AN APPLICATION FOR AN ENVIRONMENTAL PERMIT TO AUTHORISE THE DEPOSITION OF WASTE ON LAND AS A RECOVERY ACTIVITY FOR THE RESTORATION OF ESCRICK QUARRY, NORTH YORKSHIRE

ENVIRONMENTAL SETTING AND SITE DESIGN REPORT (ESSD)

Report reference: PL/ES/LJB/5689/01/ESSD
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1. Introduction

Report context

1.1 MJCA is commissioned by Plasmor Limited (Plasmor) to prepare and submit an application for a bespoke Environmental Permit for the deposition of waste on land as a recovery activity in order to restore Escrick Quarry, North Yorkshire to agricultural and nature conservation interest including waterbodies and wetland habitats. This Environmental Setting and Site Design Report (ESSD) includes a Conceptual Site Model (CSM) to support the application. The structure of this ESSD report is based on the Environment Agency guidance entitled 'What to include in your environmental setting and site design report[1]' published in January 2020 and last updated on 29 June 2023.

1.2 Planning permission reference C8/2019/0917/CPO (the planning permission) was granted by North Yorkshire County Council[2] (NYCC) on 29 March 2021 for *'…a new quarry to extract approximately 6 million tonnes of clay by 2053 and restoration of the site to agriculture and nature conservation with the importation of up to 2.67 million tonnes[3] of inert materials together with the construction of new internal site access haul road, site compound, car park, site office, wheel washing facility, security fencing and gates and the construction of a temporary bridge crossing over the National Route 65 of the National Cycle Network on land adjacent to and to the west and north of the current Escrick Quarry to the south west of Escrick, North Yorkshire…'*. A copy of the planning permission is presented at Appendix ESSD A. Numerous schemes have been submitted to NYCC to discharge conditions of the planning permission and make minor changes to the consented development and on 5 January 2023 planning permission reference C8/2021/1133/CPO was granted for the *'…construction of a site reception area comprising of an office building (approx.. 112.5sq.m), vehicle maintenance building (approx.. 49sq.m) and storage area, wheel wash and weighbridge office (approx..12.7sq. m) and car park at Land adjacent to and to the east of the current Escrick Quarry to the south west of Escrick in North Yorkshire…'*. Although the planning permission provided for the provision of a site

[1] https://www.gov.uk/guidance/landfill-operators-environmental-permits/what-to-include-in-your-environmental-setting-and-site-design-report

[2] On 1 April 2023 North Yorkshire County Council and seven district and borough councils in North Yorkshire became North Yorkshire Council.

[3] Note that this is an error in the title of the planning permission which should state 2.67 million cubic metres.

reception area to serve both the quarrying and restoration operations the design of the site reception area was changed by Plasmor necessitating the application for planning permission reference C8/2021/1133/CPO. A copy of planning permission reference C8/2021/1133/CPO is presented at Appendix ESSD B. Both planning permissions have been implemented.

1.3 A Waste Recovery Plan (WRP) presenting justification that the activity comprises recovery was submitted to the Environment Agency (EA) on 23 June 2022 and in a letter dated 21 December 2022 the EA confirmed that the activity comprises recovery. The approved WRP is presented at Appendix B to the permit application report. The letter confirming that the activity comprises recovery is presented at Appendix C to the permit application report. Since the pre-application agreement of the WRP by the EA, List of Waste Code 19 12 12 (Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11) has been added to the list of wastes which will be accepted at the site. Consistent with the restriction presented in Standard Rules Environmental Permit number SR2015 No.39[4], the 19 12 12 waste which will be accepted at the site will be restricted to *'Crushed bricks, tiles, concrete and ceramics only. Metal from reinforced concrete must be removed. Does not include fines from treatment of any non-hazardous waste or gypsum from recovered plasterboard.'*. We present in Table ESSD 1 the list of wastes which that may be accepted at Escrick Quarry for deposition as a recovery activity.

Site details

1.4 Escrick Quarry comprises two areas separated by the former route of the East Coast Main Line which ran in a generally north south direction, was diverted in 1983 and is now National Route 65 of the National Cycle Network (NR65) and part of the Trans Pennine Trail (TPT). The two areas which are the subject of the Environmental Permit application are referred to collectively as the site. The eastern area of the site is approximately 9.9ha and is centred on National Grid Reference (NGR) SE 620 407 (the eastern area). The western area of the site is approximately 51.1ha and is centred on NGR SE 615 404 (the western area). The site location, the boundaries of

[4] Use of waste in a deposit for recovery operation (Construction, reclamation, restoration or improvement of land other than by mobile plant)

the planning permissions and the boundary of the area the subject of the Environmental Permit application are shown on Figure ESSD 1 and Figure ESSD 2.

1.5 There are 15 phases of mineral extraction and restoration at the site. Phases 1 to 3 are located in the eastern area and Phases 4 to 15 are located in the western area. The areas of extraction within which waste materials will be deposited in the eastern area and the western area which are referred to as the eastern extraction area and western extraction area. The eastern extraction area is approximately 8.2ha and the western extraction area is approximately 40.9 ha. The phases of mineral extraction and restoration are shown on Figure ESSD 3. Pursuant to conditions of the planning permission the mineral extraction and restoration operations will be carried out on a progressive basis. The drawings which show the progressive operation of the site are presented at Appendix ESSD C.

1.6 Access to the site is from the A19 which runs in a generally north south direction approximately 380m east of the eastern area. The access road from the A19 to the site reception area which is located approximately 280m south-south east of the south eastern corner of the eastern area is surfaced with a combination of tarmac and concrete. Lockable gates are located at the site reception area. The site reception area comprises offices, mess facilities, a weighbridge and wheel cleaning facilities. Areas of the site reception area which are used by road going vehicles have a tarmacadam surface. Hard surfaced internal access roads are and will be constructed from the site reception area to the operational area. The Escrick Environmental Services site which is permitted for the deposition of waste is located directly to the south of the eastern area and between the eastern area and site reception area (Figure ESSD 2). Access to the site is along a hard surfaced internal access road which runs in a north south direction adjacent to and east of the Escrick Environmental Services site.

1.7 The majority of the site is currently in agricultural use and is bounded either by the current Escrick Environmental Services site, NR65/TPT or a combination of field boundaries, wooded areas and hedgerows with isolated trees and/or drainage ditches. Mineral extraction operations are ongoing on Phase 1 and soils have been stripped from Phases 2 and 3. The western area is bounded partly to the north by Heron Wood and a wooded area known as Gambles Rush is located adjacent to and south of the western area (Figure ESSD 2). Prior to mineral extraction the site was

generally flat at a level of between approximately 6mAOD and 7mAOD with the ground levels rising to the north of the site towards Mount Farm (Figure ESSD 4).

1.8 The site is located within a generally rural setting. The site is located approximately 1.4km east south east of Stillingfleet, approximately 1.7km north east of Moor End, approximately 2.3km north east of Kelfield, approximately 1.7km south-south west of Escrick and approximately 1.7km north of Riccall (Figure ESSD 1). There are several isolated residential properties which are often associated with farm buildings in the vicinity of the site (Figure ESSD 2). The nearest residential property is Mount Farm which is located approximately 100m to the north east of the north eastern boundary of the western extraction area and approximately 105m to the west of the north western corner of eastern extraction area. The residential property at Moor Farm is located approximately 430m west-south west of the south western corner of the western extraction area.

1.9 Escrick Business Park is located directly to the east of the site reception area. The buildings at Escrick Business Park and residential properties adjacent to and north of Escrick Business Park are located at least 380m south east of the eastern extraction area. The former Stillingfleet Mine buildings are located approximately 600m west of the site. Some industrial style buildings remain at the former Stillingfleet Mine but aside from a facility for the generation of electricity from mines gas the remaining buildings are unused and in a poor state of repair.

1.10 There are a number of Public Rights of Way (PROW) in the vicinity of the site. The PROW are shown on Figure ESSD 2. NR65/TPT runs in a generally north to south direction between the eastern area and the western area of the site. Bridleway 35.62/9/1 runs in a generally southerly direction from Hill Farm to the north of the site into the western area of the site. It crosses the western area of the site before turning south westerly and running along the boundary of the site where it forms Bridleway 35.40/11/1 which runs a south-south easterly direction. From this point Bridleway 35.10/11/2 runs a generally west-south westerly direction through Moor Farm and Footpath 35.40/12/1 runs in a generally south-south easterly direction becoming Footpath 35.53/8/1. Bridleway 35.62/9/1 will be diverted round the western site boundary until the site is restored when it will be reinstated along it's original route.

1.11 There are no Scheduled Monuments, World Heritage Sites or Listed Buildings within 500m of the site. The nearest listed buildings are the Garden Temple and the Gate

Piers to Escrick Park both of which are Grade II* listed and are located approximately 1.4km east and 1.4km south of the site respectively.

1.12 Based on information from the DEFRA MAGIC website and the EA nature and heritage conservation screen there are no Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA), Special Areas of Conservation (SACs), Ramsar Sites, National Nature Reserves (NNRs) or Local Nature Reserves (LNR) or Local Wildlife Sites (LWS) located within 2km of the site. The closest designations identified in the vicinity of the site is the Acaster South Ings (SSSI) and the Skipwith Common (SSSI, NNR, and SAC) located approximately 2.9km north west and south east of the site respectively.

2. Source

Historical activity

2.1 Historical maps for the period 1851 to 2018 are provided with the Envirocheck reports presented at Appendix ESSD D. Information in respect of pollution incidents in the area of the site are presented in Section 3.

2.2 With the exception of field boundaries, the historical maps show no historical developments within the site boundary. The A19 to the east of the site is shown from the earliest historical map. As explained in Section 1 the Escrick Environmental Services site which is permitted for the deposition of waste is located directly to the south of the eastern area and between the eastern area and site reception area (Figure ESSD 2). A waste treatment facility operated by Acumen is located within the Escrick Environmental Services site.

Proposed development

2.3 As explained above and as shown on Figure ESSD 3 there are 15 phases of mineral extraction which will be progressively restored to agriculture and nature conservation interest including water bodies and wetland habitats. To provide for the restoration of the site to agriculture and nature conservation interest it will be necessary to import approximately 2.67Mm^3 of inert restoration materials. The phase layout is shown on Figure ESSD 3. The total quantity of waste that will need to be deposited to complete the restoration is limited by the final levels shown on the consented restoration scheme. The consented restoration scheme is shown on drawing reference PL/ES/03-20/21229revE as supplemented by drawing reference ESC009Rev.B which was submitted to NYCC pursuant to Condition 32 of the planning permission. A copy of drawing reference PL/ES/03-20/21229revE is presented at Appendix ESSD E and a copy of drawing reference ESC009Rev.B is present at Appendix ESSD F. Drawing reference PL/ES/03-20/21229revE presented at Appendix ESSD E comprises the relevant contour plan for the site which it is proposed will be specified in the permit.

2.4 The waste types that will be accepted at the site the subject of the Environmental Permit are presented in Table ESSD 1. With the exception of 19 12 12, the waste

types in Table ESSD 1 are specified in the guidance[5] as waste types that may not need to be tested, apart from testing for classification purposes. With the exception of 19 12 12 (see paragraph 1.3), the waste types listed in Table ESSD 1 are consistent with those in the approved Waste Recovery Plan (Appendix B of the permit application report). Detailed waste acceptance procedures will be in place to minimise the risk that unacceptable waste materials are accepted at the site and procedures will be in place for the rejection of non-conforming loads. The waste acceptance procedures are presented at Appendix K of the permit application report. The receipt, handling and storage of materials are the subject of procedures in the company management system which is the subject of the ISO 14001 Environmental Management System (EMS).

[5]https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-acceptance-procedures-for-deposit-for-recovery

3. Pathway and receptor

Geology

3.1 The geology at and in the vicinity of the site is taken from the British Geological Survey (BGS) 1:50,000 scale Sheet 71 Selby Bedrock and Superficial Deposits and the accompanying Sheet Explanation[6], geological information available on the BGS website and information from site investigations including logs of mineral proving boreholes and groundwater monitoring boreholes drilled at and in the vicinity of the site. A copy of the geological map showing the geology at and in the vicinity of the site together with a cross section through the geology adjacent to the site is shown on Figure ESSD 5. The logs of the mineral proving boreholes and the groundwater monitoring boreholes are presented at Appendix ESSD G and the locations of the boreholes are shown in Figure ESSD 6.

3.2 The site is excavated through the Quaternary superficial deposits comprising the Skipwith Sand Member of the Beighton Sand Formation and the underlying Hemingbrough Glaciolacustrine Formation which is dominated by laminated clays and silts with occasional sand layers. The Hemingbrough Glaciolacustrine Formation is subdivided into the upper Thorganby Clay Member, the middle Lawns House Farm Sand Member and the lower Park Farm Clay Member. Locally the Hemingbrough Glaciolacustrine Formation may be underlain by older glaciofluvial gravel deposits. The superficial deposits overlie bedrock comprising the Triassic Sherwood Sandstone Group.

3.3 Based on a review of the logs of mineral exploration and groundwater monitoring boreholes drilled at and in the vicinity of the site the Skipwith Sand Member of the Breighton Sand Formation is present across the site beneath approximately 0.4m of topsoil. The Skipwith Sand Member is recorded as comprising orange and brown fine to coarse sand which is variably silty or clayey with subordinate gravels. There are areas where the deposit comprises generally soft sandy or silty clays which are also locally described as gravelly. The Skipwith Sand Member varies in thickness from approximately 0.4m in the central north of the western part of the site to approximately 4.1m in the central area of the western part of the site. In general the

6 Ford, J R, Cooper, A H, Price, S J, Gibson, A D, Pharaoh, T C and Kessler, H. 2008. Geology of the Selby district – a brief explanation of the geological map. Sheet Explanation of the British Geological Survey. 1:50,000 Sheet 71 Selby (England and Wales).

Skipwith Sand Member is between approximately 2m and 3m thick in the south and west of the western part of the site and is between approximately 0.5m and 1.5m thick across the remainder of the site. A plan showing contours of the elevation of the top of the Hemingbrough Glaciolacustrine Formation and contours of the thickness of the Skipwith Sand Member across the site is presented at Appendix ESSD H.

3.4 The underlying Hemingbrough Glaciolacustrine Formation is subdivided into the upper Thorganby Clay Member, the middle Lawns House Farm Sand Member and the lower Park Farm Sand Member. There is little difference between the upper Thorganby Clay Member and the lower Park Farm Clay Member of the Hemingbrough Glaciolacustrine Formation recorded in the boreholes at and in the vicinity of the site. The Hemingbrough Glaciolacustrine Formation comprises the mineral deposit extracted at the site. The full thickness of the Hemingbrough Glaciolacustrine Formation was proved in the six boreholes across the site showing that the Hemingbrough Glaciolacustrine Formation ranges in thickness from 12.7m in the north east of the eastern part of the site to 17.0m in the east of the western part of the site. The surface of the underlying Sherwood Sandstone Group bedrock falls from approximately -8.5mAOD in the north east of the site to between approximately -12.0mAOD and -12.5mAOD in the south and south east of the site. Inversely the thickness of the Hemingbrough Glaciolacustrine Formation falls from approximately 16m in the south and east of the site to between approximately 13m and 14m in the north. A plan showing contours of the elevation of the top of the Sherwood Sandstone Group and contours of the thickness of the Hemingbrough Glaciolacustrine Formation across the site is presented at Appendix ESSD H.

3.5 The Lawns House Farm Sand Member (LHFSM) is recorded within the Hemingbrough Glaciolacustrine Formation in five of the fifteen boreholes drilled to depths of greater than 9 metres below ground level (mbgl) at the site. Adjacent boreholes prove the presence and absence of the LHFSM showing great variation across the site. In general the LHFSM is recorded in boreholes in the north and to the east of the site and is absent across the central and southern areas of the western part of the site. Where present in the boreholes at the site, the LHFSM generally comprises brown and reddish or orangish brown fine to medium sand which can be locally silty or clayey. The full thickness of the LHFSM, where present, is recorded as ranging from 0.3m at borehole 17/07A in the east of the western part of the site to

1.3m thick at borehole 17/05A in the north east of the eastern part of the site. In general, where present, the top of the LHFSM is at elevations of between approximately -1mAOD and -3mAOD in the eastern area of the site and in the west of the western area of the site as well as at the adjacent Escrick Environmental Services site to the south of the eastern area of the site. In general the LHFSM is present at elevations of between approximately -3mAOD and -4mAOD in the remainder of the western area of the site where present. A plan showing the thickness of the LHFSM recorded in the boreholes across the site is presented at Appendix ESSD H.

3.6 The top of the Sherwood Sandstone Group bedrock is recorded in boreholes 17/01A, 17/02A, 17/05A, 17/07A and 17/09A at the site. The full thickness of the Sherwood Sandstone Group has not been proved at the site. The Sherwood Sandstone Group in the Selby district ranges between 300m and 435m thick[6]. From a BGS borehole record for a borehole located approximately 650m south west of the site the base of the Sherwood Sandstone Group is approximately 180mbgl in the vicinity of the site. The elevation of the surface of the Sherwood Sandstone Group falls from approximately -8.5mAOD (15mbgl) in the north east corner of the site (borehole 17/05A) to between approximately -12.0mAOD (17mbgl) and -12.5mAOD (18.5mbgl) in the south and south east of the site (boreholes 17/09A and 17/07A). The top of the Sherwood Sandstone Group surface generally dips southwards more steeply in the northern most part of the western area and in the eastern area of the site compared with the rest of the site (Appendix ESSD H).

3.7 Schematic cross sections through the site are presented on Figure ESSD 7 showing the elevations of the superficial deposits and the top of the bedrock across the site.

3.8 The site lies between two north east to south west trending faults at depth in the Sherwood Sandstone Group bedrock (Figure ESSD 5). The faulted block in which the site is situated is down thrown along both fault lines by approximately 15m in the north and approximately 10m in the south. The northern fault may cross the north western corner of the site.

Hydrology

3.9 The hydrology at and in the vicinity of the site is taken from the Ordnance Survey base maps at 1:10000 scale and 1:50000 scale, information presented in on the

Environmental Agency website and information provided by the Environment Agency (EA). Surface water features in the vicinity of the site are shown on Figures ESSD 1 and 6.

3.10 Based on information from the Meteorological Office website the average annual rainfall calculated from data collected between 1981 and 2010 at a raingauge at Fenton Church approximately 10km south west of the site is 603.2mm. The weather station is at an elevation of approximately 8mAOD which is similar to the site. Based on information provided by the EA the average annual rainfall calculated from data collected between 2005 and 2022 at a raingauge at Elvington located approximately 12km north east of the site is 617mm. The total daily rainfall recorded at the raingauge at Elvington between November 2004 and June 2023 is presented on a graph at Appendix ESSD I.

3.11 The site is located in the catchment of the River Ouse which flows in a generally south direction approximately 3km west of the site before turning south eastwards. At its closest point the River Ouse is approximately 1.85km south west of the site. The River Wharfe joins the River Ouse from the west with the confluence located approximately 4km west south west of the site. Heron Dyke (Drain) flows east along the northern boundary of the western area of the site before turning southwards at a point mid-way along the northern site boundary where a further drain joins Heron Dyke (Drain) from the north. Heron Dyke (Drain) flows south to the central area of the western area of the site then turns south east to join Parkhill Dyke (Drain) approximately two thirds of the way down the eastern boundary of the site. Bentley Park Drain flows west along the southern boundary of the eastern area of the site to the north of the adjacent Escrick Environmental Services site before crossing under the NR65 of the National Cycle Network and turning south to join the Parkhill Dyke (Drain). Parkhill Dyke (Drain) flows in a generally south direction meandering along the southern two thirds of the eastern boundary of the western area of the site. The watercourses at and in the vicinity of the site are shown on Figures ESSD 1 and 6.

3.12 Parkhill Dyke (Drain) carries on southwards from the site and is joined by Powell Dyke from the west and Glade Dyke from the east before joining Riccall Dam or Dam Dyke approximately 940m south of the site. Riccall Dam or Dam Dyke generally flows south west and is joined by Sike Dyke from the west before discharging into the River Ouse through a sluice approximately 2.15km south west of the site. Riccall Dam or

Dam Dyke passes beneath an embankment before discharging into the River Ouse. The site is located within the Ouse and Derwent Internal Drainage Board (IDB) district with the Heron Dyke (Drain), Bentley Park Drain and Parkhill Dyke (Drain) serving as listed assets together with the Powell Dyke, Glade Dyke and Riccall Dam or Dam Dyke. A plan of the Ouse and Derwent IDB district and listed assets is presented at Appendix ESSD J. It is understood from the Ouse and Derwent IDB that these watercourses are known to be subject to high flows during storm events.

3.13 There are a number of waterbodies in the area of the site (Figures ESSD 1 and 6). Mount Pond is located adjacent to the north eastern corner of the site. Based on the BGS geology map (Figure ESSD 5)) Mount Pond is underlain by the Thorganby Clay Member hence is unlikely to be in continuity with groundwater at the site albeit that groundwater from the edge of the outcrop of Skipwith Sand Member of the Breighton Sand Formation could discharge to the pond. It is likely that Mount Pond is primarily fed by incident rainfall and surface water runoff.

3.14 A pond is located approximately 30m north of the site at Mount Farm. Due to elevated water levels in the pond compared with groundwater in the Skipwith Sand Member, is likely that the pond is fed by incident rainfall and surface water runoff although continuity with the underlying Skipwith Sand Member cannot be wholly discounted. A waterbody is located approximately 275m south east of the eastern area of the site at the Escrick Business Park. Glade Farm Fishing Pond is located approximately 345m to the south east of the western area of the site. A pond is located approximately 125m south of the proposed site access at Glade Farm. Based on the BGS geology map (Figure ESSD 5) these ponds are underlain by the Skipwith Sand Member hence could be in continuity with groundwater in the deposit.

3.15 From the OS maps there are waterbodies in the adjacent Escrick Environmental Services site to the south of the eastern area of the site (Figure ESSD 6). Based on the proposed restoration of the Escrick Environmental Services site and google satellite images these waterbodies either have been or are being filled. It is understood that the in the Escrick Environmental Services site is excavated through the Skipwith Sand Member of the Breighton Sand Formation, the Thorganby Clay and the Lawns House Farm Sand Member (LHFSM) of the Hemingbrough Glaciolacustrine Formation. It is likely that waterbodies in the Escrick Environmental

Services site comprise a combination of groundwater from the Skipwith Sand Member and the LHFSM together with incident rainfall and surface water runoff.

3.16 Based on the information provided on the GOV.UK Flood Map for planning website the majority of the site is located in Flood Zone 2 which is defined as land having between 1 in 100 and a 1 in 1,000 annual probability of river flooding. The south east of the western area of the site adjacent to Parkhill Dyke (Drain) is located in Flood Zone 3 which is defined as having a 1 in 100 or greater annual probability of river flooding. A small area in the south east of the western area of the site along the Parkhill Dyke (Drain) from the south east corner to the point where the Heron Dyke (Drain) joins the Parkhill Dyke (Drain) is identified as an area benefiting from flood defences. There are areas in the north west of the site which are located in Flood Zone 1 which is defined as land having less than a 1 in 1,000 annual probability of river flooding.

3.17 The quality of the surface water at and in the vicinity of the site is classified by the EA under the Water Framework Directive (WFD). The WFD classifications and objectives are presented in the River Basin Management Plan (RBMP). The RBMP relevant to the site comprises the Humber River Basin District. The Riccall Dam Catchment which includes the Heron Dyke (Drain), Parkhill Dyke (Drain) and Bentley Park Drain was classified by the EA in 2022 under the WFD as “Moderate” with respect to ecological quality. For chemical quality the EA have stated that this catchment does not require assessment in 2022. In 2019 the chemical quality for the Riccall Dam Catchment was classified as “Fail”. The EA has stated on environment.data.gov.uk that:

> *“For the 2019 assessment of chemical status we have changed some methods and increased our evidence base. Due to these changes, all water bodies now fail chemical status and this assessment is not comparable to previous years assessments.”*

It is predicted that the ecological quality objective of “Good” will be reached by 2027 albeit with low confidence due to costs of achieving good status being disproportionately expensive. The reasons for not achieving good ecological status in 2022 are listed as poor nutrient management under the agricultural and land management sector as well as private sewage treatment under the domestic and general public sector. It is predicted that the chemical quality of “Good” will be

reached by 2063 noted as the chemical status recovery time. The Riccall Dam Catchment is recorded as not designated artificial or heavily modified.

3.18 Based on information provided by the EA there are two licensed surface water abstractions within 2km of the site. The locations of the licensed abstractions are shown on Figure ESSD 1. The closest licensed surface water abstraction is located approximately 0.7km south of the site abstracting water from the Parkhill Dyke (Drain) for spray irrigation storage. The abstraction is located downstream from the site. The second licensed surface water abstraction is from a stretch of the Bridge Dike approximately 1.3km north of the site at the closest point. The Bridge Dyke is in a separate surface water catchment from the site. Based on information provided by North Yorkshire Council – Selby Area there are no private surface water abstractions within 2km of the site.

3.19 Based on information provided by the EA there are ten Environmental Permits for consents to discharge to surface water and land within 1km of the Escrick site. One consent to discharge is recorded as to a ditch to the Heron Dike from a farm upstream of the site. Two consents to discharge are recorded as to ditches to the Bentley Park Drain from the Escrick Environmental Services site to the south of the eastern area of the site or the adjacent Escrick Business Park upstream of and adjacent to the site. Three consents to discharge are recorded as to ditches to the Parkhill Dike from farms and domestic properties upstream of, adjacent to and downstream of the site. The remainder are discharges to land at Hollicarrs Holiday Park to the south east of the site. With the exception of the trade discharge from the adjacent landfill, the discharges are all recorded as sewage – not water company. Water pumped from the site is discharged to the surface water drains at the site pursuant to Consent number 925 issued by the Ouse and Derwent Internal Drainage Board (ODIDB). A copy of Consent number 925 is presented at Appendix ESSD K.

3.20 Based on the information provided by the Environmental Agency there have been 4 pollution incidents relating to land or water within 1km of the Escrick site in the past 10 years 3 of which were recorded at Glade Farm to the south east of the site. However, all of these incidents have been classified as Category 3 incidents which are known as minor incidents. There have been no Category 2 (significant) or Category 1 (major) incidents in relation to land and water within 5km of the Escrick site.

3.21 The quality of the surface water at and in the vicinity of the site is monitored at locations SW1BP, SW2BP, SW3HD, SW4HD and SW5PD shown on Figure ESSD 8. Surface water quality was recorded on a monthly basis at the monitoring locations in 2021 through to February 2022 after which monitoring has been carried out on a quarterly basis up to and including October 2023. Chemographs of the water monitoring results are presented at Appendix ESSD L and a database of the results are presented at Appendix ESSD M.

3.22 Based on the available surface water monitoring data chloride concentrations generally range between 36mg/l and 194mg/l with occasional higher concentrations. The maximum concentration of chloride recorded was 421mg/l in May 2022 at SW5PD in the Parkhill Dike at the downstream limit of the site. Elevated concentrations were recorded on the same date in the Bentley Park Drain upstream and downstream of the eastern area of the site of 252mg/l and 346mg/l at SW1BP and SW2BP respectively. Ammoniacal nitrogen concentrations generally range from below the analytical detection limit of 0.01mg/l to 0.5mg/l with occasional higher concentrations. The maximum recorded concentrations are 4.3mg/l and 4.1mg/l recorded in January 2021 in the Bentley Park Drain upstream and downstream of the eastern area of the site at SW1BP and SW2BP respectively. Consistent with chloride, slightly elevated ammoniacal nitrogen concentrations were recorded at locations SW5PD, SW1BP and SW2BP in May 2022 when a maximum concentration of 2.8mg/l was recorded at SW5PD.

3.23 Total suspended solids recorded in the surface water at and in the vicinity of the site is generally in a range of below the analytical detection limit of 5mg/l to 60mg/l with occasional higher concentrations. The maximum concentrations of suspended solids were recorded at 297mg/l and 289mg/l in August 2022 at SW1BP and SW5PD respectively. As with chloride and ammoniacal nitrogen, elevated suspended solids were recorded at locations SW5PD, SW1BP and SW2BP in May 2022 May 2022 with a maximum concentration of 126mg/l recorded at SW2BP.

3.24 pH of the surface water generally is in the range of 7.1 to 8.3. In general, the electrical conductivity values recorded in the surface water at the site ranges between the laboratory detection limit of the analytical method used of 100µS/cm and approximately 1500µS/cm. The maximum electrical conductivity value of 2460µS/cm was recorded at SW2BP in May 2021. Consistent with chloride, ammoniacal nitrogen

and suspended solids, slightly elevated electrical conductivity values were recorded at locations SW5PD, SW1BP and SW2BP in May 2022 with a maximum value of 2350µS/cm recorded at SW5PD.

Hydrogeology

3.25 Information on the hydrogeology of the site was taken from the BGS Sheet 71 Selby Sheet Explanation, information on the magic.defra.gov.uk website, a review of the records of mineral proving and groundwater monitoring boreholes drilled at the adjacent Escrick Environmental Services site and the site, records of groundwater level monitoring at the Escrick Environmental Services site and the site, information presented on the EA website and information provided by the EA. Information from an Environmental Permit Application for the landfill at the current Escrick site comprising the Environmental Setting and Installation Design report[7] obtained through the EA website has been reviewed including groundwater level monitoring data presented in the report.

Aquifer Characteristics

3.26 The Skipwith Sand Member of the Breighton Sand Formation comprises a thin unit of clayey sand which is likely to have moderate hydraulic conductivity. The sand member will receive recharge from infiltrating rainwater. The Skipwith Sand Member is in hydraulic continuity with the surface water drainage system at and in the vicinity of the site. The underlying Hemingbrough Glaciolacustrine Formation comprises predominantly low permeability clays supporting groundwater in the overlying Skipwith Sand Member. Based on falling head tests carried out at the adjacent Escrick Environmental Services site the hydraulic conductivity of the clay has been conservatively estimated at no greater than 1 x 10^{-10} metres per second (m/s)[7]. The Lawns House Farms Sand Member (LHFSM) is present at depth within the Hemingbrough Glaciolacustrine Formation at locations across the site. The LHFSM is water bearing and is laterally discontinuous across the site. It is likely that the LHFSM has a moderate to low hydraulic conductivity depending on the proportion of clay present in the unit. Hydraulic conductivity values for the LHFSM of between 6.3 x 10^{-6}m/s and 1.8 x 10^{-5}m/s derived from falling head tests carried out at the Escrick

7 Terraconsult. 2018. Escrick Soil Landfill Site Environmental Application Environmental Setting and Installation Design. Report Reference 3156/R/03/01.

Environmental Services site are presented in the application for the Environmental Permit for the Escrick Environmental Services site[7].

3.27 The Hemingbrough Glaciolacustrine Formation is underlain by the Sherwood Sandstone Group. The Sherwood Sandstone Group has a moderate to high hydraulic conductivity. Groundwater levels in the Sherwood Sandstone Group are confined beneath the overlying Hemingbrough Glaciolacustrine Formation. Hydraulic conductivity values for the Sherwood Sandstone Group in the vicinity of the site calculated from transmissivities derived from pump tests are in the range of approximately 3.7 x 10^{-6}m/s to 1.8 x 10^{-5}m/s[8].

3.28 Based on information presented on the magic.gov.uk website the Skipwith Sand Member of the Breighton Sand Formation, the LHFSM and the Park Farm Clay Member of the Hemingbrough Glaciolacustrine Formation are designated as secondary (undifferentiated) aquifers by the EA. Strata is designated a secondary (undifferentiated) aquifer where it has not been possible to attribute either category A or B to a rock type. The Thorganby Clay Member of the Hemingbrough Glaciolacustrine Formation is designated as unproductive strata by the EA. The Sherwood Sandstone Group is designated as a principal aquifer by the EA. Principal aquifers have high intergranular and/or fracture permeability which usually provide a high level of water storage. Principal aquifers may support water supply and/or river base flow on a strategic scale.

3.29 Based on information presented on the magic.defra.gov.uk website the site is not located in or in proximity to a groundwater source protection zone (SPZ) of a public water supply abstraction. The nearest SPZ to the site is located approximately 3.1km south south east of the site.

3.30 Based on information provided by the EA there are five licensed and no deregulated groundwater abstractions within 2km of the site. The locations of the licensed abstractions are shown on Figure ESSD 1. Four of the licensed groundwater abstractions are from the Sherwood Sandstone Group and are used either for horticultural or agricultural spray irrigation. The source aquifer of one of the licensed groundwater abstractions is not identified. It is considered likely that the abstraction

8 Allen, D J, Brewerton, L J, Coleby, L M, Gibbs, B R, Lewis, M A, MacDonald, A M, Wagstaff, S J, and Williams, A T. 1997. The physical properties of major aquifers in England and Wales. British Geological Survey Technical Report WD/97/34. Environment Agency R&D Publication 8.

is from the Sherwood Sandstone Group. The closest licensed groundwater abstraction is located approximately 1.35km south south west of the site. As the restoration of the site will not affect groundwater in the Sherwood Sandstone strata the locations of the abstractions in respect of groundwater flow direction is irrelevant and not possible to define with any certainty given the marginal change in groundwater levels across the site. Based on information provided by North Yorkshire Council – Selby Area there are no private groundwater abstractions within 2km of the Escrick site.

3.31 The lack of licensed, deregulated or private abstractions from the Skipwith Sand Member of the Breighton Sand Formation and the LHFSM and the Park Farm Clay Member of the Hemingbrough Glaciolacustrine Formation confirms the geological and hydrogeological distribution and characteristics proved at the site. It is considered that these units are of little groundwater resource value in the vicinity of the site.

3.32 The Escrick site is located in the area covered by the Wharfe and Lower Ouse Abstraction Licensing Strategy (ALS)[9]. The abstraction of groundwater from the superficial deposits are not part of the Groundwater Management Unit defined in the ALS. It is stated in the ALS that where groundwater abstractions directly impact on surface water flows, the impact is measured at the surface water Assessment Point. As the Skipwith Sand Member at the site is in hydraulic continuity with the drainage ditches at the site it is assumed that there is potential for groundwater abstraction to impact on surface water flows hence the surface water Assessment Point applies to the site. Based on the Wharfe and Lower Ouse ALS there are no Assessment Points on the River Ouse or the drainage ditches in the vicinity of the site. It is indicated in the Wharfe and Lower Ouse ALS that water resource in the drainage ditches in the vicinity of the site is available for consumptive use at least 70% of the time indicating that there may be hands off flow conditions applied when there are low flows in the watercourses. Should dewatering of the Skipwith Sand Member be necessary at the site, the transfer of groundwater between sources during dewatering activities is a non-consumptive use hence there should be no hands off flow conditions on dewatering activities.

9 Environment Agency. 2013. Wharfe and Lower Ouse Abstraction Licensing Strategy. A licensing strategy to manage water resources sustainably. February 2013. Reference number LIT 7869.

Groundwater Flow

3.33 Groundwater levels have been monitored at 13 groundwater monitoring boreholes since October 2017 at and in the vicinity of the site. Groundwater in the Skipwith Sand Member is monitored at 8 of the boreholes (17/01, 17/02, 17/03, 17/05, 17/06, 17/07, 17/08 and 17/09). Groundwater at elevation of the LHFSM has been monitored in the smaller diameter (19mm) installations at 5 of the boreholes (17/01A (narrow), 17/02A (narrow), 17/05A (narrow), 17/07A (narrow) and 17/09A (narrow)). Groundwater in the Sherwood Sandstone Group has been monitored in the larger diameter (50mm) installations at 5 boreholes (17/01A, 17/02A, 17/05A, 17/07A and 17/09A). The locations of the groundwater monitoring boreholes are shown in Figure ESSD 8. Groundwater level monitoring data for the period October 2017 and November 2023 are presented at Appendix ESSD M. Hydrographs showing the variation in groundwater levels in the monitoring boreholes with time are presented on Figures ESSD 9 to 11.

3.34 Groundwater levels from the Skipwith Sand Member at the boreholes round the site recorded between October 2017 and November 2023 are presented on Figure ESSD 9. Groundwater levels in the Skipwith Sand Member range from approximately 6.13mAOD (0.73mbgl) recorded in February 2021 at borehole 17/05 in the north east of the site to approximately 2.64mAOD (2.08mbgl) recorded in August 2022 at borehole 17/09 in the south of the site. In general groundwater levels in the Skipwith Sand Member fall from between approximately 5mAOD and 6mAOD in the north east and north west of the site to between approximately 3mAOD and 4mAOD in the south of the site. Heron Dyke (Drain), Parkhill Dyke (Drain) and Bentley Park Drain are excavated through the Skipwith Sand Member at the site with the base of the drainage ditches in the underlying Hemingbrough Glaciolacustrine Formation in places. Groundwater contours interpolated from groundwater levels recorded in the Skipwith Sand Member in April 2019 are presented on Figure ESSD 12 and show that groundwater flows towards the drainage ditches and in the direction of flow of the drainage ditches to the south with a hydraulic gradient of approximately 0.0015 across the site.

3.35 Groundwater levels in the Skipwith Sand Member fluctuate seasonally by between approximately 0.2m and approximately 1.0m across the site. Limited seasonal fluctuations in groundwater level are recorded in boreholes 17/02 and 17/03 located

adjacent to Heron Dyke (Drain) on the north of the site and boreholes 17/06 and 17/07 adjacent to Bentley Park Drain in the east of the site. In general the saturated thickness of the Skipwith Sand Member is less than 0.5m across the site with a number of boreholes recorded as dry during summer months. More significant saturated thicknesses of between 0.6m and 1.6m are recorded at borehole 17/02 in the north west of the site and at boreholes 17/05 and 17/06 in the north east of the site. It is considered that groundwater in the Skipwith Sand Member does not comprise a significant groundwater resource at the Escrick site, though this unit will provide temporary storage for infiltrating rainwater prior to discharge into the Heron Dyke (Drain), Parkhill Dyke (Drain) and Bentley Park Drain.

3.36 Groundwater levels monitored at the elevations of the Lawns House Farm Sand Member (LHFSM) of the Hemingbrough Glaciolacustrine Formation at the boreholes round the site recorded between October 2017 and November 2023 are presented on Figure ESSD 10. Groundwater levels at the elevations of the LHFSM are confined by the overlying Thorganby Clay Member of the Hemingbrough Glaciolacustrine Formation. The surface of the LHFSM is approximately 8mbgl to approximately 10mbgl where present across the site. Piezometric groundwater levels range from approximately 4.8mAOD (0.38mbgl) recorded in February 2018 at borehole 17/01A (narrow) to the south west of the site to approximately 2.3mAOD (4.5mbgl) recorded in August 2022 at borehole 17/05A (narrow) in the north east of the site. Groundwater levels at the elevations of the LHFSM fluctuate seasonally by approximately 1.0m at boreholes 17/01A and 17/05A with little seasonal fluctuation up to approximately 0.2m at boreholes 17/02A and 17/09A in the north west and south of the site respectively. Groundwater levels in the LHFSM at borehole 17/07A adjacent to Bentley Park Drain in the east of the site has shown a general increasing trend over the monitoring period rising from approximately 2.9mAOD in October 2017 up to a maximum of approximately 4.1mAOD in May 2022. Since May 2022 groundwater levels have fluctuated between 2.6mAOD and 3.7mAOD at borehole 17/07A.

3.37 The LHFSM at depth within the Hemingbrough Glaciolacustrine Formation is laterally discontinuous across the site. Boreholes 17/05A (narrow) and 17/07A (narrow) are the only groundwater monitoring boreholes where the LHFSM was recorded with 1.3m of fine to medium sand (at an elevation of -1.36mAOD) and 0.3m of clayey fine to medium sand (at an elevation of -4.06mAOD) recorded at the boreholes respectively. Groundwater strikes were recorded during drilling where boreholes

extend to the LHFSM where this unit is present. Groundwater strikes were recorded at some locations at similar elevations to the LHFSM although the sand unit was not recorded at the locations which may indicate the presence of thin sand and or silt layers not recorded during drilling (Appendix ESSD H). It is reported that the LHFSM is prone to running[6] due to the confined groundwater in the unit hence the sand could have been washed out of the horizon at the groundwater strikes resulting in sand not recorded at these locations.

3.38 Site plans show excavations in the south of the adjacent Escrick Environmental Services site down to approximately -2.0mAOD[10] broadly corresponding to the elevation of the LHFSM in this area. It was confirmed in the planning application for the site that groundwater levels within the LHFSM have been controlled by dewatering at the Escrick Environmental Services site with flow towards the Escrick Environmental Services site. The groundwater levels recorded in the LHFSM at the site are consistent with a fall in levels to the east and south east towards the Escrick Environmental Services site. It is likely that any recharge to the LHFSM in the vicinity of the site has previously been from the waterbodies in the adjacent Escrick Environmental Services site. The restoration at the adjacent site includes infilling of the waterbodies following which recharge to the LHFSM may become more limited.

