391 565317
310	<b>BGS Boreholes</b> BGS Reference: Nz36nw274/G Drilled Length (m): 15.05 Borehole Name: Hebburn Dock Development 7 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/913967/">http://scans.bgs.ac.uk/sobi_scans/boreholes/913967/</a>	A19NW (NE)	999	4	431140 565470
311	<b>BGS Boreholes</b> BGS Reference: Nz36sw137/T Drilled Length (m): 21.34 Borehole Name: Jarrow To Ryton Sewerage Scheme D37 Link to Borehole Scan: <a href="http://scans.bgs.ac.uk/sobi_scans/boreholes/841023/">http://scans.bgs.ac.uk/sobi_scans/boreholes/841023/</a>	A7SE (SW)	1000	4	430080 563570



## Data Currency and Contact Details

BGS Boreholes	Version	Update Cycle
<b>BGS Boreholes</b> British Geological Survey - National Geoscience Information Service	April 2014	Quarterly

Contact Details	Contact Logo
<b>4 British Geological Survey - Enquiry Service</b> 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	 <b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL
<b>- Landmark Information Group Limited</b> 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	 <b>LANDMARK</b> <sup>®</sup> Information Group



## 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

P Coulson, Sirius Geotechnical & Environmental Ltd, 4245 Park Approach, Thorpe Park, Leeds, LS15 8GB

## Order Details

Order Number: 58659417\_1\_1  
Customer Ref: C6149 Glen Street Hebburn APC  
National Grid Reference: 430680, 564490  
Site Area (Ha): 0.89  
Search Buffer (m): 1000

## Site Details

Glen Street, Glen Street, HEBBURN, Tyne and Wear, NE31 1NU

Full Terms and Conditions can be found on the following link:  
<http://www.landmarkinfo.co.uk/Terms/Show/515>



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



## APPENDIX C

# COAL AUTHORITY MINING REPORT



Issued by:

The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG  
Website: www.groundstability.com Phone: 0845 762 6848 DX 716176 MANSFIELD 5

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

Our reference: **51000600261001**  
Your reference: **58659417\_2|**  
Date of your enquiry: **24 July 2014**  
Date we received your enquiry: **24 July 2014**  
Date of issue: **24 July 2014**

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

**Non-Residential Coal Authority Mining Report**

**GLEN STREET, GLEN STREET, HEBBURN, TYNE & WEAR,**

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

Coal mining	See comments below
Brine Compensation District	No

***Information from the Coal Authority***

**Underground coal mining**

**Past**

The property is in the likely zone of influence from workings in 5 seams of coal at 200m to 380m depth, and last worked in 1947.

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

In addition the property is in an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered prior to any site works or future development activity. Your attention is drawn to the Comments on Coal Authority Information section of the report.

**Present**

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



## **Future**

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

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

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

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

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

## **Mine entries**

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

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

## **Coal mining geology**

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

## **Opencast coal mining**

### **Past**

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

### **Present**

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

### **Future**

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

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

## **Coal mining subsidence**

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

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

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

## **Mine gas**

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

## **Hazards related to coal mining**

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

## **Withdrawal of support**

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

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

### **Working facilities orders**

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

### **Payments to owners of former copyhold land**

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

### **Comments on Coal Authority information**

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

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

### ***Information from the Cheshire Brine Subsidence Compensation Board***

The property lies outside the Cheshire Brine Compensation District.

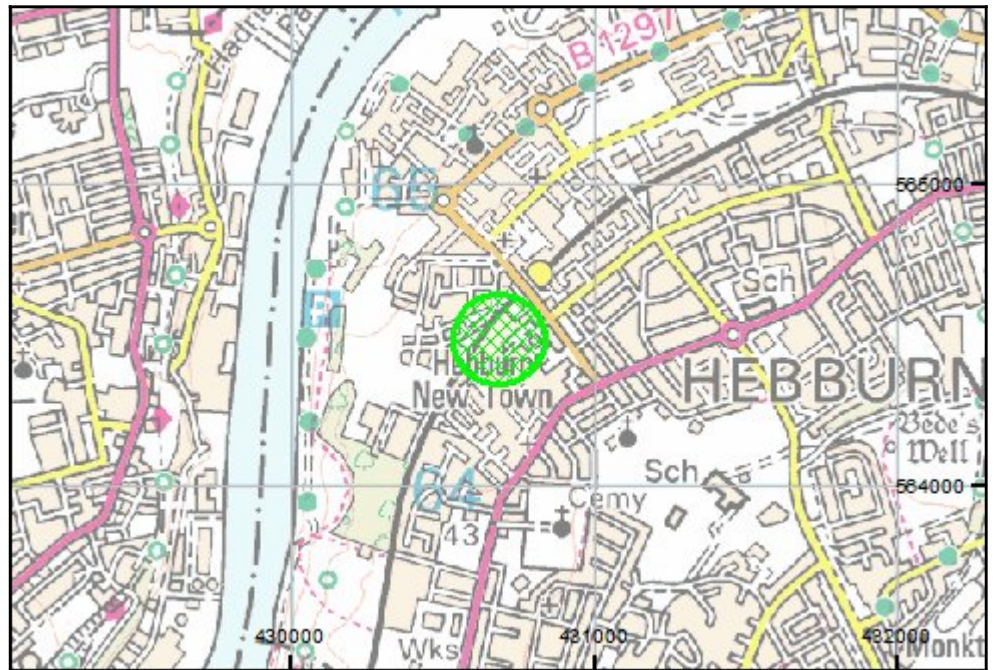
### ***Additional Remarks***

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

## Location map



Approximate position of property

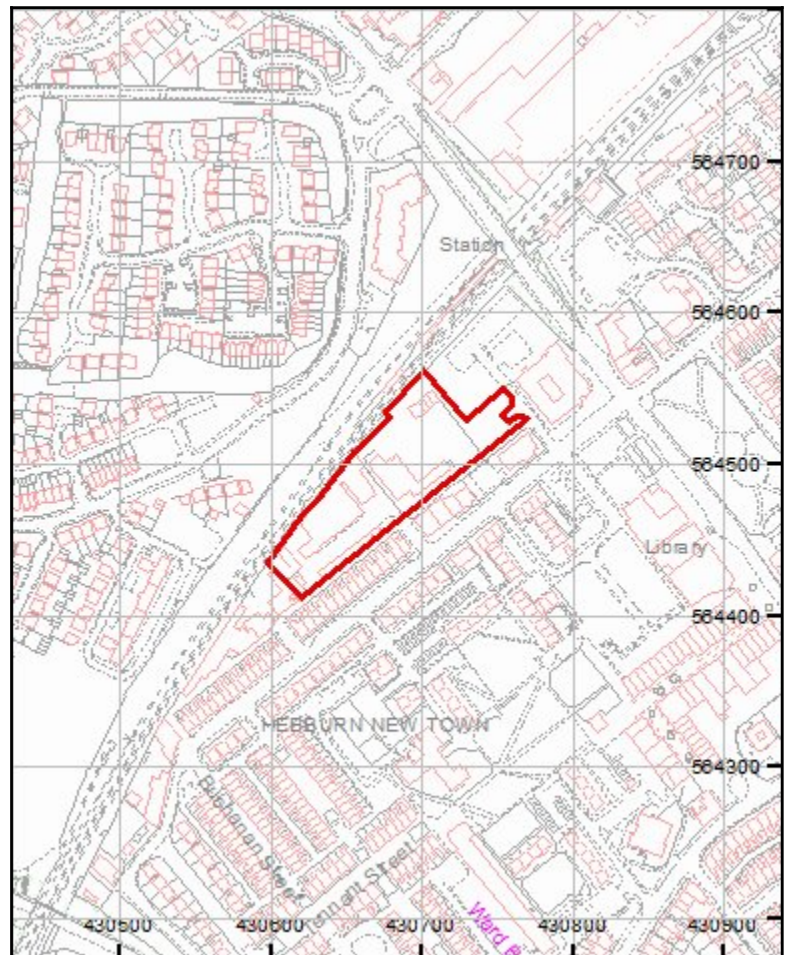


## Enquiry boundary

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## Key

Approximate position of enquiry boundary shown





## APPENDIX D

# BGS BOREHOLE RECORDS

NZ 36 SW / 108 A

Concentration  
Ground Engineering

soil mechanics department

BOREHOLE No.  
1

CONTRACT Hebburn U.D.C. REPORT No. 7613/MDMcQ

Bored for N.J. Spall and Associates Ground Level 127.5

Site Address Central Area Redevelopment, Hebburn, Co. Durham Boring Commenced 14.10.69.  
Boring Completed 14.11.69.

Type and Dia. of Boring Shell and Auger 8 ins. Rotary 4 3/4 ins.

Water Strikes		Water Levels Recorded During Boring						BGS REGISTRATION NO
1. None	Hole Depth						NZ 36 SW / 108 A	
2.	Casing Depth							
3.	Water Level							

Remarks PAGE NO. 1

Description	Scale 1 inch = 5 ft.		Samples & S.P.T.			
	Depth	Legend	Ref. No.	Type	Depth	N blows/ft
Topsoil.	1'6"					
Stiff grey brown boulder clay.			2502	J	2'6"	
			2503	U	3'6"-5'0"	
			2504	J	7'6"	
			2505	U	8'6"-10'0"	
			2506	J	12'6"	
			2507	U	13'6"-15'0"	
			2508	J	16'6"	
			2509	U	18'6"-20'0"	
			2510	J	22'0"	
			2511	U	23'6"-25'0"	
			2512	J	27'0"	
			2513	U	28'6"-30'0"	
Grey mudstone.	32'0"		2514	J	32'0"	
Coal with mudstone.	33'0"		2515	D	33'0"	
			2516	D	34'0"	125+

Code: U—Undisturbed Sample D—Large Disturbed Sample J—Jar Sample W—Water Sample

\*—Unless classification tests have been made and the results are included in this Report, the descriptions of strata given above have been obtained by inspection in accordance with British Standard Code of Practice CP 2001 (1957) Site Investigations. To ensure agreement as to interpretation, clients are requested to check descriptions against the samples submitted.



CONTRACT Hebburn U.D.C.		REPORT No. 7613/MDMcQ
Bored for N.J. Spall and Associates		Ground Level 128.1
Site Address Central Area Redevelopment, Hebburn, Co. Durham		Boring Commenced 22.10.69. Boring Completed 25.11.69.
Type and Dia. of Boring Shell and Auger 8 ins. Rotary 4 1/4 ins.		

Water Strikes 1. 15'0" 2. 3.	Water Levels Recorded During Boring						BGS REGISTRATION NO. NZ 36SW / 108-C
	Hole Depth						
	Casing Depth						
							Water Level

Remarks PAGE NO. 1

Description	Scale 1 inch = 5 ft.		Samples & S.P.T.				
	Depth	Legend	Ref. No.	Type	Depth	N blows/ft.	
Made ground (brick rubble and clay).							
Stiff grey brown boulder clay.	2'0"		2537	J	2'0"		
			2538	U	3'6"-5'0"		
			2539	J	7'6"		
			2540	U	8'6"-10'0"		
			2541	J	12'6"		
			2542	U	13'6"-15'0"		
			2545	J	17'6"		
			2544	U	18'6"-20'0"		
			2545	J	22'6"		
			2546	U	23'6"-25'0"		
			2547	J	27'6"		
			2548	U	28'6"-30'0"		
	Boulders. Grey shale.	32'0"		2550	J	32'0"	
		33'0"		2551	D	33'0"	

Code: U—Undisturbed Sample    D—Large Disturbed Sample    J—Jar Sample    W—Water Sample

\*Note—Unless classification tests have been made and the results are included in this Report, the descriptions of strata given above have been obtained by inspection.  
\*According to British Standard Code of Practice CP 2001 (1957) Site Investigations. To ensure agreement as to interpretation, clients are requested to check descriptions against the samples submitted.

BRITISH GEOLOGICAL SURVEY

soil mechanics department

BOREHOLE No.

3

Construction Sheet No. 1

CONTRACT Hebburn U.D.C.

REPORT No 7613/NDMcQ

Description	Scale 1 inch = 5 ft.		Samples & S.P.T			
	Depth	Legend	Ref. No.	Type	Depth	N blows/ft.
Grey shale: (continued)			2552	D	38'0"	230+
BGS REGISTRATION NO NZ 36 SW / 108-C PAGE NO. 2			2549	W	(15'0")	
			<u>Core Recovery:</u>			
Grey sandymudstone micaceous in parts.	44'6"		34'6" - 57'10"		= 98%	
Light grey sandstone.	49'9"					
Grey sandy mudstone. Dark grey shale.	51'6" 52'6"					
Light grey sandstone.	57'6"		57'10" - 59'3"		= 94%	
Grey mudstone.	59'10"					
Light grey sandstone.	60'6"		59'3" - 64'0"		= 100%	
Black shale. Coal - bituminous.	63'10" 64'0"					
Grey clay and mudstone.	66'0"		64'0" - 68'0"		= 87%	
Grey mudstone.	68'0"		68'0" - 71'0"		= 92%	
Brown sandstone.	70'9"		71'0" - 74'0"		= 83%	
	73'6"					

Code U—Undisturbed Sample D—Large Disturbed Sample J—Jar Sample W—Water Sample

Where classification tests have been made on the results are included in this Report. The descriptions of strata given above have been noted in respect of accordance with British Standard Code of Practice (CP 200) (1967) Site Investigations. To ensure agreement as to interpretation clients are requested to check instructions against the samples submitted.



British Geological Survey

N2 36.5W/108/A-F

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British Geological Survey

Mudst  
Coal mudst  
Mudst & Clay  
3 at 14  
41+

Sl. 2+

Shale	121
Sls. mudst	5
Sls. sh	3
Dk. grey sh	5
Sls. mudst	145
Wk. shale	1
Coal	2 at 162
Mudst	5
Rot	3+

32.

Shale 2+

Sls. sh	4
Sls. mudst	23
Clay sh	1
Coal	2 at 57
Mudst	6
Rot	4
Sls. mudst	2+

Mudst 3)

# Cementation

THE CEMENTATION COMPANY LIMITED  
SOIL MECHANICS SECTION  
DENHAM WAY, RICKMANSWORTH, HERTS.

HEBBURN U.D.C. CENTRAL AREA REDEVELOPMENT, PHASE 1.

LAYOUT OF BOREHOLES

Scale: 1/250

Drawing No. 76



## APPENDIX E

# EXPLORATORY HOLE RECORDS



# TRIAL PIT RECORD

TP No. **HDTP1**  
Sheet 1 of 1

Site : Glen Street, Hebburn

Contract No:  
**C6149**

Client : Gleeson Developments Ltd

Dates:  
03/10/2014

Method : Hand excavated with spade.

**Scale 1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	Vane Results kN/m <sup>2</sup>
J	0.30m	
J	0.70m	

Groundwater

## STRATA RECORD

Description

MADE GROUND. Pale grey brown gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse angular to sub-rounded of concrete, sandstone and mudstone.

MADE GROUND. Black brown gravelly SAND. Sand is fine to coarse occasionally of ash. Gravel is fine to coarse angular to sub-rounded of cinder, coal, concrete, sandstone and mudstone.

-----  
End of Trial Pit at 0.80 m

Logged By: BP

Checked By: APC

Depth (m)	Level (mAOD) PID (ppm)	Legend
0.40		
0.80		

Remarks and Water Observations

GL (m AOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

HDTP1



# TRIAL PIT RECORD

TP No. **HDTP2**  
Sheet 1 of 1

Site : Glen Street, Hebburn

Contract No:  
**C6149**

Client : Gleeson Developments Ltd

Dates:  
03/10/2014

Method : Hand excavated with spade.

