



APPLICATION SITE CONDITION REPORT

**ASPHALT RECYCLING FACILITY
CAULDON LOW QUARRY
STONEY LANE
CAULDON
STOKE-ON-TRENT
ST10 3EW**

**Document Reference: AI1007/07.R0
May 2023**



**Project Quality Assurance
Information Sheet**

**APPLICATION SITE CONDITION REPORT
ASPHALT RECYCLING FACILITY, CAULDON LOW QUARRY, STONEY LANE, CAULDON,
STOKE-ON-TRENT**

Report Status : Final
Report Reference : AI1007/07.R0
Report Date : May 2023
Prepared for : Aggregate Industries UK Limited
Prepared by : Sirius Environmental Limited
The Beacon Centre for Enterprise
Dafen
Llanelli
SA14 8LQ

Written by :

**Kate Jenkins BSc (Hons) MSc
Graduate Environmental Consultant**

Reviewed by :

**Dylan Thomas BSc (Hons) PGDip MCIWM
Principal Environmental Consultant**

Approved by :

**Mark Griffiths BSc (Hons) MSc CGeol MCIWM
Environmental Director**

Revision	Date	Amendment Details	Author	Reviewer
0	May 2023	First Issue	K Jenkins	D Thomas

This report is written for the sole use of Aggregate Industries UK Limited and their appointed agents. No other third party may rely on or reproduce the contents of this report without the written approval of Sirius. If any unauthorised third party comes into possession of this report, they rely upon it entirely at their own risk and the authors do not owe them any Duty of Care or Skill.

**ASPHALT RECYCLING FACILITY
CAULDON LOW QUARRY
STONE LANE
CAULDON
STOKE-ON-TRENT
ST10 3EW**

APPLICATION SITE CONDITION REPORT

CONTENTS

EXECUTIVE SUMMARY	1
1.0 SITE CONDITION REPORT CONTEXT	1
2.0 SITE DETAILS	1
3.0 CONDITION OF THE LAND AT PERMIT ISSUE	2
4.0 EVIDENCE OF HISTORIC CONTAMINATION	5
5.0 BASELINE SOIL AND GROUNDWATER DATA	5
6.0 PROPOSED PERMITTED ACTIVITIES	5
7.0 SUMMARY STATEMENT OF THE SITE CONDITION	8

LIST OF DRAWINGS

AI1007/09/01	Site Location Plan
AI1007/09/02	Site Boundaries Plan

LIST OF APPENDICES

Appendix 1	Envirocheck ® Report
------------	----------------------

LIST OF TABLES

Table 1:	Stratigraphic Succession of Regional Geology	2
Table 2:	Assessment of the pollution potential of materials proposed to be treated and stored at the site.	7

EXECUTIVE SUMMARY

Executive Summary	
Site Address	Cauldon Low Quarry Stoney Lane Cauldon Stoke-On-Trent Staffordshire ST10 3EW
Site National Grid Reference (NGR)	SK 07745 48751
Site Operator	Aggregate Industries UK Limited
Proposed Activity	Aggregate Industries UK Limited are seeking to operate a Asphalt Recycling Facility (ARF) at Cauldon Low Quarry. The waste treated at the plant will comprise non-hazardous asphalt road planings. The operation will consist of the storage and subsequent physical treatment of road planings by sorting separation, screening, crushing and blending of waste for recovery purposes to a produce secondary aggregates.
Site History and Current Use	The development history of the application site has been limited to limestone quarrying and associated mineral processing activities. Historical maps shows the site and surrounding areas have been worked for their mineral reserves since the late 1600s. The site remains situated within the confines of the Cauldon Low Quarry which is still in operation.
Ground Conditions	<p>The application site is situated directly upon the underlying bedrock of the Milldale Limestone Formation, with any superficial deposits having been removed as part of the quarrying activities.</p> <p>Historical borehole records indicate the Milldale Limestone Formation is approximately 305 – 470m thick. The Rue Hill Dolomite Formation is situated beneath the limestone and is estimated to be ~85m thick. The Redhouse Sandstone Formation is situated beneath the dolomite which historic borehole records indicate is over 170m thick, although the base of the unit has not been proven.</p> <p>The underlying bedrock aquifer is classified as a High Vulnerability, Principal Aquifer due to the permeability of the bedrock. The site is not located within a Source Protection Zone.</p> <p>There are no private water supplies or licensed abstractions within 1km of the site.</p>
Environmental Review	<p>The risk posed to the condition of the site is considered to be low considering the non-hazardous, non-degradable nature of the wastes proposed to be treated.</p> <p>It is considered that site specific baseline data is not required given the nature of the waste types, containment measures and pollution prevention controls that will be implemented and maintained at the site. The overall risk that the proposed permitted activities pose to the baseline condition to site soils and groundwater is considered to be low.</p>
This summary should be read in conjunction with the main report and reflects an assessment of the Site based on the information available at the time.	

1.0 SITE CONDITION REPORT CONTEXT

- 1.1 Sirius Environmental Limited ('Sirius') have been commissioned by Aggregate Industries UK Limited (AI) to prepare a Site Condition Report to support an application for a site-based Environmental Permit to operate an Asphalt Recycling Facility (ARF) at Cauldon Low Quarry, Stoke-on-Trent.
- 1.2 AI are seeking to operate a Asphalt Recycling Facility to enable the recovery of non-hazardous waste bitumen bound road planings, producing a range of secondary aggregate for reuse. These wastes will be recovered through physical treatment in the form of crushing and screening/grading/sorting. All associated waste treatment and storage operations will be carried out externally with a designated area within the wider quarry complex.
- 1.3 This Site Condition Report (SCR) has been compiled in accordance with the EP Regulations and with Horizontal Guidance Note 5, Site Condition Reports – Guidance and Templates (v2.0, 4th August 2008). Information has been gathered based on a desk study review of publicly available information, as well as an Envirocheck ® Report by Landmark (**Appendix 1**).
- 1.4 The purpose of an Application Site Condition Report is to provide a factual statement of the condition of the site at the time of the Environmental Permit Application. The Site Condition Report must describe the nature and distribution of potentially polluting substances in the ground and groundwater at the site prior to the commencement of operations under the Environmental Permit, and those handled during the course of activities on the site. The potentially polluting substances of interest are those which are to be handled at the site under the Permit.

2.0 SITE DETAILS

Site Setting

- 2.1 The ARF will be located within the confines of Cauldon Low Quarry, Stoney Lane, Cauldon, Stoke-on-Trent, Staffordshire, ST10 3EW. The proposed site is situated approximately on National Grid Reference (NGR) SK 07745 48751, as illustrated on **Drawing No. AI1007/09/01**. The elevation of the application site is ~280mAOD.
- 2.2 Cauldon Low Quarry is located in a rural setting approximately 20km west of Stoke-on-Trent. Cauldon village is located approximately 700m north- north-west of the site and Cauldon Low village lies ~900m southwest of the site. The application site operational boundary is shown in **Drawing No. AI1007/09/02**.
- 2.3 Access and egress from the application site will be gained from the north via a network of internal haul roads through the wider quarry complex. The main quarry access is located ~350m west of the application site, and junction with an unclassified public road network, which provides access to the A52 located ~675m south of the junction.
- 2.4 The nearest residential properties to the site include Cauldon Lowe Village hall located ~525m to the south west of the site, Yew Tree Inn located 482m to the north, and an unnamed farm located ~565m to the south of the site.

3.0 CONDITION OF THE LAND AT PERMIT ISSUE

Environmental Setting

Made Ground

- 3.1 A Landmark Envirocheck report for the site and desk study review indicates there is no made ground recorded to underlies the application site. The site sits directly on the exposed Milldale Limestone Formation. However, deposits of residual mineral aggregates from historic stockpiling operations carried out at the site are likely to be present.

Natural Soils

- 3.2 According to the UK Soil Observatory the site is underlain by freely draining slightly but base-rich soils. However these soils will have been stripped from the application site and surrounding areas prior to historic extraction of the limestone mineral reserve beneath.

Geology

- 3.3 Information on the published geology of the site area has been collated from the Landmark Envirocheck Report, British Geological Survey (BGS) 1:50,000 scale map, available BGS Borehole logs as well as publicly available information including site investigation reports.
- 3.4 **Table 1**, below, summaries the regional geology and approximate thickness of strata in the vicinity of the site.

Table 1: Stratigraphic Succession of Regional Geology

Epoch	Strata	Description	Approximate Thickness	Aquifer Characteristics
Mid Pleistocene	Till	Unsorted and unstratified drift comprising mixture of clay, sand, gravels and boulders of varying size and shape.	Unrecorded (striped as part of quarry activities)	Secondary Undifferentiated
Courseyan Substage — Asbian Substage	Milldale Limestone Formation	Well-bedded, mid grey, finely bioclastic limestones.	305 – 470m	Principal Aquifer
Courseyan Substage - Tournaisian Stage	Rue Hill Dolomite Formation	Grey, thinly bedded, very fine-grained dolostone, beds of dark grey limestone, mudstone, breccias and several thin beds of coarse-grained quartzitic sandstone.	~84.5m	N/A
Courseyan Substage	Redhouse Sandstone	Pebbly sandstone, conglomerates especially near the base, fine- to medium- sandstone, siltstone and mudstone, typically red-brown with minor green mottling.	170.3m (base not proven)	N/A

- 3.5 Borehole logs to the west of the site indicate the superficial Till comprises brown sandy boulder clay with pale yellow fine-medium grained sandstone fragments throughout. Small white quartzite pebbles were observed in upper part of sequence. There are no superficial deposits underlying the proposed site as they have been excavated during previous quarrying operations.

- 3.6 A borehole log situated 582m south east of the site within the footprint of Cauldon Low Quarry describes ~0.44m of made ground comprising red-brown with limestone fragments. Beneath this sits the Milldale Limestone Formation which comprises fine – medium grained limestone which is predominantly mid grey with red mottling along fractures. Joints and fractures are sub-horizontal and occur at 25 – 30cm intervals on average. Thick shelled brachiopods and fine crinoidal debris was observed at varying depths.
- 3.7 The Rue Hill Dolomite Formation is observed at a depth of ~189m which is described as brown, very fine grained with irregular calcite veins. From a depth of ~190m alternating bands of mudstone and limestone are observed. Dolomite is observed again at a depth of ~200m with bands of chert and limestone. A thin band of clay is observed at a depth of ~206m which transitions into alternating bands of limestone, dolomite, and mudstone. At a depth of ~258m conglomerate is observed which comprises dolomite consisting of sub-rounded clasts and a brown coarsely grained dolomite matrix. This marks the lower boundary of the Rue Hill Dolomite Formation which is situated upon the Redhouse Sandston Formation.
- 3.8 The Redhouse Sandstone Formation is from a depth of ~365m and is observed to comprise red-brown occasionally green-grey fine-grained sandstone. Alternating layers of conglomerate, mudstone, and siltstone are observed throughout the sequence. The base of the Redhouse Sandstone is not proven.