3.39 The LHFSM has limited outcrop in the Selby District restricting recharge to the water bearing horizon. The BGS geological map shows outcrops approximately 6.4km east of the site along the incision of the River Derwent valley and approximately 3.6km south of the site along the incision of the River Ouse valley. Outcrops are also seen approximately 2.7km (Figure ESSD 5) to approximately 4km south east of the site near to the village of Skipwith along the incised valley of surface water drains. The BGS cross section presented on Figure ESSD 5 also shows Dam Dyke, approximately 1.4km south south east of the current Escrick site, incised into the Thorganby Clay Member, the LHFSM and the top of the Park Farm Clay Member of the Hemingbrough Glaciolacustrine Formation. The geological map and cross section shows the incision partially filled with alluvium. Alluvium deposits are shown along the lower part of Parkhill Dyke (Drain) starting approximately 300m south of the site and continuing to its confluence with the Dam Dike. The LHFSM may be in

10 UK Waste Management Limited. 1992. A report of site investigations carried out to determine the geology and hydrogeology underlying the site of the propose landfill facility at Escrick, North Yorkshire. Report reference Esck. Rep.

hydraulic continuity with surface water to the south of the site and possibly as close as 300m south of the site along the Parkhill Dyke (Drain).

3.40 In general groundwater levels in the Skipwith Sand Member are at higher elevations than the piezometric groundwater levels in the LHFSM at the locations where adjacent boreholes monitor these horizons with a vertical hydraulic gradient downwards from the Skipwith Sand Member towards the LHFSM. In general groundwater levels in the Skipwith Sand Member are at least 0.4m higher and up to 3.1m higher than those in the LHFSM. For a period over 2018 at boreholes 17/01A and 17/01 to the south west of the site the piezometric groundwater levels in the LHFSM were higher than groundwater levels in the Skipwith Sand Member. With the exception of a few occasions the piezometric groundwater levels in the LHFSM have been lower than groundwater levels in the Skipwith Sand Member at boreholes 17/01A and 17/01 since 2018. In general groundwater levels in the Skipwith Sand Member and the piezometric groundwater levels in the LHFSM are similar and less than 0.3m different at boreholes 17/01 and 17/01A showing little vertical hydraulic gradient between the Skipwith Sand Member and the LHFSM in this area.

3.41 Groundwater levels in the Sherwood Sandstone Group at the boreholes round the site recorded between October 2017 and November 2023 are presented on Figure ESSD 11. Groundwater levels in the Sherwood Sandstone Group are confined by the overlying Hemingbrough Glaciolacustrine Formation. The surface of the Sherwood Sandstone Group is approximately 15mbgl to 18.5mbgl across the site. Groundwater levels range from approximately 4.2mAOD (3.1mbgl) recorded in April 2018 at borehole 17/02A (50mm) in the north west of the site to approximately 2.2mAOD (4.6mbgl) recorded in August 2022 at borehole 17/05A (50mm) in the south of the site. In general groundwater levels in the Sherwood Sandstone Group are similar across the site on any given date with the lateral variation across the site typically less than 1m. Groundwater levels in the Sherwood Sandstone Group fluctuate seasonally by approximately 1.5m at boreholes 17/02A and 17/05A, by approximately 1m at borehole 17/07A in the east of the site and by approximately 0.5m to 1m at borehole 17/09A in the south of the site respectively and by approximately 0.2m at borehole 17/01A to the south west of the site. In general groundwater levels in the Sherwood Sandstone Group fall slightly towards the south or east across the site with a hydraulic gradient in the order of 0.001 across the site.

3.42 At borehole 17/02A in the north west of the site the recorded piezometric groundwater levels in the LHFSM are consistently higher than those recorded in the Sherwood Sandstone Group at the same locations with a vertical hydraulic gradient downwards from the LHFSM towards the Sherwood Sandstone Group. At borehole 17/01A to the south west of the site the recorded piezometric groundwater levels in the LHFSM are generally over 0.5m higher than those recorded in the Sherwood Sandstone Group at the same locations with a vertical hydraulic gradient downwards from the LHFSM towards the Sherwood Sandstone Group albeit that at times the piezometric groundwater levels in the LHFSM and in the Sherwood Sandstone Group are similar at the borehole. At boreholes 17/7A and 17/9A in the east and south east of the site respectively, the piezometric groundwater levels in the Sherwood Sandstone Group are similar to and fluctuate higher and lower than the piezometric groundwater levels in the LHFSM showing little vertical hydraulic gradient between the LHFSM and the Sherwood Sandstone Group in these areas. Piezometric groundwater levels in the LHFSM and in the Sherwood Sandstone Group at borehole 17/05A in the north east of the site are the same over the monitoring period. While this is within the range of situations elsewhere at the site this could be an indication that the seal between the monitoring horizons has failed and that the higher groundwater level only is being monitored.

Groundwater flow and the proposed development

3.43 Clay of the Hemingbrough Glaciolacustrine Formation comprises the mineral at the site which is being excavated to depths of approximately 8.0mbgl to approximately 9.5mbgl across the site or elevations of approximately -0.9mAOD to approximately -2.7mAOD. The extraction includes the excavation of the overlying Skipwith Sand Member of the Breighton Sand Formation comprising the overburden at the site together with any sandy clay in the top of the Hemingbrough Glaciolacustrine Formation. Based on the proposed limit of extraction the excavations may intercept the Lawns House Farm Sand Member (LHFSM) of the Hemingbrough Glaciolacustrine Formation where proved in the eastern area of the site and in the north of the western area of the site. It is unlikely that significant pockets of the LHFSM will be intercepted in the base of the quarry. In the unlikely event that significant pockets of the LHFSM are intercepted in the base of the quarry, the material will be excavated and backfilled with clay from the extraction.

3.44 It is proposed that following mineral extraction the site will be backfilled with imported inert materials followed by naturally derived quarry overburden and quarry reject material to the approved restoration levels. The imported inert materials will be placed against the Hemingbrough Glaciolacustrine Formation only and up to a level below the base of the Skipwith Sand Member with naturally derived quarry reject and overburden material only placed adjacent to the Skipwith Sand Member.

3.45 Although the groundwater in the Sherwood Sandstone Group beneath the site is confined and the piezometric level of the groundwater is above the level of the base of the excavation there will be sufficient thickness of material between the base of the excavation and the top of the Sherwood Sandstone Group to prevent basal heave hence the Sherwood sandstone will remain hydraulically separate from the site. The base of the imported inert materials will be a minimum of approximately 6.8m and generally greater than 9m above the top of the Sherwood Sandstone Group.

3.46 As illustrated on the cross sections presented at Figure ESSD 13, there is no pathway from the imported inert materials to the groundwater in overlying Skipwith Sand Member or the underlying Sherwood Sandstone Group with no significant pockets of the LHFSM are intercepted in the base of the quarry.

Groundwater Quality

3.47 The quality of the groundwater at and in the vicinity of the site is classified by the EA under the WFD with the classifications and objectives presented in the Humber River Basin Management Plan. The superficial deposits are classified under the surface water catchments in respect of water quality as detailed in the hydrology section of the ESSD. The bedrock Principal aquifer of the Sherwood Sandstone Group forms part of the Wharfe & Lower Ouse Sherwood Sandstone groundwater body. The Wharfe & Lower Ouse Sherwood Sandstone groundwater body was classified by the EA in 2019 under the WFD as “Good” in respect to quantitative status and “Poor” with respect to chemical quality. The poor status with respect to chemical quality was recorded as chemical drinking water protected area with there being an upward trend. It is specified that the reason for not achieving good chemical status is unknown and under investigation. It is predicted that both quantitative status and chemical quality objectives of “Good” will be reached by 2021 albeit that it is noted that achieving good status is disproportionately expensive.

3.48 Plasmor has been undertaking groundwater quality monitoring at a number of monitoring locations round the site since 2021 up to and including November 2023. Groundwater quality monitoring data is presented in Appendix ESSD M. Graphs showing the variation in groundwater quality at and in the vicinity of the site are shown at Appendix ESSD L.

Hazardous substances

3.49 Lead concentrations recorded in the groundwater at monitoring boreholes at and in the vicinity of the site are recorded at concentrations below the analytical detection limit of 0.001mg/l. The only exception is a concentration of lead at the analytical detection limit of 0.001mg/l was recorded in groundwater sampled in May 2021 from the LHFSM at 17/01A (narrow) to the south west of the site.

3.50 Chromium IV comprises a hazardous substance. Conservatively for the purpose of reviewing the groundwater quality for the site it is assumed that the chromium recorded in the groundwater could comprise chromium IV. Chromium concentrations recorded in the groundwater at monitoring boreholes at and in the vicinity of the site are generally recorded at concentrations below the detection limit of the analytical method used of 0.001mg/l. Concentrations of chromium above the analytical detection limit were recorded in groundwater sampled from the LHFSM in May 2022 at boreholes 17/05A (narrow) and 17/09A (narrow) in the north east and south of the site respectively at a concentration of 0.002mg/l.

Non-hazardous pollution

3.51 In general, ammoniacal nitrogen concentrations recorded in the groundwater in the Skipwith Sand Member at the site are less than the UK Drinking Water Standard (DWS) of 0.39mg/l. Exceedances of the UK DWS are recorded in the Skipwith Sand Member at borehole 17/09 in the south of the site over 2021 with a maximum concentration of 3.5mg/l recorded in February 2021. Ammoniacal nitrogen concentrations have remained below the DWS in the Skipwith Sand Member at borehole 17/09 since October 2021. Ammoniacal nitrogen concentrations above the UK DWS are recorded frequently in the groundwater in the LHFSM at the site with a maximum concentration of 1.2mg/l recorded in August 2021 at borehole 17/05A in the north east of the site. Ammoniacal nitrogen concentrations above the UK DWS are recorded frequently in the groundwater in the Sherwood Sandstone Group and

at the site with a maximum concentration of 1.3mg/l recorded in April 2021 at borehole 17/01A to the south west of the site. In general, ammoniacal nitrogen in the groundwater in the LHFSM and in the groundwater in the Sherwood Sandstone Group at the site range from concentrations below the detection limit of the analytical method used of 0.01mg/l and 0.7mg/l.

3.52 Chloride concentrations recorded in the groundwater at monitoring boreholes at and in the vicinity of the site are all recorded below the UK DWS of 250mg/l. Chloride concentrations recorded in the groundwater in the Skipwith Sand Member range from 5mg/l to 95mg/l, in the LHFSM range from 21mg/l to 71mg/l and in the Sherwood Sandstone Group range from 14mg/l to 116mg/l at the site over the review period. Concentrations above 100mg/l are recorded in the groundwater in the Sherwood Sandstone Group at borehole 17/07A in the east of the site.

3.53 Sulphate concentrations recorded in the groundwater at monitoring boreholes at and in the vicinity of the site generally are recorded below the UK DWS of 250mg/l. Sulphate concentrations above the DWS are recorded in the groundwater in the Skipwith Sand Member at borehole 17/07 in the east of the site on two occasions in 2021 with a maximum concentration of 787mg/l recorded in March 2021 and on the majority of occasions at borehole 17/05 in the north east of the site with a maximum concentration of 551mg/l recorded in November 2022. Sulphate concentrations above the DWS are recorded in the groundwater in the LHFSM on one occasion only at boreholes 17/01A, 17/02A and 17/07A in 2021 with a maximum of 352mg/l recorded at borehole 17/07A in the east of the site in December 2021. Sulphate concentrations above the DWS are recorded in the groundwater in the Sherwood Sandstone Group at borehole 17/02A in the north west of the site from December 2021 with a maximum of 302mg/l recorded in May 2023 and concentrations at borehole 17/07A in the east of the site rising from 657mg/l in January 2021 to a maximum of 1590mg/l in April 2021. A falling trend in sulphate concentrations was recorded in the groundwater in the Sherwood Sandstone Group at borehole 17/07A from August 2021 falling below the UK DWS by May 2022. Sulphate concentrations in the groundwater in the Sherwood Sandstone Group recorded at borehole 17/07A had risen above the UK DWS in February 2023 rising to a maximum concentration of 1160mg/l in May 2023 before falling again in November 2023 to 786mg/l.

3.54 Cadmium concentrations recorded in the groundwater at the monitoring boreholes at and in the vicinity of the site are less than the DWS of 0.005mg/l. Generally, cadmium concentrations in the groundwater in the Skipwith Sand Member at the site have been recorded below the detection limit of the analytical method used of 0.00002mg/l (<0.00002mg/l) and up to 0.0005mg/l. The only concentrations above 0.0005mg/l were recorded in the groundwater in the Skipwith Sand Member at 0.00075mg/l and 0.00092mg/l at borehole 17/02 in the north west of the site in February and March 2021 respectively and at borehole 17/05 in the north east of the site at a concentration of 0.00059mg/l in November 2023. Cadmium concentrations recorded in the groundwater in the LHFSM and in the groundwater in the Sherwood Sandstone Group at the site range from <0.00002mg/l and 0.00016mg/l.

3.55 Copper concentrations recorded in the groundwater at the monitoring boreholes at and in the vicinity of the site are much lower than the UK DWS for copper of 2mg/l. Generally, copper concentrations in the groundwater in the Skipwith Sand Member at the site have been recorded below the analytical detection limit of 0.001mg/l (<0.001mg/l) and up to 0.005mg/l. Copper concentrations above 0.005mg/l were recorded at borehole 17/02 in the north west of the site of the site on two occasions in 2021 with a maximum concentration of 0.042mg/l recorded in February 2021 and at borehole 17/05 in the north east of the site with recorded concentrations at the borehole of between 0.013mg/l and 0.032mgl. Copper concentrations recorded in the groundwater in the LHFSM and in the groundwater in the Sherwood Sandstone Group at the site range from <0.001mg/l and 0.008mg/l. A copper concentration of 0.042mg/l was recorded in December 2021 in the groundwater in the Sherwood Sandstone Group at borehole 17/05A in the north east of the site.

3.56 Manganese concentrations above the UK DWS for manganese of 0.05mg/l are recorded frequently in the groundwater at the monitoring boreholes at and in the vicinity of the site. With the exception of at borehole 17/09 in the south of the site, manganese concentrations recorded in the groundwater in the Skipwith Sand Member at the site range from below the analytical detection limit of 0.002mg/l (<0.002mg/l) and 0.405mg/l. Manganese concentrations recorded in the groundwater in the Skipwith Sand Member at borehole 17/09 show a falling trend over the review period falling from a maximum of 12.4mg/l recorded in February to <0.002mg/l in November 2022 and February 2023. Manganese concentrations of 0.057mg/l and 0.044mg/l were recorded in the groundwater in the Skipwith Sand

Member at borehole 17/09 in May 2023 and November 2023 respectively. In general, manganese concentrations recorded in the groundwater in the LHFSM are above the UK DWS with the majority of concentrations ranging between 0.059mg/l and 0.764mg/l. A maximum manganese concentration of 1.84mg/l was recorded in the groundwater in the LHFSM at borehole 17/09A in the south of the site in May 2022. With the exception of at borehole 17/09A in the south of the site, manganese concentrations recorded in the groundwater in the Sherwood Sandstone Group at the site range from below the analytical detection limit of 0.026mg/l and 0.712mg/l. Manganese concentrations recorded in the groundwater in the Sherwood Sandstone Group at borehole 17/09A rose above the UK DWS to a maximum of 7.86mg/l in April 2021 then showed a falling trend over the review period falling to a low of 0.013mg/l in May 2022 since when it has fluctuated between 0.095mg/l and 0.408mg/l.

3.57 Nickel concentrations recorded in the groundwater at the monitoring boreholes at and in the vicinity of the site are generally below the UK DWS for nickel of 0.02mg/l. Exceedances of the UK DWS are recorded in the Skipwith Sand Member at boreholes 17/02 and 17/09. Nickel concentrations above the UK DWS were recorded at borehole 17/02 in the north west of the site on two occasions in 2021 with a maximum concentration of 0.044mg/l recorded in March 2021. Nickel concentrations recorded in the groundwater in the Skipwith Sand Member at borehole 17/09 in the south of the site rose above the UK DWS to a maximum concentration of 0.049mg/l in February 2021 then showed a falling trend over the review period falling below the UK DWS by October 2021 and below the analytical detection limit of 0.001mg/l (<0.001mg/l) in August 2022 since when it has fluctuated between 0.002mg/l and 0.004mg/l. Nickel concentrations have not been recorded in the groundwater in the Skipwith Sand Member above the UK DWS at any other boreholes at the site. Nickel concentrations recorded in the groundwater in the LHFSM and in the groundwater in the Sherwood Sandstone Group at the site are all below the UK DWS.

3.58 There is no UK DWS for zinc. The maximum threshold values (TV) for zinc in groundwater of 0.0231mg/l is set for groundwater impacts on surface water in Schedule 5 of the WFD Standards and Classifications Directions. Zinc concentrations recorded in the groundwater at the monitoring boreholes at and in the vicinity of the site have been recorded above the TV on occasion at the majority of locations. Zinc concentrations recorded in the groundwater in the Skipwith Sand Member range from below the analytical detection limit of 0.002mg/l (<0.002mg/l) to

0.201mg/l, in the LHFSM range from <0.002mg/l to 0.372mg/l and in the Sherwood Sandstone Group range from <0.002mg/l to 0.195mg/l at the site over the review period.

Indicator substances

3.59 pH values recorded in the groundwater at the monitoring boreholes at and in the vicinity of the site generally are in the range 6.5 to 8. pH values recorded in the groundwater in the Skipwith Sand Member range from 6.6 to 7.9, in the LHFSM range from 7.3 to 7.9 and in the Sherwood Sandstone Group range from 6.9 to 8.2 at the site over the review period.

3.60 Electrical conductivity values recorded in the groundwater at the monitoring boreholes at and in the vicinity of the site are generally less than the UK DWS of 2500µS/cm and are generally below 1500µS/cm at the majority of the boreholes. The electrical conductivity UK DWS has been exceeded in the groundwater in the Skipwith Sand Member on one occasion at borehole 17/05 in the north east of the site at 2600µS/cm in June 2021 following a rising trend in values in the groundwater at the borehole over 2021. Since June 2021 electrical conductivity values have fluctuated between 1500µS/cm and 2500µS/cm in the groundwater in the Skipwith Sand Member at borehole 17/05. The electrical conductivity UK DWS has been exceeded in the groundwater in the Sherwood Sandstone Group at borehole 17/07A in the east of the site rising from 2630µS/cm in February 2021 to a maximum of 2760µS/cm in April 2021. A falling trend in electrical conductivity values was recorded in the groundwater in the Sherwood Sandstone Group at borehole 17/07A from August 2021 when values fell below the UK DWS. Electrical conductivity values in the groundwater in the Sherwood Sandstone Group recorded at borehole 17/07A had risen above the UK DWS in May 2023 when a value of 2550µS/cm was recorded before falling below the UK DWS again in November 2023 to a value of 2010µS/cm.

Man-made subsurface pathways

3.61 There are no operational public utility services in or in close proximity to the permit application area.

Amenity, habitats and natural heritage receptors

3.62 The sensitive receptors identified in respect of amenity, habitats and natural heritage that could be affected by activities at the site are shown on Figures ESSD 1 and 2. An amenity Environmental Risk Assessment is provided at Appendix G of the permit application report.

4. Pollution control measures and monitoring

Basal and side slope engineering

4.1 The works will comprise the deposition of waste on land as a recovery activity in order to restore the site to agriculture and nature conservation interest including water bodies and wetland habitats. The restoration works will be carried out progressively and prior to the placement of the imported inert waste into each phase dewatering will continue from the mineral extraction operations such that wastes will not be deposited directly into water.

4.2 The waste materials imported to the site will comprise a limited range of inert wastes only. Inert waste is defined in the EU Landfill Directive (Council Directive 1999/31/EC) as:

> *'…waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the eco toxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater'.*

4.3 It is considered that the waste does not comprise a contaminant source with the potential to have a significant detrimental effect on groundwater quality. The base of the site will comprise in situ low permeability Hemingbrough Glaciolacustrine Formation. The side slopes will also comprise Hemingbrough Glaciolacustrine Formation. The Hemingbrough Glaciolacustrine Formation is overlain by the Skipworth Sand Member which is overlain by topsoil. The topsoil in the area of the site is approximately 0.4m thick and over the majority of the site the Skipworth Sand Member is approximately 0.5 to 1m thick, although in the south west of the western area of the site the Skipwith Sand Member increases to approximately 2m to 3m thick. The site will be operated such that waste will not be deposited against the side slopes where the side slopes comprise the Skipwith Sand Member or topsoil. Waste will only be deposited against the Hemingbrough Glaciolacustrine Formation or backfilled site derived overburden materials where these have been deposited as part

of the ongoing quarrying activities. As waste will only be deposited against the Hemingbrough Glaciolacustrine Formation or backfilled site derived overburden materials no artificially established basal or side wall barriers will be constructed. Site derived overburden materials and restoration soils will be placed above the waste to complete the restoration of the site.

4.4 Escrick Quarry complex will be operated in accordance with the Quarry Regulations 1999. The certified ISO 14001 EMS will be implemented at the site. The backfilling with site derived quarry reject materials and overburden or clay from the extraction will be subject to the requirements of the Quarry Regulations 1999 and the EMS.

Capping

4.4 As the materials imported to the site will comprise inert waste materials only it is not necessary to construct a cap or to provide cap protection soils. Overburden and soils will be placed above the imported inert materials consistent with the approved restoration scheme for the site.

Restoration

4.5 Pursuant to the conditions of planning permission reference C8/2019/0917/CPO the site will be restored to agriculture and nature conservation interest including water bodies and wetland habitats. The consented restoration scheme is shown on drawing reference PL/ES/03-20/21229revE as supplemented by drawing reference ESC009Rev.B which was submitted to NYCC pursuant to Condition 32 of the planning permission. A copy of drawing reference PL/ES/03-20/21229revE is presented at Appendix ESSD E and a copy of drawing reference ESC009Rev.B is present at Appendix ESSD F.

Surface water management

4.6 The Skipwith Sand Member at the site is water bearing and drains to the excavated void. Given that the base and sides of the site substantially comprise the low permeability Hemingbrough Glaciolacustrine Formation groundwater from the Skipwith Sand Member and rainfall incident to the site accumulate in the site. As discussed above pumping to facilitate dewatering is being carried out as necessary during the operational life of the mineral workings and will be carried out as necessary such that water does not accumulate in the operational area. As the quarry develops

perimeter drains will be installed at the top of the excavated clay slopes of the quarry for the collection of water draining from the Skipwith Sand Member. Water pumped from the site is discharged to the surface water drains at the site pursuant to Consent number 925 issued by the Ouse and Derwent Internal Drainage Board. A copy of Consent number 925 is presented at Appendix ESSD K. Given that the majority of the water which accumulates at the site and is pumped from the site comprises rainfall incident to the site it is not necessary for the pumping to be the subject of an abstraction licence.

Post closure controls (aftercare)

4.7 As only inert waste materials will be deposited at the site no leachate or landfill gas management systems will be necessary. Under the Environmental Permitting (England and Wales) Regulations 2016 (as amended) the Environmental Permit may be surrendered only when it is concluded that the facility no longer presents a risk to the environment. As only inert waste will be deposited at the site an application will be submitted to surrender the Environmental Permit following the collection of monitoring data over only a limited period of time following the completion of the works at the site. The surrender application will be supported by the records of the waste materials accepted at the site and of gas, surface water and groundwater monitoring records which will confirm the inert nature of the wastes deposited.

5. Monitoring

Gas monitoring

5.1 EA guidance on Waste recovery plans and permits[11] states the following under the heading '*gas monitoring*':-

> *'Where your risk assessment suggests there is a risk of gas and you plan to deposit waste more than 2 metres below the surrounding ground surface, you must monitor your waste for:*
>
> - *methane*
> - *carbon dioxide*
> - *oxygen*
>
> *You must install the appropriate number of monitoring boreholes per hectare as indicated by your risk assessment. The boreholes must extend to the full depth of the waste.'*

5.2 As shown in the Environmental Risk Assessment presented at Appendix G of the permit application report based on the inert nature of the waste that will be deposited at the site the potential for landfill gas generation is negligible. On this basis it is considered that gas monitoring at the site is unnecessary

5.3 Although the site does not comprise an inert waste landfill site it is considered that the guidance presented in LFTGN03[7] in respect of the scope of a gas risk assessment for the deposit of inert waste on land is the nearest relevant guidance. In paragraph 2.3.1 of LFTGN03 it is stated that:-

> *'New inert landfills ought not to pose a landfill gas hazard. The emphasis in the risk assessment should, therefore, be placed on the Waste Acceptance Procedures and particularly the waste characterisation and compliance monitoring measures introduced to ensure that only inert waste is deposited at the site. If these*

11 https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-recovery-plans-and-deposit-for-recovery-permits

7 Environment Agency Guidance on the management of landfill gas. LFTGN03. September 2004.

> *measures can be shown to be robust, then the landfill gas source should be demonstrably negligible. Provisions for the monitoring of gas within the waste body will normally be required at inert waste landfills.'*

5.4 The site will be the subject of an Environmental Permit restricting the waste types accepted at the site to inert wastes only hence in accordance with paragraph 2.3.1 of LFTGN03 should not pose a gas hazard. Robust waste acceptance procedures (WAP) will be implemented to minimise the risk that non-inert wastes will be accepted at the site. The robust WAP will form part of the externally accredited Environmental Management System (EMS) for the site. Based on the robust waste acceptance procedures it is concluded that the site will comprise a negligible source of gas.

5.5 Nonetheless a programme of confirmatory gas monitoring will be carried out at the site. It is stated in the recovery guidance that:-

> *'You can rely on searcher bar (also called spike test) monitoring where the total depth of the waste is less than 4 metres, or before the deposit is complete. You must record the atmospheric pressure when you take gas readings.'*

5.6 It is proposed, in line with recovery guidance, that searcher bar monitoring is used to monitor gas from the inert waste materials during the operational period before the deposit is complete. In areas of the site where the waste depth may exceed 4m consideration will be given during the operational period to the installation of in waste gas monitoring boreholes. Whether or not in waste gas monitoring boreholes are installed during the operational period will depend on the actual extracted profile and the waste thickness, the progression of the infilling and restoration operations, the results of monitoring using the searcher bar technique and any practical difficulties associated with the installation of boreholes at an operational site. The need to install operational in waste gas monitoring boreholes will be agreed with the EA with reference to the latest guidance. The programme of operational gas monitoring is presented in Table ESSD 2 and a Gas Action Plan is presented at Table ESSD 3.

5.7 In accordance with the recovery guidance post closure in waste gas monitoring boreholes will be installed. It is proposed that the number and location of post closure in waste gas monitoring boreholes will be determined based on the actual extracted

profile and the restored profile and the results of the monitoring during the operational period and will be agreed with the EA with reference to the latest guidance. The post closure monitoring will be agreed with the EA.

Groundwater monitoring and surface water monitoring

5.8 No biodegradable waste materials will be deposited at the site which could result in the generation of leachate. Only inert wastes will be deposited at the site which have a limited potential for leaching of contaminants. Nonetheless a programme of confirmatory groundwater and surface water monitoring is presented in Table ESSD 2. The groundwater and surface water monitoring locations are shown on Figure ESSD 8. Groundwater quality and surface water quality up hydraulic gradient and upstream of the site will be compared with quality down hydraulic gradient and downstream of the site to confirm the environmental performance of the proposed operations.

5.9 The post closure monitoring will be agreed with the Environment Agency.

6. Site Condition Report

6.1 The application is necessary to authorise the permanent deposit of waste on land to restore the site in accordance with the obligations in planning permission reference C8/2019/0917/CPO. The section of the ESSD guidance[12] relevant to preparation of a Site Condition Report states:

> *"A site condition report (SCR) is not necessary for parts of a permitted activity where you permanently deposit waste. An SCR is necessary for areas of the permitted site where you have not deposited any waste (eg site access areas, site offices, weigh bridge, wheel wash etc)"*

6.2 As the Environmental Permit boundary is substantially limited to the extent of the area in which waste will be deposited permanently there are only very limited areas of the site in which waste will not be deposited and these areas are either undisturbed land which was previously in agricultural use or areas where soils will be stored which were undisturbed land previously in agricultural use. Accordingly it is considered unnecessary to provide an SCR with the application.

[12] Conceptual Site Model, Environmental Setting and Site Design Report" Version 1 dated 14 October 2016

TABLES

Table ESSD 1
Waste types that may be accepted at Escrick Quarry for deposition as a recovery activity

Waste Code	Description (consistent with SR2015_No39)	Restrictions (consistent with SR2015_No39)
01 01	**wastes from mineral excavation**	**-**
01 01 02	Wastes from mineral non-metalliferous excavation	Restricted to waste overburden and interburden only
01 04	**wastes from physical and chemical processing of non-metalliferous minerals**	**-**
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 06	-
01 04 09	Waste sand and clays	-
10 12	**wastes from manufacture of ceramic goods, bricks, tiles and construction products**	**-**
10 12 08	Waste ceramics, bricks, tiles and construction products (after thermal processing)	-
17 01	**concrete, bricks, tiles and ceramics**	**-**
17 01 01	Concrete	-
17 01 02	Bricks	-
17 01 03	Tiles and ceramics	-
17 01 07	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	Metal from reinforced concrete must have been removed.
17 05	**soil stones and dredging spoil**	**-**
17 05 04	Soil and stones other than those mentioned in 17 05 03	Restricted to topsoil, peat, subsoil and stones only.
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**	**-**
19 12 09	Minerals (for example sand, stones) only	Restricted to wastes from treatment of waste aggregates that are otherwise naturally occurring minerals. Does not include fines from treatment of any non-hazardous waste or gypsum from recovered plasterboard.
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Restricted to crushed, bricks, tiles, concrete and ceramics only. Metal from reinforced concrete must be removed. Does not include fines from treatment of any non-hazardous waste or gypsum from recovered plasterboard.
20 02	garden and park wastes	**-**
20 02 02	Soil and stones	Restricted to topsoil, peat, subsoil and stones only.

Table ESSD 2

Programme of environmental monitoring during the operational phase of the site

	Location	Frequency	Determinands
Shallow Groundwater – Skipwith Sand Member	Monitoring boreholes 17/01, 17/02 17/03, 17/05, 17/06, 17/07, 17/08 and 17/09	Quarterly	Groundwater level pH, electrical conductivity, ammoniacal nitrogen, chloride, total alkalinity, magnesium potassium, sulphate, calcium, sodium, total organic carbon (TOC), arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel and zinc
Groundwater – Lawns House Farm Sand Member (upper) and Sherwood Sandstone Group (lower)	Upper and lower monitoring horizons in monitoring boreholes 17/01A, 17/02A, 17/05A, 17/07A and 17/09A	Quarterly	Groundwater level
Surface water	Bentley Park Drain at 1BP and 2BP, Heron Dyke (Drain) at 3HD and 4HD and Parkhill Dyke (Drain) at 5PD	Quarterly	pH, electrical conductivity, ammoniacal nitrogen, chloride, total suspended solids and visual oil/grease
Gas (searcher bar locations internal to the waste)[1]	Two points per hectare	Quarterly	Methane, carbon dioxide and oxygen concentrations[2]

1. In areas of the site where the waste depth may exceed 4m consideration will be given during the operational period to the installation of in waste gas monitoring boreholes. Whether or not in waste gas monitoring boreholes are installed during the operational period will depend on the actual extracted profile and the waste thickness, the progression of the infilling and restoration operations, the results of monitoring using the searcher bar technique and any practical difficulties associated with the installation of boreholes at an operational site.
2. Meteorological and ground conditions should be recorded during each monitoring visit

TABLE ESSD 3

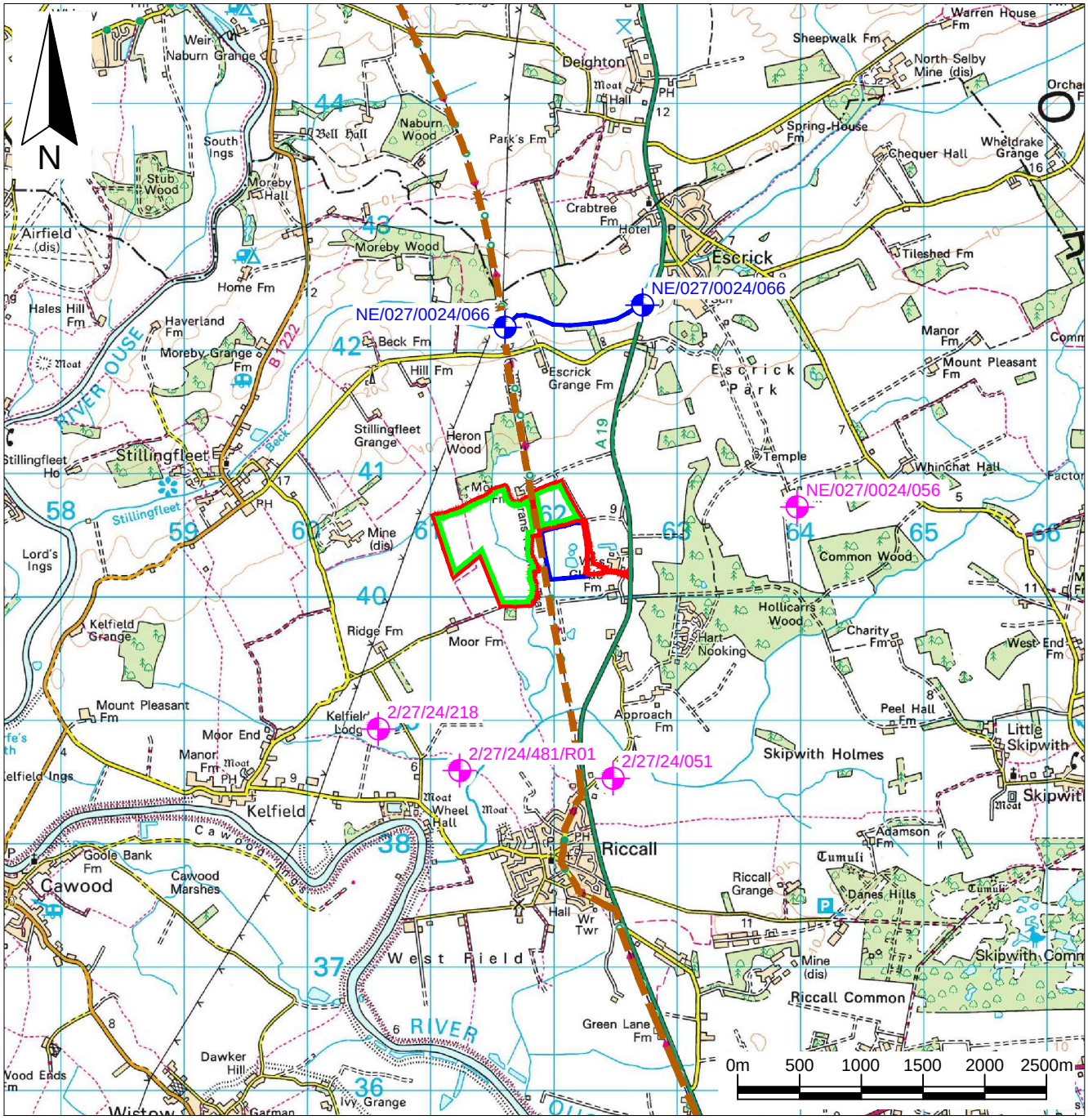
Gas Action Plan

Parameter	**Action limit [1] (% by volume)**	
Methane	1% volume/volume (v/v) ***(To be reviewed based on background data)***	
Carbon dioxide	1.5% v/v ***(To be reviewed based on background data)***	
Frequency	Quarterly	
Assessment test Exceedance of the action limit on any one occasion.		
Contingency action		**Response time**
Repeat the monitoring at and in the vicinity of the affected location		Before the end of the working day
If the exceedance is sustained repeat the monitoring at and in the vicinity of the affected location		5 working days
Advise the Environment Agency		Within 24 hours of the repeat monitoring
If the exceedance is sustained assess the risks associated with the presence of the elevated gas concentrations.		Within 5 working days of the repeat monitoring
Advise the Environment Agency		Within 2 working days of the assessment
If the risks are acceptable re-evaluate the assessment test		3 months
If the risks are unacceptable implement corrective measures and or additional monitoring which may include the installation of additional in-waste gas monitoring wells.		Agree timetable with the Environment Agency based on the results of the revised risk assessment

Notes:

[1] Based on the trigger levels specified in Environment Agency LFTGN03 Guidance on the management of landfill gas the action limits comprise 20% of the lower explosive limit for methane and 20% of the 8-hour UK Occupational Exposure Standard for carbon dioxide.

