

PHASE I PRELIMINARY CONTAMINATION RISK ASSESSMENT



LAND ADJACENT TO PENSHAW HILL HOUSE, CHESTER ROAD, SUNDERLAND, SR4 9JX
PREPARED FOR GREEN DEVELOPMENTS LIMITED

GEOL
CONSULTANTS LTD



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QUALITY CONTROL

Project No.	GEOL24-7117	Client	Green Developments Limited
Design Team	John Taylor Architects Limited		
Report Type	Phase I Preliminary Contamination Risk Assessment		
Project Type	Proposed Commercial Development (Pizza Café)		
Site Address	Land adjacent to Penshaw Hill House, Chester Road, Sunderland, SR4 9JX		
NGR	433560, 554300		
Date	31/03/2024		
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Position	Director		

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REPORT REVISION HISTORY				
Issue	Description	Date	Author	Approval
1	Final Issue	31/03/2024	WH	TMc

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1.0 Introduction

Geol Consultants Limited (GEOL) were instructed by John Taylor Architects Limited on behalf of Green Developments Limited to undertake a Phase I Preliminary Contamination Risk Assessment (PCRA) to facilitate a new commercial development (Pizza Café) on land adjacent to Penshaw Hill House off Chester Road, Sunderland, SR4 9JX. The site currently comprises building materials, shipping container, caravan and 2 no. stockpiles, one being rock and the other comprising earth. Proposals have been made to construct 1 no. commercial property with associated vehicle parking. The National Grid Reference for the centre of the site is 433560, 554300.

The purpose of this PCRA is to provide information relating to the following.

- ▼ Identify the environmental setting and likely ground conditions for the site, including details relating to the deeper geology, hydrogeology, hydrology, mining and mineral safeguarding
- ▼ Identify the sites previous development history, usage, and activities with a view to determining any potential contaminants associated with the recorded site history and to assess the impacts from those contaminants towards the future site end-users (Human Health) and nearby sensitive receptors (Controlled Waters)
- ▼ Assess all potential sources of hazardous ground gas generation
- ▼ Establish a preliminary Conceptual Site Model (CSM) and to identify all potential source, pathway, and receptor linkages
- ▼ Determine the scope of any further investigation works required for the site prior to commencing with the proposed commercial development

As part of this PCRA, a reconnaissance (walkover) survey was undertaken which involved an inspection of the site and immediate surrounding area. Site photographs taken during this survey can be seen in Appendix I and all relevant observations are noted in the Site Details section on the following page.

A review of currently available information from the following data sources has been undertaken to assist in the completion of this technical report.

- ▼ British Geological Survey (BGS); geological maps, historical borehole records, where applicable
- ▼ Landmark Information Group, Envirocheck Report; including Ordnance Survey (OS) maps
- ▼ The Coal Authority; Online Interactive Map Viewer, Consultants Coal Mining Report
- ▼ Environment Agency / GOV.UK
- ▼ Relevant guidance documents, these are listed within the report text, where applicable

2.0 Site Details

All relevant details and descriptions relating to the proposed development area (site) have been summarised in the Table below.

Detail	Description
Site address and access	Land adjacent to Penshaw Hill House, Chester Road, Sunderland, SR4 9JX
NGR	433560, 554300
Shape and approximate size	Irregular shaped parcel of land, occupying an area of 0.09Ha
Current site use	The site comprises a storage area for building materials, shipping container, caravan and 2 no. stockpiles (rock / earth)
Proposed site use	Proposals have been made to construct 1 no. commercial property (Pizza Café) with associated vehicle parking
Surrounding land uses	The site is situated just outside of the village of Penshaw with the adjoining land being predominantly undeveloped. Penshaw Monument is located c.200m northwest of the site
Site topography	The site is relatively flat with a slope to the south at the entrance
Additional features	Prior to undertaking any future investigation or construction works it would be prudent to obtain all existing utility / service plans, to avoid any unnecessary damage to any live services which may pass below the site

3.0 Site Geology

In accordance with available BGS data and published maps, reference; Sheet NZ35SW, 1:10,560 scale, dated 1971, the site lies within an area where superficial (drift) deposits are present and mostly comprise Devensian Till, deposited up to 116,000 years during the Quaternary Period. The southern boundary of the site comprises the Pelaw Clay Member of the same age.

The underlying bedrock deposits beneath the southern site area are shown to consist of the Pennine Middle Coal Measures Formation (comprising sandstone), deposited between 310 and 318 million years ago during the Carboniferous Period.

The bedrock deposits in the northern portion of the site are shown to consist of the Yellow Sands Formations (sandstone), deposited between 251.9 and 298.9 million years ago during the Permian Period. No geological faults are mapped running through or close to the site.

Whilst no artificial deposits are recorded over the site area in accordance with available BGS mapping, made ground deposits are to be expected, associated with the current site-use.

3.0 Site Geology (Cont'd)

Ground stability hazards on the site are listed in the Landmark Envirocheck Datasheet as no hazard, very low, low, and moderate.

4.0 Coal Mining

The site lies in a Coalfield Consultation Area.

The Coal Authority has divided the coalfield into two areas, referred to as development high risk areas (DHRA's), and development low risk areas (DLRA's). The DHRA forms 15% of the coalfield area, where coal mining risks could be present at shallow depth which could have the potential to affect new developments. The DLRA forms 85% of the coalfield where past coal mining activity has taken place at such depth that it poses a low risk to new development.

The site is shown to lie within a DLRA and is not shown to be underlain by past recorded or probable shallow coal workings. As such a CMRA to evaluate coal mining legacy risks is therefore not required to support the planning application for the proposed development at the site, as the risks from coal mining have already been ruled out by the Coal Authority in accordance with their guidance document Risk Based Approach to Development Management, Guidance for Developers, Version 4, 2017.

For completeness a site-specific Consultants Coal Mining Report has been obtained directly from the Coal Authority, a copy of which can be seen attached in Appendix III.

5.0 Historical Map Review

Copies of OS maps covering the site and adjacent land are contained within the Landmark Information Group, Envirocheck Report attached in Appendix II. The information contained within the Table below and on the following page has been based on available OS maps and the observations noted during the reconnaissance (walkover) survey completed.

OS map date	Site	Adjacent land
1862 to 1880	A path is shown to pass through the northern site area, aligned northeast to southwest	The area around the site generally comprises undeveloped land. There are 2 no. buildings present c.60m east labelled as Painshaw Hill House

5.0 Historical Map Review (Cont'd)

OS map date	Site	Adjacent land
1862 to 1880 (Cont'd)	As previous	There are 3 no. Old Quarries (Limestone) situated c.75m, c.150m and c.200m northwest of the site, as well as an Old Sand Pit mapped c.90m northeast. Painshaw Hill Quarry (Limestone) and an Old Lime Kiln are both labelled c.60m north of the site. A track leading to the quarries has been mapped as being built up, directly north of the site. The Earl of Durham's Monument is also present c.150m northwest. A road later labelled as Chester Road runs adjacent to the site's southern boundary, aligned northeast to southwest
1896 to 1975	The path is no longer running through the site	All the Old Quarries (Limestone), Old Sand Pit, and Old Lime Kiln are no longer mapped, and Painshaw Hill Quarry is now labelled as disused
1977 to 1993	By 1985 the site is shown to be covered in scrub. By 1993 the site is shown to be vacant	A new road has been constructed c.75m south of the site which is labelled as Chester Road
1999 to 2023	Aerial photography of the site shows it to be covered by hardstanding with no structures present	Aerial photography shows a building has been constructed immediately west of the site. The disused quarry to the north of the site is now covered by grass and shrubbery

The OS mapping indicates the site has historically comprised undeveloped land, since the earliest published mapping (1862).

Aerial photography of the site taken in 1999 shows the site to be covered in hardstanding but the site remains vacant.

A reconnaissance (walkover) survey was undertaken by GEOL, during March 2024. The survey involved walking over the site and the surrounding area, recording all observed information which may be relevant to the project. The reconnaissance survey identified the site as being used for storage of construction materials as well as 2 no. stockpiles being present. Photographs taken during the reconnaissance (walkover) survey can be seen attached in Appendix I.

6.0 Environmental Setting

6.1 Surface Mineral Extraction / Quarrying

Based on OS maps dating from 1862 to 2023, there is evidence of historical surface mineral extraction or quarrying features recorded within a plausible, lateral migration distance (<250m) comprising multiple limestone quarries between c.60m and 200m from the site's boundaries.

6.2 Hydrogeology

The Devensian Till deposits underlying most of the site are designated as a Secondary Undifferentiated Aquifer. Secondary Undifferentiated Aquifers are Aquifers where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the drift or rock type. The Pelaw Clay Member deposits present along the southern site boundary are designated as an Unproductive Aquifer. Unproductive Aquifers are largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them.

The Permian Yellow Sands Formation underlying the northern site area are designated as a Principal Aquifer with high vulnerability. Principal Aquifers provide significant quantities of water and can support water supply and / or baseflow to rivers, lakes, and wetlands on a strategic scale. The Pennine Middle Coal Measures Formation, which is mapped in the southern site area, is designated as a Secondary A Aquifer with high vulnerability. Secondary A Aquifers comprise permeable layers that can support local water supplies, and may form an important source of base flow to rivers.

When considering the anticipated ground conditions below the site, the groundwater table is expected to be at depth within the bedrock geology. However, water strikes may occur at shallow depths within the superficial deposits, originating from perched / trapped water within granular layers. The Landmark Information Group, Envirocheck Report records no Water Abstractions or Source Protection Zones within 500m of the site. When considering the recorded site history, the site is not considered to represent a significant risk to groundwater or drinking water supplies / abstractions.

6.3 Hydrology

The nearest surface water feature is recorded 401m south of the site associated with a duck pond. The site lies within a Flood Zone 1, an area with a low probability of flooding with <1 in 1000 chance of fluvial flooding occurring (<0.1%), and therefore this site is unlikely to be at significant risk from future flooding.

6.0 Environmental Setting (Cont'd)

6.3 Hydrology (Cont'd)

According to the GOV.UK Long Term Flood Risk Information Interactive Map, the site is shown to lie within an area at very low risk (<0.1%) of surface water (pluvial) flooding occurring. Appropriate surface water management will need to be adopted to deal with the future management of positively drained surface water, when considering the future development of this site.

During the reconnaissance (walkover) survey there were no significant areas of standing surface water noted.

The site has been identified in the Landmark Information Group, Envirocheck Report as having limited potential for groundwater flooding to occur.

6.4 Landfill & Waste

The Landmark Information Group, Envirocheck Report identifies no Landfill Sites, Waste Management Facilities or Waste Transfer Sites within a plausible migration distance (<250m) of the site's boundaries.

The Landmark Information Group, Envirocheck Report identifies 2 no. records of potentially infilled land (non-water) within 250m of the site, 1 no. located on site and 64m northeast.

6.5 Radon Assessment

The BRE Digest, BR211 (2015 & 2023) Radon: Guidance on protective measures for new buildings, indicates the site to lie within a clear grid square (1km) where no radon protective measures will be required for new structures. Reference to the UKRadon.org mapping indicated the site is located in a band of radon potential where 1% - 3% of homes at or above the Action Level.

The Landmark Information Group, Envirocheck Report records the site to lie in an intermediate probability radon area, where 1% - 3% of homes are estimated to be at or above the Action Level in accordance with data held by the BGS, and their assessment also indicates that no radon protection measures are necessary in the construction of new dwellings or extensions.

6.0 Environmental Setting (Cont'd)

6.6 Site Ecology

The Landmark Information Group, Envirocheck Report records the site to lie within an Area of Adopted Green Belt as well as 2 no. Nitrate Vulnerable Zones. These are areas designated as being at risk from agricultural nitrate pollution. A Site of Special Scientific Interest (SSSI) is also recorded 308m north of the site, named Dawsons Plantation Quarry. No other areas of sensitive land use are recorded within a 500m radius of the site.

During the reconnaissance (walkover) survey completed, there was no obvious evidence to suggest the site is affected by the presence of invasive weed species (i.e. Japanese Knotweed).

7.0 Regulatory Database

The information given in the Table below has been obtained from a commercially available database and is contained within the Landmark Information Group, Envirocheck Report attached in Appendix II. The information presented in the Table only includes records not otherwise detailed in the report.

Data type	0 – 250m	251 – 500m	Details
Contaminated Land Register Entries and Notices	0	0	None recorded
Discharge Consents	0	0	None recorded
Local Authority Pollution Prevention and Controls	0	0	None recorded
Substantiated Pollution Incident Register	0	0	None recorded
Pollution Incidents to Controlled Waters	0	0	None recorded
Active Contemporary Trade Directory Entries (CTDE)	0	0	None recorded
Fuel Station Entries	0	0	None recorded

8.0 Contamination and Ground Gas Risk Assessment

The risks posed towards Human Health or environmental receptors (i.e. Controlled Waters) is based on an assessment of one or more source-pathway-receptor linkages.

8.0 Contamination and Ground Gas Risk Assessment (Cont'd)

The source is any substance which has the potential to cause significant harm to a relevant receptor and the pathway is any route by which contamination may travel to impact on a receptor. The preliminary Conceptual Site Model (CSM) summarises the principal contaminant sources, pathways and receptors for this site and the likelihood of the existence of a pollutant linkage.

The significance of the potential source-pathway-receptor linkages identified within the preliminary CSM can be assessed using the following criteria.

- ▼ LOW risk – not likely to cause significant harm to Human Health or Controlled Waters. Remedial measures are not likely to be required
- ▼ MEDIUM risk – it is possible that significant harm to Human Health or Controlled Waters could occur depending on site specific circumstances. Remedial measures may be required to mitigate potential risks
- ▼ HIGH risk – it is likely that significant harm to Human Health or Controlled Waters will occur unless appropriate remedial measures are incorporated into the development

The potential pollutant linkages pertaining to the site and the assessed significance are summarised in the preliminary CSM Table on the following page.

In accordance with OS maps, the site has remained as undeveloped and vacant land since the earliest published mapping (1862). Aerial photography of the site shows it has been covered by hardstanding.

Given the historical site use and the land-use of the surrounding area, the risk of significant contamination being present on this site is LOW.

At this stage, made ground deposits are initially expected to be present over the site area. It would be prudent to assess the levels of contamination present within the made ground deposits present over the site to determine the suitability for their intended end-use (Commercial), and to assist with the disposal of surplus soil deposits which are likely to be generated as part of the proposed development / construction work.

Representative samples of soil can be screened for standard metals and semi-metals including As, Cd, Cr (III & VI), Cu, Hg, Ni, Pb, Se, Zn, CN, as well as Polycyclic Aromatic Hydrocarbons (PAH's – 16 USEPA Specification), Petroleum Hydrocarbons (Aliphatic / Aromatic split) and Asbestos screening.

8.0 Contamination and Ground Gas Risk Assessment (Cont'd)

Laboratory testing should also be undertaken on samples of natural and made ground soils for naturally aggressive chemicals (pH value and soluble sulphate) which could have a potential effect on buried concrete.

The risk of hazardous ground gases from on-site and off-site sources is considered LOW to MEDIUM, due to the presence of nearby infilled / partially infilled quarries north of the site. Therefore, a detailed ground gas risk assessment will be required for the site.

Consideration may need to be given to the protection of new service pipes which are to be incorporated into the new development, and therefore a supplementary suite of contamination testing (UKWIR suite) may be required to meet the requirements of the Utility service providers to satisfy their own pipe selection risk assessment (PSRA) once the location and depth of future services have been determined.

Potential source	Pathway	Receptor	Pollutant linkage / assessed risk
Made Ground Deposits	Dermal contact and ingestion / inhalation of contaminated soil and dust	Human site users - Construction workers and end-users	LOW risk
	Air – Inhalation of vapours (indoor & outdoor)		LOW risk
	Plant uptake, consumption of homegrown vegetables	End-users	No pathways present
	Migration through services	End-users	LOW risk
	Direct contact with building materials	Building materials (concrete)	LOW risk
	Surface run-off, vertical and lateral infiltration / leaching, and migration of mobile contaminants	Localised shallow perched water. Deep groundwater within the solid geology	LOW risk
	Contaminated soils	Flora and Fauna on completion of building works	LOW risk
Ground gas	Lateral & vertical migration	End-users (Asphyxiation, fire & explosion)	LOW to MEDIUM risk
Radon gas	Lateral & vertical migration	End-users (Carcinogenic)	LOW risk

9.0 Geotechnical Risk Assessment

The ground conditions below the site are expected to comprise made ground, overlying natural deposits comprising clay and granular deposits, in turn underlain by bedrock that is a part of the Pennine Middle Coal Measures Formation and the Permian Yellow Sands Formation. The anticipated ground profile for this site has been summarised in the Table below.

Strata type	Anticipated thickness	Groundwater	Comments
Made Ground	<1m	None anticipated	Due to the current development on the site, made ground deposits are expected
Devensian Till / Pelaw Clay Member	No information is available on the thickness of the natural superficial deposits	Perched / trapped water is expected within granular deposits. These deposits have been designated as Secondary Undifferentiated and Unproductive Aquifers	Superficial deposits beneath the site are expected to comprise clay and granular deposits
Pennine Middle Coal Measures Formation / Yellow Sands Formation	>20m	Deep groundwater is expected within the bedrock. These deposits have been designated as Secondary A and Principal Aquifers	No information is available on the depth to rockhead although due to the presence of nearby limestone quarries, rockhead is expected to be present at a depth <5m

A summary of the anticipated potential risks associated with the geotechnical issues and hazards identified for this site can be seen in the Table below and on the following page. The definitions for the allocated level of risk(s) are as follows.

- ▼ LOW risk – unlikely to impact on the proposed development
- ▼ MEDIUM risk – may have a significant impact on the proposed development
- ▼ HIGH risk – likely to have a significant impact on the proposed development

Issue or hazard	Level of potential risk	Comments
Made Ground	LOW risk	Made Ground deposits are expected to be present across the site area the type and thickness of which are currently unknown

9.0 Geotechnical Risk Assessment (Cont'd)

Issue or hazard	Level of potential risk	Comments
Natural deposits	LOW risk	The natural deposits are expected to comprise clay and granular deposits
Shallow groundwater	LOW risk	Groundwater is expected at depth within the bedrock deposits
Stability of excavations	LOW risk	Within future excavations, made ground and natural deposits could be unstable below depths of c.1.20m and adequate lateral support will be required
Sub-surface structures	LOW risk	Any sub-structures encountered during the site works should be grubbed up and removed off site
Shallow coal workings	LOW risk	The site lies within a DLRA and is not underlain by shallow coal bearing strata
Mine entries (shafts / adits)	LOW risk	No mine entries are recorded within 100m of the site's boundaries
Control of surface drainage	LOW to MEDIUM risk	Conventional SuDS (i.e. soakaways) are unlikely to be viable for this site
Flooding	LOW risk	The site lies within a Zone 1 Flood Risk Area

Based on the various data sources reviewed, the foundation options given in the Table below are likely to be available for the proposed development.

Foundation type	Anticipated depth to bearing stratum	Maximum allowable bearing pressure	Comments
Shallow conventional foundations	Between 1m and 2m	Between 75kN/m ² and 150kN/m ²	Where thin deposits of made ground are present over competent natural deposits, this foundation option would be the most feasible for the proposed development
Deep Trench Foundations	Between 2m and 3m	>100kN/m ²	Feasible where made ground deposits do not exceed beyond 3m in thickness, and competent natural deposits are present below
Raft	Up to 1m	50kN/m ² and 75kN/m ²	If the made ground and initial natural deposits are poor in nature, then a raft foundation may be considered

10.0 Further Recommendations

It is recommended that appropriate site-specific investigation works forming a detailed Phase II Ground Investigation be completed for this site, prior to commencing with the proposed commercial development. This will allow for accurate foundation designs to be made and the investigation should include for the items listed below, or similar exploratory work.

- ✔ Undertake a series of shallow percussion boreholes, including appropriate insitu geotechnical testing to help aid with future foundation designs
- ✔ Install dedicated insitu ground gas monitoring wells followed by an appropriate programme of periodic data collection visits
- ✔ Undertake appropriate geotechnical laboratory classification testing to include Atterberg limits and pH and soluble sulphate analysis
- ✔ Undertake appropriate confirmatory contamination screening on selected samples of made ground recovered from site to confirm the suitability of these deposits to remain onsite within an end-use of Commercial. The samples of soil collected should also be forwarded to a UKAS and MCERTS accredited laboratory
- ✔ Production of a Phase II Ground Investigation Report, to include Ground Gas & Ground Contamination Risk Assessments

Furthermore, prior to site investigation works commencing, all existing utilities / services should be identified and recorded, such that any potential damage to services crossing the site can be prevented, as well as ensuring the Health and Safety of all future site workers.

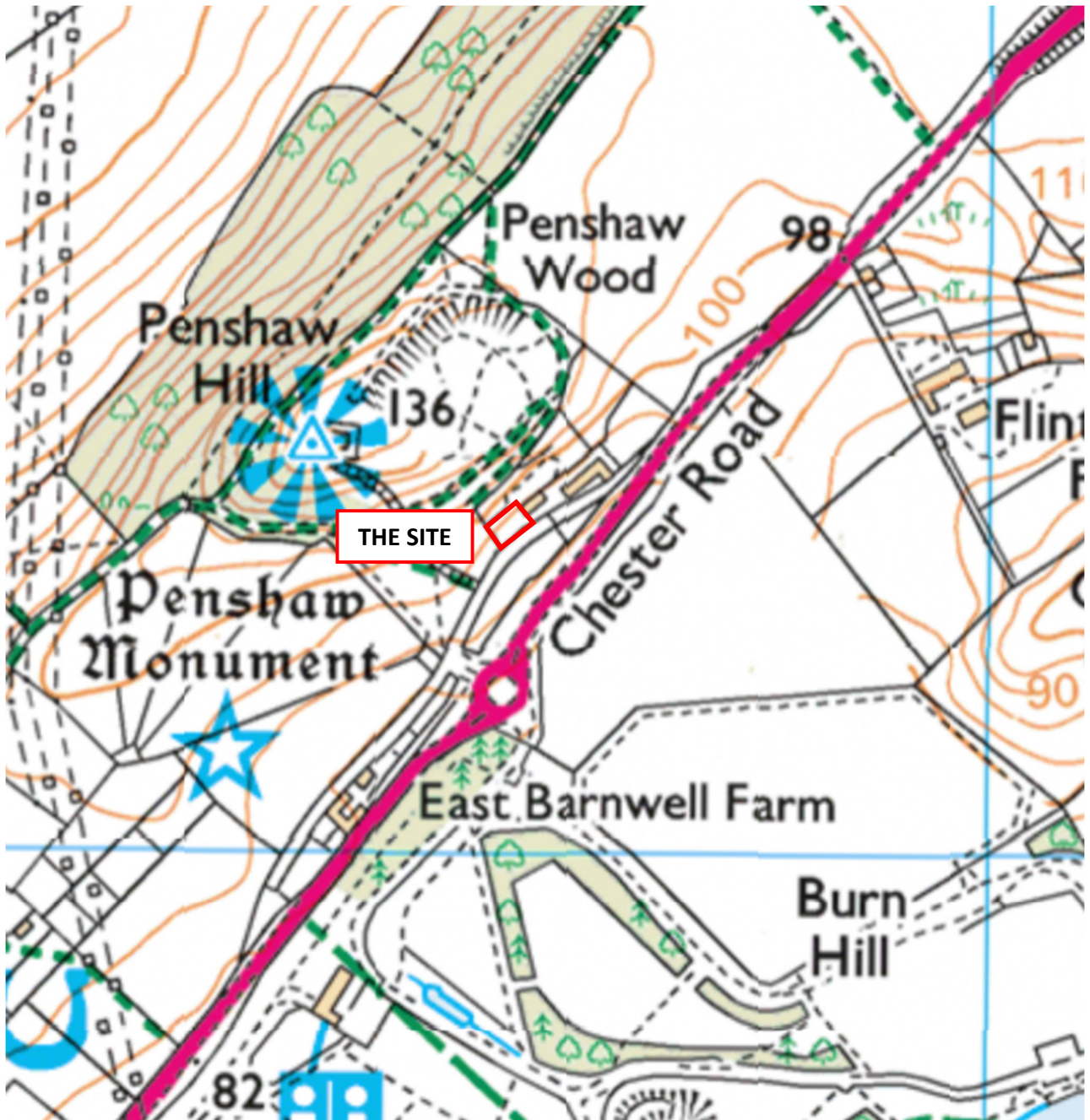
End of Report

APPENDIX I

Site Location Plan, Aerial Photograph, Site Photographs & Proposed Development Layout Plans



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SITE LOCATION PLAN

Report Type: Phase I Preliminary Contamination Risk Assessment

Site Address: Land adjacent to Penshaw Hill House, Chester Road, Sunderland, SR4 9JX

Project No.: GEOL24-7117



Tectonic House, Unit 11 Queens Court North
Third Avenue, Team Valley Trading Estate
Gateshead, Tyne and Wear
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 **AERIAL PHOTOGRAPH** 

Report Type: Phase I Preliminary Contamination Risk Assessment

Site Address: Land adjacent to Penshaw Hill House, Chester Road, Sunderland, SR4 9JX

Project No.: GEOL24-7117



Tectonic House, Unit 11 Queens Court North
Third Avenue, Team Valley Trading Estate
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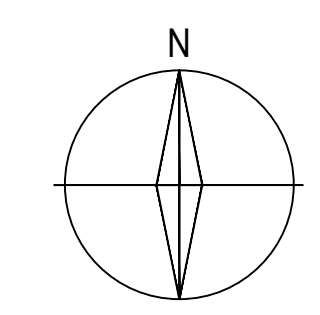
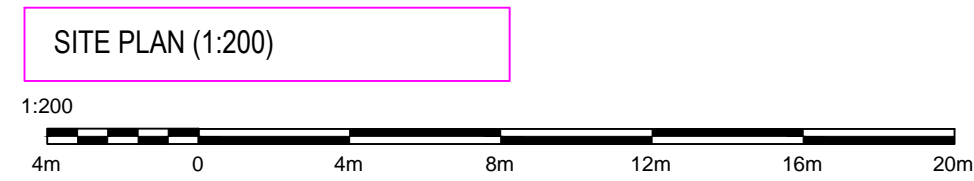
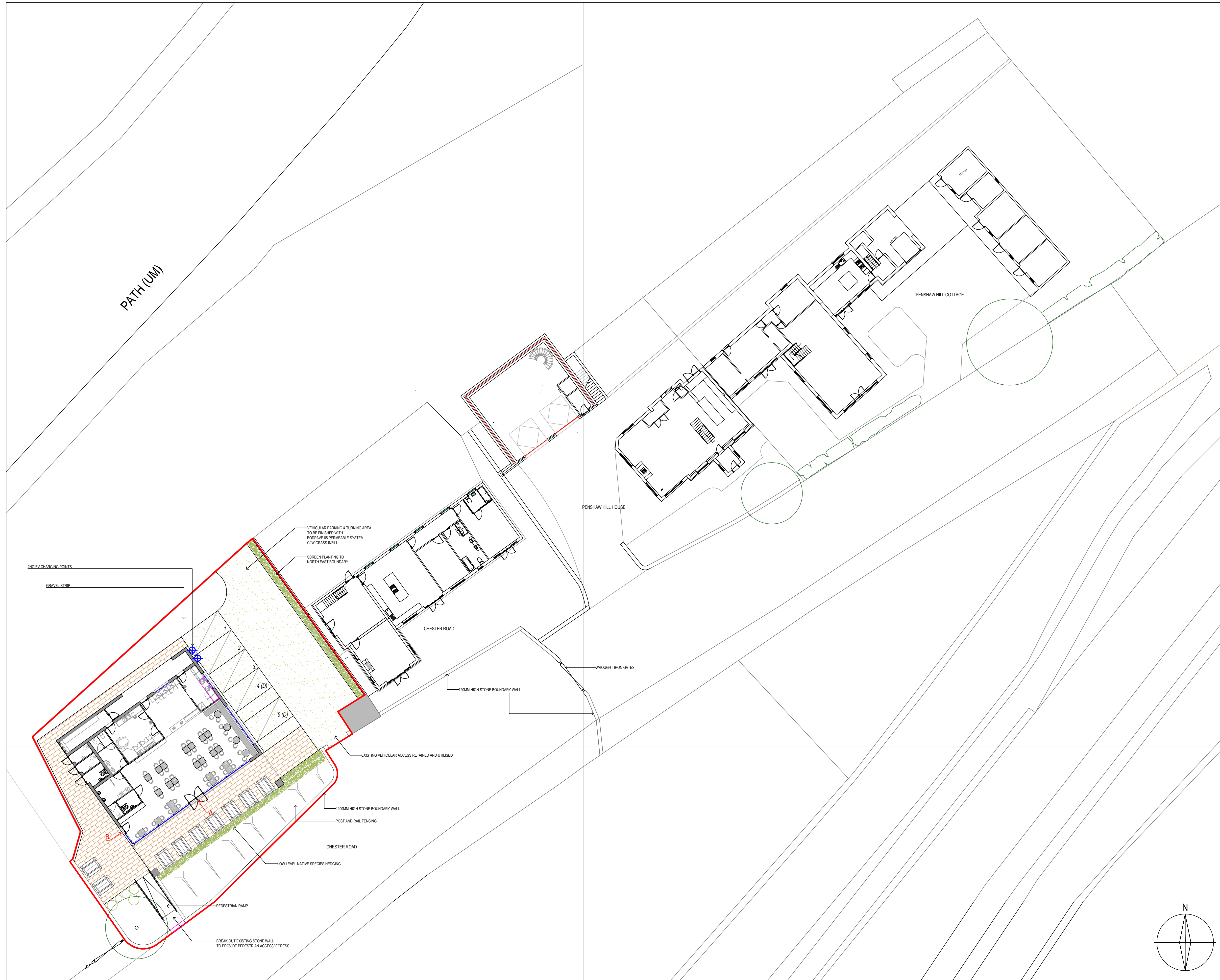