Hydrogeology

- 3.9 Publicly available information has been used to determine the hydrogeology of the site. The Milldale Limestone is a Principal aquifer commonly considered to exhibit karstic hydrogeological behaviour. The term karst can be summarised as a terrain which has distinctive landforms and hydrogeology as a result of its high rock solubility and well developed secondary fracture porosity. In general karst systems tend to evolve downward to include a simplified network of a few main pathways.
- 3.10 A Water Impact Assessment Report¹ prepared for Cauldon Quarry (Barnes et. al., 2014) interpreted that under observed conditions groundwater flows to the north-northeast locally. However, regionally groundwater flow is observed to continue east and towards Ilam and the River Dove. Based on these conclusions, it is considered unlikely that the Milldale Limestone aquifer provides baseflow to the River Hamps that is located 1.4km to the north for the quarry.
- 3.11 The Milldale Limestones constitute an aquifer only due to the presence of a secondary network of solution-enlarged fractures and joints which commonly form complex branching systems, ranging in scale from extensive cave systems to microfractures. Groundwater flow is largely concentrated in the larger conduits and directed towards discrete discharge points at a single spring or group of springs. As highlighted in the Water Impact Assessment Report the River Manifold feeds the springs that rise in Ilam located ~5.6km east-northeast of the site boundary. However, given the non-hazardous nature of the wastes and large intervening distance the Ilam springs are not considered a sensitive receptor.

¹ Barnes, S., Elvins, J. and White, N. (2014). *Are your groundwater monitoring boreholes deep enough? – Water Impact Assessment in karstic limestones at Cauldon Quarry.* – Accessed April 2023.

- 3.11.1 There are no licensed groundwater abstractions located within 1km of the application site.

Surface Waters

- 3.12 The area is regionally part of the River Dove drainage basin which rises near Buxton ~25km north of the site boundary and flows to the south towards its confluence with the River Trent at Newton Solney. The nearest river is the River Hamps which located ~1.33km to the north of the site boundary. The River Hamps rises to the south of Merryton Low, east of Upper Hulme. It flows towards the south where it then flows to the east towards Winkhill and Watercourses where it then flows to join the River Manifold.
- 3.13 The River Hamps is major tributary of the River Manifold their confluence is located ~5.8km north east of the site. The River Manifold flows south towards Ilam and is a tributary of the River Dove.
- 3.14 There is a man made surface lagoon located ~100m south of the site which is associated with the quarry. There is another man made surface water lagoon located ~1.15km north of the site boundary. There are several more smaller surface water lagoons located north east of the site within the confines of the Cauldon Cement works. Another lagoon associated with the quarry located ~1km north west of the site.
- 3.15 With regard to flood risk there is a medium risk of flooding from surface waters with a chance of flooding of between 1% and 3.3% each year. There is a very low risk of flooding from rivers or sea with a chance of flooding of less than 0.1% each year.
- 3.16 There are no licensed surface water abstractions located within 1km of the site.

Pollution History

Pollution Incidents Which May Have Affected the Land

- 3.17 The Envirocheck Report demonstrates there have been no recorded pollution incidents reported at the site.

Historical Land-Uses and Associated Contaminants

- 3.18 The Envirocheck Report as well as publicly available information have been examined to determine the historical land-uses for the site and surrounding areas.
- 3.19 A historical Ordnance map dated 1888 shows the proposed site is situated within the footprint of the Cauldon Low Quarry which comprises a network of several historic quarries surrounded by agricultural land. A desk study review reveals the area has been quarried for limestone dating back to the 1600s. The Ordnance map dated 1888 depicts a tramroad that runs through the quarry from the south west to the north east. The tramroad was extended across the proposed site location between 1881 to 1888. A desk study review reveals the tramroad belongs to the historic Cauldon Low Tramway which was constructed in 1777 and was primarily used to transport quarried material.
- 3.20 Beyond the extent of the quarry the 1888 map shows scattered farmsteads and residential dwellings including Moorend Barn located ~800m north west of the site boundary, a school located ~610m south of the site and St Mary's Church and the Yew Tree Inn located ~ 480m to the north of the site.

- 3.21 The 1888 map also depicts records of where human remains were found including human remains were found on the proposal site in 1857. More human remains were found ~360m south east of the site in 1868.
- 3.22 A historic map dated 1900 shows the quarry has been further excavated to the north of the site, with further extension also shown in the map dated 1924. The surrounding land has not significantly changed. Sometime between 1924 and 1968 the tramway has been removed and the quarry has been further worked. Subsequent mapping shows no significant development within the application site of immediately surrounding areas, whilst Google Earth aerial imagery indicates the use of the site for the storage of mineral products adjacent to a mineral processing facility, understood from LAPPC license records to be a mineral drying and roadstone coating facility operated by Tarmac from 1993 until approximately 2021. The adjacent processing facility had been decommissioned by 2022, by which time the application site laid dormant with some residual mineral stockpiles remaining.
- 3.23 A historical map dated between 1970 to 1971 shows the Cauldon cement works, which are still in operation, located ~930m to the north east of the site. The quarry has continued to be worked until present day. The surrounding areas have largely remained the same with no significant development of residential areas. Many of the historic buildings to the north of the site still exist. The old quarries and disused mine shafts to the south of the site gradually returned to agricultural land.

Visual / Olfactory Evidence of Existing Contamination

- 3.24 There has been no evidence of historic leaks or spills associated with the operation of the quarry or the adjacent Tarmac Cauldon Low Asphalt Plant.

Evidence of Damage to Pollution Prevention Measures

- 3.25 There were no existing pollution control measures present at the site prior to the development of the ARF.

4.0 EVIDENCE OF HISTORIC CONTAMINATION

- 4.1 The Envirocheck report and desk study review of the application site suggests there is no evidence of any significant historic contamination.

5.0 BASELINE SOIL AND GROUNDWATER DATA

- 5.1 No previous intrusive investigation information or monitoring data have been identified for review to establish the baseline condition of the underlying soils and groundwaters.

6.0 PROPOSED PERMITTED ACTIVITIES

Proposed Permitted Activities

- 6.1 The Asphalt Recycling Facility will involve the physical treatment of non-hazardous waste bitumen bound road planings to produce a range of secondary aggregate for reuse. Physical treatment operation will take the form of mechanical crushing and screening/grading/sorting. All associated waste treatment and storage operations will be carried out externally with a designated area within the wider quarry complex, that will be engineered with a permeable, compacted aggregate hardstanding.

Proposed Non-Permitted Activities

- 6.2 The ARF will be located within the wider Cauldon Low Quarry where a number of complementary activities are ongoing. All operations undertaken at the application will relate specifically to the permitted waste activity. Ancillary operations, including office accommodation, service roads, weighbridge, wash down area, and welfare facilities that are located outside of the permit boundary. These supporting elements will not be subject to the requirements of the Environmental Permit.

Pollution Potential

- 6.3 A selection of raw materials, waste and by-products will be used, produced and stored onsite during the processing of waste materials. An assessment of the pollution potential of these materials treated and stored at the site is presented in **Table 2**.

Table 2: Assessment of the pollution potential of materials proposed to be treated and stored at the site.

Substance	Chemical Composition	Quantity	Environmental Behaviour & Fate	Potential Environmental Impact	Treatment and Storage Arrangements	Assessment of Alternatives
Asphalt planings	Non-hazardous waste Complex mixture of heavy hydrocarbons	Up to 180.000 tonnes per annum.	Chemically stable at ambient temperatures. Low leaching potential and solubility at ambient temperatures Generates hydrocarbon and hydrogen sulphide gases/vapours when heated. Potential dust generated by dry materials during mechanical processing and storage	No significant environmental risk in cold state. Dust causing nuisance to site workers, visitors and neighbouring land users.	Water spray techniques to be implemented as necessary to control dust emissions Cold treatment processes being used only.	None – waste material forms primary purpose of facility.
Gas oil/Diesel	Hydrocarbons with trace additives.	c.500tpa for mobile and semi mobile plant.	Dangerous for the environment. Toxic to most invertebrates. Slightly toxic to fish. Some soil mobility. Floats on water. Biodegradable. Lighter fractions volatile. Potential to bioaccumulate. Fate is 100% to air via the process.	Significant, but air impacts from emissions standards required by combustion processes within plant engines. Low sulphur gas oil is used. Leaks and spillages controlled by detailed operational procedures.	Double skinned mobile bowser.. Refuelling of mobile plant will be carried out with th aid of a funnel and drip tray. Spill kits to be located in strategic locations across the facility.	Gas oil/diesel is used as fuel to the mobile plant. No viable alternatives currently available. Use of electrical powered plant to be considered in the future.
Lubricating Oils /Greases	Hydrocarbons with trace additives.	Not known – likely to be <1000 litres / yr <500 litres	Insoluble and floats on water. Low biodegradation in soil. Fate is ultimately 100% to air – low volatility	Contamination of land and controlled waters and health risk to end users (i.e. humans, wildlife)	All containers to be stored in designated areas with impermeable surfacing and drip/spills trays. Spill kits to be located in strategic locations across the facility. Engineered containment measures for contaminated surface waters.	Essential for operation of various items at the facility. No readily available alternatives with equivalent properties exist.
Spill Granules	Various grades of absorbent material, chemically inert.	c.500kg	For use in emergency spill clean-up. Does not readily biodegrade. Fate is collected for appropriate disposal after deployment and use.	If not removed after use could result in general risk to humans and wider environment, although this is considered low as any contaminants should be 'locked in' to the product.	Covered pallet of 25kg sealed bags, located in store.	Alternatives exhibit similar properties, no advantage in considering another material as it offers no additional benefit.

7.0 SUMMARY STATEMENT OF THE SITE CONDITION

- 7.1 The application site is located within a wider limestone quarry complex, located with a wider rural setting interspersed with small villages, hamlets and farmsteads. The application site and surrounding areas have been subject to past mineral extraction and have support an array of mineral processing activities, with the application site itself having supported tramway infrastructure in the early 20th century and more recently to support storage operations for processed mineral products. Beyond the extents of the quarry, the current and past land uses relate to agricultural pasture and other mineral activities.
- 7.2 The wastes materials being handled at the facility will comprise non-hazardous road planings which present a low pollution potential. Other potentially polluting substances (e.g. fuels, oils) will be fully contained and handled with the aid of appropriate spillage/leak control systems to minimise the risk of contamination.
- 7.3 The proposed containment measures are considered appropriate to mitigate any potential significant risk that the potentially polluting materials handled at the site pose to the baseline condition of the underlying site soils and groundwaters.
- 7.4 This SCR will be reviewed routinely and the details of any incidents that result in the release of any potentially polluting substances included, together with the results of any investigations and remedial actions.



