



Queens Park, Millom, Cumbria
Phase I Geo-Environmental Assessment
For
Home Group

Report Ref	Issue	Prepared by	Date	Reviewed by	Date
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Queens Park, Millom, Cumbria
Phase I Geo-Environmental Assessment

CONTENTS

EXECUTIVE SUMMARY	ii
1 INTRODUCTION	1
2 THE SITE	2
3 SITE HISTORY	3
4 ENVIRONMENTAL SETTING	4
5 CONCEPTUAL SITE MODEL	7
6 ENVIRONMENTAL RISK ASSESSMENT	9
7 GEOTECHNICAL CONSIDERATIONS	11
8 FURTHER INVESTIGATIONS	12

Drawings

G001 Site Location Plan

Appendices

Appendix A Indicative Proposed Site Layout
Appendix B Historical Maps
Appendix C Envirocheck Report

EXECUTIVE SUMMARY

Land Use	The site is a residential estate, located within the western edge of Millom, comprising terrace, semi-detached and detached houses with associated gardens, parking and road infrastructure.
Site History	Earliest OS plans (dated 1862) show the majority of the site as undeveloped agricultural land up until 1968 when the site is developed as a residential estate comprising dwellings, gardens, areas for parking and road infrastructure, known as Queens Park.
Environmental Setting	- Published geological information indicates the site to be underlain by Glacial Till superficial (drift) deposits with nearby historical BGS boreholes noting soft becoming firm and stiff slightly silty, and sandy clay to a depth up to 6.30m (base of borehole). - Bedrock deposits of the Kirkley Bank Formation underlie the site, with calcareous mudstone and siltstone recorded at 'rock-head' level. - There are no Local Authority, Historical or BGS recorded landfill sites within 1km of the site boundaries. - The superficial deposits are designated as a Secondary Aquifer (Undifferentiated). - The solid deposits are designated as Secondary B Aquifers. - There are no licensed groundwater abstractions within 1km. - The site is located within a designated Zone 1 area according to EA data, be and as such is at low risk of flooding from rivers. - The site is located within an area designated by the BGS as being susceptible to groundwater flooding of property situated below ground level. In addition, the site is located within an area where there is a potential for groundwater flooding to occur.
Contamination	Based on the site history, it is considered that the site presents a low environmental risk with respect to contamination. However, a limited thickness of made ground is anticipated beneath the site associated with the construction of a residential properties and access road/s.
Mining	Based on a review of available data the site is not considered to be at risk from shallow coal mining activities or exploitation of hematite deposits.
Ground Gas	The potential risk to this site from ground gas migration and/or production is considered to be low. However, it is recommended that gas monitoring be completed as part of any future ground investigation works to confirm the level of potential risk. Radon protection measures are not required for this site.
Foundations	Due to the nature of the anticipated ground conditions, shallow conventional foundations (i.e. strip or pad) could represent a potentially viable solution for this site, based wholly within the natural glacial clay deposits. However, further ground investigation works will be required to more definitively confirm potential foundation options.

Further Investigations	A ground investigation will be required to confirm the site conditions. This should include as a minimum: mini-percussive boreholes to determine shallow ground conditions, gas and groundwater monitoring, geotechnical and chemical laboratory analysis. If initial investigations are undertaken prior to the demolition of existing dwellings, it is recommended additional boreholes are completed post demolition in order to ensure a site wide coverage has been achieved.
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1 INTRODUCTION

1.1 3e Consulting Engineers Ltd (3e) were commissioned by Home Group to carry out a Phase I Geo-Environmental Assessment for a proposed housing development at Queens Park, Millom. This report highlights ground related environmental and geotechnical considerations in relation to the proposed development, which includes the construction of residential dwellings, with associated parking, access road/s and soft landscaping, as indicated on the indicative site layout plan included as **Appendix A**.

1.2 The objectives of this assessment were:

- To establish the historical development of the site and surrounding area.
- To establish the environmental setting of the site.
- To determine if historical or current activities could give rise to significant ground or groundwater contamination.
- To assess the potential for hazardous ground gas.
- To determine the potential risks posed by contamination arising from historical or current activities on or in the vicinity of the site.

1.3 To this end the study has included an inspection of historical maps, a review of environmental data held on publicly available registers and other sources as indicated within the report. This report presents the factual information available during this appraisal, interpretation of the data obtained and recommendations relevant to the scope of works outlined above. In addition, a site walkover survey was also undertaken on 19th November 2018. It has been assumed in the production of this report that the site is to be redeveloped for a Residential end use.

1.4 The comments and opinions presented in this report are based on the findings of the available desk study investigation carried out by 3e. Responsibility cannot be accepted for any conditions not revealed by this desk study and which have not been taken into account by this report. This report has been prepared for the sole use of Home Group. No other third party may rely upon or reproduce the contents of this report without the written approval of 3e. If any unauthorised third party comes into possession of this report, they rely on it entirely at their own risk and 3e do not owe them any Duty of Care or Skill.

2 THE SITE

Location and Description

2.1 The site, centred on National Grid Reference 316610, 480160 is located north west of Barrow-in-Furness within the southern Lake District, Cumbria. A site location plan is included as **Drawing G001**.

2.2 The site is a residential estate located on the western parts of Millom, comprising terrace, semi-detached and detached houses with associated gardens, parking and road infrastructure.

2.3 During the walkover survey, no visual evidence of contamination (i.e. asbestos, tanks, etc.,) was identified at the surface across the site.

2.4 The adjacent land use is as follows:

- North: A5093 and residential dwellings.
- South: Public Park and Black Combe Junior School.
- East: Residential dwellings with Millom town centre beyond.
- West: Residential dwellings with agricultural land recorded beyond.

3 SITE HISTORY

3.1 In order to establish the site history an inspection was made of historical maps, dating between 1862 and 2019. A summary of the information is provided below and a copy of the maps is included as **Appendix B**. It is not the intention of this report to describe in detail all of the changes that have occurred on or adjacent to the site, only those pertinent to the proposed development.

Map Dates	On-Site Features	Relevant Off-Site Features
1862 – 1897	The site is recorded as an area of agricultural land, absent of development.	A small quarry is recorded 240m north east of the site.
1898 – 1967	No significant change.	The quarry to the north east appears to have been infilled with significant residential development recorded 50m north.
1968 – 1977	The site is now developed as Queens Park, reflecting its current layout of residential dwellings with gardens, areas for parking and road infrastructure.	Additional residential development is recorded to the immediate east of the site.
1978 - 2019	No significant change.	The A5093 has been constructed to the north of the site.

3.2 In summary, there is no history of previous significant contaminative use on the site, with historic OS data recording the majority of the site as undeveloped agricultural land up until 1968 at which point Queens Park is recorded. However, it is anticipated that a limited thicknesses of made ground will be present beneath areas of the site, generally local to the locations of the existing residential properties and road infrastructure.

4 ENVIRONMENTAL SETTING

4.1 This section summarises the publicly available information collated within an Envirocheck search, included as **Appendix C**.

Geology

4.2 A summary of the site geology, based on published information, is provided below.

Sources of Information	British Geological Survey (BGS) Sheet 48 Ulverston, 1:50 000 scale, Solid and Drift Edition. Available nearby BGS borehole data.
Made Ground	Significant thicknesses of made ground are not anticipated beneath the site due to limited historical site activities. However, a limited thickness of made ground is anticipated associated with the construction of a residential properties and access road/s.
Superficial Geology	Geological plans record the site as being underlain by Glacial Till superficial (drift) deposits, with nearby historical BGS boreholes noting initially soft becoming firm and stiff silty and sandy clays to a depths of between 2.10m and 6.30m (terminal depth of boreholes). When considering the site is located within proximity to large scale deltaic activities to the east, it is plausible to assume pockets, lens and bands of granular deposits (I.e. sands and gravels) or organic matter (i.e. organic rich silts / peat) may be present within the Glacial Till.
Bedrock Geology	The Kirkley Bank Formation is recorded at 'rock-head' level beneath the site, comprising calcareous mudstone and siltstone. In addition, a geological fault trending north east – south west with a down throw to the north west partitions the site.
Quarrying	A small quarry is recorded 240m north east of the site between 1862 and 1898, however this is unlikely to pose a significant risk to the site.

Coal Mining and Mineral Extraction

4.3 From BGS data and Coal Authority (CA) data, the site is not located within an area underlain by shallow coal workings. Therefore no further assessment or intrusive activities are deemed necessary for this site.

4.4 From BGS Geological Plan Sheet 48, Ulverston (1:50,000 scale), significant quantities of hematite deposits are recorded to have been exploited at rock-head level to the south east of the site (Hodbarrow Mine). The plan does not show these workings to extend below the site. Based on an assessment of geological plans and publically available information, the haematite deposits were recorded within geological deposits of carboniferous age, with these deposits are not recorded beneath the site. In view of the above, it is considered the risk of hematite exploitation at or beneath rockhead level is negligible.