**Scale 1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	Vane Results kN/m <sup>2</sup>	Groundwater
J	0.20m		
J	0.70m		

## STRATA RECORD

Description		Depth (m)	Level (mAOD) PID (ppm)	Legend
<p>MADE GROUND. Grey brown gravelly slightly cobbley SAND. Sand is fine to coarse. Gravel is fine to coarse angular to sub-angular of concrete, brick fragments, cinder, sandstone and mudstone. Cobbles are angular to sub-angular of concrete and bricks.</p>				
<p>----- End of Trial Pit at 0.80 m</p>		0.80		

Logged By: BP

Checked By: APC

Remarks and Water Observations

GL (m AOD)

-

Easting:

-

Northing:

-

Fig. No.

HDTP2





















































# WINDOW SAMPLING RECORD

BH No. **WS2**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
01/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.30m	
J	0.80m	N=9 (1,1/2,2,2,3)
D	1.50m	
D	2.40m	N=16 (2,3/3,3,5,5)
D	3.50m	N=18 (3,2/4,4,5,5)
		N=18 (3,2/4,4,5,5)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.	0.10			
MADE GROUND. Dark brown black slightly clayey gravelly SAND. Sand is fine to coarse mostly of ash. Gravel is fine to coarse angular to sub-angular of cinder, brick fragments, pottery, sandstone and coal.	0.60			
MADE GROUND. Soft black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to sub-rounded of wood fragments, coal, sandstone and mudstone. (Relict Topsoil)	1.00			
Firm medium strength orange mottled grey slightly sandy slightly gravelly CLAY of intermediate plasticity (field test). Sand is fine to medium. Gravel is fine sub-angular to sub-rounded of coal and mudstone. Below 1.2m bgl; Firm/stiff.				
Below 1.6m bgl; Gravel increases with depth.				
Stiff high strength brown mottled grey slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of sandstone, mudstone, limestone and coal. Below 2.1m bgl; Brown mottled grey.	2.10			
Below 2.7m bgl; Gravel decreases with depth.				
Below 3.6m bgl; Sand increases with depth.				
----- End of Window Sample at 4.00 m	4.00			

Logged By: BP      Checked By: APC

Driller: RP Drilling

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS2



# WINDOW SAMPLING RECORD

**BH No. WS3**  
 Sheet 1 of 1

Contract No: **C6149**

Dates: 01/10/2014

**Scale 1:25**

Site: Glen Street, Hebburn

Client: Gleeson Developments Ltd

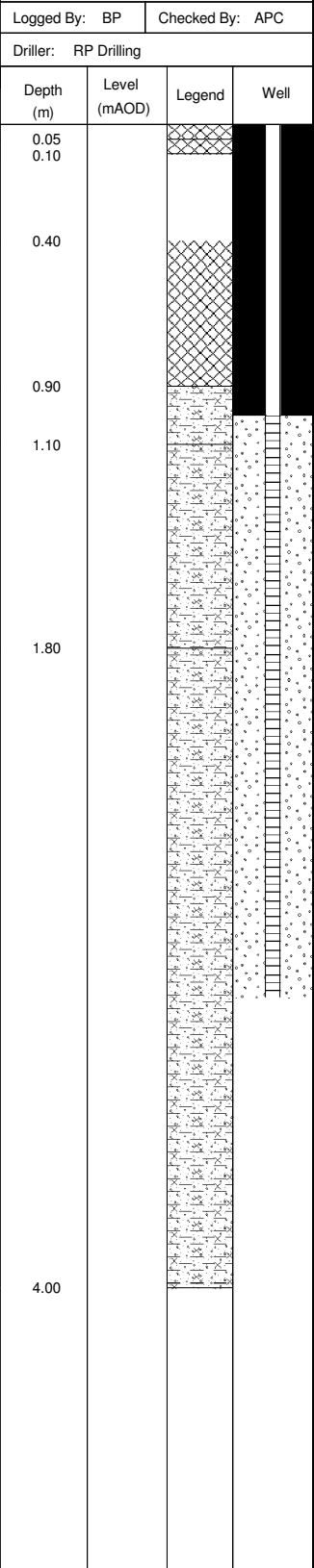
Method: Tracked window sampler.

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.60m	N=7 (1,1/1,2,2,2)
D	1.60m	N=17 (2,2/3,4,4,6)
D	2.50m	N=19 (3,3/3,5,5,6)
D	3.60m	N=17 (3,2/3,4,4,6)

## STRATA RECORD

Description		Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.		0.05			
MADE GROUND. Yellow SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.		0.10			
No Recovery.		0.40			
MADE GROUND. Black mottled yellow slightly clayey gravelly SAND. Sand is fine to coarse occasionally of ash. Gravel is fine to coarse angular to sub-angular of limestone, brick fragments, cinder and sandstone.		0.90			
Soft low strength brown grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine sub-angular to rounded of coal, mudstone and sandstone.		1.10			
Firm medium strength orange mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone.		1.80			
Stiff high strength red brown mottled grey slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of sandstone, mudstone, limestone and coal.					
Below 2.7m bgl; Brown.					
----- End of Window Sample at 4.00 m		4.00			



**Remarks and Water Observations**

1. No groundwater encountered.

**GL (mAOD)**  
 -  
**Eastings:**  
 -  
**Northing:**  
 -

**Fig. No.**  
 WS3



# WINDOW SAMPLING RECORD

BH No. **WS4**  
 Sheet 1 of 1  
 Contract No: **C6149**  
 Dates: 01/10/2014  
 Scale **1:25**

Site: Glen Street, Hebburn  
 Client: Gleeson Developments Ltd  
 Method: Tracked window sampler.

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.30m	
J	0.50m	
D	0.80m	N=8 (2,1/2,2,2,2)
D	1.50m	N=17 (2,3/3,3,6,5)
D	2.60m	N=15 (2,3/3,3,4,5)
D	3.60m	N=15 (2,2/3,3,4,5)

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.	0.10			
MADE GROUND. Firm friable black brown sandy gravelly CLAY. Sand is fine to coarse mostly of ash. Gravel is fine to medium angular to sub-angular of cinder, brick fragments, sandstone, concrete and mudstone.	0.40			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	0.60			
Soft orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	0.90			
Firm medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.				
Below 1.5m bgl; Stiff.				
Below 2.0m bgl; High strength.				
End of Window Sample at 4.00 m	4.00			

**Remarks and Water Observations**  
 1. No groundwater encountered.

**GL (mAOD)**  
 -  
**Easting:**  
 -  
**Northing:**  
 -

**Fig. No.**  
 WS4



# WINDOW SAMPLING RECORD

BH No. **WS5**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
01/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.30m	
J	0.50m	
D	1.40m	N=9 (1,2/2,3,2,2)
D	2.50m	N=18 (2,3/4,4,4,6)
D	3.70m	N=17 (3,2/3,4,5,5)
		N=13 (2,2/2,3,4,4)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.	0.05			
No Recovery.	0.20			
MADE GROUND. Black slightly clayey gravelly SAND. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, brick fragments, glass, pottery, concrete, sandstone and mudstone.	0.40			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	0.60			
Firm orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	0.90			
Firm medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone. Below 1.0m bgl; Stiff.	1.70			
Brown slightly clayey SAND. Sand is fine to medium.	1.80			
Stiff high strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.				
Below 2.8m bgl; Gravel decreases with depth.				
End of Window Sample at 4.00 m	4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS5



# WINDOW SAMPLING RECORD

BH No. **WS6**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
01/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.30m	
J	0.60m	
D	0.90m	N=10 (2,1/2,2,3,3)
D	1.70m	N=16 (3,3/3,4,4,5)
D	2.90m	N=15 (3,2/3,4,4,4)
D	3.80m	N=16 (2,3/3,4,4,5)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.	0.10			
MADE GROUND. Black slightly clayey gravelly SAND. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, brick fragments, concrete, sandstone and coal.	0.50			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	0.70			
Firm orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.10			
Below 2.0m bgl; High strength.				
Below 2.9m bgl; Gravel decreases with depth.				
End of Window Sample at 4.00 m	4.00			

Logged By: BP      Checked By: APC

Driller: RP Drilling

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS6



# WINDOW SAMPLING RECORD

BH No. **WS7**  
 Sheet 1 of 1  
 Contract No: **C6149**  
 Dates: 01/10/2014  
 Scale **1:25**

Site: Glen Street, Hebburn  
 Client: Gleeson Developments Ltd  
 Method: Tracked window sampler.

SAMPLE DETAILS			Groundwater	STRATA RECORD			
Type	Depth From - To(m)	(N) Shear vane		Description	Depth (m)	Level (mAOD)	Legend
J	0.30m		MADE GROUND. Concrete.	0.10			
J	0.80m		MADE GROUND. Black slightly clayey gravelly SAND. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, glass, brick fragments, wood fragments, coal, sandstone, mudstone and asphalt.	0.70			
D	0.95m	N=8 (1,1/2,1,2,3)	MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	0.90			
D	1.70m		Firm orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.00			
D	1.70m	N=12 (2,2/2,3,3,4)	Stiff medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.				
D	2.50m		Below 2.2m bgl; Gravel decreases with depth.				
D	2.50m	N=16 (2,2/3,4,4,5)	Below 2.9m bgl; Sand increases with depth. Below 3.0m bgl; High strength.				
D	3.70m		Below 3.5m bgl; Sand decreases with depth. Gravel increases with depth.				
D	3.70m	N=19 (3,3/3,5,5,6)	End of Window Sample at 4.00 m	4.00			

<b>Remarks and Water Observations</b> 1. No groundwater encountered.	<b>GL (mAOD)</b> - <b>Eastings:</b> - <b>Northing:</b> -	<b>Fig. No.</b>  <b>WS7</b>
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# WINDOW SAMPLING RECORD

BH No. **WS8**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
01/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.20m	
J	0.50m	
J	0.70m	
D	1.00m	N=8 (1,2/2,2,2,2)
D	1.90m	N=16 (2,3/3,4,4,5)
D	2.80m	N=17 (2,3/3,4,4,6)
D	3.90m	N=15 (3,2/3,3,5,4)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.	0.10			
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.	0.30			
MADE GROUND. Firm friable black brown sandy gravelly CLAY. Sand is fine to coarse of ash. Gravel is fine to medium angular to sub-angular of cinder, brick fragments, sandstone, concrete and mudstone.	0.60			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	0.80			
Firm medium strength orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.10			
Stiff medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.				
Below 2.0m; High strength.				
End of Window Sample at 4.00 m	4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS8



# WINDOW SAMPLING RECORD

BH No. **WS9**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
01/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.30m	N=6 (1,1/1,2,1,2)
J	0.70m	
D	1.20m	N=12 (2,2/2,3,3,4)
D	1.80m	
D	2.70m	N=16 (2,3/3,4,4,5)
D	3.70m	
		N=18 (3,3/4,4,5,5)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.	0.10			
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.				
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	0.50			
Firm medium strength orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.00			
Firm medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.	1.30			
Below 3.0m; High strength.				
End of Window Sample at 4.00 m	4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)  
-  
Easting:  
-  
Northing:  
-

Fig. No.  
  
WS9



# WINDOW SAMPLING RECORD

BH No. **WS10**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
01/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.40m	N=7 (1,1/1,2,2,2)
J	0.80m	
J	1.10m	
D	1.30m	N=11 (2,2/2,3,3,3)
D	2.20m	
D	3.50m	N=14 (2,2/3,3,3,5)
D	3.50m	N=15 (2,3/3,3,4,5)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.				
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.	0.20			
MADE GROUND. Stiff friable black sandy gravelly CLAY. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, coal, brick fragments, glass, sandstone and mudstone.	0.60			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	1.00			
Firm medium strength orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.20			
Stiff medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.	1.40			
Below 3.0m bgl; High strength.				
End of Window Sample at 4.00 m	4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS10



# WINDOW SAMPLING RECORD

BH No. **WS11**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
01/10/2014

Method: Tracked window sampler.

Scale **1:25**

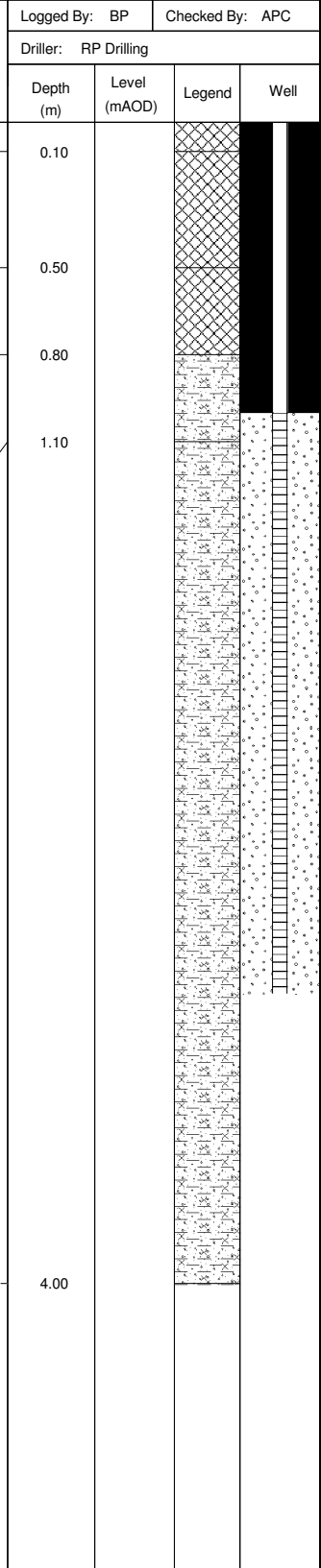
## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.30m	
J	0.70m	
D	0.90m	N=8 (2,1/2,2,2,2)
D	1.80m	N=17 (2,3/4,3,5,5)
D	2.70m	N=17 (2,3/3,4,4,6)
D	3.80m	N=17 (2,3/3,5,4,5)

Groundwater

## STRATA RECORD

Description
MADE GROUND. Concrete.
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.
At 0.4m bgl; Red sandstone gravel band (~3cm).
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)
Firm orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone. Below 1.0m bgl; Sand increases with depth.
Stiff medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.
Below 2.0m bgl; High strength.
----- End of Window Sample at 4.00 m



### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)  
-  
Easting:  
-  
Northing:  
-

Fig. No.