APPENDIX 1

Envirocheck Report

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

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

1:10,000 Raster Mapping

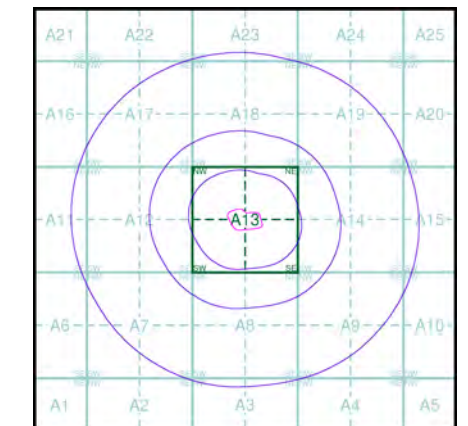
	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil,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



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Staffordshire	1:10,560	1888	2
Staffordshire	1:10,560	1900	3
Staffordshire	1:10,560	1924	4
Ordnance Survey Plan	1:10,000	1955	5
Ordnance Survey Plan	1:10,000	1970 - 1971	6
Ordnance Survey Plan	1:10,000	1988	7
10K Raster Mapping	1:10,000	2000	8
Street View	Variable		9

Historical Map - Slice A



Order Details

Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 1000

Site Details

Site at 407900, 348700



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



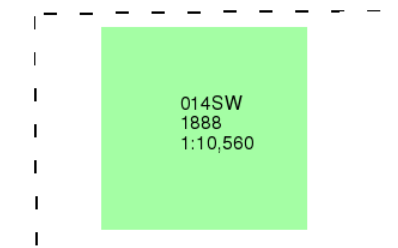
Staffordshire

Published 1888

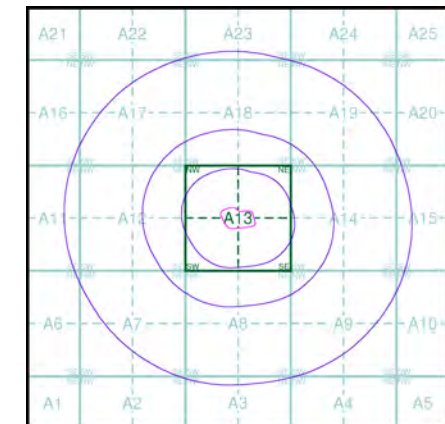
Source map scale - 1:10,560

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

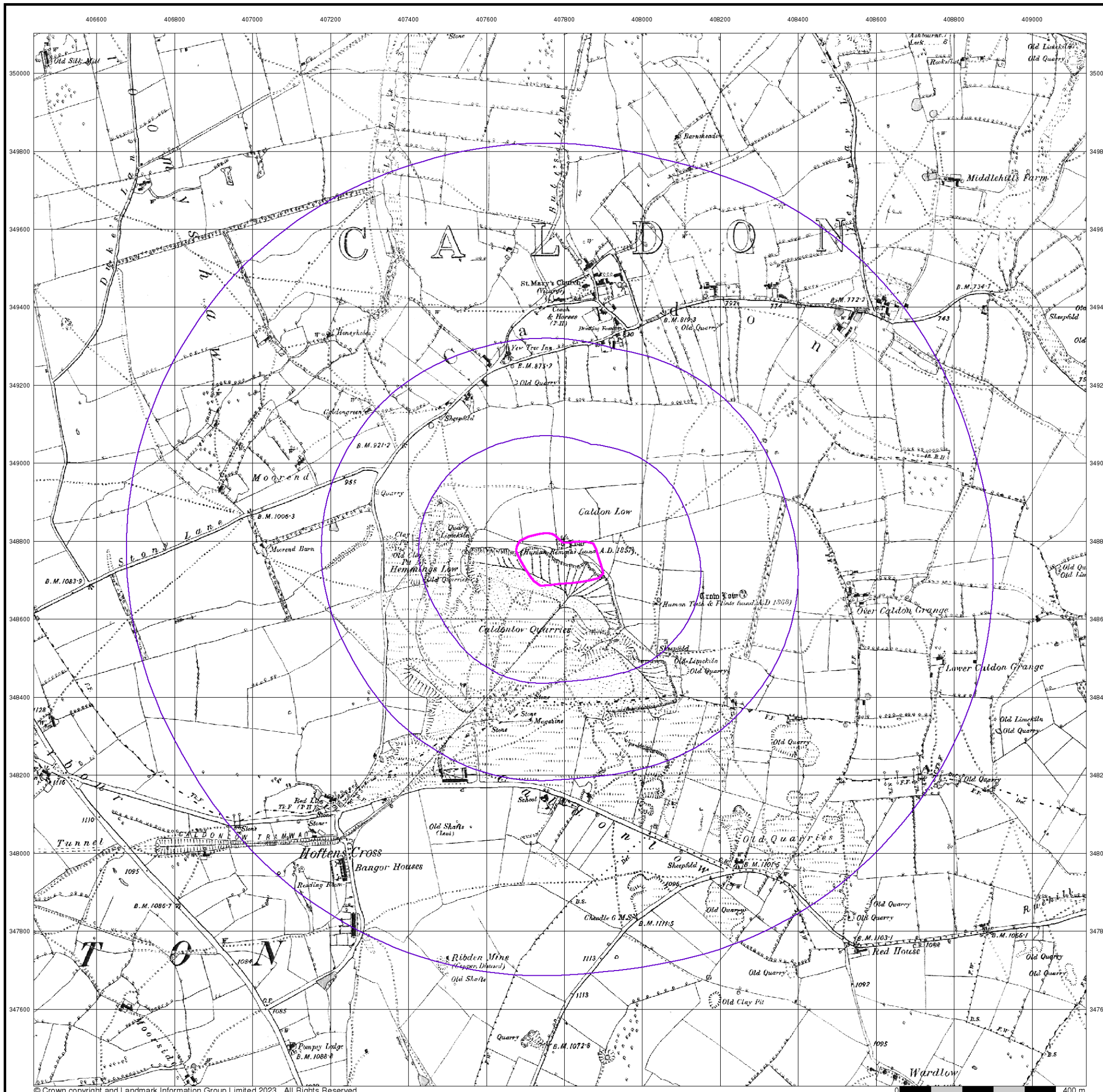
Order Number: 310987107_1_1
Customer Ref: A11007
National Grid Reference: 407790, 348750
Slice: A
Site Area (Ha): 2.22
Search Buffer (m): 1000

Site Details

Site at 407900, 348700



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





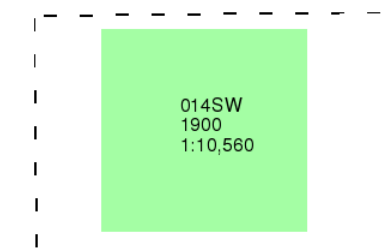
Staffordshire

Published 1900

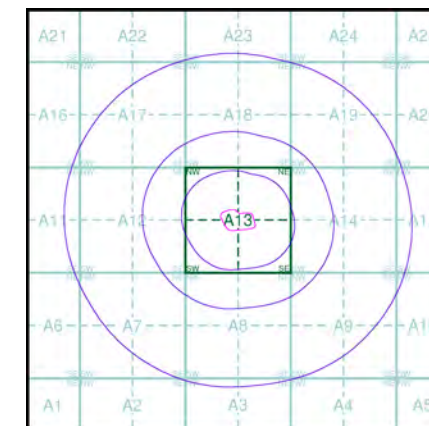
Source map scale - 1:10,560

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

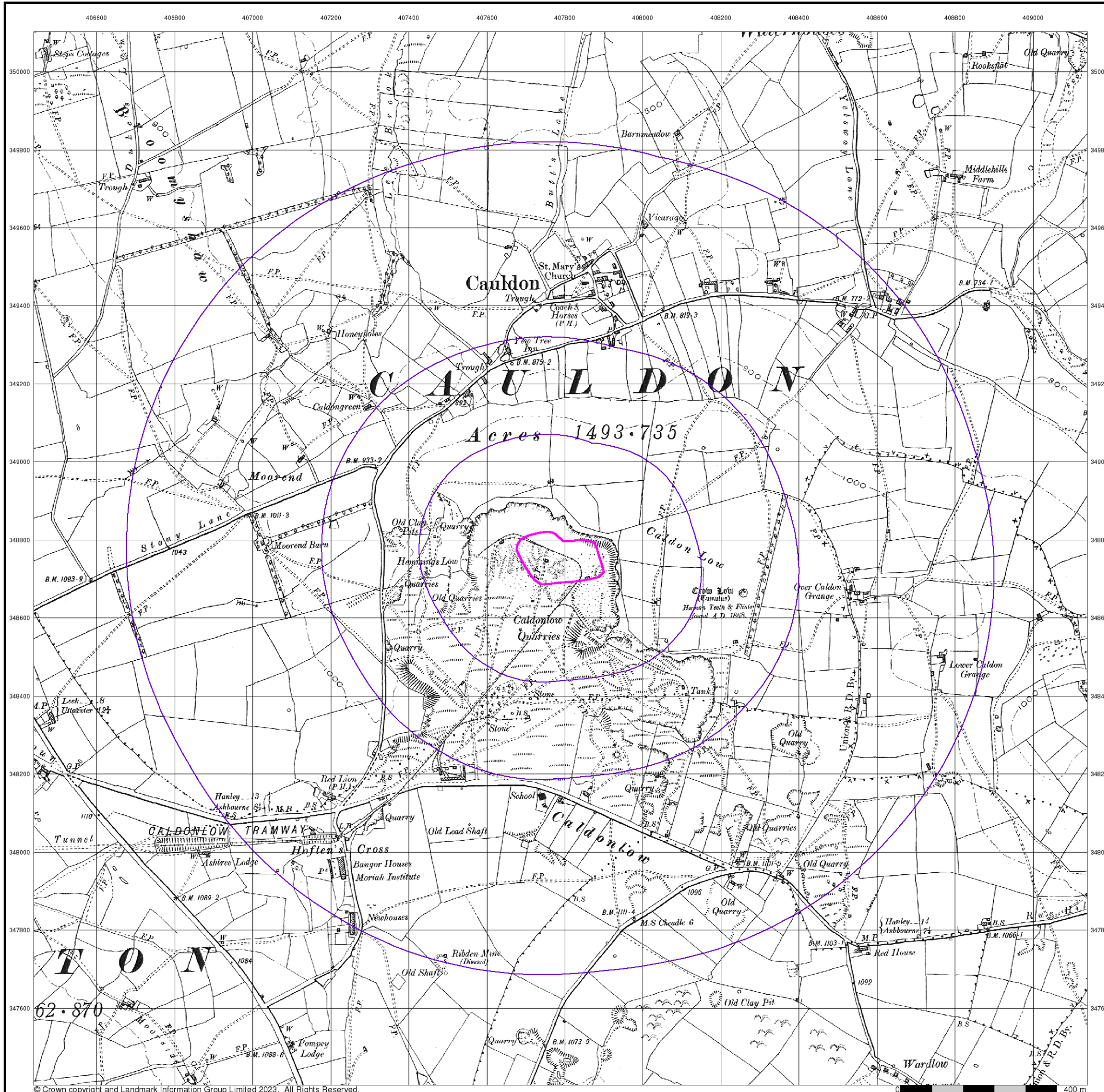
Order Number: 310987107_1_1
Customer Ref: A11007
National Grid Reference: 407790, 348750
Slice: A
Site Area (Ha): 2.22
Search Buffer (m): 1000