Hydrology and Hydrogeology

4.5 A summary of available information pertaining to hydrology, hydrogeology, flood risk potential, water abstractions, discharge consents and pollution incidents to controlled waters is provided below.

Watercourses	NR within 250m.
Flood Risk	The site is located within Zone 1 area considered to be at 'Low Risk' from fluvial flooding (i.e. is not within a flood plain).
BGS Groundwater Flooding Susceptibility	The site is recorded as being located within an area designated by the BGS as being susceptible to groundwater flooding of property situated below ground level. In addition, the site is located within an area where there is a potential for groundwater flooding to occur.
Groundwater Classification	Superficial Geology: Secondary Aquifer (Undifferentiated). Bedrock Geology: Secondary B Aquifer.
Source Protection Zones	NR within 1km.
Springs and Wells	NR within 1km.
Licensed Water Abstractions	NR within 1km.
Discharge Consents	NR within 250m.
Pollution Incidents	NR within 250m.

NR – None Recorded

Landfill Sites and Waste Management

4.6 A summary of information regarding landfill sites (historical or current) and waste management facilities is provided below.

Local Authority Recorded Landfills	NR within 1km.
BGS / EA and Historical Landfills	NR within 1km.
Other Waste Management Facilities	NR within 1km.

NR – None Recorded

Pollution Controls and Industrial Land Use

4.7 A summary of Pollution Control records and potentially polluting activities (fuel stations) is provided below.

Integrated Pollution Controls (IPC)	NR within 1km.
Integrated Pollution Prevention and Control (IPPC)	NR within 1km.
Pollution Prevention and Controls (PPC)	NR within 1km.
Petrol Filling Stations	NR within 250m.

NR – None Recorded

Radon

4.8 Inspection of the BRE publication BR211 (2015), 'Radon: Guidance on protective measures for new buildings' indicates that the site lies in an area where radon protection measures are not required and this is confirmed by the Envirocheck report.

5 CONCEPTUAL SITE MODEL

5.1 Based on the available desk study information, a conceptual site model (CSM) has been developed for the proposed future land use (residential). This summarises the understanding of the existing site and its historical development, the site geology, the potential contaminant sources, transport pathways and receptors in order to assess potential pollutant linkages. In assessing the potential contaminants present at the site, reference has also been made to the relevant sections of CLR 8, the Department of the Environment Industry Profile reports and any other relevant supporting documentation.

5.2 The proposed development includes the construction of a new residential housing development, as shown on the indicative site layout plan included as **Appendix A**. Based on the available information, a summary of the potential contamination sources, pathways and receptors is provided below.

Sources of Contamination

- Contamination associated with current and historic site usage – made ground is anticipated beneath areas of the site, generally local to the locations of the existing developments and access road/s.
- Contamination associated with nearby historical site usage – No risk considered at this stage due to an absence of sources within plausible migration distance.
- Potential for hazardous ground gas migration and/or production – low risk considered due to the absence of sources within plausible migration distance.

Potential Pollution Pathways

- Humans – direct contact, soil ingestion and dust inhalation.
- Secondary B Aquifer and Secondary Aquifer (Undifferentiated) – leaching and vertical migration of contamination.
- Lateral migration into nearby watercourses – low risk anticipated due to a lack of plausible sources.
- Vertical and lateral migration, ingress and accumulation of ground gases into buildings and service entries (manholes).
- Direct contact of aggressive soils with building foundations and floor slabs.

Receptors

- Human Health - Site end users.
- Human Health - Construction workers.
- Controlled Waters – Superficial and Bedrock Aquifer deposits (Secondary Aquifer Undifferentiated & Secondary B Aquifer).
- Building foundations and floor slabs.

Pollutant Linkage Assessment

5.3 A qualitative risk assessment has been made of the likelihood of any pollutant linkage operating and its potential significance, as summarised in the table below.

Contamination Source	Pathway	Hazard	Potential Receptors	Linkage Complete
Made Ground	Direct contact, ingestion, dust inhalation	Human health risk	Construction workers	Yes, can be removed by the use of appropriate PPE and limited exposure.
	Direct contact, ingestion, dust inhalation	Human health risk	Site end users	Yes, although exposure pathways will only likely be available in areas of future soft landscaping.
	Lateral and vertical migration	Pollution of controlled waters	Secondary Aquifer (Undifferentiated) & Secondary B Aquifer	Yes, although migration pathways will be prohibited due to the anticipated thickness of low permeability glacial clay deposits.
	Lateral and vertical migration	Pollution of controlled waters	Nearby watercourse	Yes, although no significant risk is anticipated at this stage due to a lack of plausible sources.
Contaminants associated with off-site sources	Lateral migration	Human health risk	Site end users	Yes, however there is no significant risk due to a lack of plausible sources within a plausible migration distance.
Ground Gas	Vertical migration into buildings or confined spaces	Human health risk. Fire risk	Human health and property	Yes, though considered to be a low risk at this stage.

6 ENVIRONMENTAL RISK ASSESSMENT

6.1 The potential environmental risk has been assessed based on the 'source-pathway-target' pollutant linkages identified in the Conceptual Site Model, which requires that for a liability to arise each stage of the pollutant linkage must be present. References to risk classifications are made according to the following definitions:

- **Low risk** – it is unlikely that an issue will arise with respect to causing significant harm to human health or controlled waters.
- **Medium risk** – it is possible that an issue could arise with respect to causing significant harm to human health or controlled waters.
- **High risk** – it is likely that an issue will arise with respect to causing significant harm to human health or controlled waters.

6.2 Having evaluated the information gathered during this study and described in the previous sections the following risk assessment has been produced.

ENVIRONMENTAL RISK ASSESSMENT		
Contamination potential for:	Risk rating	Reason
On-site contamination	Low	Made ground is anticipated beneath areas of the site, generally local to the locations of the existing buildings and access roads.
Contaminants migrating off site	Low	Limited risk anticipated at this stage due to absence of significant sources recorded on this site.
Contaminants migrating onto site	Low	Limited risk anticipated at this stage due to absence of significant sources recorded within a plausible migration distance.
Other environmental issues giving rise to concern	Low	None identified.
Overall Risk	Low	

Ground Gas Risk Assessment

6.3 Based on the above information gained through the Envirocheck Report, the following summarises the gas risk for the site. In accordance with current guidance (CIRIA C665), the gas generation potential for each source has been individually assessed, with references to potential gassing risk made according to the following definitions: Negligible, Very Low, Low, Moderate, High and Very High.

Potential Gas Source	Hazard	Risk Rating	Justification
Made ground (CH ₄ , CO ₂)	Humans: health risk Buildings: explosion	Low	Localised made ground may be present below areas of this site associated with historical development based activities.
Alluvium deposits (CH ₄ , CO ₂)	Humans: health risk Buildings: explosion	Low	When considering the sites proximity to large deltaic activities and the coast line, it is possible organic matter may be encountered in the form of organic clays and peat, which over time may biodegrade, producing potentially harmful ground gases.
Nearby Landfill (CH ₄ , CO ₂)	Humans: health risk Buildings: explosion	N/A	There are no recorded landfill activities within a plausible migration distance of the site.
Coal and historical mining	Humans: health risk Buildings: explosion	N/A	Shallow coal is not anticipated beneath the site and therefore does not represent a plausible risk to the site.
Radon	Humans: health risk	N/A	No precautions required.
Overall Risk		Low	

6.4 In summary, the risk of ground gas emissions is considered to be low. However, it is recommended that gas monitoring be completed as part of any future ground investigation works to confirm the level of potential risk.

7 GEOTECHNICAL CONSIDERATIONS

7.1 The following geotechnical considerations are given as preliminary guidelines only based on the available data on the ground conditions. Consequently, the following should not be taken as design criteria without further geotechnical data obtained from a suitably designed ground investigation.

Coal Mining & Mineral Extraction Assessment

7.2 The site is not considered to be at risk from potential shallow coal mining activities. Furthermore, the site is not considered to be at risk from potential hematite extraction.

Foundations

7.3 Due to the nature of the anticipated ground conditions, shallow conventional foundations (i.e. strip or pad) could represent a potentially viable solution for this site, based wholly within the natural glacial clay deposits. However, further ground investigation works will be required to more definitively confirm potential foundation options.

Floor Slabs

7.4 When considering the nature of the proposed development, it is considered likely that a suspended (block and beam) floor slab will be adopted.

Pavements

7.5 It is anticipated, subject to a ground investigation, that standard construction techniques can be utilised.

Gas Protection Measures

7.6 In view of the preliminary assessment, the potential risk to this site from ground gas migration and/or production is considered to be low. However, it is recommended that gas monitoring be completed as part of any future ground investigation works to confirm the level of potential risk.

7.7 Radon protection measures are not required for this site.

8 FURTHER INVESTIGATIONS

8.1 An intrusive investigation will be required for the proposed development to address the ground related issues discussed above. A summary of the likely scope of works, which should not be taken as an exhaustive list, is provided below.