WS11



# WINDOW SAMPLING RECORD

BH No. **WS12**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.20m - 0.60	
J	0.90m	N=6 (3,2/1,2,1,2)
J	1.40m	
D	1.90m	N=12 (2,2/2,3,3,4)
D	2.70m	
D	3.80m	N=10 (2,1/2,2,3,3)
		N=13 (3,2/3,2,4,4)

Groundwater

## STRATA RECORD

Description

0.10	MADE GROUND. Concrete.
0.50	MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.
1.10	MADE GROUND. Black slightly clayey gravelly SAND. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of brick fragments, concrete, cinder and slag. At 0.6-0.65m bgl; Concrete.
1.30	No Recovery.
1.50	MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)
2.10	Firm medium strength orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.
	Below 2.5m bgl; Sand increases with depth.
	Below 3.2m bgl; Sand and gravel decrease with depth.
4.00	----- End of Window Sample at 4.00 m

Logged By: BP      Checked By: APC

Driller: RP Drilling

Depth (m)	Level (mAOD)	Legend	Well
0.10			
0.50			
1.10			
1.30			
1.50			
2.10			
4.00			

### Remarks and Water Observations

- No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS12



# WINDOW SAMPLING RECORD

BH No. **WS13**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.80m	N=7 (2,1/2,1,2,2)
D	1.70m	N=12 (2,2/2,2,3,5)
D	2.90m	N=21 (4,3/4,4,6,7)
D	3.40m	N=21 (3,3/4,5,6,6)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.	0.10			
No Recovery.				
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.	0.40 0.50			
MADE GROUND. Firm friable black brown sandy gravelly CLAY. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, coal and slag.				
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	1.10			
Firm medium strength orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.50			
Brown slightly clayey SAND. Sand is fine to medium.	2.60			
No Recovery from 2.7m to 3.1m bgl. Probable sand.	2.70			
Medium dense light brown clayey SAND. Sand is fine to medium.	3.10			
Stiff high strength brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.	3.60			
End of Window Sample at 4.00 m	4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

- No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS13



# WINDOW SAMPLING RECORD

BH No. **WS14**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.60m	N=8 (1,1/2,2,2,2)
D	1.20m	
D	2.30m	N=13 (2,1/3,3,3,4)
D	3.90m	N=20 (3,3/4,5,5,6)
D		N=15 (2,2/3,3,4,5)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.	0.10			
No Recovery.				
MADE GROUND. Black slightly clayey gravelly SAND with pockets of clay. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, brick fragments, mudstone, sandstone and concrete.	0.30			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	0.80			
Firm medium strength orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.10			
Firm red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.	1.40			
Below 2.7m bgl; Stiff.				
No Recovery. Probable sand.	3.10			
Brown slightly clayey SAND. Sand is fine to medium.	3.70			
Stiff high strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.	3.80			
End of Window Sample at 4.00 m	4.00			

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS14



# WINDOW SAMPLING RECORD

BH No. **WS15**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.60m	
D	1.00m	N=13 (2,1/1,3,4,5)
D	1.90m	N=13 (3,2/3,3,3,4)
D	2.80m	N=13 (2,2/3,3,3,4)
D	3.60m	N=13 (2,2/3,3,3,4)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete. No Recovery.	0.10			
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.	0.30 0.40			
MADE GROUND. Firm friable red mottled black and brown sandy gravelly CLAY. Sand is fine to coarse occasionally of ash. Gravel is fine to coarse angular to sub-angular of burnt shale, concrete, cinder, sandstone and mudstone.	0.70			
Firm orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.10			
Stiff high strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone. At 1.2m bgl; 0.05m thick band of pale grey SAND and GRAVEL. At 1.6m bgl; 0.1m thick band of wet yellow clayey SAND and GRAVEL.				
At 2.6m bgl; 0.05m thick band of brown gravelly SAND.				
----- End of Window Sample at 4.00 m	4.00			

Logged By: BP      Checked By: APC  
Driller: RP Drilling

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)  
-  
Easting:  
-  
Northing:  
-

Fig. No.

WS15





# WINDOW SAMPLING RECORD

BH No. **WS16**  
 Sheet 1 of 1  
 Contract No: **C6149**  
 Dates: **02/10/2014**  
 Scale **1:25**

Site: **Glen Street, Hebburn**  
 Client: **Gleeson Developments Ltd**  
 Method: **Tracked window sampler.**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.50m - 0.80	N=5 (1,1/1,1,2,1)
J	1.20m	
D	1.90m	N=11 (2,1/3,2,3,3)
D	2.70m	
D	3.70m	N=22 (3,3/4,6,6,6)
		N=18 (2,3/4,4,5,5)

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.	0.10			
No Recovery.				
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.	0.40			
MADE GROUND. Firm friable black brown sandy gravelly CLAY. Sand is fine to coarse occasionally of ash. Gravel is fine to medium angular to sub-angular of cinder, brick fragments, concrete, sandstone and mudstone.	0.60			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	1.20			
Firm orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.50			
Stiff medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.	2.10			
Below 3.0m bgl; High strength.				
End of Window Sample at 4.00 m	4.00			

Logged By: **BP**      Checked By: **APC**  
 Driller: **RP Drilling**

Remarks and Water Observations  
 1. No groundwater encountered.

GL (mAOD)  
 -  
 Easting:  
 -  
 Northing:  
 -

Fig. No.  
**WS16**



# WINDOW SAMPLING RECORD

BH No. **WS17**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.40m	N=5 (1,1/1,1,2,1)
J	0.70m	
D	1.30m	N=11 (2,1/2,3,3,3)
D	2.50m	
D	3.70m	N=20 (3,4/4,5,5,6)
D		N=13 (3,2/2,3,4,4)

Groundwater

## STRATA RECORD

Description		Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.		0.10			
No Recovery.		0.20			
MADE GROUND. Brown clayey gravelly SAND. Sand is fine to coarse. Gravel is fine to medium angular to sub-angular of brick fragments, sandstone and mudstone.		0.50			
MADE GROUND. Black gravelly SAND. Sand is fine to coarse of ash. Gravel is fine to medium angular to sub-angular of cinder, brick fragments and burnt shale.		0.90			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)		1.30			
Firm orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.		1.60			
Stiff medium strength brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, sandstone and mudstone.					
Below 3.0m bgl; High strength.					
----- End of Window Sample at 4.00 m		4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

- No groundwater encountered.

GL (mAOD)

-

Easting:

-

Northing:

-

Fig. No.

WS17



# WINDOW SAMPLING RECORD

BH No. **WS18**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.40m	N=0 (1,0/,-,-,-)
J	0.80m	
D	2.00m	N=7 (0,0/1,2,2,2)
D	3.10m	N=19 (2,3/4,4,5,6)
		N=17 (2,3/3,5,4,5)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.				
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.	0.20			
MADE GROUND. Black slightly clayey gravelly SAND. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, slag, concrete, mudstone and sandstone. At 0.8m bgl; 0.05m thick layer of concrete.	0.60			
No Recovery. Possible made ground.	1.20			
Very soft low/ medium strength grey mottled yellow slightly gravelly CLAY of high plasticity (field test). Gravel is sub-angular to rounded of coal and mudstone.	1.80			
Stiff high strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, limestone, sandstone and mudstone.	2.60			
No Recovery. Possible sand.	3.20			
----- End of Window Sample at 4.00 m	4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

- No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS18



# WINDOW SAMPLING RECORD

BH No. **WS19**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.30m	
J	0.70m	
D	1.30m	N=7 (0,1/1,2,2,2)
D	2.40m	N=17 (2,3/3,4,4,6)
D	3.80m	N=23 (4,4/4,6,6,7)
		N=19 (3,2/4,4,5,6)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.	0.10			
MADE GROUND. Pale grey clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, concrete and cinder.	0.50			
MADE GROUND. Black clayey gravelly SAND. Sand is fine to coarse occasionally of ash. Gravel is fine to coarse angular to sub-rounded of cinder, burnt shale, mudstone and sandstone.	0.80			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	1.00			
Firm medium strength orange brown mottled grey slightly sandy slightly gravelly CLAY of low plasticity. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.60			
Stiff high strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal, limestone, sandstone and mudstone.	4.00			
End of Window Sample at 4.00 m				

Logged By: BP      Checked By: APC  
Driller: RP Drilling

### Remarks and Water Observations

- No groundwater encountered.

GL (mAOD)  
-  
Easting:  
-  
Northing:  
-

Fig. No.

WS19



# WINDOW SAMPLING RECORD

BH No. **WS20**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane

Groundwater

## STRATA RECORD

Description

Logged By: BP      Checked By: APC

Driller: RP Drilling

Depth (m)	Level (mAOD)	Legend	Well
0.10			
0.50			

MADE GROUND. Tarmac.

MADE GROUND. Black slightly clayey gravelly SAND. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, brick fragments, sandstone and mudstone.

-----  
End of Window Sample at 0.50 m

### Remarks and Water Observations

1. No groundwater encountered.
2. Borehole abandoned due to hard strata encountered at 0.5m bgl.

GL (mAOD)

-

Eastings:

-

Northing:

-

Fig. No.

WS20



# WINDOW SAMPLING RECORD

BH No. **WS20A**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.50m	
J	1.00m	N=11 (2,2/2,3,4,2)
D	2.40m	N=10 (2,1/2,2,3,3)
D	3.60m	N=19 (6,3/4,4,5,6)
		N=19 (4,4/3,5,4,7)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.	0.10			
No Recovery.	0.30			
MADE GROUND. Black clayey gravelly SAND. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, slag, brick fragments and sandstone.	0.70			
MADE GROUND. Brown gravelly SAND. Sand is fine to coarse occasionally of ash. Gravel is fine to medium angular to sub-angular of cinder.	2.10			
Stiff medium strength brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of coal, limestone, sandstone and mudstone.				
Below 3.0m bgl; High strength.				
----- End of Window Sample at 4.00 m	4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

- No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS20A



# WINDOW SAMPLING RECORD

BH No. **WS21**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
02/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.80m	N=3 (1,1/0,1,1,1,1)
D	1.90m	N=11 (1,1/1,3,2,5)
D	3.10m	N=25 (4,4/5,5,7,8)
D	3.90m	N=19 (3,2/3,5,5,6)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.	0.20			
No Recovery.	0.40			
MADE GROUND. Black clayey gravelly SAND. Sand is fine to coarse mostly of ash. Gravel is fine to medium angular to sub-angular of cinder, slag and burnt shale.	1.20			
No Recovery. Probable made ground.	1.60			
Soft orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	2.20			
Below 2.0m bgl; Medium strength.	2.60			
No Recovery.	3.10			
Stiff high strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of coal, limestone, sandstone and mudstone.	3.90			
----- End of Window Sample at 4.00 m				

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS21



# WINDOW SAMPLING RECORD

BH No. **WS22**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	1.30m	N=3 (1,2/1,1,0,1)
D	1.70m	
D	2.60m	N=11 (2,2/2,2,4,3)
D	3.50m	N=18 (3,3/3,4,5,6)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.	0.10			
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.	0.20			
No Recovery. Suspected void.				
MADE GROUND. Pale grey clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse angular to sub-angular of sandstone and mudstone.	0.70			
MADE GROUND. Red GRAVEL. Gravel is fine to coarse angular of brick fragments.	1.00			
MADE GROUND. Firm friable yellow brown mottled red sand gravelly CLAY. Sand is fine to coarse occasionally of ash. Gravel is fine to coarse angular to sub-angular of brick, pottery, burnt shale and concrete.	1.50			
Very soft yellow brown slightly sandy slightly gravelly CLAY of intermediate plasticity. Sand is fine to medium. Gravel is fine sub-angular to rounded of sandstone, mudstone and coal.	1.80			
Stiff medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of coal, limestone, sandstone and mudstone.				
Below 3.0m bgl; High strength.				
End of Window Sample at 4.00 m	4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)  
-  
Easting:  
-  
Northing:  
-

Fig. No.

WS22





# WINDOW SAMPLING RECORD

BH No. **WS23**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.10m	
J	0.60m	
J	1.30m	N=46 (8,17 for 70mm/17,12,9,8)
D	2.30m	N=12 (1,1/2,3,3,4)
D	3.90m	N=24 (2,3/5,5,7,7)  N=24 (4,3/4,6,6,8)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Brown clayey gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse angular to sub-angular of brick fragments, concrete, cinder, coal, sandstone and mudstone. At 0.2m bgl; 0.05m thick band of yellow SAND.				
At 0.8m bgl; 0.1m thick band of pale yellow SAND and GRAVEL.				
MADE GROUND. Black mottled red clayey gravelly SAND. Sand is fine to coarse mostly of ash. Gravel is fine to medium angular to sub-angular of cinder, brick fragments, burnt shale and slag.	1.00			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	1.70			
Firm medium strength orange brown mottled grey slightly sandy slightly gravelly CLAY of intermediate plasticity. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	2.10			
Stiff red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of coal, limestone, sandstone and mudstone.	2.50			
Below 3.0m bgl; High strength.				
----- End of Window Sample at 4.00 m	4.00			

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)  
-  
Easting:  
-  
Northing:  
-

Fig. No.

WS23



# WINDOW SAMPLING RECORD

BH No. **WS24**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane

Groundwater

## STRATA RECORD

Description

Logged By: BP      Checked By: APC

Driller: RP Drilling

Depth (m)	Level (mAOD)	Legend	Well
0.20			

MADE GROUND. Tarmac.

-----  
End of Window Sample at 0.20 m

### Remarks and Water Observations

1. No groundwater encountered.
2. Borehole abandoned at 0.2m bgl due to hard strata.

GL (mAOD)

-

Eastings:

-

Northing:

-

Fig. No.

WS24



# WINDOW SAMPLING RECORD

BH No. **WS24A**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane	Groundwater
J	0.30m		

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.	0.10			
MADE GROUND. Black brown slightly clayey gravelly SAND. Sand is fine to coarse occasionally of ash. Gravel is fine to medium angular to sub-angular of cinder, slag, burnt shale, sandstone and mudstone.				
----- End of Window Sample at 1.00 m	1.00			

Logged By: BP	Checked By: APC		
Driller: RP Drilling			
Depth (m)	Level (mAOD)	Legend	Well

### Remarks and Water Observations

1. No groundwater encountered.
2. Borehole abandoned at 1.0m bgl due to hard strata.

GL (mAOD)  
-  
Easting:  
-  
Northing:  
-

Fig. No.  
  
WS24A



# WINDOW SAMPLING RECORD

BH No. **WS25**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane

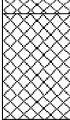
Groundwater

## STRATA RECORD

Description

Logged By: BP      Checked By: APC

Driller: RP Drilling

Depth (m)	Level (mAOD)	Legend	Well
0.05			
0.40			

MADE GROUND. Tarmac.

MADE GROUND. Black SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse of limestone, sandstone and mudstone.

-----  
End of Window Sample at 0.40 m

### Remarks and Water Observations

1. No groundwater encountered.
2. Borehole abandoned at 0.4m bgl due to hard strata.

GL (mAOD)

-

Eastings:

-

Northing:

-

Fig. No.

WS25



# WINDOW SAMPLING RECORD

BH No. **WS26**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane

Groundwater

## STRATA RECORD

Description

Logged By: BP      Checked By: APC

Driller: RP Drilling

Depth (m)	Level (mAOD)	Legend	Well
0.10		X	

MADE GROUND. Tarmac.

-----  
End of Window Sample at 0.10 m

### Remarks and Water Observations

1. No groundwater encountered.
2. Borehole abandoned at 0.1m bgl due to hard strata.

GL (mAOD)

-

Easting:

-

Northing:

-

Fig. No.

WS26



# WINDOW SAMPLING RECORD

BH No. **WS27**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane	Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.  No Recovery.	0.05		XXXXXX	
End of Window Sample at 0.50 m	0.50			

Logged By: BP      Checked By: APC

Driller: RP Drilling

### Remarks and Water Observations

1. No groundwater encountered.
2. Borehole abandoned at 0.5m bgl due to hard strata.

GL (mAOD)

-

Eastings:

-

Northing:

-

Fig. No.