FIGURES



Key / Notes

- The boundary of planning permission reference C8/2019/0917/CPO
- The area the subject of the Environmental Permit application
- Permitted Escrick Environmental Services site
- National Route 65 of the National Cycle Network/the Trans Pennine Trail
- Approximate location of a licensed groundwater abstraction
- Approximate location of a licensed surface water abstraction

Rev	Status	Drn	App	Chk	Date
	Final	KR	JCO	GT	19/01/24

Site: ESCRICK

Client: Plasmor Limited

Title: The site location

Figure ESSD 1

Scale: 1:50,000@A4

Drawing Ref: PL/ES/07-23/23780

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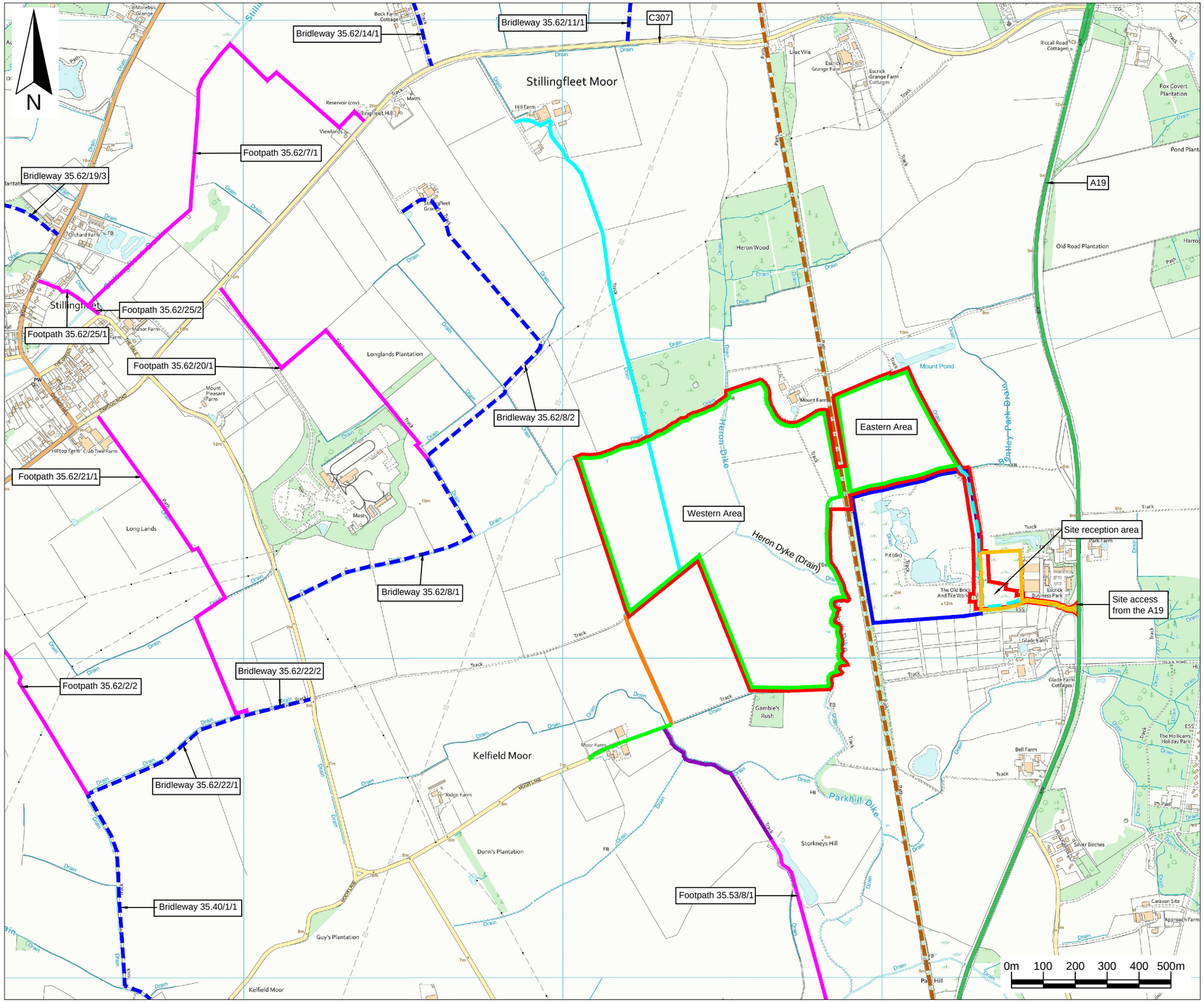

Key / Notes

- The boundary of planning permission reference C8/2019/0917/CPO
- Boundary of planning permission reference C8/2021/1133/CPO
- The area the subject of the Environmental Permit application
- Permitted Escrick Environmental Services site
- National Route 65 of the National Cycle Network/the Trans Pennine Trail
- Approximate route of bridleway 35.10/11/2
- Approximate route of bridleway 35.40/11/1
- Approximate route of bridleway 35.62/9/1 (to be diverted)
- Approximate route of footpath 35.40/12/1
- Other footpaths in the area of the site
- Other bridleways in the area of the site
- The primary site access road

Rev	Status	Drn	App	Chk	Date
	Final	KR	JCO	GT	19/01/24

Site: ESCRICK

Client: Plasmor Limited

Title: The site and surrounding area

Figure ESSD 2

Scale: 1:12,500@A3

Drawing Ref: PL/ES/07-23/23781

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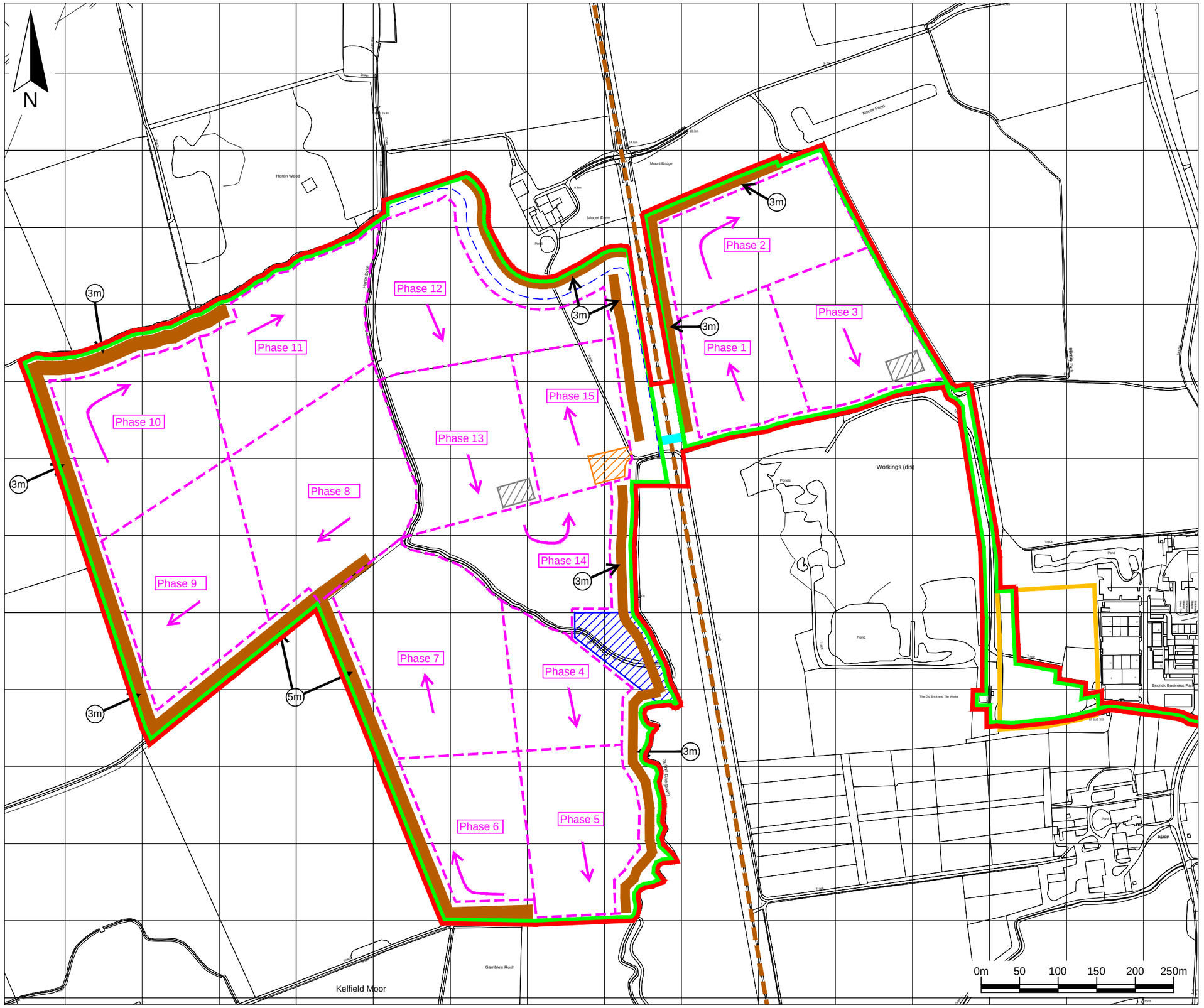

Key / Notes

- The boundary of planning permission reference C8/2019/0917/CPO
- Boundary of planning permission reference C8/2021/1133/CPO
- The area the subject of the Environmental Permit application
- Mineral extraction/restoration phase
- Direction of mineral extraction/ restoration
- Phase 3 — Mineral extraction/restoration phase number
- Diverted route of Heron Dyke (Drain)
- Screening bund
- 3m — 3 meters high
- 5m — 5 meters high

(Topsoil bunds will be 3m high and subsoil bunds will be a minimum of 3m high and a maximum of 5m high)

- Approximate exclusion area due to archaeology
- Proposed diverted route of Bridleway 35.62/9/1
- National Route 65 of the National Cycle Network and the Trans Pennine Trail
- Approximate location of the bridge constructed over National Route 65 of the National Cycle Network and the Trans Pennine Trail
- Mobile mess facility
- Mobile plant storage area

Rev	Status	Drn	App	Chk	Date
	Final	KR	JCO	GT	19/01/24

Site: ESCRICK

Client: Plasmor Limited

Title: The phasing of the clay extraction and restoration operations

Figure ESSD 3

Scale: 1:5,000@A3

Drawing Ref: PL/ES/07-23/23782

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Key / Notes

- The area the subject of the Environmental Permit application
- 16.26 + Existing spot levels (mAOD)
- Overhead electricity line
- Fenceline

Notes:
Based on Derek Brook Surveying Services Ltd drawing reference ESCRICK FIELDS AND ACCESS DRAWING.dwg dated October 2018 and access road annotations from Paul Tesh.

Refer to drawing reference PS 7 PL/ES/11-18/20957 for northern end of access road and junction design on C307.

Rev	Status	Drn	App	Chk	Date
	Final	KR	JCO	GT	19/01/24

Site: ESCRICK

Client: Plasmor Limited

Title: The site topography prior to the commencement of mineral extraction

Figure ESSD 4

Scale: 1:2,000@A1

Drawing Ref: PL/ES/12-23/24086

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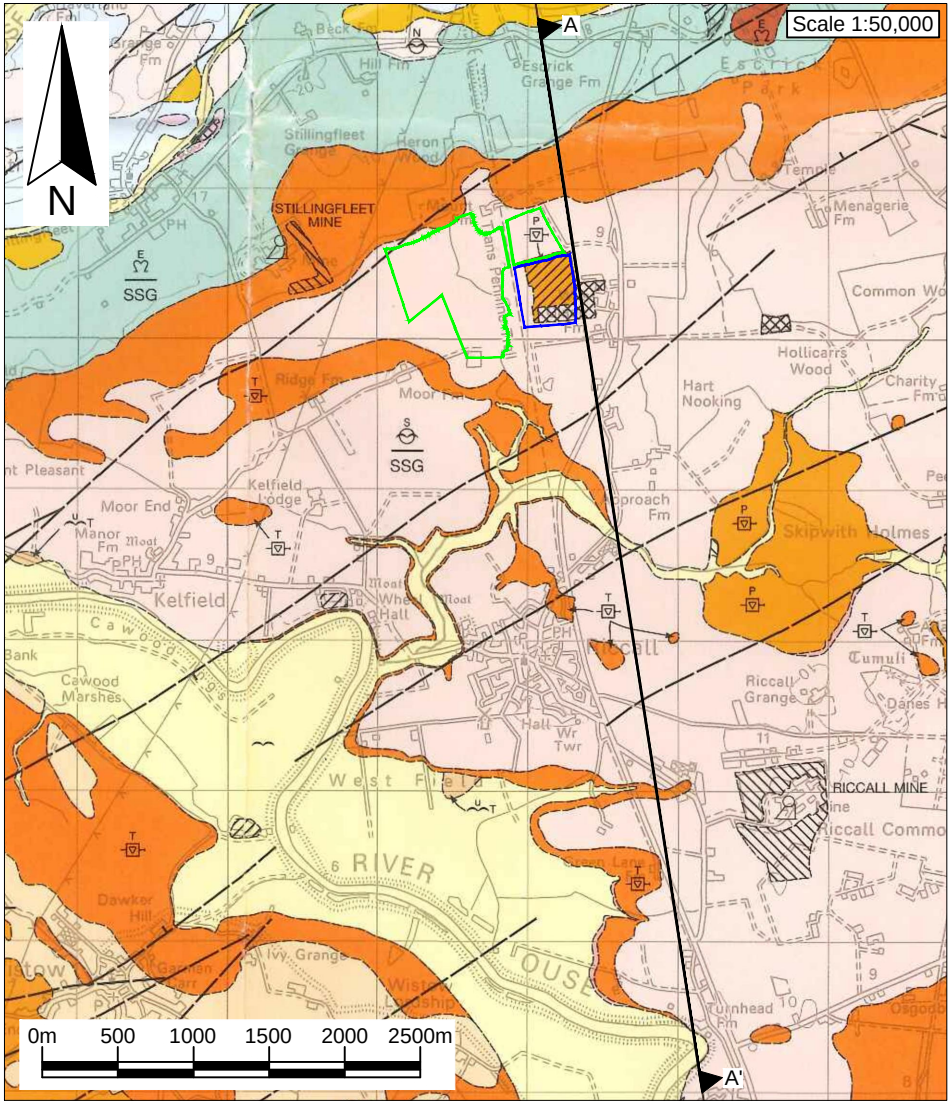


Key / Notes

The area the subject of the Environmental Permit application

Permitted Escrick Environmental Services site

A A' Line of cross section

ARTIFICIALLY MODIFIED GROUND

Worked ground: excavations

Made ground: land raised by fill

Infilled ground: filled in excavations

QUATERNARY SUPERFICIAL DEPOSITS

Alluvium: silt and clay on gravel

River Terrace Deposits (undifferentiated)

Breighton Sand Formation
- Naburn Sand Member
- Skipworth Sand Member

Elvington Glaciolacustrine Formation

Hemingbrough Glaciolacustrine Formation
- Thorganby Clay Member
- Lawns House Farm Sand Member
- Park Farm Clay Member
- Hemingbrough Glaciolacustrine Formation: sand

Vale of York Formation: gravelly, sandy clay with boulders

Escrick Moraine Member: gravelly clay

Escrick Moraine Member: sand and gravel

Escrick Moraine Member: clay and silt

Older Glaciofluvial Deposits

TRIASSIC BEDROCK

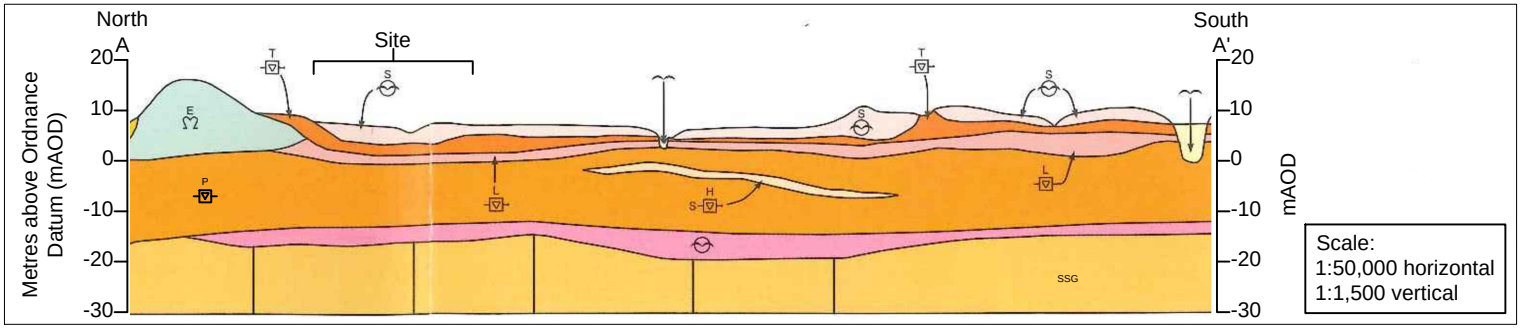
SSG Sherwood Sandstone Group

Symbol indicates the Superficial deposit at the surface and the Bedrock formation at rockhead; other Superficial deposits may intervene

Geological boundary, Superficial Deposits and Artificially Modified Ground

Fault at rockhead, crossmark on downthrow side

Approximate site of former major underground coal mine



Rev	Status	Drn	App	Chk	Date
	Final	KR	JCO	JRC	19/01/24

Site: ESCRICK

Client: Plasmor

Title: The regional geology at and in the vicinity of the site

Figure ESSD 5

Scale: As shown

Drawing Ref: PL/ES/07-23/23792

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Telephone : 01827 717891
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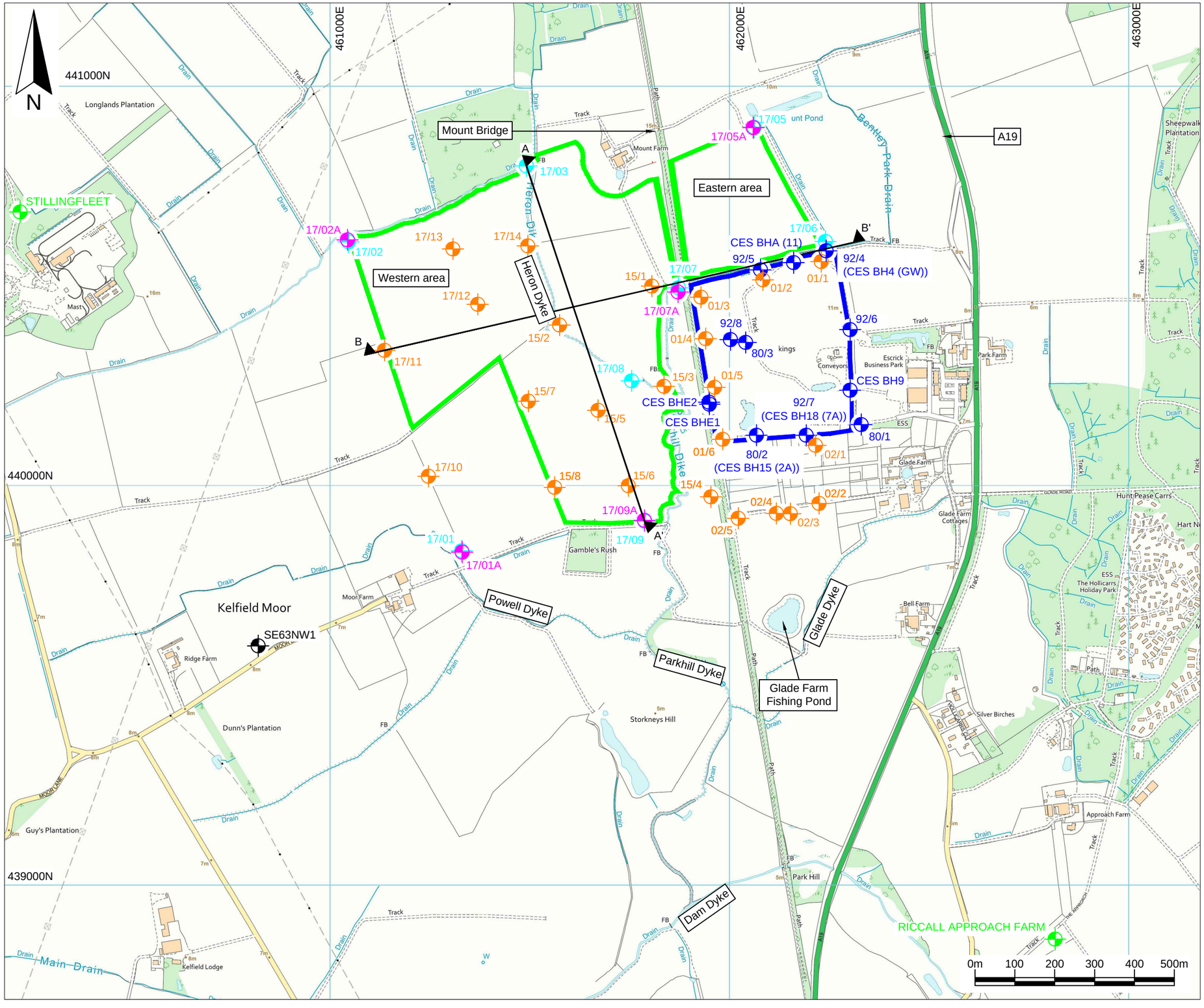

Key / Notes

- Permitted Escrick Environmental Services Site
- The area the subject of the Environmental Permit application
- Location of a monitoring borehole in the Skipworth Sand Member of the Breighton Sand Formation
- Location of a borehole with a monitoring horizon in the Lawns House Farm Sand Member and a monitoring horizon in the Sherwood Sandstone Group
- Mineral proving borehole
- Location of a monitoring borehole at the Environmental Services site
- Location of a BGS borehole
- Approximate location of an Environment Agency monitoring borehole
- A–A' Location of cross sections (Cross sections shown on drawing reference PL/ES/05-19/21166)

Rev	Status	Drn	App	Chk	Date
	Final	TL	JCO	JRC	19/01/24

Site: ESCRICK

Client: Plasmor Limited

Title: Borehole location plan

Figure ESSD 6

Scale: 1:10,000@A3

Drawing Ref: PL/ES/01-24/24126

MJCA
Technical advisers on environmental issues
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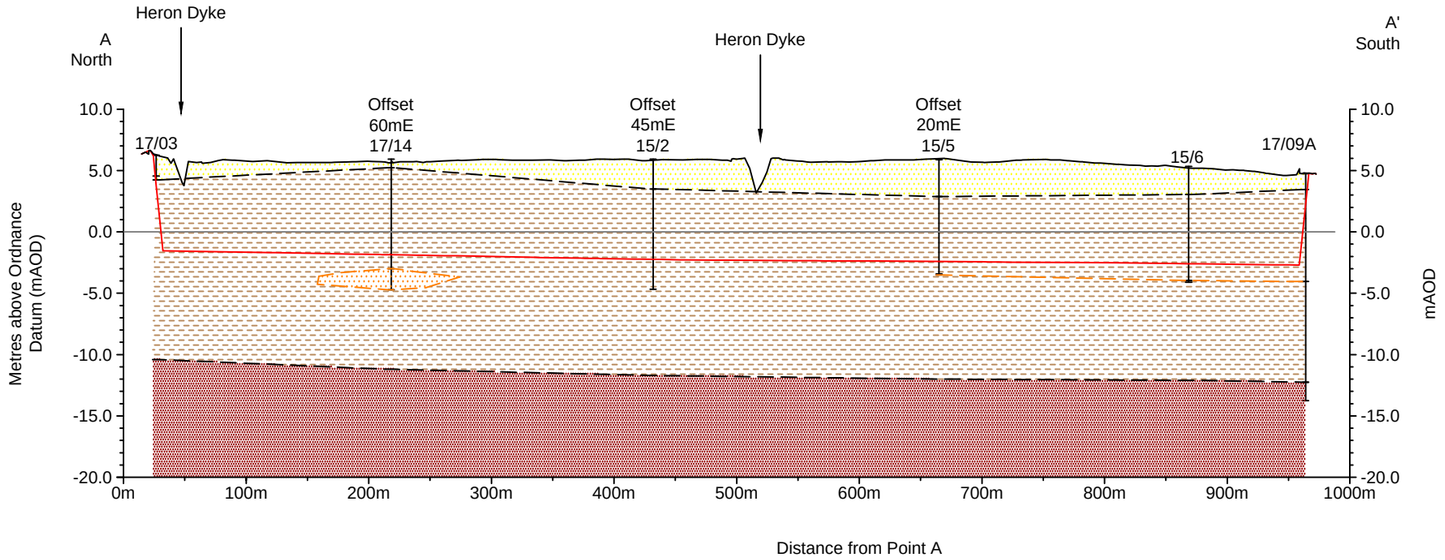
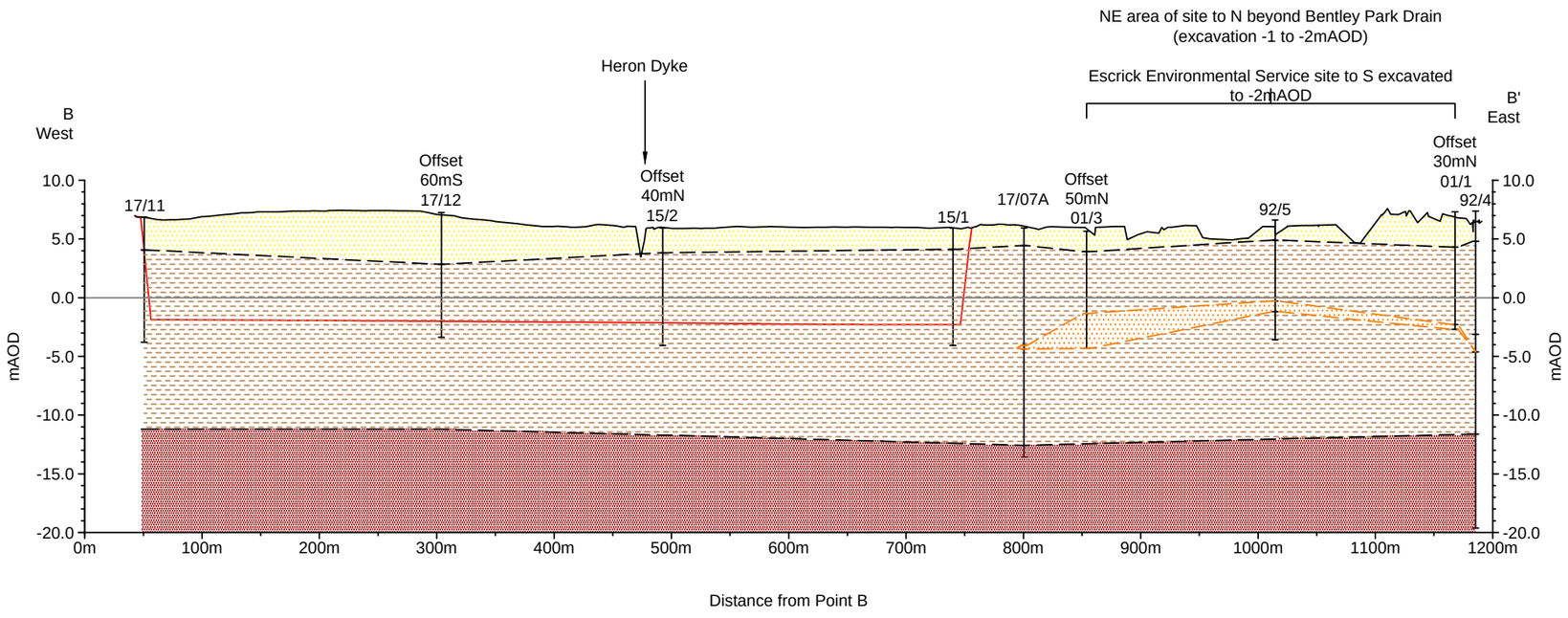
Main Road, Baxterley, Atherstone,
Warwickshire, CV9 2LE.
Telephone : 01827 717891
Fax : 01827 718507





Key / Notes

- Skipwith Sand Member
- Heminbrough Glaciolacustrine Formation (HGF)
- Lawns House Farm Sand Member of the HGF
- Sherwood Sandstone Group
- Original ground level
- Limit of excavation

Note:
Location of cross sections shown on drawing reference PL/ES/01-24/24126

Rev	Status	Drn	App	Chk	Date
	Final	TL	JCO	JRC	19/01/24

Site
ESCRICK

Client
Plasmor Limited

Title
Schematic cross sections through the site

Figure ESSD 7

Scale
1:5.000v@A3
1:500h

Drawing Ref
PL/ES/06-19/21166

MJCA
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Telephone : 01827 717891
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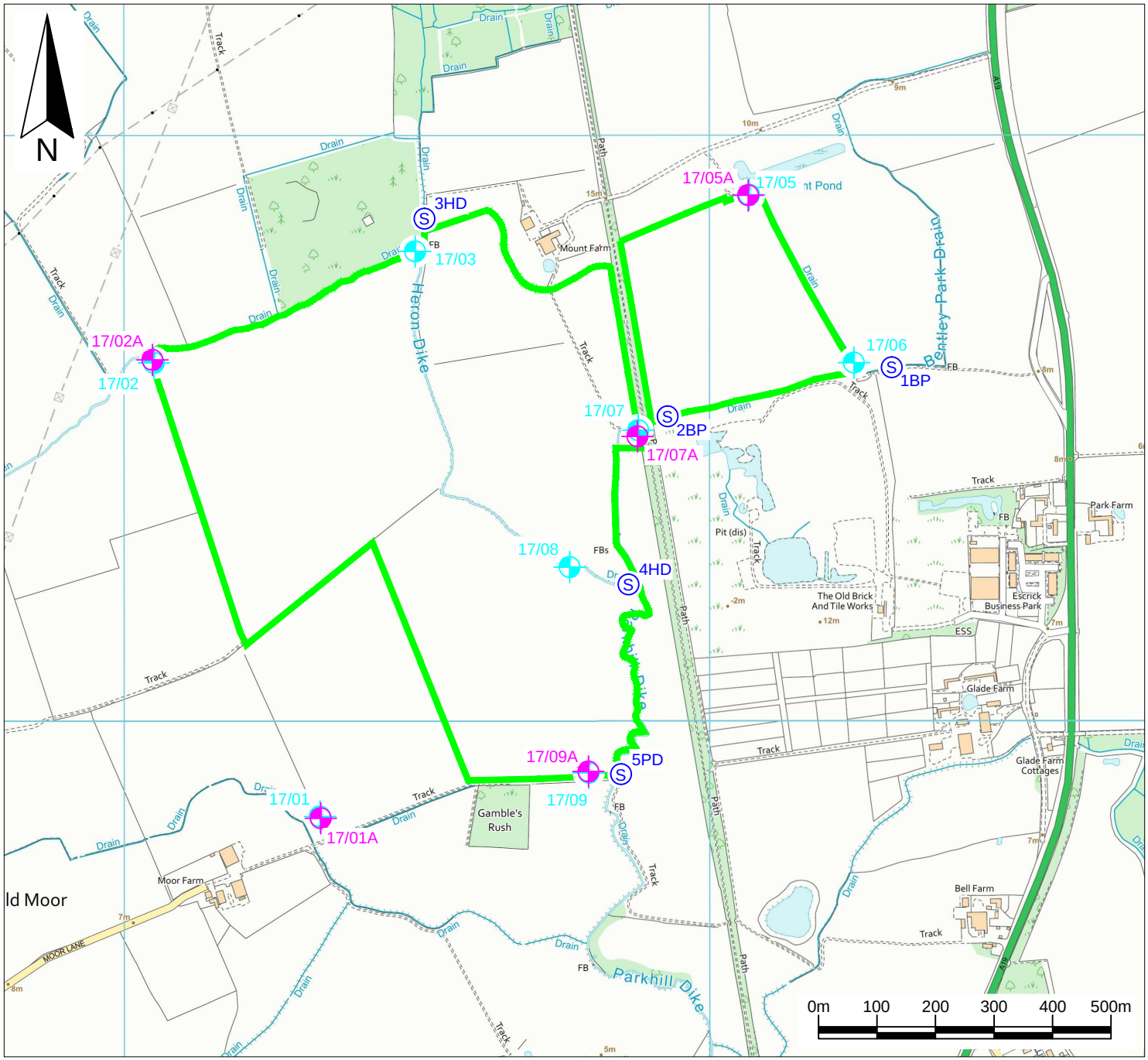

Key / Notes

The area the subject of the Environmental Permit application

Location of a monitoring borehole in the Skipworth Sand Member of the Breighton Sand Formation

Location of a borehole with a monitoring horizon in the Lawns House Farm Sand Member and a monitoring horizon in the Sherwood Sandstone Group

Surface water monitoring location

Rev	Status	Drn	App	Chk	Date
	Final	KR	JCO	JRC	19/01/24

Site
ESCRICK

Client
Plasmor Limited

Title
Environmental monitoring locations

Figure ESSD 8

Scale
1:10,000@A4

Drawing Ref
PL/ES/07-23/23793

MJCA
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Telephone : 01827 717891
Fax : 01827 718507

Figure ESSD 9 - Groundwater levels recorded in the Skipwith Sand Member at groundwater monitoring boreholes at the Escrick site between October 2017 and November 2023

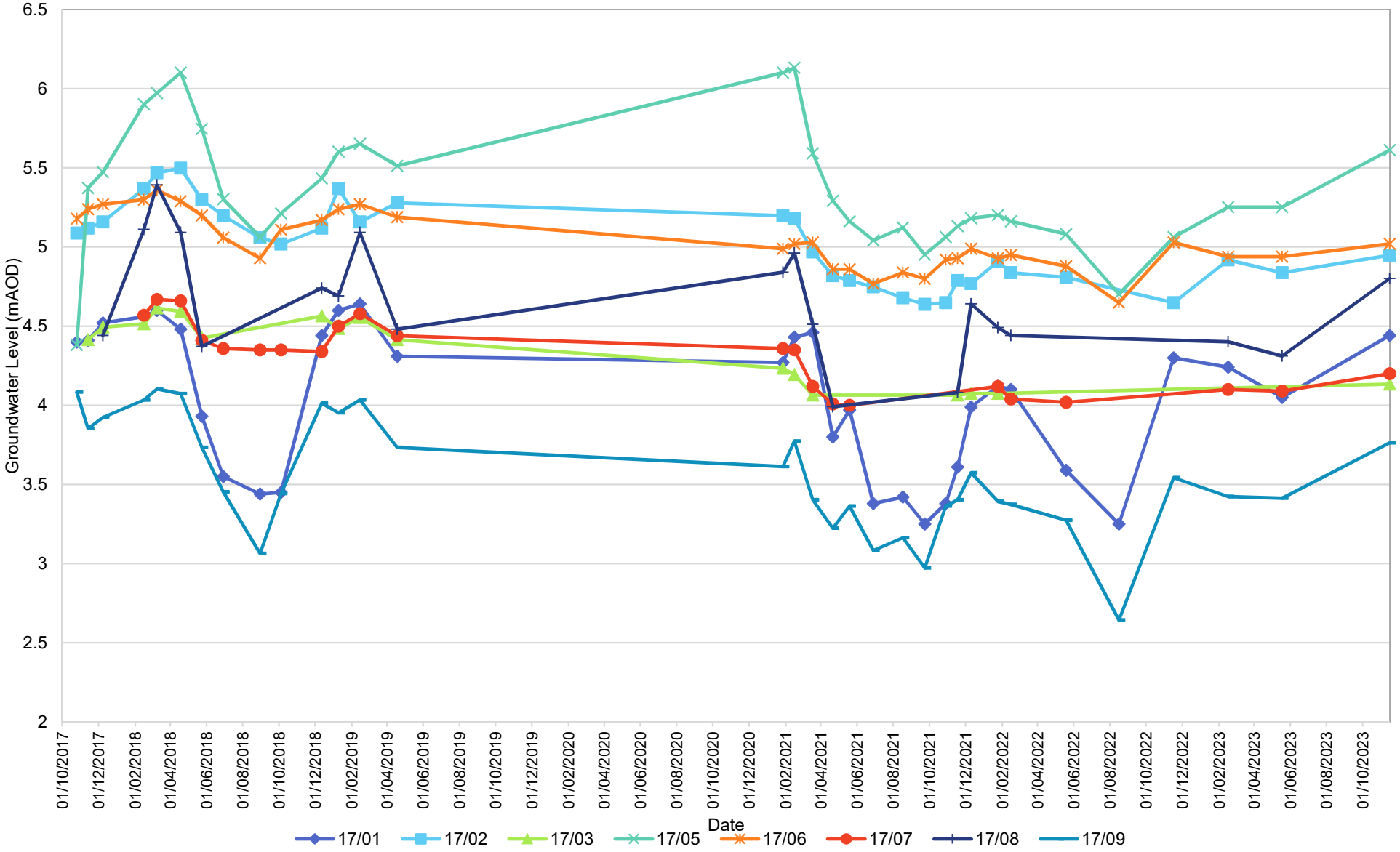


Figure ESSD 10 - Groundwater levels recorded in the Lawns House Sand Member at groundwater monitoring boreholes at the Escrick site between October 2017 and November 2023

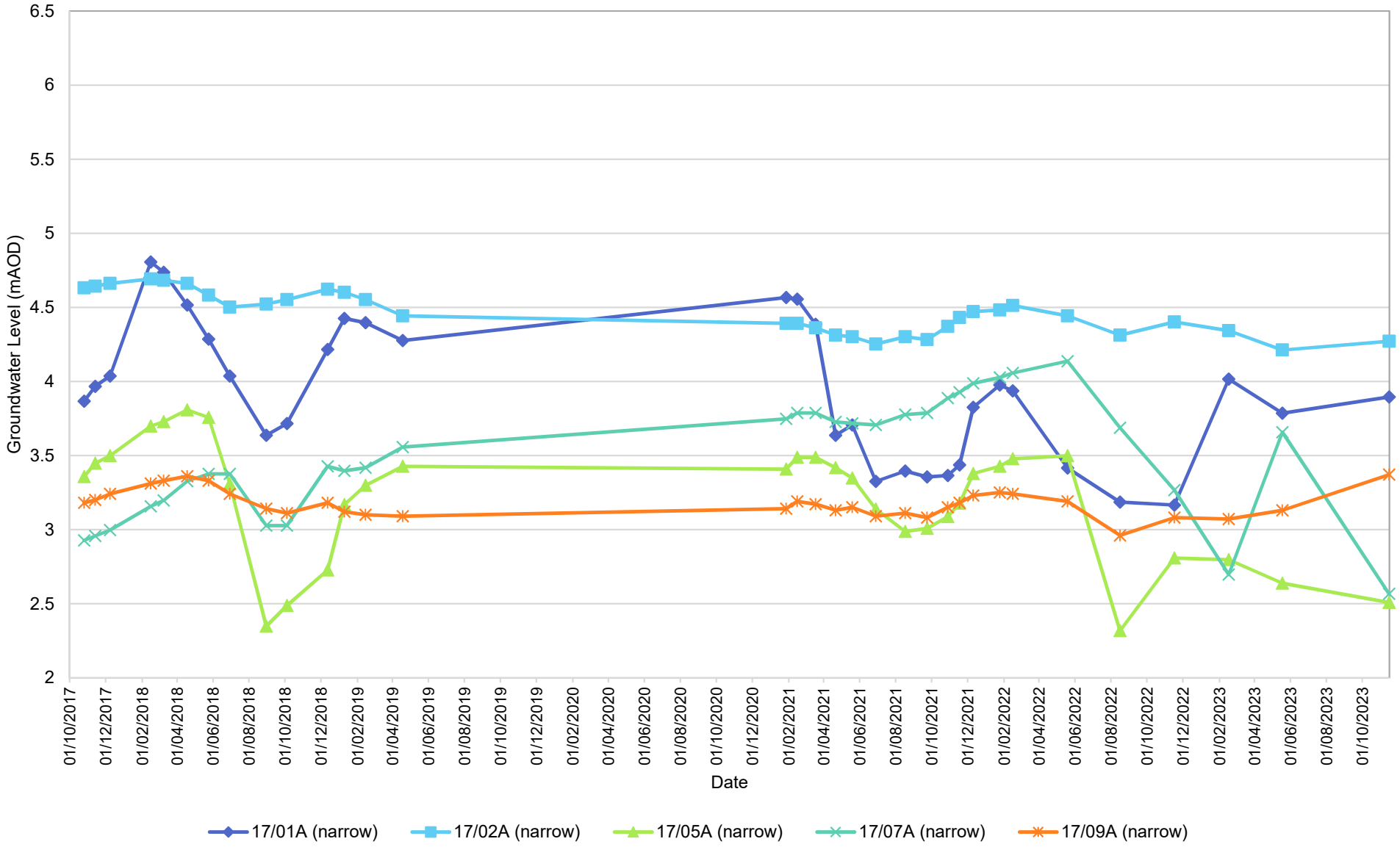
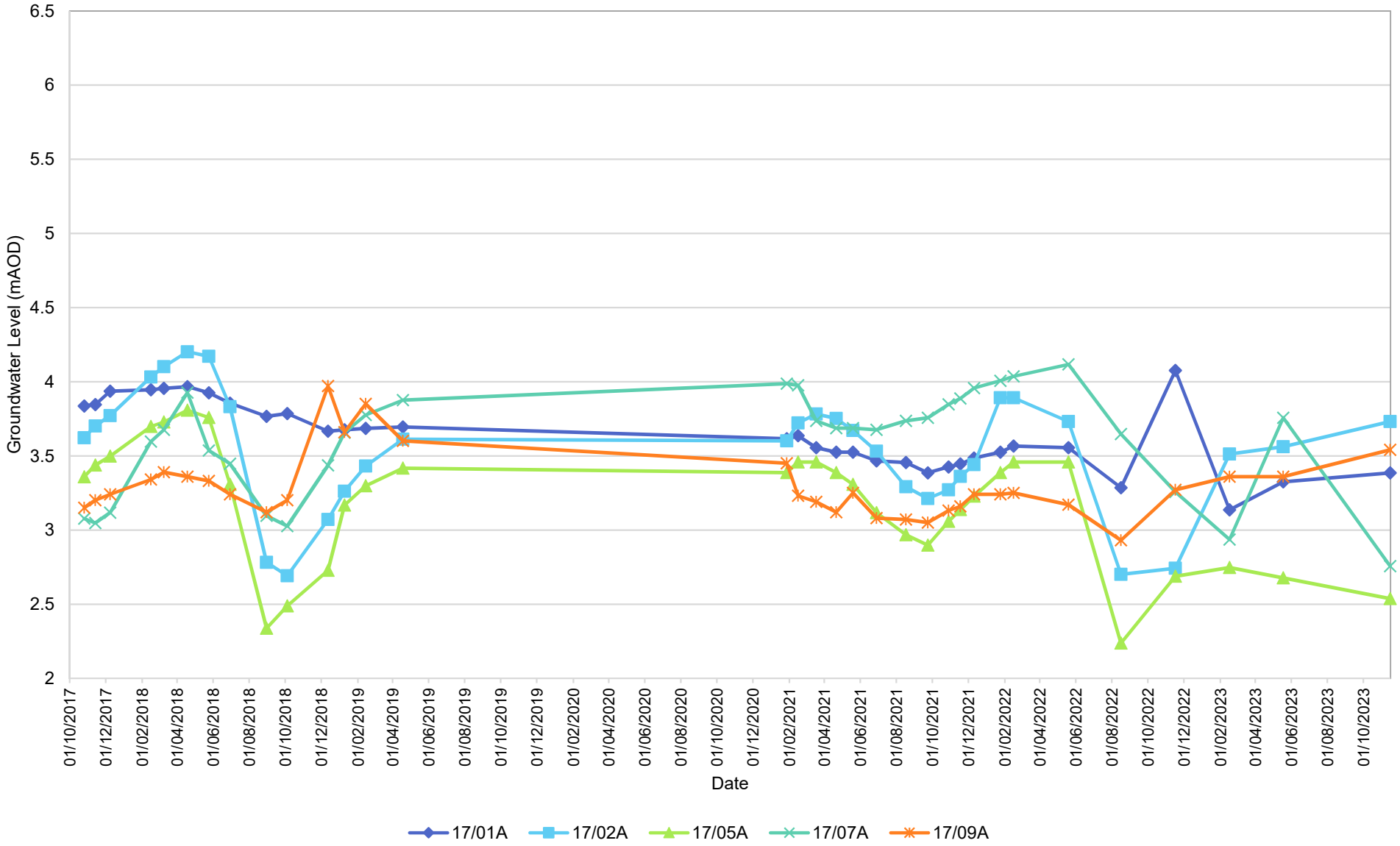
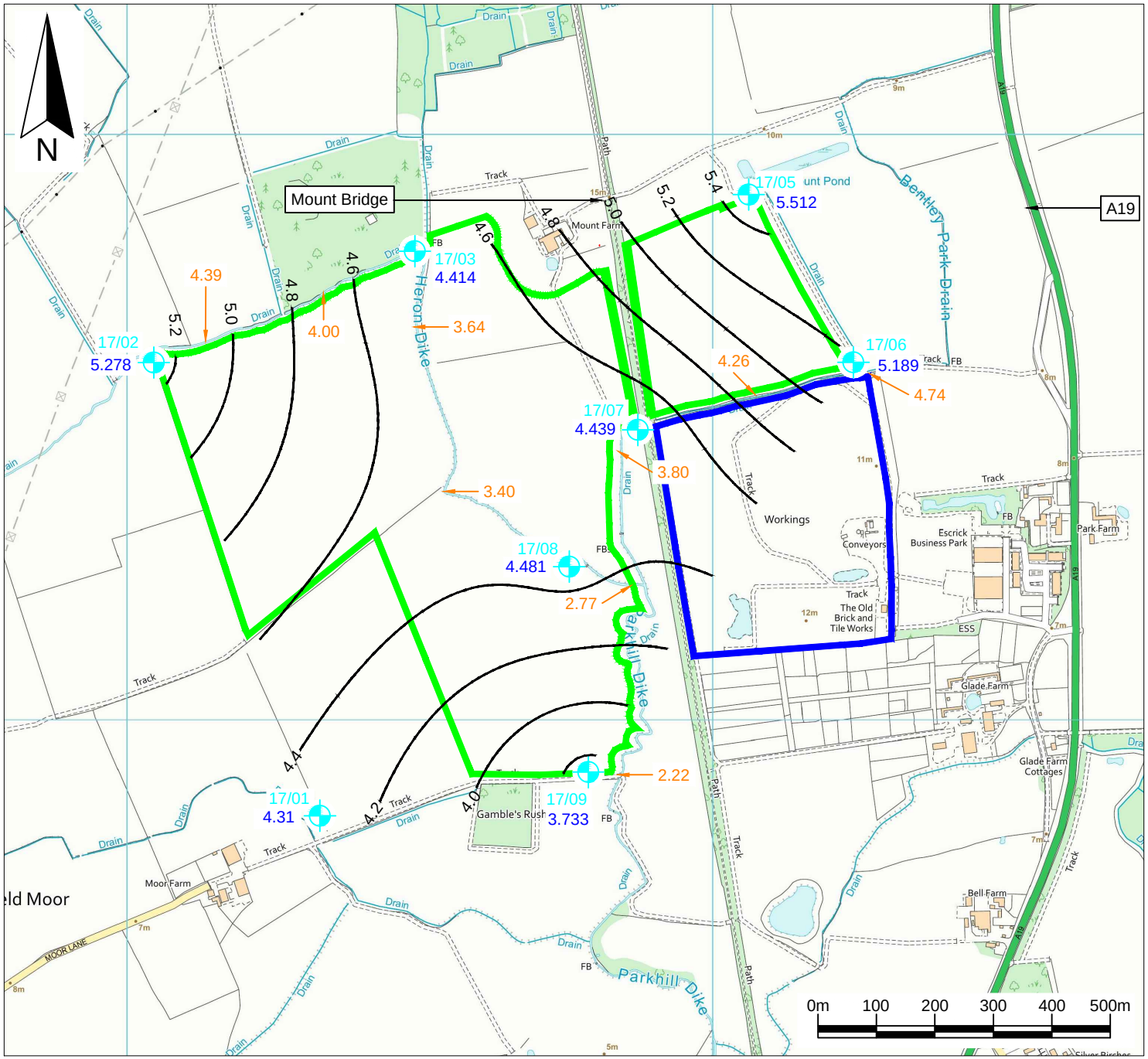