- Mini percussive drilling to allow the recovery of samples for laboratory testing and establish the shallow geological profile.
- It is recommended additional mini percussive drilling is undertaken post demolition if the initial phase of works is completed prior to the removal of the residential properties in order to ensure a site wide coverage is achieved.
- Ground gas and water monitoring to confirm the level of potential risk to the proposed development, with monitoring on a minimum of 6 occasions over a minimum 3 month period (in accordance with CIRIA C665).
- Geotechnical and chemical laboratory testing.

Drawings



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Date	Revision	Checked	Rev.
Project Queens Park, Millom for Home Group			
Title Site Location Plan			
Scale 1:25,000 at A4	Drawn CB	Checked NW	Date Jan '19
Job No P17-498	Drawing No. G001	Rev 0	

Appendix A

Indicative Proposed Site Layout Plan

Appendix B

Historical Maps

Historical Mapping Legends

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

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

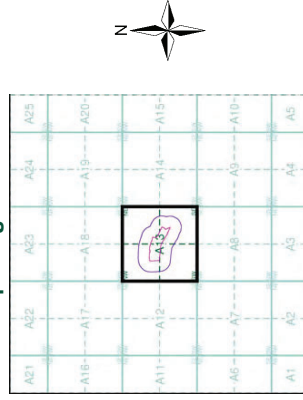
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Cumberland	1:2,500	1862	2
Cumberland	1:2,500	1898 - 1899	3
Cumberland	1:2,500	1924	4
Ordnance Survey Plan	1:2,500	1968 - 1969	5
Additional SIMs	1:2,500	1978 - 1987	6
Additional SIMs	1:2,500	1984 - 1989	7
Additional SIMs	1:2,500	1987	8
Ordnance Survey Plan	1:2,500	1991	9
Additional SIMs	1:2,500	1992	10
Large-Scale National Grid Data	1:2,500	1994 - 1995	11

Historical Map - Segment A13



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Search Buffer (m): 100

Site Details

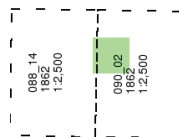
Queens Park, Millom, Cumbria, LA18 5DZ



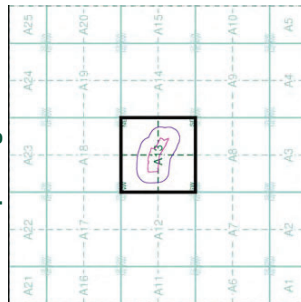
Tel: 0844 844 9652
Fax: 0844 844 9651
Web: www.envirocheck.co.uk

The historical maps shown were reproduced from maps predominantly held in the collections of the Ordnance Survey. The first map, published in 1854 at the scale adopted for England, Wales and Scotland in the 1840's, in 1854 at the 1:2,500 scale was adopted for mapping urban areas and by 1896 it represented the whole of what were considered to be the cultivated parts of Great Britain. The published data given below is often some years later than the surveyed data. 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 Details

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Search Buffer (m):	100

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



Cumberland

Published 1898 - 1899

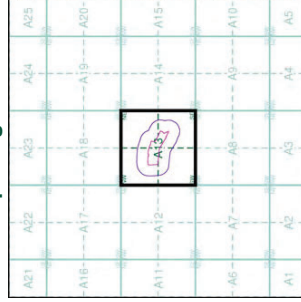
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The historical maps shown were reproduced from maps predominantly held at 1:2,500 scale, adopted for England, Wales and Scotland in the 1940s. 1854 was the first year that the Ordnance Survey maps of Great Britain covered the whole of what was considered 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)

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090.02	1899	1:2,500

Historical Map - Segment A13



Order Details

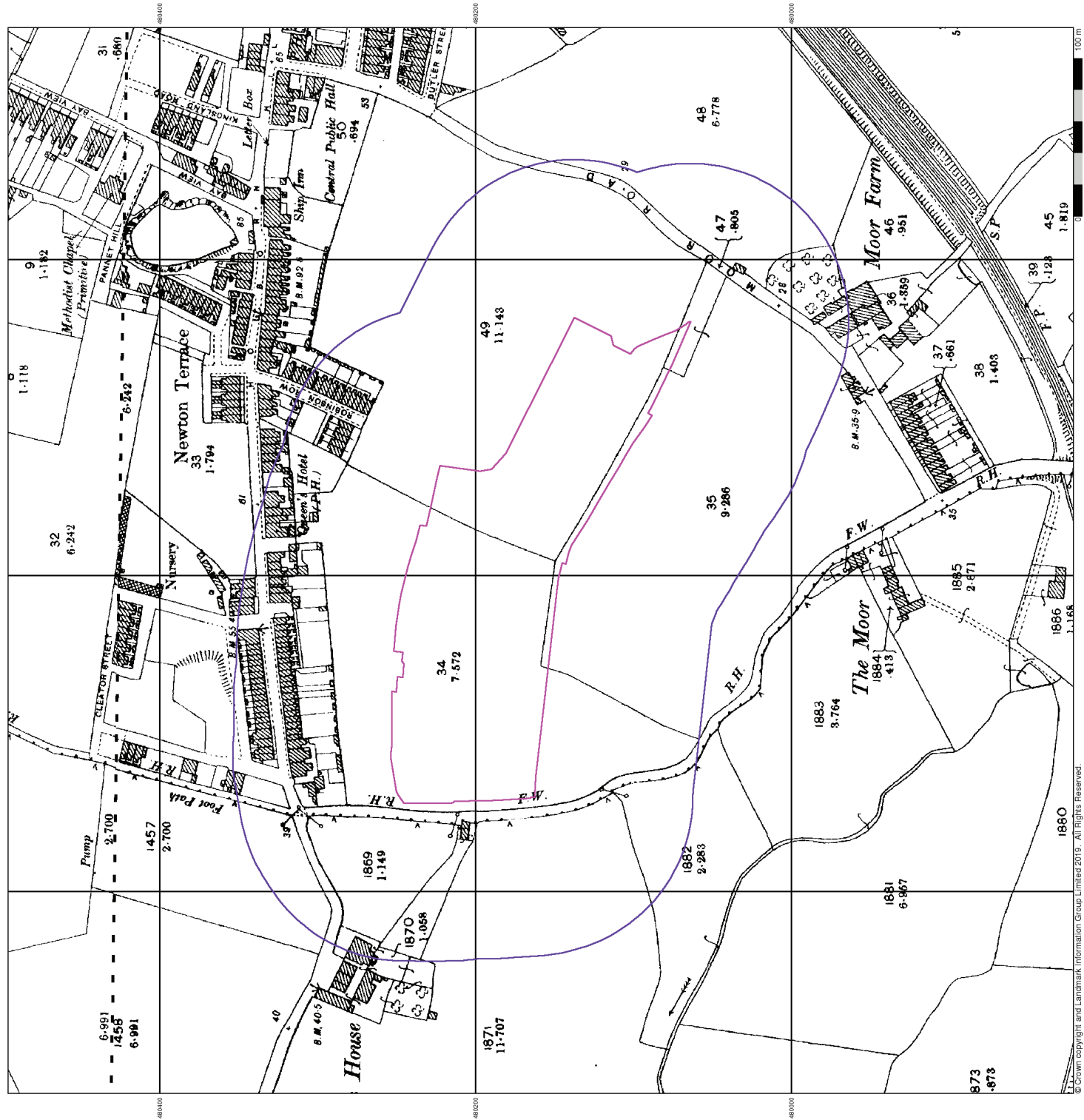
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Customer Ref: P17-498
National Grid Reference: 316610, 480160
Site: A
Site Area (Ha): 2.71
Search Buffer (m): 100

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



Tel: 0844 844 9552
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Web: www.envirocheck.co.uk





Cumberland

Published 1924

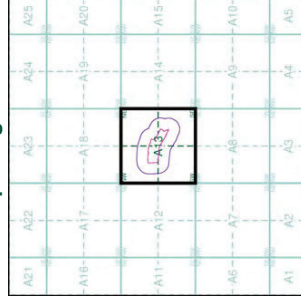
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Map Name(s) and Date(s)