 **SITE PHOTOGRAPHS** 

Report Type: Phase I Preliminary Contamination Risk Assessment

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N.B
DO NOT SCALE FROM THESE DRAWINGS. IF IN DOUBT ASK ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR AND ANY DISCREPANCIES REPORTED TO THE CLIENT/ ARCHITECT PRIOR TO CONSTRUCTION

REV	DESCRIPTION	DATE



FOOTPATHS & TERRACES:
MARSHALLS INDIAN SANDSTONE
BROWN MULTI



PARKING / TURNING AREA:
PODPAVE 85
C/W GRASS INFILL

John Taylor
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client
GREEN DEVELOPMENTS LTD

drg.
PROPOSED SITE/ BLOCK PLAN

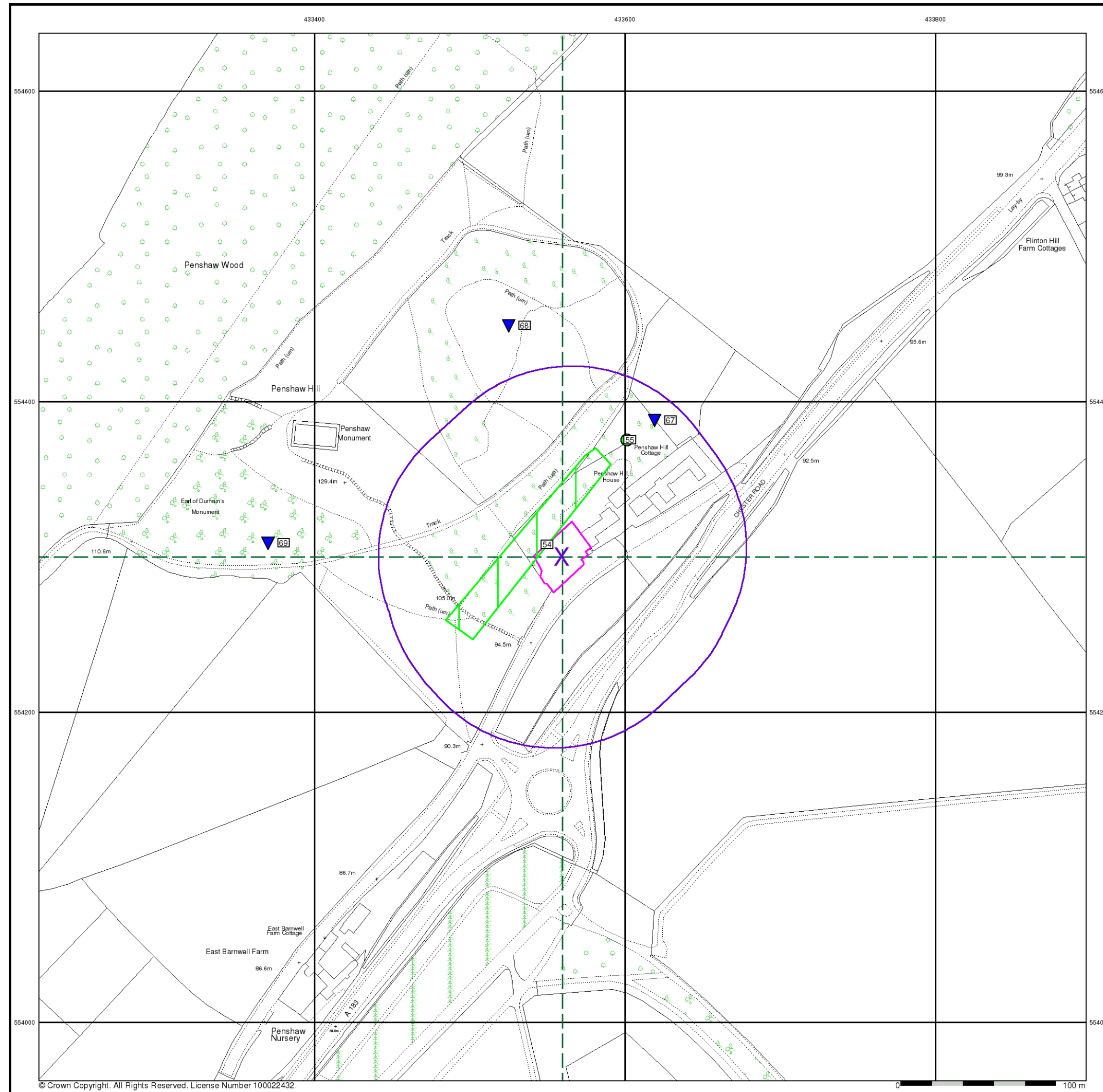
site.
PROPOSED PIZZA
LAND ADJACENT TO PENSHAW HILL HOUSE
CHESTER ROAD
SUNDERLAND, SR4 5JX

scale
1:200 @ A1

drg. no.
23 22 06

APPENDIX II

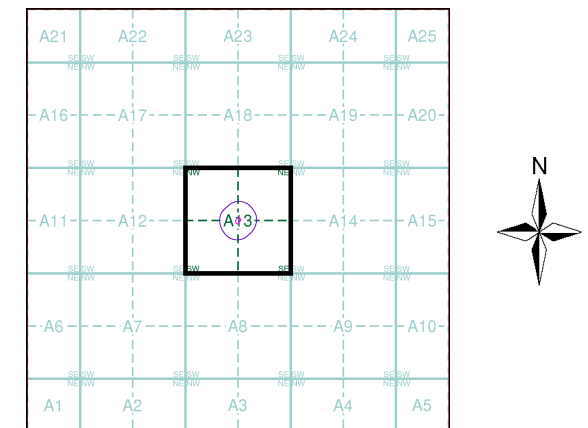
Landmark Information Group, Envirocheck Report



General

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

Site Sensitivity Map - Segment A13



Order Details

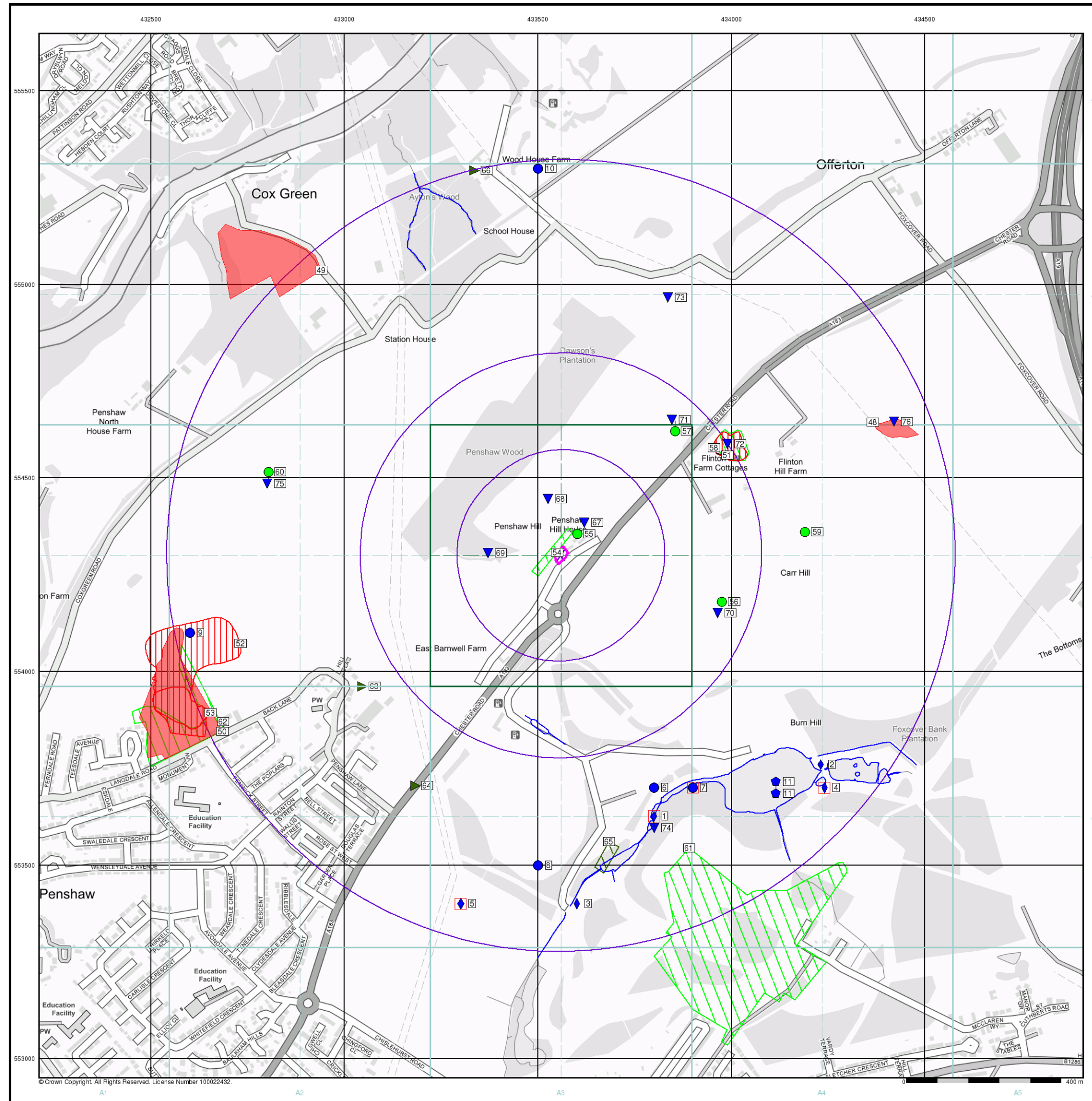
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Plot Buffer (m): 100

Site Details

Land adjacent to, Penshaw Hill House, Chester Road, SUNDERLAND, SR4 9JX

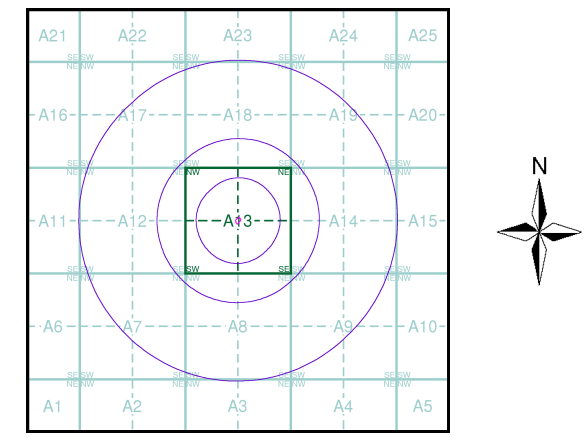


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- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice (Location)
 - Discharge Consent
 - 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
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIHNS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site

Site Sensitivity Map - Slice A



Order Details

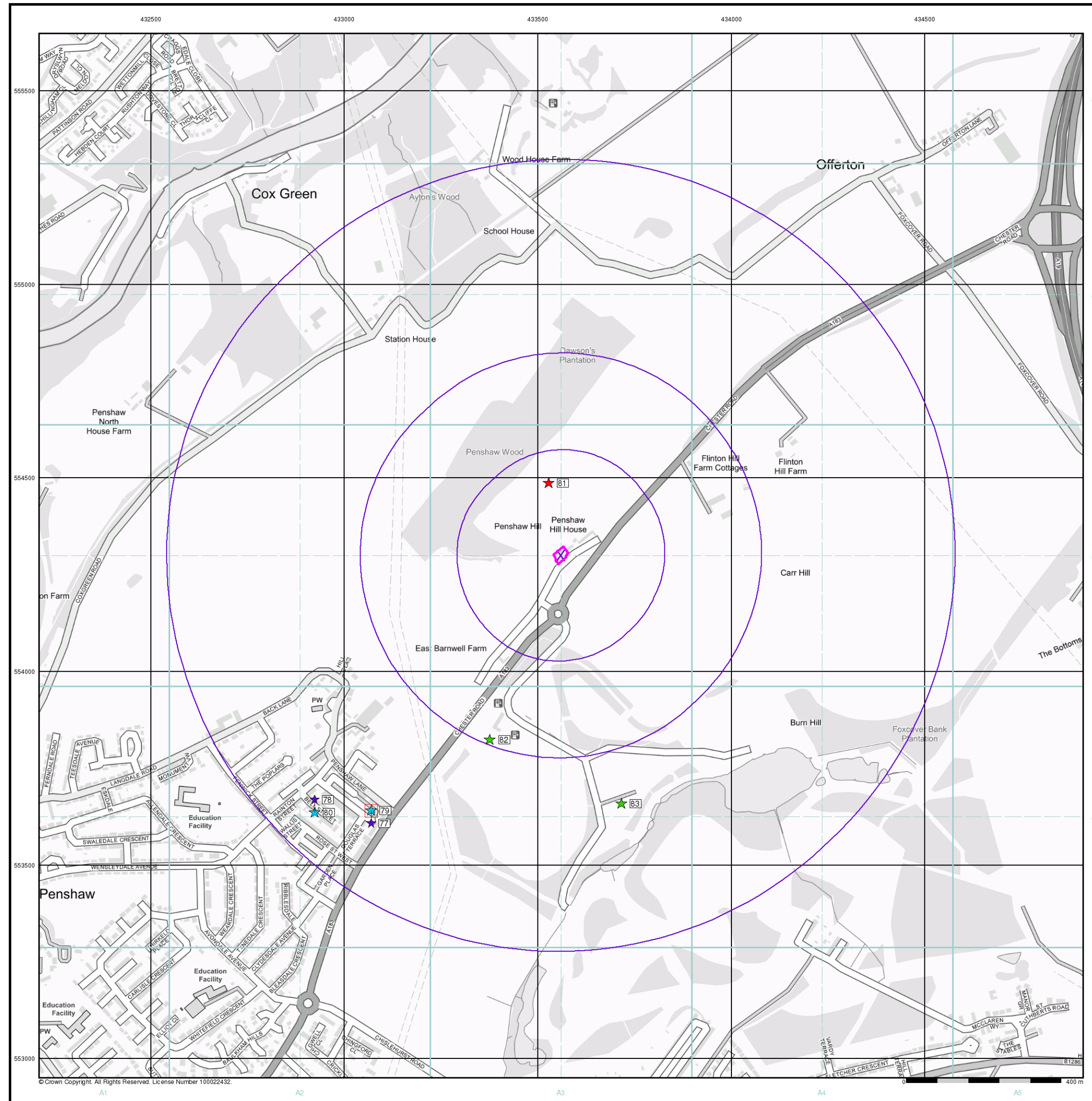
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

Land adjacent to, Penshaw Hill House, Chester Road, SUNDERLAND, SR4 9JX

Landmark
 INFORMATION GROUP

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Industrial Land Use Map

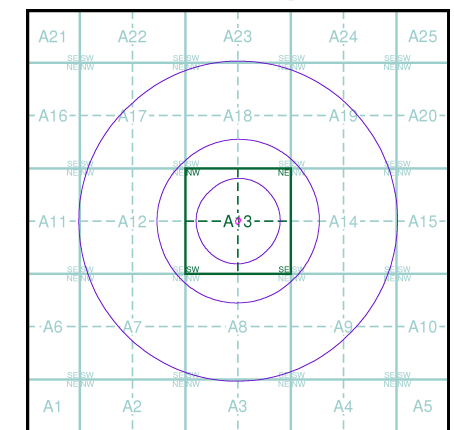
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

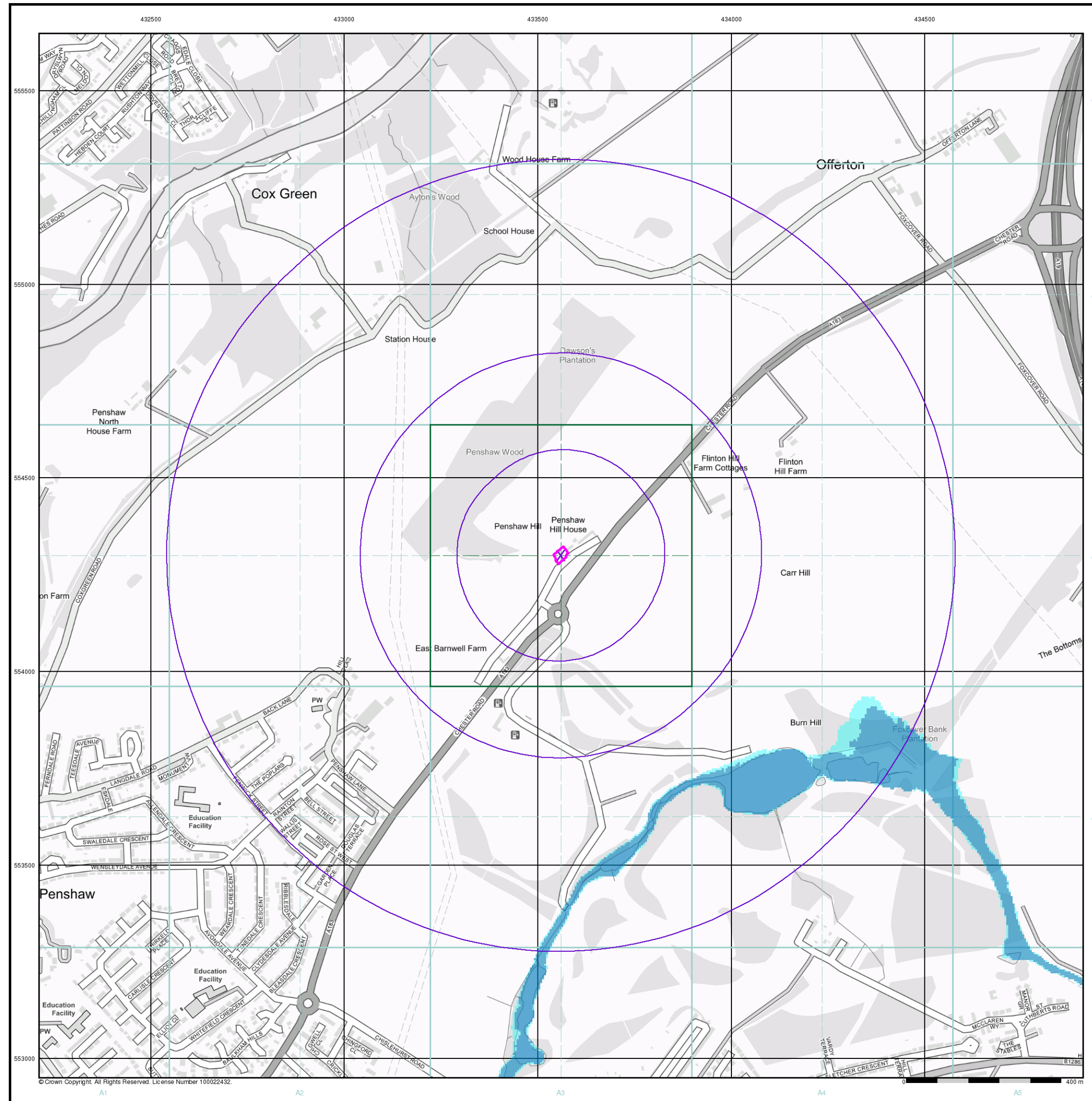
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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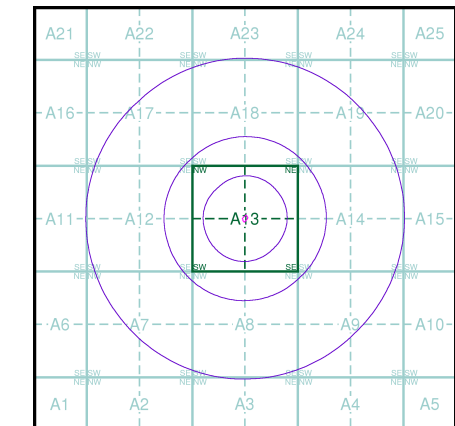
General

- 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

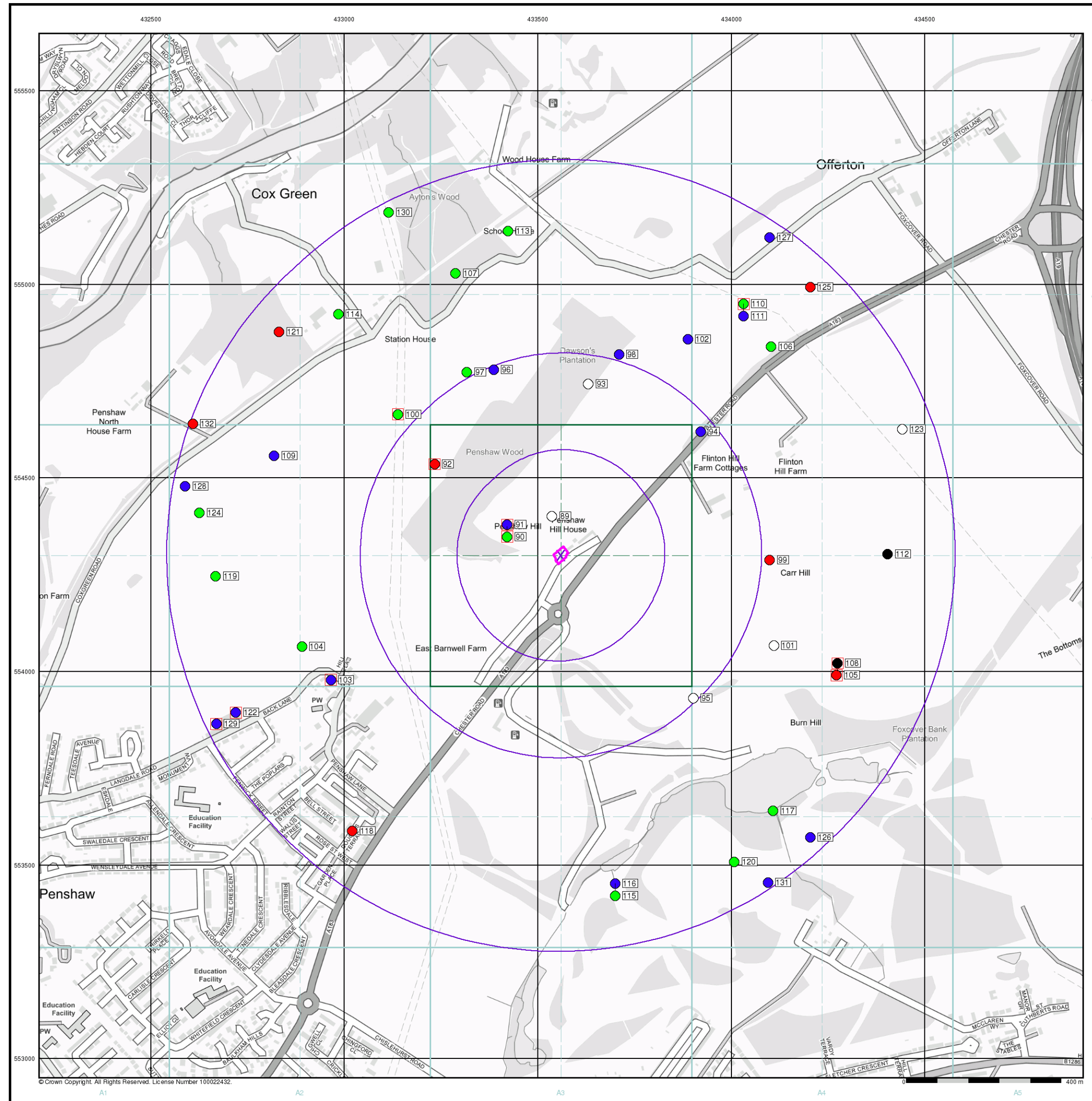
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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General

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

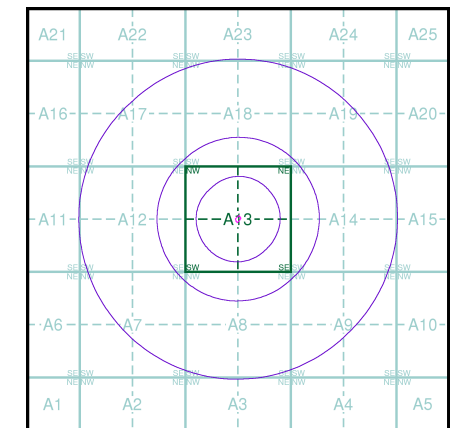
Agency and Hydrological (Boreholes)

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

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

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

Borehole Map - Slice A



Order Details

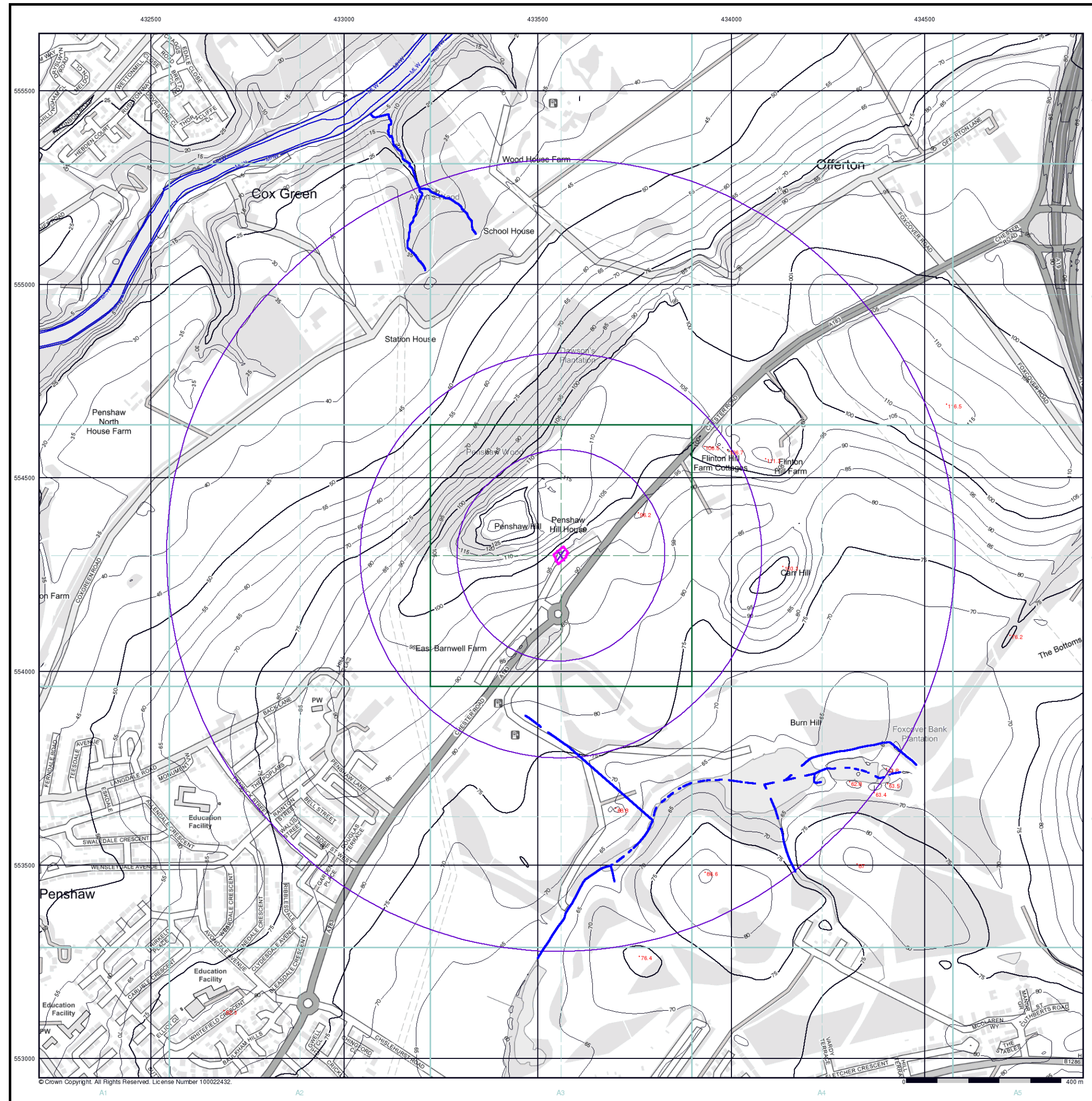
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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General

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

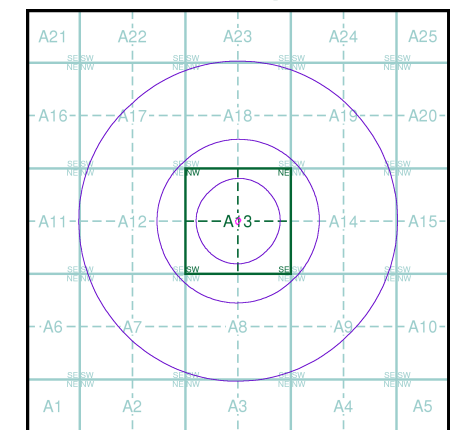
OS Water Network Data

- | | |
|--------------|-------------------------|
| Canal | Drain |
| Reservoir | Other |
| Foreshore | Lake |
| Marsh | Transfer |
| Tidal River | Lock Or Flight Of Locks |
| Inland River | Sea |

Contours (height in meters)

- Standard Contour MLW Mean Low Water
- Master Contour MHW Mean High Water
- Spot Height 167.3