Figure ESSD 11 - Groundwater levels recorded in the Sherwood Sandstone Group at groundwater monitoring boreholes at the Escrick site between October 2017 and November 2023





Key / Notes

- Permitted Escrick Environmental site
- The area the subject of the Environmental Permit application
- Location of a monitoring borehole in the Skipworth Sand Member of the Breighton Sand Formation
- 4.439 — Groundwater levels recorded in the Skipworth Sand Member in April 2019 (mAOD)
- 5.0 — Groundwater levels contours interpolated from groundwater levels
- 4.39 — Invert level of IDB drain

Rev	Status	Drn	App	Chk	Date
	Final	TL	JCO	GT	19/01/24

Site: ESCRICK

Client: Plasmor Limited

Title: Groundwater level contours interpolated from groundwater levels recorded in the Skipworth Sand Member in April 2019

Figure ESSD 12

Scale: 1:10,000@A4

Drawing Ref: PL/ES/06-19/21231

MJCA
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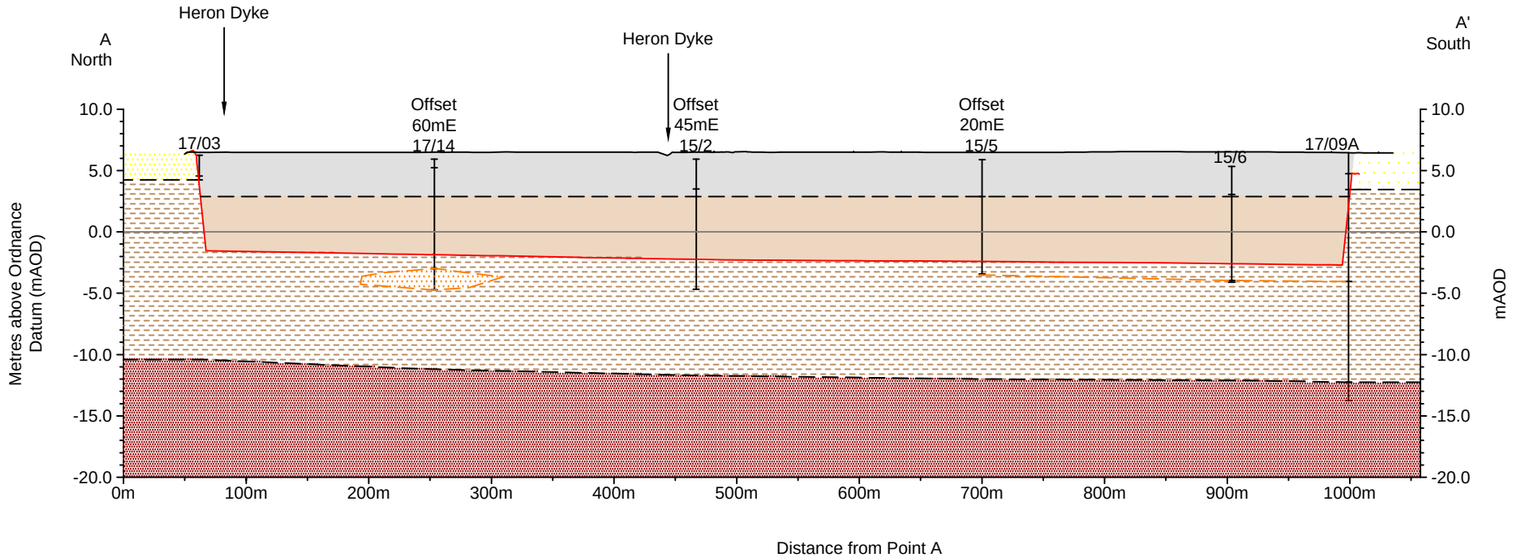
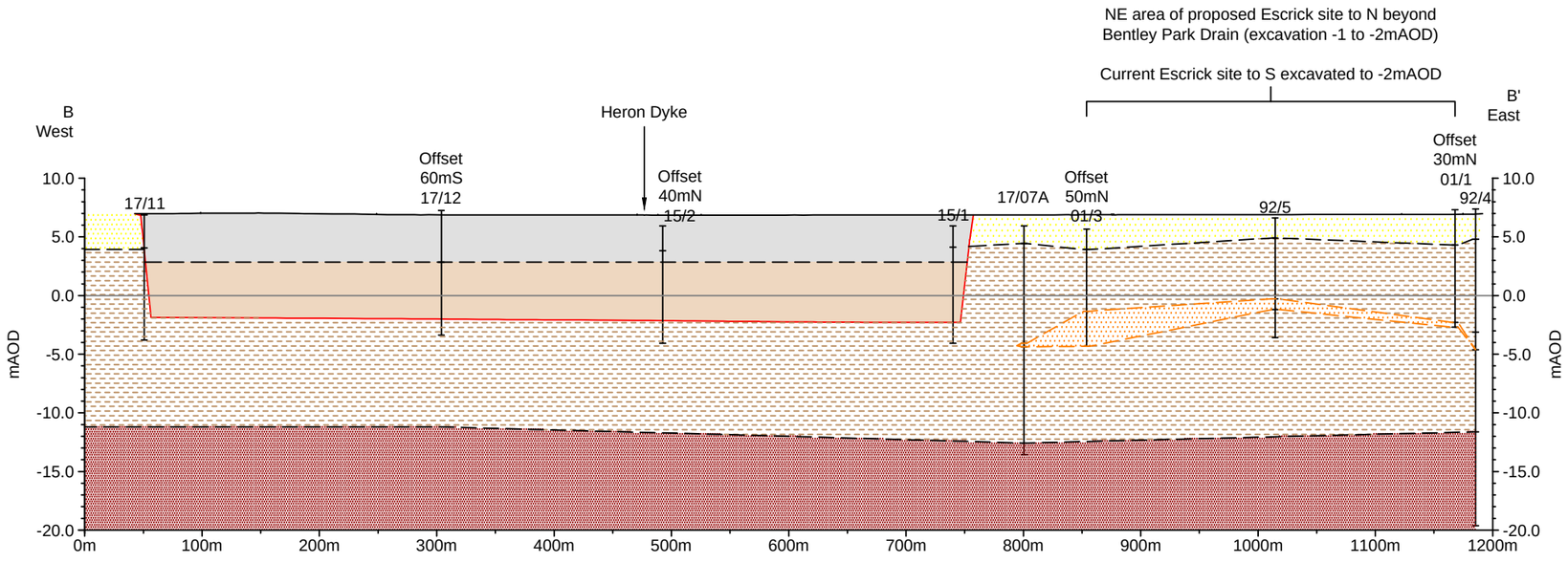
Main Road, Baxterley, Atherstone,
Warwickshire, CV9 2LE.
Telephone : 01827 717891
Fax : 01827 718507





Key / Notes

- Skipwith Sand Member
- Heminbrough Glaciolacustrine Formation (HGF)
- Lawns House Farm Sand Member of the HGF
- Sherwood Sandstone Group
- Quarry overburden
- Waste
- Restored ground level
- Limit of excavation

Note:
Location of cross sections shown on drawing reference PL/ES/01-24/24126

Rev	Status	Drn	App	Chk	Date
	Final	KR	JCO	JRC	19/01/24

Site
ESCRICK

Client
Plasmor Limited

Title
Schematic cross sections through the restored site

Figure ESSD 13

Scale
1:5.000v@A3
1:500h

Drawing Ref
PL/ES/07-23/23797

MJCA
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APPENDICES

APPENDIX ESSD A

PLANNING PERMISSION REFERENCE C8/2019/0917/CPO

TOWN AND COUNTRY PLANNING ACT 1990

NORTH YORKSHIRE COUNTY COUNCIL

NOTICE OF DECISION OF PLANNING AUTHORITY ON APPLICATION FOR PERMISSION TO CARRY OUT DEVELOPMENT

TO: Plasmor Ltd
PO Box 44
Womersley Road
Knottingley
West Yorkshire
WF11 0DN

C/o: MJCA
Baddesley Colliery Offices
Main Road
Baxterley
Atherstone
Warwickshire
CV9 2LE

The above-named Council, being the Local Planning Authority for the purposes of your application accompanied by an Environmental Statement dated 31 July 2019 in respect of the application for the proposed new quarry to extract approximately 6 million tonnes of clay by 2053 and restoration of the site to agriculture and nature conservation with the importation of up to 2.67 million tonnes of inert materials together with the construction of new internal site access haul road, site compound, car park, site office, wheel washing facility, security fencing and gates and the construction of a temporary bridge crossing over the National Route 65 of the National Cycle Network on land adjacent to and to the west and north of the current Escrick Quarry to the south west of Escrick, North Yorkshire, YO19 6ED have considered your said application

- **HAVING** first taken into consideration the environmental information (including the Environmental Statement, which includes such information as is reasonably required to assess the environmental effects of the development and which the applicant could be reasonably required to compile and duly made representations about the environmental effects of the development) pursuant to Regulation 3 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017; and

- **HAVING CONSIDERED** the development to comply with the Development Plan for the area and there being no material considerations to indicate a decision other than in accordance with the Development Plan; and

- **HAVING SECURED** a Section 106 Legal Agreement providing for the following matters:
  i. Detailed Restoration and Aftercare Scheme for a period of 30 years

FOR RIGHTS OF APPEAL PLEASE SEE END OF DECISION NOTICE

have **GRANTED** planning permission for the proposed development

- **SUBJECT TO THE FOLLOWING CONDITIONS** imposed for the reasons thereafter given:

Time limit and commencement of development

1. The development to which this permission relates must be implemented no later than the expiration of three years from the date of this Decision Notice, the date of which shall be notified in writing to the County Planning Authority within 7 days of the commencement.

   Reason: To comply with Section 91 of Town and Country Planning Act 1990 as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

Duration of development

2. The permission hereby granted authorises the extraction of clay only until 30 years from the date of commencement of development as notified under condition 1 of this planning permission. The development hereby permitted shall be discontinued and all buildings, plant and machinery shall be removed from the site and the site shall be restored in accordance with the scheme approved under Condition 32 within 7 years of the completion of mineral workings or within such longer period as may be specifically approved in writing by the County Planning Authority.

   Reason: To reserve the rights of control of the County Planning Authority to ensure restoration of the land with the minimum of delay in the interests of amenity.

Definition of development

3. The development hereby permitted shall be carried out in accordance with the application details dated 31 July 2019, the accompanying Environmental Statement reference PL/ES/SE/1683/01/ESF dated July 2019, the Planning Statement reference PL/ES/SE/1683/01/PSF dated July 2019, the approved drawings and documents listed in the table below and the following conditions which at all times take precedence or in accordance with such other details as may be subsequently approved in writing by the County Planning Authority:

Reference	Date	Drawing number/document and title
	31 July 2019	Application Form
PL/ES/SE/1683/01/ESF	July 2019	Environmental Statement and accompanying appendices
PL/ES/07-19/21321	31/07/19	Figure PS 3 - The planning application boundary
PL/ES/06-19/21220revE	05/05/20	Figure PS 5 - The proposed phasing of the clay extraction operations
PL/ES/01-20/21221revC	09/04/20	Figure PS 5a - The proposed phasing of the clay extraction operations in Phases 1 – 3

PL/ES/01-20/21222revC	09/04/20	Figure PS 5b - The proposed phasing of the clay extraction operations in Phases 4 - 7 and the restoration operations in Phases 1 - 3
PL/ES/01-20/21223revC	09/04/20	Figure PS 5c - The proposed phasing of the clay extraction operations in Phases 8 - 11 and the restoration operations in Phases 4 - 7
PL/ES/01-20/21224revC	09/04/20	Figure PS 5d - The proposed phasing of the clay extraction operations in Phases 12 - 15 and the restoration operations in Phases 8 - 11
PL/ES/01-20/21225revC	09/04/20	Figure PS 5e - The proposed phasing of the restoration operations in Phases 12 – 15
PL/ES/03-20/21229revE	05/05/20	Figure PS 6 – The restoration plan
PL/ES/07- 19/21322revA	09/04/20	Figure PS 7 - The proposed access route
PL/ES/06-19/21227	31/07/19	Figure PS 8 - The preliminary design of the proposed bridge over National Route 65 of the National Cycle Network
PL/ES/06-19/21228	31/07/19	Figure PS 9 - The layout of the proposed bridge over National Route 65 of the National Cycle Network
PL/ES/06-19/21230revA	13/02/20	Figure ES 10 - Cross Sections of the proposed Escrick site
MJ115-L097-008	May 2019	Figure ES 12 - Habitat Map
C599 Drawing No. 2	17/08/18	Figure ES 13 - Agricultural Land Classification
R19.9459/3/AP	17/7/19	Figure ES 14 - Assessment Locations (noise)
PL/ES/07-19/21317	31/07/19	Figure ES 15 - Locations of sensitive dust receptors
	May 2020	Restoration and Outline Aftercare Strategy
	11 February 2020	Biodiversity Mitigation, Monitoring and Management Plan for Land at Escrick
PL/ES/10-19/21463	11/02/20	Approximate extent of vegetation to be cleared to accommodate the crossing construction
MJCA115	January 2020	Arboricultural Impact Assessment and Arboricultural Method Statement: Land adjacent to and to the west and north of the current Escrick Quarry to the southwest of Escrick in North Yorkshire
PCAS job no. 2215 Site code: ECWM 19	May 2019 (amended July 2019)	Archaeological Mitigation Strategy, prepared by PCAS Archaeology on behalf of Andrew Josephs Associates

Reason: *To ensure that the development is carried out in accordance with the application details.*

Hours of operation

4. Except with the prior written approval of the County Planning Authority operations at the site shall only take place between the following times:

Activity	**Times**
Soil and overburden stripping	0630 – 1700 Mondays to Fridays

Quarrying operations and exportation of clay from the site	0645 – 1700 Mondays to Fridays
Importation of inert restoration materials	0630 – 1700 Monday to Friday

Only essential maintenance work shall take place on Saturdays between the hours of 0715 and 1300 and no work on Saturdays outside these hours. No operations shall take place on Sundays or Bank or Public Holidays.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

Phased working and restoration

5. The phased working and restoration of the site shall take place strictly in accordance with Figures PS 5 (drawing reference PL/ES/06-19/21220RevE); PS 5a (drawing reference PL/ES/01-20/21221RevC); PS 5b (drawing reference PL/ES/01-20/21222RevC); PS 5c (drawing reference PL/ES/01-20/21223RevC); PS 5d (drawing reference PL/ES/01-20/21224RevC) and PS 5e (drawing reference PL/ES/01-20/21225RevC).

   Reason: To secure an orderly progression of working.

6. No extraction operations shall take place in any phase until materials within the immediately preceding phase have been worked out unless otherwise agreed in writing with the County Planning Authority

   Reason: To secure an orderly progression of working and in the interests of controlling progressive restoration.

Noise

7. All plant, machinery and vehicles used on any part of the site shall be fitted with effective noise attenuating equipment which shall be regularly maintained. Where earthmoving plant is operating in proximity to residential properties, non-audible reverse warning alarm systems shall be deployed.

   Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

8. During the working hours specified in Condition 4, noise from mineral extraction and restoration operations on site shall not exceed the following measurements as measured at the following locations:

Location	**LAeq,1 hour dB(A)**
Hill Farm and Cottages	51
Lilac Villa	52
Escrick Grange Farm Cottages	52
Mount Farm	53
Moor Farm	50

Brickworks House	55
Escrick Business Park	55
Glade Farm	55
Bell Farm	55

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

9. Noise from water pumping during the night-time period shall not exceed 42 dB $L_{Aeq, 1h}$ (free field) at noise-sensitive properties.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

10. Noise monitoring shall be undertaken at the locations specified in Condition 8 and in accordance with Figure ES 14 - Assessment Locations (Noise Assessment Locations A-I) dated 17 July 2019, within two months of the clay extraction operations moving into a new phase of working as shown on Figure PS 5 (drawing reference PL/ES/06-19/21220RevE), and nonetheless at a frequency of not less than 12 monthly to assess the noise impact of the operations at those locations. Between noise surveys additional monitoring shall be carried out at the written request of the County Planning Authority. All results shall be made available within 10 working days of a written request to do so by the County Planning Authority and an annual summary of results shall be submitted to the County Planning Authority for consideration not later than 31 March in the following calendar year.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

11. In the event that the noise levels specified in Condition 8 are exceeded, those operations at the site causing the excessive noise shall cease immediately and steps shall be taken to attenuate the noise level to be in compliance with the requirements of Condition 8 within 7 days.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

12. At the reasonable request of the County Planning Authority or following a noise complaint the operator shall employ a qualified acoustician to carry out noise monitoring to determine if the noise limits has been exceeded. Where an exceedance is determined mitigation measures shall be determined and instigated to ensure that the levels are met. A report detailing the monitoring results, mitigation measures and any retesting shall be provided to the County Planning Authority within 4 weeks of the request being made.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

13. Notwithstanding the noise limits imposed within Condition 8 a temporary daytime noise limit of up to 70 dB $L_{Aeq,1hour}$ free-field is permitted for up to 8 weeks in a calendar year for temporary works on site such as soil stripping and bund construction.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

14. Operations shall at all times adhere to the findings and recommendations contained within Appendix ES N of the Environmental Statement (Noise Assessment – ref. R19.9459/3/AP) dated 17 July 2019.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

Dust

15. Prior to the commencement of development at the site a dust management and monitoring scheme generally in accordance with the dust controls set out in Table ES 7 of the Environmental Statement dated July 2019 shall be submitted to the County Planning Authority for approval. The dust control measures in the approved scheme shall be adhered to throughout the duration of the development.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of ensuring the rights of control of the County Planning Authority in the interests of amenity.

16. Dust control measures shall be employed to minimise the emission of dust from the site. Such measures shall include the spraying of working areas, roadways and stockpiles and discontinuance of soil movements during periods of high winds.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

17. All stockpiled material shall be profiled and conditioned with water as necessary to minimise the wind entrainment of dust.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

Highways and access

18. There shall be no access or egress between the highway and the application site by any vehicles other than via the existing access with the public highway. The access shall be maintained in a safe manner which shall include as necessary the cutting back of the vegetation at the access to ensure the necessary visibility splays onto the A19.

Reason: In the interests of both vehicle and pedestrian safety and the visual amenity of the area.

19. There shall be no access or egress by any vehicles carrying clay or inert restoration materials between the highway and the application site until the new access road and site compound together with the vehicle wheel washing facilities have been installed in accordance with Figure PS 7 (drawing reference PL/ES/07- 19/21322revA) and for which details shall be submitted to and approved in writing by the County Planning Authority. The existing site compound that will be used by inert restoration material vehicles and the new access road and site compound that will be used by clay vehicles shall be kept in full working order at all times. All vehicles involved in the transport of clay or inert restoration materials to or from the site shall be thoroughly cleaned before leaving the site so that no mud, waste materials or debris are deposited on the public highway.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of highway safety and amenity.

20. All vehicles involved in the transport of clay from the site or inert restoration materials to the site shall be securely sheeted in such a manner as no material may be spilled onto the public highway.

Reason: In the interests of highway safety, amenity and convenience of highway users.

21. No development shall take place at the site until a Vehicles Management Statement for the development has been submitted to and approved in writing by the County Planning Authority in consultation with the Local Highways Authority. The approved Statement shall be adhered to throughout the life of the development. The statement shall provide for the following;-
    a. the parking of vehicles of site operatives and visitors;
    b. loading and unloading of plant and materials;
    c. storage of plant and materials used in the development;
    d. erection and maintenance of facilities for public viewing where appropriate; and
    e. a scheme for recycling/disposing of waste resulting from the development.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of providing for appropriate on-site vehicle parking and storage facilities, in the interests of highway safety and the general amenity of the area.

22. Prior to the commencement of development a scheme for the detailed design of the temporary bridge crossing the National Route (NR) 65 and the Trans Pennine Trail (TPT), including access during construction, the temporary diverted route of NR65/TPT during construction, the specification of the temporary diverted route, the design of the temporary bridge and details of the surfacing of the section of NCR65/TPT and the verges running under the temporary bridge once constructed will be provided for approval of the County Planning Authority in consultation with Sustrans, the Trans Pennine Trail Officer and the local Internal Drainage Board. No extraction operations will be carried out in the western extraction area (as shown on Figure PS 3 – drawing reference PL/ES/07-19/21321) until the temporary bridge has been constructed. The temporary bridge will be maintained following construction throughout the life of the

development. The temporary bridge will be demolished and removed within 1 year of the completion of restoration operations in the western extraction area.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of ensuring the rights of control of the County Planning Authority in the interests of the safety of the highway network and amenity.

23. Once constructed but prior to the use of the temporary bridge referred to in condition 22, written notification shall be provided to the County Planning Authority within 7 days of completion of the temporary bridge construction.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

24. No more than 60 HGVs associated with the extraction of clay shall visit the site in any single working day as per the hours of operation detailed in Condition 4, which is equivalent to 120 vehicle movements per day (60 in and 60 out).

Reason: In the interests of ensuring the safe and efficient operation of the strategic road network.

25. No more than 40 HGVs associated with the importation of inert restoration materials shall visit the site in any single working day as per the hours of operation detailed in Condition 4, which is equivalent to 80 vehicle movements per day (40 in and 40 out).

Reason: In the interests of ensuring the safe and efficient operation of the strategic road network.

26. Prior to the commencement of extraction operations in the western extraction area details of the diversion of Bridleway 35.62/9/1 including the surface of the diverted Bridleway shall be submitted to and agreed in writing with the County Planning Authority.

Reason: This is a pre-commencement condition for works in phase 4 and one which is considered warranted in the interests of amenity and protection of the existing bridleway.

Archaeology

27. Development at the site shall take place within the application area in accordance with 'Land at Escrick Clay Works, Selby, North Yorkshire: Archaeological Mitigation Strategy, prepared by PCAS Archaeology on behalf of Andrew Josephs Associates on behalf of Plasmor Ltd. May 2019 (amended July 2019)'.

Reason: In order to ensure the archaeological resources at the site are adequately investigated, understood, and where necessary safeguarded.

Ecology

28. A detailed Biodiversity Mitigation, Monitoring and Management Plan will be prepared and submitted to the County Planning Authority for approval prior to the commencement of the development. The detailed plan will be based on the Outline Biodiversity

Mitigation, Monitoring and Management Plan submitted the County Planning Authority on 11 February 2020. The plan will include measures for:

a. ecological surveys necessary prior to the commencement of operations in certain phases and the need for mitigation and monitoring as a result of the surveys, such as for badger and hobby;
b. a management plan for invasive species particularly during the site establishment, vegetation removal and the diversion of Heron Dyke. The management plan will include information on identification of the species, controls necessary and timing of controls to minimise the spread of seeds or the procedure for removal and disposal of plants or spraying of the plants; and
c. phased hedgerow removal where hedgerows will be removed as part of the development.

The biodiversity mitigation, monitoring and management measures approved will be implemented throughout the duration of the development.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of biodiversity mitigation.

Landscaping and restoration

29. Prior to the commencement of development a scheme for the advanced and infill planting and landscaping works that will be undertaken prior to the commencement of development or within the first year of the commencement of development at the site shall be submitted to the County Planning Authority for approval. The scheme shall include for advanced planting on the boundaries of the site as shown on Figure PS 6 (drawing reference PL/ES/03-20/21229RevE) and the scrub planting on the bund to be constructed to the south west of Mount Farm.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of achieving a high standard of landscaping and restoration.

30. Prior to the commencement of development an Arboricultural Method Statement and Tree Protection Plan shall be submitted to the County Planning Authority for approval. The Method Statement and Protection Plan shall be in accordance with BS5837.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of tree protection.

31. All existing boundary hedgerows which will not be removed as part of the development shall be gapped up with species of local provenance and maintained to a target height of 3m prior to the commencement of the development except where the hedgerows are located within 9m of a watercourse maintained by the Internal Drainage Board. The gapping up will be specified in the scheme to be approved in condition 29. From the commencement of the development until completion of aftercare all boundary hedgerows which will not be removed as part of the development shall be maintained in accordance with this condition.

Reason: In the interests of amenity and in the interests of achieving a high standard of landscaping and restoration.

32. A detailed landscaping and restoration scheme for the restoration works to agricultural land and biodiversity including a programme for the implementation of the works shall be submitted to the County Planning Authority for written approval within six months of the date of this planning permission. The detailed landscaping scheme shall be based on Figure PS 6 (drawing reference PL/ES/03-20/21229RevE) and the Restoration and Outline Aftercare Strategy dated 12 May 2020. The landscaping scheme shall include methods of placement of soils, establishment of drainage and initial cropping of the land, planting schemes, species mixes. Once approved the landscaping and restoration scheme shall be adhered to at all times for the duration of the development. The approved landscaping and restoration scheme shall be implemented in a progressive manner.

Reason: In the interests of amenity and in the interests of achieving a high standard of landscaping and restoration.

33. The soil profile of the area to be restored to agricultural land, as shown on plan reference PL/ES/03-20/21229revE will comprise 0.6m of onsite soils comprising 0.3m of topsoil and 0.3m of subsoil together with 0.6m of soil forming materials. The onsite soil resources used to restore the agricultural land will be suitable to restore the land to best and most versatile agricultural land.

Reason: In the interests of amenity and in the interests of achieving a high standard of landscaping and restoration.

34. The restored areas of the site under agricultural use will be the subject of a 5 year aftercare period. The restored areas of the site with habitat features for biodiversity including hedgerows, trees and woodland will be the subject of a 30 year aftercare period.

Reason: In the interests of amenity and in the interests of achieving a high standard of landscaping, restoration and aftercare.

Soils

35. Following stripping all topsoils, subsoils and overburden shall be used for restoration except where it is necessary for screening purposes to construct a storage/screening bund. The management of soils on site will be the subject of a detailed soil management scheme that will be submitted for approval of the County Planning Authority prior to the commencement of soil stripping operations in Phase 1. The scheme will provide information on the location, type and management of soil stockpiles. All storage mounds that will remain in situ for more than 3 months, or over winter, shall be vegetated and managed in accordance with this scheme. Thereafter, soils shall be stored and managed in accordance with the approved scheme. The soil management scheme will include provision for an annual audit of all soil materials to be completed at the end of each soil moving season and submitted to the County Planning Authority. The audit will include:

a. drawings and tables to identify clearly the origin, intermediate storage and final location of the different soil types. The drawings and tables are to be prepared as part of the first soil audit to a format to be agreed with the County Planning Authority and are to be updated as part of each subsequent audit to provide the most accurate ongoing summary of soil management at the site; and
b. volumetric information which is to be included in the tables.

Any recommendations resulting from each soil audit must be carried out in the timescale to the agreed with the County Planning Authority.

Reason: This is a pre-commencement condition for phase 1 and one which is considered warranted in order to ensure that the soil resources are correctly handled and safeguarded.

36. All topsoil, subsoil and overburden shall be permanently retained on site and used in restoration. Topsoil stripped in the course of working shall be directly placed for use in restoration or stored in bunds and seeded until used in site restoration.

Reason: To ensure soil resources are correctly handled and safeguarded.

37. Topsoil and subsoils shall only be stripped when they are in a dry and friable condition, movements of soils shall only occur:
    a. during the months April to September inclusive, or
    b. when all soil is in a suitable dry and friable condition that it is not subject to smearing, and
    c. when topsoil is sufficiently dry that it can be separated from subsoil without difficulty.

Reason: To ensure soil resources are correctly handled and safeguarded.

38. The movement of soils and overburden shall be suspended if necessary during dry and windy conditions to minimise the emission of particulate matter to air.
    i. All undisturbed areas of the site and all topsoil, subsoil, soil making material and overburden mounds shall be kept free from agriculturally noxious weeds as far as is reasonably practicable. Cutting, grazing or spraying shall be undertaken, as necessary, to control plant growth and the build-up of a seed bank of agricultural weed or their dispersal onto adjoining land.

    ii. The soil storage/screening bunds shall be constructed on the site in accordance with the submitted application details and Figure PS 5 (drawing reference PL/ES/06-19/21220RevE), PS 5a (drawing reference PL/ES/01-20/21221RevC); PS 5b (drawing reference PL/ES/01-20/21222RevC); PS 5c (drawing reference PL/ES/01-20/21223RevC); PS 5d (drawing reference PL/ES/01-20/21224RevC) and PS 5e (drawing reference PL/ES/01-20/21225RevC). Topsoil bunds will be 3 metres high and subsoil bunds will be a minimum of 3 metres high and a maximum of 5 metres high.

    iii. Prior to soil stripping no part of the site shall be excavated or traversed by heavy vehicles or machinery (except as necessary to strip that part of topsoil or subsoil) or used for a road or for the stationing of plant or buildings, or storage of subsoil or overburden or imported inert restoration materials or mineral deposits. In respect of soil storage it is necessary only to strip topsoil in areas where subsoil

will be stored. Where overburden will be stored it is necessary to strip topsoil and subsoil.

iv. Prior to the commencement of soil stripping operations in the western extraction area, a scheme detailing the design, spacing and maintenance of the pipework beneath the temporary soil storage/screening bunds located within Flood Zones 2 and 3 shall be submitted to and approved by the County Planning Authority. Thereafter, the pipework shall be constructed and maintained in accordance with the approved scheme.

Reason: To ensure soil resources are correctly handled and safeguarded and in the interests of amenity.

Water and drainage

39. The water ingress to the void will be controlled by a series of sumps and trenches excavated in the base of the site as the extraction progresses. The water will as necessary be pumped to the Internal Drainage Board managed drainage ditches. Prior to the discharge of water from the site a detailed scheme for the management of water at the site will be submitted to and approved by the County Planning Authority.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of water management.

40. No discharge of water from the site shall be undertaken until a scheme for the provision, implementation and maintenance of a surface water management system has been approved by to the reasonable satisfaction of the County Planning Authority in consultation with the Internal Drainage Board. The rate of discharge will not exceed that of a "greenfield site" at 1.4 litres per second per hectare.
The following criteria should also be used:
    a. Storage volume should accommodate a 1:30 year event with no surface flooding and no overland discharge off the site in a 1:100year event.
    b. A 30% allowance for climate change should be included in all calculations.
    c. A range of durations should be used to establish the worst-case scenario.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of water management.

41. The series of waterbodies at the restored site will be linked to an outfall to Parkhill Dyke (Drain) to the east of the western area of the site and the discharge of water off site will be managed by a weir structure. Prior to the commencement of clay extraction in Phase 4 the detailed design of the outfall and weir will be the subject of detailed design to be submitted to the County Planning Authority for approval in consultation with the Internal Drainage Board. The rate of discharge shall be consistent with the restrictions provided in Condition 40 above.

Reason: This is a pre-commencement condition for phase 4 and one which is considered warranted in the interests of water management.

42. There shall be no discharge of foul or contaminated drainage from the site into either groundwater or any surface waters, whether direct or via soakaway.

Reason: In the interests of pollution control.

43. No storage of fuels, lubricants oils or antifreeze will take place within the extraction area. Fuel will be stored in a self bunded mobile fuel storage tank and refuelling will be undertaken in accordance with the company environmental procedures to minimise the risk of spillage. Lubricants, oils and antifreeze will be stored in areas to contain spillage at the plant site.

Reason: In the interests of pollution control.

44. Prior to the commencement of the diversion a detailed scheme for the diversion of Heron Dyke shall be submitted to and approved by the County Planning Authority. The scheme shall include the line of the new dyke including the falls to demonstrate the flows will be similar as before into Parkhill Dyke, information on the construction of the new dyke such as materials management, and mammal protection measures will be included in the detailed scheme.

Reason: This is a pre-commencement condition and one which is considered warranted in the interests of the protection of the existing IDB drain.

45. A strip of land 9 metres wide adjacent to the top of both banks of all watercourses on site shall be kept clear of all new buildings and structures, including gates, walls, fences, hedging, planting and trees at all times and no mineral extraction will encroach on the 9-metre-wide stand-off, in accordance with reference PL/ES/06-19/21220revE.

Reason: In the interests of pollution control.

46. Full details of the proposed crossing of any watercourse must be approved with the County Planning Authority in consultation with the Internal Drainage Board prior to any such works commencing. A crossing must be constructed in accordance with the approved details.

Reason: In the interests of pollution control and protection of watercourses.

47. Full details of the proposed culverting of any watercourse must be approved with the County Planning Authority in consultation with the Internal Drainage Board prior to any such works commencing. A culvert must be installed in accordance with the approved details.

Reason: In the interests of pollution control and protection of watercourses.

Other

48. In addition to soils and overburden only imported inert restoration materials will be used to restore the site.

Reason: In the interests of amenity and in the interests of achieving a high standard of landscaping and restoration.

49. No lighting shall be used on the site during the hours of darkness except in an emergency.

Reason: In the interests of amenity.

50. No materials shall be burned on the site.

Reason: In the interests of amenity.

51. The excavation of minerals from the site shall be carried out by means of excavator and no other method of extraction (e.g. pecker or explosives) shall be permitted.

Reason: To ensure the rights of control of the County Planning Authority in the interests of amenity.

52. In the event of mineral extraction permanently ceasing on site for a period in excess of 18 months before the completion of the development a revised scheme of restoration, landscaping and aftercare shall be submitted to the County Planning Authority for written approval within 18 months of the cessation. The approved scheme shall be implemented in accordance with the programme to be included within that scheme.

Reason: To ensure restoration is undertaken as soon as practicable in the interests of amenity.

53. An annual community liaison meeting shall be organised by the operator to review schemes of working, soil audit results, restoration, landscaping, aftercare, and any relevant issues raised by the local community in relation to the site. This meeting shall include nominated representatives from the relevant parish councils and technical advisers as required, together with the County Planning Authority and if necessary the Internal Drainage Board and the Environment Agency.

Reason: In the interests of ensuring compliance and an orderly and progressive pattern of working and restoration.

54. A copy of the planning permission and any agreed variations, together with all the approved plans shall be kept available at the site office at all times.

Reason: To ensure that site personnel are aware of the terms of the planning permission.

Informatives

1. The existing Public Right(s) of Way on the site must be protected and kept clear of any obstruction until such time as any alternative route has been provided and confirmed under an Order made under the Town and Country Planning Act 1990. Applicants are advised to contact the County Council's Access and Public Rights of team at County Hall, Northallerton via paths@northyorks.gov.uk to obtain up-to-date information regarding the line of the route of the way. The applicant should discuss with the Highway Authority any proposals for altering the route.

Date: 29 March 2021

……..……..…

Corporate Director, Business and Environmental Services

NOTE :-
No consent, permission or approval hereby given absolves the applicant from the necessity of obtaining the approval, under the Building Regulations, of the District Council in whose area the site of the proposed development is situated; or of obtaining approval under any other byelaws, local acts, orders, regulations and statutory provisions in force; and no part of the proposed development should be commenced until such further approval has been obtained.

Statement of Compliance with Article 35(2) of the Town and Country Planning (Development Management Procedure) (England) Order 2015

In determining this planning application, the County Planning Authority has worked with the applicant adopting a positive and proactive manner. The County Council offers the opportunity for pre-application discussion on applications and the applicant, in this case, chose to take up this service. Proposals are assessed against the National Planning Policy Framework, Replacement Local Plan policies and Supplementary Planning Documents, which have been subject to proactive publicity and consultation prior to their adoption. During the course of the determination of this application, the applicant has been informed of the existence of all consultation responses and representations made in a timely manner which provided the applicant/agent with the opportunity to respond to any matters raised. The County Planning Authority has sought solutions to problems arising by liaising with consultees, considering other representations received and liaising with the applicant as necessary. Where appropriate, changes to the proposal were sought when the statutory determination timescale allowed.

RIGHTS OF APPEAL

(1) If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development, or to grant it subject to conditions, then you can appeal to the Secretary of State under Section 78 of the Town and Country Planning Act 1990.

If you want to appeal against your local planning authority's decision then you must do so within 6 months of the date of this notice.

Appeals must be made using a form which you can get from the Secretary of State at Temple Quay House, 2 The Square, Temple Quay, Bristol BS1 6PN (Tel: 0303 444 5000) or online at https://acp.planninginspectorate.gov.uk

The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.

The Secretary of State need not consider an appeal if it seems to the Secretary of State that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

(2) If permission to develop land is refused or granted subject to conditions, whether by the local planning authority or by the Secretary of State for Communities and Local Government, and the owner of the land claims that the land has become incapable of reasonably beneficial use in its existing state and cannot be rendered capable of reasonably beneficial use by the carrying out of any development which has been or would be permitted, he/she may serve on the Council of the county district in which the land is situated, a purchase notice requiring that Council to purchase his/her interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.

APPENDIX ESSD B

PLANNING PERMISSION REFERENCE C8/2021/1133/CPO

Decision No. C8/2021/1133/CPO

TOWN AND COUNTRY PLANNING ACT 1990

NORTH YORKSHIRE COUNTY COUNCIL

NOTICE OF DECISION OF PLANNING AUTHORITY ON APPLICATION FOR PERMISSION TO CARRY OUT DEVELOPMENT

TO:

Plasmor Ltd
PO Box 44
Womersley Road
Knottingley
West Yorkshire
WF11 0DN

MJCA
Baddesley Colliery Offices
Main Road
Baxterley
Atherstone
Warwickshire
CV9 2LE

The above-named Council being the Planning Authority for the purposes of your application dated 12 July 2021 in respect of proposed development for the purposes of construction of a site reception area comprising of an office building (approx. 112.5sq.m), vehicle maintenance building (approx. 49sq.m) and storage area, wheel wash and weighbridge office (approx.12.7sq. m) and car park at Land adjacent to and to the east of the current Escrick Quarry to the south west of Escrick in North Yorkshire have considered your said application and have granted permission for the proposed development subject to the following conditions:-

(please see attached sheets for conditions)

Date: 5 January 2023

……..……..…

Corporate Director, Business and Environmental Services

NOTE:-
No consent, permission or approval hereby given absolves the applicant from the necessity of obtaining the approval, under the Building Regulations, of the District Council in whose area the site of the proposed development is situated; or of obtaining approval under any other byelaws, local acts, orders, regulations and statutory provisions in force; and no part of the proposed development should be commenced until such further approval has been obtained.

FOR RIGHTS OF APPEAL SEE OVERLEAF

RIGHTS OF APPEAL

(1) If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development, or to grant it subject to conditions, then you can appeal to the Secretary of State under Section 78 of the Town and Country Planning Act 1990.

If you want to appeal against your local planning authority's decision then you must do so within 6 months of the date of this notice.

Appeals must be made using a form which you can get from the Secretary of State at Temple Quay House, 2 The Square, Temple Quay, Bristol BS1 6PN (Tel: 0303 444 5000) or online at https://acp.planninginspectorate.gov.uk

The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.

The Secretary of State need not consider an appeal if it seems to the Secretary of State that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

(2) If permission to develop land is refused or granted subject to conditions, whether by the local planning authority or by the Secretary of State for Communities and Local Government, and the owner of the land claims that the land has become incapable of reasonably beneficial use in its existing state and cannot be rendered capable of reasonably beneficial use by the carrying out of any development which has been or would be permitted, he/she may serve on the Council of the county district in which the land is situated, a purchase notice requiring that Council to purchase his/her interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.

Conditions:

1. The development to which this permission relates must be implemented no later than the expiration of three years from the date of this Decision Notice.