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089.02	1924	1:2,500

Historical Map - Segment A13



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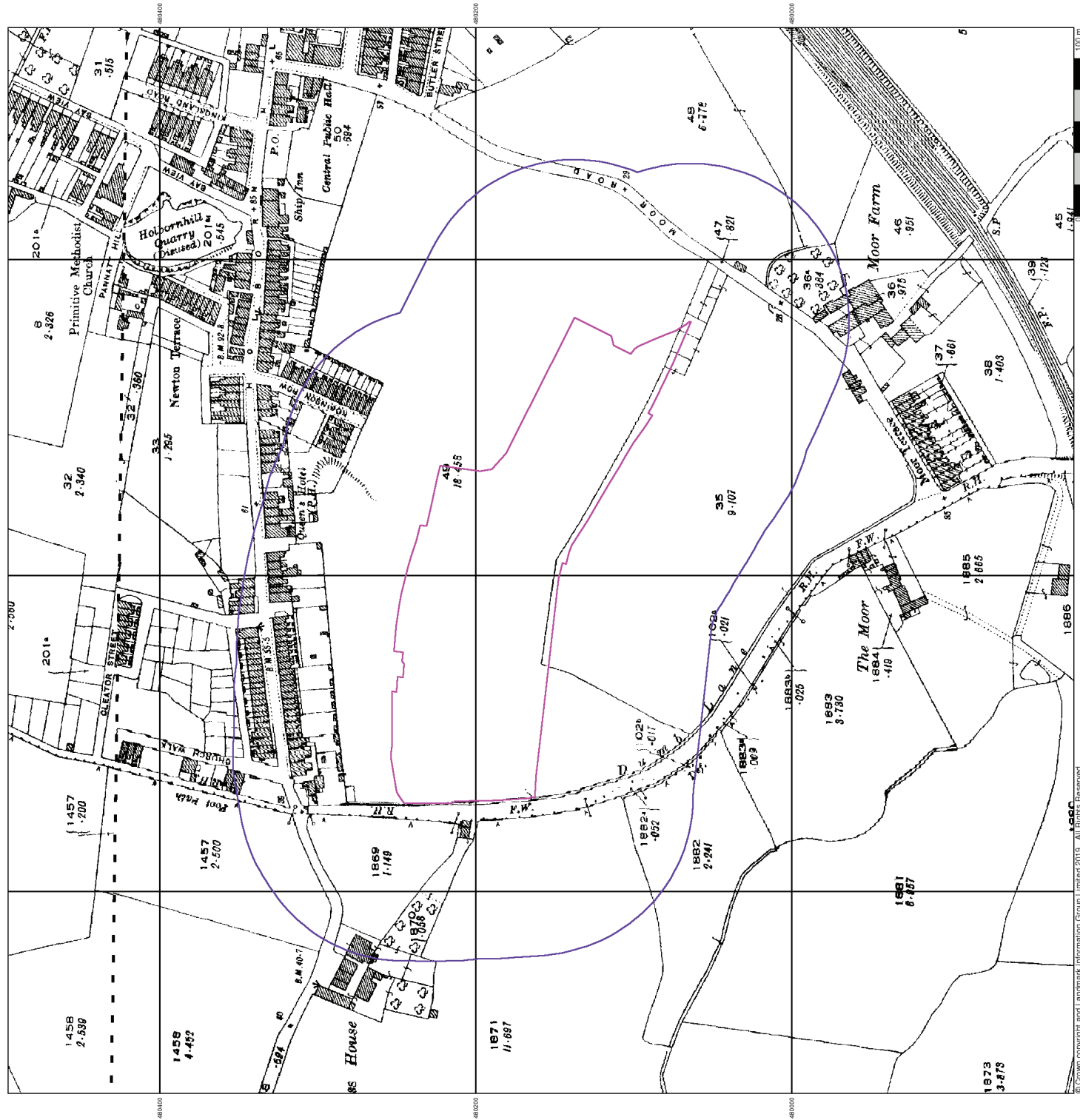
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Sheet: A
Site Area (Ha): 2.71
Search Buffer (m): 100

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



Tel: 0844 844 9652
Fax: 0844 844 9651
Web: www.envirocheck.co.uk





Ordinance Survey Plan

Published 1968 - 1969

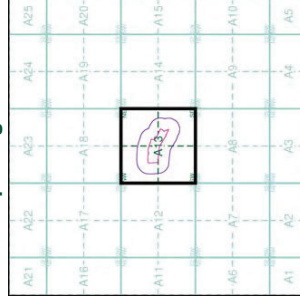
Source map scale - 1:2,500

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Map Name(s) and Date(s)

SD 1680	1968
SD 1579	1969

Historical Map - Segment A13



Order Details

Order Number: 189940651_1.1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 100

Site Details

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Additional SIMs

Published 1978 - 1987

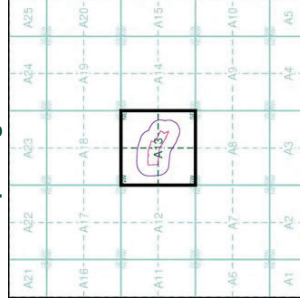
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further information mapping which were produced and published from 1947 to 1987. They 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)

SD1680	1978
SD1579	1987

Historical Map - Segment A13



Order Details

Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 100

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



Tel: 0844 844 9552
Fax: 0844 844 9551
Web: www.envirocheck.co.uk



Additional SIMs

Published 1984 - 1989

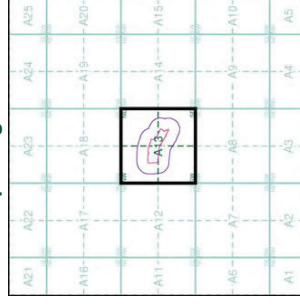
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further information mapping which were produced and published from 1947 to 1984, 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)

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1:2,500	
SD1 579	1989
1:2,500	

Historical Map - Segment A13



Order Details

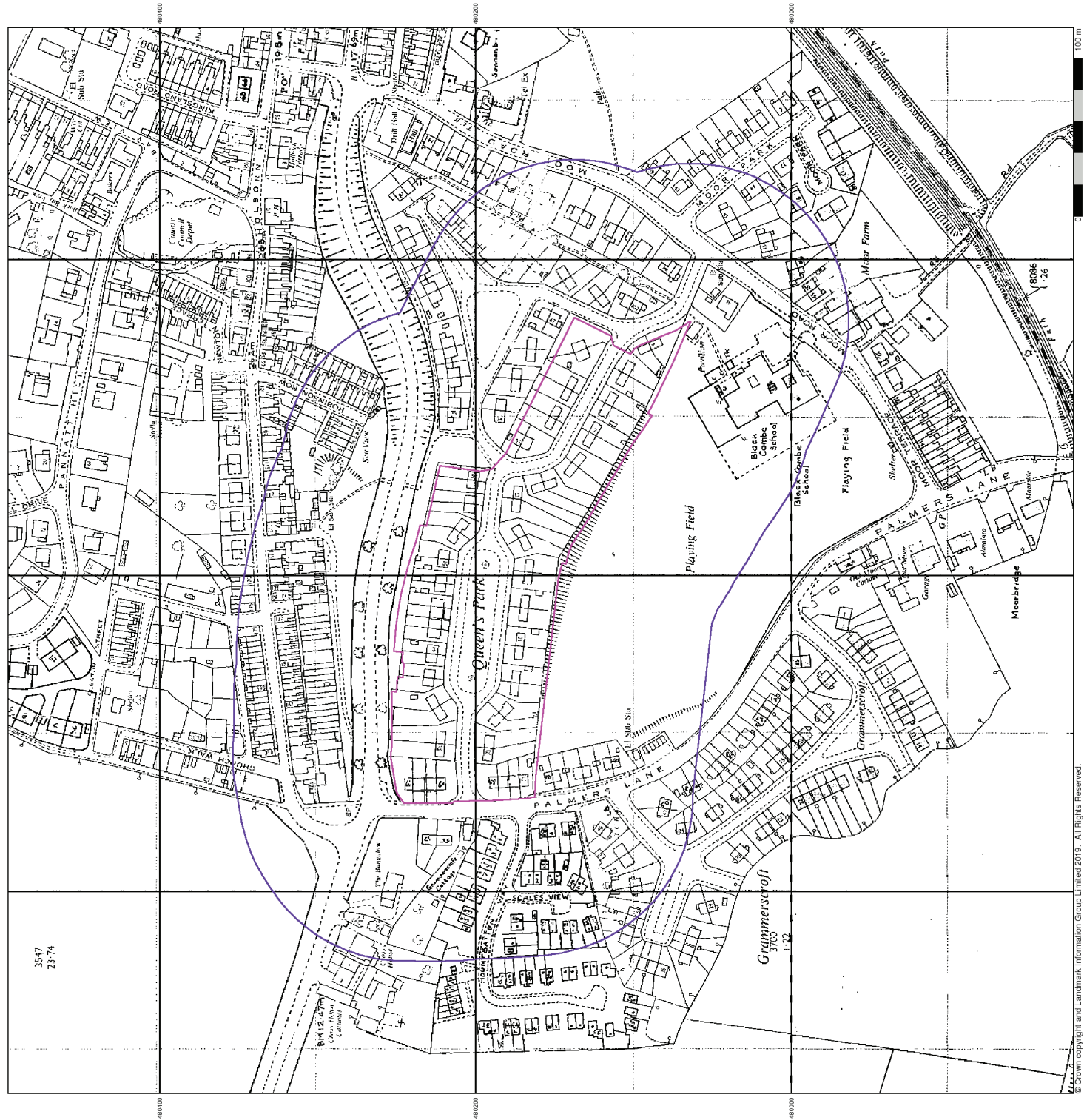
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National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 100

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



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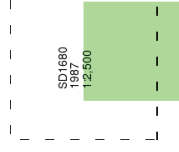
Additional SIMs