Site Details

Site at 407900, 348700



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





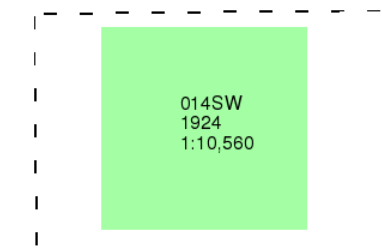
Staffordshire

Published 1924

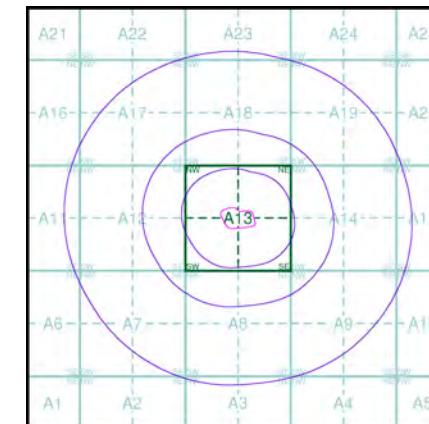
Source map scale - 1:10,560

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

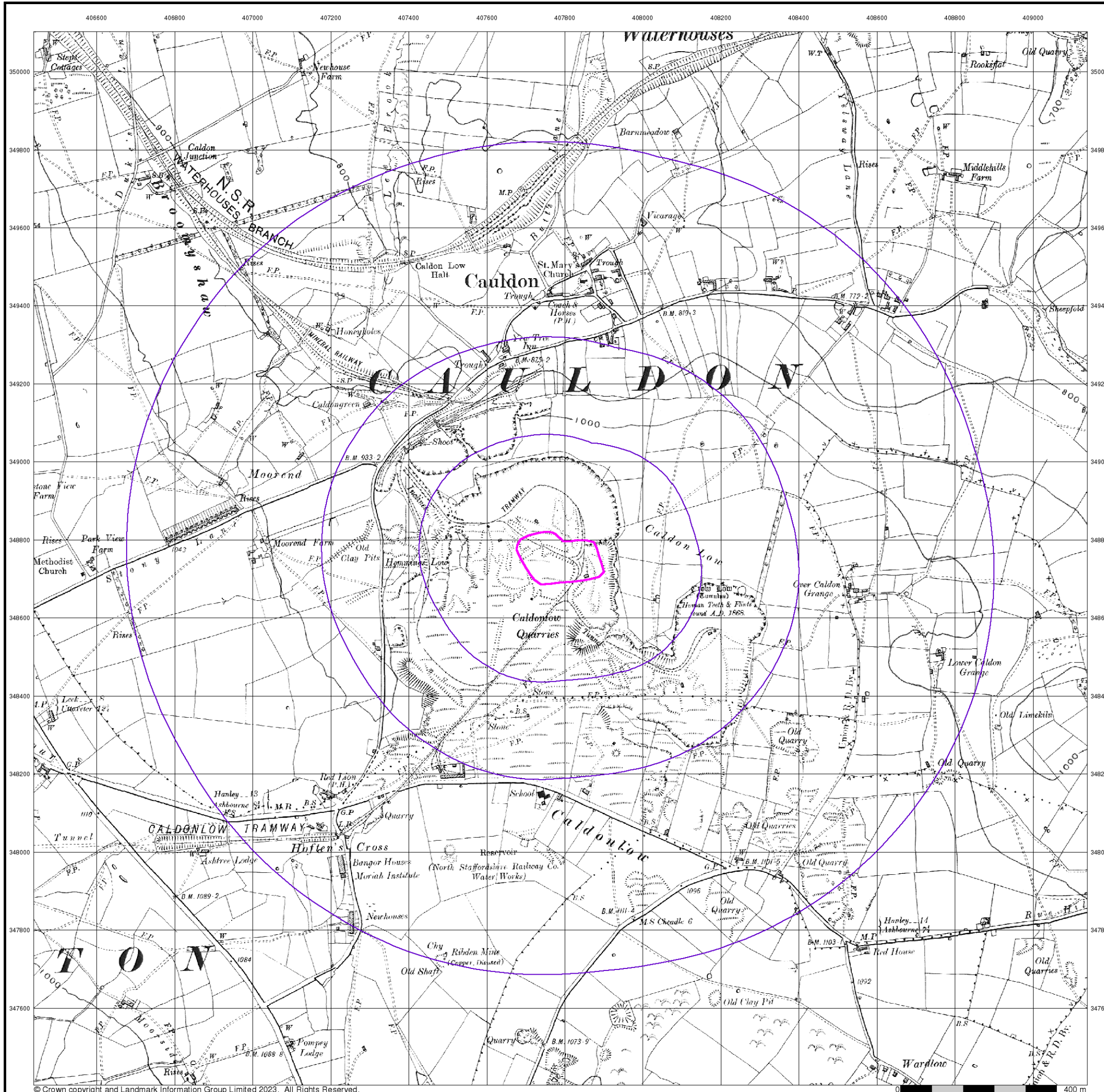
Order Number: 310987107_1_1
Customer Ref: A11007
National Grid Reference: 407790, 348750
Slice: A
Site Area (Ha): 2.22
Search Buffer (m): 1000

Site Details

Site at 407900, 348700



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





Ordnance Survey Plan

Published 1955

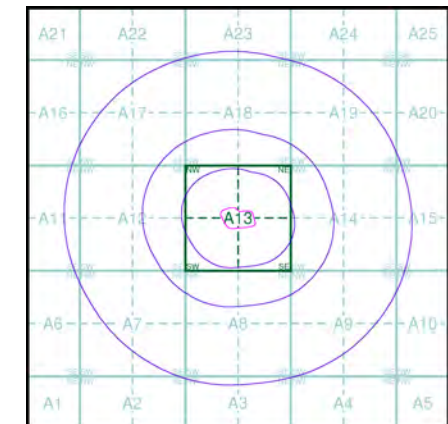
Source map scale - 1:10,000

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)

SK05SE	1955
1:10,560	
SK04NE	1955
1:10,560	

Historical Map - Slice A



Order Details

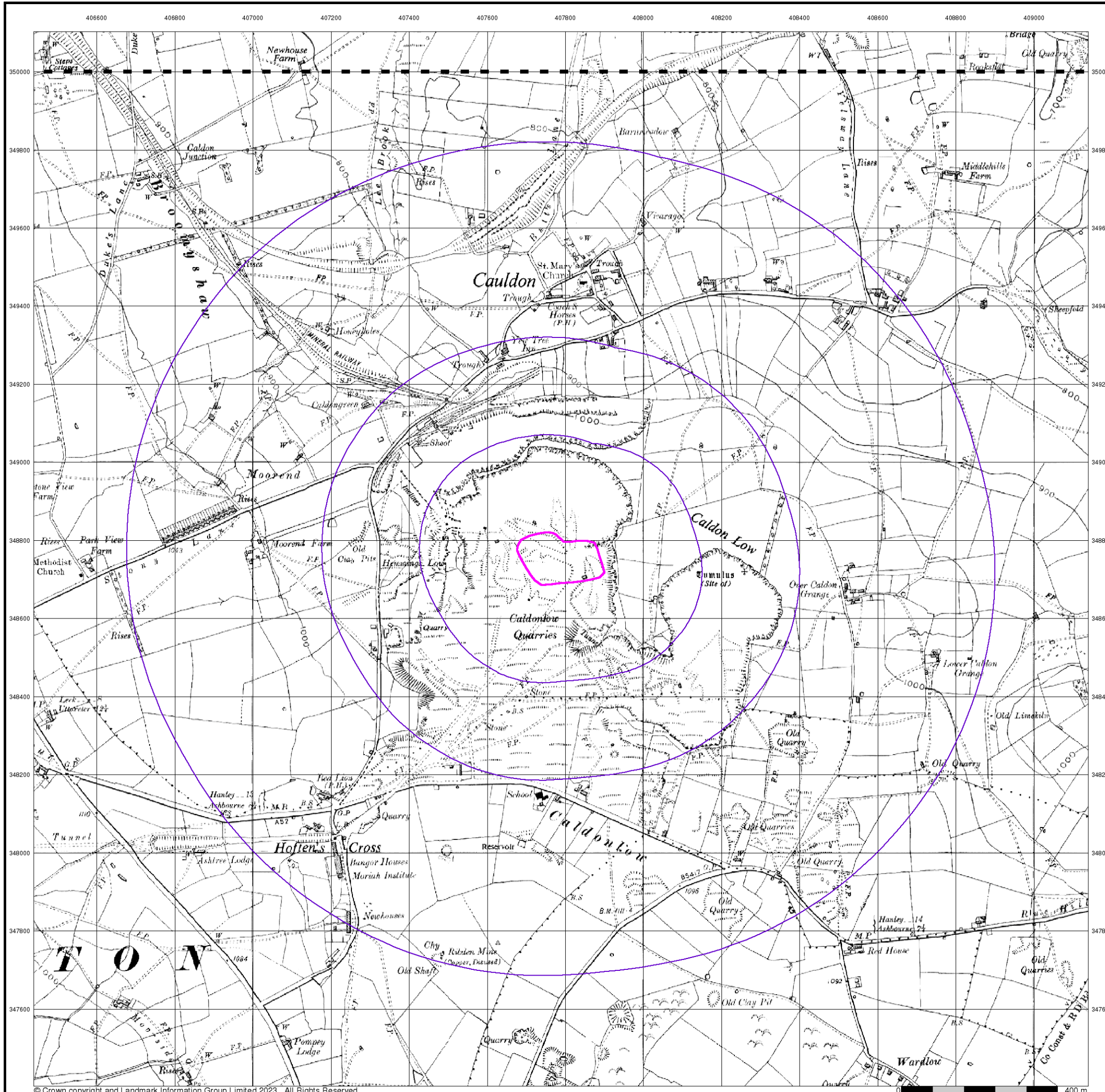
Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 1000

Site Details

Site at 407900, 348700



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





Ordnance Survey Plan

Published 1970 - 1971

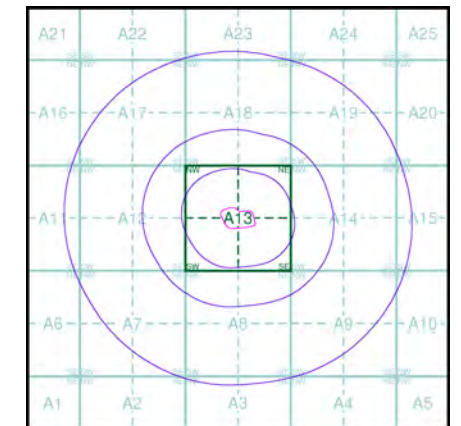
Source map scale - 1:10,000

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)