WS27



# WINDOW SAMPLING RECORD

BH No. **WS27A**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

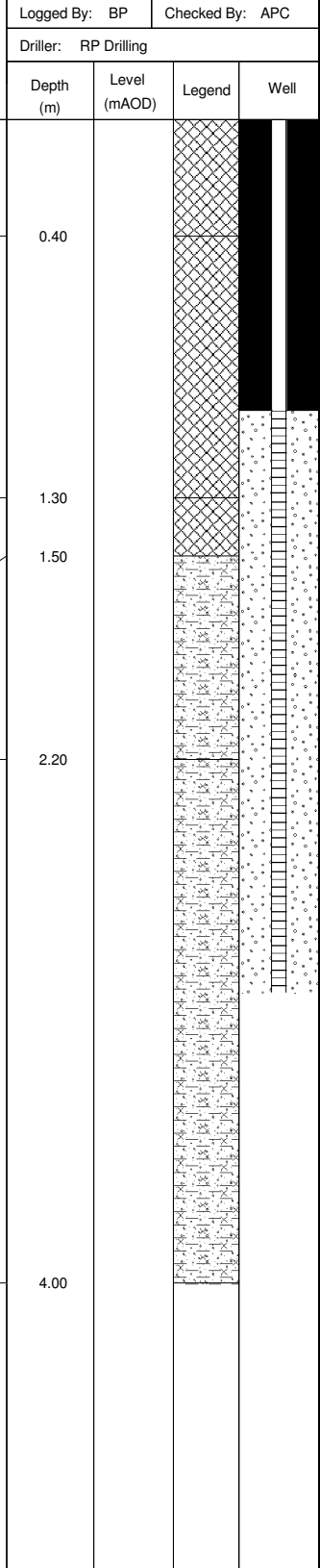
## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.10m	
J	0.70m	N=11 (6,5/4,3,2,2)
J	1.40m	
D	2.00m	N=11 (2,2/2,3,3,3)
D	2.70m	
D	3.80m	N=19 (2,3/4,4,5,6)
D		N=22 (3,3/4,5,6,7)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Soft friable light brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse angular to sub-rounded of sandstone, limestone, mudstone, coal and asphalt.				
MADE GROUND. Black brown slightly clayey gravelly SAND. Sand is fine to coarse mostly of ash. Gravel is fine to medium angular to sub-angular of cinder, burnt shale, sandstone and mudstone.	0.40			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	1.30			
Firm medium strength orange brown mottled grey slightly sandy slightly gravelly CLAY of intermediate plasticity. Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.50			
Below 2.0m bgl; Sand increases with depth.				
Stiff brown grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of coal, limestone, sandstone and mudstone.	2.20			
Below 2.6m bgl; Gravel decreases with depth.				
Below 3.0m bgl; High strength.				
Below 3.3m bgl; Gravel increases with depth.				
End of Window Sample at 4.00 m	4.00			



### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS27A



# WINDOW SAMPLING RECORD

BH No. **WS28**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.50m	N=5 (1,0/0,1,2,2)
D	1.40m	N=12 (2,2/2,3,3,4)
D	2.50m	N=12 (2,1/2,2,4,4)
D	3.70m	N=15 (2,2/2,3,4,6)

Groundwater

## STRATA RECORD

Description
MADE GROUND. Tarmac.
MADE GROUND. Pale yellow grey clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.
MADE GROUND. Black clayey gravelly SAND. Sand is fine to coarse of ash. Gravel is fine to coarse angular to sub-angular of cinder, slag, brick fragments, burnt shale, limestone and sandstone.
Firm low strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of coal, limestone, sandstone and mudstone.
Below 1.5m bgl; Stiff.
Below 2.0m bgl; Medium strength.
----- End of Window Sample at 4.00 m

Depth (m)	Level (mAOD)	Legend	Well
0.10			
0.20			
0.90			
4.00			

### Remarks and Water Observations

- No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS28





# WINDOW SAMPLING RECORD

BH No. **WS29**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

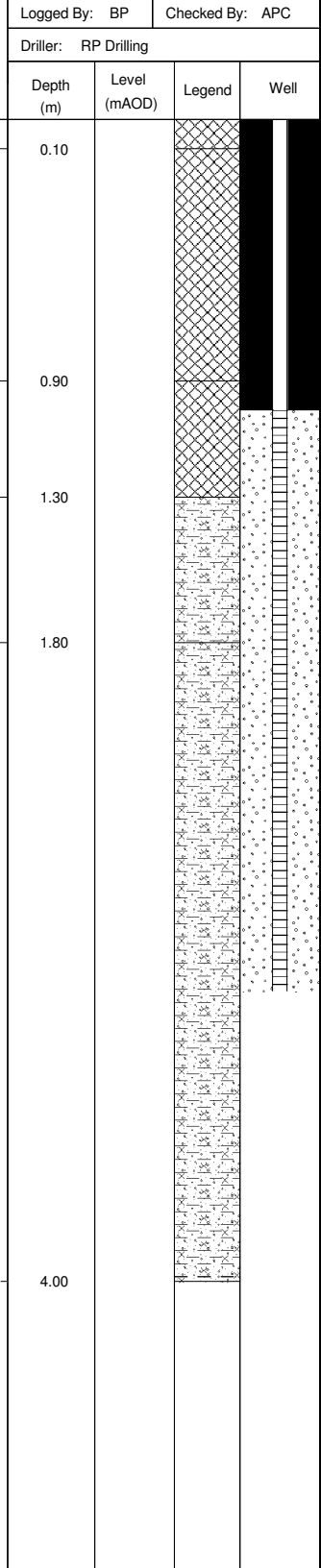
## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.50m	
J	1.10m	N=7 (2,1/2,1,2,2)
D	1.60m	
D	2.50m	N=11 (2,1/3,2,3,3)
D	3.90m	N=19 (3,3/4,4,5,6)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Concrete.	0.10			
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.				
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	0.90			
Firm orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.30			
Firm medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of coal, limestone, sandstone and mudstone.	1.80			
Below 3.0m bgl; High strength.				
----- End of Window Sample at 4.00 m	4.00			



### Remarks and Water Observations

- No groundwater encountered.

GL (mAOD)

-  
Easting:  
-  
Northing:  
-

Fig. No.

WS29



# WINDOW SAMPLING RECORD

BH No. **WS30**  
Sheet 1 of 1

Site: Glen Street, Hebburn

Contract No: **C6149**

Client: Gleeson Developments Ltd

Dates:  
03/10/2014

Method: Tracked window sampler.

Scale **1:25**

## SAMPLE DETAILS

Type	Depth From - To(m)	(N) Shear vane
J	0.60m	
J	1.00m	N=2 (0,0/0,0,0,2)
D	1.60m	
D	2.70m	N=10 (2,1/2,3,2,3)
D	3.60m	N=20 (3,3/4,4,4,6)
		N=18 (3,3/4,4,4,6)

Groundwater

## STRATA RECORD

Description	Depth (m)	Level (mAOD)	Legend	Well
MADE GROUND. Tarmac.	0.10			
MADE GROUND. Yellow clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub-angular of limestone.	0.20			
MADE GROUND. Black brown mottled red clayey gravelly SAND. Sand is fine to coarse mostly of ash. Gravel is fine to coarse angular to sub-angular of cinder, burnt shale brick fragments and slag.	0.90			
MADE GROUND. Soft grey black slightly sandy gravelly organic CLAY. Sand is fine to coarse. Gravel is fine sub-angular to rounded of coal, sandstone and mudstone. (Relict Topsoil)	1.10			
Firm orange brown mottled grey slightly sandy slightly gravelly CLAY of high plasticity (field test). Sand is fine to medium. Gravel is fine to medium sub-angular to rounded of coal and mudstone.	1.70			
Stiff medium strength red brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse sub-angular to rounded of coal, limestone, sandstone and mudstone.				
Below 3.0m bgl; High strength.				
End of Window Sample at 4.00 m	4.00			

Logged By: BP	Checked By: APC
Driller: RP Drilling	

### Remarks and Water Observations

1. No groundwater encountered.

GL (mAOD)  
-  
Easting:  
-  
Northing:  
-

Fig. No.

WS30



## APPENDIX F

# LABORATORY TEST RESULTS



## Certificate of Analysis

Certificate Number 14-17687

15-Oct-14

*Client* Sirius Geotechnical & Environmental  
Russel House  
Suite 2  
Mill Road  
Langley Moor  
DH7 8HJ

*Our Reference* 14-17687

*Client Reference* C6149

*Contract Title* Glen Street, Hebburn

*Description* 42 Soil samples, 4 Leachate samples.

*Date Received* 09-Oct-14

*Date Started* 09-Oct-14

*Date Completed* 15-Oct-14

*Test Procedures* Identified by prefix DETSn (details on request), Asbestos Analysis DETSC 1101.

*Notes* Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

*Approved By*

Rob Brown  
Business Manager



## Summary of Chemical Analysis

### Matrix Descriptions

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

Sample ID	Depth	Lab No	Completed	Matrix Description
WS1	0.3	711418	15/10/2014	Light brown clayey sandy GRAVEL (sample matrix outside MCERTS scope of accreditation)
WS2	0.8	711420	15/10/2014	Dark brown gravelly sandy CLAY
WS3	0.6	711421	15/10/2014	Dark brown gravelly sandy CLAY (made ground includes brick)
WS4	0.3	711422	15/10/2014	Dark grey clayey gravelly SAND
WS4	0.5	711423	15/10/2014	Dark brown gravelly sandy CLAY
WS5	0.3	711424	15/10/2014	Dark brown gravelly clayey SAND (made ground includes brick)
WS6	0.3	711426	15/10/2014	Dark grey clayey gravelly SAND
WS6	0.6	711427	15/10/2014	Dark brown gravelly sandy CLAY (made ground includes brick)
WS7	0.3	711428	15/10/2014	Dark brown clayey gravelly SAND
WS8	0.2	711430	15/10/2014	Light brown gravelly sandy CLAY
WS8	0.5	711431	15/10/2014	Dark brown clayey gravelly SAND
WS10	1.1	711433	15/10/2014	Dark brown gravelly sandy CLAY
WS10	0.4	711434	15/10/2014	Light brown clayey gravelly SAND
WS10	0.8	711435	15/10/2014	Dark grey clayey gravelly SAND
WS11	0.3	711436	15/10/2014	Brown red clayey sandy GRAVEL (made ground includes brick) (sample matrix outside MCERTS scope of accreditation)
WS13	0.8	711438	15/10/2014	Dark brown clayey gravelly (made ground includes slag) (sample matrix outside MCERTS scope of accreditation)
WS14	0.6	711439	15/10/2014	Dark brown clayey gravelly SAND (made ground includes slag + brick)
WS15	0.6	711440	15/10/2014	Dark brown light brown SAND clayey gravelly (made ground includes brick)
WS16	0.50-0.80	711441	15/10/2014	Dark grey light brown gravelly sandy CLAY SAND
WS16	1.2	711442	15/10/2014	Dark brown gravelly sandy CLAY
WS17	0.7	711444	15/10/2014	Dark grey gravelly SAND (made ground includes slag)
WS18	0.4	711445	15/10/2014	Light brown gravelly SAND
WS18	0.8	711446	15/10/2014	Dark brown clayey gravelly SAND
WS19	0.3	711447	15/10/2014	Grey clayey gravelly SAND
WS20A	0.5	711448	15/10/2014	Dark brown gravelly sandy CLAY
WS21	0.8	711449	15/10/2014	Dark brown clayey gravelly SAND (made ground includes slag)
WS23	1.3	711452	15/10/2014	Dark brown clayey gravelly SAND (made ground includes brick)
WS27A	0.7	711454	15/10/2014	Dark brown clayey gravelly SAND (made ground includes tiles)
WS27A	1.4	711455	15/10/2014	Dark brown gravelly sandy CLAY
WS29	0.5	711456	15/10/2014	Light brown clayey gravelly SAND
WS29	1.1	711457	15/10/2014	Dark brown gravelly sandy CLAY
WS30	1	711458	15/10/2014	Dark brown gravelly sandy CLAY (made ground includes brick)
HDTP1	0.7	711459	15/10/2014	Dark brown clayey gravelly SAND
HDTP2	0.2	711460	15/10/2014	Brown clayey gravelly SAND with numerous rootlets

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687  
 Client Ref C6149  
 Contract Title Glen Street, Hebburn

Lab No	711418	711420	711421	711422	711423	711424
Sample ID	WS1	WS2	WS3	WS4	WS4	WS5
Depth	0.30	0.80	0.60	0.30	0.50	0.30
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	01/10/14	01/10/14	01/10/14	01/10/14	01/10/14	01/10/14
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
<b>Metals</b>									
Arsenic	DETSC 2301#	0.2	mg/kg	2.2	14	23		13	98
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.8	1.5		0.9	1.2
Chromium	DETSC 2301#	0.15	mg/kg	4.1	32	35		38	33
Copper	DETSC 2301#	0.2	mg/kg	26	53	110		38	190
Lead	DETSC 2301#	0.3	mg/kg	38	100	150		56	350
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.16	0.22		0.17	0.37
Nickel	DETSC 2301#	1	mg/kg	3.3	20	32		20	37
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.7	< 0.5		0.6	< 0.5
Zinc	DETSC 2301#	1	mg/kg	49	80	390		66	220
<b>Inorganics</b>									
pH	DETSC 2008#			8.8	7.6	10.5		7.6	8.2
Total Organic Carbon	DETSC 2002	0.1	%	0.2	2.7	3.6		2.7	4.0
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	47	77	110		58	43
Total Sulphate as SO4	DETSC 2321#	0.01	%	0.07	0.08	0.23		0.07	0.11
<b>Petroleum Hydrocarbons</b>									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg				< 0.01		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg				< 0.01		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg				< 0.01		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg				< 1.5		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg				8.7		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg				22		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg				61		
Aliphatic C5-C35	DETSC 3072*	10	mg/kg				91		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg				< 0.01		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg				< 0.01		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg				< 0.01		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg				< 0.9		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg				< 0.5		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg				29		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg				42		
Aromatic C5-C35	DETSC 3072*	10	mg/kg				71		
TPH Ali/Aro	DETSC 3072*	10	mg/kg				160		
Benzene	DETSC 3321#	0.01	mg/kg				< 0.01		
Ethylbenzene	DETSC 3321#	0.01	mg/kg				< 0.01		
Toluene	DETSC 3321#	0.01	mg/kg				< 0.01		
Xylene	DETSC 3321#	0.01	mg/kg				< 0.01		
MTBE	DETSC 3321	0.01	mg/kg				< 0.01		

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

<b>Lab No</b>	711418	711420	711421	711422	711423	711424
<b>Sample ID</b>	WS1	WS2	WS3	WS4	WS4	WS5
<b>Depth</b>	0.30	0.80	0.60	0.30	0.50	0.30
<b>Other ID</b>						
<b>Sample Type</b>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
<b>Sampling Date</b>	01/10/14	01/10/14	01/10/14	01/10/14	01/10/14	01/10/14
<b>Sampling Time</b>	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
<b>PAHs</b>									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.4		< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2		< 0.1	0.2
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.1		< 0.1	0.2
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2		< 0.1	0.3
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	1.9		< 0.1	2.9
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.8		< 0.1	1.2
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	4.9		< 0.1	5.6
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	5.0		< 0.1	5.0
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	2.9		< 0.1	2.9
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	3.0		< 0.1	3.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	2.4		< 0.1	1.8
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	1.4		< 0.1	1.3
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	3.0		< 0.1	2.4
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	1.6		< 0.1	1.2
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.5		< 0.1	0.5
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	2.1		< 0.1	1.2
PAH	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	31		< 1.6	30
<b>Phenols</b>									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3		< 0.3	< 0.3