Published 1987

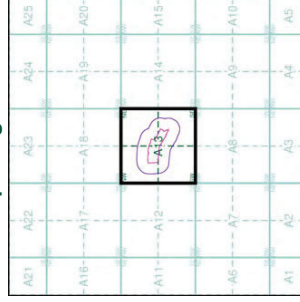
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further editions of the mapping which were produced and published from 1947 to 1984, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 100

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



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Ordinance Survey Plan

Published 1991

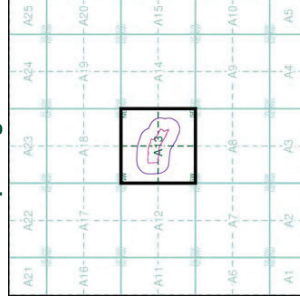
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the time adopted for England, Wales and Scotland in the 1940s. In 1854 the 1:2,500 scale maps were first published and by 1896 it covered the whole of what was 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)

SD1679
1991
1:2,500

Historical Map - Segment A13



Order Details

Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Site: A
Site Area (Ha): 2.71
Search Buffer (m): 100

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



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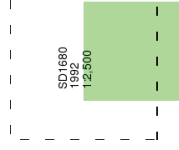
Additional SIMS

Published 1992

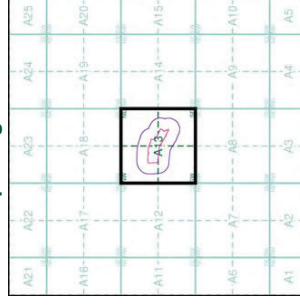
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further information mapping which were produced as a publication in 1992 to be used in conjunction with the 1:2,500 scale maps published in 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 100

Site Details

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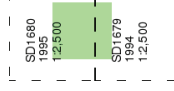
Large-Scale National Grid Data

Published 1994 - 1995

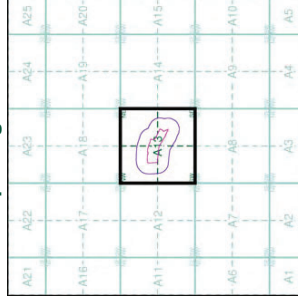
Source map scale - 1:2,500

Large Scale National Grid Data superseded SIM cards (Ordnance Survey's Survey of Information on Microform) in 1992, and continued to be produced until 1999. These maps were produced by the Ordnance Survey and provide detailed information on houses and roads, but tend to lack 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

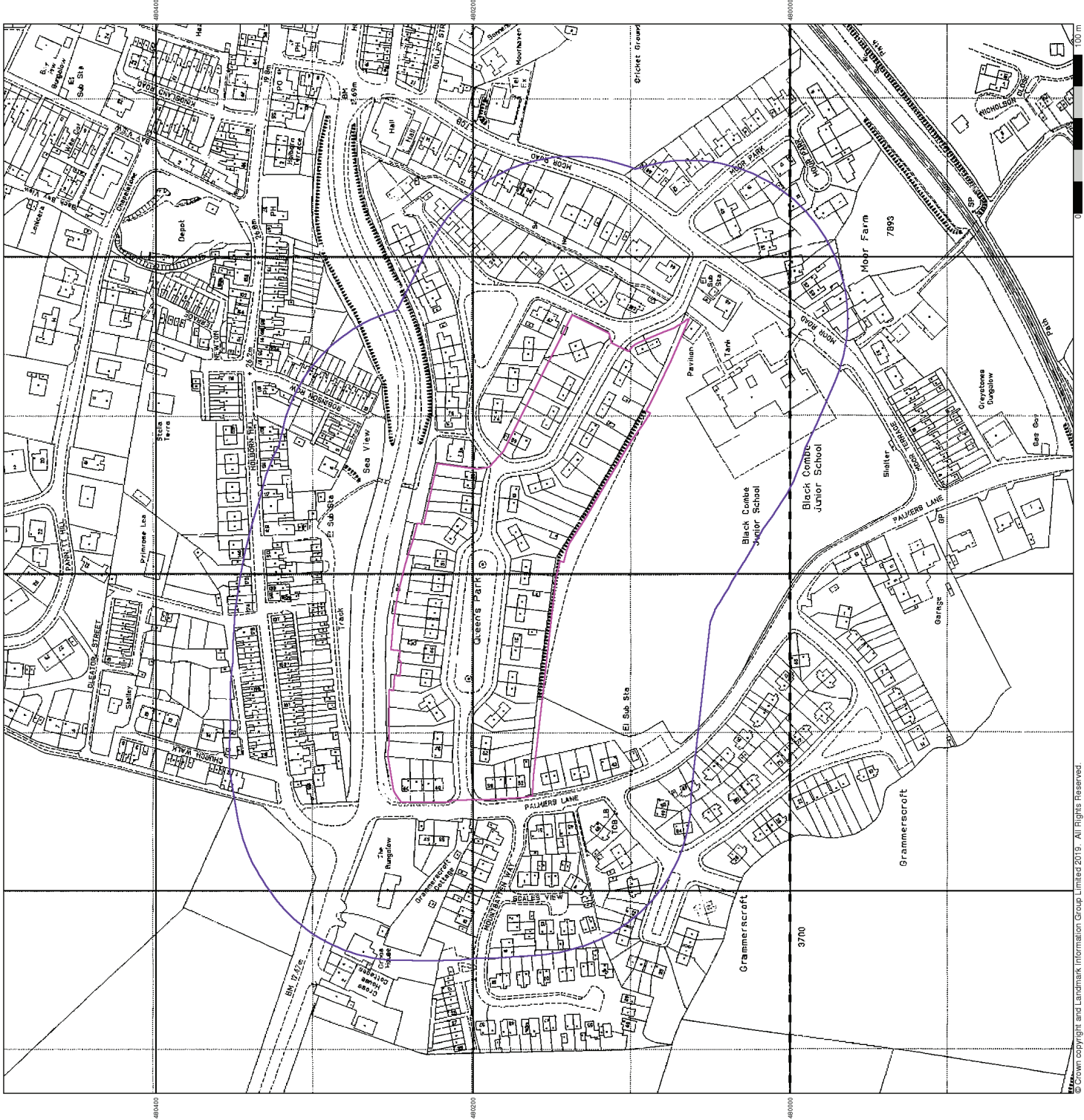
Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Site: A
Site Area (Ha): 2.71
Search Buffer (m): 100

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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

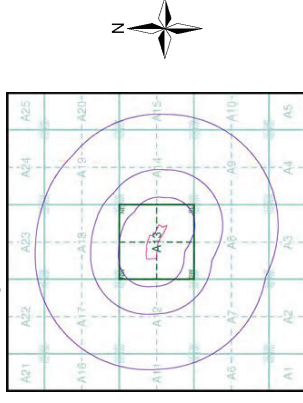
Ordnance Survey Plan 1:10,000

1:10,000 Raster Mapping

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1850	2
Cumberland	1:10,560	1887	3
Lancashire And Furness	1:10,560	1892	4
Cumberland	1:10,560	1900	5
Lancashire And Furness	1:10,560	1916	6
Lancashire And Furness	1:10,560	1919	7
Lancashire And Furness	1:10,560	1919	8
Cumberland	1:10,560	1926 - 1927	9
Lancashire And Furness	1:10,560	1938	10
Ordnance Survey Plan	1:10,000	1956	11
Ordnance Survey Plan	1:10,000	1973	12
Ordnance Survey Plan	1:10,000	1980	13
Ordnance Survey Plan	1:10,000	1993	14
10K Raster Mapping	1:10,000	2001	15
Street View	Variable		16

Historical Map - Slice A



Order Details

Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



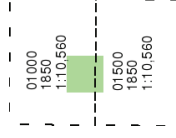
Lancashire And Furness

Published 1850

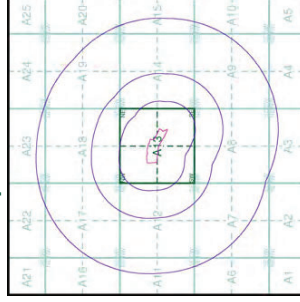
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at 1:62,500 adopted for England, Wales and Scotland in the 1840's. In 1854 the Ordnance Survey published the first 1:10,560 map of Lancashire. These were used to update the 1:10,560 maps. The published date is then the date of the first survey of the area. Before 1838, 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 1840'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