SK05SE	1971	1:10,560
SK04NE	1970	1:10,560

Historical Map - Slice A



Order Details

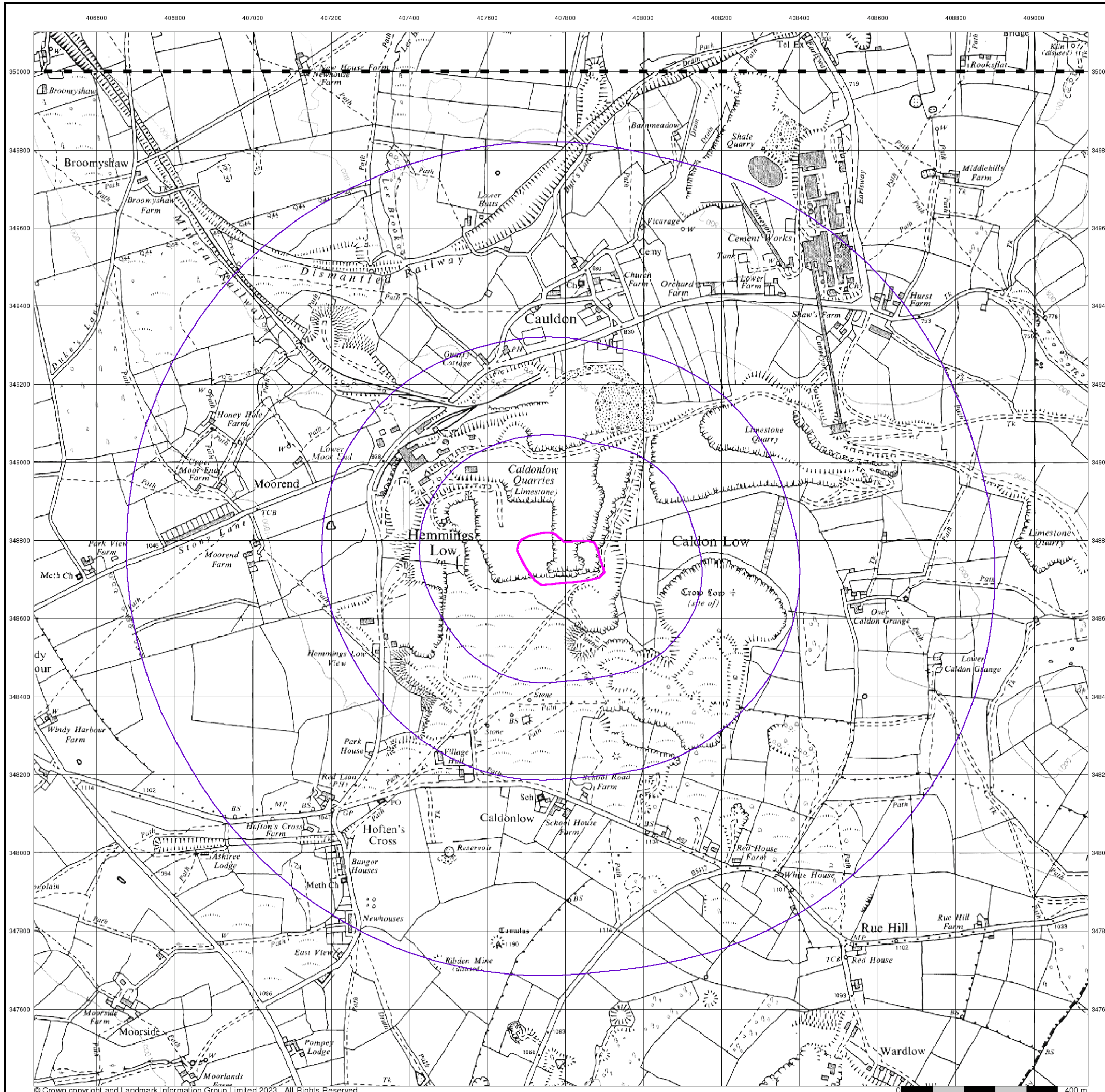
Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 1000

Site Details

Site at 407900, 348700



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





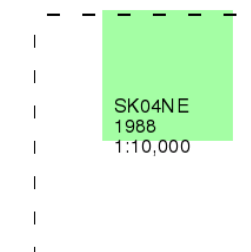
Ordnance Survey Plan

Published 1988

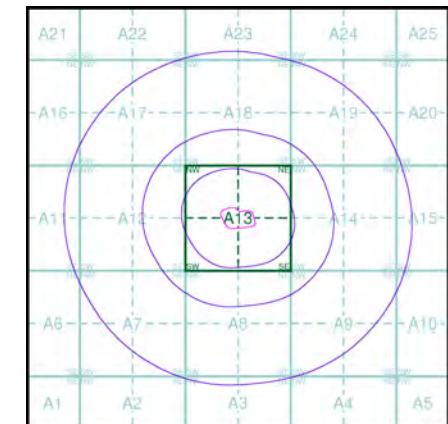
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

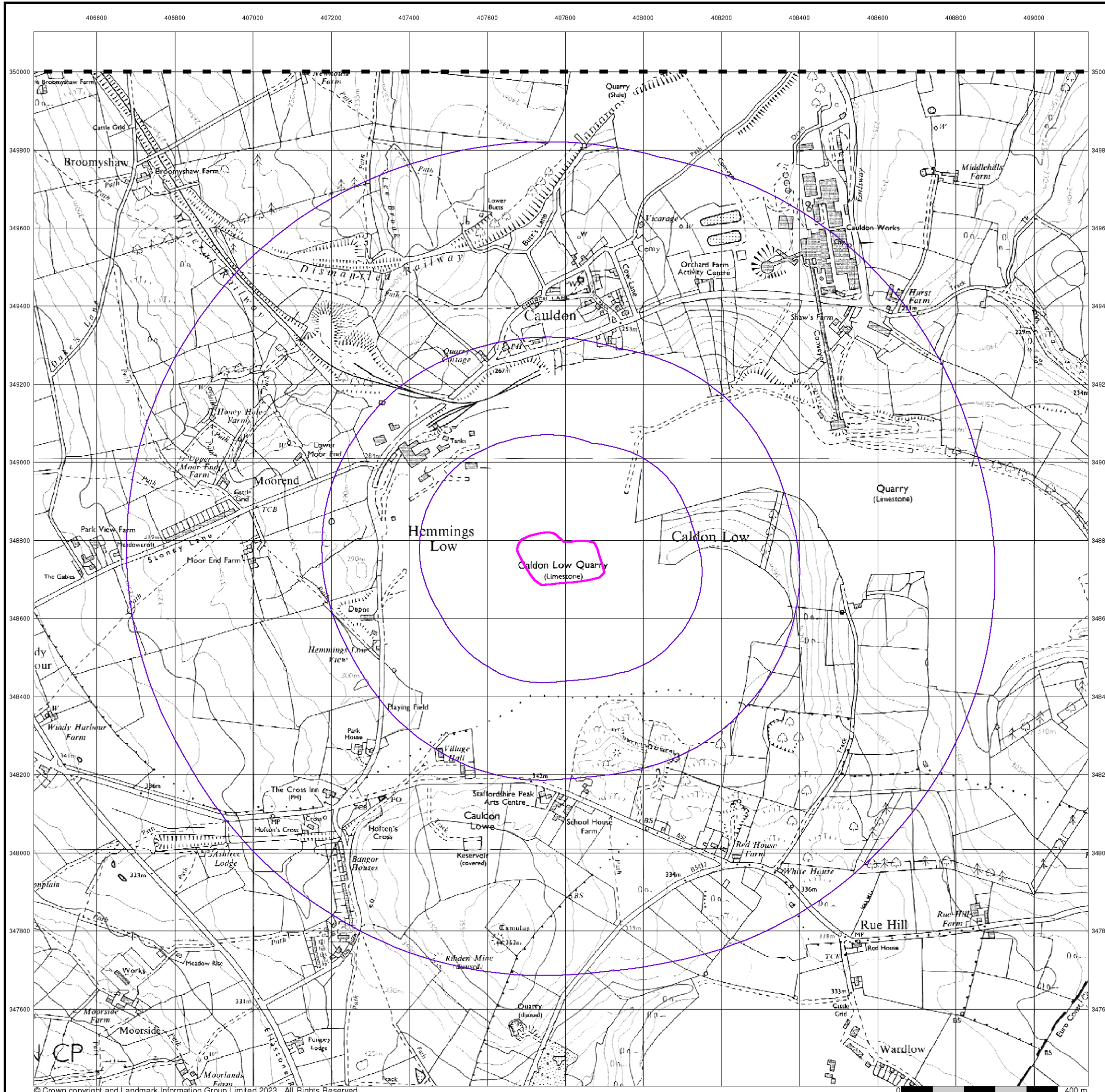
Order Number: 310987107_1_1
Customer Ref: A11007
National Grid Reference: 407790, 348750
Slice: A
Site Area (Ha): 2.22
Search Buffer (m): 1000

Site Details

Site at 407900, 348700



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





10k Raster Mapping

Published 2000

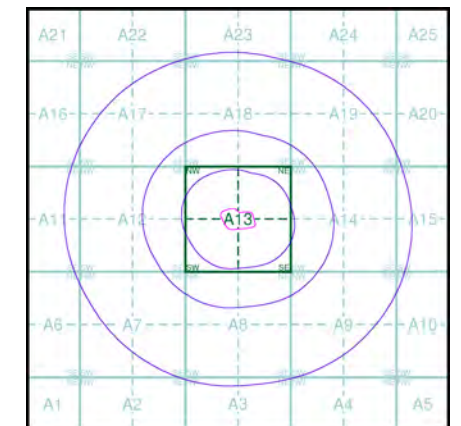
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SK05SE	2000
1:10,000	
SK04NE	2000
1:10,000	

Historical Map - Slice A



Order Details

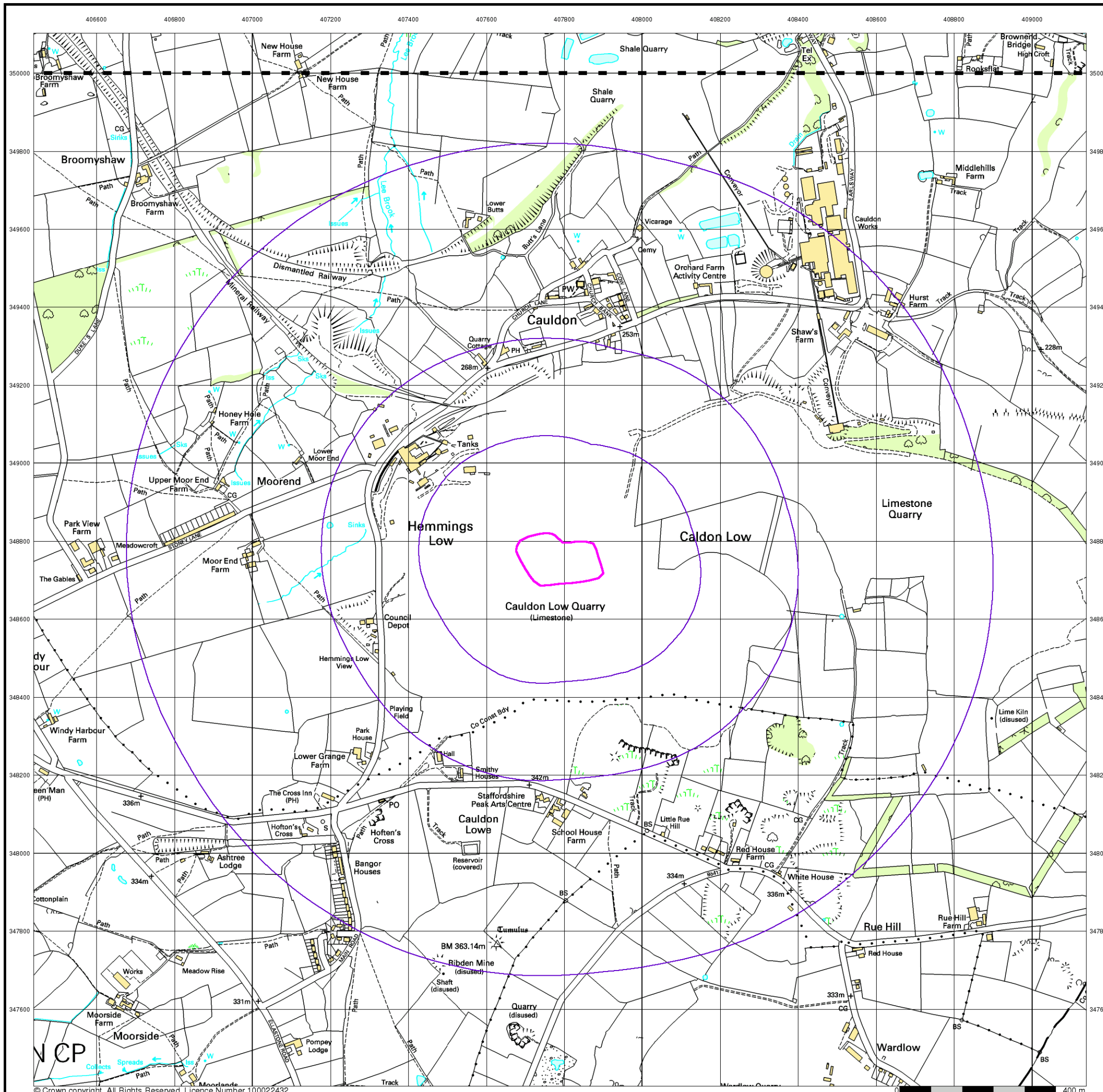
Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 1000