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

Lab No	711426	711427	711428	711430	711431	711433
Sample ID	WS6	WS6	WS7	WS8	WS8	WS10
Depth	0.30	0.60	0.30	0.20	0.50	1.10
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	01/10/14	01/10/14	01/10/14	01/10/14	01/10/14	01/10/14
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
<b>Metals</b>									
Arsenic	DETSC 2301#	0.2	mg/kg		57	290	5.9		11
Cadmium	DETSC 2301#	0.1	mg/kg		0.8	1.8	0.3		0.7
Chromium	DETSC 2301#	0.15	mg/kg		30	23	9.1		34
Copper	DETSC 2301#	0.2	mg/kg		61	330	10		35
Lead	DETSC 2301#	0.3	mg/kg		120	290	24		66
Mercury	DETSC 2325#	0.05	mg/kg		0.19	0.41	< 0.05		0.11
Nickel	DETSC 2301#	1	mg/kg		22	54	7.2		22
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5	0.8	< 0.5		< 0.5
Zinc	DETSC 2301#	1	mg/kg		82	320	64		71
<b>Inorganics</b>									
pH	DETSC 2008#				7.4	8.0	8.5		7.8
Total Organic Carbon	DETSC 2002	0.1	%		3.0	9.1	0.5		3.3
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l		34	230	58		68
Total Sulphate as SO4	DETSC 2321#	0.01	%		0.06	0.17	0.10		0.06
<b>Petroleum Hydrocarbons</b>									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5		< 1.5		< 1.5	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2		< 1.2		16	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5		< 1.5		34	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4		< 3.4		100	
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10		< 10		150	
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9		< 0.9		< 0.9	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5		< 0.5		< 0.5	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6		< 0.6		6.4	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4		< 1.4		< 1.4	
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10		< 10		< 10	
TPH Ali/Aro	DETSC 3072*	10	mg/kg	< 10		< 10		160	
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01		< 0.01		< 0.01	
MTBE	DETSC 3321	0.01	mg/kg	< 0.01		< 0.01		< 0.01	



# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

<b>Lab No</b>	711426	711427	711428	711430	711431	711433
<b>Sample ID</b>	WS6	WS6	WS7	WS8	WS8	WS10
<b>Depth</b>	0.30	0.60	0.30	0.20	0.50	1.10
<b>Other ID</b>						
<b>Sample Type</b>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
<b>Sampling Date</b>	01/10/14	01/10/14	01/10/14	01/10/14	01/10/14	01/10/14
<b>Sampling Time</b>	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
<b>PAHs</b>								
Naphthalene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg		< 0.1	0.6	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg		< 0.1	0.2	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg		< 0.1	0.5	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg		< 0.1	6.7	< 0.1	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg		< 0.1	2.0	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg		< 0.1	7.4	< 0.1	< 0.1
Pyrene	DETSC 3301	0.1	mg/kg		< 0.1	6.2	< 0.1	< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg		< 0.1	3.3	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg		< 0.1	4.3	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg		< 0.1	2.1	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg		< 0.1	1.7	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg		< 0.1	2.6	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		< 0.1	1.3	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg		< 0.1	0.6	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg		< 0.1	1.7	< 0.1	< 0.1
PAH	DETSC 3301	1.6	mg/kg		< 1.6	41	< 1.6	< 1.6
<b>Phenols</b>								
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		< 0.3	< 0.3	< 0.3	< 0.3

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

Lab No	711434	711435	711436	711438	711439	711440
Sample ID	WS10	WS10	WS11	WS13	WS14	WS15
Depth	0.40	0.80	0.30	0.80	0.60	0.60
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	01/10/14	01/10/14	01/10/14	02/10/14	02/10/14	02/10/14
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
<b>Metals</b>								
Arsenic	DETSC 2301#	0.2	mg/kg	6.5		5.5	43	10
Cadmium	DETSC 2301#	0.1	mg/kg	0.5		0.7	2.2	0.8
Chromium	DETSC 2301#	0.15	mg/kg	12		28	61	38
Copper	DETSC 2301#	0.2	mg/kg	14		19	77	50
Lead	DETSC 2301#	0.3	mg/kg	45		19	330	78
Mercury	DETSC 2325#	0.05	mg/kg	0.08		< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	9.8		16	41	39
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5		< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	93		39	200	130
<b>Inorganics</b>								
pH	DETSC 2008#			8.5		8.8	7.7	8.5
Total Organic Carbon	DETSC 2002	0.1	%	0.4		0.5	4.0	0.2
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	110		76	200	47
Total Sulphate as SO4	DETSC 2321#	0.01	%	0.12		0.10	0.18	0.25
<b>Petroleum Hydrocarbons</b>								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	12	< 1.2	< 1.2	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	37	< 1.5	< 1.5	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	380	< 3.4	< 3.4	
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	420	< 10	< 10	
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	3.0	< 0.5	< 0.5	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	10	59	< 0.6	< 0.6	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	18	360	< 1.4	< 1.4	
Aromatic C5-C35	DETSC 3072*	10	mg/kg	29	420	< 10	< 10	
TPH Ali/Aro	DETSC 3072*	10	mg/kg	29	840	< 10	< 10	
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

<b>Lab No</b>	711434	711435	711436	711438	711439	711440
<b>Sample ID</b>	WS10	WS10	WS11	WS13	WS14	WS15
<b>Depth</b>	0.40	0.80	0.30	0.80	0.60	0.60
<b>Other ID</b>						
<b>Sample Type</b>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
<b>Sampling Date</b>	01/10/14	01/10/14	01/10/14	02/10/14	02/10/14	02/10/14
<b>Sampling Time</b>	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
<b>PAHs</b>								
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1		0.2	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	1.2		1.6	< 0.1	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	0.5		0.6	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	2.0		3.0	< 0.1	< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	1.8		2.5	< 0.1	< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	1.0		1.1	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	1.0		1.1	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.7		0.8	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.6		0.7	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	0.8		0.9	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	0.3		0.4	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1		0.2	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	0.3		0.5	< 0.1	< 0.1
PAH	DETSC 3301	1.6	mg/kg	9.9		14	< 1.6	< 1.6
<b>Phenols</b>								
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3		< 0.3	< 0.3	< 0.3

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

<b>Lab No</b>	711441	711442	711444	711445	711446	711447
<b>Sample ID</b>	WS16	WS16	WS17	WS18	WS18	WS19
<b>Depth</b>	0.50-0.80	1.20	0.70	0.40	0.80	0.30
<b>Other ID</b>						
<b>Sample Type</b>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
<b>Sampling Date</b>	02/10/14	02/10/14	02/10/14	02/10/14	02/10/14	02/10/14
<b>Sampling Time</b>	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
<b>Metals</b>									
Arsenic	DETSC 2301#	0.2	mg/kg	6.6	10	19	4.0		6.6
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.6	1.3	0.5		0.3
Chromium	DETSC 2301#	0.15	mg/kg	19	36	39	6.9		13
Copper	DETSC 2301#	0.2	mg/kg	28	31	180	13		15
Lead	DETSC 2301#	0.3	mg/kg	34	75	100	25		66
Mercury	DETSC 2325#	0.05	mg/kg	0.08	0.11	< 0.05	< 0.05		< 0.05
Nickel	DETSC 2301#	1	mg/kg	12	21	77	9.6		5.7
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5		4.3
Zinc	DETSC 2301#	1	mg/kg	52	74	140	44		67
<b>Inorganics</b>									
pH	DETSC 2008#			9.9	7.7	7.8	8.8		10.5
Total Organic Carbon	DETSC 2002	0.1	%	1.1	3.0	6.5	0.1		0.9
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	140	90	380	76		450
Total Sulphate as SO4	DETSC 2321#	0.01	%	0.11	0.10	0.21	0.03		0.03
<b>Petroleum Hydrocarbons</b>									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg						< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg						< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg						< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg						< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg						< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg						< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg						< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg						< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg						< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg						< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg						< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg						< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg						< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg						< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg						< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg						< 10
TPH Ali/Aro	DETSC 3072*	10	mg/kg						< 10
Benzene	DETSC 3321#	0.01	mg/kg						< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg						< 0.01
Toluene	DETSC 3321#	0.01	mg/kg						< 0.01
Xylene	DETSC 3321#	0.01	mg/kg						< 0.01
MTBE	DETSC 3321	0.01	mg/kg						< 0.01

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

<b>Lab No</b>	711441	711442	711444	711445	711446	711447
<b>Sample ID</b>	WS16	WS16	WS17	WS18	WS18	WS19
<b>Depth</b>	0.50-0.80	1.20	0.70	0.40	0.80	0.30
<b>Other ID</b>						
<b>Sample Type</b>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
<b>Sampling Date</b>	02/10/14	02/10/14	02/10/14	02/10/14	02/10/14	02/10/14
<b>Sampling Time</b>	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
<b>PAHs</b>									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	0.4	< 0.1	0.9	< 0.1		< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.3	< 0.1		< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	0.7	< 0.1	1.5	< 0.1		< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	0.6	< 0.1	1.2	< 0.1		< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.3	< 0.1	0.7	< 0.1		< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	0.4	< 0.1	0.9	< 0.1		< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.7	< 0.1		< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	1.0	< 0.1		< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.7	< 0.1		< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.5	< 0.1		< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1		< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.5	< 0.1		< 0.1
PAH	DETSC 3301	1.6	mg/kg	2.5	< 1.6	9.1	< 1.6		< 1.6
<b>Phenols</b>									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3		< 0.3

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

Lab No	711448	711449	711452	711454	711455	711456
Sample ID	WS20A	WS21	WS23	WS27A	WS27A	WS29
Depth	0.50	0.80	1.30	0.70	1.40	0.50
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	02/10/14	02/10/14	03/10/14	03/10/14	03/10/14	03/10/14
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
<b>Metals</b>									
Arsenic	DETSC 2301#	0.2	mg/kg	24	67	17	11	2.1	
Cadmium	DETSC 2301#	0.1	mg/kg	0.9	3.8	2.1	0.6	0.1	
Chromium	DETSC 2301#	0.15	mg/kg	40	88	21	24	3.4	
Copper	DETSC 2301#	0.2	mg/kg	88	2300	88	42	11	
Lead	DETSC 2301#	0.3	mg/kg	83	230	410	58	11	
Mercury	DETSC 2325#	0.05	mg/kg	0.12	0.17	< 0.05	0.10	< 0.05	
Nickel	DETSC 2301#	1	mg/kg	34	82	20	15	3.8	
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
Zinc	DETSC 2301#	1	mg/kg	98	2200	560	57	32	
<b>Inorganics</b>									
pH	DETSC 2008#			8.4	7.8	9.8	8.2	8.8	
Total Organic Carbon	DETSC 2002	0.1	%	1.6	4.0	4.6	1.8	0.3	
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	69	290	230	230	39	
Total Sulphate as SO4	DETSC 2321#	0.01	%	2.7	0.08	0.33	0.31	0.20	
<b>Petroleum Hydrocarbons</b>									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg			0.04			
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg			< 0.01			
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg			< 0.01			
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg			< 1.5			
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg			< 1.2			
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg			< 1.5			
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg			19			
Aliphatic C5-C35	DETSC 3072*	10	mg/kg			19			
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg			< 0.01			
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg			< 0.01			
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg			< 0.01			
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg			< 0.9			
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg			< 0.5			
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg			37			
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg			140			
Aromatic C5-C35	DETSC 3072*	10	mg/kg			170			
TPH Ali/Aro	DETSC 3072*	10	mg/kg			190			
Benzene	DETSC 3321#	0.01	mg/kg			< 0.01			
Ethylbenzene	DETSC 3321#	0.01	mg/kg			< 0.01			
Toluene	DETSC 3321#	0.01	mg/kg			< 0.01			
Xylene	DETSC 3321#	0.01	mg/kg			< 0.01			
MTBE	DETSC 3321	0.01	mg/kg			< 0.01			

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

<b>Lab No</b>	711448	711449	711452	711454	711455	711456
<b>Sample ID</b>	WS20A	WS21	WS23	WS27A	WS27A	WS29
<b>Depth</b>	0.50	0.80	1.30	0.70	1.40	0.50
<b>Other ID</b>						
<b>Sample Type</b>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
<b>Sampling Date</b>	02/10/14	02/10/14	03/10/14	03/10/14	03/10/14	03/10/14
<b>Sampling Time</b>	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
<b>PAHs</b>									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1		37	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1		8.7	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	0.3		56	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1		87	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	3.3		260	0.4	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	1.0		74	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	4.2		270	0.4	0.1
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	3.6		220	0.3	0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	2.2		170	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	2.1		170	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	1.6		140	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	1.4		68	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	2.3		140	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	1.3		120	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	2.0		45	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	1.4		110	< 0.1	< 0.1
PAH	DETSC 3301	1.6	mg/kg	< 1.6	27		2000	< 1.6	< 1.6
<b>Phenols</b>									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3		< 0.3	< 0.3	< 0.3

# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687  
 Client Ref C6149  
 Contract Title Glen Street, Hebburn

Lab No	711457	711458
Sample ID	WS29	WS30
Depth	1.10	1.00
Other ID		
Sample Type	SOIL	SOIL
Sampling Date	03/10/14	03/10/14
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
<b>Metals</b>					
Arsenic	DETSC 2301#	0.2	mg/kg	12	17
Cadmium	DETSC 2301#	0.1	mg/kg	0.7	0.7
Chromium	DETSC 2301#	0.15	mg/kg	30	29
Copper	DETSC 2301#	0.2	mg/kg	34	65
Lead	DETSC 2301#	0.3	mg/kg	76	89
Mercury	DETSC 2325#	0.05	mg/kg	0.12	0.12
Nickel	DETSC 2301#	1	mg/kg	21	24
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	75	150
<b>Inorganics</b>					
pH	DETSC 2008#			8.3	8.8
Total Organic Carbon	DETSC 2002	0.1	%	3.4	2.5
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	120	55
Total Sulphate as SO4	DETSC 2321#	0.01	%	0.09	0.06
<b>Petroleum Hydrocarbons</b>					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		
Aliphatic C5-C35	DETSC 3072*	10	mg/kg		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		
Aromatic C5-C35	DETSC 3072*	10	mg/kg		
TPH Ali/Aro	DETSC 3072*	10	mg/kg		
Benzene	DETSC 3321#	0.01	mg/kg		
Ethylbenzene	DETSC 3321#	0.01	mg/kg		
Toluene	DETSC 3321#	0.01	mg/kg		
Xylene	DETSC 3321#	0.01	mg/kg		
MTBE	DETSC 3321	0.01	mg/kg		



# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

Lab No	711457	711458
Sample ID	WS29	WS30
Depth	1.10	1.00
Other ID		
Sample Type	SOIL	SOIL
Sampling Date	03/10/14	03/10/14
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
<b>PAHs</b>					
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	0.1	< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
PAH	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6
<b>Phenols</b>					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3

# Summary of Chemical Analysis

## Soil VOC Samples

Our Ref 14-17687  
 Client Ref C6149  
 Contract Title Glen Street, Hebburn

Lab No	711422	711428	711434	711438	711452
Sample ID	WS4	WS7	WS10	WS13	WS23
Depth	0.30	0.30	0.40	0.80	1.30
Other ID					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	01/10/14	01/10/14	01/10/14	02/10/14	03/10/14
Sampling Time	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
<b>VOCs</b>								
Vinyl Chloride	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

## Summary of Chemical Analysis Soil VOC Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

<b>Lab No</b>	711422	711428	711434	711438	711452
<b>Sample ID</b>	WS4	WS7	WS10	WS13	WS23
<b>Depth</b>	0.30	0.30	0.40	0.80	1.30
<b>Other ID</b>					
<b>Sample Type</b>	SOIL	SOIL	SOIL	SOIL	SOIL
<b>Sampling Date</b>	01/10/14	01/10/14	01/10/14	02/10/14	03/10/14
<b>Sampling Time</b>	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
sec-butylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

# Summary of Asbestos Analysis

## Soil Samples

Our Ref 14-17687

Client Ref C6149

Contract Title Glen Street, Hebburn

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
711425	WS5 0.50	SOIL	NAD	none	Colin Patrick
711429	WS7 0.80	SOIL	NAD	none	Colin Patrick
711432	WS9 0.30	SOIL	NAD	none	Colin Patrick
711437	WS12 0.90	SOIL	NAD	none	Colin Patrick
711440	WS15 0.60	SOIL	NAD	none	Colin Patrick
711443	WS17 0.40	SOIL	NAD	none	Colin Patrick
711445	WS18 0.40	SOIL	NAD	none	Colin Patrick
711447	WS19 0.30	SOIL	NAD	none	Colin Patrick
711448	WS20A 0.50	SOIL	NAD	none	Colin Patrick
711450	WS22 1.30	SOIL	Chrysotile	bundle of chrysotile fibres	Colin Patrick
711451	WS23 0.60	SOIL	NAD	none	Colin Patrick
711453	WS24A 0.30	SOIL	NAD	none	Colin Patrick
711455	WS27A 1.40	SOIL	NAD	none	Colin Patrick
711456	WS29 0.50	SOIL	NAD	none	Colin Patrick

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: \* -not included in laboratory scope of accreditation.

# WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 14-17687  
Client Ref C6149  
Contract Title Glen Street, Hebburn  
Sample Id HDTP1 0.70

Sample Numbers 711459 711461 711462  
Date Analysed 15/10/2014

Test Results On Waste		
Determinand and Method Reference	Units	Result
DETSC 2084* Total Organic Carbon	%	5.1
DETSC 2003# Loss On Ignition	%	11
DETSC 3321# BTEX	mg/kg	< 0.04
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01
DETSC 3311# TPH (C10 - C40)	mg/kg	170
DETSC 3301 PAHs	mg/kg	11
DETSC 2008# pH	pH Units	8.2
DETS 073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1
DETS 073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate				
Determinand and Method Reference	Conc in Eluate ug/l		Amount Leached mg/kg	
	2:1	8:1	LS2	LS10
DETSC 2306 Arsenic as As	1.4	0.95	0.003	0.01
DETSC 2306 Barium as Ba	120	79	0.24	0.84
DETSC 2306 Cadmium as Cd	0.03	< 0.03	< 0.004	< 0.02
DETSC 2306 Chromium as Cr	1.1	< 0.25	< 0.02	< 0.1
DETSC 2306 Copper as Cu	7.8	2.4	0.016	0.031
DETSC 2306 Mercury as Hg	< 0.01	< 0.01	< 0.0004	< 0.002
DETSC 2306 Molybdenum as Mo	< 1.05	< 1.05	< 0.02	< 0.1
DETSC 2306 Nickel as Ni	0.8	< 0.5	< 0.02	< 0.1
DETSC 2306 Lead as Pb	4.9	1.9	< 0.01	< 0.05
DETSC 2306 Antimony as Sb	1	0.46	< 0.01	< 0.05
DETSC 2306 Selenium as Se	0.35	< 0.25	< 0.006	< 0.03
DETSC 2306 Zinc as Zn	10.4	4.11	0.021	0.049
DETSC 2055 Chloride as Cl	2400	1000	< 20	< 100
DETSC 2055* Fluoride as F	700	590	1.4	6.03
DETSC 2055 Sulphate as SO4	12000	4100	24	< 100
DETSC 2009* Total Dissolved Solids	74000	42000	148	459
DETSC 2130 Phenol Index	< 100	< 100	< 0.2	< 1
* Dissolved Organic Carbon	4400	< 2000	< 10	< 50

WAC Limit Values		
Limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

### Additional Information

DETSC 2008 pH	6	5.8
DETSC 2009 Conductivity uS/cm	106	60.2
* Temperature*	14	15

Mass of Sample Kg	0.140
Mass of dry Sample Kg	0.123

### Stage 1

Volume of Leachant L2	0.229
Volume of Eluate VE1	0.15

### Stage 2

Volume of Leachant L8	0.983
Volume of Eluate VE2	0.89

TBE - To Be Evaluated  
SNRHW - Stable Non-Reactive  
Hazardous Waste

Disclaimer: The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

# WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 14-17687  
 Client Ref C6149  
 Contract Title Glen Street, Hebburn  
 Sample Id HDTP2 0.20

Sample Numbers 711460 711463 711464  
 Date Analysed 15/10/2014

Test Results On Waste		
Determinand and Method Reference	Units	Result
DETSC 2084* Total Organic Carbon	%	1.3
DETSC 2003# Loss On Ignition	%	4.5
DETSC 3321# BTEX	mg/kg	< 0.04
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10
DETSC 3301 PAHs	mg/kg	< 1.6
DETSC 2008# pH	pH Units	11.2
DETS 073* Acid Neutralisation Capacity (pH4)	mol/kg	2.1
DETS 073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate				
Determinand and Method Reference	Conc in Eluate ug/l		Amount Leached mg/kg	
	2:1	8:1	LS2	LS10
DETSC 2306 Arsenic as As	1.3	0.63	0.003	< 0.01
DETSC 2306 Barium as Ba	36	17	0.07	0.19
DETSC 2306 Cadmium as Cd	0.05	< 0.03	< 0.004	< 0.02
DETSC 2306 Chromium as Cr	1.4	0.43	< 0.02	< 0.1
DETSC 2306 Copper as Cu	3.1	2.1	0.006	0.022
DETSC 2306 Mercury as Hg	< 0.01	< 0.01	< 0.0004	< 0.002
DETSC 2306 Molybdenum as Mo	< 1.05	< 1.05	< 0.02	< 0.1
DETSC 2306 Nickel as Ni	1.5	0.6	< 0.02	< 0.1
DETSC 2306 Lead as Pb	1.1	1.1	< 0.01	< 0.05
DETSC 2306 Antimony as Sb	0.45	0.2	< 0.01	< 0.05
DETSC 2306 Selenium as Se	< 0.25	< 0.25	< 0.006	< 0.03
DETSC 2306 Zinc as Zn	11.7	2.28	0.023	0.035
DETSC 2055 Chloride as Cl	3200	1300	< 20	< 100
DETSC 2055* Fluoride as F	320	410	0.64	3.99
DETSC 2055 Sulphate as SO4	11000	4600	22	< 100
DETSC 2009* Total Dissolved Solids	80000	41000	160	458.7
DETSC 2130 Phenol Index	< 100	< 100	< 0.2	< 1
* Dissolved Organic Carbon	5100	2200	10.2	< 50

WAC Limit Values		
Limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

TBE - To Be Evaluated  
 SNRHW - Stable Non-Reactive  
 Hazardous Waste

### Additional Information

DETSC 2008 pH	6.6	6.7
DETSC 2009 Conductivity uS/cm	114	57.8
* Temperature*	14	15

Mass of Sample Kg	0.130
Mass of dry Sample Kg	0.117

### Stage 1

Volume of Leachant L2	0.221
Volume of Eluate VE1	0.146

### Stage 2

Volume of Leachant L8	0.936
Volume of Eluate VE2	0.87

Disclaimer: The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

## Information in Support of the Analytical Results

Our Ref 14-17687  
 Client Ref C6149  
 Contract Glen Street, Hebburn

### Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
711418	WS1 0.30 SOIL	01/10/14	GJ 1L	pH (7 days)	
711419	WS2 0.30 SOIL	01/10/14	GJ 1L		
711420	WS2 0.80 SOIL	01/10/14	GJ 1L	pH (7 days)	
711421	WS3 0.60 SOIL	01/10/14	GJ 1L	pH (7 days)	
711422	WS4 0.30 SOIL	01/10/14	GJ 1L		BTEX, VOC
711423	WS4 0.50 SOIL	01/10/14	GJ 1L	pH (7 days)	
711424	WS5 0.30 SOIL	01/10/14	GJ 1L	pH (7 days)	
711425	WS5 0.50 SOIL	01/10/14	GJ 1L		
711426	WS6 0.30 SOIL	01/10/14	GJ 1L		BTEX
711427	WS6 0.60 SOIL	01/10/14	GJ 1L	pH (7 days)	
711428	WS7 0.30 SOIL	01/10/14	GJ 1L	pH (7 days)	BTEX, VOC
711429	WS7 0.80 SOIL	01/10/14	GJ 1L		
711430	WS8 0.20 SOIL	01/10/14	GJ 1L	pH (7 days)	
711431	WS8 0.50 SOIL	01/10/14	GJ 1L		BTEX
711432	WS9 0.30 SOIL	01/10/14	GJ 1L		
711433	WS10 1.10 SOIL	01/10/14	GJ 1L	pH (7 days)	
711434	WS10 0.40 SOIL	01/10/14	GJ 1L	pH (7 days)	BTEX, VOC
711435	WS10 0.80 SOIL	01/10/14	GJ 1L		BTEX
711436	WS11 0.30 SOIL	01/10/14	GJ 1L	pH (7 days)	
711437	WS12 0.90 SOIL	02/10/14	GJ 1L		
711438	WS13 0.80 SOIL	02/10/14	GJ 1L		BTEX, VOC
711439	WS14 0.60 SOIL	02/10/14	GJ 1L		BTEX
711440	WS15 0.60 SOIL	02/10/14	GJ 1L		
711441	WS16 0.50-0.80 SOIL	02/10/14	GJ 1L		
711442	WS16 1.20 SOIL	02/10/14	GJ 1L		
711443	WS17 0.40 SOIL	02/10/14	GJ 1L		
711444	WS17 0.70 SOIL	02/10/14	GJ 1L		
711445	WS18 0.40 SOIL	02/10/14	GJ 1L		
711446	WS18 0.80 SOIL	02/10/14	GJ 1L		BTEX
711447	WS19 0.30 SOIL	02/10/14	GJ 1L		
711448	WS20A 0.50 SOIL	02/10/14	GJ 1L		
711449	WS21 0.80 SOIL	02/10/14	GJ 1L		
711450	WS22 1.30 SOIL	03/10/14	GJ 1L		
711451	WS23 0.60 SOIL	03/10/14	GJ 1L		
711452	WS23 1.30 SOIL	03/10/14	GJ 1L		BTEX, VOC
711453	WS24A 0.30 SOIL	03/10/14	GJ 1L		
711454	WS27A 0.70 SOIL	03/10/14	GJ 1L		
711455	WS27A 1.40 SOIL	03/10/14	GJ 1L		
711456	WS29 0.50 SOIL	03/10/14	GJ 1L		
711457	WS29 1.10 SOIL	03/10/14	GJ 1L		
711458	WS30 1.00 SOIL	03/10/14	GJ 1L		
711459	HDTP1 0.70 SOIL	03/10/14	GJ 1L		BTEX
711460	HDTP2 0.20 SOIL	03/10/14	GJ 1L		BTEX
711461	HDTP1 0.70 LEACHATE	03/10/14	GJ 1L		
711462	HDTP1 0.70 LEACHATE	03/10/14	GJ 1L		
711463	HDTP2 0.20 LEACHATE	03/10/14	GJ 1L		
711464	HDTP2 0.20 LEACHATE	03/10/14	GJ 1L		

## Information in Support of the Analytical Results

*Our Ref* 14-17687

*Client Ref* C6149

*Contract* Glen Street, Hebburn

Key: G-Glass J-Jar

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

### Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425 $\mu$ m sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

### Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



## Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETS 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETS 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETS 2024	Sulphide	mg/kg	10	Air Dried	No	Yes	Yes
DETS 2076	Sulphate Aqueous Extract as SO <sub>4</sub>	mg/l	10	Air Dried	No	Yes	Yes
DETS 2084	Total Carbon	%	0.5	Air Dried	No	Yes	Yes
DETS 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETS 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETS 2321	Total Sulphate as SO <sub>4</sub>	%	0.01	Air Dried	No	Yes	Yes
DETS 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETS 3049	Sulphur (free)	mg/kg	0.75	Air Dried	No	Yes	Yes
DETS 2123	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETS 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETS 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETS 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETS 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETS 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETS 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETS 3072	Aliphatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETS 3072	Aromatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETS 3072	Aromatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 062	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETS 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETS 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes

## Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.



# LABORATORY REPORT



4043

**Contract Number: PSL14/5166**

Client's Reference:

Report Date: 17 October 2014

Client Name: Sirius Durham  
Suite 2, Russel House  
Mill Road  
Langley Moor  
Durham  
DH7 8HJ

**For the attention of: Bradley Pennicott**

Contract Title: Glen Street, Hebburn

Date Received: 9/10/2014  
Date Commenced: 9/10/2014  
Date Completed: 17/10/2014

**Notes: Opinions and Interpretations are outside the UKAS Accreditation**

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

R Gunson  
(Director)

A Watkins  
(Director)

M Beall  
(Laboratory Manager)

D Lambe  
(Senior Technician)

S Royle  
(Senior Technician)

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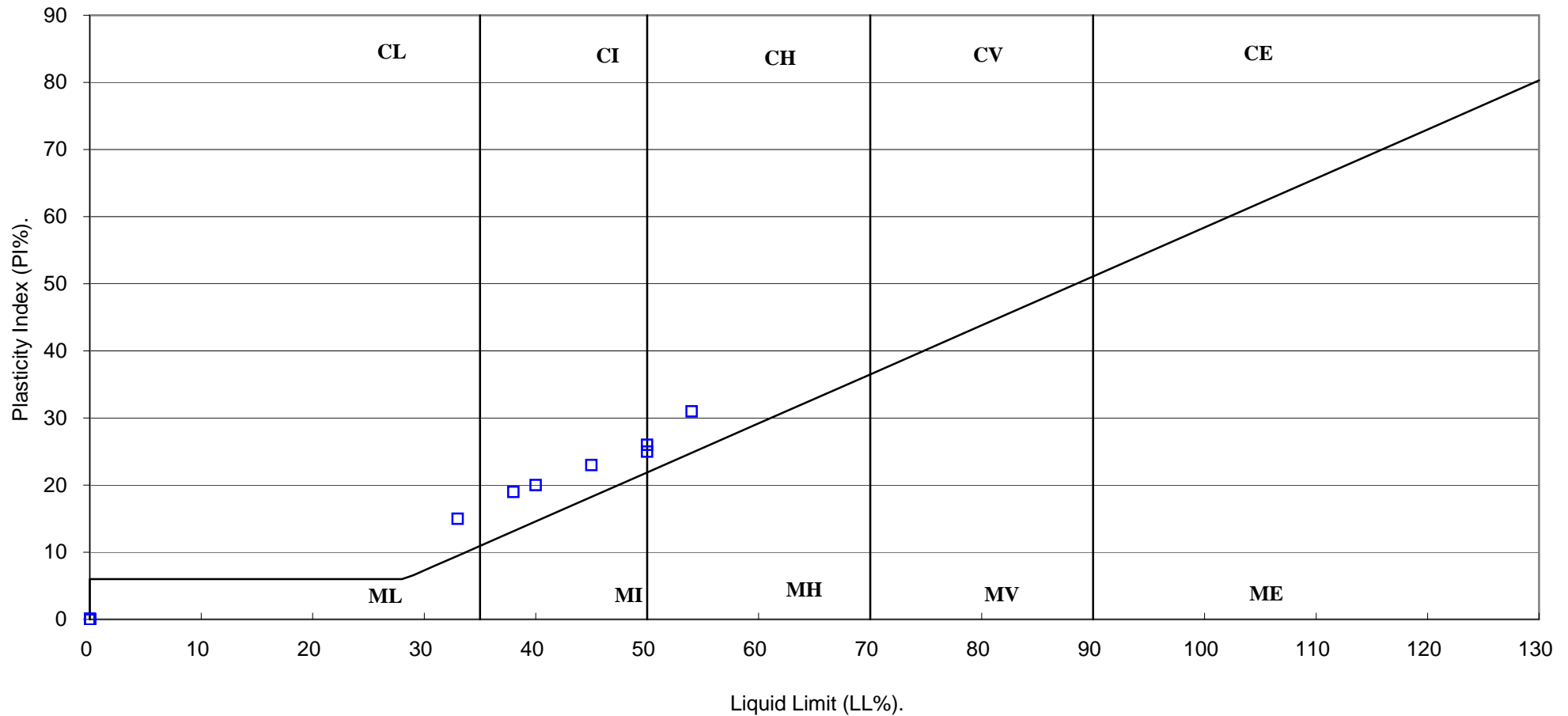
Page 1 of





# PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(B.S.5930 : 1999)



Compiled by	Date	Checked by	Date	Approved by	Date
<i>[Signature]</i>	17/10/14	<i>[Signature]</i>	17/10/14	<i>[Signature]</i>	17/10/14
<b>GLEN STREET, HEBBURN.</b>				Contract No:	PSL14/5166
				Client Ref:	C6149



## Certificate of Analysis

Certificate Number 14-18194

22-Oct-14

*Client* Professional Soils Laboratory Ltd  
5/7 Hexthorpe Road  
Hexthorpe  
DN4 0AR

*Our Reference* 14-18194

*Client Reference* PSL14/5166

*Contract Title* Glen Street, Hebburn

*Description* 8 Soil samples.