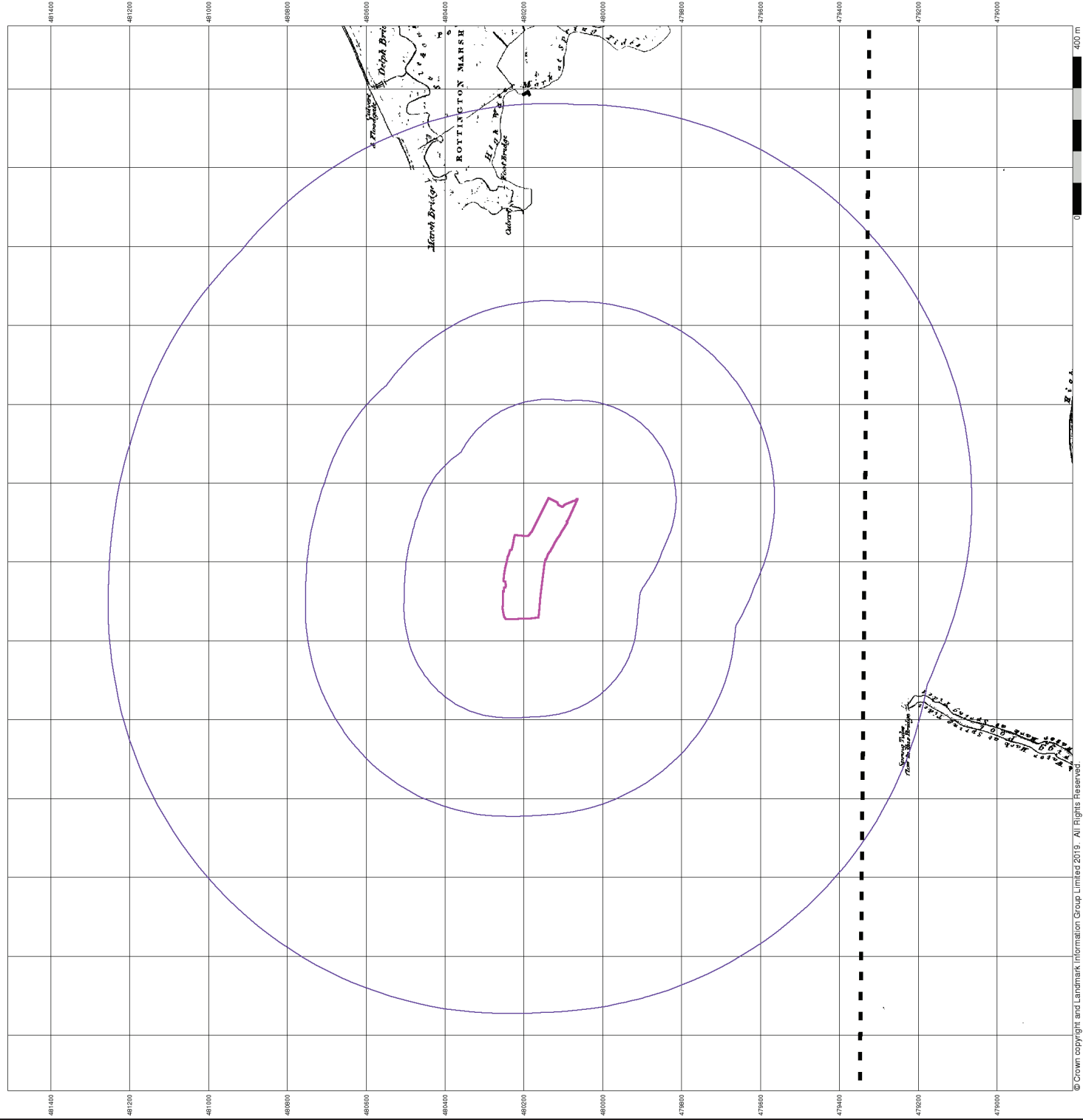
Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ

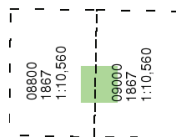


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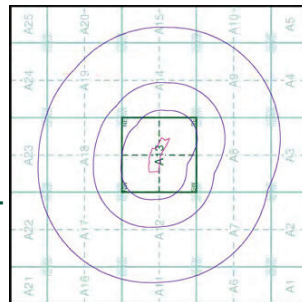


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s or, in 1854 at the 1:2,500 scale was adopted for mapping urban areas; these maps are used to update the 1:10,560 maps. The published data given therefore is often some years later than the surveyed data. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single parish or township being carried out and then joined together to form a 'sheet' of the 1:10,560 map. In the late 1940's a 'Practical 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 1:110,000 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 Details

Order Number:	189940651_1_1
Customer Ref:	P17-498
National Grid Reference:	316610, 480160
Slice:	A
Site Area (Ha):	2.71
Search Buffer (m):	1000

Site Details

Site Details
Queens Park, Millom, Cumbria, LA18 5DZ



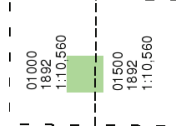
Lancashire And Furness

Published 1892

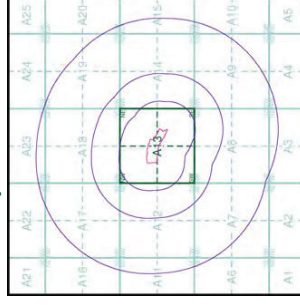
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at 1:63,360 adopted for England, Wales and Scotland in the 1840's. In 1854 the Ordnance Survey published the first 1:10,560 map. These maps were used to update the 1:10,560 maps. The published date is the date the map was 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

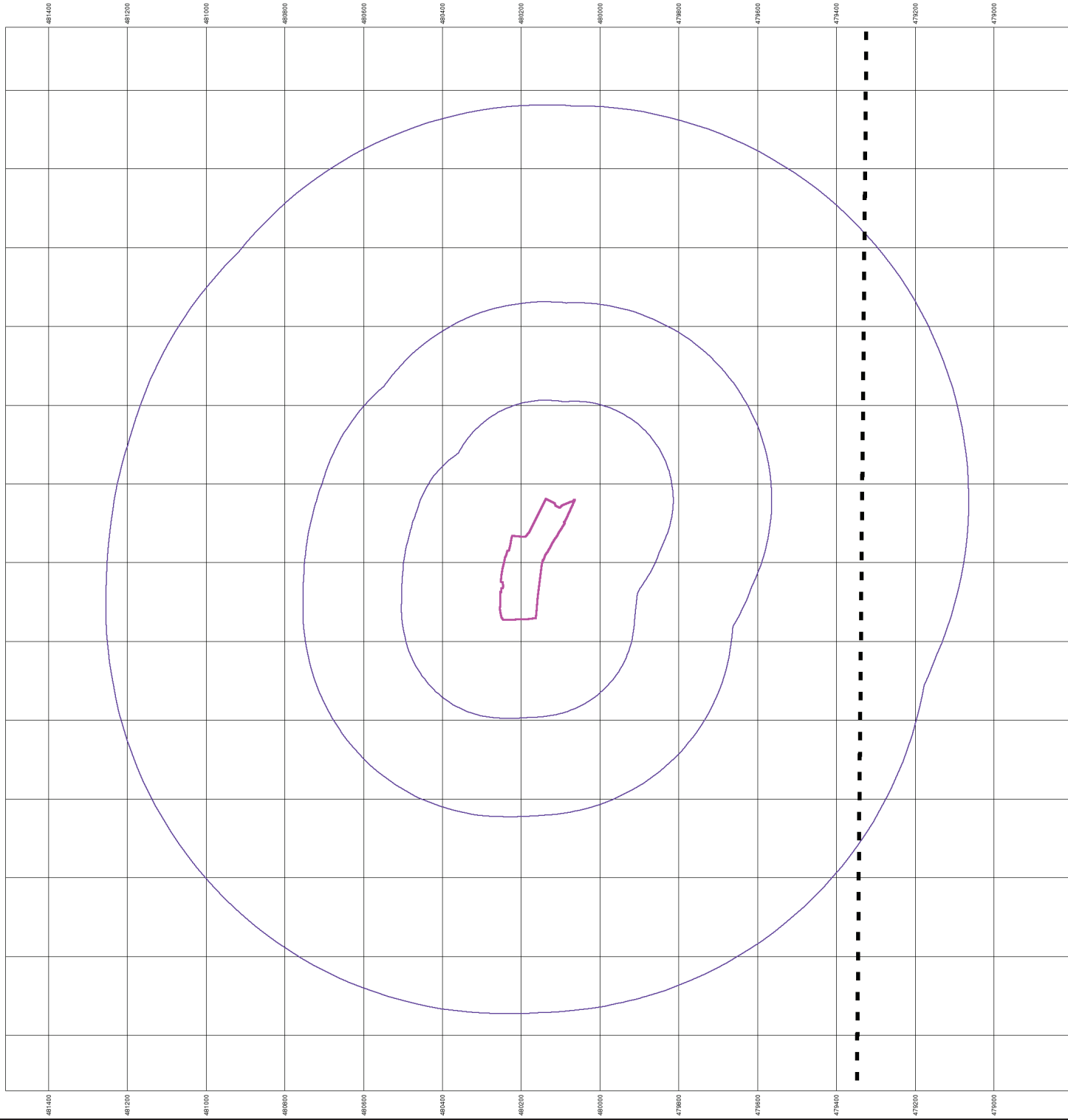
Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

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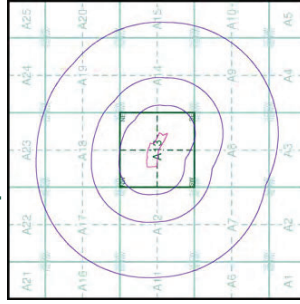