2. The permission hereby granted is valid only until 19th April 2059. In the event of the approved Escrick Quarry site (Ref. C8/2019/0917/CPO) or the operations at the application site permanently ceasing for a period in excess of 18 months before the completion of the development a revised scheme of restoration shall be submitted to the County Planning Authority for written approval within 18 months of the cessation. The approved scheme shall be implemented in accordance with the programme to be included within that scheme

3. The development hereby permitted shall be carried out in accordance with the application details dated 13th July 2021 as amended by the application submissions

to North Yorkshire County Council dated 30th July 2021 and 06th August 2021 and the following approved documents and drawings:

Ref.	**Date**	**Title**
Drawing reference PL/ES/07-21/22637	12/07/21	The site location
Drawing reference PL/ES/07-21/22638revA	19/07/21	The site and surrounding area
Drawing reference PL/ES/07-21/22639revA	19/07/21	Existing site layout (block plan)
Drawing reference PL/ES/07-21/22640revA	19/07/21	Proposed site layout plan
Document reference PL/ES/SE/1683/01/ASRA (Footer reference PL_ESp26787 Amendments to site reception area FV)	July 2021	Supporting Statement in respect of 'A planning application for a site reception area comprising an office building, car park, vehicle maintenance building and storage area together with internal haul roads at Escrick Quarry planning permission C8/2019/0917/CPO to the south west of Escrick in North Yorkshire' submitted with the email to North Yorkshire County Council dated 06 August 2021
Drawing reference PL/ES/11-22/23438	01/11/22	'Design of proposed site attenuation pond and a high level chamber to pump water from the site attenuation pond to a culverted tributary of the Bentley Park Drain in the event of an extreme rainfall event' attached to the email to the Ouse and Derwent Internal Drainage Board dated 23 November 2022
Document reference PL/ES/SE/1683/01/AFRA (Footer reference PL_ESp26787 FRA FV)	July 2021	Flood Risk Assessment for a planning application for amendments to the site reception area, including a new office building, new car park, vehicle maintenance building and stockpile area at land adjacent to the south and east of the current Escrick Quarry in North Yorkshire
Drawing reference	03/08/21	Plan showing the current and

Ref.	Date	Title
PL/ES/08-21/22644revA		proposed site layout and extent of flood zones 2 and 3a
Document reference PL/ES/SE/1683/01	September 2022	Annex A entitled 'Calculations of the surface water run off and attenuation at the proposed reception area, Escrick' attached to the email to the Ouse and Derwent Internal Drainage Board dated 2 September 2022
Document reference PL/ES/SE/1683/01	September 2022	Table 1 entitled 'Input parameters for the calculation of the greenfield run off rate and the post development runoff rate for the 1 in 100 year rainfall event plus 30% increase for climate change' attached to the email to the Ouse and Derwent Internal Drainage Board dated 2 September 2022
Drawing reference 6022-HJCE-XX-00-DR-S-3001 Rev. A3	17/11/22	'Site Plan and Drainage General Arrangement' attached to the email to the Ouse and Derwent Internal Drainage Board dated 23 November 2022
Document reference PL/ES/SE/1683/01	November 2021	Construction Management Plan for the site reception area Planning application reference NY/2021/0180/FUL provided at Schedule 1 to the letter to North Yorkshire County Council dated 3 November 2021
Drawing reference SYARD/APR2021	April 2021	Topographical Survey. April 2021.
Drawing reference ESC010 Rev.0	February 2022	'PROPOSED NEW OFFICE AND COMPOUND LAYOUT - PLANTING PLAN' provided with the letter to North Yorkshire County Council dated 11 February 2022
Document reference MJCA115	November 2021	'Preliminary Ecological Appraisal : Proposed Site Reception for Escrick Quarry, Land at Escrick, North Yorkshire' provided with the email to North Yorkshire

Ref.	Date	Title
		County Council dated 17 November 2021
Drawing reference PL/ES/07-21/22641	12/07/21	Elevations and floor plan for the proposed office building
Drawing reference PL/ES/07-21/22642	12/07/21	Elevations and floor plan for the proposed vehicle maintenance building
Drawing reference PL/ES/07-21/22643	12/07/21	Elevations and floor plan for the proposed weighbridge office
Drawing reference PCE/062	26/10/2020	G.A. OF WHEEL WASH AND CIVIL WORK ESCRICK PHASE 2

4. Except with the prior written approval of the County Planning Authority operations at the site shall only take place between 0630 and 1700 Mondays to Fridays. Only essential maintenance work will be undertaken on Saturdays between 0715 and 1300 and no work on Saturdays outside these hours. No operations shall take place on Sundays or Bank Holidays or Public Holidays.

5. A detailed scheme for the restoration works including a programme for the implementation of the works shall be submitted to the County Planning Authority for written approval within six months of the date of this planning permission. The detailed restoration scheme shall be based on drawing reference ESC009 Rev B entitled 'Advance planting, restoration planting and aftercare plan' dated February 2022 approved pursuant to Condition 32 of planning permission reference C8/2019/0917/CPO together with drawing reference ESC010 Rev 0 entitled 'Proposed new office and compound layout - planting plan' dated February 2022. Once approved the restoration scheme shall be adhered to at all times for the duration of the development.

6. The surface water drainage works shall be constructed in accordance with "Design of proposed site attenuation pond and a high level pump chamber to pump water from the site attenuation pond to a culverted tributary of the Bentley Park Drain in the event of an extreme rainfall event" - "Figure 1" - drawing reference PL/ES/11-22/23438 – dated 01/11/2022. Any changes to the scheme must be approved by the County Planning Authority in consultation with Ouse & Derwent Internal Drainage Board, and then implemented to the reasonable satisfaction of the County Planning Authority before the development is brought into use.

7. The foul sewage drainage works shall be constructed in accordance with "Site Plan and Drainage General Arrangement" - drawing reference 6022-HJCE-XX-00-DR-S-3001 – Revision A3 – dated 17/11/22 Any changes to the scheme must be approved by the County Planning Authority in consultation with Ouse & Derwent Internal Drainage Board, and then implemented to the reasonable satisfaction of the County Planning Authority before the development is brought into use.

8. There shall be no access or egress between the highway and the application site by any vehicles other than via the existing access with the public highway. The access shall be maintained in a safe manner which shall include as necessary the cutting

back of the vegetation at the access to ensure the necessary visibility splays onto the A19.

9. The development the subject of this planning permission shall only be used by vehicles associated with clay extraction and restoration operation at the adjacent Escrick Quarry which is the subject of planning permission reference C8/2019/0917/CPO (or other subsisting planning permission associated with the adjacent Escrick Quarry). A written record of all heavy goods vehicle movements into and out of the site the subject of this planning permission shall be maintained and retained at the site for a period of six months. The record shall contain the vehicles registration number and the time and date of movement together with a record of whether the vehicles was exporting clay, importing restoration materials or associated with another purpose. The record shall be retained at site and made available to the County Planning Authority on request

10. The development hereby approved, shall, at all times, be carried out in accordance with the recommendations set out in the Preliminary Ecological Appraisal Report (ref. MJCA1154 dated November 2021).

Reasons:

1. To comply with Section 91 of Town and Country Planning Act 1990 as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

2. To ensure the timely restoration of the site

3. To ensure that the development is carried out in accordance with the application details.

4. In the interests of amenity

5. To ensure a good standard of restoration in the interests of amenity.

6. To ensure the development is provided with satisfactory means of drainage and to reduce the risk of flooding.

7. To ensure the development is provided with satisfactory means of drainage and to reduce the risk of flooding.

8. In the interests of both vehicle and pedestrian safety and the visual amenity of the area.

9. In the interests of ensuring the safe and efficient operation of the strategic road network.

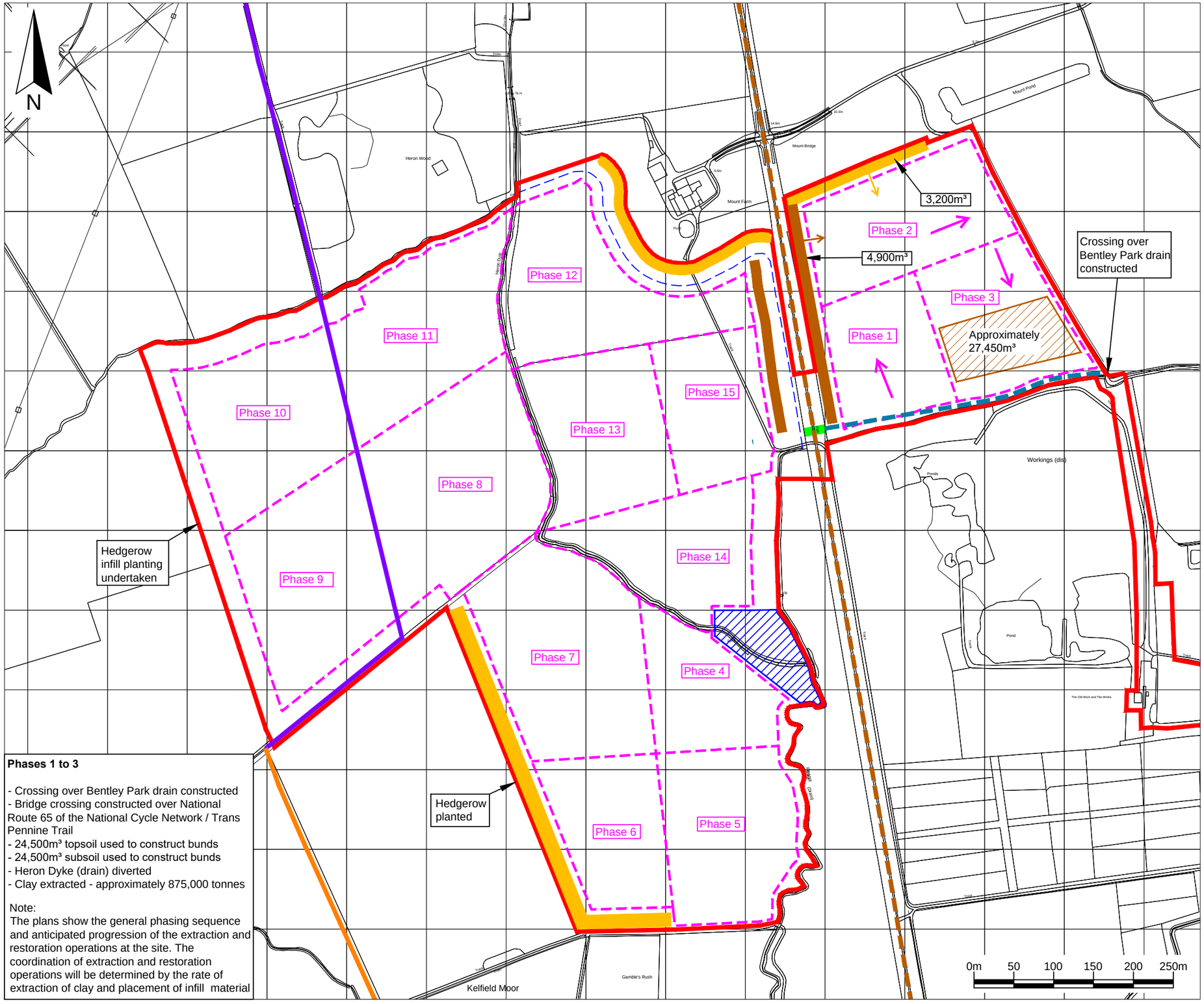
10. In the interests of protecting wildlife and their habitats.

Statement of Compliance with Article 35(2) of the Town and Country Planning (Development Management Procedure) (England) Order 2015

In determining this planning application, the County Planning Authority has worked with the applicant adopting a positive and proactive manner. The County Council offers the opportunity for pre-application discussion on applications and the applicant, in this case, chose not to take up this service. Proposals are assessed against the National Planning Policy Framework, Replacement Local Plan policies and Supplementary Planning Documents, which have been subject to proactive publicity and consultation prior to their adoption. During the course of the determination of this application, the applicant has been informed of the existence of all consultation responses and representations made in a timely manner which provided the applicant/agent with the opportunity to respond to any matters raised. The County Planning Authority has sought solutions to problems arising by liaising with consultees, considering other representations received and liaising with the applicant as necessary. Where appropriate, changes to the proposal were sought when the statutory determination timescale allowed.

APPENDIX ESSD C

DRAWINGS SHOWING THE PHASED OPERATIONS AT THE SITE



Phases 1 to 3

- Crossing over Bentley Park drain constructed
- Bridge crossing constructed over National Route 65 of the National Cycle Network / Trans Pennine Trail
- 24,500m³ topsoil used to construct bunds
- 24,500m³ subsoil used to construct bunds
- Heron Dyke (drain) diverted
- Clay extracted - approximately 875,000 tonnes

Note:
The plans show the general phasing sequence and anticipated progression of the extraction and restoration operations at the site. The coordination of extraction and restoration operations will be determined by the rate of extraction of clay and placement of infill material

Key / Notes

- Planning application boundary
- Mineral extraction phase
- Phase 3 — Mineral extraction phase number and direction of working
- Proposed restoration phase
- Phase 3 — Proposed restoration phase number and direction of infilling
- Proposed diverted route of Heron Dyke (Drain)
- Approximate exclusion area due to archaeology
- National Route 65 of the National Cycle Network / Trans Pennine Trail
- Haul route
- Topsoil storage bund
- Subsoil storage bund
- Soil overburden storage
- Indicative location of the bridge which will be constructed over National Route 65 of the National Cycle Network / Trans Pennine Trail
- Approximate route of bridleway 35.62/9/1 (to be diverted)
- Approximate route of bridleway 35.40/11/1

Rev	Status	Drn	App	Chk	Date
C	Amended bund	SRW	SE		09/04/20
B	Haul route additions	HM	SE	LC	13/02/20
A	Additional info on phasing	HM	SE	LC	31/07/19
	Final	KR	SE	LC	31/07/19

Site
ESCRICK

Client
Plasmor Limited

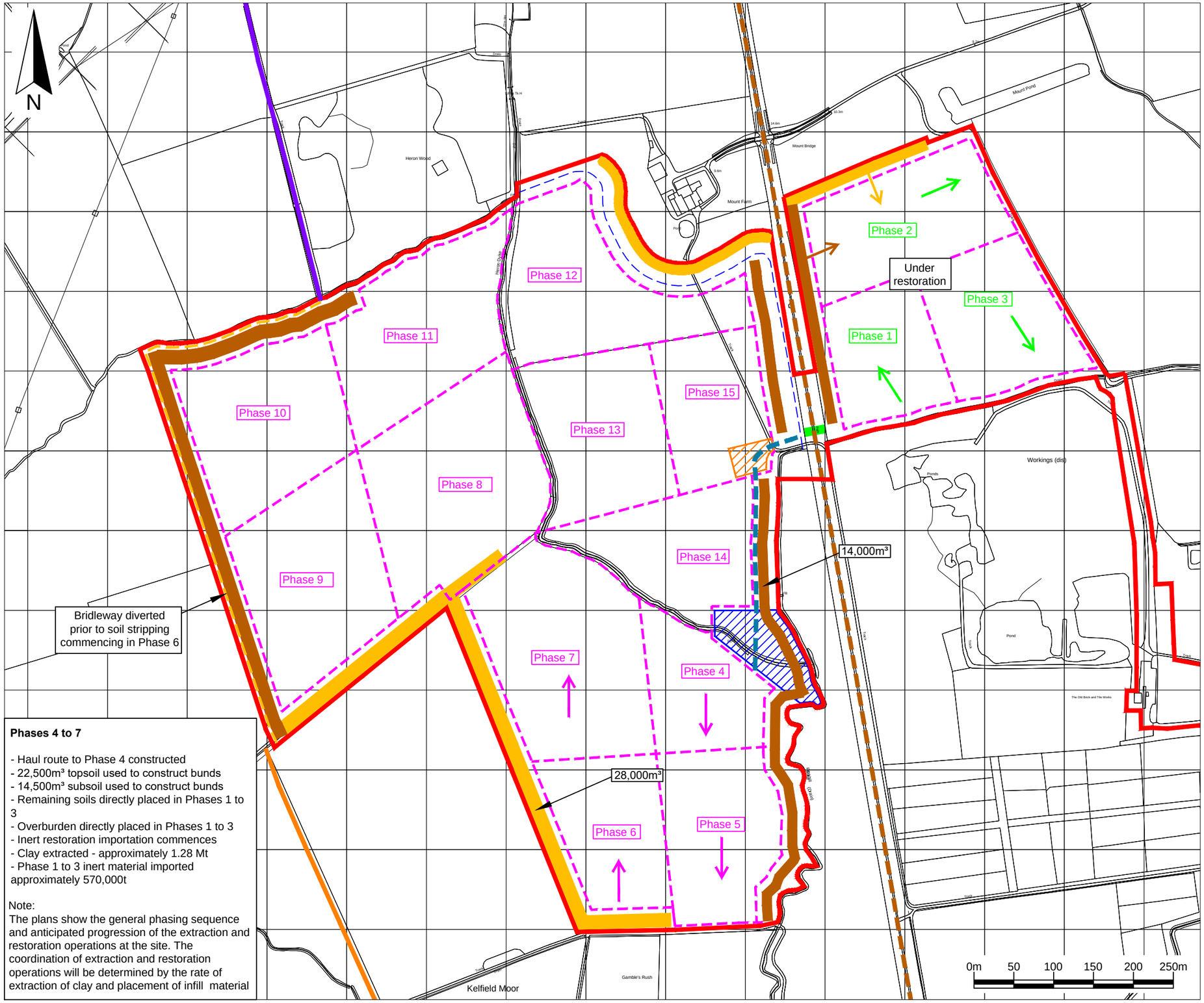
Title
The proposed phasing of the clay extraction operations in Phases 1 - 3

Figure PS 5a

Scale
1:5,000@A3

Drawing Ref
PL/ES/01-20/21221revC

MJCA
Technical advisers on environmental issues
Baddesley Colliery Offices,
Main Road, Baxterley, Atherstone
Warwickshire, CV9 2LE.
Telephone : 01827 717891
Fax : 01827 718507



Phases 4 to 7

- Haul route to Phase 4 constructed
- 22,500m³ topsoil used to construct bunds
- 14,500m³ subsoil used to construct bunds
- Remaining soils directly placed in Phases 1 to 3
- Overburden directly placed in Phases 1 to 3
- Inert restoration importation commences
- Clay extracted - approximately 1.28 Mt
- Phase 1 to 3 inert material imported approximately 570,000t

Note:
The plans show the general phasing sequence and anticipated progression of the extraction and restoration operations at the site. The coordination of extraction and restoration operations will be determined by the rate of extraction of clay and placement of infill material

Key / Notes

- Planning application boundary
- Mineral extraction phase
- Phase 3 — Mineral extraction phase number and direction of working
- Proposed restoration phase
- Phase 3 — Proposed restoration phase number and direction of infilling
- Diverted route of Heron Dyke (Drain)
- Approximate exclusion area due to archaeology
- National Route 65 of the National Cycle Network / Trans Pennine Trail
- Topsoil storage bund
- Subsoil storage bund
- Indicative location of the bridge which will be constructed over National Route 65 of the National Cycle Network
- Site compound
- Haul route
- Approximate route of bridleway 35.62/9/1 (to be diverted)
- Approximate route of bridleway 35.40/11/1
- Proposed diverted route of Bridleway 35.62/9/1

Rev	Status	Drn	App	Chk	Date
C	Amended bund	HM	SE		09/04/20
B	Addition of bridleways	HM	SE	LC	13/02/20
A	Additional info on phasing	HM	SE	LC	31/07/19
	Final	KR	SE	LC	31/07/19

Site: ESCRICK

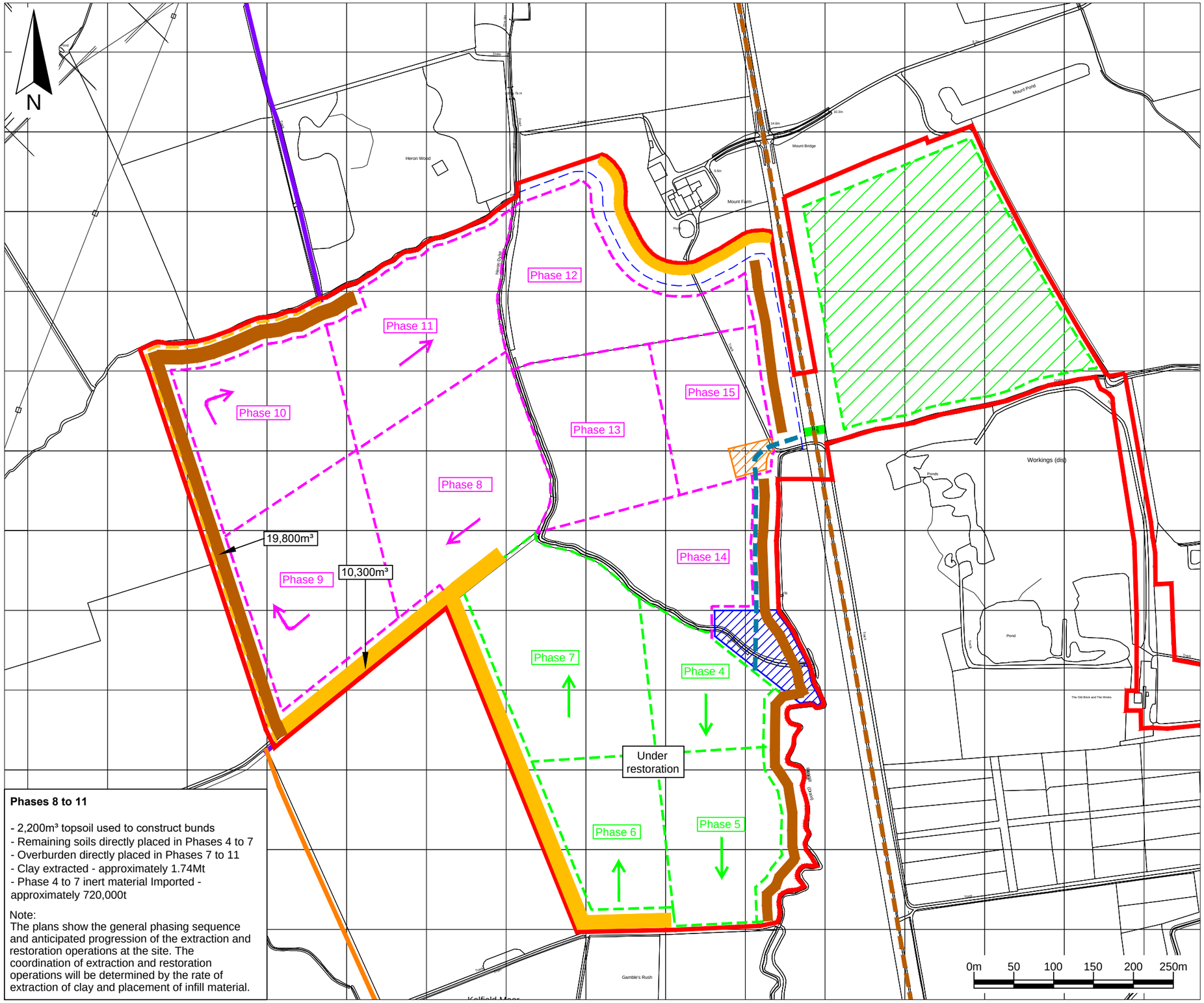
Client: Plasmor Limited

Title: The proposed phasing of the clay extraction operations in Phases 4 - 7 and the restoration operations in Phases 1 - 3

Figure PS 5b | Scale: 1:5,000@A3

Drawing Ref: PL/ES/01-20/21222revC

MJCA
Technical advisers on environmental issues
Baddesley Colliery Offices,
Main Road, Baxterley, Atherstone
Warwickshire, CV9 2LE.
Telephone : 01827 717891
Fax : 01827 718507



Phases 8 to 11

- 2,200m³ topsoil used to construct bunds
- Remaining soils directly placed in Phases 4 to 7
- Overburden directly placed in Phases 7 to 11
- Clay extracted - approximately 1.74Mt
- Phase 4 to 7 inert material Imported - approximately 720,000t

Note:
The plans show the general phasing sequence and anticipated progression of the extraction and restoration operations at the site. The coordination of extraction and restoration operations will be determined by the rate of extraction of clay and placement of infill material.

Key / Notes

- Planning application boundary
- Mineral extraction phase
- Phase 3 — Mineral extraction phase number and direction of working
- Restoration phase
- Phase 3 — Restoration phase number and direction of infilling
- Restored area
- Diverted route of Heron Dyke (Drain)
- Approximate exclusion area due to archaeology
- National Route 65 of the National Cycle Network / Trans Pennine Trail
- Topsoil storage bund
- Subsoil storage bund
- Indicative location of the bridge which will be constructed over National Route 65 of the National Cycle Network
- Site compound
- Haul route
- Proposed diverted route of Bridleway 35.62/9/1
- Existing route of Bridleway 35.62/9/1
- Approximate route of bridleway 35.40/11/1

Rev	Status	Drn	App	Chk	Date
C	Amended bund	SRW	SE		09/04/20
B	Added bridleway	HM	SE	LC	13/02/20
A	Additional Phasing	HM	SE	LC	31/07/19
	Final	KR	SE	LC	31/07/19

Site: ESCRICK

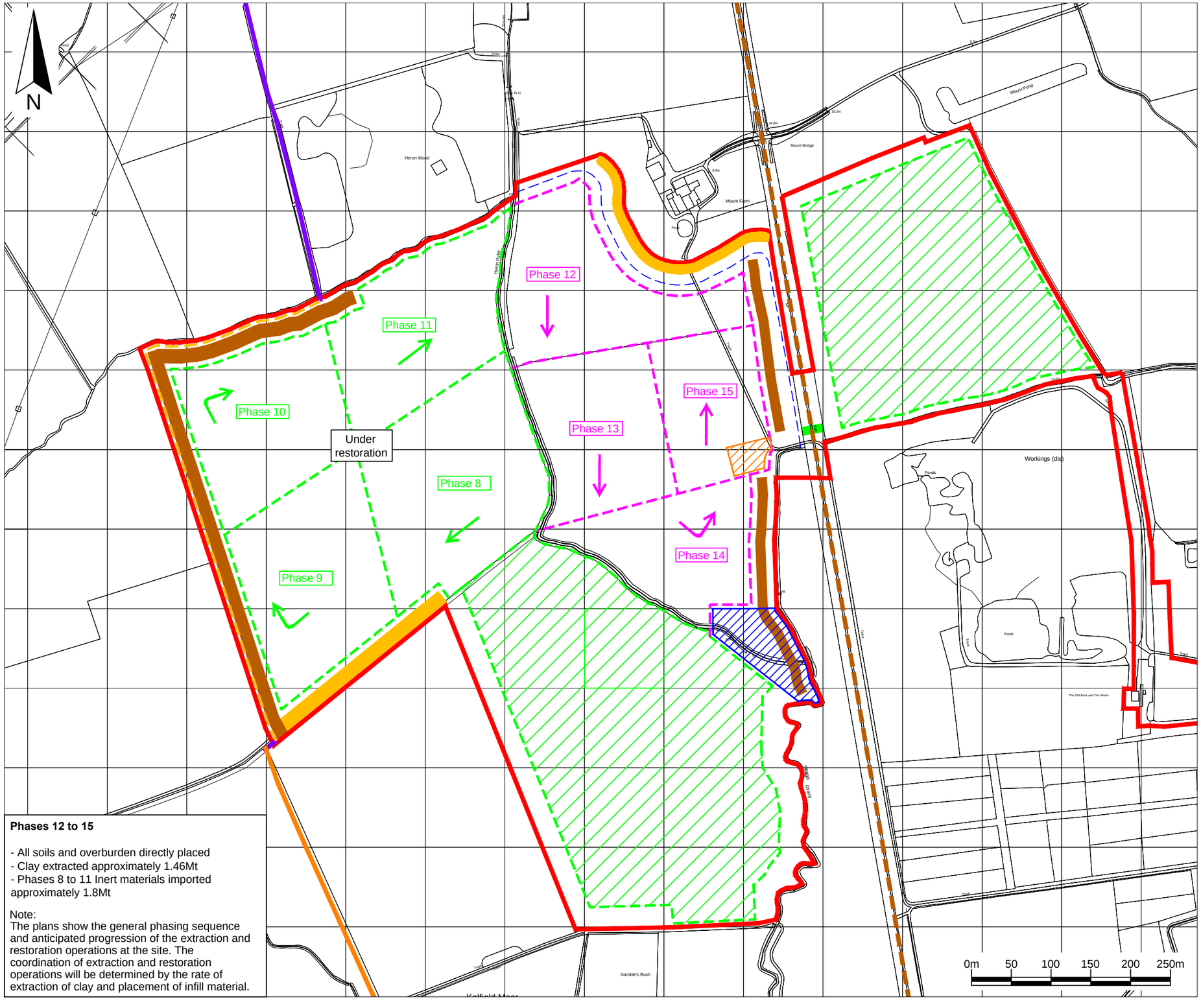
Client: Plasmor Limited

Title: The proposed phasing of the clay extraction operations in Phases 8 - 11 and the restoration operations in Phases 4 - 7

Figure PS 5c | Scale: 1:5,000@A3

Drawing Ref: PL/ES/01-20/21223revC

MJCA
Technical advisers on environmental issues
Baddesley Colliery Offices, Main Road, Baxterley, Atherstone, Warwickshire, CV9 2LE.
Telephone : 01827 717891
Fax : 01827 718507



Phases 12 to 15

- All soils and overburden directly placed
- Clay extracted approximately 1.46Mt
- Phases 8 to 11 Inert materials imported approximately 1.8Mt

Note:
The plans show the general phasing sequence and anticipated progression of the extraction and restoration operations at the site. The coordination of extraction and restoration operations will be determined by the rate of extraction of clay and placement of infill material.

Key / Notes

- Planning application boundary
- Mineral extraction phase
- Phase 3 — Mineral extraction phase number and direction of working
- Restoration phase
- Phase 3 — Restoration phase number and direction of infilling
- Restored area
- Diverted route of Heron Dyke (Drain)
- Approximate exclusion area due to archaeology
- National Route 65 of the National Cycle Network / Trans Pennine Trail
- Topsoil storage bund
- Subsoil storage bund
- Indicative location of the bridge which will be constructed over National Route 65 of the National Cycle Network
- Site compound
- Proposed diverted route of Bridleway 35.62/9/1
- Existing route of Bridleway 35.62/9/1
- Approximate route of bridleway 35.40/11/1

Rev	Status	Drn	App	Chk	Date
C	Amended bund	SRW	SE		09/04/20
B	Added bridleway	HM	SE	LC	13/02/20
A	Additional info on phasing	HM	SE	LC	31/07/19
	Final	KR	SE	LC	31/07/19

Site: ESCRICK

Client: Plasmor Limited

Title: The proposed phasing of the clay extraction operations in Phases 12 - 15 and the restoration operations in Phases 8 - 11

Figure PS 5d | Scale 1:5,000@A3

Drawing Ref: PL/ES/01-20/21224revC

MJCA
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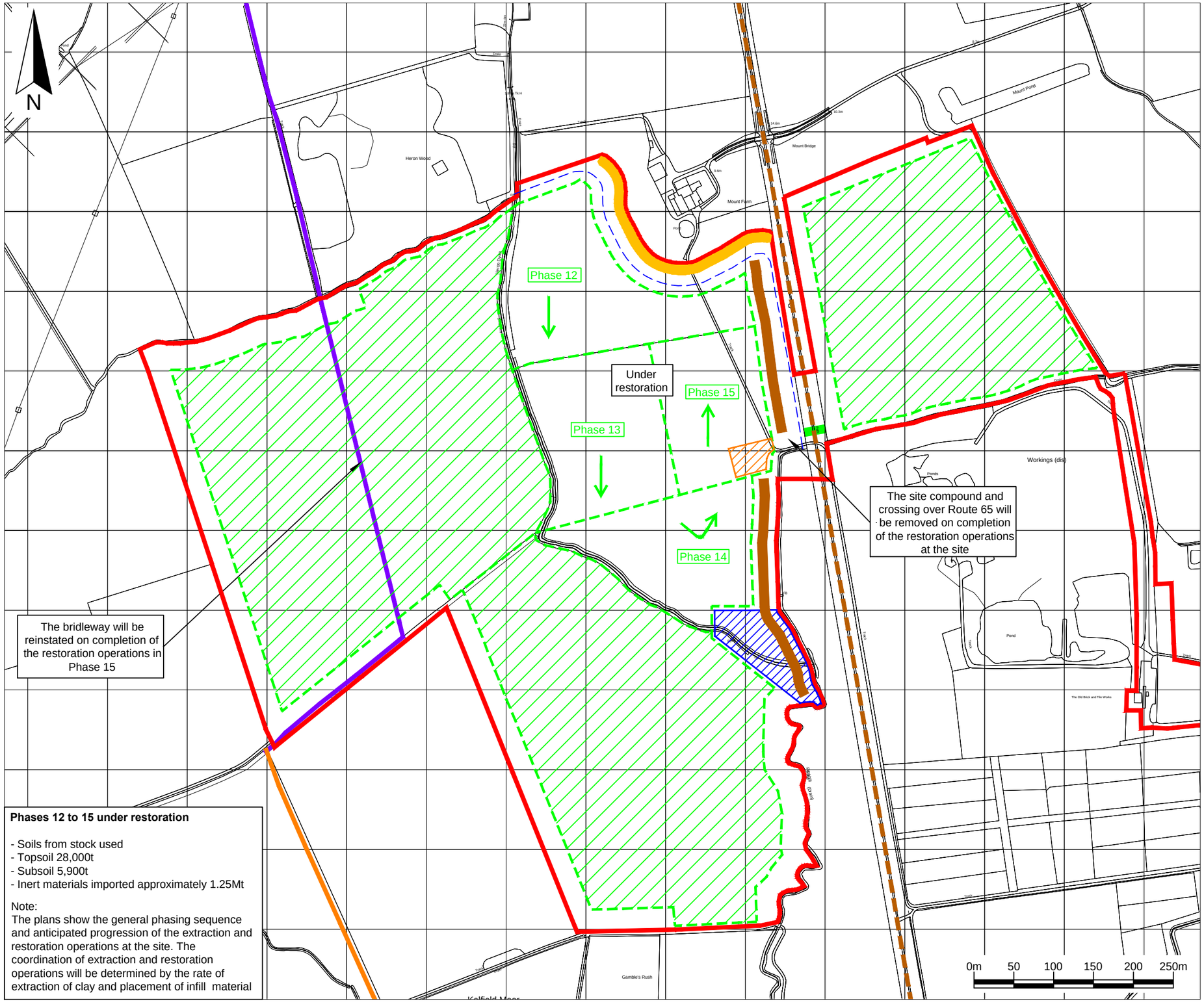

Phases 12 to 15 under restoration

- Soils from stock used
- Topsoil 28,000t
- Subsoil 5,900t
- Inert materials imported approximately 1.25Mt

Note:
The plans show the general phasing sequence and anticipated progression of the extraction and restoration operations at the site. The coordination of extraction and restoration operations will be determined by the rate of extraction of clay and placement of infill material

Key / Notes

- Planning application boundary
- Mineral extraction phase
- Phase 3 — Mineral extraction phase number and direction of working
- Restoration phase
- Phase 3 — Restoration phase number and direction of infilling
- Restored area
- Diverted route of Heron Dyke (Drain)
- Approximate exclusion area due to archaeology
- National Route 65 of the National Cycle Network / Trans Pennine Trail
- Topsoil storage bund
- Subsoil storage bund
- Indicative location of the bridge which will be constructed over National Route 65 of the National Cycle Network / Trans Pennine Trail
- Site compound
- Route of Bridleway 35.62/9/1

Rev	Status	Drn	App	Chk	Date
C	Amended bund	SRW	SE		09/04/20
B	Added bridleway	HM	SE	LC	13/02/20
A	Additional phasing	HM	SE	LC	31/07/19
	Final	KR	SE	LC	31/07/19

Site: ESCRICK

Client: Plasmor Limited

Title: The proposed phasing of the restoration operations in Phases 12 - 15

Figure PS 5e | Scale: 1:5,000@A3

Drawing Ref: PL/ES/01-20/21225revC

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APPENDIX ESSD D

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
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
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
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
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)
BM 123.45 m 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

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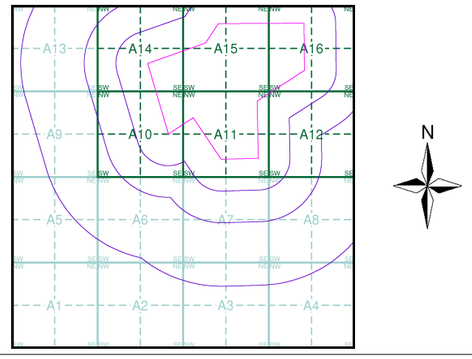
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1851	2
Yorkshire	1:10,560	1892	3
Yorkshire	1:10,560	1909 - 1910	4
Yorkshire	1:10,560	1952	5
Ordnance Survey Plan	1:10,000	1958	6
Ordnance Survey Plan	1:10,000	1965 - 1966	7
Ordnance Survey Plan	1:10,000	1968	8
Ordnance Survey Plan	1:10,000	1979	9
Ordnance Survey Plan	1:10,000	1980 - 1987	10
Ordnance Survey Plan	1:10,000	1989	11
Ordnance Survey Plan	1:10,000	1990 - 1991	12
10K Raster Mapping	1:10,000	1999	13
10K Raster Mapping	1:10,000	2006	14
VectorMap Local	1:10,000	2018	15

Historical Map - Slice A



Order Details

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Customer Ref: PL/ES/JRC/2948/01
National Grid Reference: 461450, 440120
Slice: A
Site Area (Ha): 82.61
Search Buffer (m): 1000

Site Details

Site at 461540, 440390

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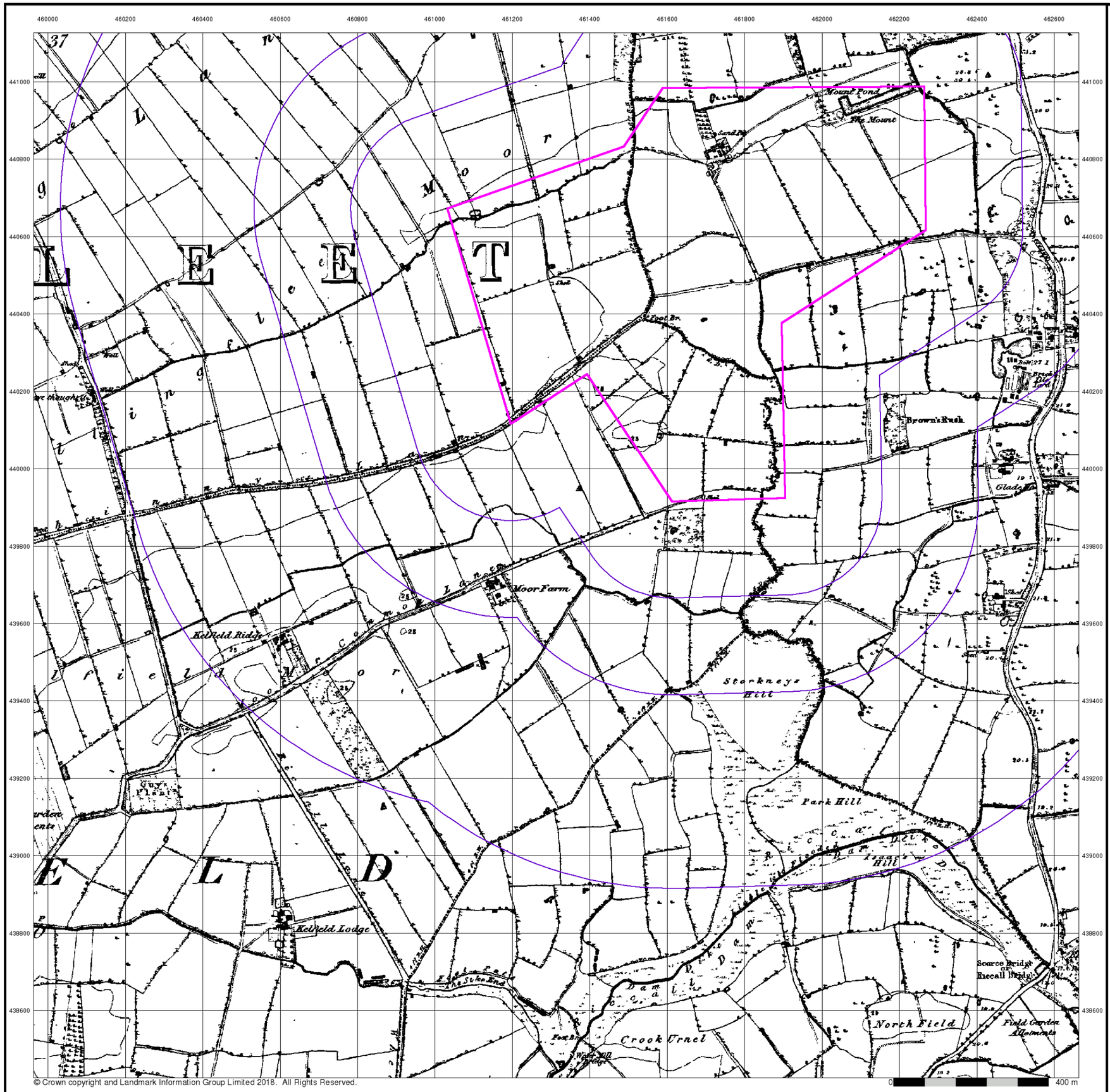
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Yorkshire