Site Details

Site at 407900, 348700



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



© Crown copyright. All Rights Reserved. Licence Number 100022432.



Street View

Published 2023

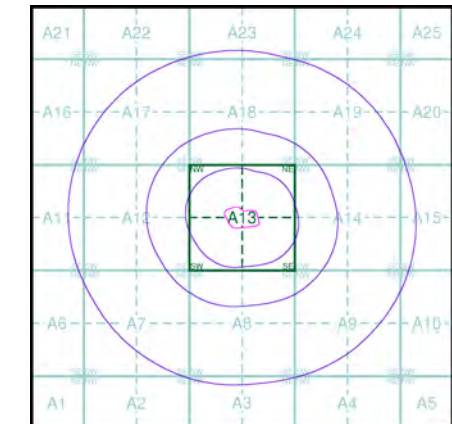
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Street View Map - Slice A



Order Details

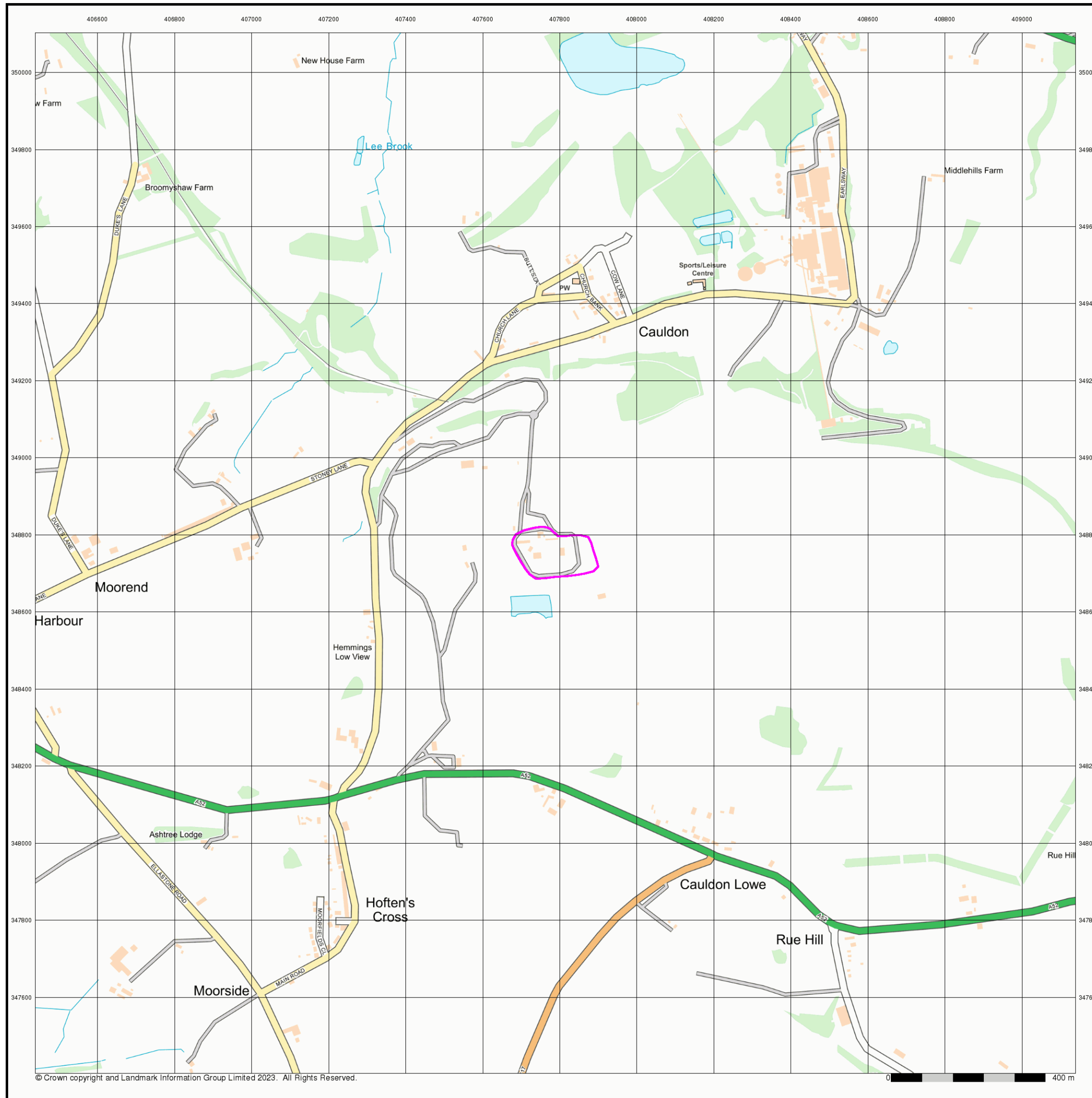
Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 1000

Site Details

Site at 407900, 348700



Tel: 0844 844 9952
 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

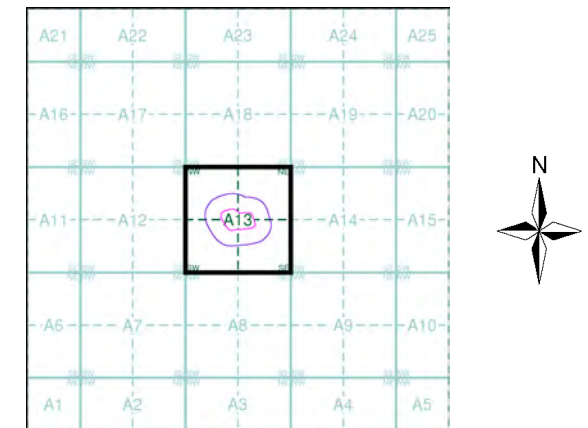
Cliff **Slopes** **Top**
Rock **Rock (scattered)**
Boulders **Boulders (scattered)**
Positioned Boulder **Scree**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Triangulation Station** **Antiquity (site of)**
Electricity Transmission Line **Electricity Pylon**
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
Staffordshire	1:2,500	1881	2
Staffordshire	1:2,500	1899 - 1900	3
Staffordshire	1:2,500	1922 - 1923	4
Ordnance Survey Plan	1:2,500	1967 - 1968	5
Additional SIMs	1:2,500	1985 - 1989	6
Large-Scale National Grid Data	1:2,500	1994	7

Historical Map - Segment A13



Order Details

Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 100

Site Details

Site at 407900, 348700



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



Staffordshire

Published 1881

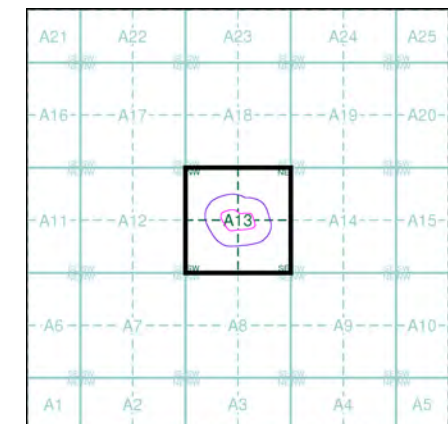
Source map scale - 1:2,500

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)

014_09 1881 1:2,500	014_10 1881 1:2,500
014_13 1881 1:2,500	014_14 1881 1:2,500

Historical Map - Segment A13



Order Details

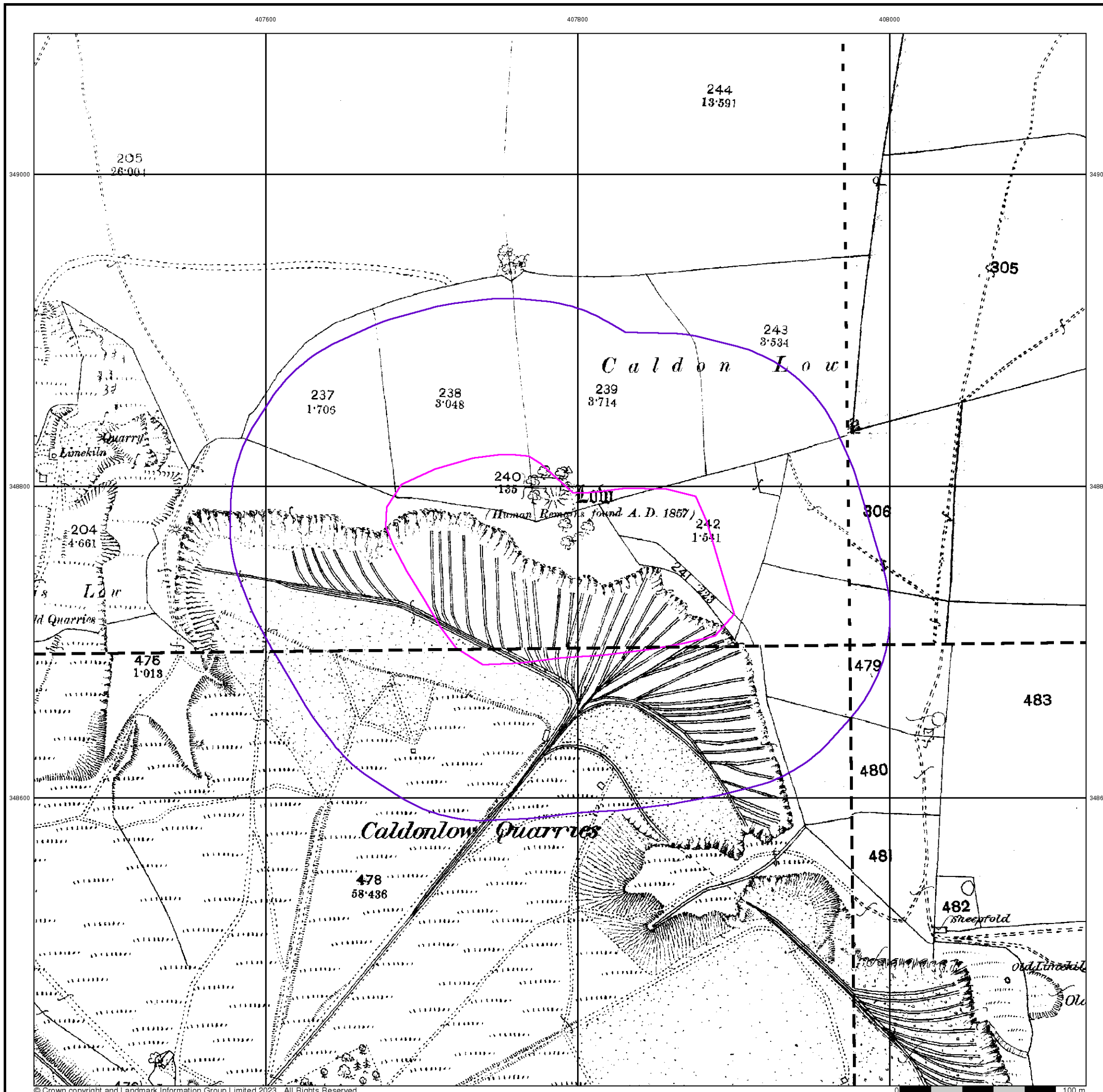
Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 100