*Date Received* 15-Oct-14

*Date Started* 15-Oct-14

*Date Completed* 22-Oct-14

*Test Procedures* Identified by prefix DETSn (details on request).

*Notes* Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

*Approved By*

A handwritten signature in black ink, appearing to read 'Rob Brown'.

Rob Brown  
Business Manager



# Summary of Chemical Analysis

## Soil Samples

Our Ref 14-18194

Client Ref PSL14/5166

Contract Title Glen Street, Hebburn

<b>Lab No</b>	714374	714375	714376	714377	714378	714379	714380	714381
<b>Sample ID</b>	WS1	WS3	WS10	WS11	WS17	WS19	WS27A	WS30
<b>Depth</b>	1.60	1.60	1.30	0.90	2.50	1.90	2.00	1.60
<b>Other ID</b>								
<b>Sample Type</b>	D	D	D	D	D	D	D	D
<b>Sampling Date</b>	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
<b>Sampling Time</b>	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units								
<b>Inorganics</b>											
pH	DETSC 2008#			8.2	8.1	8.2	8.0	8.1	8.5	8.4	8.8
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	28	35	130	63	21	36	61	90



## Information in Support of the Analytical Results

Our Ref 14-18194  
Client Ref PSL14/5166  
Contract Glen Street, Hebburn

### Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
714374	WS1 1.60 SOIL		PT 1L	Sample date not supplied	
714375	WS3 1.60 SOIL		PT 1L	Sample date not supplied	
714376	WS10 1.30 SOIL		PT 1L	Sample date not supplied	
714377	WS11 0.90 SOIL		PT 1L	Sample date not supplied	
714378	WS17 2.50 SOIL		PT 1L	Sample date not supplied	
714379	WS19 1.90 SOIL		PT 1L	Sample date not supplied	
714380	WS27A 2.00 SOIL		PT 1L	Sample date not supplied	
714381	WS30 1.60 SOIL		PT 1L	Sample date not supplied	

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

### Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

### Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



## APPENDIX G

# GROUND GAS AND GROUNDWATER MONITORING RESULTS

# Ground Gas and Groundwater Monitoring Record Sheet



## JOB DETAILS:

Client: Gleeson Developments Ltd  
 Site: Glen Street, Hebburn  
 Date: 15/10/2014

Job No: C6149  
 Visit No: 1 of 6  
 Operator: TC Project Manager: APC

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA			Worst-credible GSVs		WELL AND WATER DATA					Comments		
	Methane (%v/v)		%LEL		Carbon dioxide (%v/v)		Carbon monoxide (ppmv)		Hydrogen sulphide (ppmv)		Oxygen (%v/v)		PID Peak (ppm)	Product thickness (mm)	Flow rate (l/hr)		Differential borehole Pressure (Pa)	Time for flow to equalise (secs)	Methane (l/hr)	CO2 (l/hr)	Water level (mbgl)	Depth of well (m)	Reduced level (mAOD)	Water level (mAOD)		Response Zone	
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Min.	Steady			Peak	Steady											Peak
WS1	ND	ND	ND	ND	0.6	0.6	ND	ND	ND	ND	20.4	20.4	ND	ND	0.2	0.2		2	0.0002	0.0012	0.32	3.00	NR	NR	NAT C	Water sample recovered	
WS3	ND	ND	ND	ND	2.0	2.0	ND	ND	ND	ND	18.9	18.9	ND	ND	0.1	0.1			0.0001	0.002	0.60	3.00	NR	NR	NAT C	Water sample recovered	
W11	ND	ND	ND	ND	1.7	1.7	ND	ND	ND	ND	19.5	19.5	ND	ND	-0.1	-0.1			0.0001	0.0017	1.46	3.00	NR	NR	NAT C	Water sample recovered	
WS16	ND	ND	ND	ND	0.6	0.6	ND	ND	ND	ND	19.7	19.7	ND	ND	-0.1	-0.1			0.0001	0.0006	1.00	3.00	NR	NR	MG C & NAT C	Water sample recovered	
WS19	ND	ND	ND	ND	0.8	0.8	ND	ND	ND	ND	17.0	17.0	0.2	ND	-0.1	-0.1			0.0001	0.0008	2.07	3.00	NR	NR	NAT C		
WS23	ND	ND	ND	ND	1.9	1.9	ND	ND	ND	ND	15.5	15.5	7.3	ND	-0.2	-0.2			0.0002	0.0038	1.64	3.00	NR	NR	COMBINED	Water sample recovered	
WS27A	ND	ND	ND	ND	2.3	2.3	ND	ND	ND	ND	9.5	9.5	2.1	ND	-0.3	-0.3			0.0003	0.0069	2.07	3.00	NR	NR	COMBINED		
WS29	ND	ND	ND	ND	1.4	1.4	ND	ND	ND	ND	20.0	20.0	1.4	ND	-0.2	-0.2			0.0002	0.0028	2.28	3.00	NR	NR	COMBINED		















## APPENDIX H

# SIRIUS GENERIC ASSESSMENT CRITERIA

# **SIRIUS GENERIC ASSESSMENT CRITERIA**

## **LEGISLATIVE AND RISK ASSESSMENT FRAMEWORK**

Under the Town and Country Planning Legislation, in order that a site may be redeveloped, the site needs to be suitable for its intended use. Part IIA of the Environmental Protection Act 1990 (EPA) provides a legal framework for identifying and dealing with contaminated land.

The Contaminated Land (England) Regulations 2000 were issued in accordance with the provision with the EPA. The regulations define Contaminated Land as land “in such condition, by reason of substances in, on, or under the land, that: significant harm is being caused, or pollution of controlled waters is being or is likely to be caused”.

In the UK the determination of whether land can be classified as contaminated land and whether land is suitable for its intended use are both based upon risk assessment. The methodology for undertaking such risk assessments has been published by DEFRA and the Environment Agency. This is based upon the concept of potential source-pathway-receptor relationships to determine whether there are pollutant linkages operating in a particular end use.

The framework for conducting site investigations, risk assessments and undertaking any necessary remedial works is presented in the Environment Agency report CLR11 “Model Procedures for the Management of Contaminated Land”. This presents a tiered approach to risk assessment: analysis of potential pollutant linkages via a Conceptual Site Model; comparison of contaminant concentrations with Soil Guideline Values or other Generic Assessment Criteria (Generic Quantitative Risk Assessment; GQRA); and, if required, a Detailed Quantitative Risk Assessment (DQRA) based on site-specific conditions.

### **Human Health**

Where Soil Guideline Values (SGV) have been published by the Environment Agency, these have been used by Sirius as the basis for human health Generic Assessment Criteria (GAC).

For metals and metalloids, SGVs have been applied directly for the “Residential With Plant Uptake” and “Commercial” land uses as the SGVs are not sensitive to soil type nor soil organic matter content. For the “Residential Without Plant Uptake” land use, GAC values have been derived by Sirius using CLEA versions 1.04 and 1.06, the contaminant parameter values presented in the SGV reports and the relevant guidance presented in the Environment Agency Science Report SC050021 series. For organics, GAC values have been derived using the same approach for a sandy soil type at a range of SOM contents. The sandy soil type is conservative for the majority of soils (including made ground) encountered on historically contaminated sites.

In the absence of published SGVs, Sirius has normally derived GAC values using CLEA versions 1.04 and 1.06 and the authoritative parameter data presented in Nathanail *et al.* (2009) “The LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment”, 2nd edition, Land Quality Press, Nottingham.

Where neither SGVs nor authoritative third party reports were available, GAC values were derived by Sirius using the CLEA version 1.04 and 1.06 models in accordance with the guidance published by the Environment Agency in the SC050021 report series. Full details of the derivation of these GAC values can be provided upon request.

### **Controlled Waters**

The Environment Agency’s “Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources”, R&D Publication 20, provides a framework for assessing the potential for pollution of controlled waters and for deriving remedial target concentrations in soil and groundwater. In relation to the standards for controlled waters, there are currently no generic groundwater nor surface water standards that are applicable to all sites. However, the UK Drinking Water Standards and the Environment Agency’s national Environmental Quality Standards (EQS) are considered appropriate assessment criteria for many cases.

### **Soil Leachability**

A screening assessment has been carried out using leachability data obtained from tests performed on soils at the site, to assess the potential risks to local controlled waters, including groundwater. The Environment Agency’s Remedial Targets

Methodology recommends the use of the BS EN 12475 leachate methods and this is adopted by Sirius.

The results of the leachate analysis have been compared to relevant criteria derived from Environment Agency (2002) "Technical Advice to Third Parties on Pollution of Controlled Waters for Part IIA, EPA1990" and The Water Supply (Water Quality) Regulations 1989, as amended (2001 and 2007).

### **Buried Concrete**

A generic assessment is made in relation to the potential impact on buried concrete by reference to BRE Special Digest No. 1; 3rd Edition (2005) "Concrete in Aggressive Ground".

## SIRIUS HUMAN HEALTH GENERIC ASSESSMENT CRITERIA – SOILS

Parameter	Residential (mg/kg, unless otherwise stated)						Commercial / Industrial (mg/kg, unless otherwise stated)			Source
	With Plant Uptake			Without Plant Uptake			1% SOM	2.5% SOM	5% SOM	
	1% SOM	2.5% SOM	5% SOM	1% SOM	2.5% SOM	5% SOM				
<b>Metals/Metalloids</b>										
Arsenic (inorganic)	32			35			640			Arsenic SGV <sup>[a]</sup>
Boron	290			10300			190000			Sirius/LQM/CIEH <sup>[b]</sup>
Cadmium <sup>[c]</sup>	10			18			230			Cadmium SGV
Chromium (III) <sup>[d]</sup>	3000			3000			30000			Sirius/LQM/CIEH
Copper	200 <sup>[e]</sup>			6200			72000			See note <sup>[a]</sup>
Lead	450			450			750			SGV 10 <sup>[f]</sup>
Mercury (inorganic) <sup>[g]</sup>	170			240			3600			Mercury SGV
Nickel	130			130			1800			Nickel SGV
Selenium	350			600			13000			Selenium SGV
Vanadium	74			190			3200			Sirius/LQM/CIEH
Zinc	450 <sup>[e]</sup>			40000			600000			See note <sup>[a]</sup>
<b>Other Inorganics</b>										
pH	<5			<5			<5			
Total Sulphate	2400			2400			2400			BRE (2005) <sup>[h]</sup>
Water-Soluble Sulphate	0.5 g/l			0.5 g/l			0.5 g/l			BRE (2005)
Free Cyanide	34			34			1400			Acute risk calc. <sup>[i]</sup>
<b>Organics</b>										
<b>PAHs</b>										
Acenaphthene	200	460	840	1400	2400	3200	77000	93000	100000	Sirius/LQM/CIEH
Acenaphthylene	160	380	710	1400	2400	3200	77000	93000	100000	Sirius/LQM/CIEH
Anthracene	2200	4900	8200	19000	22000	23000	520000	540000	540000	Sirius/LQM/CIEH
Benzo(a)anthracene	3.3	4.9	5.8	4.1	5.5	6.2	91	96	98	Sirius/LQM/CIEH
Benzo(a)pyrene	0.83	0.94	1.0	1.0	1.0	1.0	14	14	15	Sirius/LQM/CIEH
Benzo(b)fluoranthene	5.6	6.5	7.0	7.0	7.3	7.4	100	100	100	Sirius/LQM/CIEH
Benzo(g,h,i)perylene	44	46	47	47	47	48	660	660	660	Sirius/LQM/CIEH
Benzo(k)fluoranthene	8.5	9.6	10	10	10	10	140	140	140	Sirius/LQM/CIEH

Parameter	Residential (mg/kg, unless otherwise stated)						Commercial / Industrial (mg/kg, unless otherwise stated)			Source
	With Plant Uptake			Without Plant Uptake			1% SOM	2.5% SOM	5% SOM	
	1% SOM	2.5% SOM	5% SOM	1% SOM	2.5% SOM	5% SOM				
Chrysene	6.1	8.1	9.1	9.0	9.8	10	140	140	140	Sirius/LQM/CIEH
Dibenz(a,h)anthracene	0.77	0.86	0.90	0.87	0.91	0.93	13	13	13	Sirius/LQM/CIEH
Fluoranthene	260	460	630	980	1000	1000	23000	23000	23000	Sirius/LQM/CIEH
Fluorene	160	370	660	1500	2200	2600	61000	67000	70000	Sirius/LQM/CIEH
Indeno(1,2,3-cd)pyrene	3.2	3.9	4.1	4.2	4.4	4.4	61	62	62	Sirius/LQM/CIEH
Naphthalene	0.68	1.6	3.2	0.7	1.7	3.3	110	270	540	Sirius/LQM/CIEH
Phenanthrene	92	200	330	820	920	960	22000	22000	23000	Sirius/LQM/CIEH
Pyrene	560	1000	1500	2300	2400	2400	54000	54000	55000	Sirius/LQM/CIEH
<b>BTEX and related</b>										
Benzene	0.054	0.11	0.20	0.11	0.21	0.38	16	30	52	Sirius/CLEA <sup>II</sup>
Toluene	92	210	410	260	570	1070	840	1900	3600	Sirius/CLEA
Ethylbenzene	42	100	200	70	160	320	510	1200	2400	Sirius/CLEA
Xylenes (total) <sup>(A)</sup>	20	47	92	22	52	100	470	1100	2200	Sirius/CLEA
1,2,4-trimethylbenzene	0.16	0.39	0.76	0.17	0.41	0.81	23	55	110	Sirius/CLEA/EIC <sup>III</sup>
Iso-propylbenzene	4.7	11	23	4.8	12	23	750	1800	3600	Sirius/CLEA/EIC
Propylbenzene	15	37	54	16	40	79	2200	5400	10400	Sirius/CLEA/EIC
Styrene	6.1	14	28	15	34	65	2000	4100	6900	Sirius/CLEA/EIC
<b>TPH</b>										
Aliphatic EC 5-6	17	28	47	29	53	93	2500	4300	7200	Sirius/LQM/CIEH
Aliphatic EC >6-8	36	77	150	70	160	300	5500	12000	22000	Sirius/LQM/CIEH
Aliphatic EC >8-10	8.8	22	42	18	44	88	1300	3200	6300	Sirius/LQM/CIEH
Aliphatic EC >10-12	43	110	210	90	220	440	6400	15000	29000	Sirius/LQM/CIEH
Aliphatic EC >12-16	350	850	1600	720	1600	2700	44000	73000	85000	Sirius/LQM/CIEH
Aliphatic EC >16-35	29000	48000	62000	44000	64000	74000	No GAC <sup>(IV)</sup>	No GAC	No GAC	Sirius/LQM/CIEH
Aliphatic EC >35-44	29000	48000	62000	44000	64000	74000	No GAC	No GAC	No GAC	Sirius/LQM/CIEH
Aromatic EC >5-7	0.054	0.11	0.20	0.11	0.21	0.38	16	30	52	Set as benzene
Aromatic EC >7-8	92	210	410	610	1290	2300	35000	71000	120000	Sirius/LQM/CIEH