OS Water Network Map - Slice A



Order Details

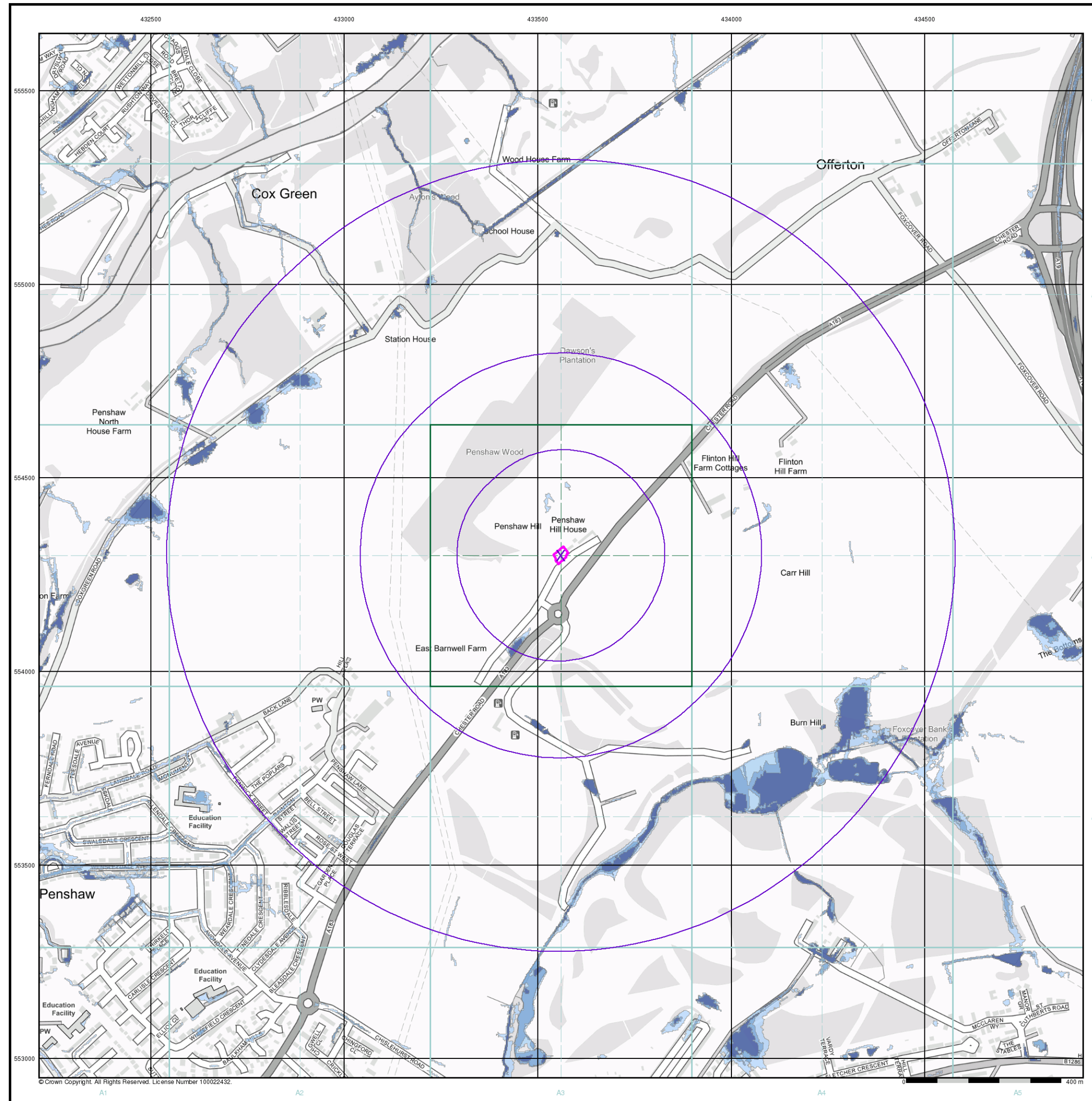
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

Land adjacent to, Penshaw Hill House, Chester Road,
 SUNDERLAND, SR4 9JX



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General

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

Risk of Flooding from Surface Water

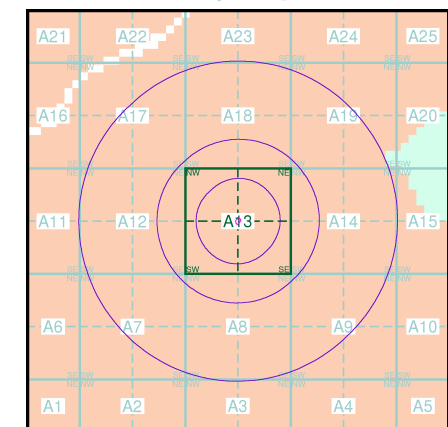
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

EANRW Suitability Map - Slice A



Order Details

Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

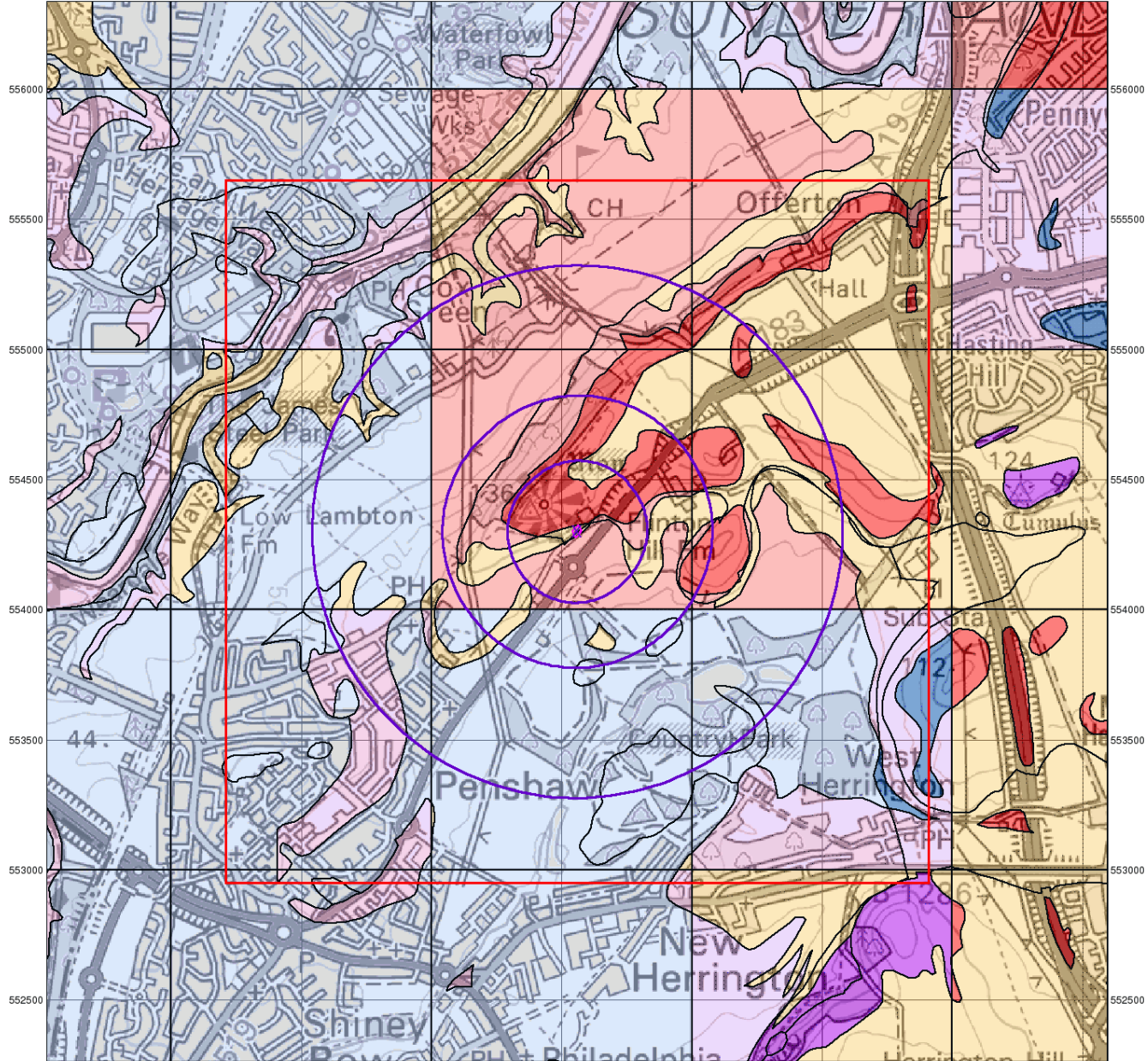
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Groundwater Vulnerability

General

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

Agency and Hydrological

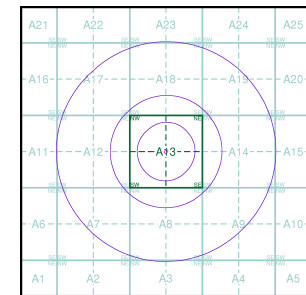
Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer
- Unproductive Aquifer
- Soluble Rock

Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

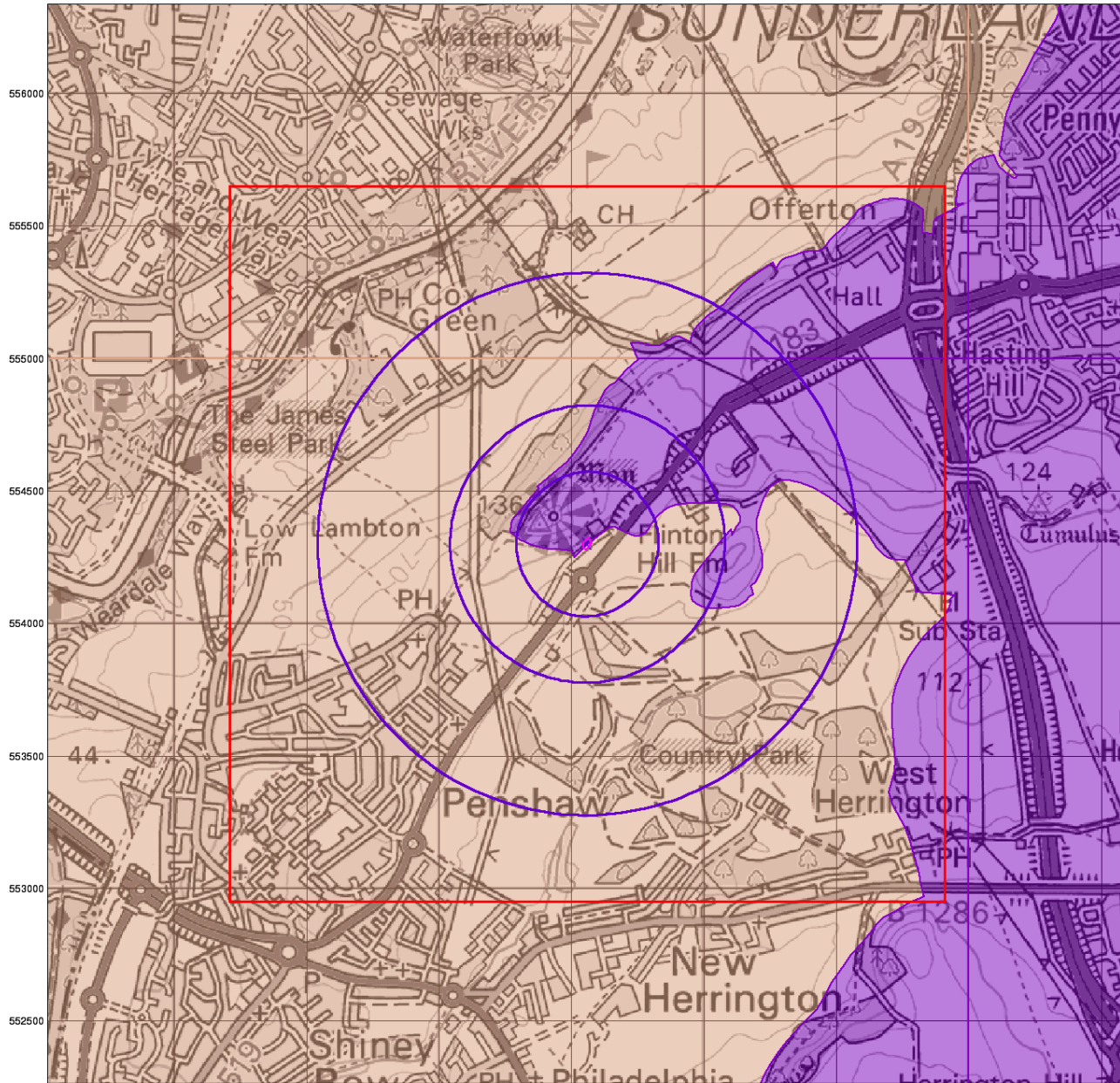
Site Details

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Bedrock Aquifer Designation

General

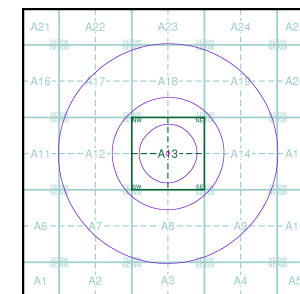
- ◊ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

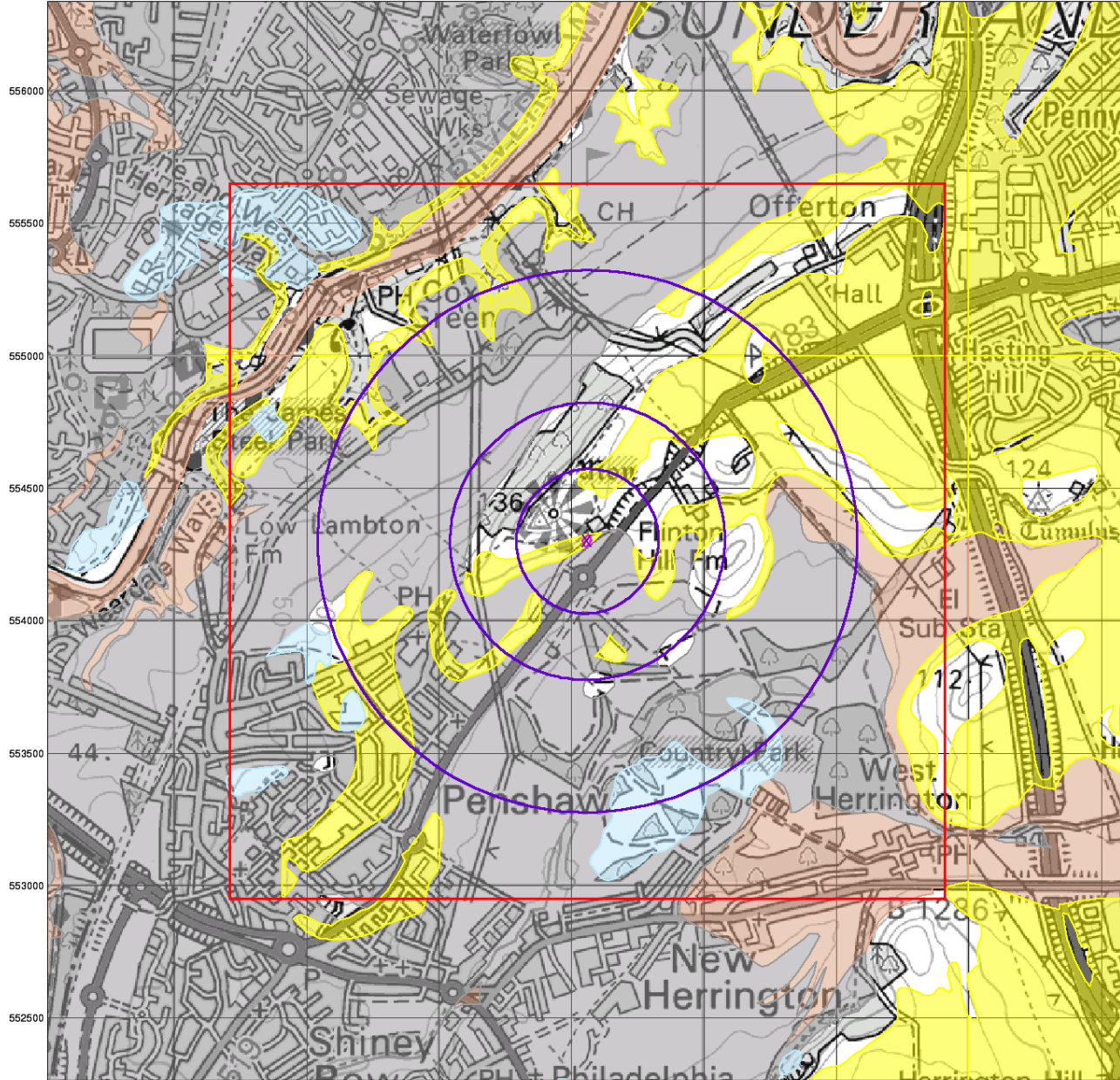
Site Details

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Superficial Aquifer Designation

General

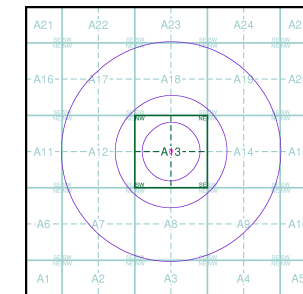
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

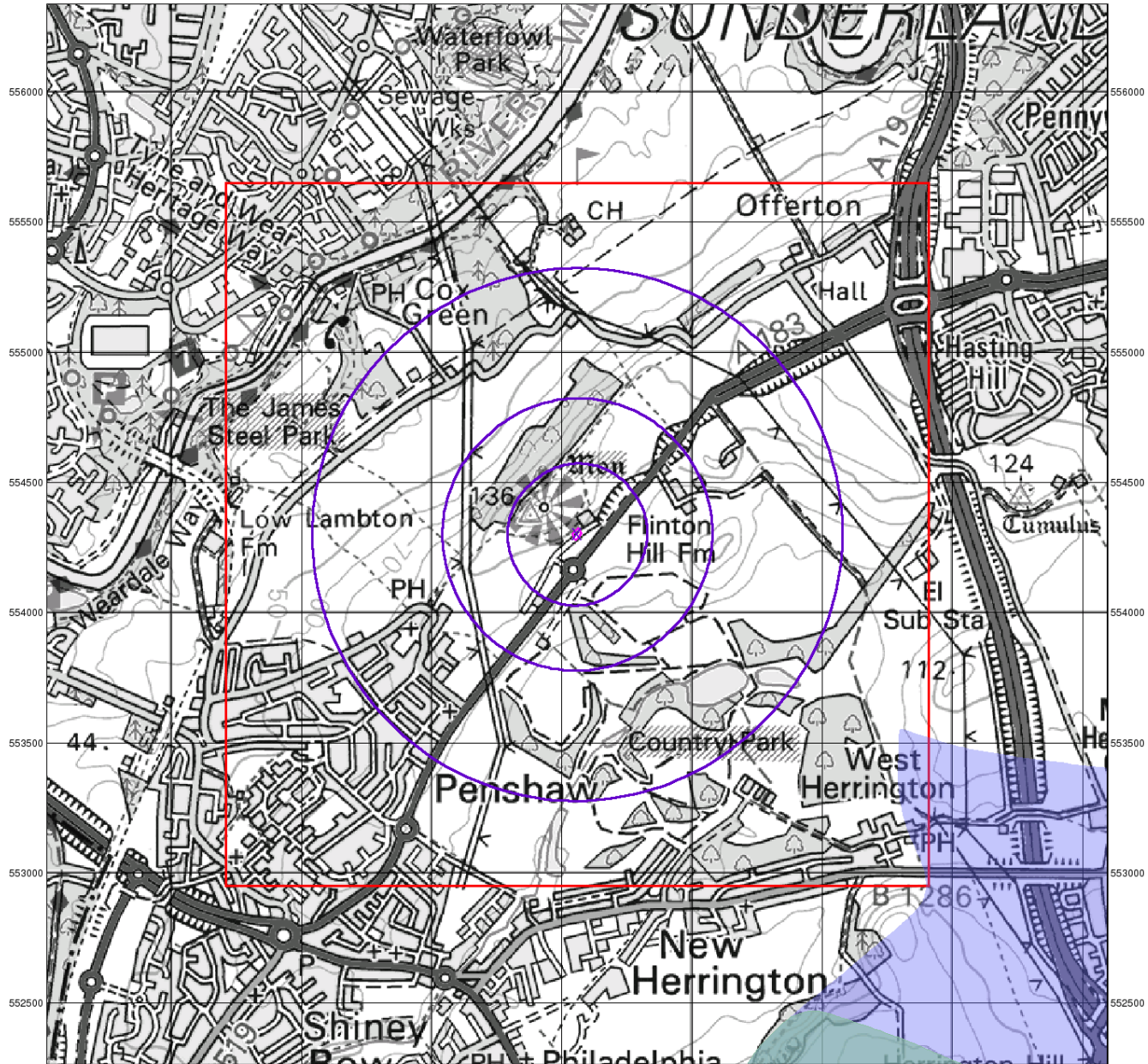
Site Details

Land adjacent to, Penshaw Hill House, Chester Road, SUNDERLAND, SR4 9JX



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Source Protection Zones

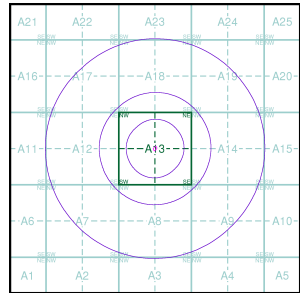
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



Order Details

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 Site Area (Ha): 0.09
 Search Buffer (m): 1000

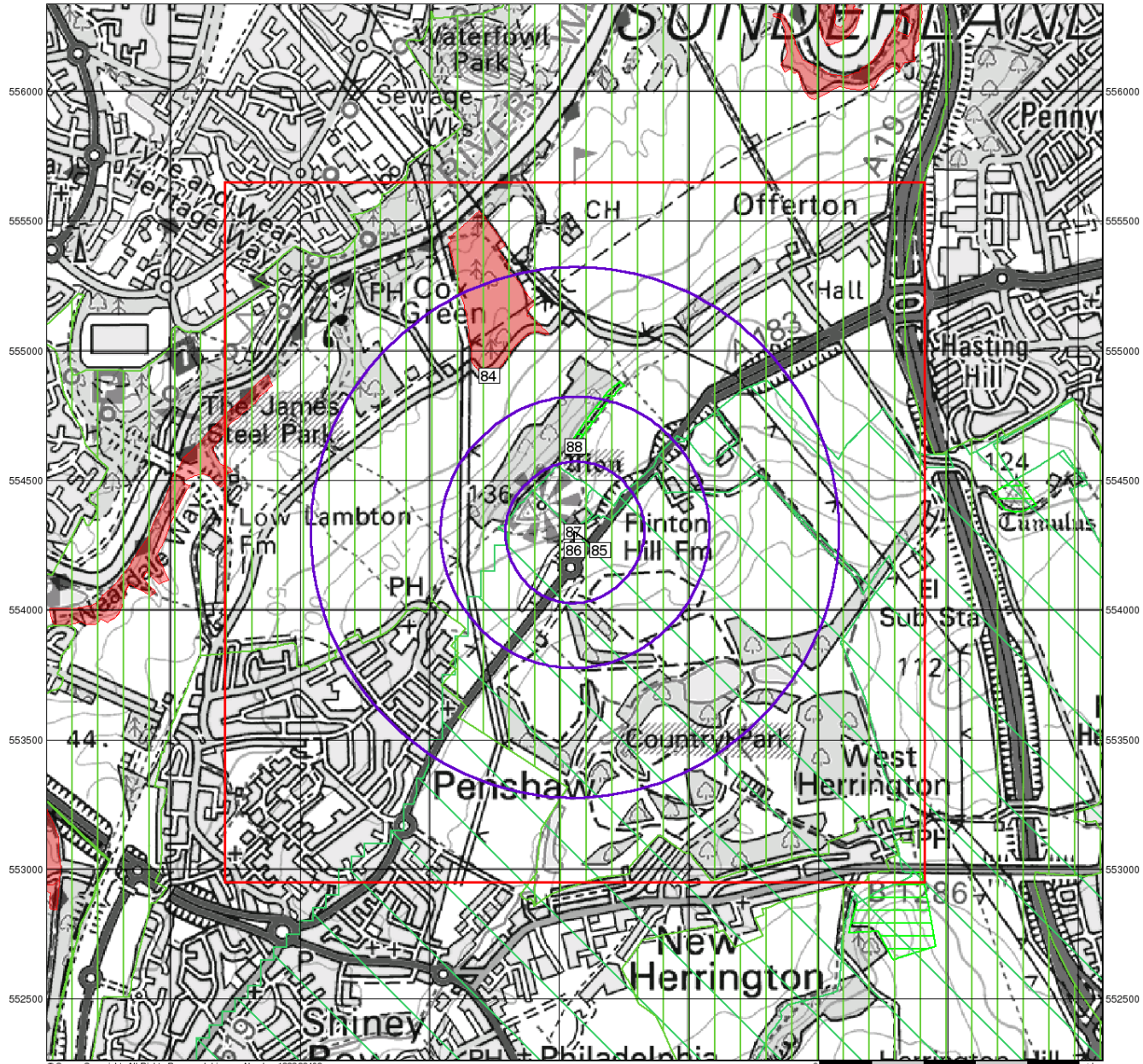
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Sensitive Land Uses

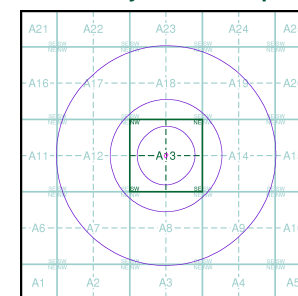
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 337564571_1_1
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 Slice: A
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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

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

1:10,000 Raster Mapping

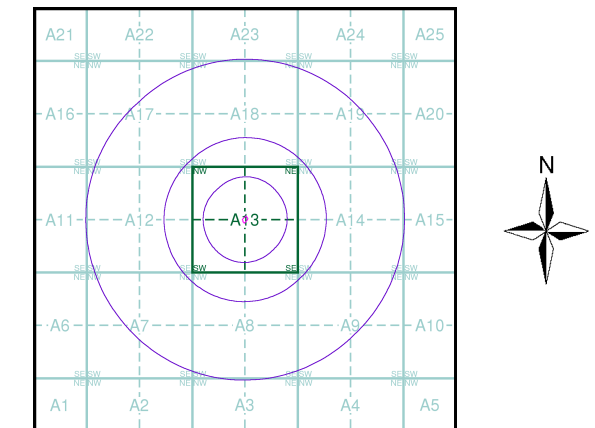
	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil,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



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:10,560	1862	3
Durham	1:10,560	1898	4
Durham	1:10,560	1921	5
Durham	1:10,560	1938	6
Ordnance Survey Plan	1:10,000	1951	7
Ordnance Survey Plan	1:10,000	1967	8
Ordnance Survey Plan	1:10,000	1975	9
Sunderland	1:10,000	1976	10
Newcastle-upon-Tyne	1:25,000	1977	11
Ordnance Survey Plan	1:10,000	1980 - 1981	12
Ordnance Survey Plan	1:10,000	1989	13
Ordnance Survey Plan	1:10,000	1990	14
10K Raster Mapping	1:10,000	2000	15
10K Raster Mapping	1:10,000	2006	16
VectorMap Local	1:10,000	2023	17

Historical Map - Slice A



Order Details

Order Number: 337564571_1_1
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 National Grid Reference: 433560, 554300
 Slice: A
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Site Details

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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
	Coniferous Forest		Deciduous Forest
	Mixed Forest		Lawns
	Citrus Orchard		Wet Ground
	Scattered Vegetation		

243,8 Values for prominent elevations
186.0 Numbers for spot elevations, depth soundings, contour lines, etc.
0,2 Velocity of the current, width of river bed, depth of river
180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

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

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Partly Demolished Buildings		Demolished Buildings
	Built-Up Area with Fireproof Buildings Predominant		Built-Up Area with Non-Fireproof Buildings Predominant
	Individual Fireproof Building		Prominent Industrial Building
	Individual Dwelling, Fireproof		Ruins of an Individual Dwelling
	Factory or Mill Chimney		Factory or Mill with Chimney
	Factory or Mill without Chimney		Salt Mine
	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		Telegraph Office
	Telephone Station		Radio Station
	Radio Tower		Airfield or Seaplane Base
	Landing Strip		Cut
	Fill		Km Post
	Plantings		Width of Road
	Steep Grade		Highway under Construction
	Improved Dirt Road (former truck 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 Gauge
	Direction and velocity of current		Water Level Mark
	Well		Spring
	Water Reservoir or Rain Water Pit		Isobath with value
	Heavy (Index) Contour Line		Half Contour Line
	Contour Line and Value		Spot Elevation Value
	Coniferous		Deciduous
	Mixed		Scrub

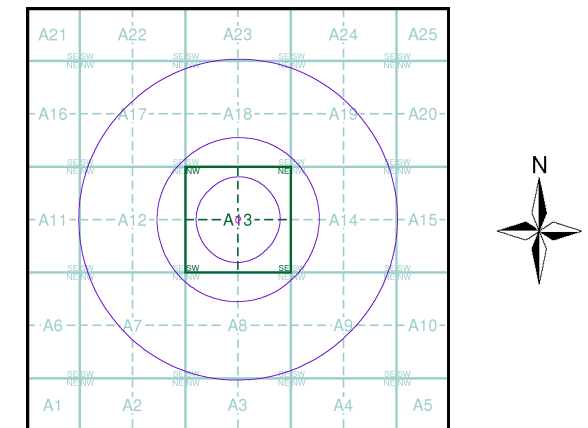
Key to Numbers on Mapping



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:10,560	1862	3
Durham	1:10,560	1898	4
Durham	1:10,560	1921	5
Durham	1:10,560	1938	6
Ordnance Survey Plan	1:10,000	1951	7
Ordnance Survey Plan	1:10,000	1967	8
Ordnance Survey Plan	1:10,000	1975	9
Sunderland	1:10,000	1976	10
Newcastle-upon-Tyne	1:25,000	1977	11
Ordnance Survey Plan	1:10,000	1980 - 1981	12
Ordnance Survey Plan	1:10,000	1989	13
Ordnance Survey Plan	1:10,000	1990	14
10K Raster Mapping	1:10,000	2000	15
10K Raster Mapping	1:10,000	2006	16
VectorMap Local	1:10,000	2023	17