The historical maps shown were reproduced from maps predominantly held at 1:25,000 scale for England, Wales and Scotland in the 1840's. In 1854 the Ordnance Survey began publishing maps at 1:50,000 scale. These maps were used to update the 1:10,560 maps. The published date given therefore is often some 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)

088SW	1900	1:10,560
088SE	1900	1:10,560
090NW	1900	1:10,560
090NE	1900	1:10,560

Historical Map - Slice A

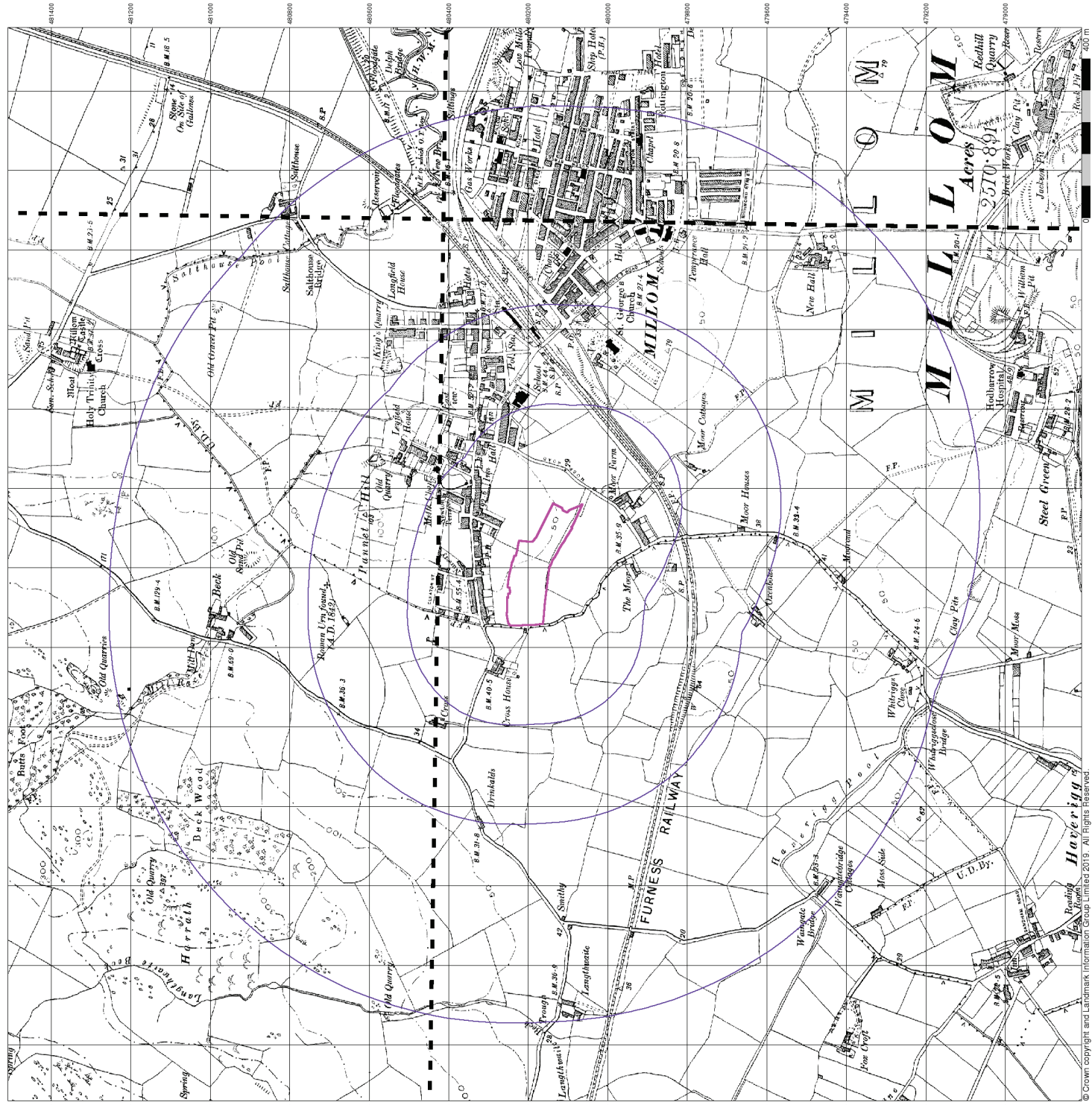


Order Details

Order Number: 189940651_1.1
 Customer Ref: P17-498
 National Grid Reference: 316610, 480160
 Slice: A
 Site Area (Ha): 2.71
 Search Buffer (m): 1000

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ





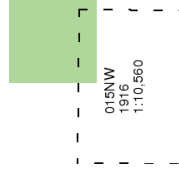
Lancashire And Furness

Published 1916

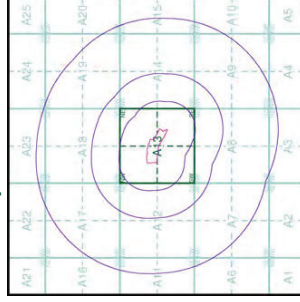
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the time adopted for England, Wales and Scotland in the 1840's. In 1854 the Ordnance Survey produced the first 1:10,560 scale maps. These maps were used to update the 1:10,560 maps. The published date is the date the map was 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: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

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Lancashire And Furness

Published 1919

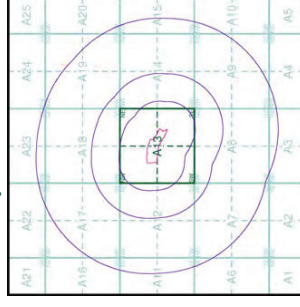
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the time adopted for England, Wales and Scotland in the 1940's. In 1854 the first 1:10,560 map was published. These maps were used to update the 1:10,560 maps. The published date is then therefore 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)

010SE	1919
1:10,560	
015NE	1919
1:10,560	

Historical Map - Slice A



Order Details

Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

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Lancashire And Furness

Published 1919

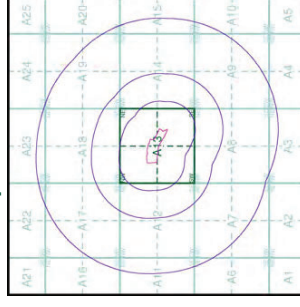
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the time adopted for England, Wales and Scotland in the 1940's. In 1854 the Ordnance Survey produced the first 1:10,560 map. These maps were used to update the 1:10,560 maps. The published date is then therefore 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)

010SE	1919
1:10,560	
015NE	1919
1:10,560	

Historical Map - Slice A



Order Details

Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



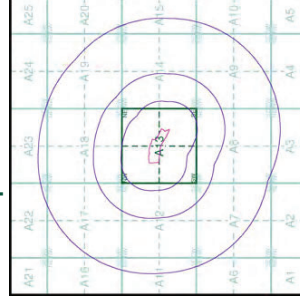
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Fax: 0844 844 9951
Web: www.envirocheck.co.uk

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Warley and Scotland in the 1940's. In 1854 the OS adopted the Cassini Projection, which was used for the maps used to update the 1:10,560 maps. The published date of the maps are 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 cutting 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)