Site Details

Site at 407900, 348700



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





Staffordshire

Published 1899 - 1900

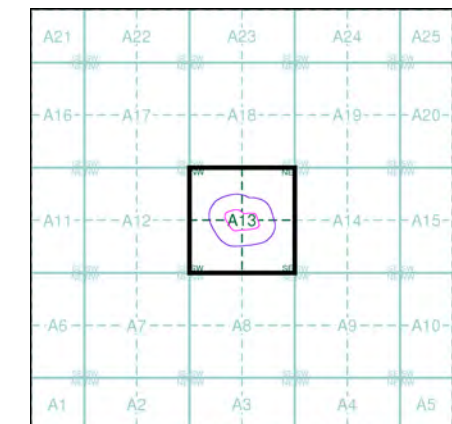
Source map scale - 1:2,500

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)

014_09 1899 1:2,500	014_10 1899 1:2,500
014_13 1899 1:2,500	014_14 1900 1:2,500

Historical Map - Segment A13



Order Details

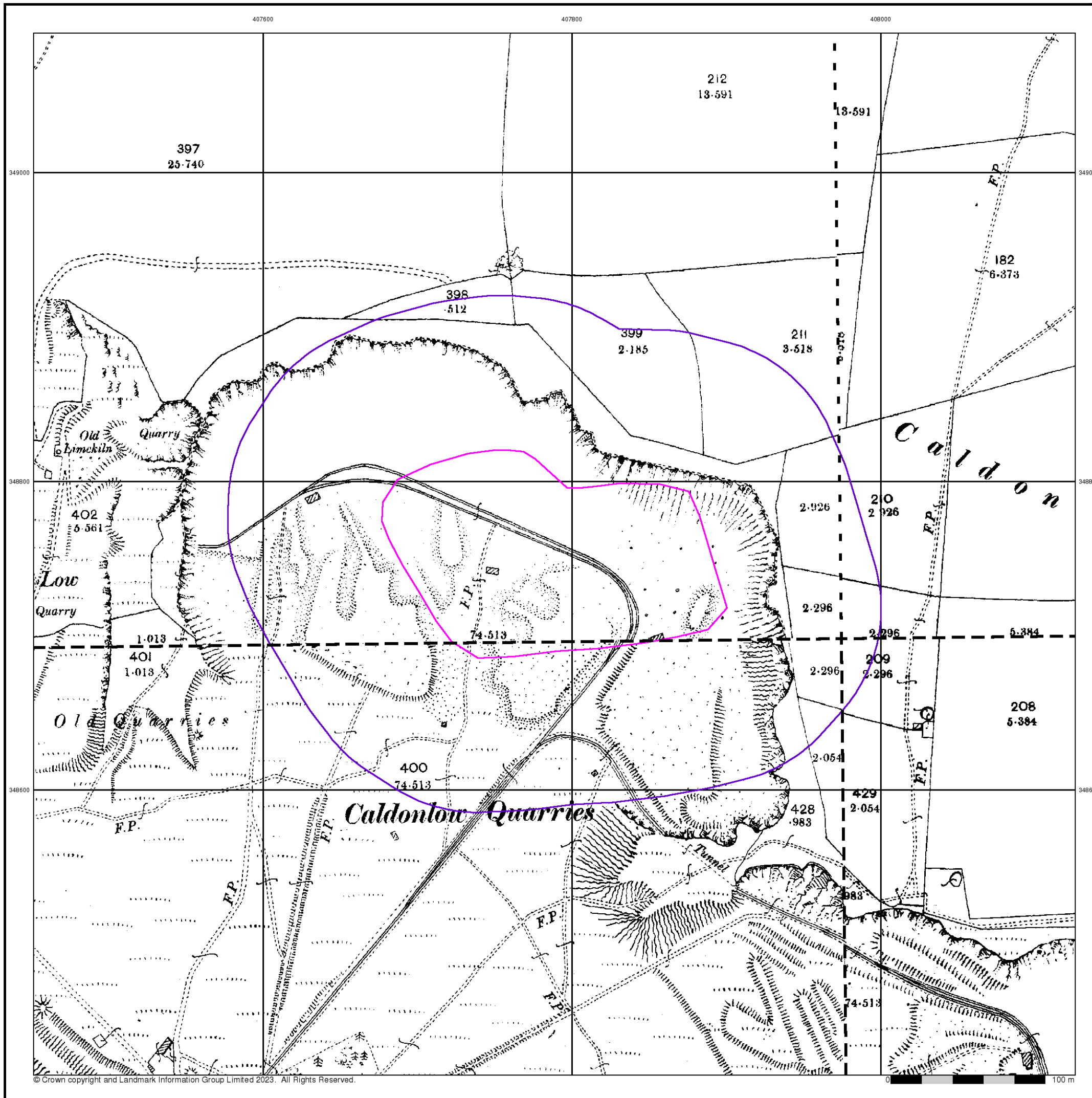
Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 100

Site Details

Site at 407900, 348700



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





Staffordshire

Published 1922 - 1923

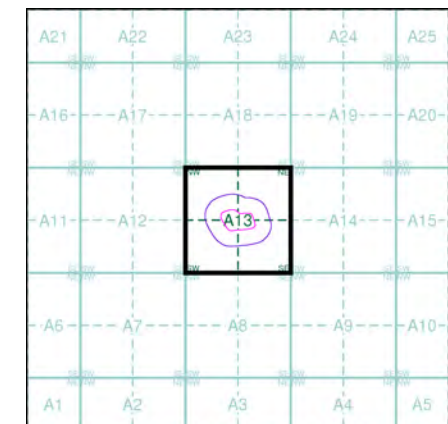
Source map scale - 1:2,500

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)

014_09 1923 1:2,500	014_10 1922 1:2,500
014_13 1923 1:2,500	014_14 1923 1:2,500

Historical Map - Segment A13



Order Details

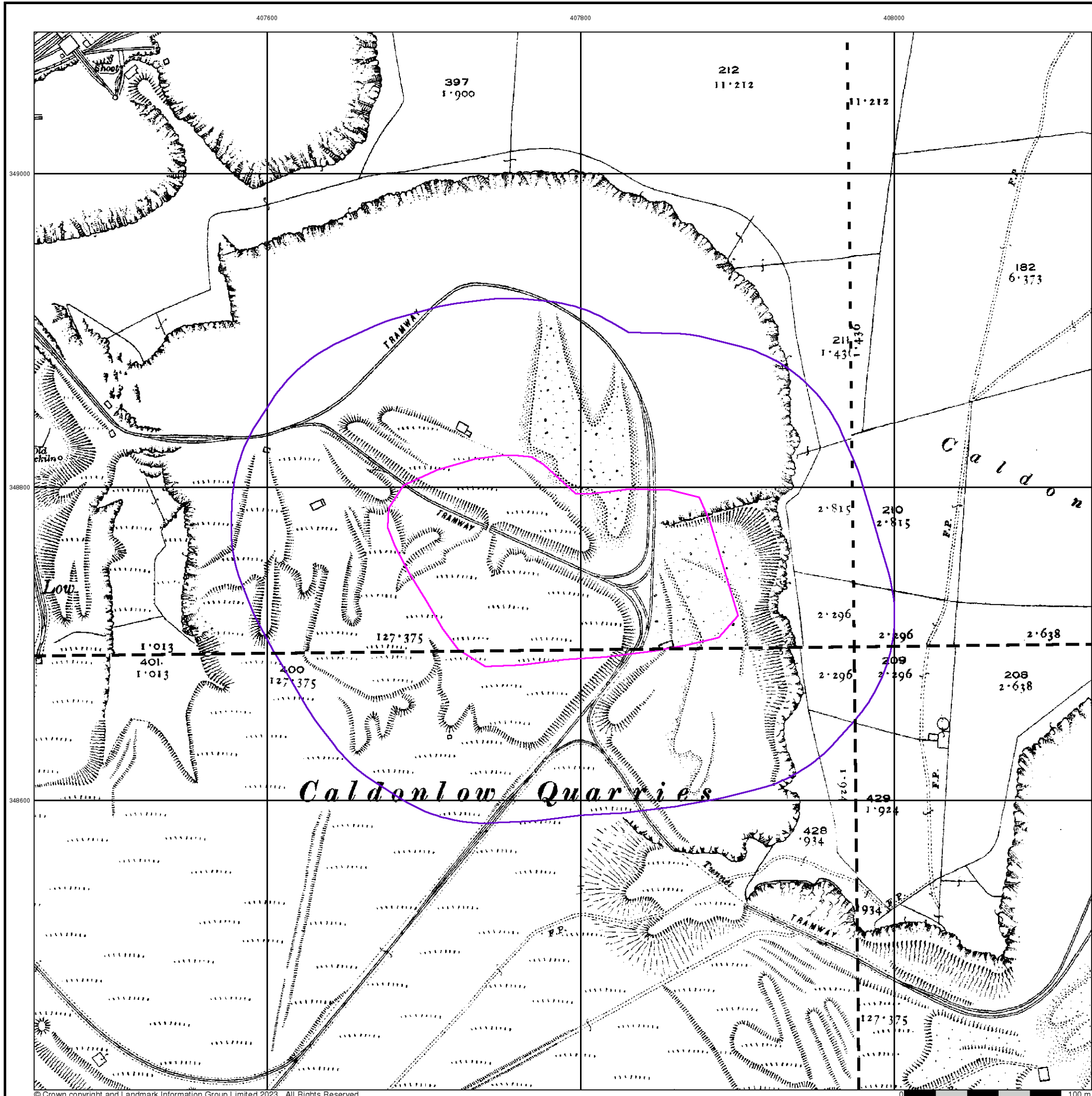
Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 100