Russian Map - Slice A



Order Details

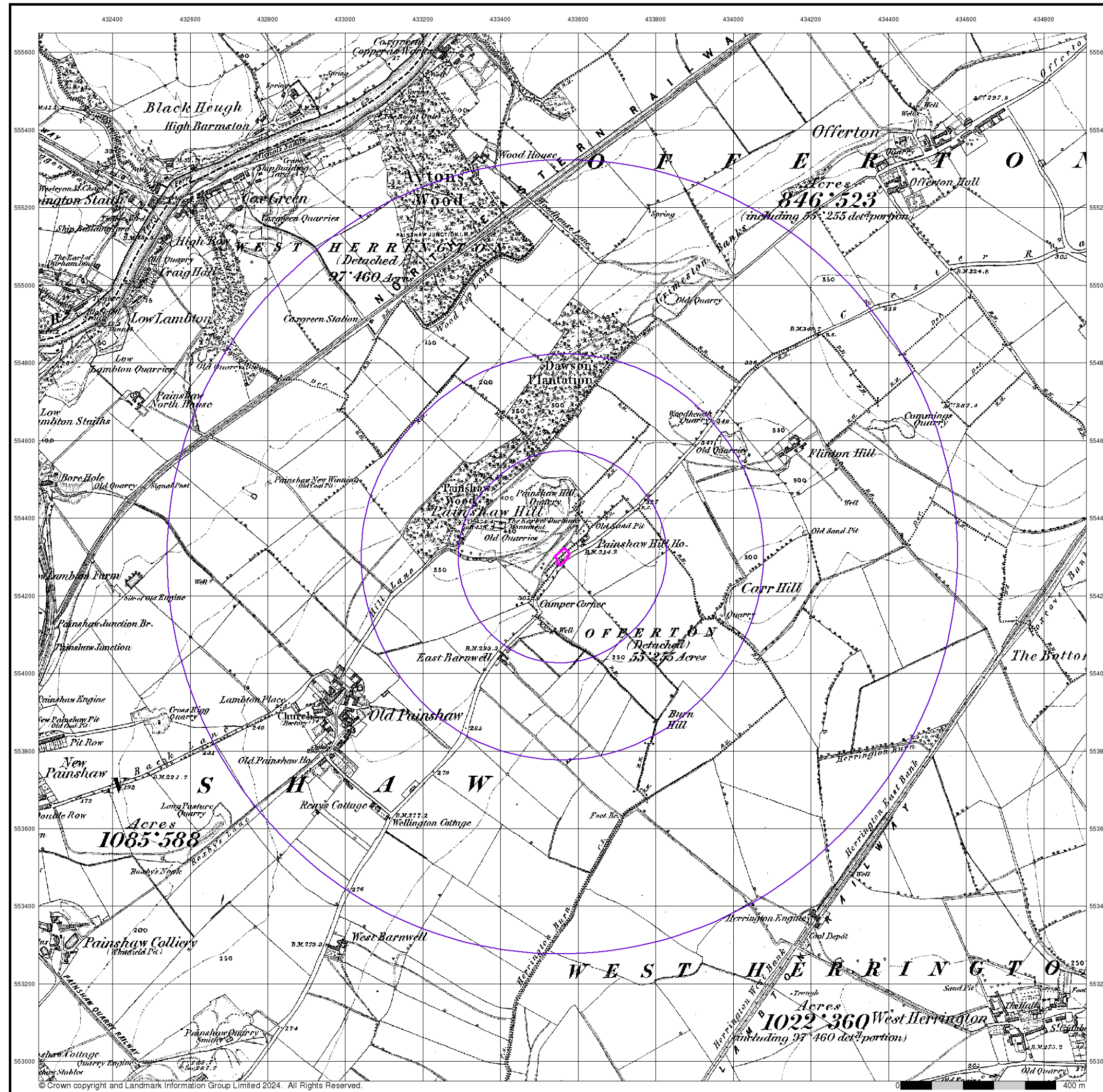
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

Land adjacent to, Penschaw Hill House, Chester Road, SUNDERLAND, SR4 9JX



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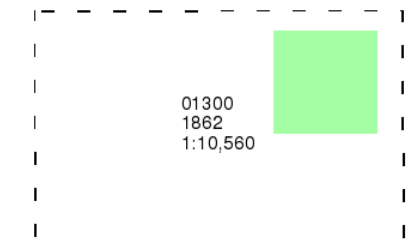
Durham

Published 1862

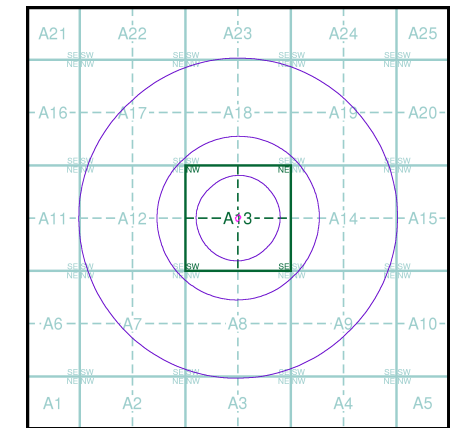
Source map scale - 1:10,560

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

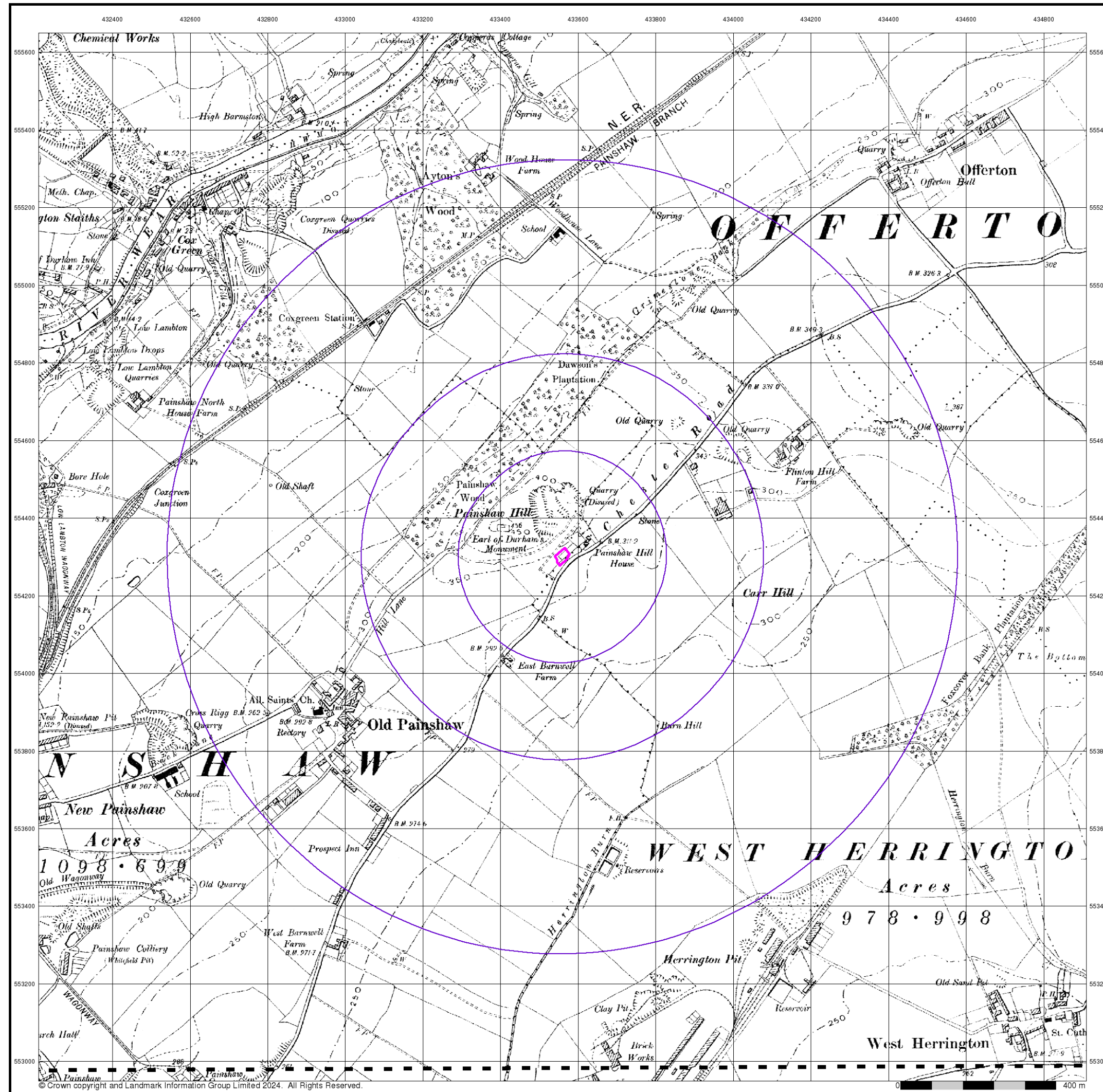
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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Durham

Published 1898

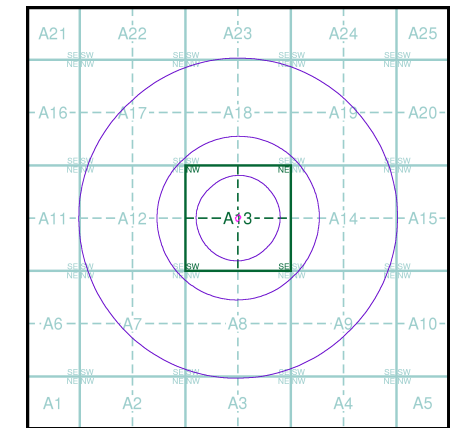
Source map scale - 1:10,560

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)

013NE	1898	1:10,560
013SE	1898	1:10,560

Historical Map - Slice A



Order Details

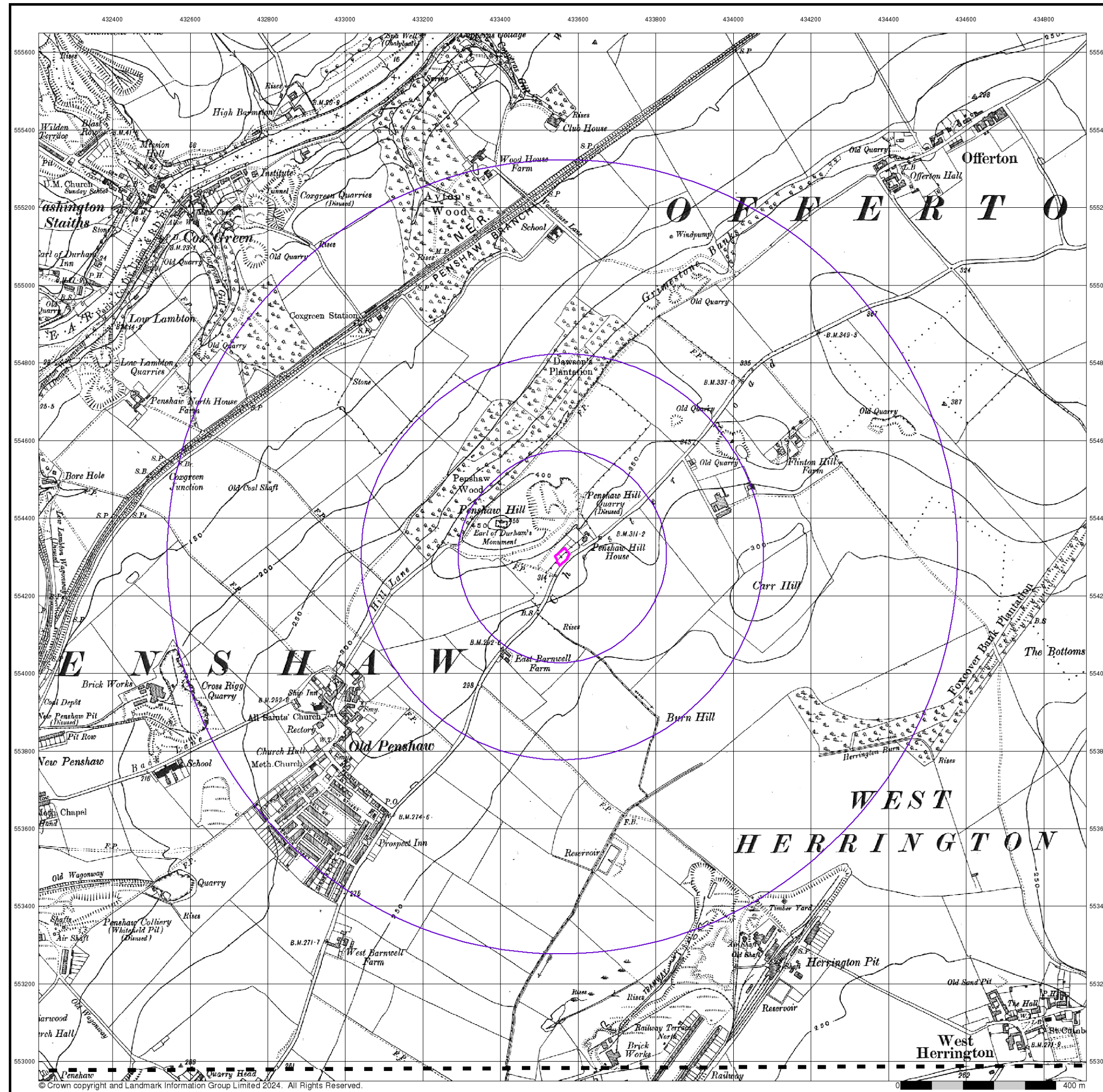
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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Durham

Published 1921

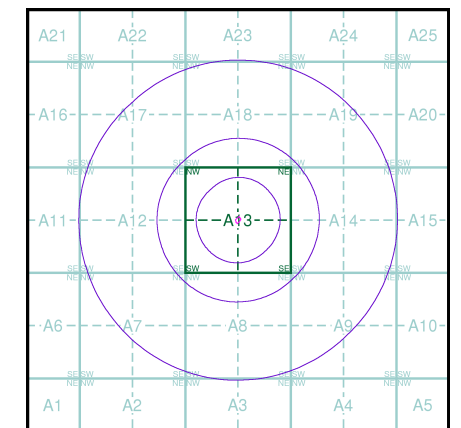
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

013NE	1921	1:10,560
013SE	1921	1:10,560

Historical Map - Slice A



Order Details

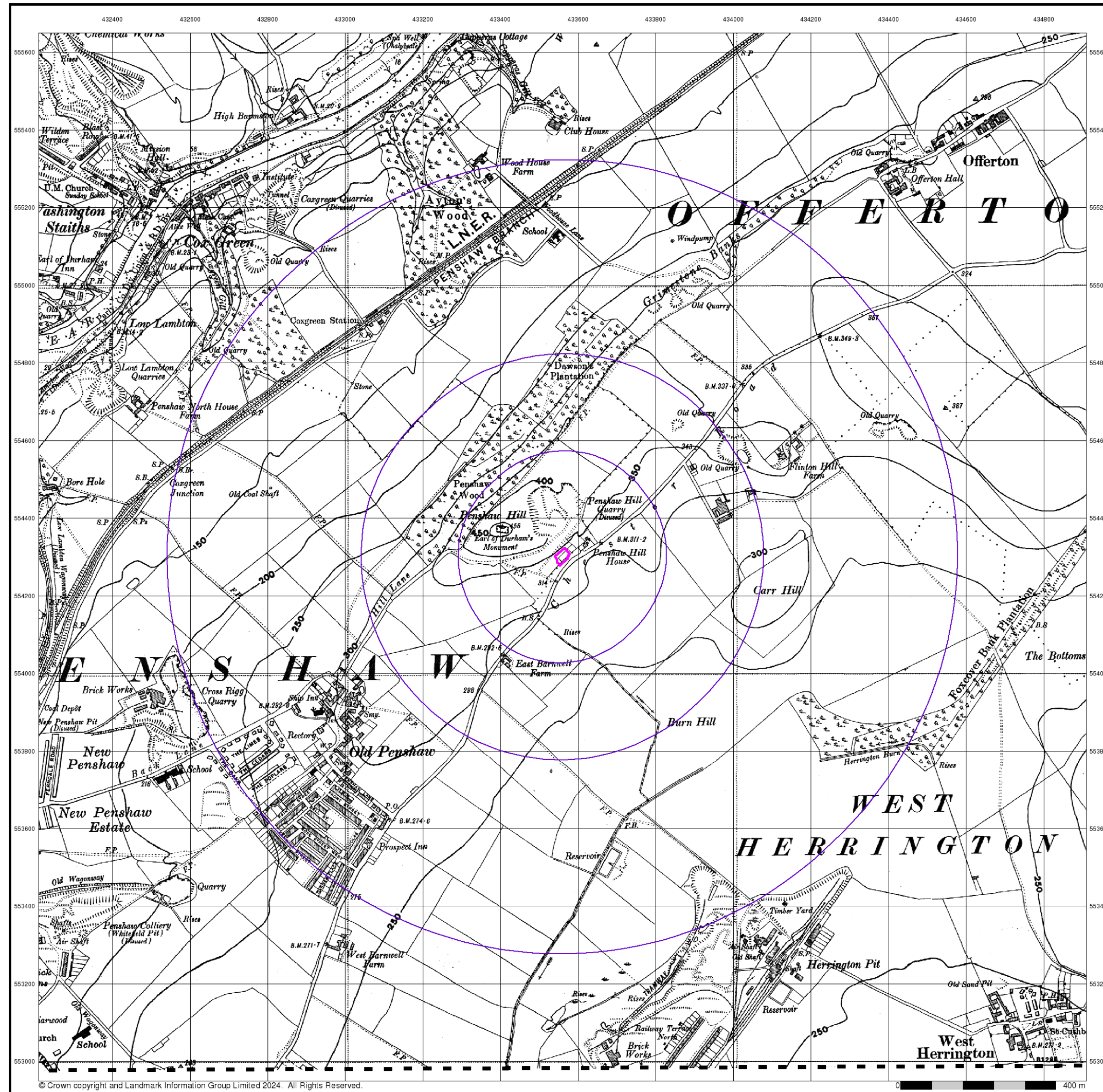
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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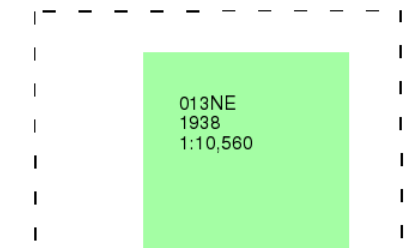
Durham

Published 1938

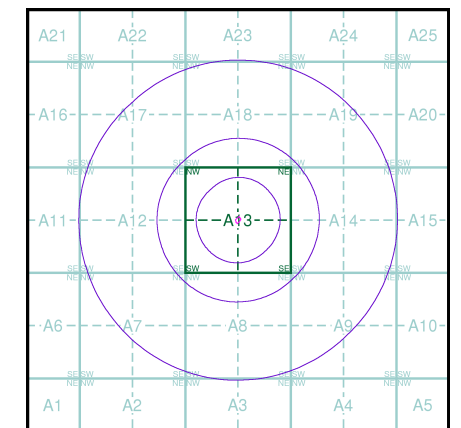
Source map scale - 1:10,560

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

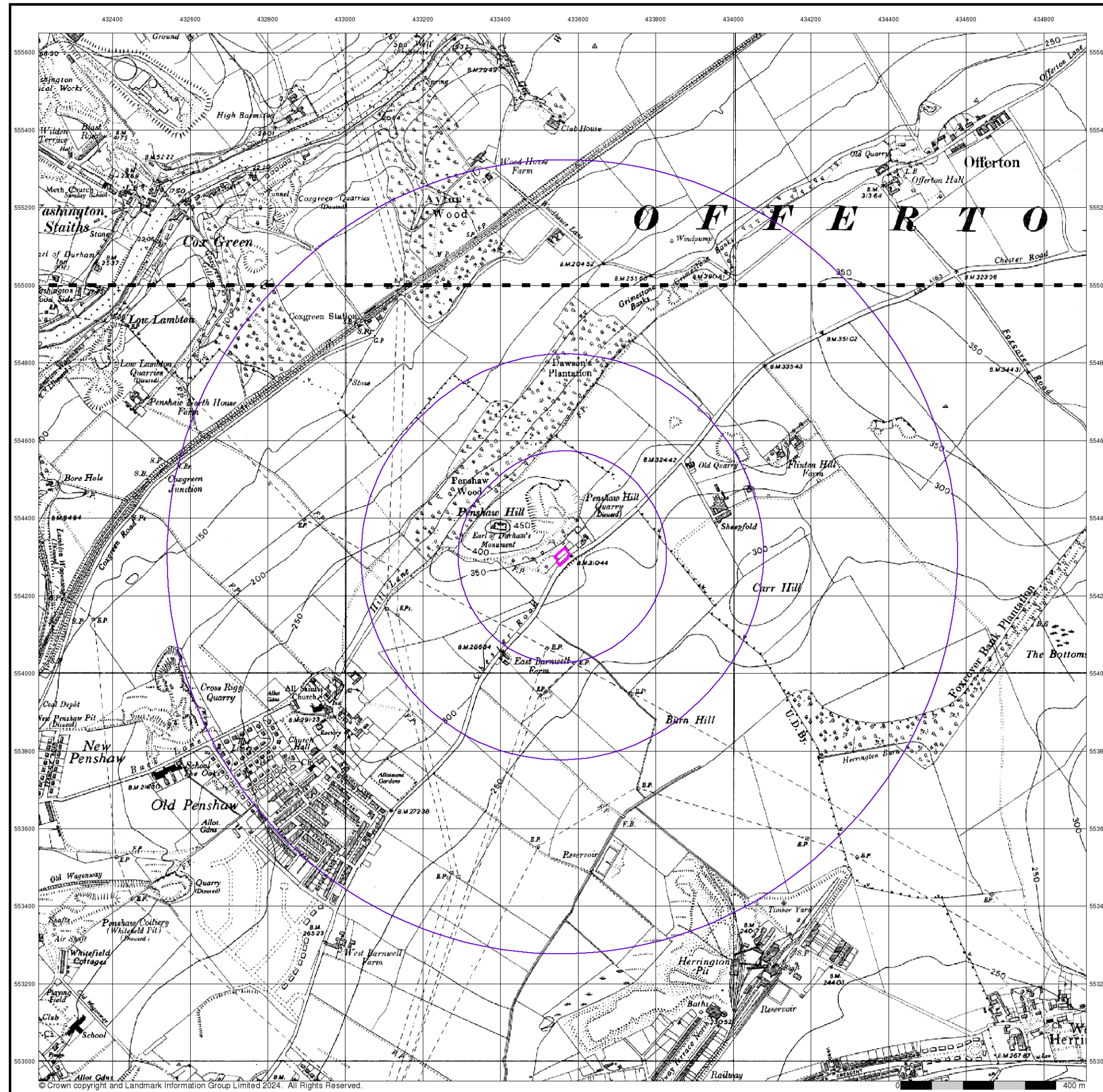
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

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Ordnance Survey Plan

Published 1951

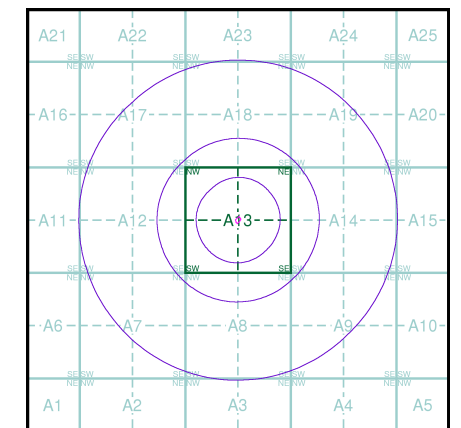
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

NZ35NW	1951
1:10,560	
NZ35SW	1951
1:10,560	

Historical Map - Slice A



Order Details

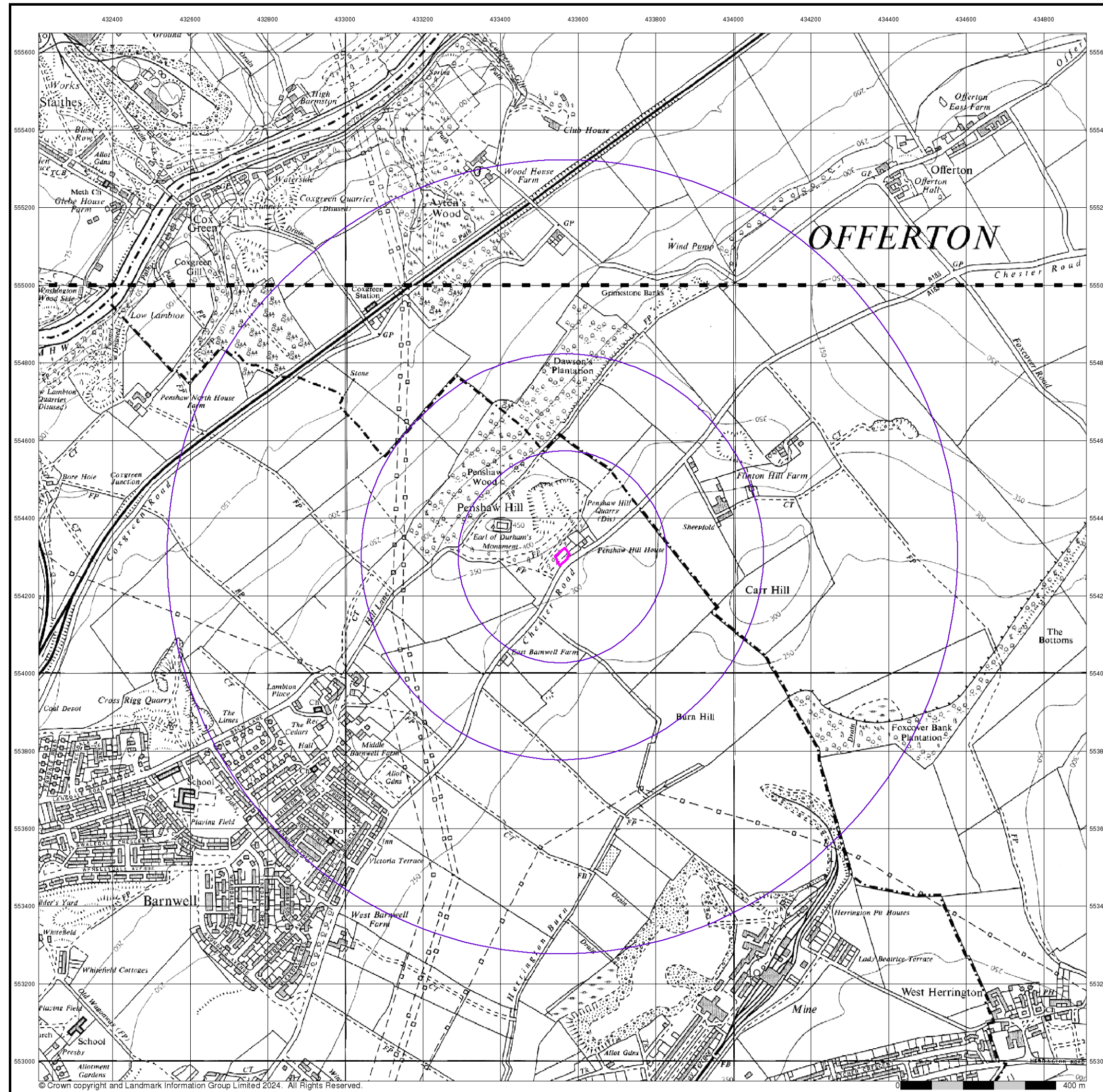
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

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Ordnance Survey Plan

Published 1967

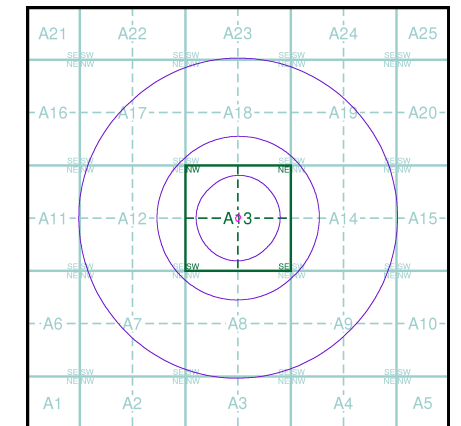
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