Published 1851

Source map scale - 1:10,560

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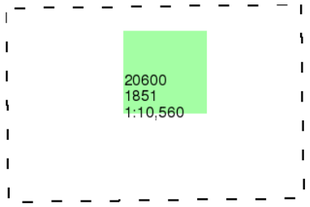
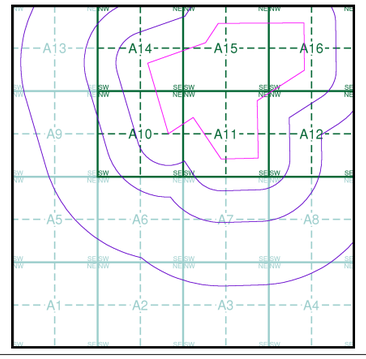
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
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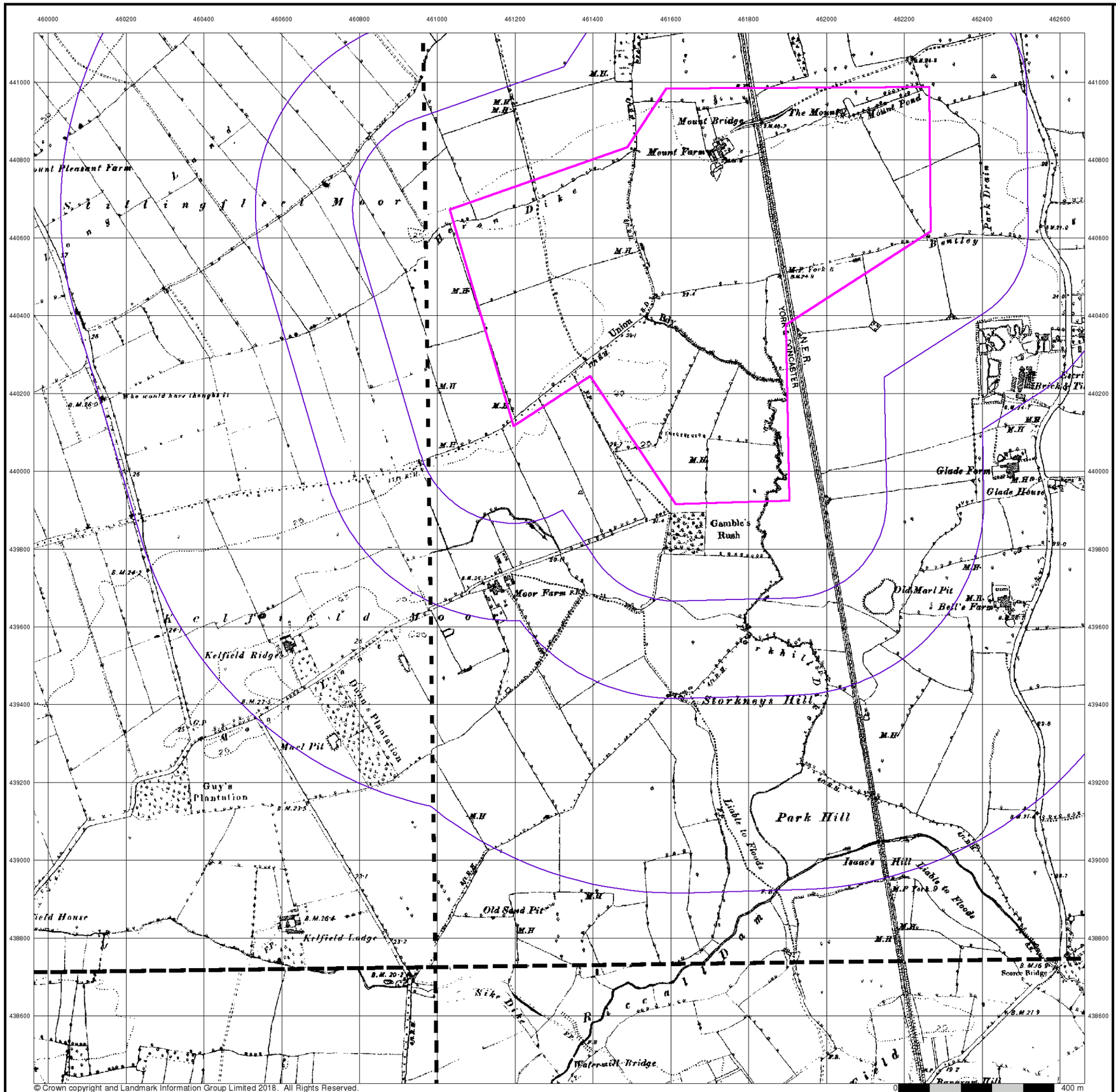

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Yorkshire

Published 1892

Source map scale - 1:10,560

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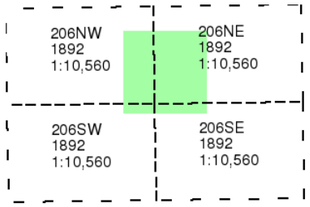
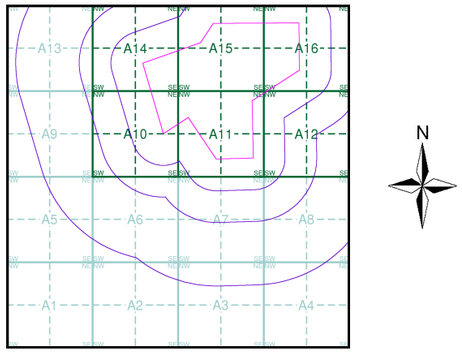
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	1000

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Site at 461540, 440390

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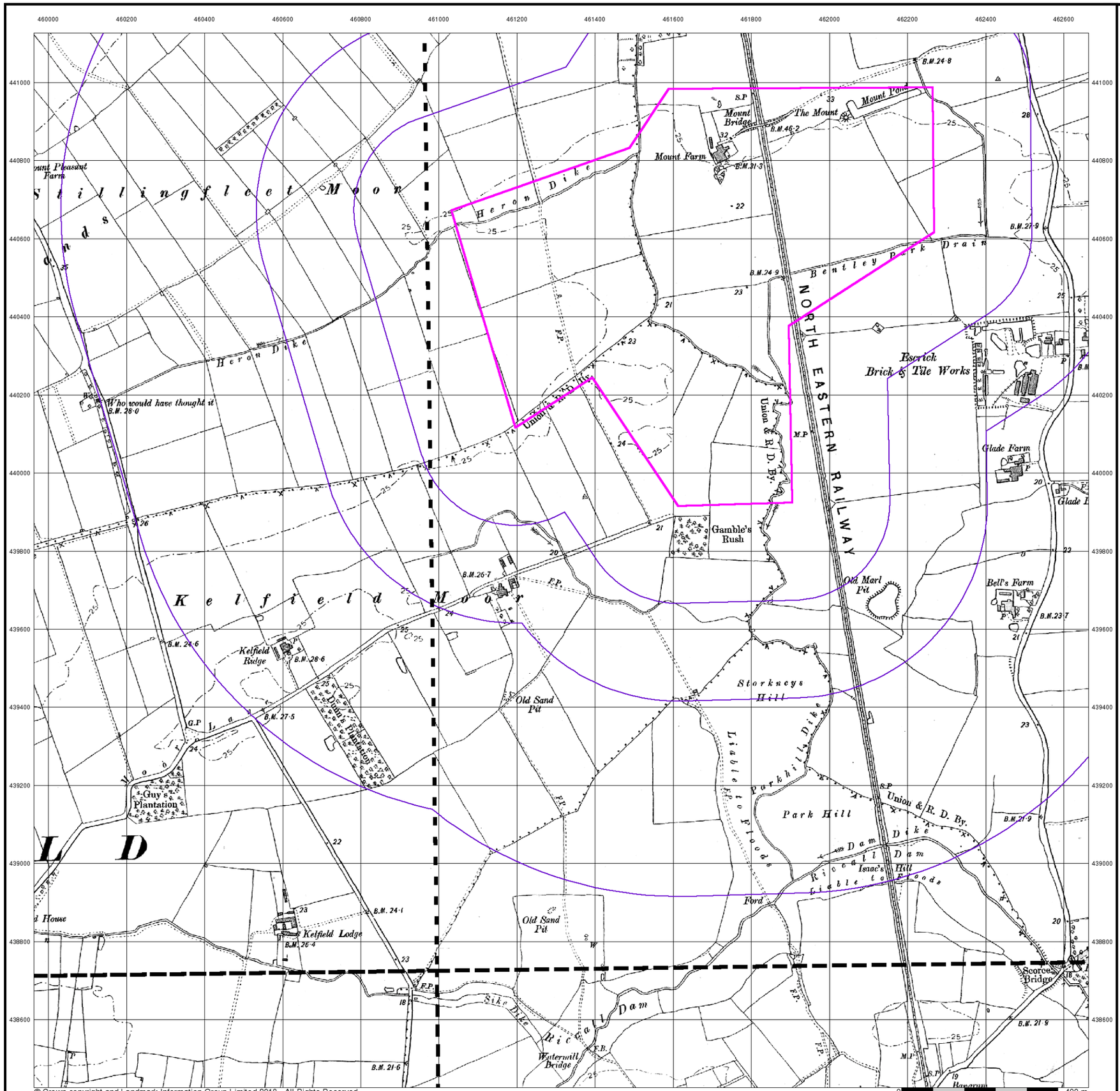

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Yorkshire

Published 1909 - 1910

Source map scale - 1:10,560

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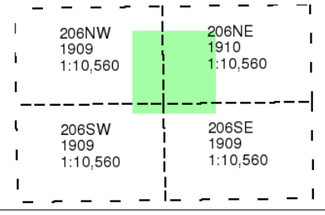
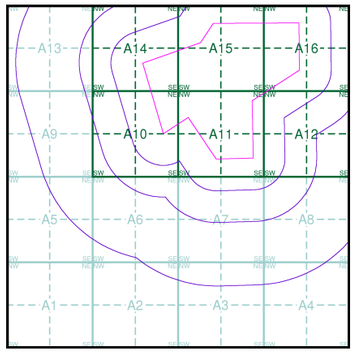
Map Name(s) and Date(s)



Historical Map - Slice A



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Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
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Site Details

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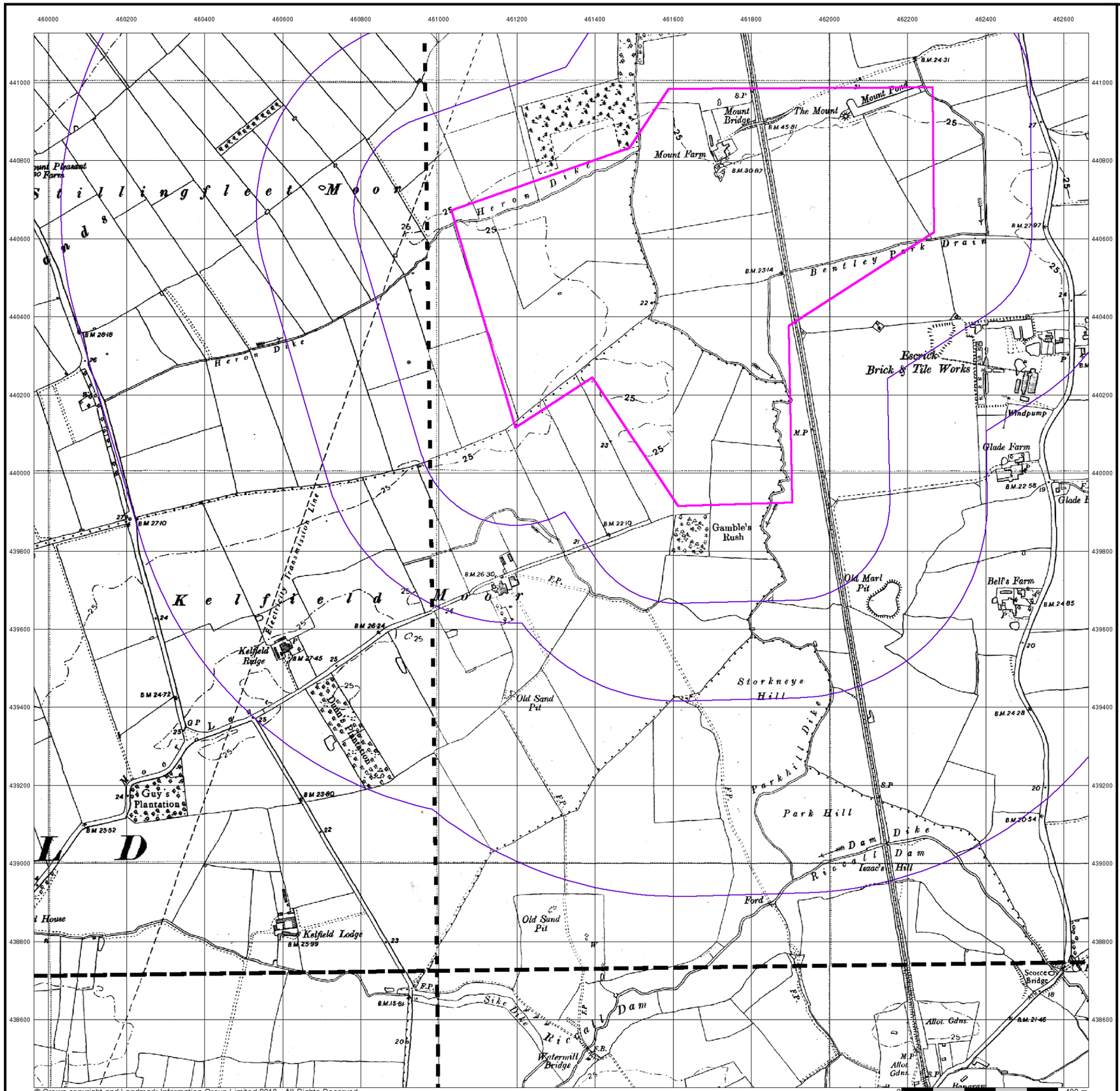

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Yorkshire

Published 1952

Source map scale - 1:10,560

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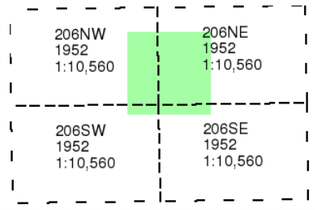
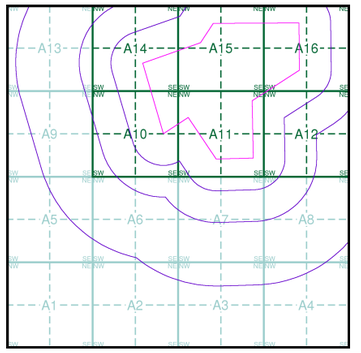
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	1000

Site Details

Site at 461540, 440390

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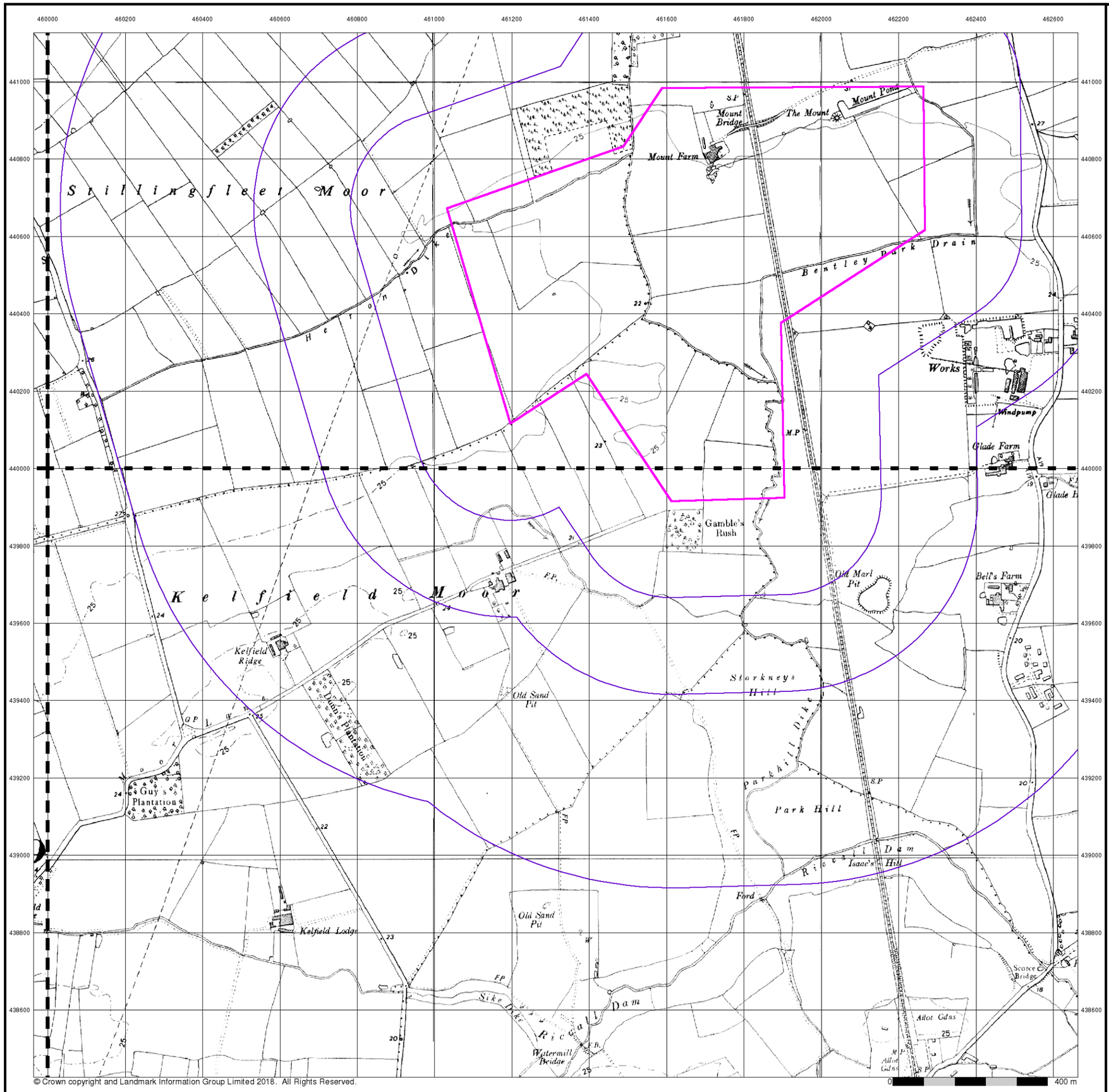

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Ordnance Survey Plan

Published 1958

Source map scale - 1:10,000

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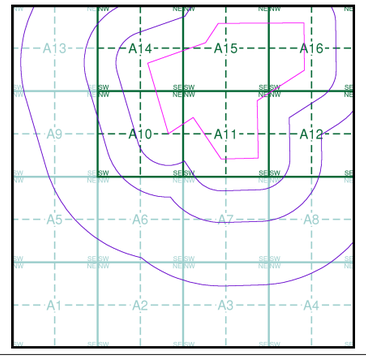
Map Name(s) and Date(s)

SE54SE 1958 1:10,560	SE64SW 1958 1:10,560
SE53NE 1958 1:10,560	SE63NW 1958 1:10,560

Historical Map - Slice A



Order Details

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Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	1000

Site Details

Site at 461540, 440390

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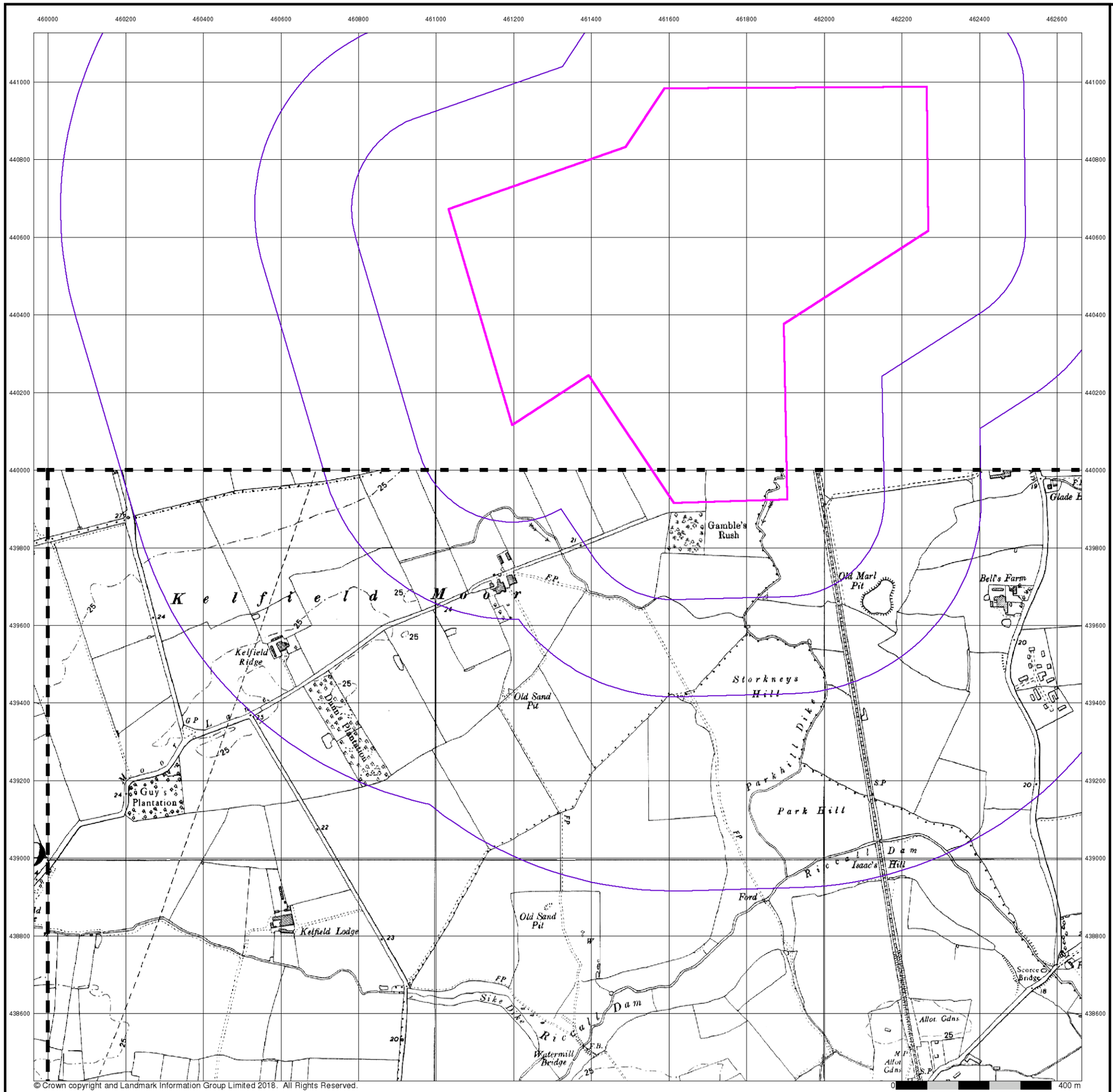

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Ordnance Survey Plan

Published 1965 - 1966

Source map scale - 1:10,000

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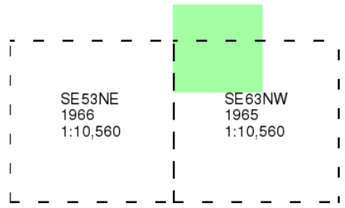
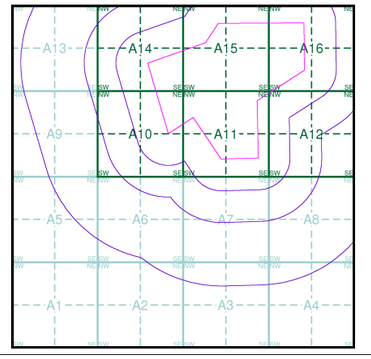
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	1000

Site Details

Site at 461540, 440390

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Fax: 0844 844 9951
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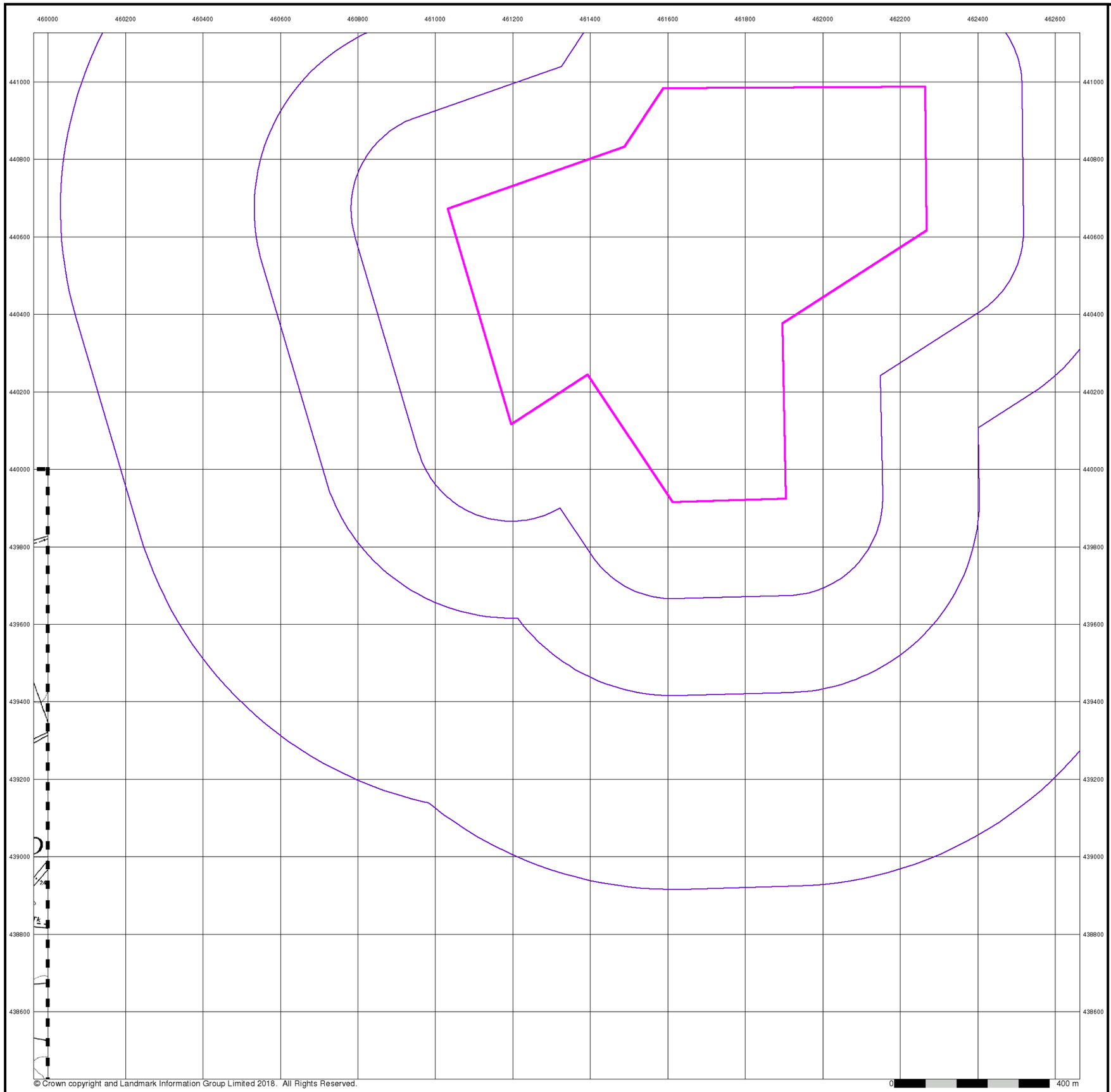

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LANDMARK INFORMATION GROUP®

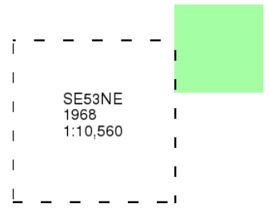
Ordnance Survey Plan

Published 1968

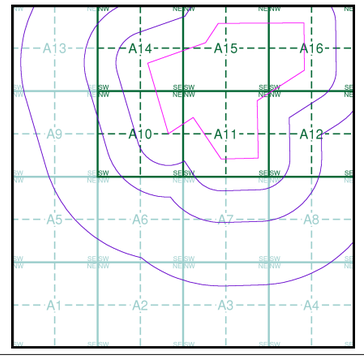
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	1000

Site Details

Site at 461540, 440390

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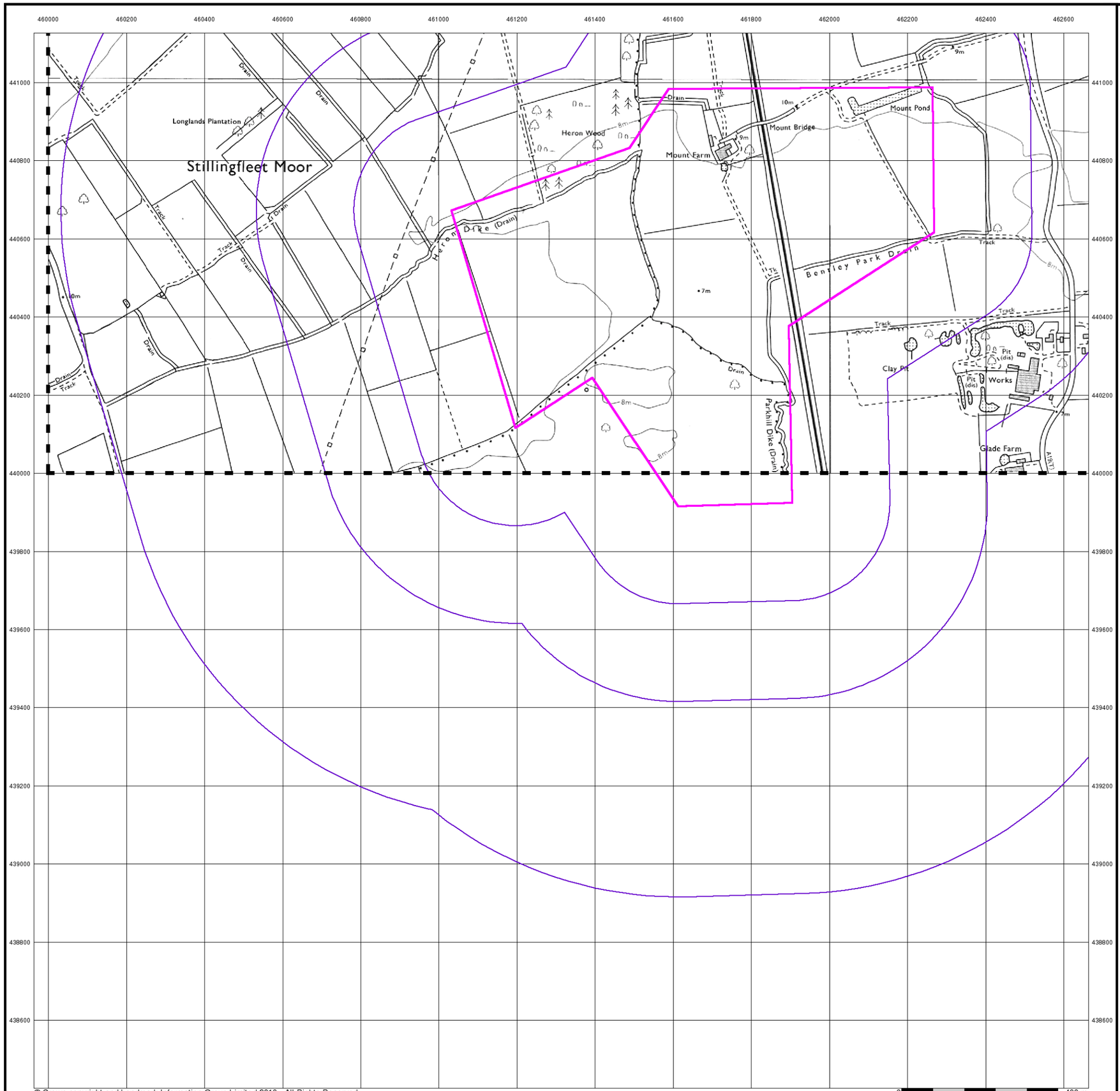
Web: www.envirocheck.co.uk



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Ordnance Survey Plan

Published 1979

Source map scale - 1:10,000

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

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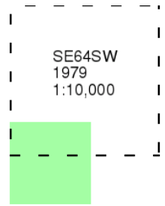
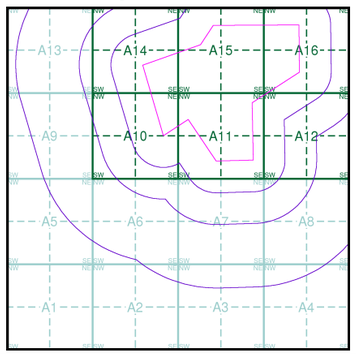


Historical Map - Slice A



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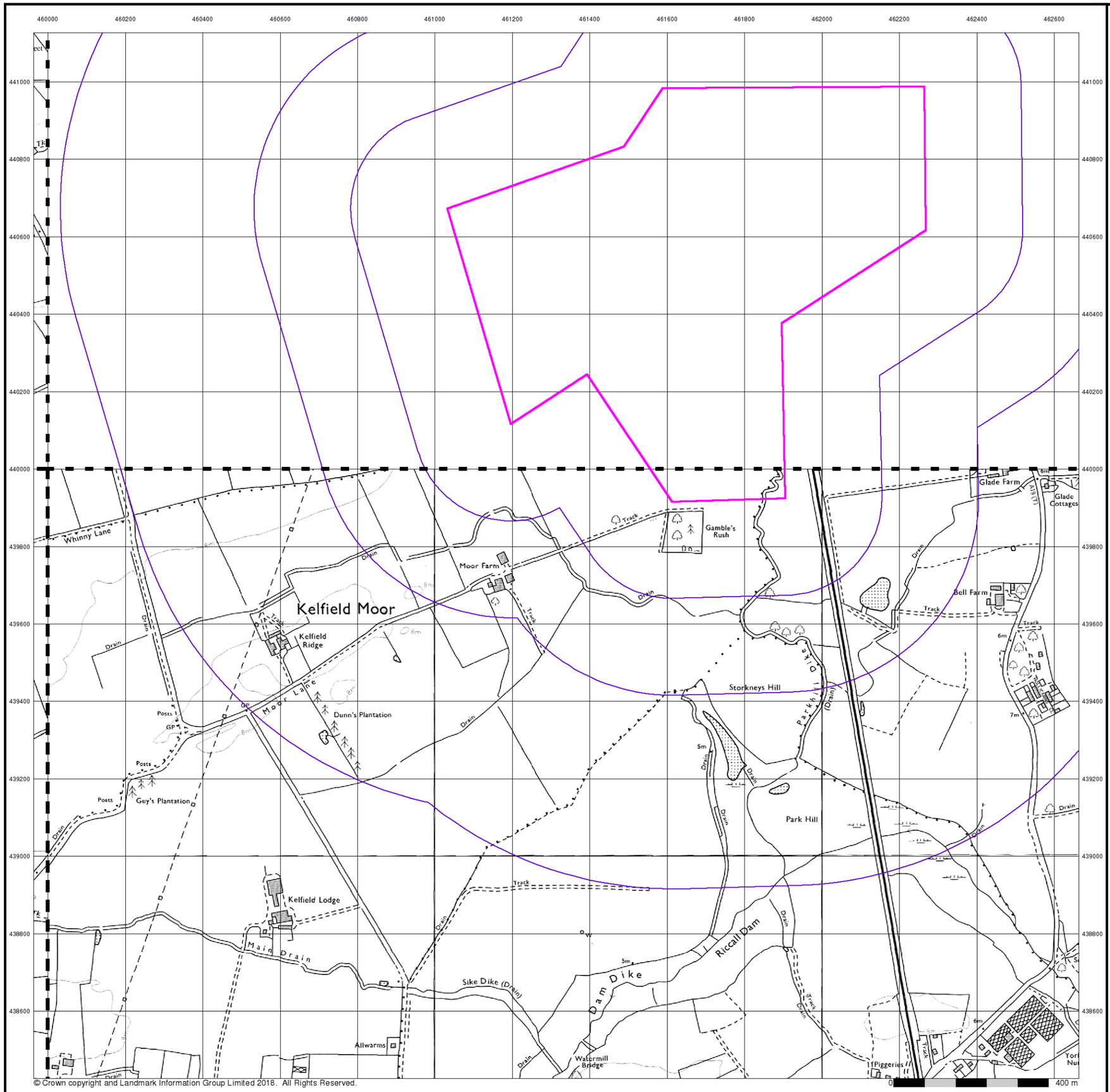

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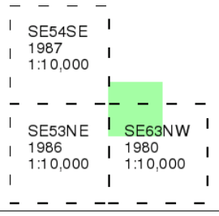
Ordnance Survey Plan

Published 1980 - 1987

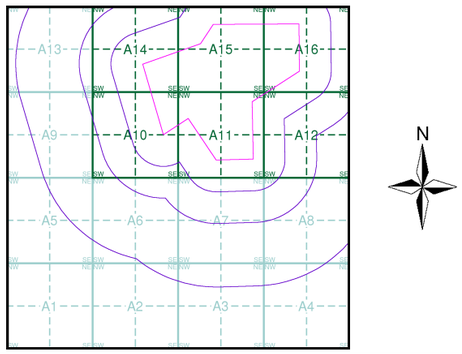
Source map scale - 1:10,000

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



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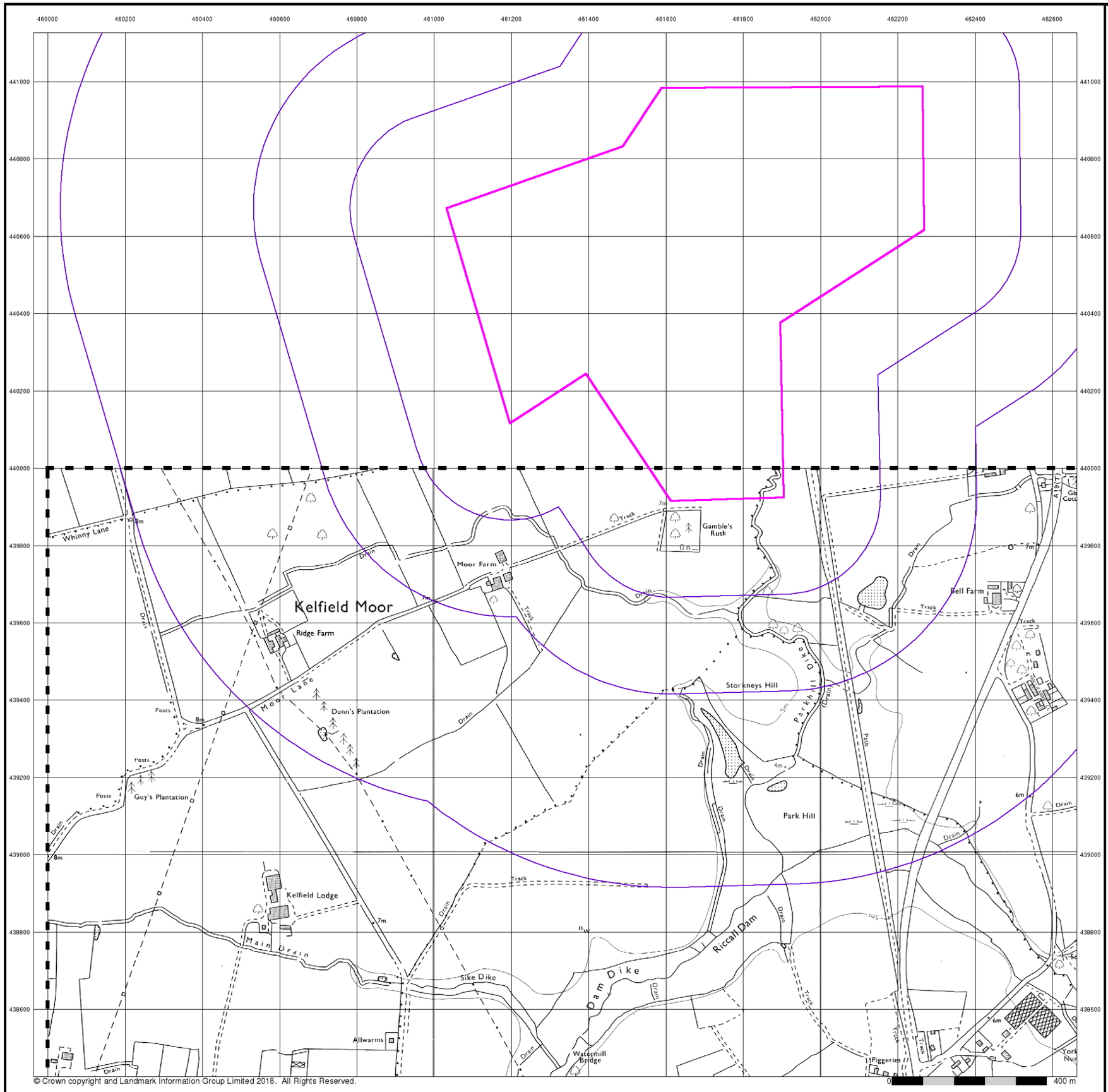