Site Details

Site at 407900, 348700



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





Ordnance Survey Plan

Published 1967 - 1968

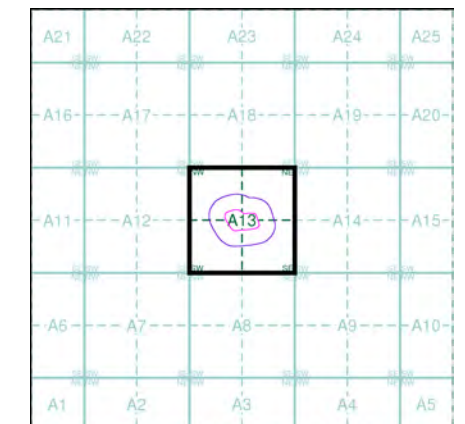
Source map scale - 1:2,500

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)

SK0749 1967 1:2,500	SK0849 1967 1:2,500
SK0748 1968 1:2,500	SK0848 1968 1:2,500

Historical Map - Segment A13



Order Details

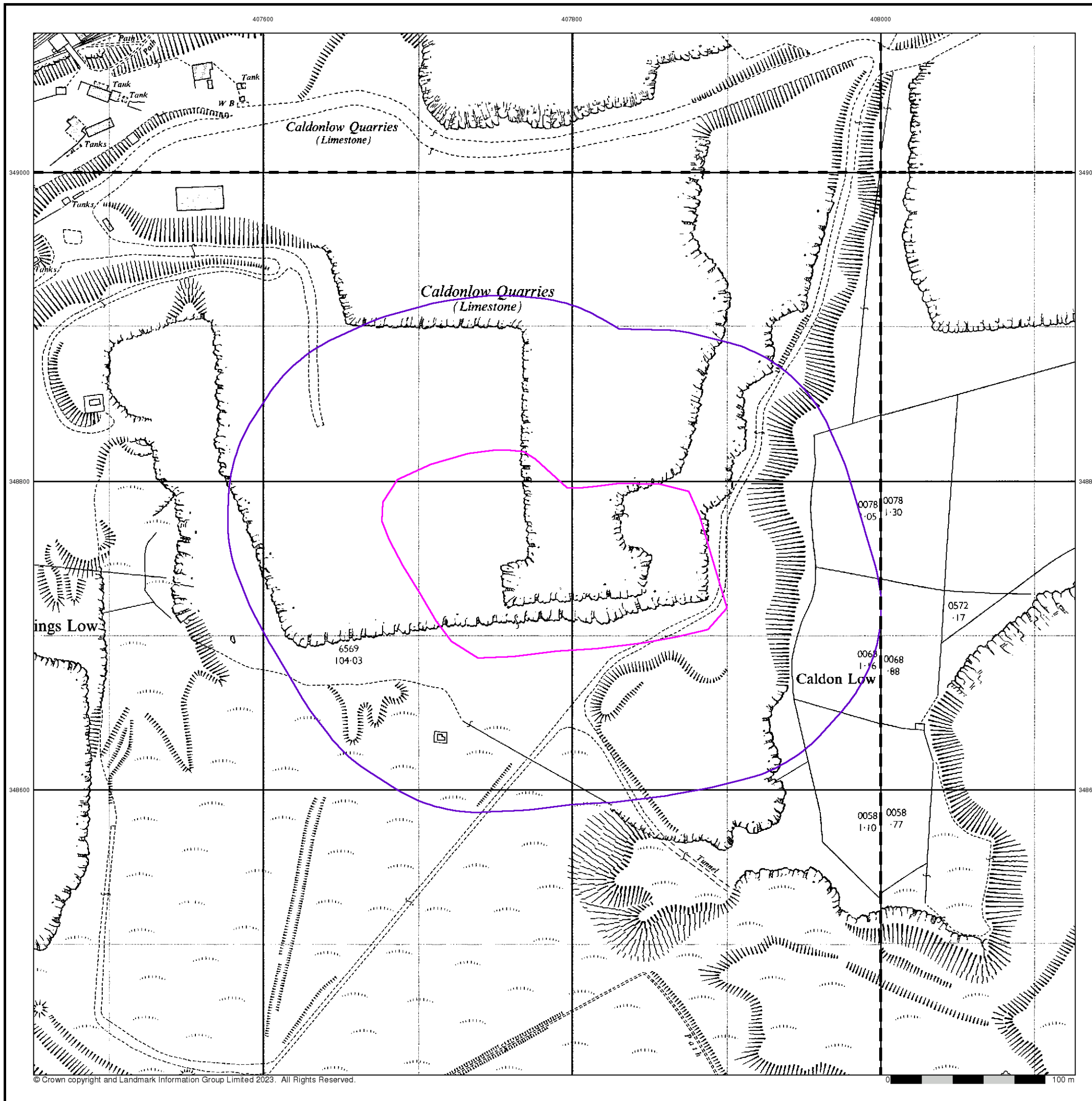
Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 100

Site Details

Site at 407900, 348700



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





Additional SIMs

Published 1985 - 1989

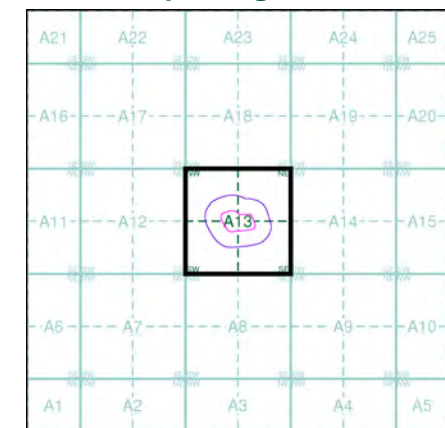
Source map scale - 1:2,500

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)

SK0749 1989 1:2,500	SK0849 1988 1:2,500
SK0748 1985 1:2,500	SK0848 1989 1:2,500

Historical Map - Segment A13



Order Details

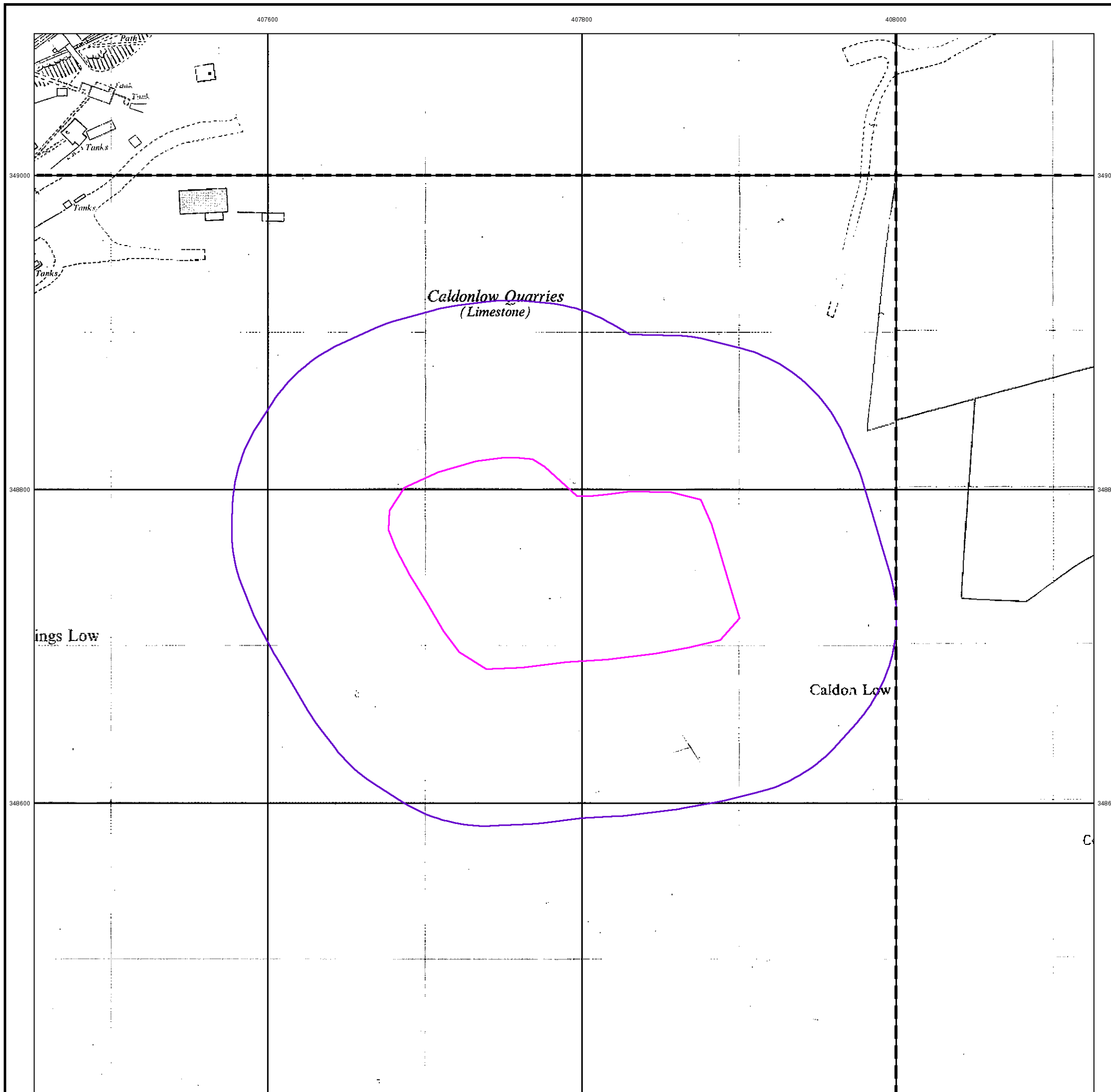
Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 100

Site Details

Site at 407900, 348700



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





Large-Scale National Grid Data

Published 1994

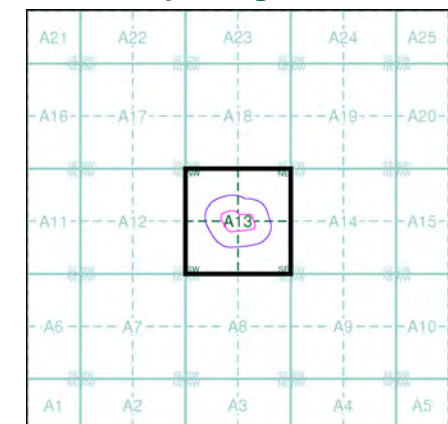
Source map scale - 1:2,500

'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)

SK0749 1994 1:2,500	SK0849 1994 1:2,500
SK0748 1994 1:2,500	SK0848 1994 1:2,500

Historical Map - Segment A13



Order Details

Order Number: 310987107_1_1
 Customer Ref: A11007
 National Grid Reference: 407790, 348750
 Slice: A
 Site Area (Ha): 2.22
 Search Buffer (m): 100

Site Details

Site at 407900, 348700



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