Parameter	Residential (mg/kg, unless otherwise stated)						Commercial / Industrial (mg/kg, unless otherwise stated)			Source
	With Plant Uptake			Without Plant Uptake			1% SOM	2.5% SOM	5% SOM	
	1% SOM	2.5% SOM	5% SOM	1% SOM	2.5% SOM	5% SOM				
Aromatic EC >8-10	14	34	68	32	78	150	2300	5400	10000	Sirius/LQM/CIEH
Aromatic EC >10-12	54	130	250	170	400	730	11000	23000	30000	Sirius/LQM/CIEH
Aromatic EC >12-16	140	300	520	1200	1600	1700	35000	37000	38000	Sirius/LQM/CIEH
Aromatic EC >16-21	250	480	710	1300	1300	1300	28000	28000	28000	Sirius/LQM/CIEH
Aromatic EC >21-35	890	1100	1200	1300	1300	1300	28000	28000	28000	Sirius/LQM/CIEH
Aromatic EC >35-44	890	1100	1200	1300	1300	1300	28000	28000	28000	Sirius/LQM/CIEH
<b>Chlorinated Organics</b>										
Chlorobenzene	0.14	0.31	0.61	0.14	0.31	0.61	33	75	150	Sirius/LQM/CIEH
Dichloromethane (DCM)	0.41	0.7	1.0	0.83	1.2	1.7	140	200	290	Sirius/CLEA/EIC
1,1-dichloroethane (DCA)	1.0	1.7	2.8	1.0	1.7	2.9	150	250	420	Sirius/CLEA/EIC
1,2-dichloroethane (DCA)	0.0022	0.0035	0.0055	0.0024	0.0037	0.0059	0.36	0.55	0.86	Sirius/LQM/CIEH
1,1-dichloroethene (DCE)	0.10	0.18	0.32	0.10	0.18	0.32	15	28	48	Sirius/CLEA/EIC
<i>cis</i> -1,2-dichloroethene (DCE)	0.05	0.08	0.14	0.05	0.09	0.19	7.7	14	24	Sirius/CLEA/EIC
<i>trans</i> -1,2-dichloroethene (DCE)	0.08	0.15	0.27	0.08	0.15	0.27	12	23	41	Sirius/CLEA/EIC
Pentachlorophenol	0.54	1.3	2.5	23	31	35	1200	1300	1400	Sirius/LQM/CIEH
1,1,1,2-tetrachloroethane	0.41	0.96	1.9	0.44	1.0	2	63	150	280	Sirius/LQM/CIEH
1,1,2,2-tetrachloroethane	0.78	1.7	3.2	1.1	2.4	4.4	160	330	600	Sirius/LQM/CIEH
Tetrachloroethene (PCE)	0.41	0.94	1.8	0.43	0.96	1.9	72	163	310	Sirius/LQM/CIEH
Tetrachloromethane	0.0078	0.017	0.033	0.0078	0.017	0.033	1.7	3.8	7.3	Sirius/LQM/CIEH
1,1,1-trichloroethane (TCA)	2.6	5.5	10	2.7	5.5	10	390	820	1500	Sirius/LQM/CIEH
1,1,2-trichloroethane (TCA)	0.30	0.64	1.2	0.36	0.76	1.4	51	110	200	Sirius/CLEA/EIC
Trichloroethene (TCE)	0.045	0.1	0.18	0.046	0.098	0.19	6.6	14	27	Sirius/LQM/CIEH
Trichloromethane	0.34	0.63	1.1	0.37	0.68	1.2	57	110	190	Sirius/LQM/CIEH
Vinyl Chloride	0.00024	0.00032	0.00045	0.00026	0.00034	0.00047	0.04	0.052	0.072	Sirius/LQM/CIEH
<b>Miscellaneous Organics</b>										
Carbon disulphide	0.047	0.094	0.17	0.047	0.094	0.17	7.1	14	27	Sirius/LQM/CIEH
Di-(2-ethylhexyl)-phthalate	280	610	1000	2700	2800	2800	85000	86000	86000	Sirius/CLEA/EIC

Parameter	Residential (mg/kg, unless otherwise stated)						Commercial / Industrial (mg/kg, unless otherwise stated)			Source
	With Plant Uptake			Without Plant Uptake			1% SOM	2.5% SOM	5% SOM	
	1% SOM	2.5% SOM	5% SOM	1% SOM	2.5% SOM	5% SOM				
MTBE	23	40	70	28	48	81	4000	6900	12000	Sirius/CLEA/EIC
Phenol	180	290	392	310	420	510	3200 <sup>[b]</sup>			Phenol SGV
Methylphenols (cresols), total [o]	77	170	330	3900	5600	6800	160000	160000	160000	Sirius/CLEA/EIC
2,4-dimethylphenol (m-xylene)	18	41	78	140	300	500	14000	22000	27000	Sirius/CLEA/EIC

All values are rounded to 1 or 2 significant figures.



## Notes:

[a] SGV reports comprise the SGV, TOX and supporting contaminant-specific reports published by the Environment Agency as part of the Science Report SC050021 series. SGV values are applied directly as the criteria are not sensitive to soil type nor SOM content. For the "Residential Without Plant Uptake" land use, GAC values have been derived by Sirius using CLEA version 1.06 and the published model parameter and chemical property data.

[b] Calculated by Sirius for sandy soil in CLEA version 1.06 using the toxicological, model parameter and chemical property data presented in Nathanail et al. (2009) "The LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment", 2nd edition, Land Quality Press, Nottingham.

[c] The SGV and GAC values for cadmium are based on data for soils having a pH value in the range 6-8. Caution should be applied in applying them at pH values outside this range, especially at pH values <5.

[d] GAC for Cr (III) also applied for total chromium, as hexavalent chromium does not persist to a significant extent in soils under normal conditions (further information can be provided upon request). A SSAC will be required for sites where historical information indicate that Cr (VI) was handled or generated on site, when analytical data demonstrate Cr (VI) is present or when soil conditions indicate that Cr (VI) will persist in situ.

[e] For the 'Residential with Plant Uptake' end-use, the GAC values for Cu and Zn are based on potential phytotoxic effects and have been set at the maximum allowable concentrations for sewage sludge-amended soils presented in the "Sludge (Use in Agriculture) Regulations" (SI 1263/1989). The equivalent GAC values for human health protection in this land-use are: Cu, 2300 mg/kg; Zn, 3700 mg/kg (LQM/CIEH values - Nathanail et al., 2009). The GAC values for the other land uses presented are human health-based criteria presented in Nathanail et al. (2009). In cases where soils in those land uses may be used for vegetation purposes, then the 'Residential with Plant Uptake' GAC values may be applied. However, for all cases where the GAC is set on the basis of potential phytotoxicity, alternative criteria will be derived where elevated natural background soil concentrations of these metals have been demonstrated.

[f] SGV10 has been retained as the most appropriate source of a GAC for lead, given the specific blood lead calculation methods and input data applied.

[g] The SGV for mercury is based on inorganic mercury which represents the most common form encountered within the environment. This is considered appropriate for most sites as: "...the SGV for inorganic mercury can normally be compared with chemical analysis for total mercury content because the equilibrium concentrations of elemental and methylmercury compounds are likely to be very low" (SC050021/Mercury SGV). Analysis and specific assessment for elemental or methylated forms of mercury will need to be considered if historical land use or site-specific factors indicate that these forms of mercury are likely to be present.

[h] BRE (2005) Special Digest 1, 3rd Edition "Concrete in aggressive ground". Sulphate is not considered to pose a potential risk to human health under normal circumstances – this GAC applies to construction cases only and is set at the upper limit for DS-1 Design Sulphate Class concrete.

[i] GAC calculated for acute risk. Further information can be provided upon request.

[j] Calculated by Sirius for all land uses using CLEA version 1.06 and the toxicological, model parameter and chemical property data published by the Environment Agency (Science Report SC050021 Series).

[k] For screening purposes, a single GAC has been set for total xylene. This is the lowest of the values calculated for the three individual xylene isomers.

[l] Calculated by Sirius for all land uses using CLEA version 1.06 and the toxicological, model parameter and chemical property data published by CL:AIRE in association with the AGS and EIC (December 2009).

[m] "No GAC" indicates that no value has been specified for this land use as the HCV cannot be exceeded at achievable soil concentrations.

[n] The GAC for Commercial/Industrial land use is based on the threshold protective of direct skin contact with phenol (See SR050021/Phenol SGV).

[o] For screening purposes, a single GAC has been set for total methylphenol. This is the lowest of the values calculated for the three individual methylphenol isomers.

[p] The Hazardous Waste (England and Wales) Regulations 2005. TOC content in itself does not represent a potential risk to human health. This GAC is provided for indicative assessment of disposal options, in the case that off-site landfill of soil is undertaken. This GAC is specified at the 'Inert' waste threshold and should be considered as for information purposes only.

[q] ICRCL (1986) Guidance Note 61/84, 2nd Edition, Notes on the Fire Hazards of Contaminated Land. Calorific value is not an indication of chronic human health risk but may be useful in assessment of the potential fire risk posed by made ground or natural soils containing elevated concentrations of potentially combustible organic matter.

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## GAC VALUES FOR CONTROLLED WATERS IN ENGLAND AND WALES

Parameter	GAC (µg/l, unless stated)			Notes
	Inland waters		Coastal and transition waters	
	EQS	DWS	EQS	
<b>Metals and metalloids</b>				
Arsenic	50	10	25	1
Cadmium	See separate table	5	0.2	1, 2
Chromium (total)	4.7	50	4.7	1, 3
Copper	See separate table	2000	5	1, 2
Lead	7.2	25	7.2	1
Mercury	0.05	1	0.05	1
Nickel	20	20	20	1
Zinc	See separate table	5000	40	1, 2
<b>Misc. inorganics</b>				
Ammonia (total, as N)	See separate table	N.A.	N.A.	2, 4
Ammonia (total, as NH <sub>4</sub> <sup>+</sup> )	N.A.	500	N.A.	
Ammonia (un-ionised (NH <sub>3</sub> ), as N)	N.A.	N.A.	21	
Sulphate	400 mg/l	250 mg/l	N.A.	5
<b>Petroleum hydrocarbons and related</b>				
TPH	See notes	See notes	See notes	6, 7
Benzene	10	1	8	
Toluene	50	700	40	8
Xylenes (sum)	30	500	30	8
MTBE	2600	200	2600	9, 10
<b>PAHs</b>				
Anthracene	0.1	N.A.	0.1	
Benzo(b)fluoranthene + Benzo(k)fluoranthene (sum)	0.03	Sum of 4 = 0.1	0.03	
Benzo(g,h,i)perylene + indeno(1,2,3-c,d)pyrene (sum)	0.002		0.002	
Benzo(a)pyrene	0.05	0.01	0.05	
Fluoranthene	0.1	N.A.	0.1	
Naphthalene	2.4	N.A.	1.2	
<b>Phenol</b>				
Phenol	7.7	0.5	7.7	

Cadmium - inland waters EQS	
Hardness (as mg/l CaCO <sub>3</sub> )	EQS (µg/l)
<40	0.08
40-50	0.08
50-100	0.09
100-200	0.15
>=200	0.25

Copper & zinc - inland waters EQS		
Hardness (as mg/l CaCO <sub>3</sub> )	EQS (µg/l)	
	Cu	Zn
0-50	1	8
50-100	6	50
100-250	10	75
>250	28	125

Ammonia - inland waters EQS		
Alkalinity (as mg/l CaCO <sub>3</sub> )	Altitude	EQS (µg/l)
<10	Any	300
10-50	Any	300
50-100	<80m	600
50-100	>80m	300
100-200	<80m	600
100-200	>80m	300
>200	Any	600



Parameter	GAC (µg/l, unless stated)			Notes
	Inland waters		Coastal and transition waters	
	EQS	DWS	EQS	
<b>Chlorinated organics</b>				
Dichloromethane	20	N.A.	20	
Trichloromethane (chloroform)	2.5	100	2.5	11
Tetrachloromethane (carbon tetrachloride)	12	3	12	
1,2-dichloroethane (1,2-DCA)	10	N.A.	10	
1,1,1-trichloroethane (1,1,1-TCA)	100	N.A.	100	
1,1,2-trichloroethane (1,1,2-TCA)	400	N.A.	300	
Trichloroethene (TCE)	10	Sum of 2 = 10	10	
Tetrachloroethene (PCE)	10		10	
Vinyl chloride	N.A.	0.5	N.A.	

**Notes referenced in table:**

1. Metals and metalloid EQS relate to dissolved contamination only (i.e. analysis of filtered samples).
2. Inland waters EQS for these parameters is dependent upon hardness or alkalinity of the *receiving water*. See separate tables.
3. Separate EQS standards exist for Cr III and CrVI in fresh water. Cr III value adopted as screening purposes for total Cr analysis as it is normally the predominant form in solution. Specific EQS for Cr VI (3.4µg/l in freshwater; 0.6µg/l in transition and coastal waters) must be applied where relevant.
4. EQS for ammonia in inland waters also depends on altitude of receptor water body. See separate table.
5. Inland waters EQS for sulphate is non-statutory.
6. No concentration based EQS exists for TPH. Hydrocarbons must not: form a visible film on the surface of the water; form coatings on the beds of water bodies: impart a detectable 'hydrocarbon' taste to fish; or, produce harmful effects in fish.
7. No concentration based DWS exists for TPH. Subject to justification on a case-specific basis, it may be appropriate to apply 200µg/l TPH as a GAC on the basis that this is the DW2 Class threshold limit specified in the Surface Water (Abstraction for Drinking Water) (Classification) Regulations 1996. DW2 waters are generally suitable for abstraction as drinking water supplies, subject to standard filtration and chemical treatment.
8. World Health Organisation (WHO) Guidelines for Drinking Water Quality, 1984 - health value.
9. EQS for MTBE is the PNEC value for fresh and sea water life given in: EU Risk Assessment Report (2002) MTBE, 3rd Priority List, volume 19.
10. DWS for MTBE is a 5-fold dilution of the USEPA (1997) Drinking Water Advisory value for taint, EPA-822-F-97-009. Toxicological thresholds are significantly higher.
11. Sum trihalomethanes limit is 100µg/l but chloroform is only compound of this class normally encountered at contaminated sites.

**Sources and general comments**

Unless otherwise stated, EQS-based GACs relate to "Good Standard" annual average surface water quality criteria as given in: The River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Directions 2010.

Unless otherwise stated, drinking water standard-based GACs are taken from the Water Supply (Water Quality) (Amendment) Regulations 2000, 2001 and 2007 and relate to concentration at the supply point and/or consumers' taps.

This list presents recommended GAC values for commonly monitored analytes but is not exhaustive. A comprehensive database of criteria is available at: <http://evidence.environment-agency.gov.uk/ChemicalStandards/home.aspx>.

Other EQS-based criteria may apply in specific cases and regulatory guidance should be sought in case of doubt.

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