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Ordnance Survey Plan

Published 1989

Source map scale - 1:10,000

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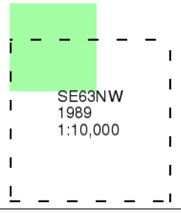
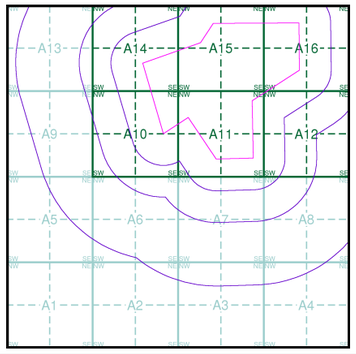


Historical Map - Slice A



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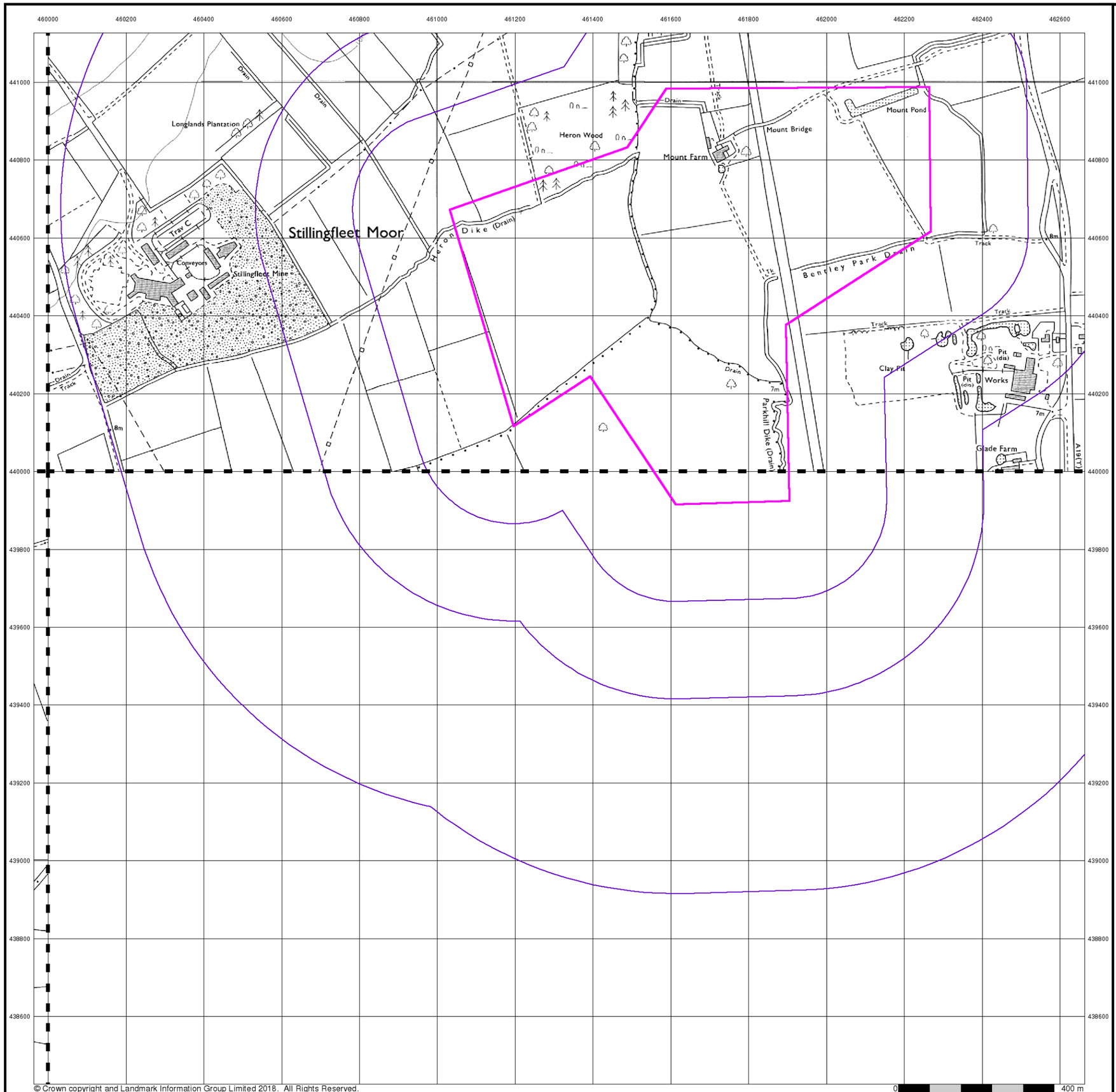

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Ordnance Survey Plan

Published 1990 - 1991

Source map scale - 1:10,000

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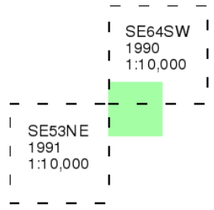
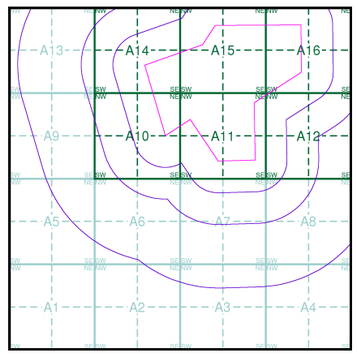


Historical Map - Slice A



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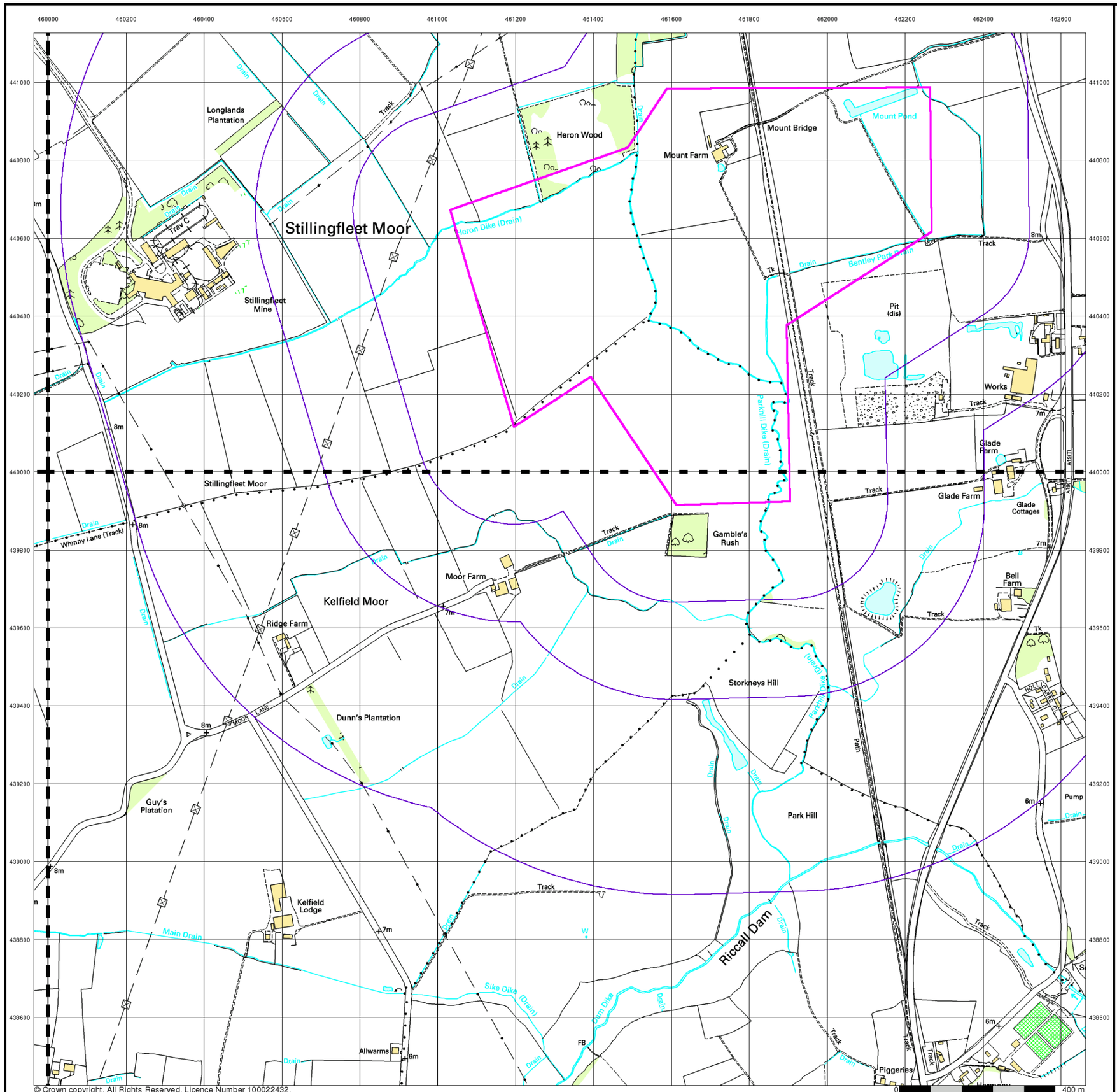

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10k Raster Mapping

Published 1999

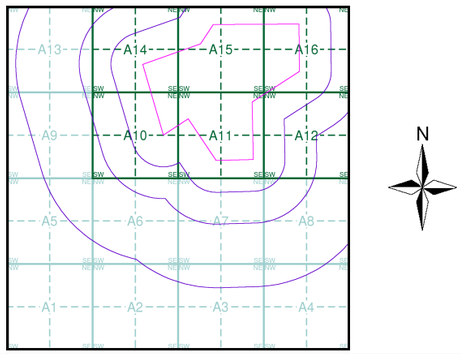
Source map scale - 1:10,000

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)

SE54SE 1999 1:10,000	SE64SW 1999 1:10,000
SE53NE 1999 1:10,000	SE63NW 1999 1:10,000

Historical Map - Slice A



Order Details

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Site at 461540, 440390

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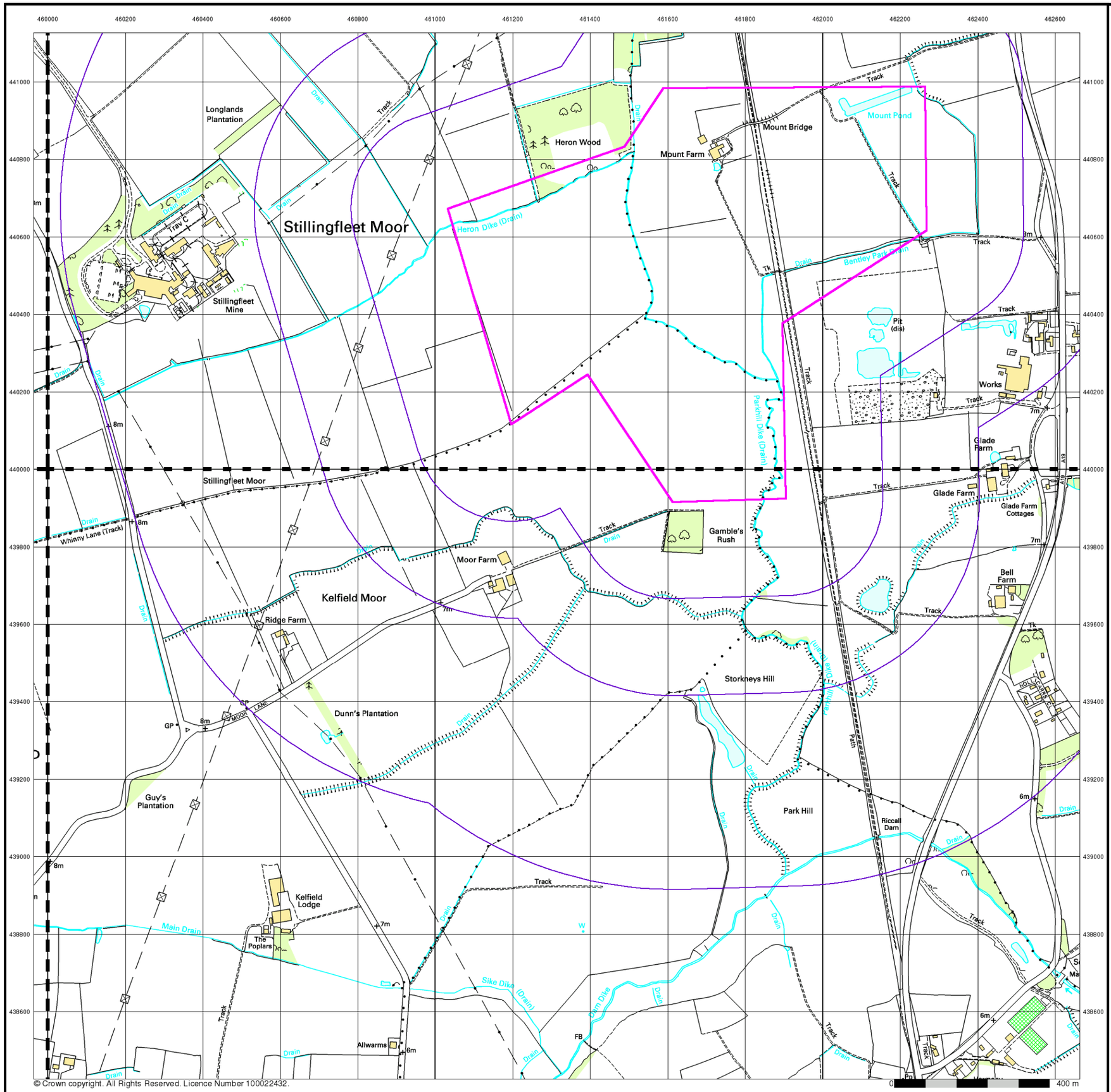

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LANDMARK INFORMATION GROUP®

10k Raster Mapping

Published 2006

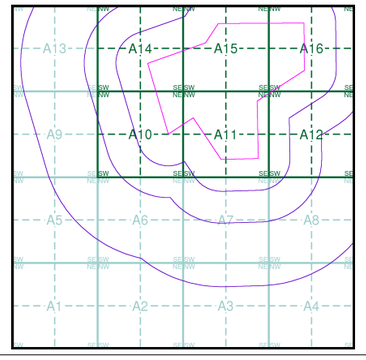
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SE54SE 2006 1:10,000	SE64SW 2006 1:10,000
SE53NE 2006 1:10,000	SE63NW 2006 1:10,000

Historical Map - Slice A



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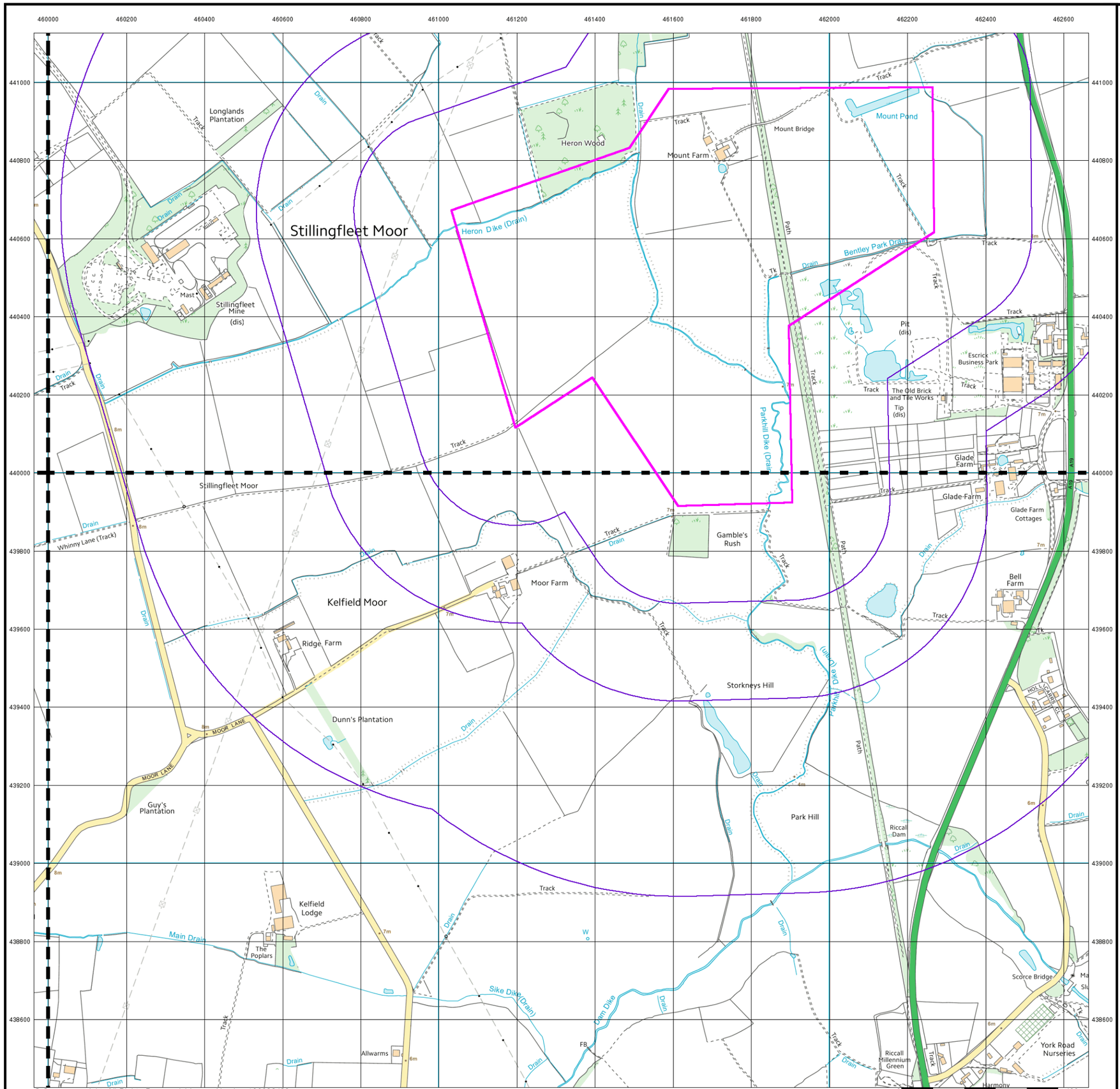

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VectorMap Local

Published 2018

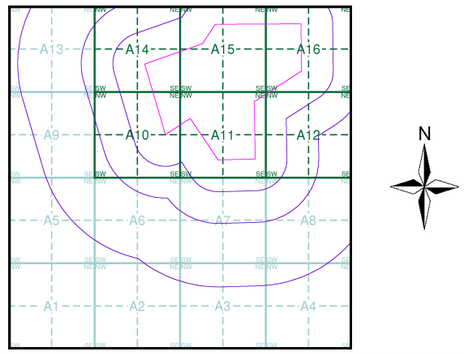
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

SE54SE 2018 Variable	SE64SW 2018 Variable
SE53NE 2018 Variable	SE63NW 2018 Variable

Historical Map - Slice A



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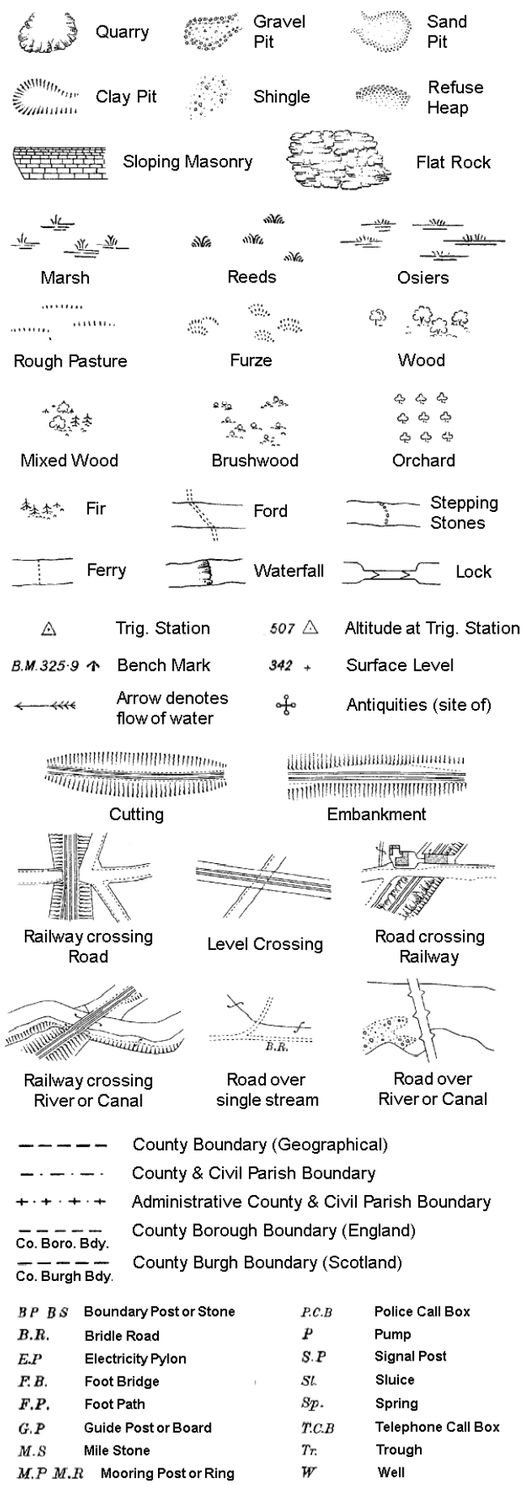
Historical Mapping Legends

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



County Boundary (Geographical)

County & Civil Parish Boundary

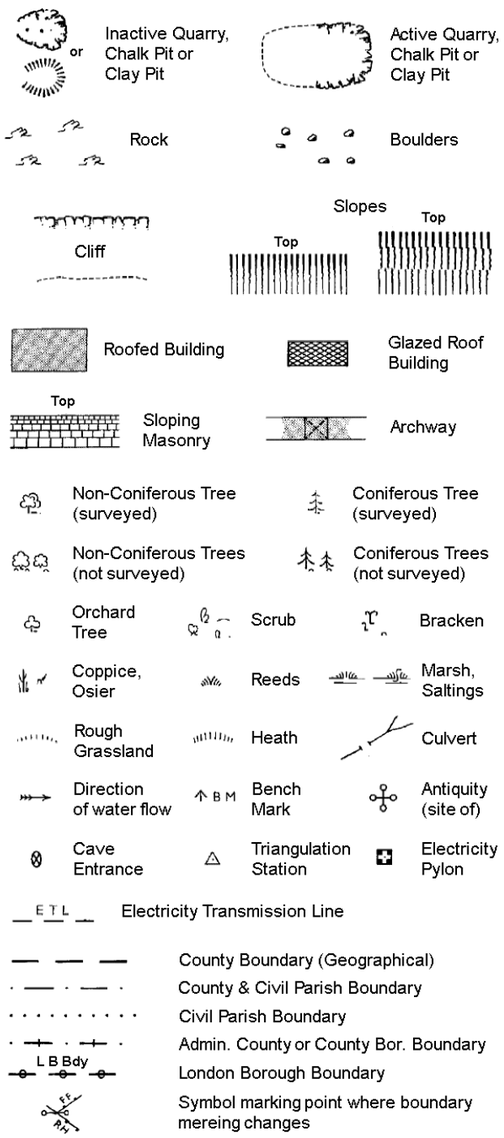
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	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



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

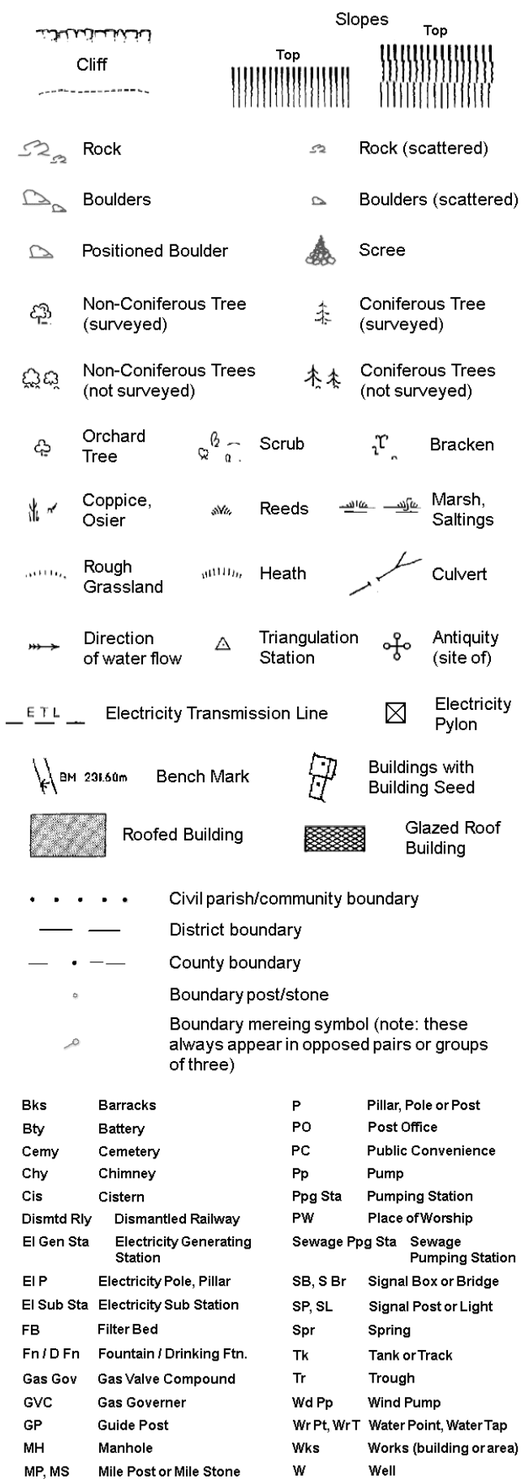
Admin. County or County Bor. Boundary

L B Bdy 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
El 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



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
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El 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 Governer	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

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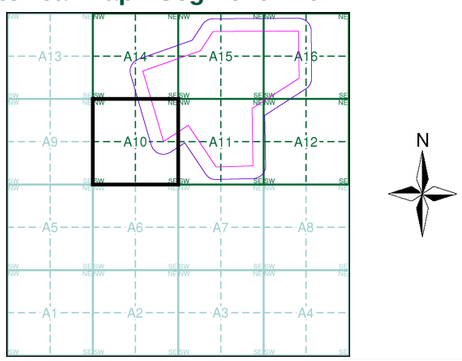
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1891	2
Yorkshire	1:2,500	1908 - 1910	3
Ordnance Survey Plan	1:2,500	1974	4
Additional SIMs	1:2,500	1984	5
Large-Scale National Grid Data	1:2,500	1995	6
Large-Scale National Grid Data	1:2,500	1995	7
Historical Aerial Photography	1:2,500	1999	8

Historical Map - Segment A10



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Search Buffer (m):	100

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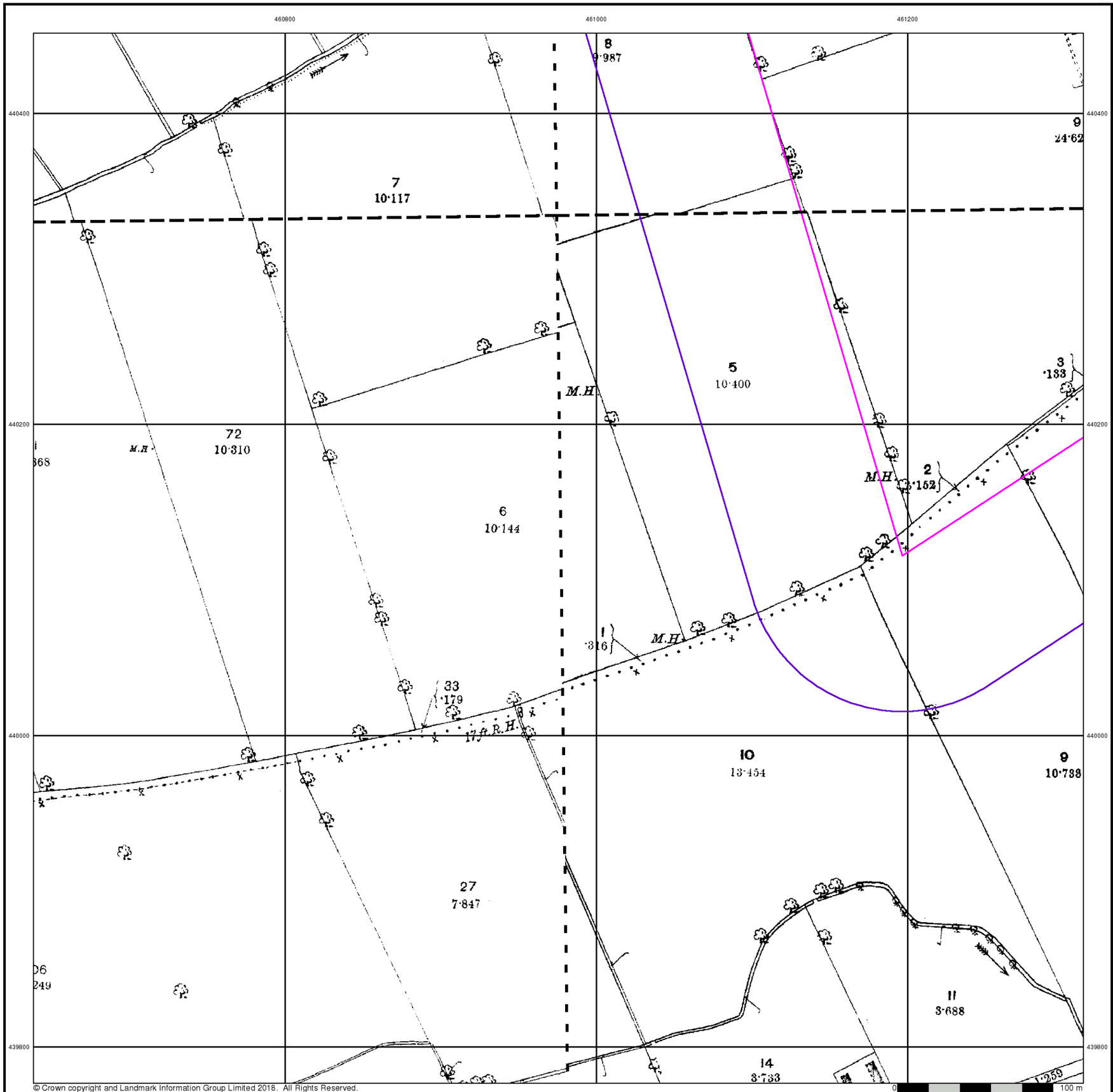

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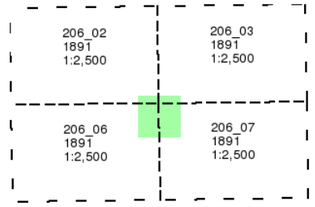
Yorkshire

Published 1891

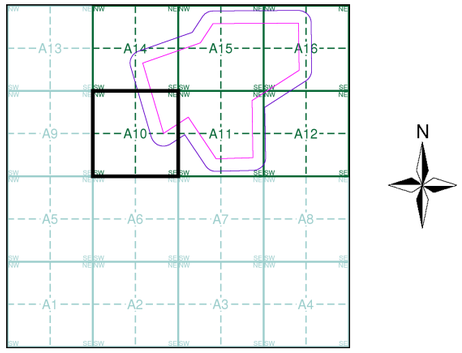
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A10



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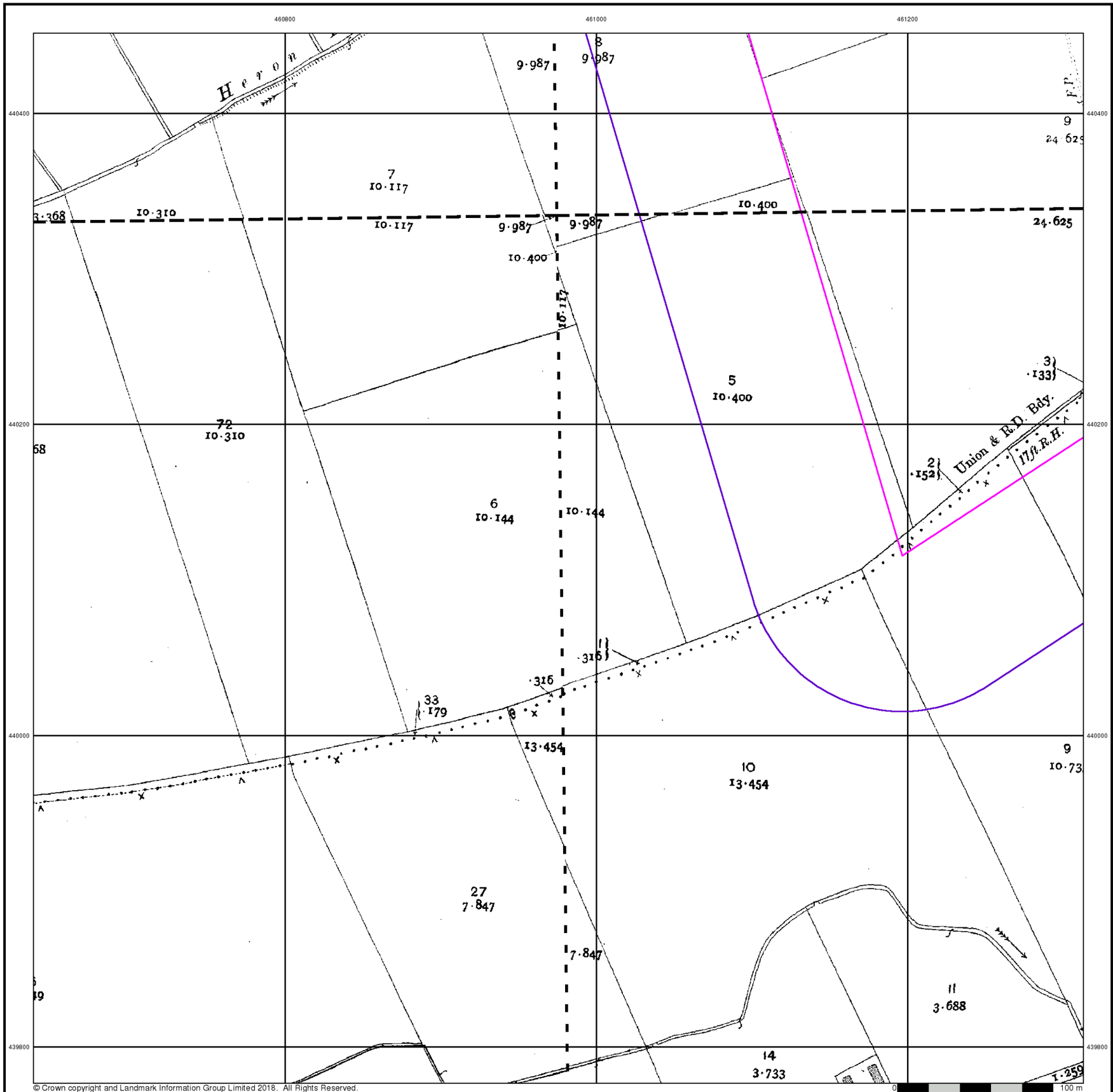

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LANDMARK INFORMATION GROUP®

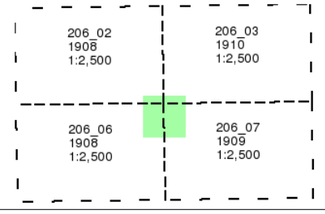
Yorkshire

Published 1908 - 1910

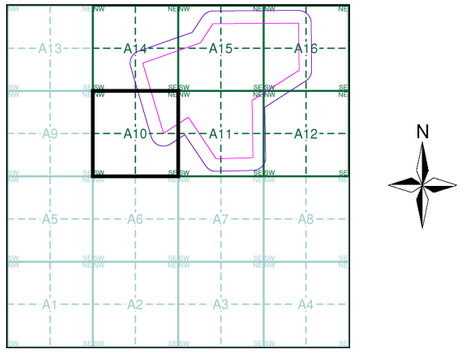
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	100

Site Details

Site at 461540, 440390

Landmark INFORMATION GROUP

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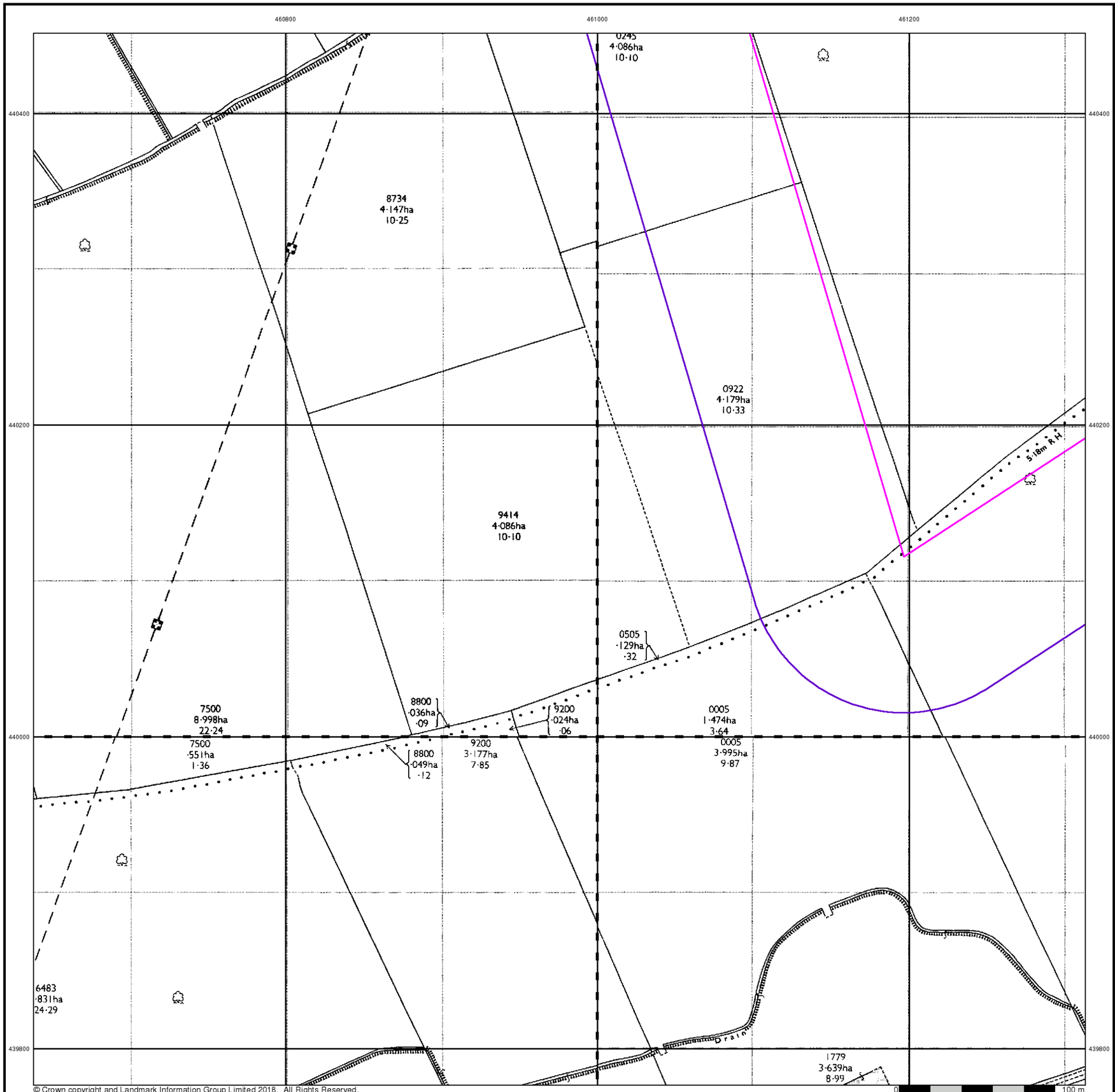

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Ordnance Survey Plan

Published 1974

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.