NZ35NW	1967
1:10,560	
NZ35SW	1967
1:10,560	

Historical Map - Slice A



Order Details

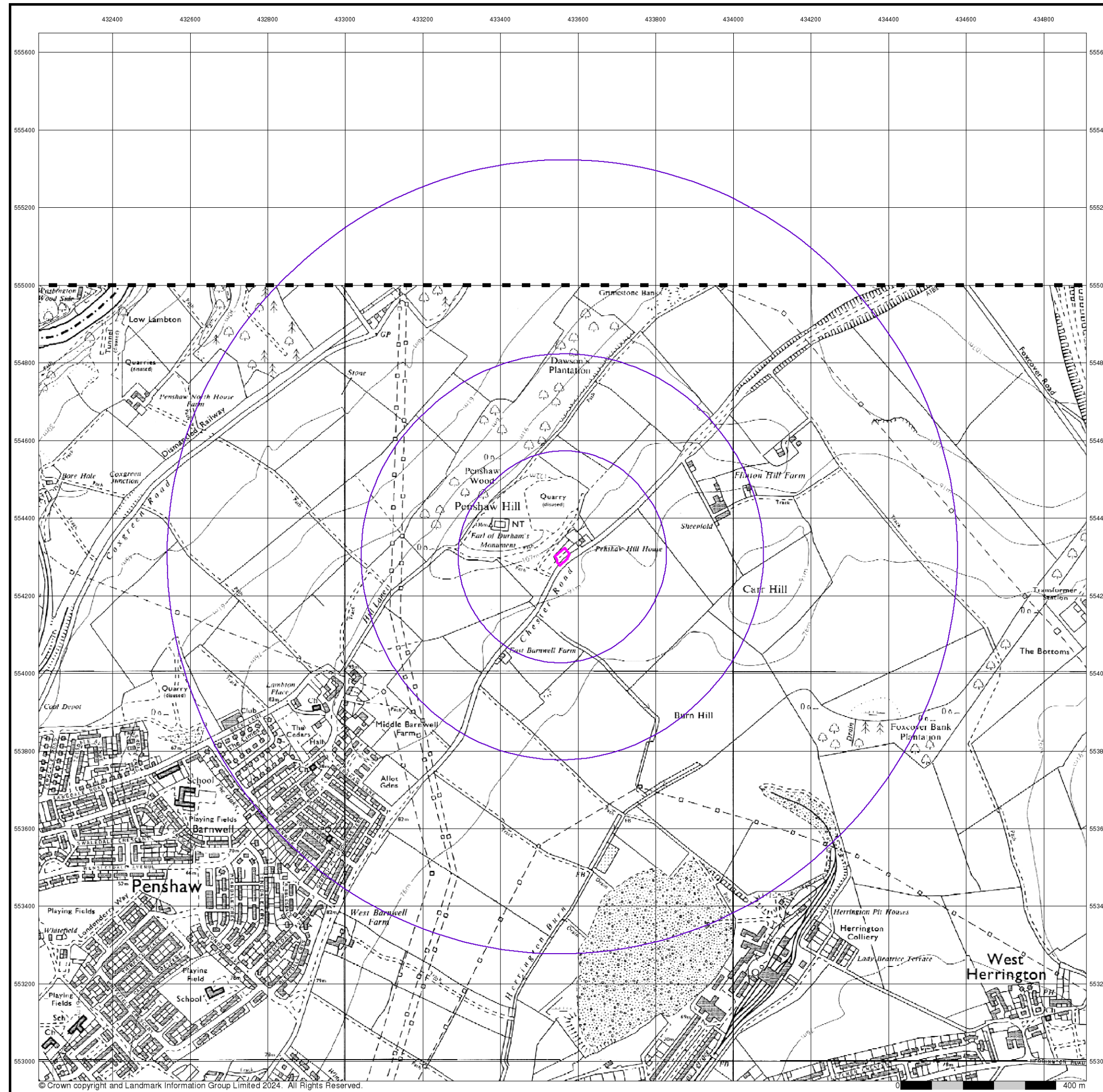
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

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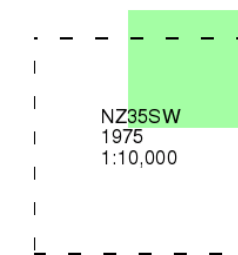
Ordnance Survey Plan

Published 1975

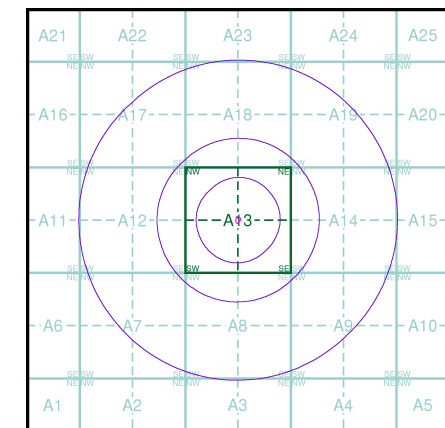
Source map scale - 1:10,000

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

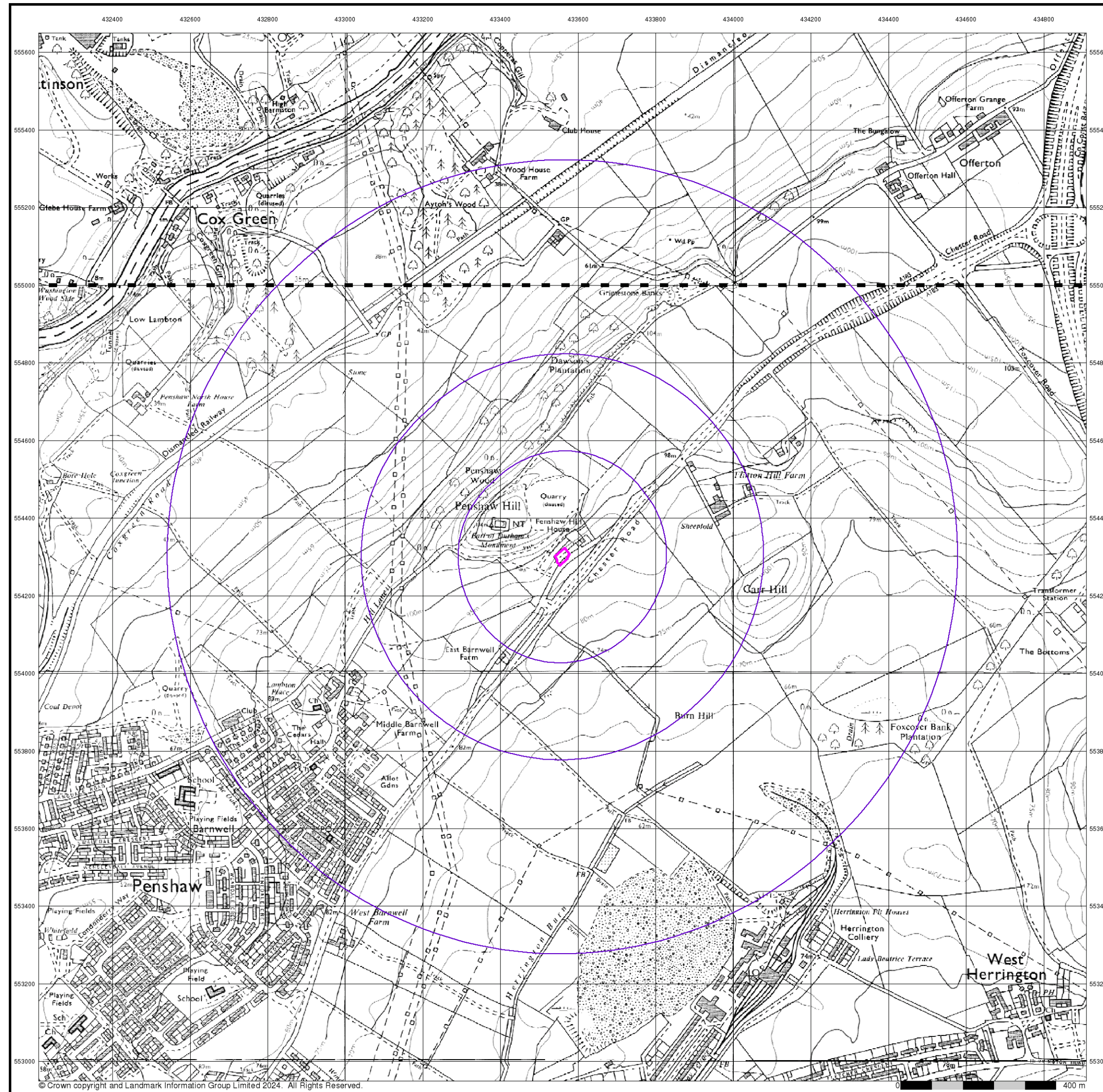
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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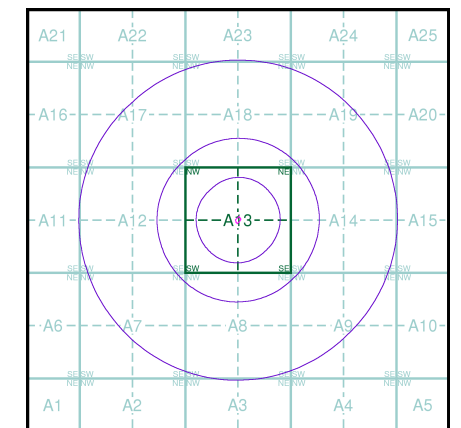
Ordnance Survey Plan
Published 1980 - 1981
Source map scale - 1:10,000

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)

NZ35NW	1980	1:10,000
NZ35SW	1981	1:10,000

Historical Map - Slice A



Order Details

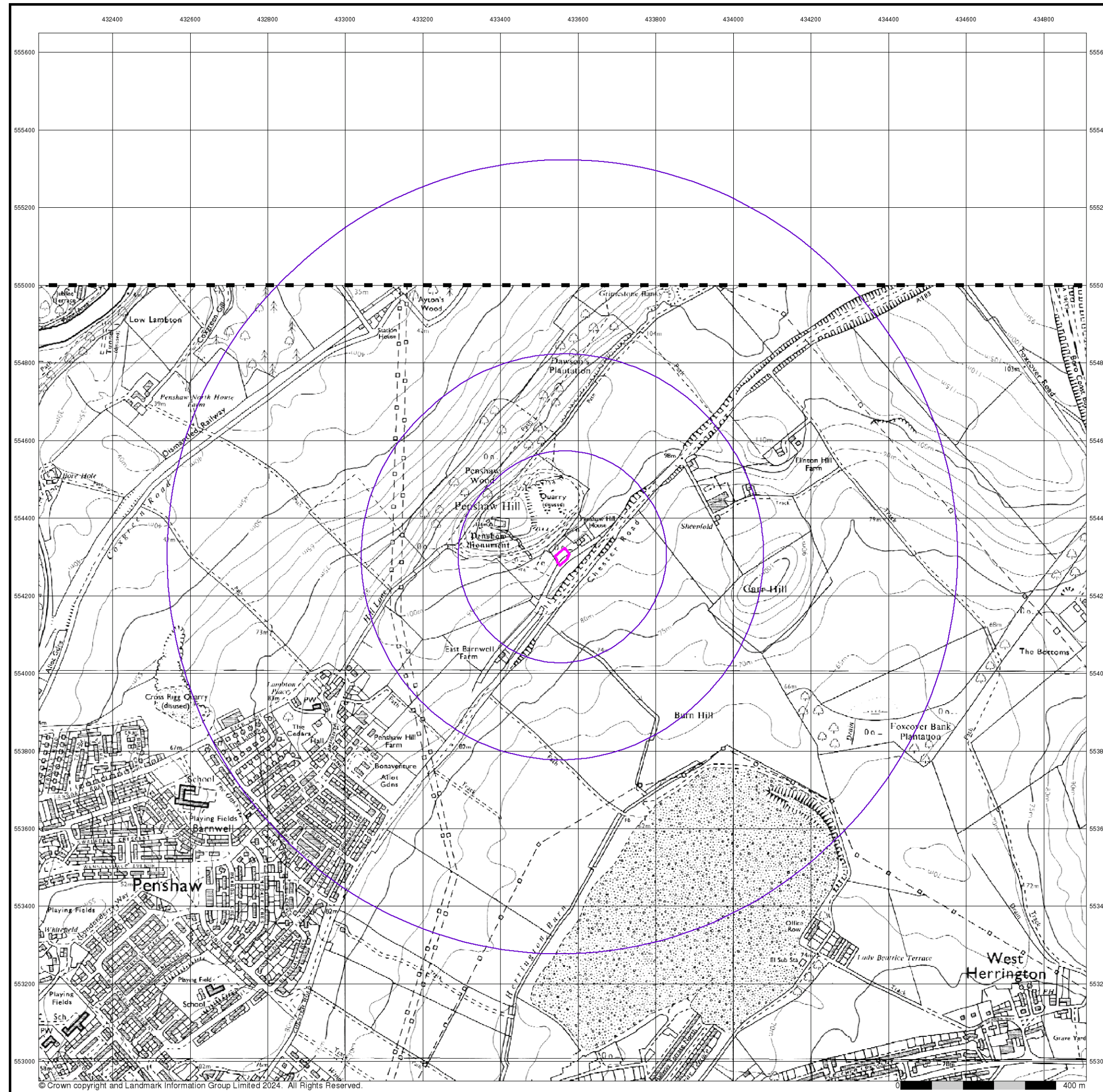
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 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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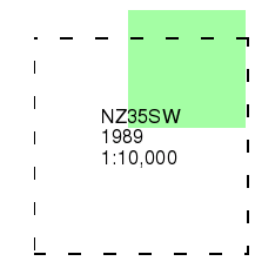
Ordnance Survey Plan

Published 1989

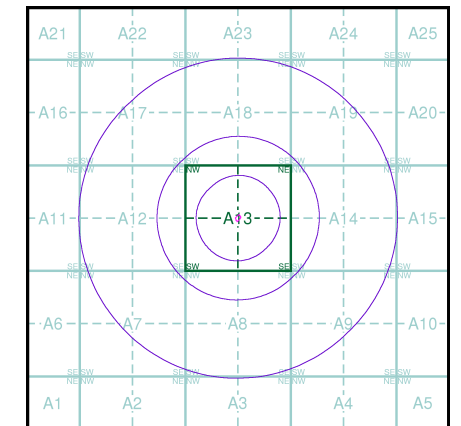
Source map scale - 1:10,000

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: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

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10k Raster Mapping

Published 2000

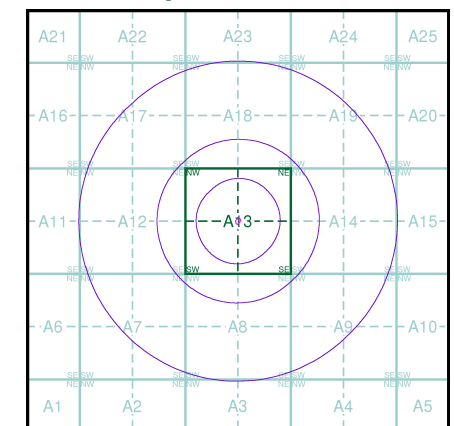
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

NZ35NW	2000	1:10,000
NZ35SW	2000	1:10,000

Historical Map - Slice A



Order Details

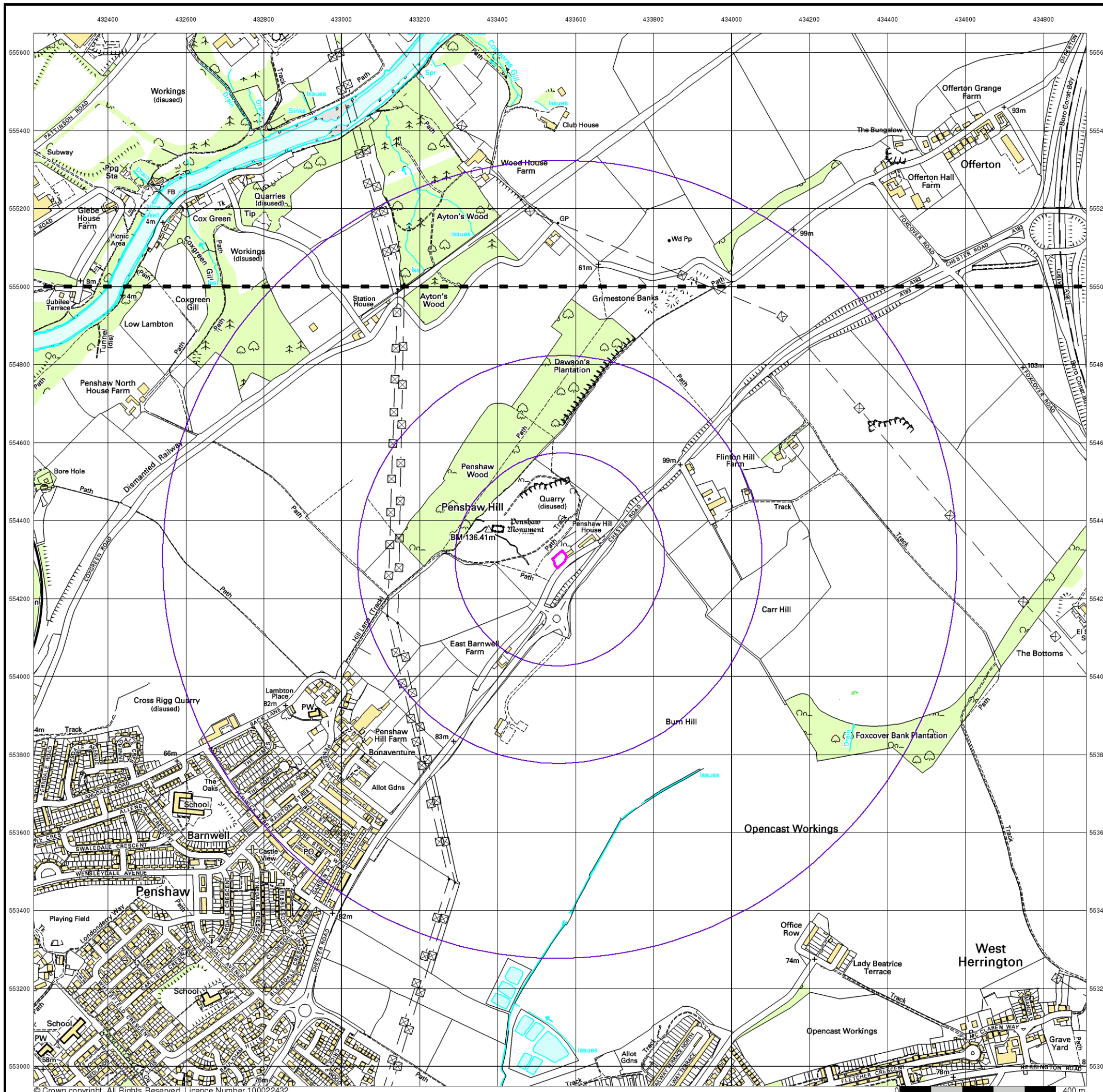
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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10k Raster Mapping

Published 2006

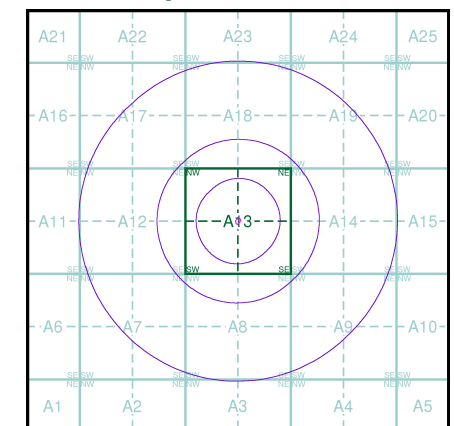
Source map scale - 1:10,000

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)

NZ35NW	2006	1:10,000
NZ35SW	2006	1:10,000

Historical Map - Slice A



Order Details

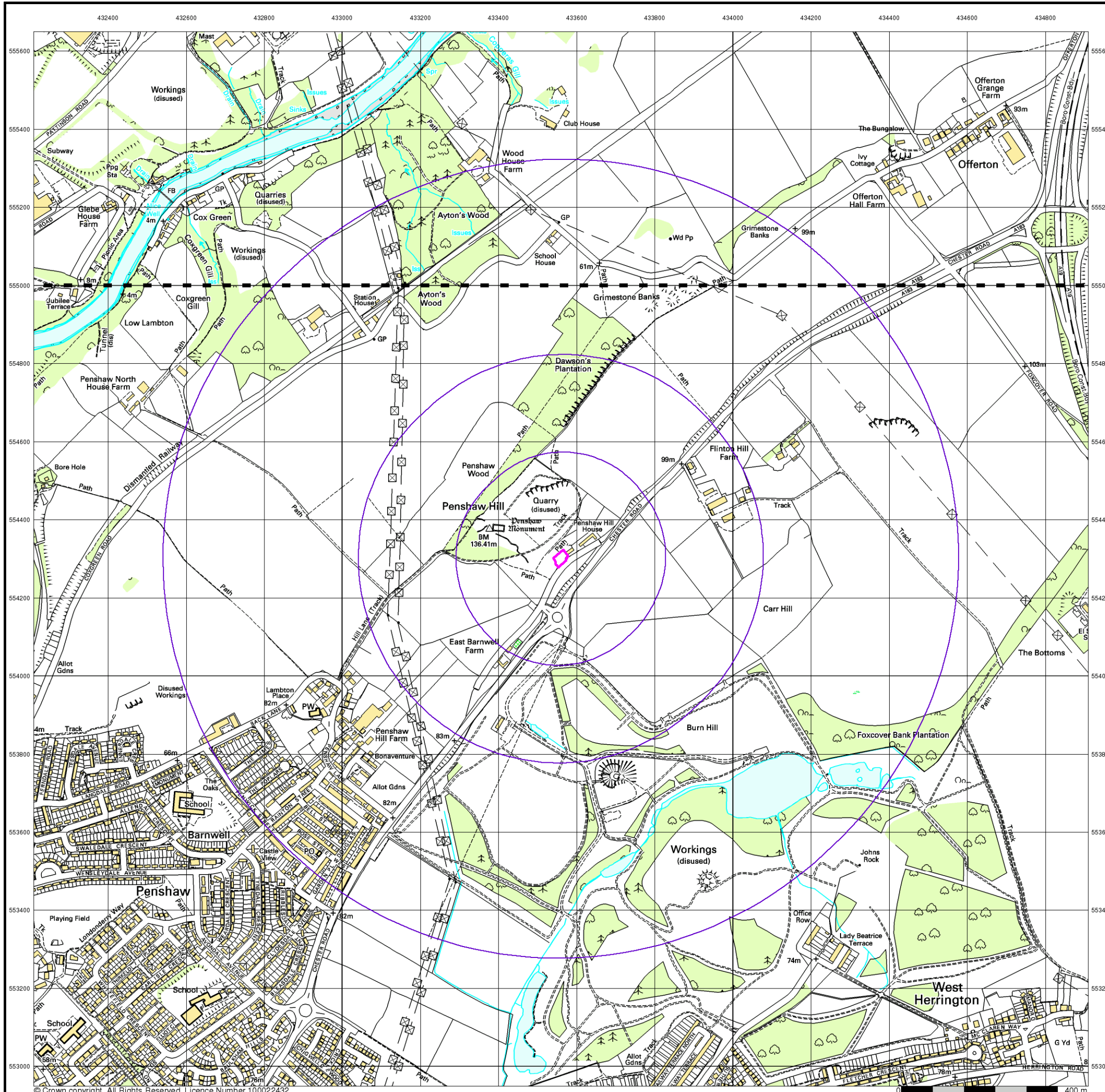
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Site Details

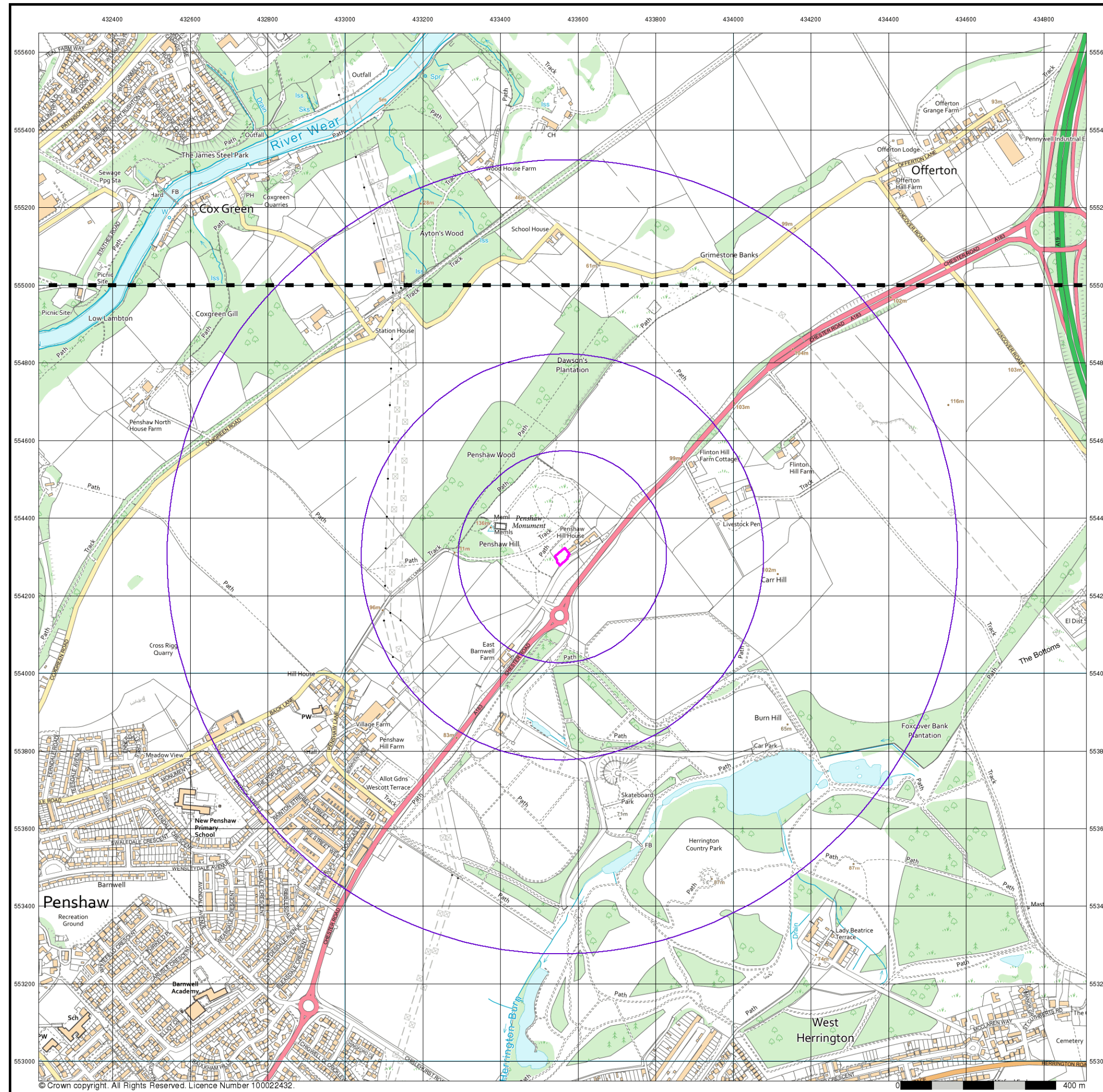
Land adjacent to, Penshaw Hill House, Chester Road, SUNDERLAND, SR4 9JX



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VectorMap Local

Published 2023

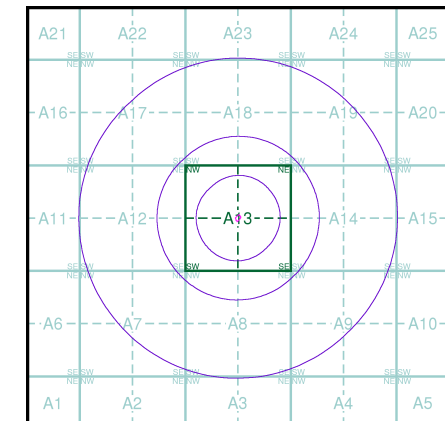
Source map scale - 1:10,000

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)

- NZ35NW | 2023 | Variable
- NZ35SW | 2023 | Variable

Historical Map - Slice A



Order Details

Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

Land adjacent to, Penshaw Hill House, Chester Road, SUNDERLAND, SR4 9JX



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

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

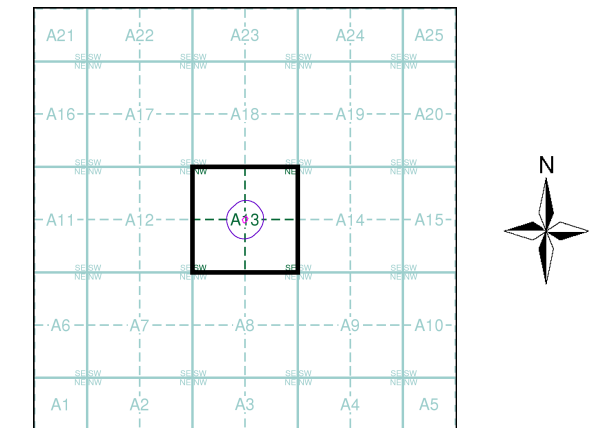
Cliff **Slopes** **Top**
Rock **Rock (scattered)**
Boulders **Boulders (scattered)**
Positioned Boulder **Scree**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **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	1873 - 1880	2
Durham	1:2,500	1896	3
Durham	1:2,500	1919	4
Durham	1:2,500	1939	5
Ordnance Survey Plan	1:2,500	1959	6
Ordnance Survey Plan	1:2,500	1966 - 1985	7
Additional SIMs	1:2,500	1977 - 1984	8
Ordnance Survey Plan	1:1,250	1978	9
Large-Scale National Grid Data	1:2,500	1993	10
Large-Scale National Grid Data	1:1,250	1993	11
Historical Aerial Photography	1:2,500	1999	12