088SW 1926 1:10,560	088SE 1927 1:10,560
090NW 1927 1:10,560	090NE 1927 1:10,560

Historical Map - Slice A

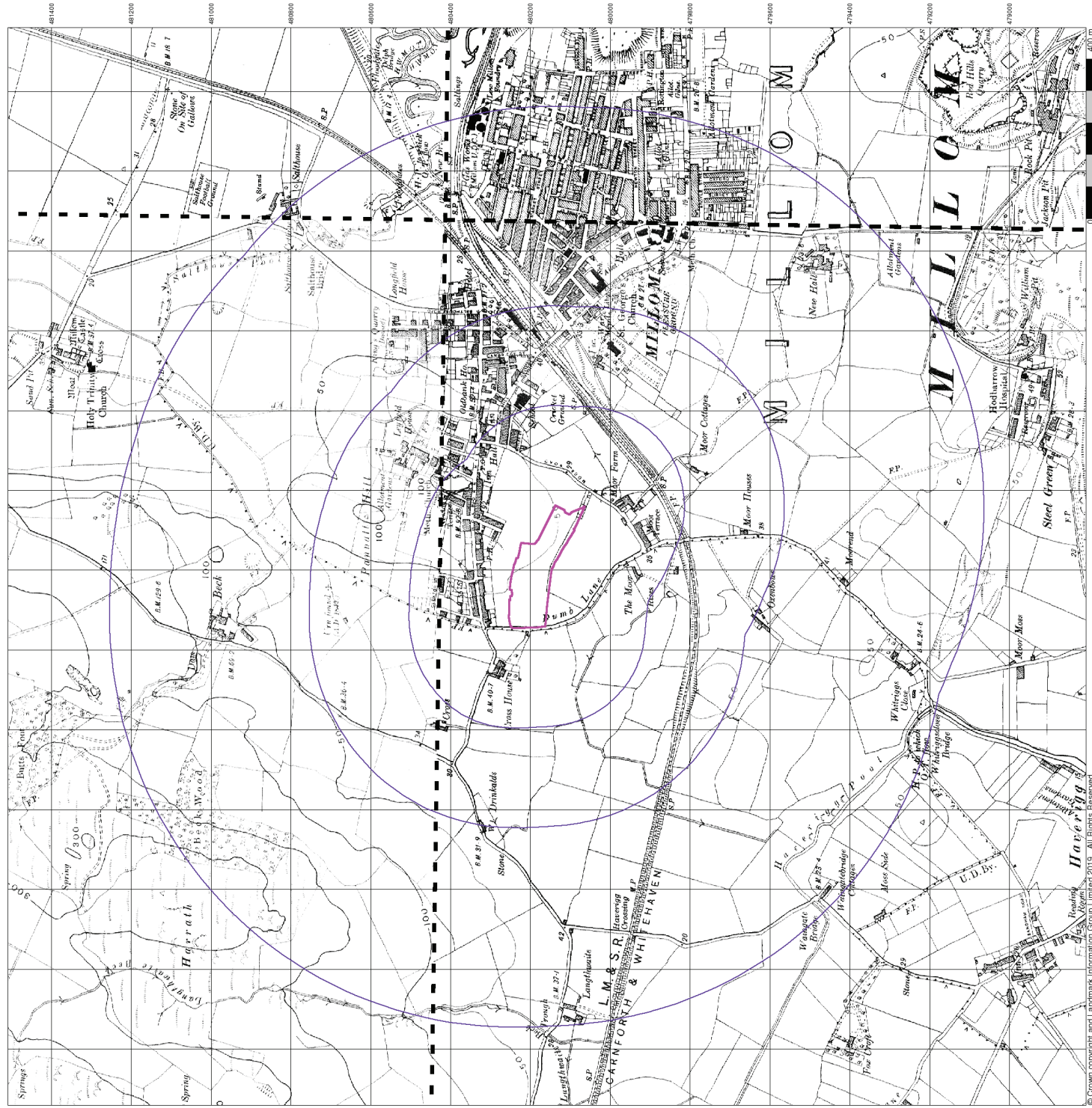


Order Details

Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ





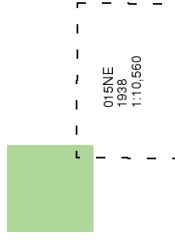
Lancashire And Furness

Published 1938

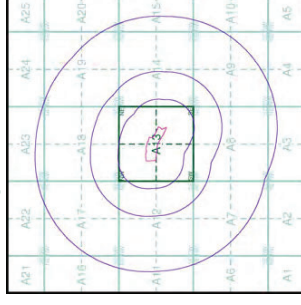
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the time adopted for England, Wales and Scotland in the 1840's. In 1854 the Ordnance Survey (OS) was established and the first maps were used to update the 1:10,560 maps. The published date of the maps are 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

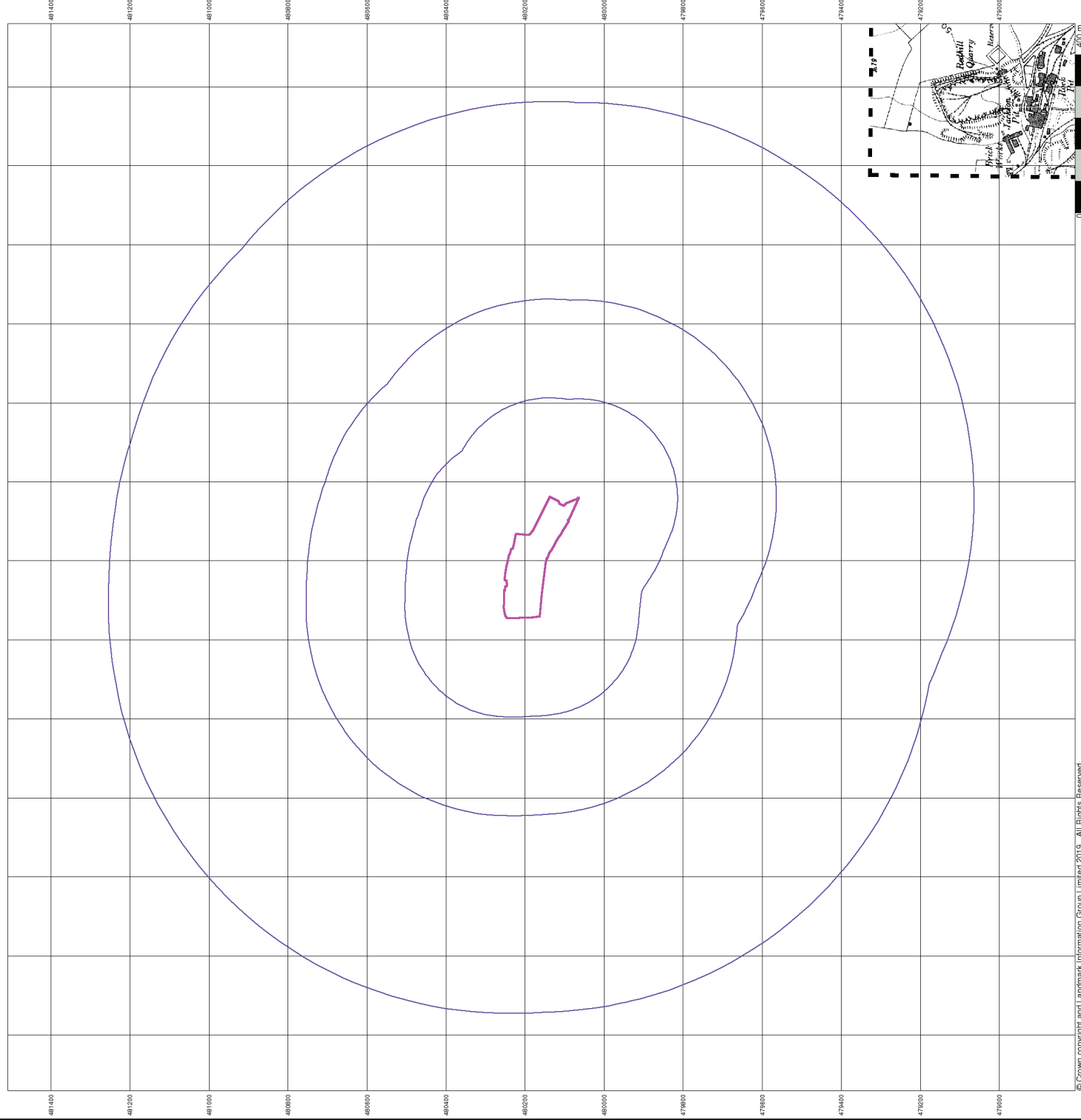
Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

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Ordinance Survey Plan

Published 1956

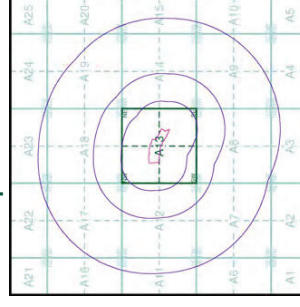
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey archives in the 1940's. In 1854 the first map of England, Wales and Scotland in the 1:10,000 scale was published. These maps were used to update the 1:10,000 maps. The published date is then therefore 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 1:10,000 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)

SD18SE	1956
1:10,560	
SD17NE	1956
1:10,560	

Historical Map - Slice A



Order Details

Order Number: 189940651_1.1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Site: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



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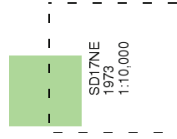
Ordinance Survey Plan

Published 1973

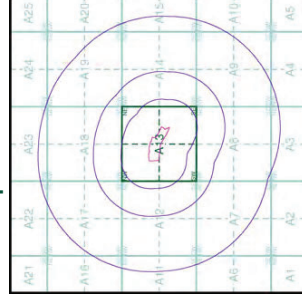
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at 1:62,500 scale adopted for England, Wales and Scotland in the 1840's. In 1854 the Ordnance Survey began to publish maps at 1:25,000 scale. These maps were used to update the 1:10,000 maps. The published date is the date the 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 1:10,000 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: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Site: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

Site Details

Queens Park, Millom, Cumbria, LA18 5DZ



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Ordinance Survey Plan

Published 1980

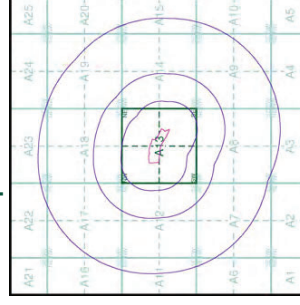
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, which were adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:10,000 scale maps were first published. The maps shown here are used to update the 1:10,000 maps. The published date is then therefore 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 1:10,000 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)

SD18SE
1980
1:10,000

Historical Map - Slice A



Order Details

Order Number: 189940651_1_1
Customer Ref: P17-498
National Grid Reference: 316610, 480160
Slice: A
Site Area (Ha): 2.71
Search Buffer (m): 1000

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