Historical Map - Segment A13



Order Details

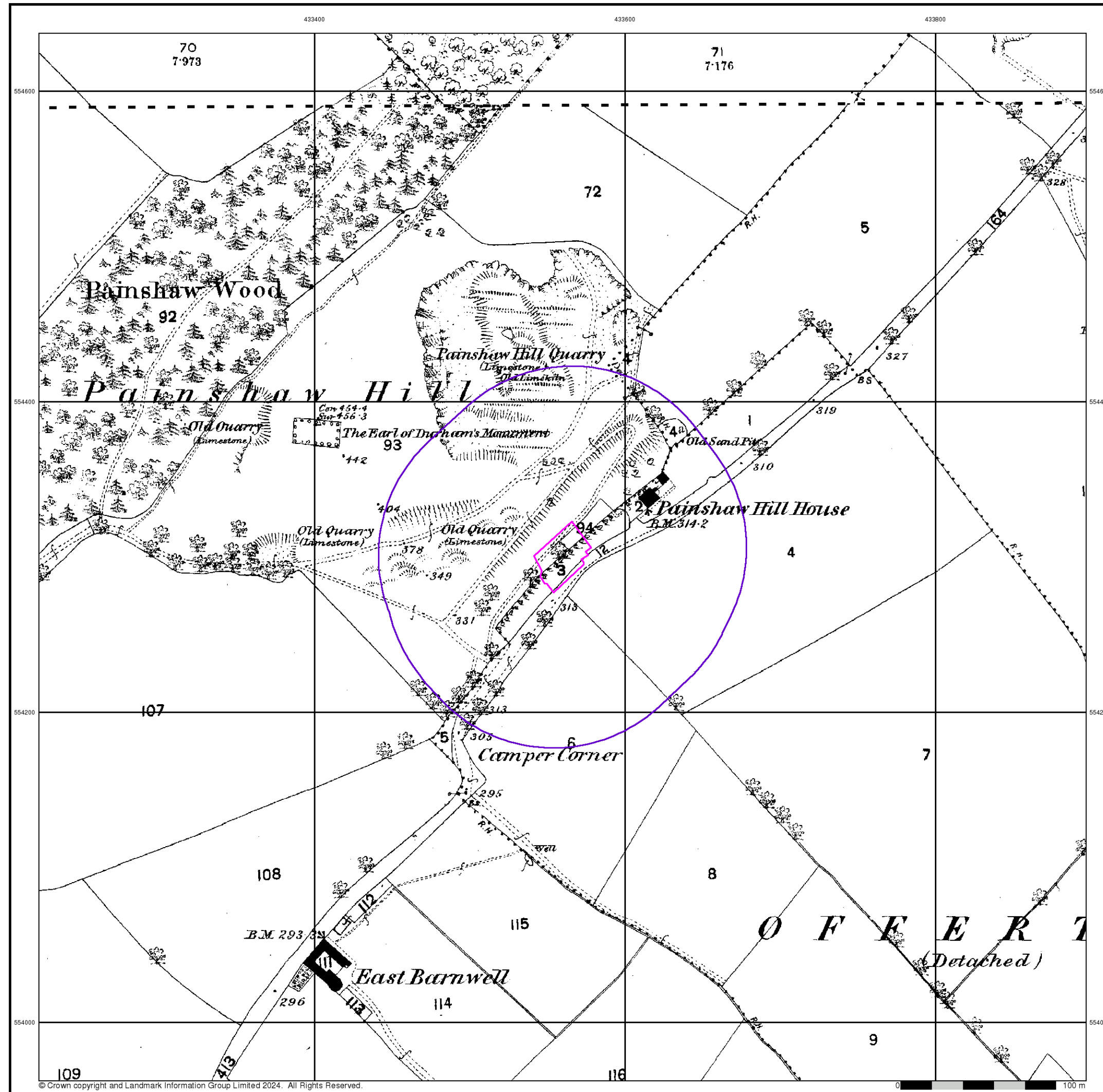
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 100

Site Details

Land adjacent to, Penshaw Hill House, Chester Road, SUNDERLAND, SR4 9JX



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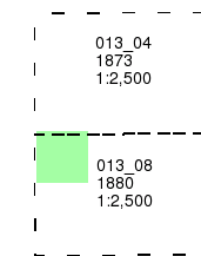
Durham

Published 1873 - 1880

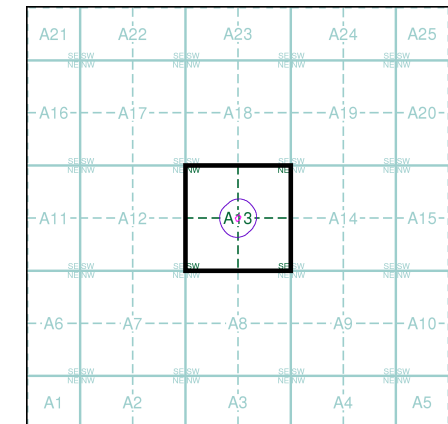
Source map scale - 1:2,500

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

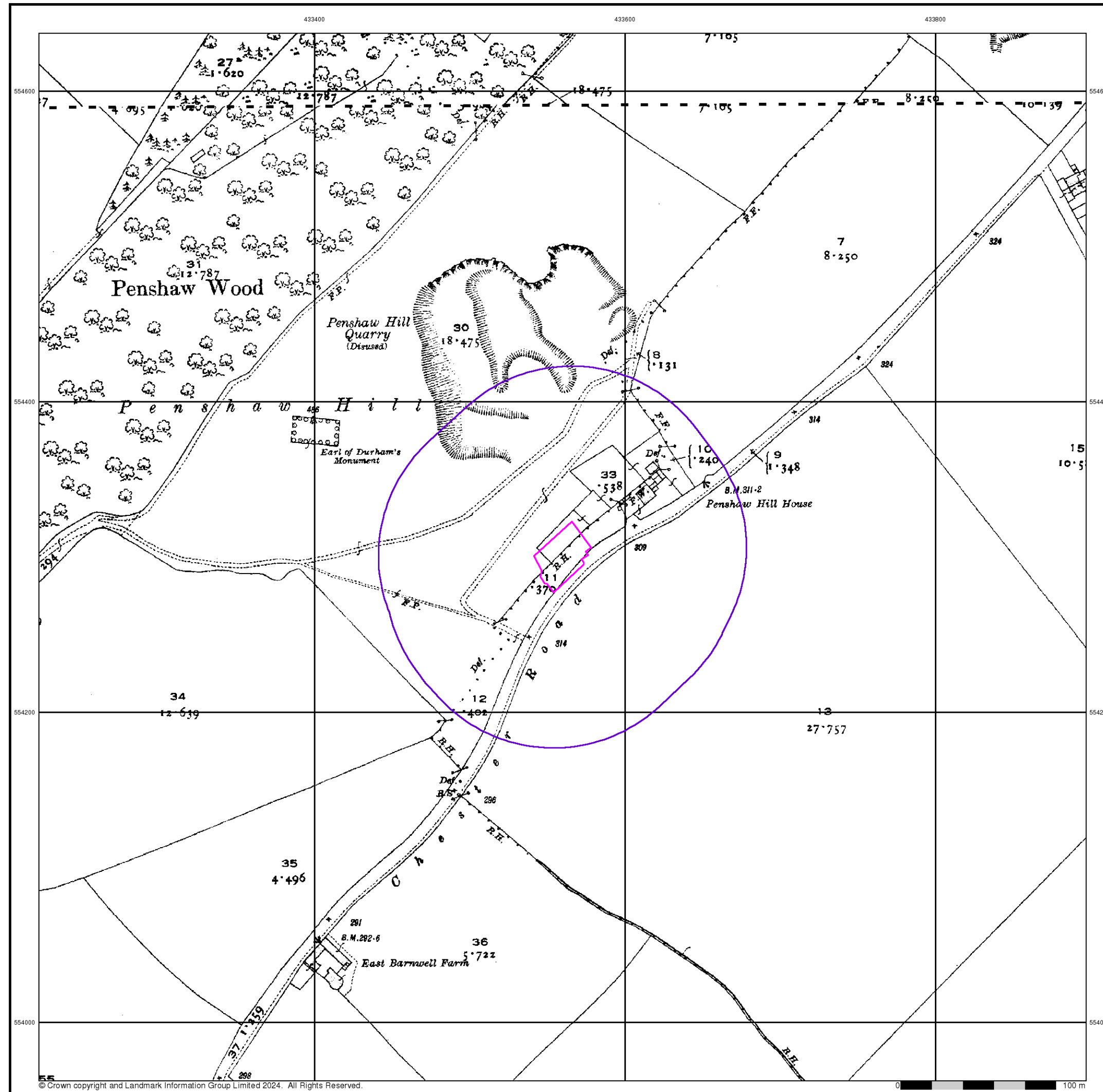
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 100

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Durham

Published 1919

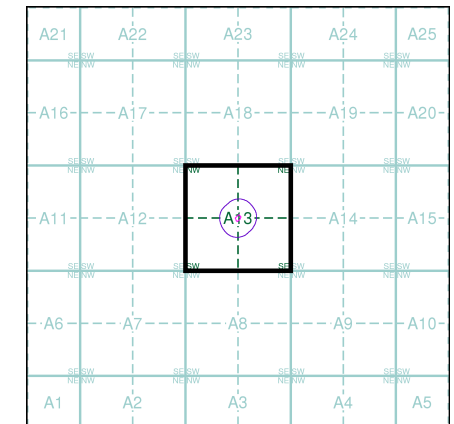
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

013_04 1919 1:2,500
013_08 1919 1:2,500

Historical Map - Segment A13



Order Details

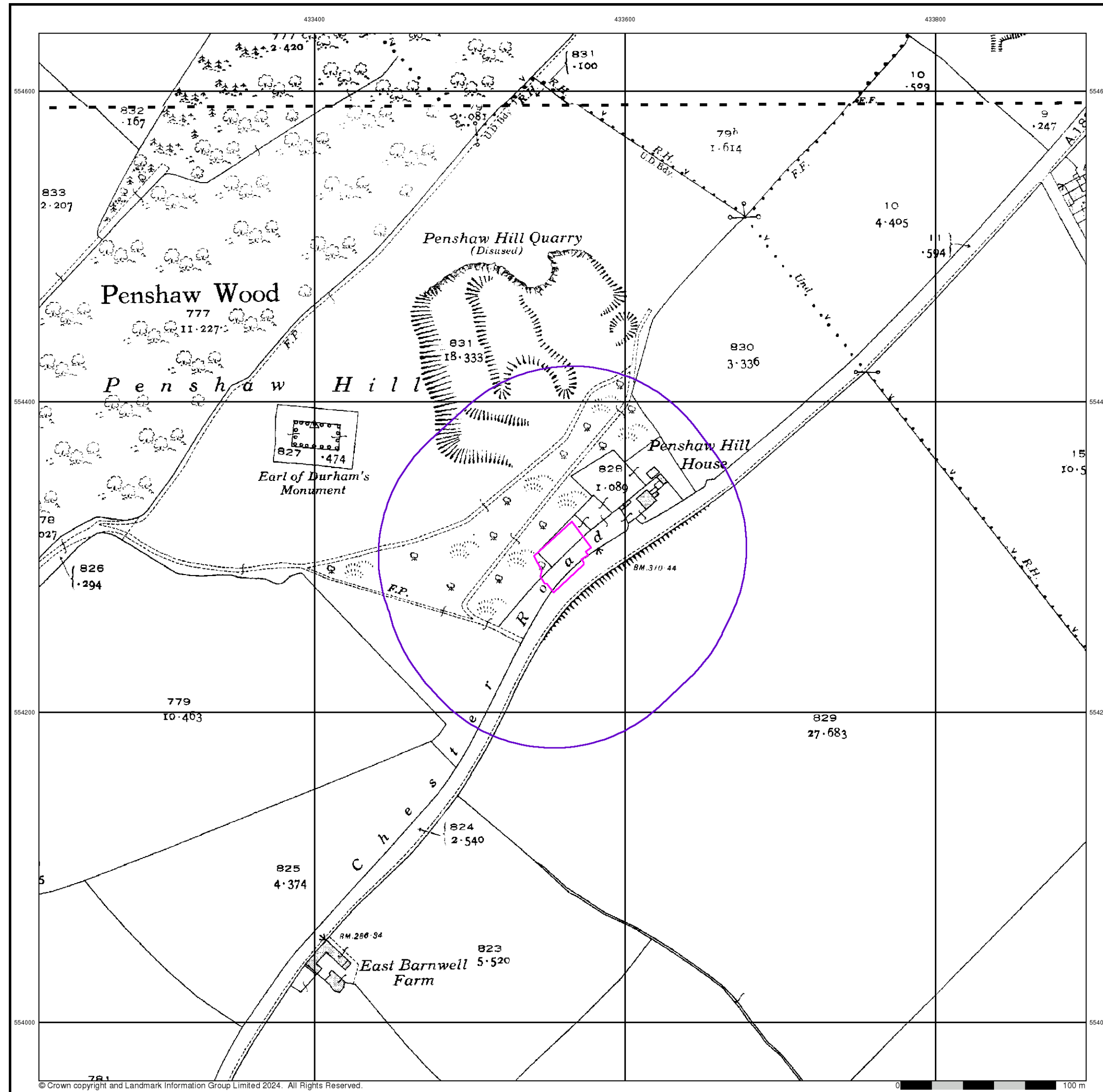
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 100

Site Details

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Durham

Published 1939

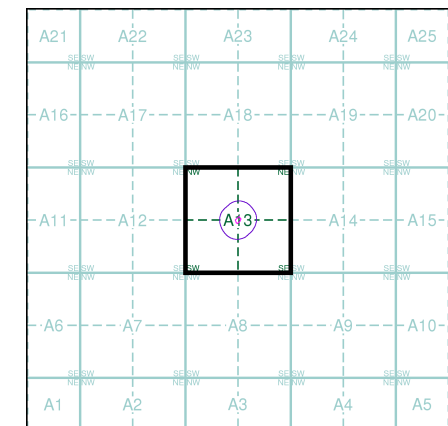
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

013_04 1939 1:2,500
013_08 1939 1:2,500

Historical Map - Segment A13



Order Details

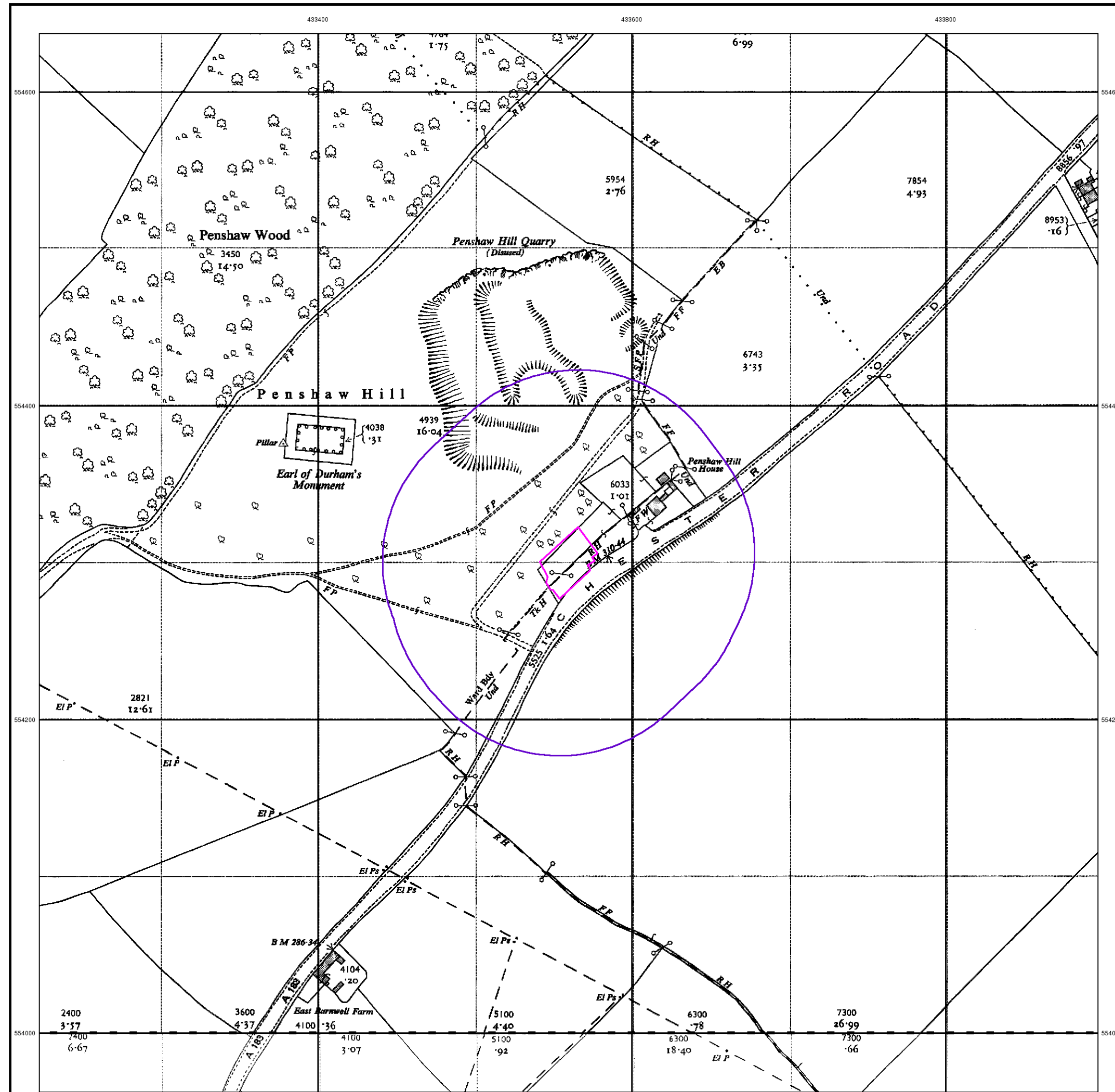
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 100

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Ordnance Survey Plan

Published 1959

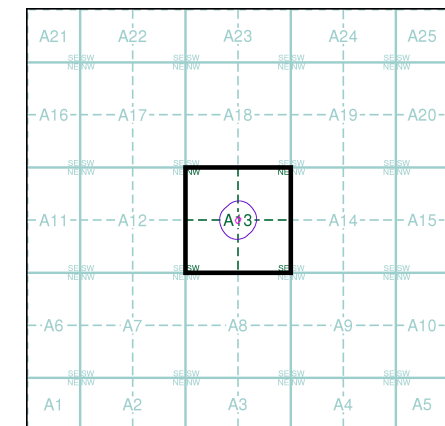
Source map scale - 1:2,500

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)

NZ3354	1959	1:2,500
NZ3353	1959	1:2,500

Historical Map - Segment A13



Order Details

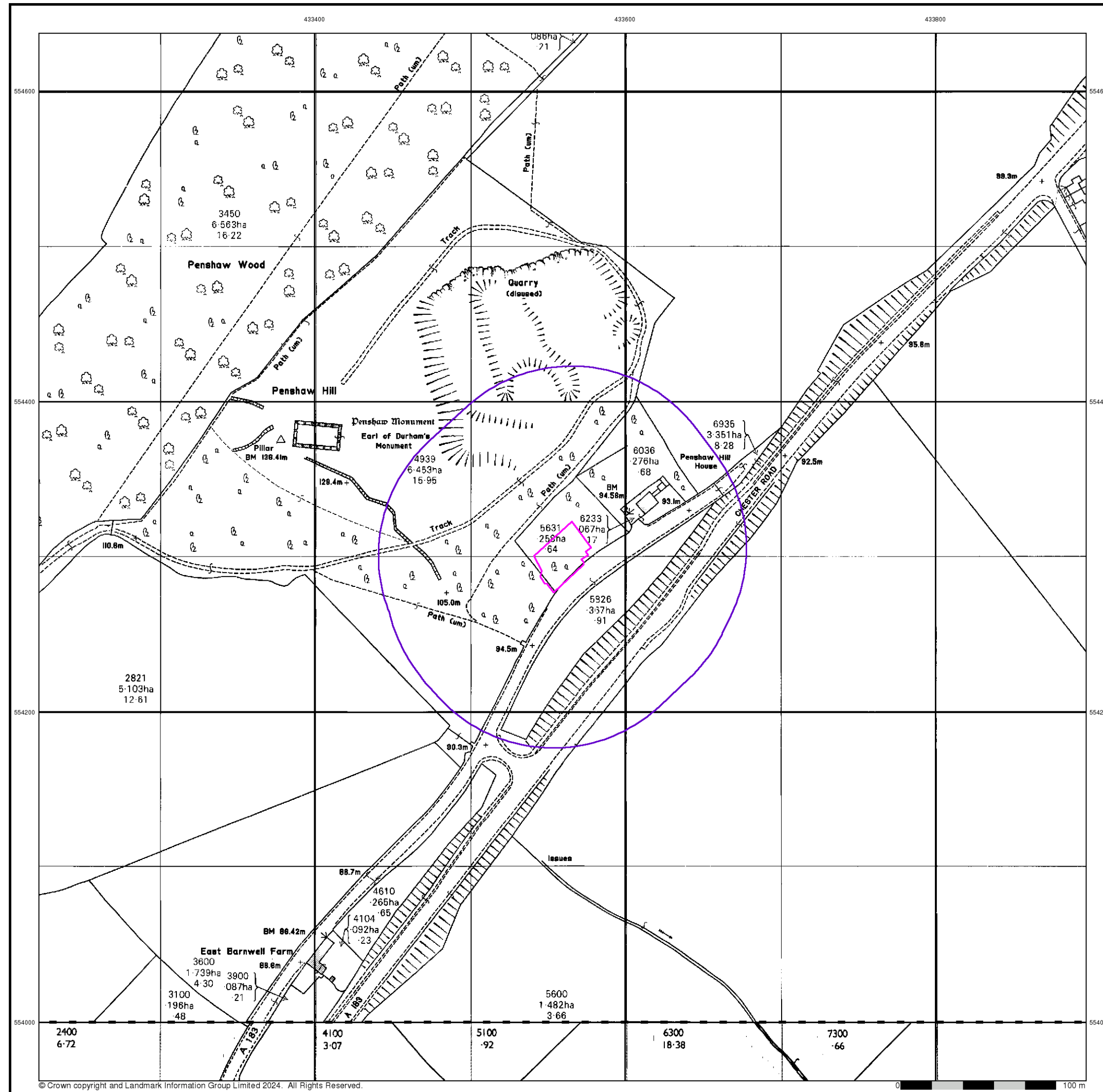
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 100

Site Details

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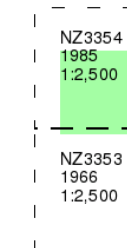
Tel: 0844 844 9952
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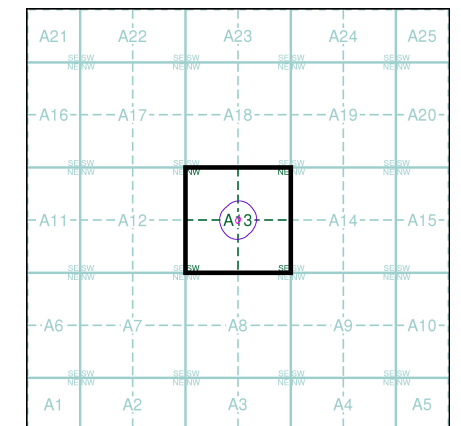
Ordnance Survey Plan
Published 1966 - 1985
Source map scale - 1:2,500

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

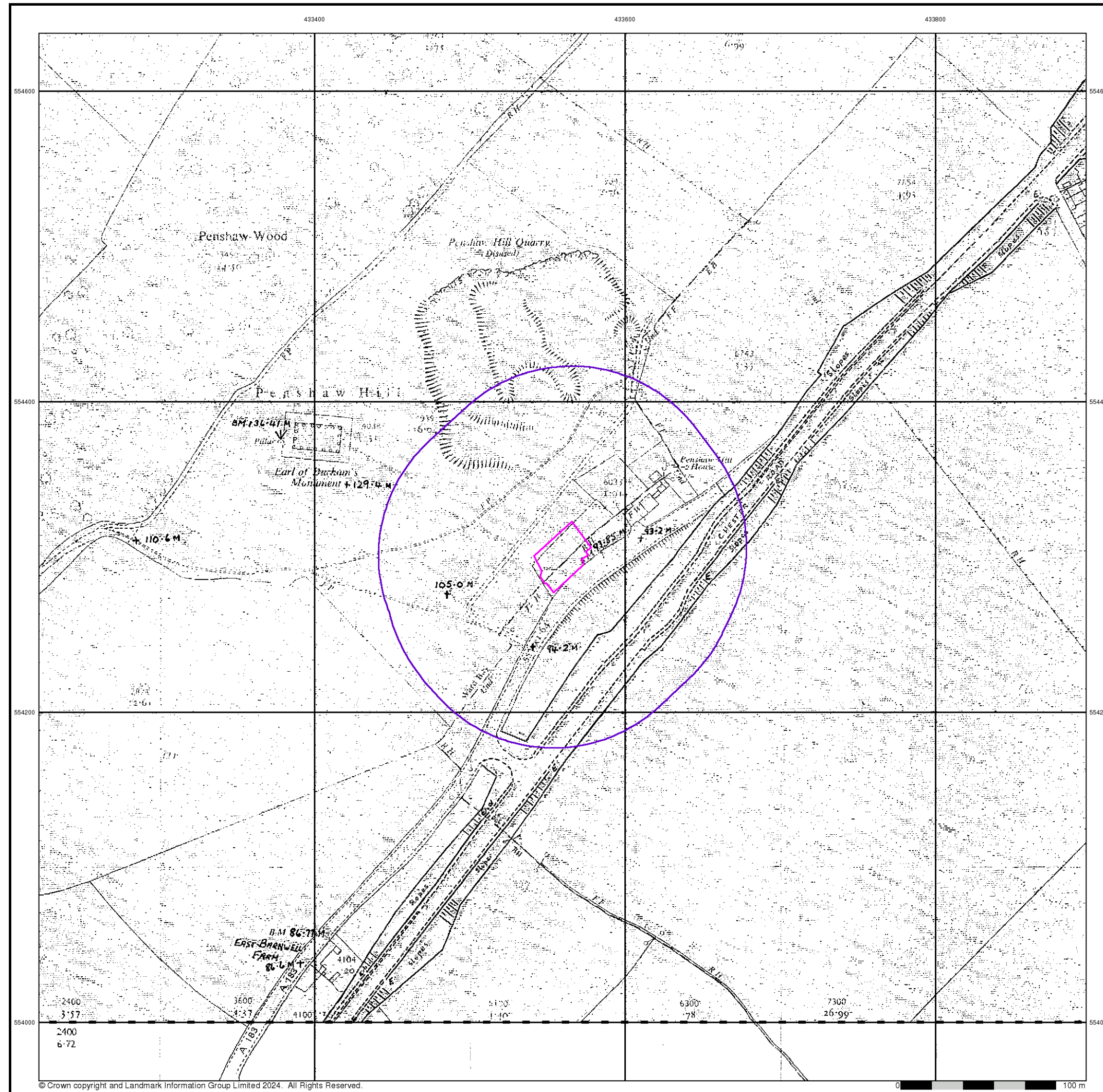
Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 100

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Additional SIMs

Published 1977 - 1984

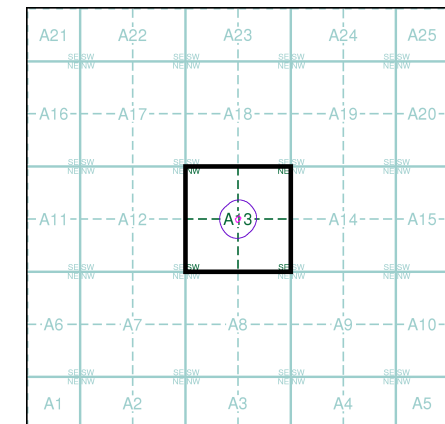
Source map scale - 1:2,500

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)

NZ3354	1977	1:2,500
NZ3353	1984	1:2,500

Historical Map - Segment A13



Order Details

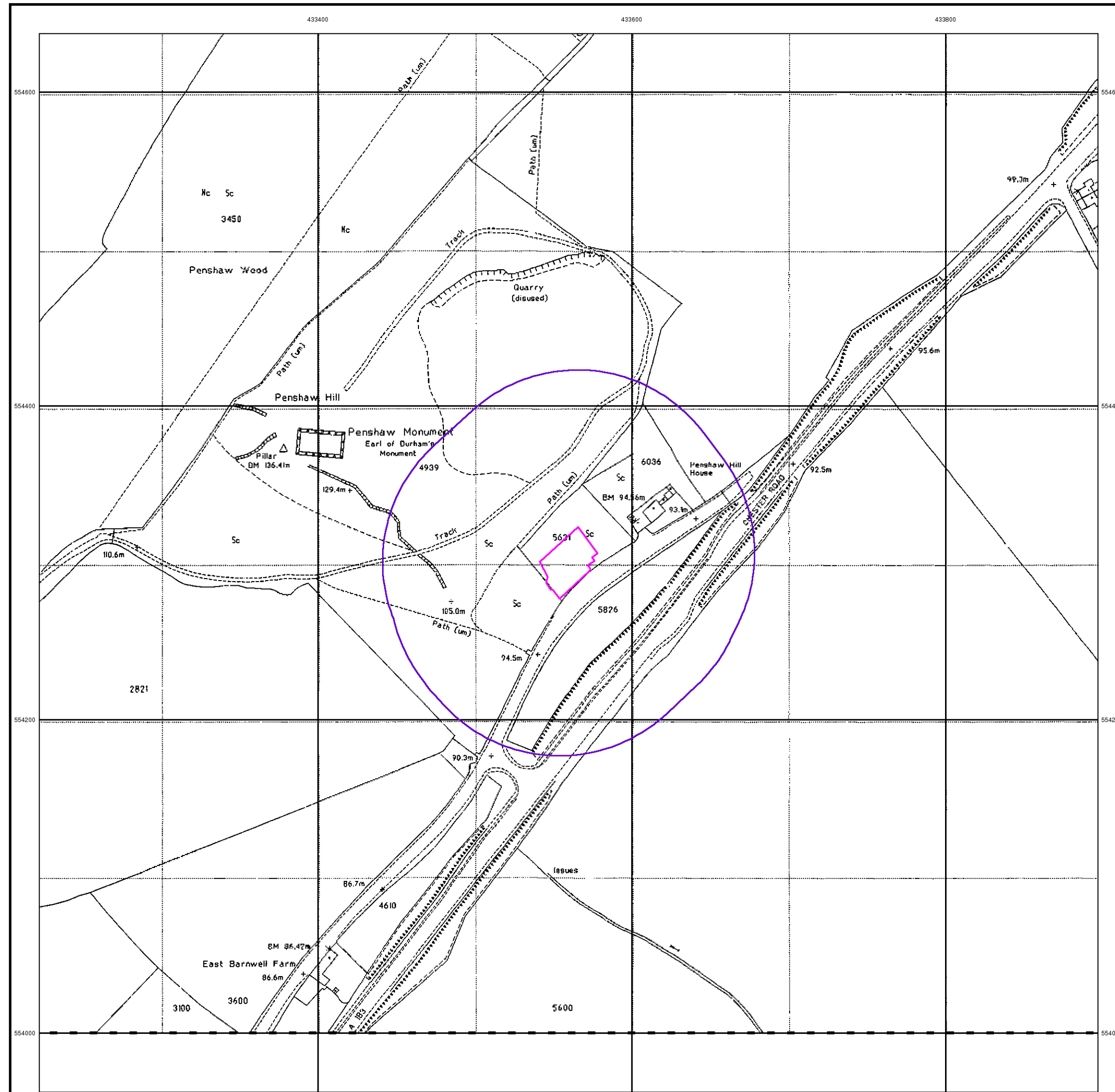
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 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
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 Site Area (Ha): 0.09
 Search Buffer (m): 100

Site Details

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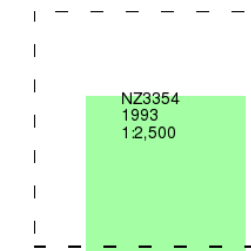
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



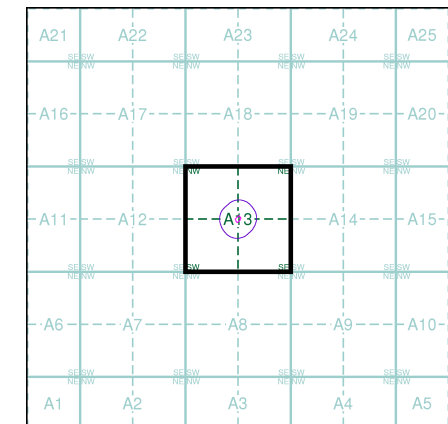
Large-Scale National Grid Data
Published 1993
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 100

Site Details

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433400

433600

433800

554600

554600

554400

554400

554200

554200

554000

554000



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0 100 m

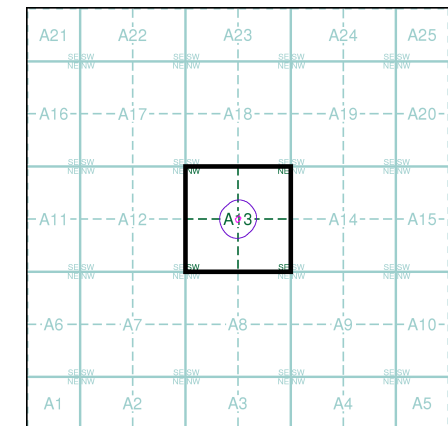


Historical Aerial Photography

Published 1999

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number: 337564571_1_1
 Customer Ref: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 100

Site Details

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 SUNDERLAND, SR4 9JX



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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

337564571_1_1

Customer Reference:

GEOL24-7117

National Grid Reference:

433560, 554300

Slice:

A

Site Area (Ha):

0.09

Search Buffer (m):

1000

Site Details:

Land adjacent to
Penshaw Hill House
Chester Road
SUNDERLAND
SR4 9JX

Client Details:

Terry McMenam
Geol Consultants Ltd
Tectonic House, Unit 11, Queens Court North
Third Avenue
Team Valley Trading Estate
Gateshead
NE11 0BU

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	11
Hazardous Substances	-
Geological	13
Industrial Land Use	28
Sensitive Land Use	29
Data Currency	30
Data Suppliers	37
Useful Contacts	38

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this 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 v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1				8
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 3			Yes	
Pollution Incidents to Controlled Waters	pg 3				6
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 4				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 5				1
Water Abstractions	pg 5				(*2)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 5	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 6	1	n/a	n/a	n/a
Groundwater Vulnerability - Local Information		1	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 6	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 6	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
OS Water Network Lines	pg 6			4	32

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 11				3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 11	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 11			1	2
Potentially Infilled Land (Non-Water)	pg 12	1	1	3	4
Potentially Infilled Land (Water)	pg 12				4
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 13	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 13	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 24		3	2	5
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 26	Yes	n/a	n/a	n/a
Mining Instability	pg 26	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 26	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 26		Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 26	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 27	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 27	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 27	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 28				2
Fuel Station Entries					
Points of Interest - Commercial Services	pg 28				3
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 28		1		
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental	pg 28			1	1
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 29				1
Areas of Adopted Green Belt	pg 29	1			
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	pg 29	2			
Ramsar Sites					
Sites of Special Scientific Interest	pg 29			1	
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	0	1	433559 554300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	103	1	433450 554250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	172	1	433750 554300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	201	1	433750 554200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	235	1	433400 554100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	275	1	433400 554050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	336	1	433900 554400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	356	1	433200 554400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (E)	375	1	433950 554350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	380	1	433600 553900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	392	1	433150 554300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	404	1	433950 554150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SW)	414	1	433300 553950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (SE)	442	1	433850 553950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	478	1	433550 554800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SW)	485	1	433250 553900
1	Discharge Consents Operator: Robert Simpson Property Type: MINING OF COAL + LIGNITE Location: Herrington Colliery, Herrington, County Durham Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 245/A/0949 Permit Version: 1 Effective Date: 29th December 1982 Issued Date: 29th December 1982 Revocation Date: 17th September 1990 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Herrington Burn Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m	A8SE (S)	721	2	433800 553600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p>Discharge Consents</p> <p>Operator: Robert Simpson Property Type: MINING OF COAL + LIGNITE Location: Herrington Colliery, Herrington, County Durham Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 245/D/0378 Permit Version: 1 Effective Date: 25th May 1973 Issued Date: 25th May 1973 Revocation Date: 29th December 1982 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Herrington Burn Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961 Positional Accuracy: Located by supplier to within 10m</p>	A8SE (S)	721	2	433800 553600
2	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: Undefined Or Other Location: Fox Cover Plantation, New Herrington Authority: Environment Agency, North East Region Catchment Area: Wear (Lower) Reference: 245/0880 Permit Version: 1 Effective Date: 21st September 1989 Issued Date: 21st September 1989 Revocation Date: 14th June 1996 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Herrington Burn Status: Authorisation revoked Positional Accuracy: Located by supplier to within 100m</p>	A9NW (SE)	848	2	434230 553760
3	<p>Discharge Consents</p> <p>Operator: City Of Sunderland Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Herrington Country Park, Chester Road, Penshaw, Tyne & Wear, Dh4 7el Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 245/1381 Permit Version: 1 Effective Date: 28th July 2005 Issued Date: 28th July 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Herrington Burn Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A8SE (S)	879	2	433600 553400
4	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Fox Cover Plantation Cso, New Herrington, Sunderland, Tyne And Wear Authority: Environment Agency, North East Region Catchment Area: Not Given Reference: 245/1184 Permit Version: 1 Effective Date: 14th September 1996 Issued Date: 14th June 1996 Revocation Date: 10th October 1997 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Herrington Burn Status: Authorisation revoked Positional Accuracy: Located by supplier to within 100m</p>	A9NE (SE)	894	2	434240 553700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Discharge Consents</p> <p>Operator: Northumbrian Water Ltd Property Type: Undefined Or Other Location: Fox Cover Plantation Cso, NEW HERRINGTON Authority: Environment Agency, North East Region Catchment Area: Not Given Reference: 245/1184 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Storm sewage overflow discharge Discharge: Freshwater Stream/River Environment: Receiving Water: Herrington Burn Status: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A9NE (SE)	898	2	434240 553695
5	<p>Discharge Consents</p> <p>Operator: Robert Simpson Property Type: MINING OF COAL + LIGNITE Location: Herrington Colliery, Herrington, County Durham Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 245/A/0950 Permit Version: 1 Effective Date: 29th December 1982 Issued Date: 29th December 1982 Revocation Date: 17th September 1990 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Herrington Burn Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m</p>	A8SW (S)	913	2	433300 553400
5	<p>Discharge Consents</p> <p>Operator: Robert Simpson Property Type: MINING OF COAL + LIGNITE Location: Herrington Colliery, Herrington, County Durham Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: 245/D/0334 Permit Version: 1 Effective Date: 5th November 1971 Issued Date: 5th November 1971 Revocation Date: 29th December 1982 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Herrington Burn Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961 Positional Accuracy: Located by supplier to within 10m</p>	A8SW (S)	913	2	433300 553400
	<p>Nearest Surface Water Feature</p>	A8NW (S)	401	-	433468 553885
6	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: PENSRAW Authority: Environment Agency, North East Region Pollutant: Not Given Note: Herrington Burn Incident Date: 28th April 1992 Incident Reference: 245/002437 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Sewerage - Storm Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A8NE (S)	628	2	433800 553700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	Pollution Incidents to Controlled Waters Property Type: Not Given Location: House And Hounds Public House Authority: Environment Agency, North East Region Pollutant: Not Given Note: Herrington Burn Incident Date: 24th December 1990 Incident Reference: 245/001407 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Sewerage - Storm Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	673	2	433900 553700
7	Pollution Incidents to Controlled Waters Property Type: Not Given Location: SHINEY ROW Authority: Environment Agency, North East Region Pollutant: Not Given Note: Herrington Burn Incident Date: 31st January 1991 Incident Reference: 245/001459 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Sewerage - Storm Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	678	2	433900 553695
8	Pollution Incidents to Controlled Waters Property Type: Mining/Extraction: Other Location: Herrington Burn At, PENSHAW Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Tip Leachate Note: No Fish Killed Incident Date: 1st September 1995 Incident Reference: NW950264 Catchment Area: Lower Wear Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SW (S)	779	2	433500 553500
9	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Storm Overflow Location: River Wear At North Terrace, FATFIELD Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: No Fish Killed Incident Date: 27th March 1995 Incident Reference: NW950319 Catchment Area: Lower Wear Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	963	2	432600 554100
10	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: COX GREEN Authority: Environment Agency, North East Region Pollutant: Not Given Note: Wear Incident Date: 8th July 1992 Incident Reference: 245/002623 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Trade Effluent Complying Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NW (N)	980	2	433500 555300
	River Quality Name: Herrington_Burn GQA Grade: River Quality E Reach: Source_Sedgeleth_St Estimated Distance (km): 3.2 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A9NW (SE)	631	2	433930 553771

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, North East Area Incident Date: 13th August 2008 Incident Reference: 613112 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Microbiological	A9NW (SE)	793	2	434115 553716
	Water Abstractions Operator: The Wildfowl And Wetlands Trust Licence Number: 1/24/05/036 Permit Version: 100 Location: River Wear Authority: Environment Agency, North East Region Abstraction: Private Non-Industrial Amenity: Lake And Pond Throughflow Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): 727 Yearly Rate (m3): 9092 Details: Washington Wildfowl Park, Washington, Tyne & Wear Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 7th December 1984 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22SE (N)	1344	2	433150 555600
	Water Abstractions Operator: Timberpak Ltd Licence Number: Ne/024/0005/018 Permit Version: 1 Location: Borehole - Middle Coal Measures - Washington Authority: Environment Agency, North East Region Abstraction: Refuse And Recycling: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: 22b Staithes Road Pattinson Industrial Estate Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 15th December 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NW (NW)	1677	2	432071 555107
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial: <90% Patchiness: Superficial <3m Thickness: Superficial Low Recharge:	A13SE (SE)	0	3	433562 554297
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial: <90% Patchiness: Superficial <3m Thickness: Superficial Low Recharge:	A13NW (NW)	0	3	433559 554300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Unproductive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: Low	A13SE (SE)	0	3	433567 554288
	Groundwater Vulnerability - Soluble Rock Risk Classification: Significant Risk - Problems Unlikely	A13NW (NW)	0	3	433559 554300
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A13NW (NW)	0	3	433559 554300
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (SE)	0	3	433562 554297
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13SE (SE)	0	3	433567 554288
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NW (NW)	0	3	433559 554300
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
12	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A8NW (S)	401	4	433468 553885
13	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 54.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A8NW (S)	408	4	433484 553876
14	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 57.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A8NW (S)	436	4	433527 553842

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 294.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A8NE (S)	468	4	433574 553810
16	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 336.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A8NE (SE)	658	4	433869 553699
17	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A8SE (S)	704	4	433796 553616
18	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 27.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A8SE (S)	705	4	433797 553615
19	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 37.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A8SE (S)	726	4	433786 553590
20	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 97.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A8SE (S)	748	4	433763 553560
21	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 136.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NW (SE)	778	4	434085 553709
22	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 56.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A9NW (SE)	778	4	434085 553709
23	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 12.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A8SE (S)	790	4	433687 553499

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 25.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A8SE (S)	790	4	433687 553499
25	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 70.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A8SE (S)	794	4	433664 553491
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 242.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A17NE (NW)	798	4	433209 555037
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A8SE (S)	803	4	433691 553487
28	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 88.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A9NW (SE)	808	4	434140 553719
29	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 76.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NW (SE)	808	4	434140 553719
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.5 Watercourse Level: Underground Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A9NW (SE)	820	4	434207 553777
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 278.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A9NW (SE)	830	4	434224 553782
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 57.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A8SE (S)	835	4	433611 553445

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 207.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A18NW (N)	839	4	433340 555130
34	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 20.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NW (SE)	852	4	434215 553736
35	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 18.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NW (SE)	852	4	434215 553736
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 0.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NW (SE)	859	4	434231 553744
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NW (SE)	860	4	434232 553744
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NW (SE)	864	4	434213 553715
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NE (SE)	865	4	434242 553747
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NE (SE)	866	4	434244 553748
41	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 198.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NE (SE)	867	4	434246 553749

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 12.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9NW (SE)	871	4	434219 553712
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 20.8 Watercourse Level: Underground Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A8SE (S)	883	4	433584 553395
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 138.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrington Burn Catchment Name: Wear Primacy: 1	A8SE (S)	901	4	433573 553377
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9SW (SE)	906	4	434133 553581
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 32.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A9SW (SE)	971	4	434152 553512
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 284.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Wear Primacy: 1	A17NE (N)	1000	4	433194 555250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	Historical Landfill Sites Licence Holder: Not Supplied Location: West of Hastings Hill, Sunderland Name: Flinton Hill Farm Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06712 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4500/0245 BGS Ref: Not Supplied Other Ref: SL 008	A19SE (NE)	856	2	434364 554645
49	Historical Landfill Sites Licence Holder: Not Supplied Location: Fatfield, Sunderland Name: Cox Green A Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06590 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4500/0242 BGS Ref: Not Supplied Other Ref: SL 005, SL 26	A17NE (NW)	950	2	432939 555036
50	Historical Landfill Sites Licence Holder: Borough Of Sunderland Location: Langdale Road, Penshaw, Sunderland, Tyne and Wear Name: Cross Rigg Quarry Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD06616 First Input Date: 31st December 1962 Last Input Date: 31st December 1991 Specified Waste: Deposited Waste included Inert, Industrial, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: YO1/L/BOR003 WRC Ref: 4500/0034 BGS Ref: Not Supplied Other Ref: TW 136 SL, SL 077, TW 030 SL, SL 050, 4500/0072	A7NW (SW)	968	2	432685 553846
	Local Authority Landfill Coverage Name: Sunderland City Council - Has supplied landfill data		0	5	433559 554300
51	Local Authority Recorded Landfill Sites Location: Flint Mill Reference: C Authority: Sunderland City Metropolitan Borough Council, Environmental Health Department Last Reported Status: Closed Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A14NW (NE)	462	5	433962 554563
52	Local Authority Recorded Landfill Sites Location: Cross Rigg Quarry Reference: TW136 Authority: Sunderland City Metropolitan Borough Council, Environmental Health Department Last Reported Status: Open Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A12SW (W)	842	5	432731 554073

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	<p>Local Authority Recorded Landfill Sites</p> <p>Location: Cross Rigg Quarry Reference: TW 30 Authority: Sunderland City Metropolitan Borough Council, Environmental Health Department Last Reported Status: Closed Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate</p>	A7NW (SW)	975	5	432654 553894
54	<p>Potentially Infilled Land (Non-Water)</p> <p>Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989</p>	A13NW (NW)	0	-	433550 554308
55	<p>Potentially Infilled Land (Non-Water)</p> <p>Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989</p>	A13NE (NE)	64	-	433601 554375
56	<p>Potentially Infilled Land (Non-Water)</p> <p>Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989</p>	A14SW (E)	426	-	433975 554154
57	<p>Potentially Infilled Land (Non-Water)</p> <p>Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989</p>	A18SE (NE)	435	-	433854 554648
58	<p>Potentially Infilled Land (Non-Water)</p> <p>Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989</p>	A14NW (NE)	466	-	433955 554579
59	<p>Potentially Infilled Land (Non-Water)</p> <p>Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989</p>	A14NW (E)	615	-	434190 554361
60	<p>Potentially Infilled Land (Non-Water)</p> <p>Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989</p>	A12NW (W)	762	-	432804 554491
61	<p>Potentially Infilled Land (Non-Water)</p> <p>Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989</p>	A8SE (SE)	807	-	433892 553545
62	<p>Potentially Infilled Land (Non-Water)</p> <p>Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989</p>	A7NW (SW)	961	-	432687 553856
63	<p>Potentially Infilled Land (Water)</p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938</p>	A7NE (SW)	599	-	433043 553962
64	<p>Potentially Infilled Land (Water)</p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938</p>	A7NE (SW)	684	-	433179 553705
65	<p>Potentially Infilled Land (Water)</p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951</p>	A8SE (S)	728	-	433684 553561
66	<p>Potentially Infilled Land (Water)</p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951</p>	A18NW (N)	1000	-	433332 555295

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Middle Coal Measures Formation And South Wales Middle Coal Measures Formation (Undifferentiated)	A13SE (S)	0	1	433561 554289
	BGS 1:625,000 Solid Geology Description: Zechstein Group	A13NW (NW)	0	1	433559 554300
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (NW)	0	1	433559 554300
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SE)	0	1	433562 554297
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (SE)	0	1	433567 554288
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SW)	48	1	433501 554271
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SW)	62	1	433526 554222

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NE (NE)	67	1	433628 554350
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NE (E)	104	1	433674 554343
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NE (E)	142	1	433719 554317
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SE (E)	164	1	433739 554277
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SW (W)	203	1	433344 554256
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SW (S)	247	1	433512 554034

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SW (S)	277	1	433559 554000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	277	1	433432 554565
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SE (S)	279	1	433586 554000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SW (SW)	294	1	433383 554038
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SE (E)	306	1	433880 554261
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13SW (SW)	328	1	433379 554000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SW (SW)	335	1	433321 554036
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8NE (S)	342	1	433645 553948
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8NW (S)	371	1	433509 553909
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A13NW (NW)	373	1	433303 554587
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13SW (SW)	376	1	433300 554000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NE (W)	378	1	433185 554426

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A13NW (NW)	379	1	433312 554605
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NE (W)	428	1	433125 554398
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SE (W)	443	1	433117 554175
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8NE (SE)	465	1	433886 553951
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8NE (SE)	465	1	433882 553948
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NW (NE)	465	1	434000 554500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8NE (S)	472	1	433608 553809
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NW (E)	476	1	434053 554326
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12NE (W)	519	1	433034 554409
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SE (W)	519	1	433062 554100
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 30 - 45 mg/kg Concentration:	A8NW (S)	523	1	433448 553765
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NW (E)	527	1	434102 554352

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8NW (S)	534	1	433546 553743
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (N)	537	1	433527 554858
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SW (SE)	581	1	434090 554031
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A9NW (SE)	600	1	434000 553874
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NW (E)	623	1	434199 554351
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12NW (W)	664	1	432879 554346

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18NW (N)	678	1	433559 555000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18NE (N)	678	1	433579 555000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18NE (N)	679	1	433610 555000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 15 - 30 mg/kg Concentration:	A8SE (S)	689	1	433763 553621
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12SE (W)	693	1	432898 554040
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NE (SW)	701	1	433065 553775

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NE (SW)	707	1	433000 553838
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SE (SW)	719	1	432887 554000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SW (NW)	804	1	432876 554752
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A9SW (SE)	812	1	434000 553599
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17NE (NW)	828	1	433090 555000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17NE (NW)	873	1	433162 555096

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	876	1	432799 554765
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17NE (NW)	885	1	433210 555133
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SW (NW)	890	1	432782 554764
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12SW (W)	912	1	432649 554113
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14SE (E)	923	1	434500 554267
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12NW (W)	929	1	432614 554352

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17NE (N)	952	1	433192 555198
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SW (NW)	956	1	432725 554799
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18NW (N)	957	1	433317 555247
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SW (W)	966	1	432602 554074
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7NW (SW)	969	1	432660 553894
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17NW (NW)	976	1	432861 555000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SW (W)	977	1	432616 553988
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NW (SW)	981	1	432737 553732
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17SW (NW)	981	1	432710 554822
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 300 - 600 mg/kg Nickel 30 - 45 mg/kg Concentration:	A3NE (S)	996	1	433652 553286
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 30 - 45 mg/kg Concentration:	A17NW (NW)	1000	1	432827 555000
67	BGS Recorded Mineral Sites Site Name: Painshaw Hill Sand Pit Location: Penshaw, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99495 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Yellow Sands Formation (Basal Permian Sands) Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	86	1	433619 554389

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Penshaw Hill Location: Penshaw, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 11518 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Raisby Formation (Lower Magnesian Limestone) Commodity: Dolomite Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	134	1	433525 554450
69	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Penshaw Hill Location: Penshaw, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99493 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Raisby Formation (Lower Magnesian Limestone) Commodity: Dolomite Positional Accuracy: Located by supplier to within 10m</p>	A13NW (W)	172	1	433370 554310
70	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Carr Hill Location: Penshaw, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99494 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Raisby Formation (Lower Magnesian Limestone) Commodity: Dolomite Positional Accuracy: Located by supplier to within 10m</p>	A14SW (E)	415	1	433964 554155
71	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Woodheugh Quarry Location: Penshaw, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 11519 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Raisby Formation (Lower Magnesian Limestone) Commodity: Dolomite Positional Accuracy: Located by supplier to within 10m</p>	A18SE (NE)	435	1	433845 554655
72	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Flint Hill Location: Offerton, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99481 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Raisby Formation (Lower Magnesian Limestone) Commodity: Dolomite Positional Accuracy: Located by supplier to within 10m</p>	A14NW (NE)	501	1	433989 554592
73	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Grimeston Banks Location: Offerton, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 99482 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Raisby Formation (Lower Magnesian Limestone) Commodity: Dolomite Positional Accuracy: Located by supplier to within 10m</p>	A18SE (N)	702	1	433835 554971

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	BGS Recorded Mineral Sites Site Name: Herrington Colliery Occs Location: Herrington, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 4287 Type: Opencast Status: Ceased Operator: Rjb Mining (Uk) Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Opencast Positional Accuracy: Unknown	A8SE (S)	721	1	433800 553600
75	BGS Recorded Mineral Sites Site Name: Penshaw New Winning Location: Penshaw, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 145253 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	765	1	432800 554490
76	BGS Recorded Mineral Sites Site Name: Cummings Quarry Location: Hasting Hill, Sunderland, Tyne And Wear Source: British Geological Survey, National Geoscience Information Service Reference: 11520 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Raisby Formation (Lower Magnesian Limestone) Commodity: Dolomite Positional Accuracy: Located by supplier to within 10m	A19SE (E)	910	1	434420 554650
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NW (NW)	0	6	433559 554300
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (NW)	0	-	433559 554300
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	433559 554300
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	433559 554300
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	433559 554300
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	5	1	433547 554315
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	433559 554300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	433560 554299
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	3	1	433555 554323
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	157	1	433628 554466
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	433559 554300
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	433567 554288
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	3	1	433559 554324
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	57	1	433484 554303
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	150	1	433614 554464
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	237	1	433374 554469
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	433567 554288
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	433559 554300
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	3	1	433555 554323
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	67	1	433628 554350
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	142	1	433719 554317
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	433559 554300
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	433559 554300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
77	Contemporary Trade Directory Entries Name: North Car Garage Location: Front Street East, Penshaw, Houghton le Spring, Tyne and Wear, DH4 7EX Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	800	-	433070 553640
78	Contemporary Trade Directory Entries Name: A K Commercial Services Location: 9, Bell Street, Houghton le Spring, Tyne and Wear, DH4 7HH Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	899	-	432923 553637
79	Points of Interest - Commercial Services Name: North Car Garage Location: Front Street East, Penshaw, Houghton le Spring, DH4 7EX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	800	7	433070 553640
79	Points of Interest - Commercial Services Name: North Car Garage Location: Front Street East, Penshaw, Houghton-le-Spring, DH4 7EX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	801	7	433069 553640
80	Points of Interest - Commercial Services Name: A K Commercial Services Location: 9 Bell Street, Houghton le Spring, DH4 7HH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	900	7	432923 553636
81	Points of Interest - Manufacturing and Production Name: Quarry (Disused) Location: SR4 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A13NW (N)	168	7	433528 554486
82	Points of Interest - Recreational and Environmental Name: Play Area Location: DH4 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	487	7	433376 553824
83	Points of Interest - Recreational and Environmental Name: Skatepark Location: DH4 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	640	7	433716 553658

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
84	Ancient Woodland Name: Aytons Wood Reference: 1101652 Area(m ²): 120643.49 Type: Plantation on Ancient Woodland	A18SW (NW)	671	8	433228 554903
85	Areas of Adopted Green Belt Authority: Sunderland City Metropolitan Borough Council, Planning Plan Name: Core Strategy And Development Plan Status: Adopted Plan Date: 30th January 2020	A13NW (NW)	0	9	433559 554300
86	Nitrate Vulnerable Zones Name: Lumley Park Burn From Herrington Burn To R Wear Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NW (NW)	0	3	433559 554300
87	Nitrate Vulnerable Zones Name: Durham Description: Groundwater Source: Environment Agency, Head Office	A13NW (NW)	0	3	433559 554300
88	Sites of Special Scientific Interest Name: Dawsons Plantation Quarry Multiple Areas: N Total Area (m2): 7527.84 Source: Natural England Reference: 2000047 Designation Details: Geological Conservation Review Designation Date: 22nd February 1996 Date Type: Notified Designation Details: Site Of Special Scientific Interest Designation Date: 22nd February 1996 Date Type: Notified	A13NE (N)	308	8	433561 554630

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices South Tyneside Metropolitan Borough Council - Neighbourhood Services Durham City Council (now part of Durham County Council) - Environmental Health Department Environment Agency - Head Office Chester-le-Street District Council (now part of Durham County Council) - Environmental Health Department Gateshead Metropolitan Borough Council - Environmental Health Department Durham County Council (Unitary) - Environmental Health Department Sunderland City Metropolitan Borough Council - Environmental Health Department	January 2024 November 2008 November 2023 October 2008 October 2017 October 2017 October 2017	Annual Rolling Update Annually Annual Rolling Update Annually Annually
Discharge Consents Environment Agency - North East Region	January 2024	Quarterly
Enforcement and Prohibition Notices Environment Agency - North East Region	March 2013	
Integrated Pollution Controls Environment Agency - North East Region	January 2009	
Integrated Pollution Prevention And Control Environment Agency - North East Region	October 2023	Quarterly
Local Authority Integrated Pollution Prevention And Control Durham County Council (Unitary) - Environmental Health Department Chester-le-Street District Council (now part of Durham County Council) - Environmental Health Department Durham City Council (now part of Durham County Council) - Environmental Health Department Sunderland City Metropolitan Borough Council - Environmental Health Department Gateshead Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Environmental Health Department	April 2015 December 2008 March 2009 May 2016 October 2014 September 2012	Variable Not Applicable Not Applicable Variable Variable Variable
Local Authority Pollution Prevention and Controls Durham County Council (Unitary) - Environmental Health Department Chester-le-Street District Council (now part of Durham County Council) - Environmental Health Department Durham City Council (now part of Durham County Council) - Environmental Health Department Sunderland City Metropolitan Borough Council - Environmental Health Department Gateshead Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Environmental Health Department	April 2015 December 2008 March 2009 May 2016 October 2014 September 2012	Annually Not Applicable Not Applicable Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Durham County Council (Unitary) - Environmental Health Department Chester-le-Street District Council (now part of Durham County Council) - Environmental Health Department Durham City Council (now part of Durham County Council) - Environmental Health Department Sunderland City Metropolitan Borough Council - Environmental Health Department Gateshead Metropolitan Borough Council - Environmental Health Department South Tyneside Metropolitan Borough Council - Environmental Health Department	April 2015 December 2008 March 2009 May 2016 October 2014 September 2012	Variable Not Applicable Not Applicable Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	December 2023	
Pollution Incidents to Controlled Waters Environment Agency - North East Region	December 1998	
Prosecutions Relating to Authorised Processes Environment Agency - North East Region	July 2015	
Prosecutions Relating to Controlled Waters Environment Agency - North East Region	March 2013	

Agency & Hydrological	Version	Update Cycle
Registered Radioactive Substances Environment Agency - North East Region Environment Agency - Head Office	June 2016 May 2023	As notified Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	January 2024 January 2024	Quarterly Quarterly
Water Abstractions Environment Agency - North East Region	October 2023	Quarterly
Water Industry Act Referrals Environment Agency - North East Region	October 2017	
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Groundwater Vulnerability - Soluble Rock Risk Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	As notified
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	As notified
Source Protection Zones Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	December 2023	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	December 2023	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2023	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	January 2024	Quarterly
Flood Defences Environment Agency - Head Office	August 2022	Quarterly
OS Water Network Lines Ordnance Survey	January 2024	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites Environment Agency - Head Office	July 2023	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North East Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	January 2024 January 2024	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	January 2023 January 2023	Quarterly Quarterly
Local Authority Landfill Coverage Chester-le-Street District Council (now part of Durham County Council) Durham City Council (now part of Durham County Council) Durham County Council - Economic Development and Planning Department Gateshead Metropolitan Borough Council - Development Control South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Environmental Health Department	February 2003 February 2003 February 2003 February 2003 February 2003 February 2003	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Chester-le-Street District Council (now part of Durham County Council) Durham City Council (now part of Durham County Council) Durham County Council - Economic Development and Planning Department Gateshead Metropolitan Borough Council - Development Control South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Environmental Health Department	October 2018 October 2018 October 2018 October 2018 October 2018 October 2018	
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	
Registered Landfill Sites Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	March 2006 March 2006	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	April 2018 April 2018	
Registered Waste Treatment or Disposal Sites Environment Agency - North East Region - North East Area Environment Agency - North East Region - Northumbria Area	June 2015 June 2015	

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	March 2023	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements Durham City Council (now part of Durham County Council) Durham County Council (Unitary) - Planning Department Gateshead Metropolitan Borough Council - Development Control Durham County Council - Economic Development and Planning Department South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Planning Chester-le-Street District Council (now part of Durham County Council)	December 2008 February 2016 February 2016 July 2007 June 2023 June 2023 March 2009	Not Applicable Variable Variable Annual Rolling Update Variable Variable Not Applicable
Planning Hazardous Substance Consents Durham City Council (now part of Durham County Council) Durham County Council (Unitary) - Planning Department Gateshead Metropolitan Borough Council - Development Control South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Planning Durham County Council - Economic Development and Planning Department Chester-le-Street District Council (now part of Durham County Council)	December 2008 February 2016 February 2016 February 2016 February 2016 July 2007 March 2009	Not Applicable Variable Variable Variable Variable Annual Rolling Update Not Applicable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	October 2023	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	October 2023	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	October 2023	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2023	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	March 2024	Quarterly
Points of Interest - Education and Health PointX	March 2024	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2024	Quarterly
Points of Interest - Public Infrastructure PointX	March 2024	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2024	Quarterly
Underground Electrical Cables National Grid	February 2023	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	October 2023	Bi-Annually
Areas of Adopted Green Belt Chester-le-Street District Council (now part of Durham County Council) Durham City Council (now part of Durham County Council) Durham County Council (Unitary) - Planning Department Gateshead Metropolitan Borough Council - Development Control South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Planning	August 2023 August 2023 August 2023 August 2023 August 2023 August 2023	Quarterly Quarterly Quarterly Quarterly Quarterly Quarterly
Areas of Unadopted Green Belt Chester-le-Street District Council (now part of Durham County Council) Durham City Council (now part of Durham County Council) Durham County Council (Unitary) - Planning Department Gateshead Metropolitan Borough Council - Development Control South Tyneside Metropolitan Borough Council - Planning Department Sunderland City Metropolitan Borough Council - Planning	August 2023 August 2023 August 2023 August 2023 August 2023 August 2023	Quarterly Quarterly Quarterly Quarterly Quarterly Quarterly
Areas of Outstanding Natural Beauty Natural England	November 2023	Bi-Annually
Environmentally Sensitive Areas Natural England	August 2023	
Forest Parks Forestry Commission	May 2023	Not Applicable
Local Nature Reserves Natural England	February 2024	Bi-Annually
Marine Nature Reserves Natural England	February 2024	Bi-Annually
National Nature Reserves Natural England	February 2024	Bi-Annually
National Parks Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas Natural England	April 2023	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 March 2023	Bi-Annually
Ramsar Sites Natural England	February 2024	Bi-Annually
Sites of Special Scientific Interest Natural England	November 2023	Bi-Annually
Special Areas of Conservation Natural England	October 2023	Bi-Annually
Special Protection Areas Natural England	October 2023	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	 British Geological Survey <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	Sunderland City Metropolitan Borough Council - Environmental Health Department Civic Centre, P O Box 107, Burden Road, Sunderland, Tyne And Wear, SR2 7DN	Telephone: 0191 553 1699 Fax: 0191 553 1660 Website: www.sunderland.gov.uk
6	The Coal Authority - Property Searches 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
7	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
8	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
9	Sunderland City Metropolitan Borough Council - Planning PO Box 107, Civic Centre, Sunderland, Tyne & Wear, SR2 7DN	Telephone: 0191 553 1000 Fax: 0191 553 1099 Website: www.sunderland.gov.uk
10	Durham County Council (Unitary) - Planning Department County Hall, Durham, DH1 5UL	Telephone: 0300 123 7070 Website: www.durham.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - 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	Not Supplied - Holocene
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	PELC	Pelaw Clay Member	Clay	Not Supplied - Devensian
	GLLDD	Glaciolacustrine Deposits, Devensian	Clay and Silt	Not Supplied - Devensian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	PEAT	Peat	Peat	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	RML	Raisby Formation	Dolostone	Not Supplied - GUADALUPIAN
	FML	Ford Formation	Dolostone	Not Supplied - GUADALUPIAN
	YWS	Yellow Sands Formation	Sandstone	Not Supplied - Cisuralian
	GNP	Grindstone Post Member	Sandstone	Not Supplied - Westphalian
	PUCM	Pennine Upper Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	PMCM	Pennine Middle Coal Measures Formation	Sandstone	Not Supplied - Westphalian
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	SFP	Seventy Fathom Post Member	Sandstone	Not Supplied - Westphalian
	HMNP	High Main Post Member	Sandstone	Not Supplied - Westphalian

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
		Faults		
		Rock Segments		



Geology 1:50,000 Maps

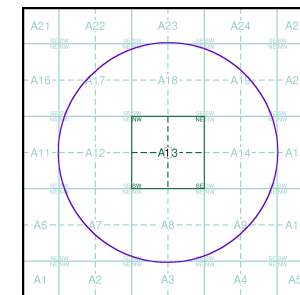
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	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



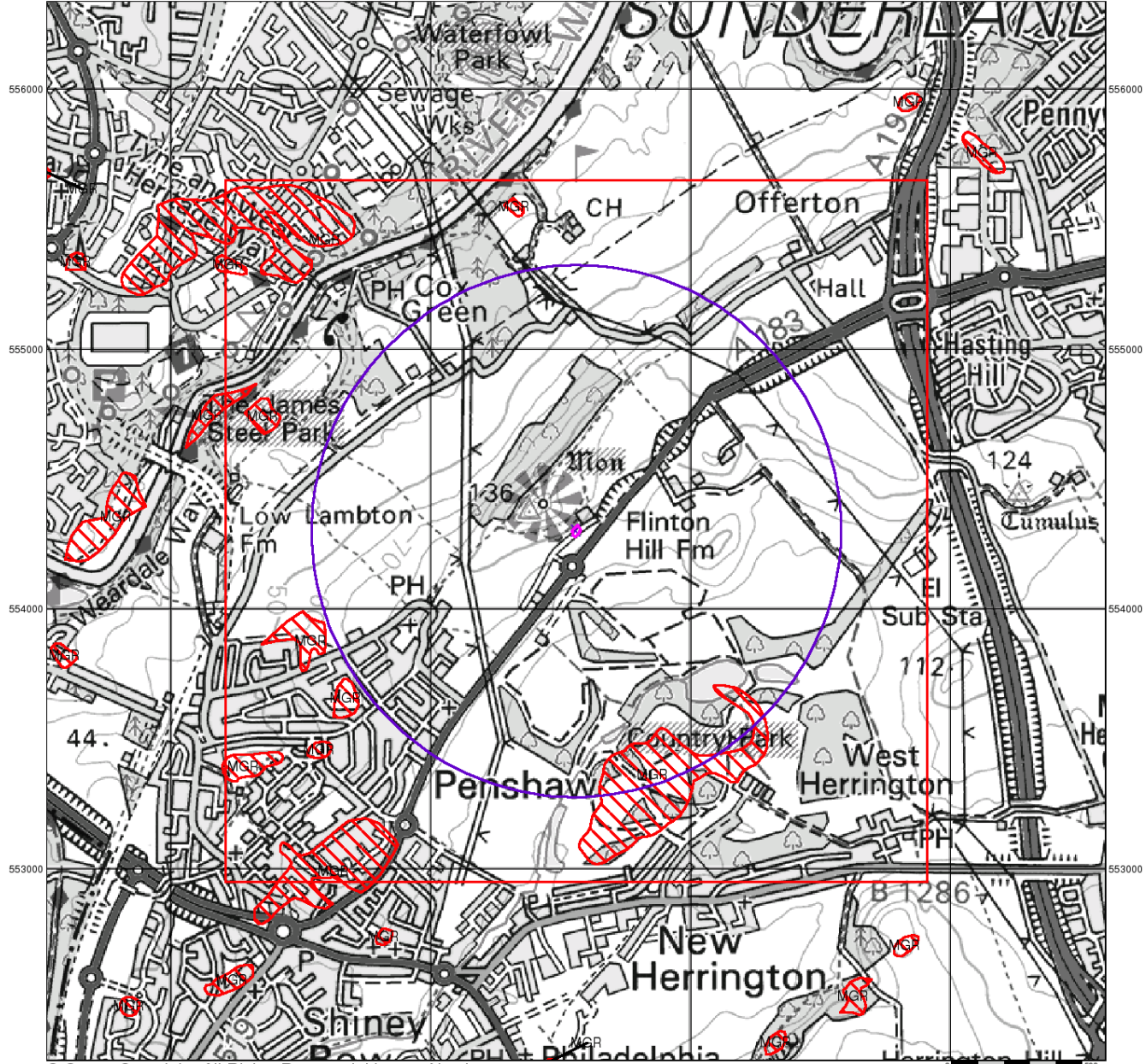
Order Details:

Order Number:	337564571_1_1
Customer Reference:	GEOL24-7117
National Grid Reference:	433560, 554300
Slice:	A
Site Area (Ha):	0.09
Search Buffer (m):	1000

Site Details:

Land adjacent to, Penshaw Hill House, Chester Road, SUNDERLAND, SR4 9JX

432000 433000 434000 435000



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Artificial Ground and Landslip

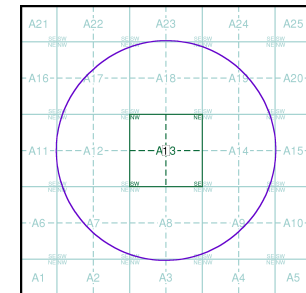
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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

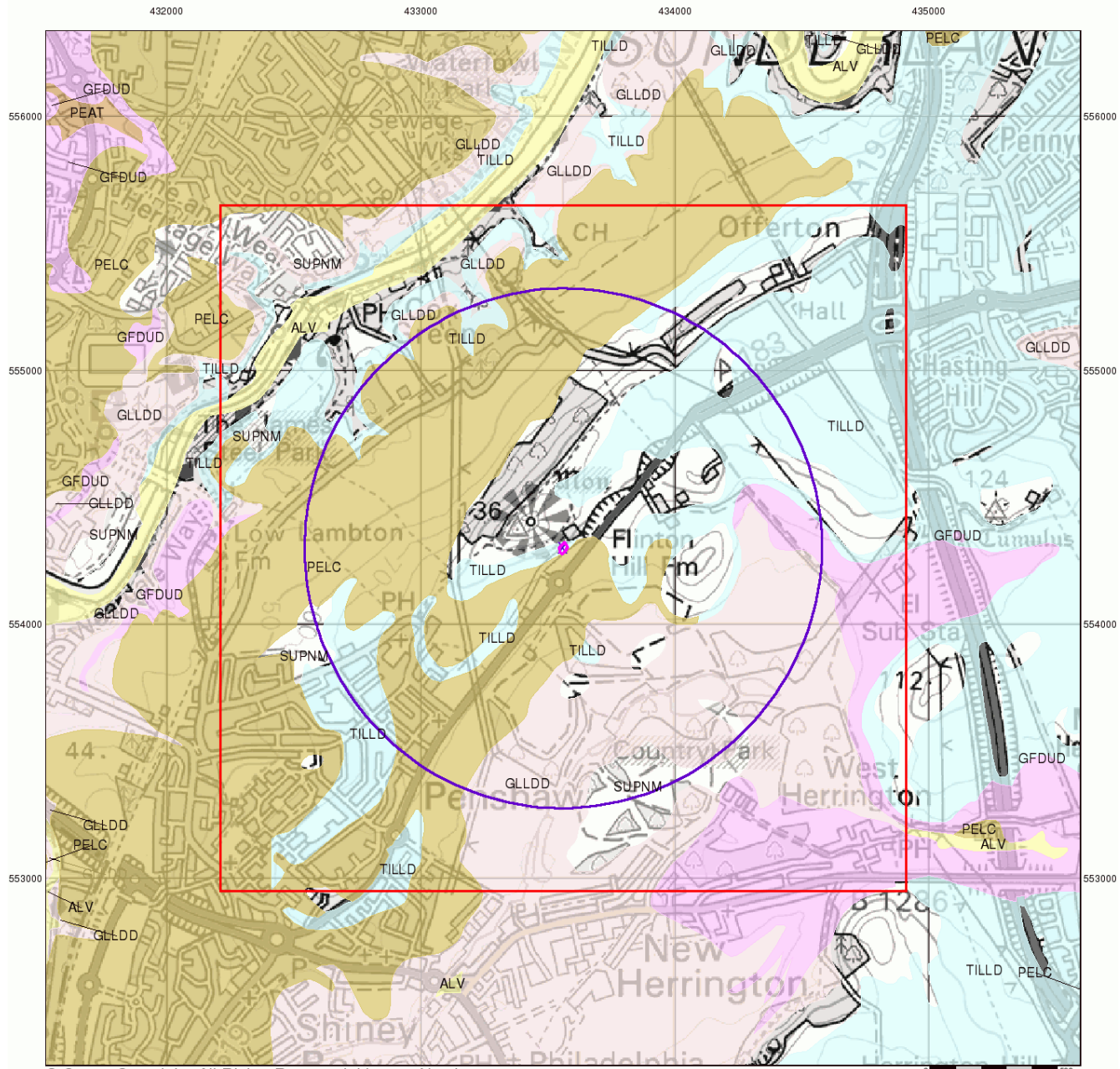
Order Number: 337564571_1_1
 Customer Reference: GEOL24-7117
 National Grid Reference: 433560, 554300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details:

Land adjacent to, Penshaw Hill House, Chester Road, SUNDERLAND, SR4 9JX



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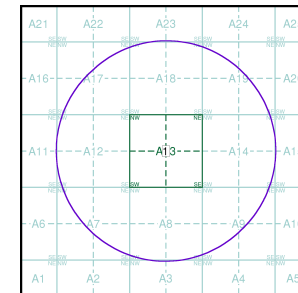
Superficial Geology

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:

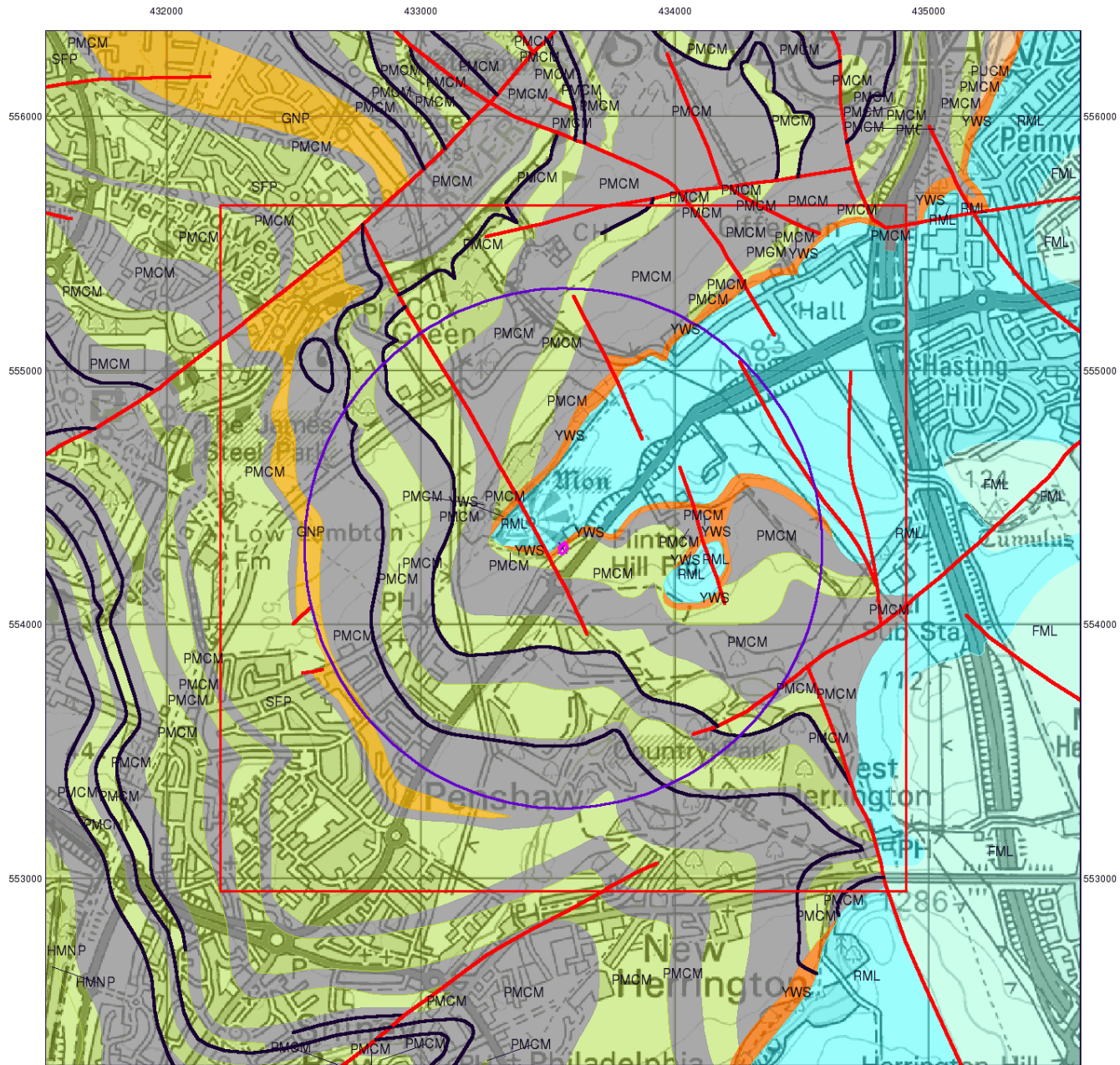
Order Number: 337564571_1_1
 Customer Reference: GEOL24-7117
 National Grid Reference: 433560, 554300
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 Site Area (Ha): 0.09
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Bedrock and Faults

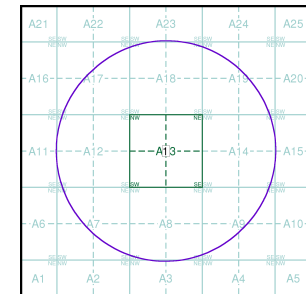
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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:

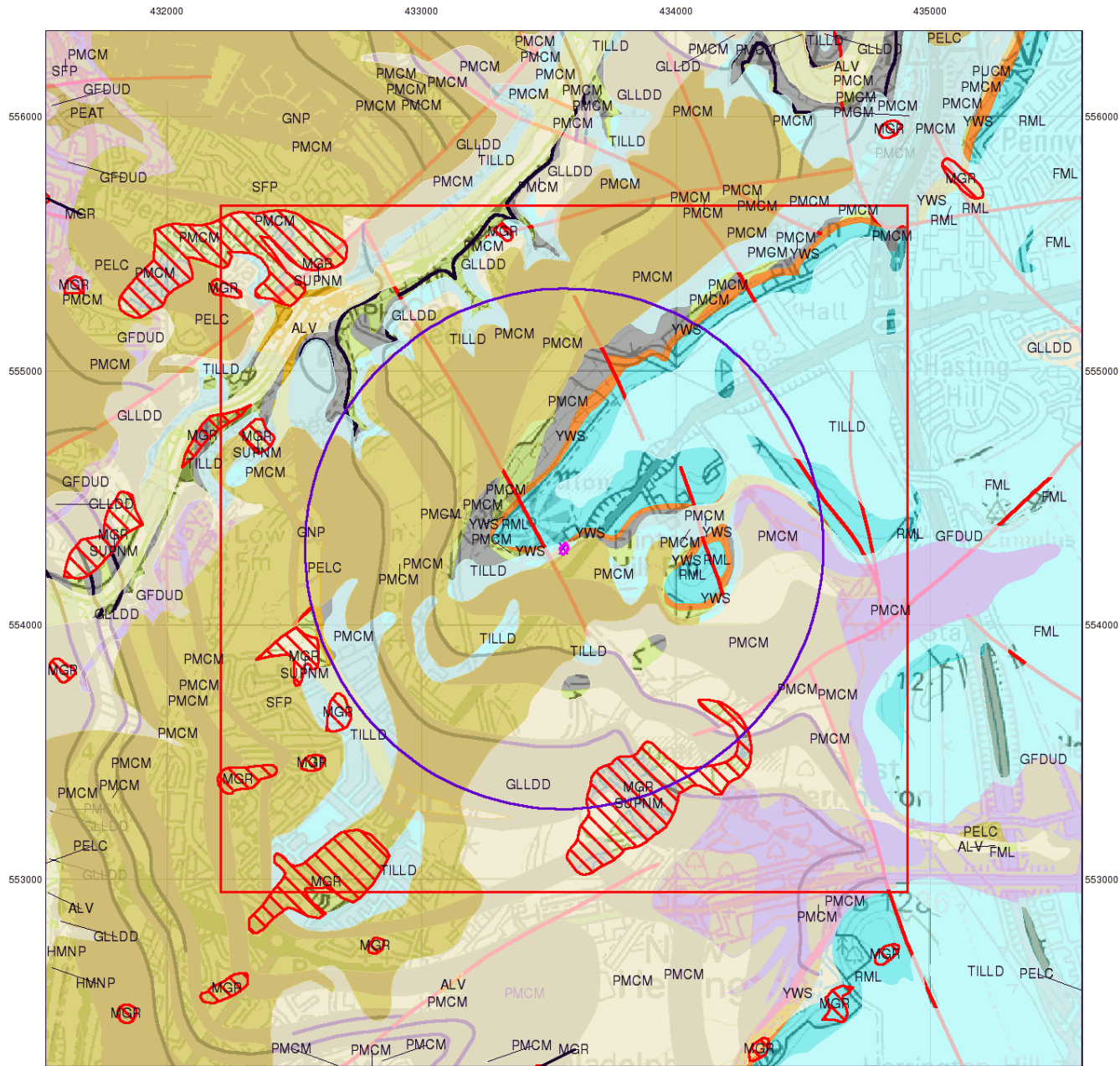
Order Number: 337564571_1_1
 Customer Reference: GEOL24-7117
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Combined Surface Geology

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.

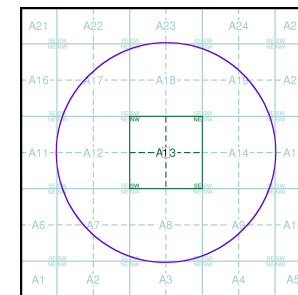
Additional Information

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: 337564571_1_1
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APPENDIX III

The Coal Authority, Consultants Coal Mining Report



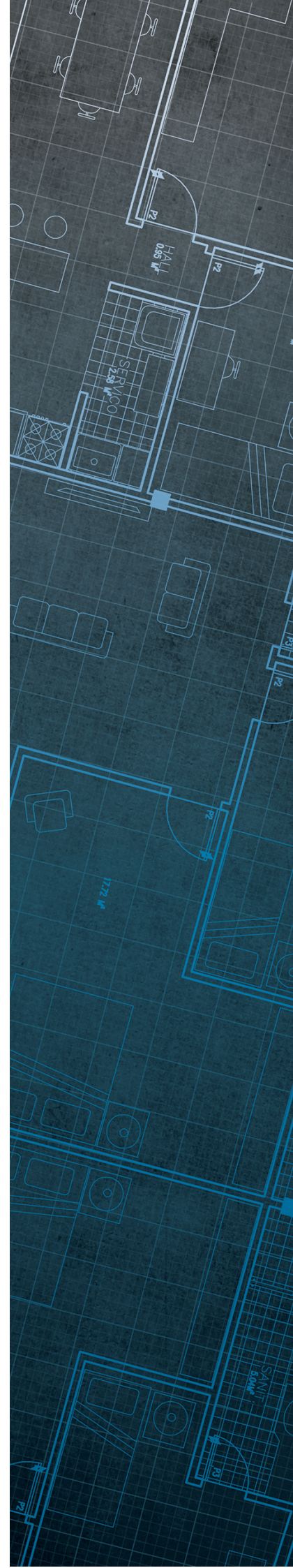
The Coal
Authority

Consultants Coal Mining Report

Land Adjacent To Penshaw Hill
House
Chester Road
Sunderland
SR4 9JX

Date of enquiry: 19 March 2024
Date enquiry received: 19 March 2024
Issue date: 19 March 2024

Our reference: 51003412630001
Your reference: GEOL24-7117



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

William Howells

Enquiry address

Land Adjacent To Penshaw Hill House
Chester Road
Sunderland
SR4 9JX


How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

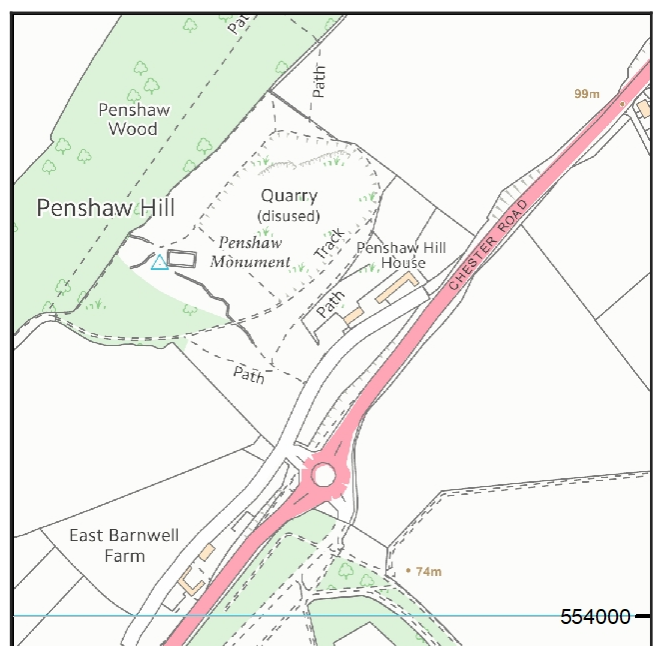
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	MAIN	Coal	3ROS	287	West	5.8	North-East	100	1900
unnamed	YARD	Coal	3RJ2	293	West	4.2	North-East	200	1930
unnamed	MAIN	Coal	3RNS	297	Beneath Property	5.1	North-East	100	1900
unnamed	YARD	Coal	3RK2	310	South-West	6.5	North-East	120	1927
unnamed	MAUDLIN	Coal	3I0K	314	South	13.1	North	120	1918
unnamed	MAUDLIN	Coal	3RO3	322	North-West	6.7	North-East	170	1923
unnamed	MAUDLIN	Coal	3ROH	326	South-East	1.6	North-East	178	1922
unnamed	MAUDLIN	Coal	3RMV	328	South-West	7.1	North-East	170	1922
unnamed	MAUDLIN	Coal	3ROV	342	North-East	1.6	North-East	178	1918
unnamed	HUTTON	Coal	3QLV	356	South	5.3	North-East	100	1926
unnamed	HUTTON	Coal	3ROJ	357	West	3.4	North-East	90	1949
unnamed	BRASS THILL	Coal	3RRS	359	Beneath Property	3.4	North-East	86	1938
unnamed	HUTTON	Coal	3RP5	364	West	5.2	North-East	90	1930
unnamed	HUTTON	Coal	3ROX	378	South-West	5.9	North-East	90	1930
unnamed	HUTTON	Coal	3RPJ	387	North-East	1.4	North-East	80	1939
unnamed	HARVEY	Coal	3QQ6	416	South	5.5	North-East	71	1957
unnamed	TILLEY	Coal	3GRW	426	South	4.7	North-East	170	1963
unnamed	HARVEY	Coal	3RQY	428	South-East	5.4	North-East	71	1963
unnamed	TILLEY	Coal	3RWI	430	South-West	6.9	North	164	1971

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

D1226	D1510	10727
12739	D1247	D864
D866	D1504	14953

Our records show we have more plans than those shown above which could affect the enquiry boundary.

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

Please refer to the "Summary of findings" map (on separate sheet) for details of any opencast areas within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

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

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

The Coal 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

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices

The property is not in an area where a notice to withdraw support has been given.

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

Payments to owners of former copyhold land

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

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Future development

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 specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices



Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown 
- Opencast mine licence area 
- Unlicensed opencast site 