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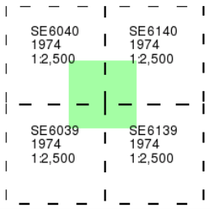
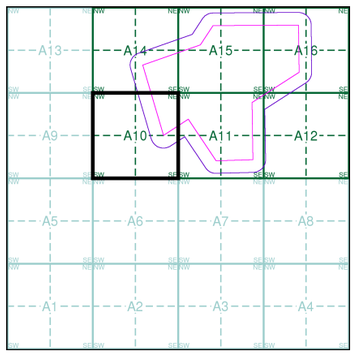


Historical Map - Segment A10



Order Details

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Site Area (Ha):	82.61
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Site Details

Site at 461540, 440390

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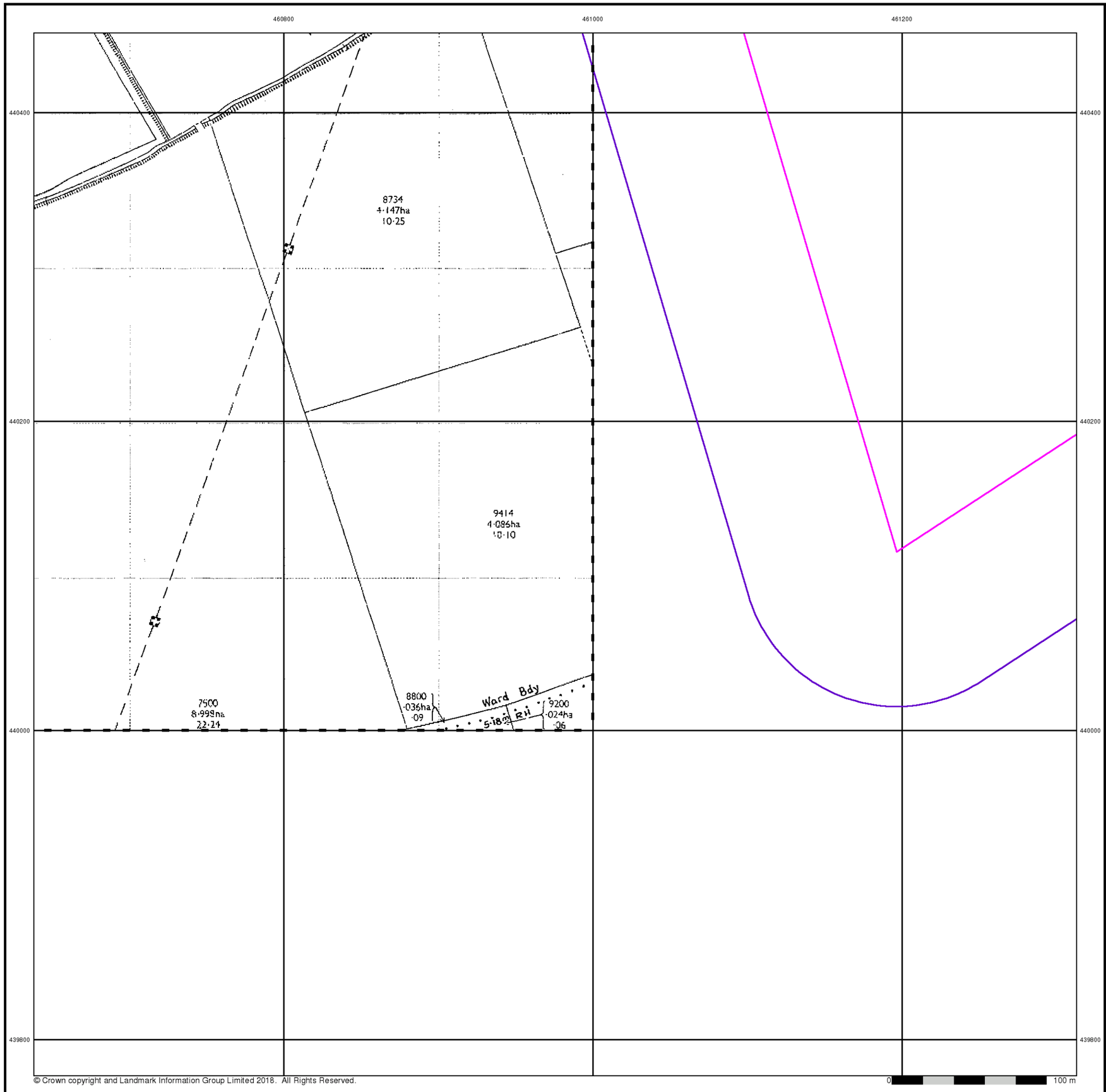

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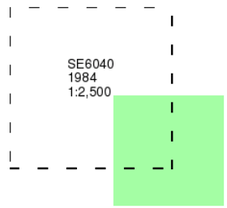
Additional SIMs

Published 1984

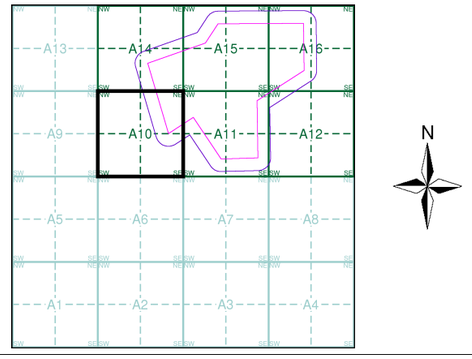
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A10



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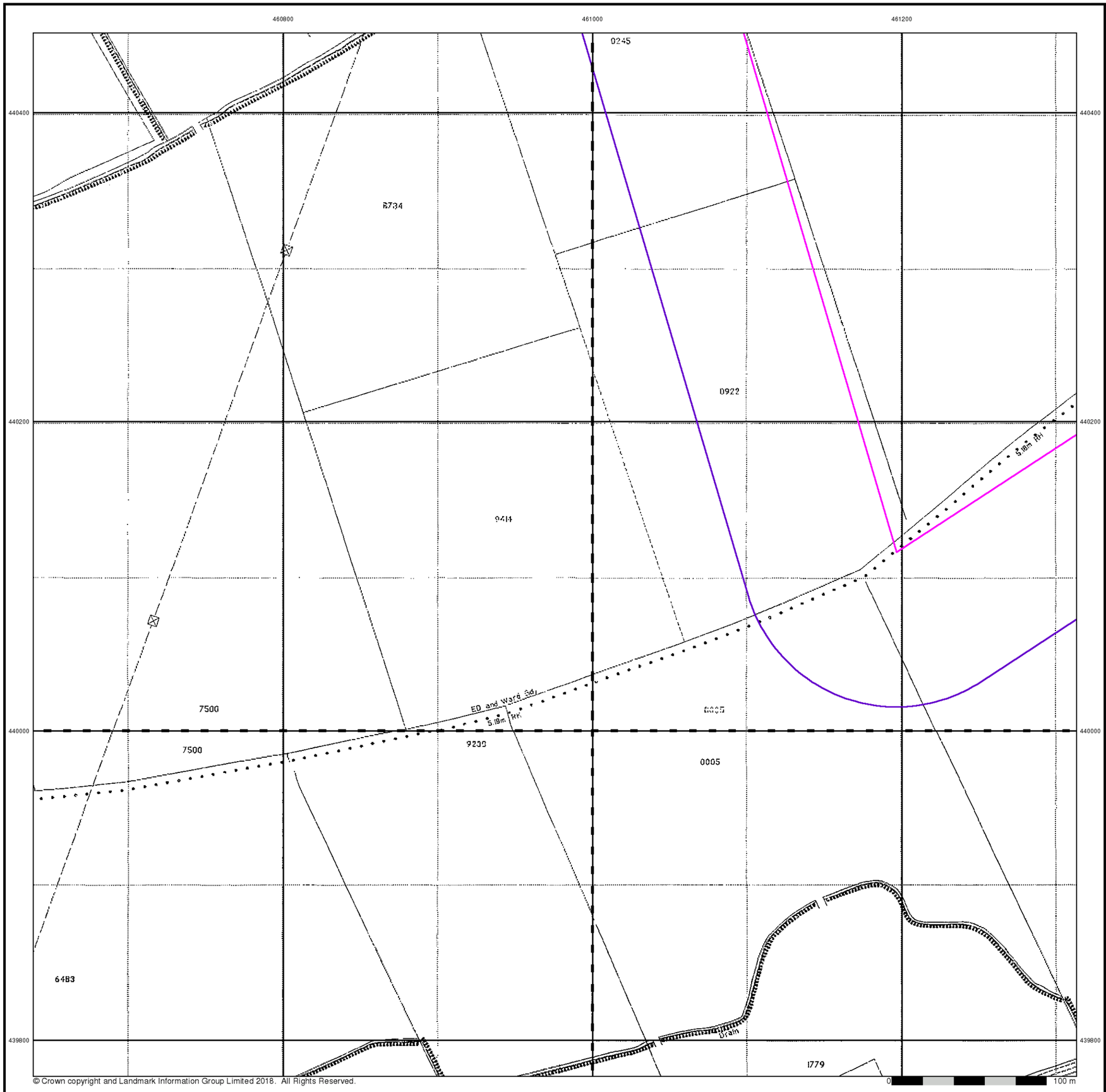

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LANDMARK INFORMATION GROUP®

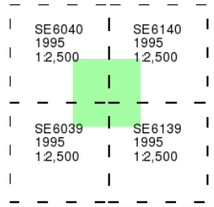
Large-Scale National Grid Data

Published 1995

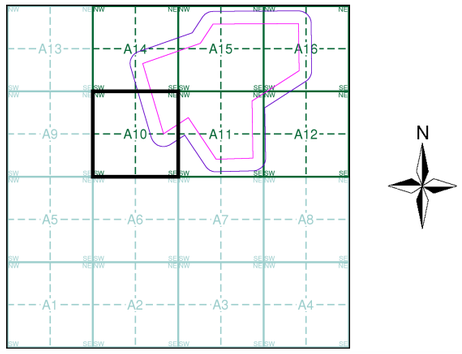
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A10



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Site Details

Site at 461540, 440390

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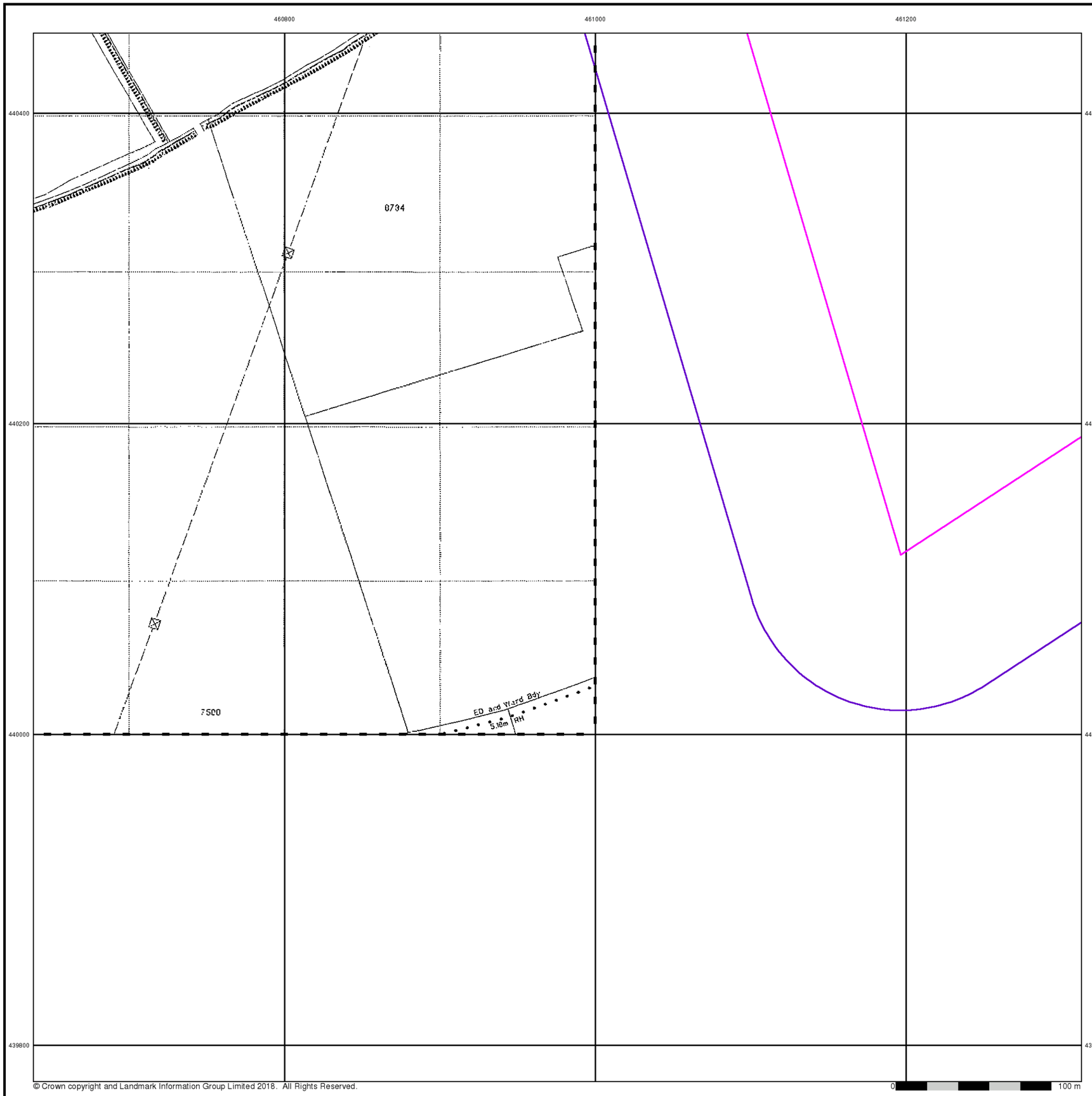

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LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1995

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.

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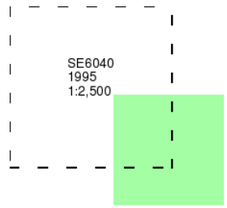
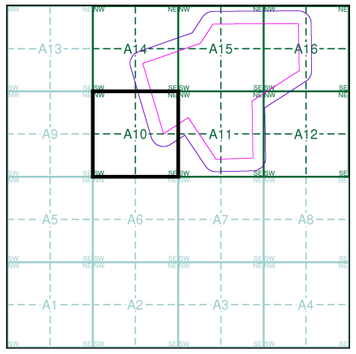


Historical Map - Segment A10



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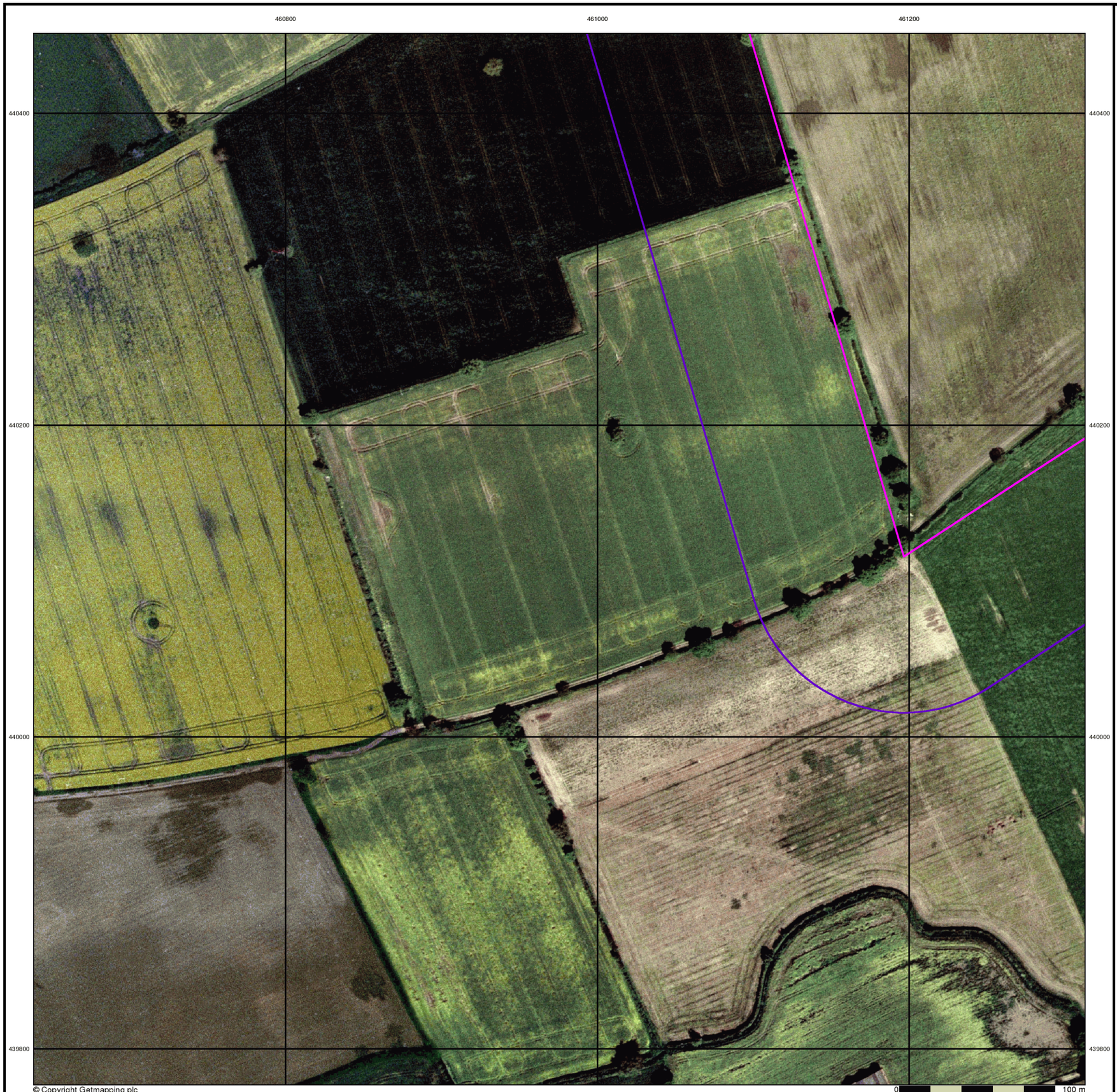
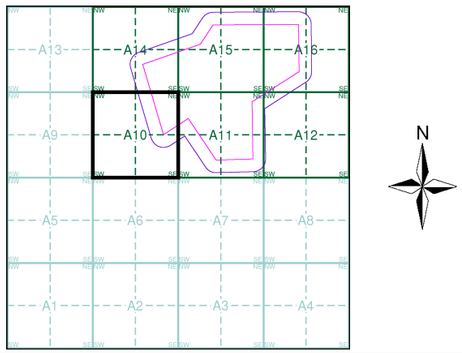


Historical Aerial Photography

Published 1999

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

Historical Aerial Photography - Segment A10



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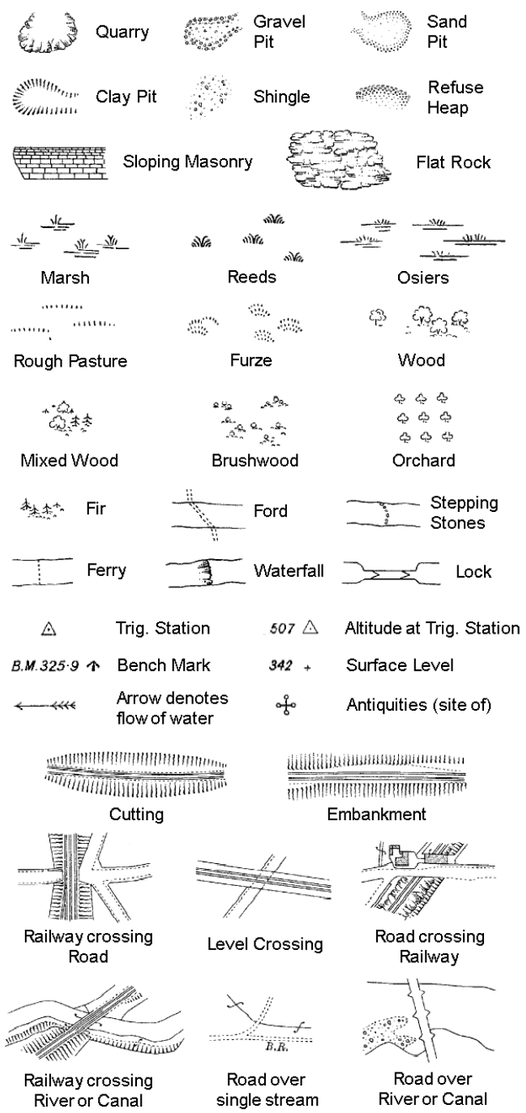
Historical Mapping Legends

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



County Boundary (Geographical)

County & Civil Parish Boundary

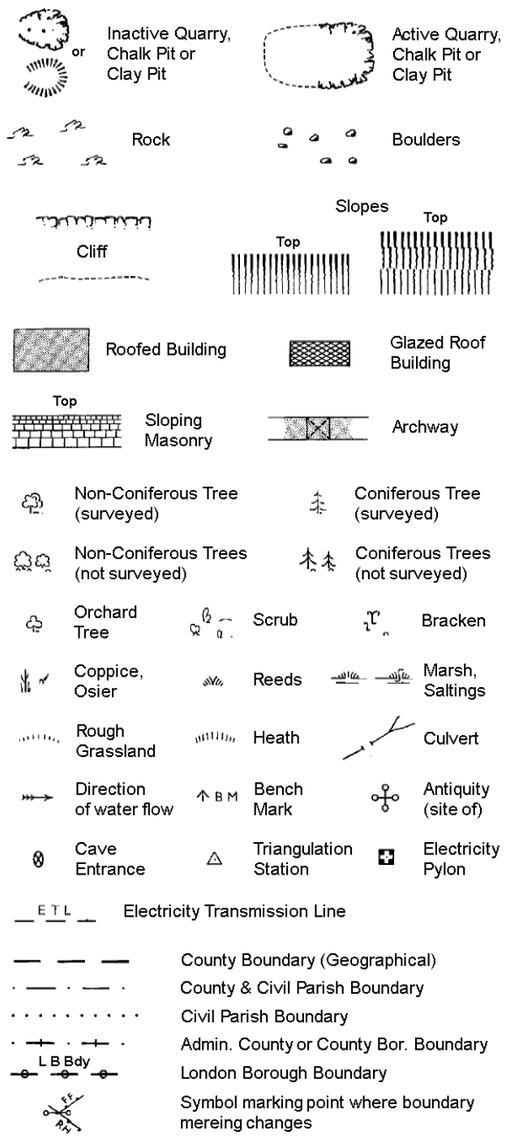
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	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	St.	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



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

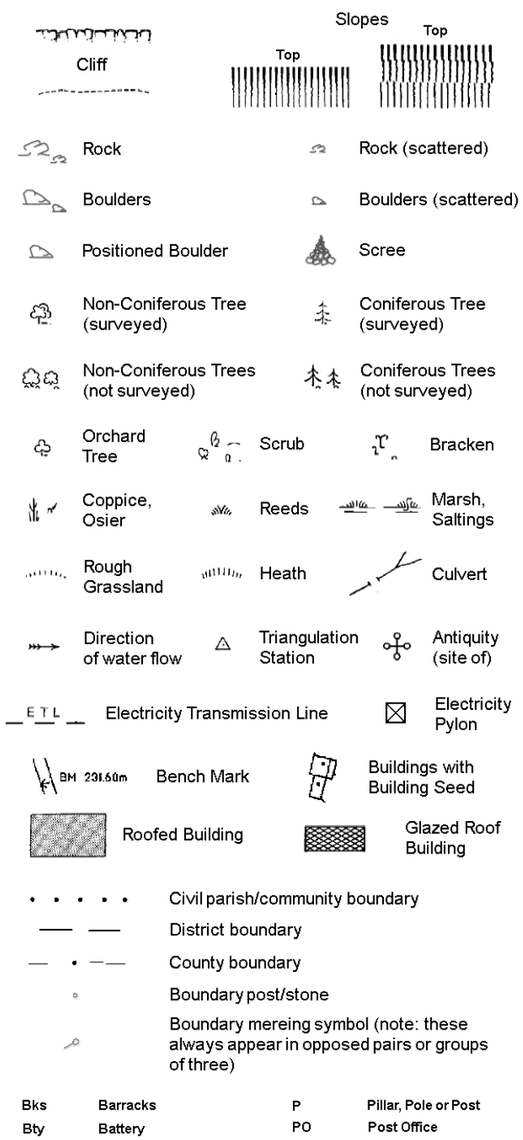
Admin. County or County Bor. Boundary

L B Bdy 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
El 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



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
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El 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 Governer	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

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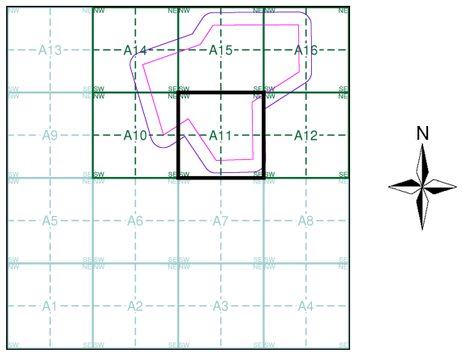
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1891	2
Yorkshire	1:2,500	1909 - 1910	3
Ordnance Survey Plan	1:2,500	1974	4
Large-Scale National Grid Data	1:2,500	1995	5
Historical Aerial Photography	1:2,500	1999	6

Historical Map - Segment A11



Order Details

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National Grid Reference:	461450, 440120
Slice:	A
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Site Details

Site at 461540, 440390

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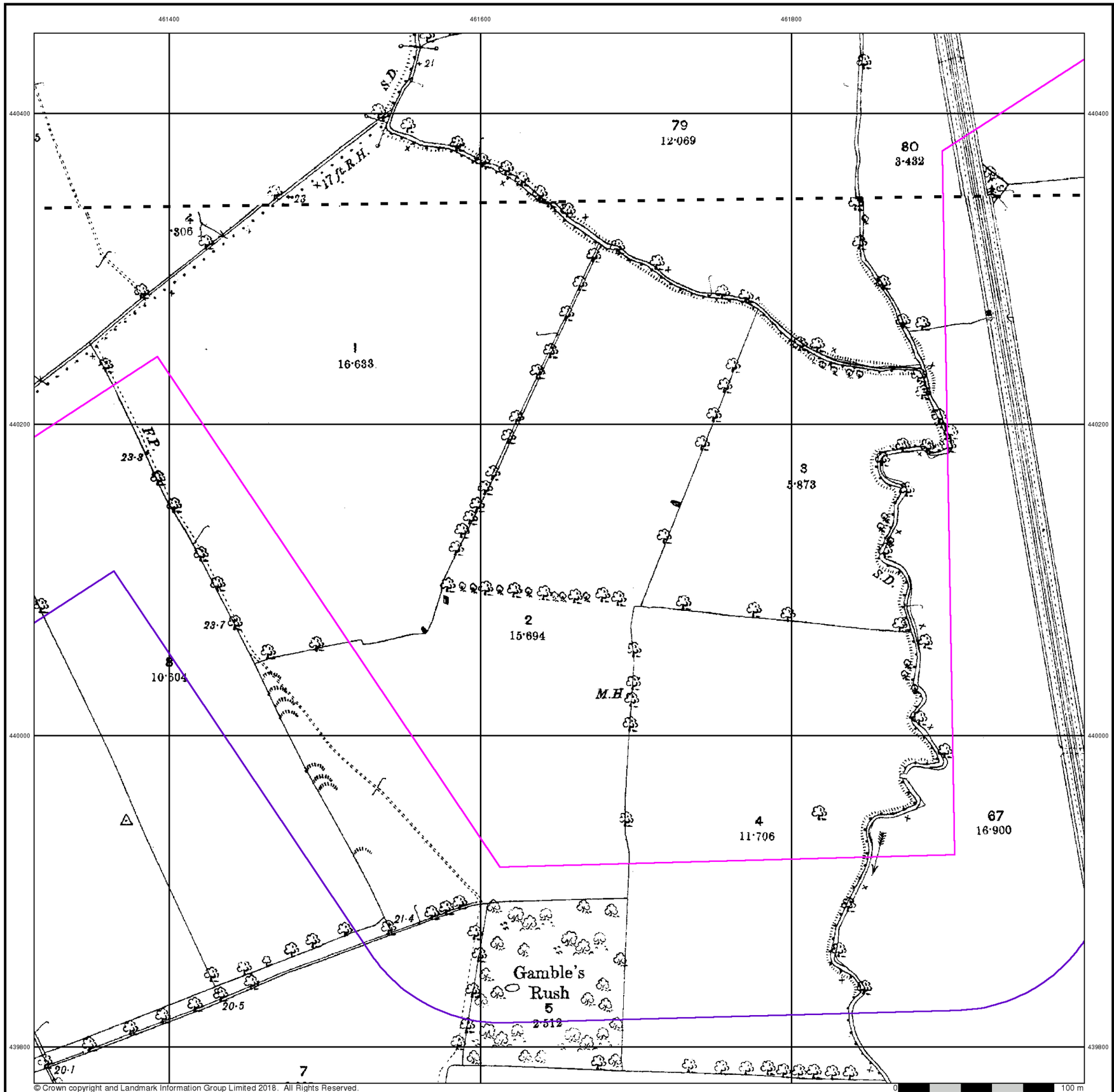

0 100 m

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LANDMARK INFORMATION GROUP®

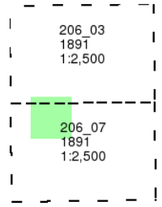
Yorkshire

Published 1891

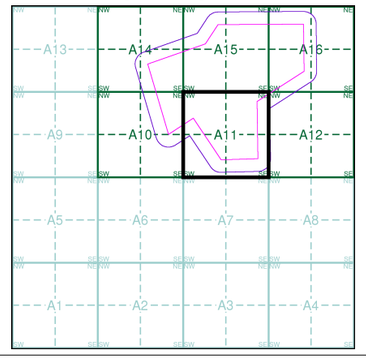
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



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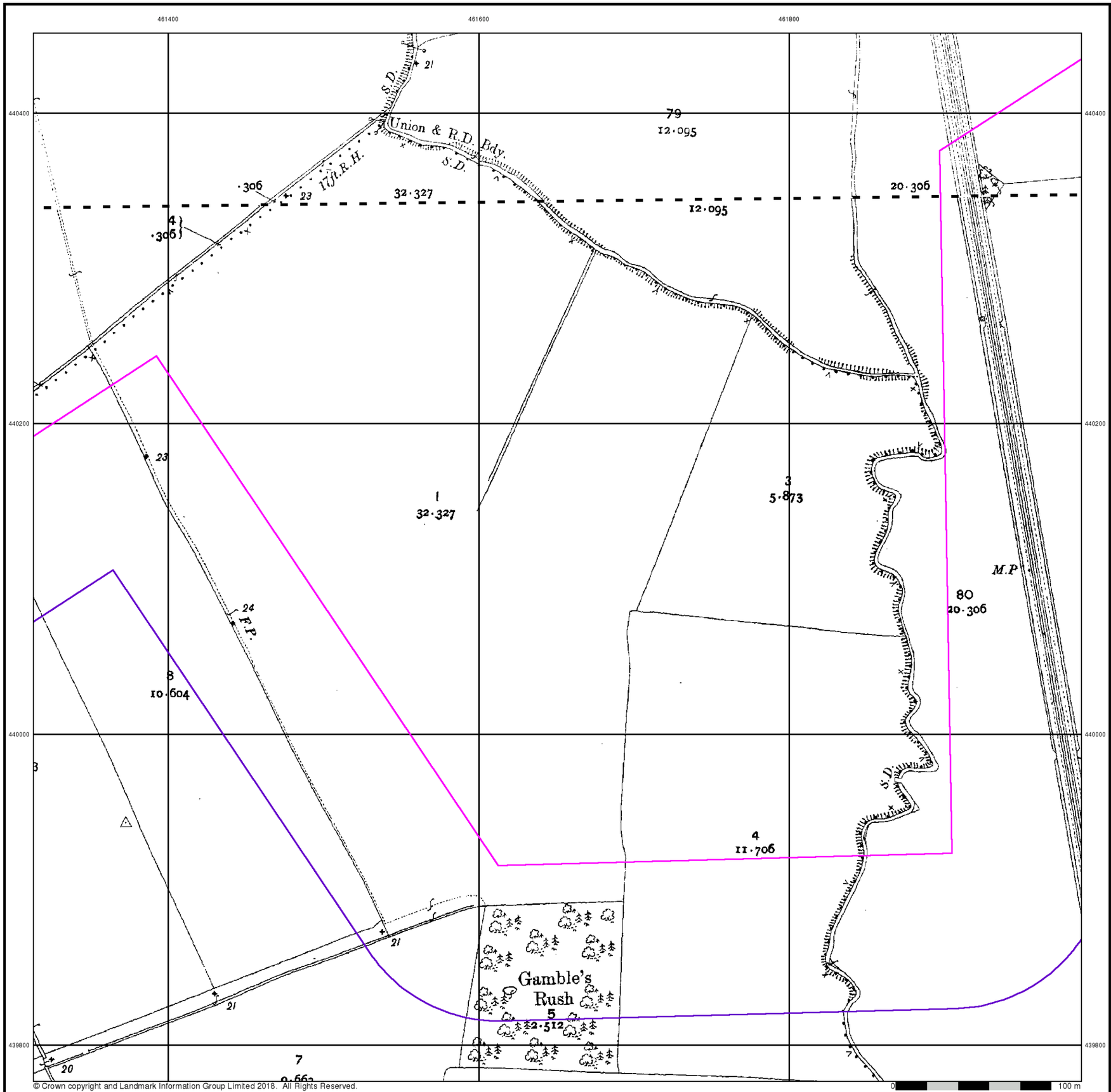

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LANDMARK INFORMATION GROUP®

Yorkshire

Published 1909 - 1910

Source map scale - 1:2,500

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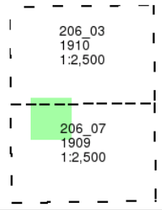
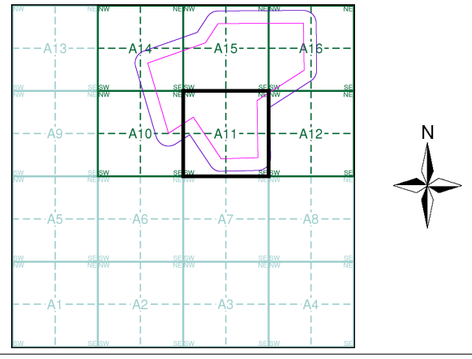


Historical Map - Segment A11



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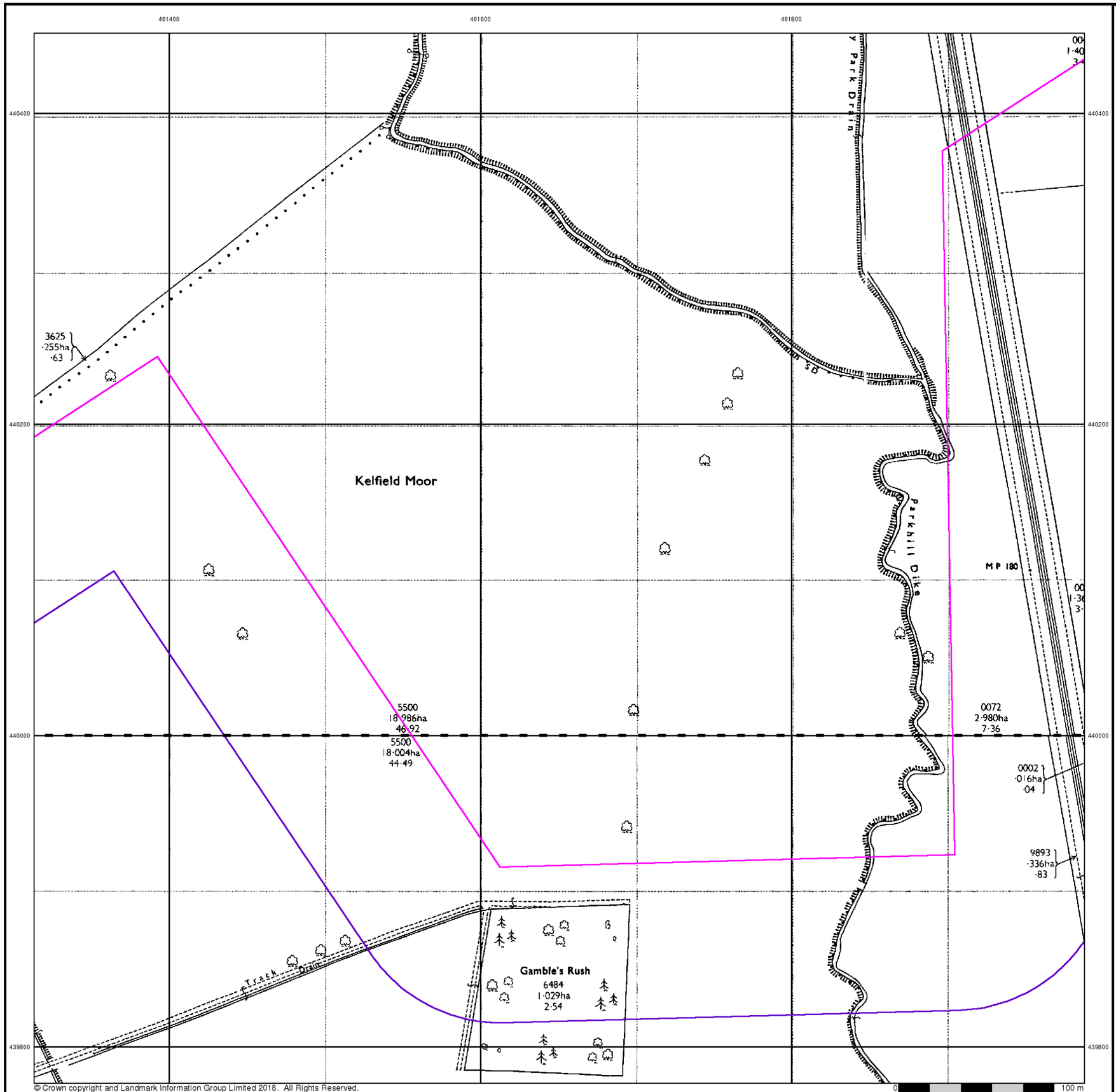

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LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1974

Source map scale - 1:2,500

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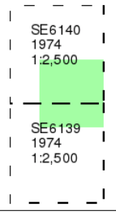
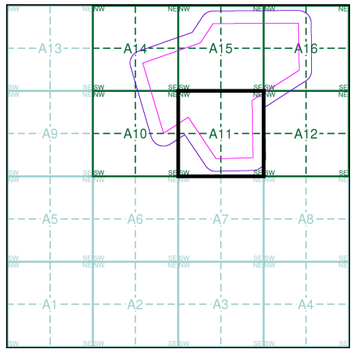


Historical Map - Segment A11



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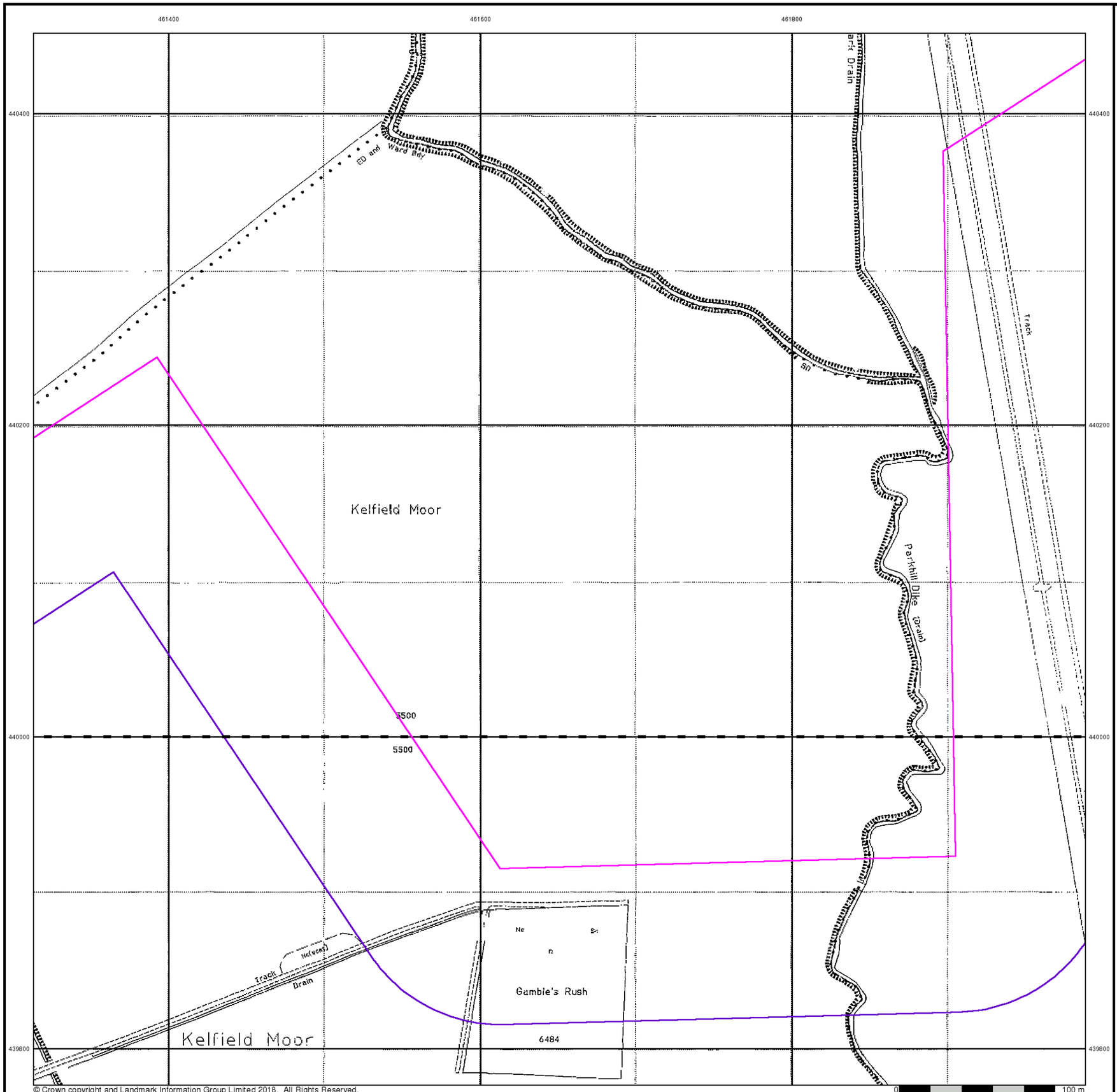

Envirocheck®

LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1995

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.

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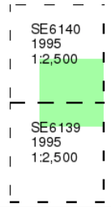
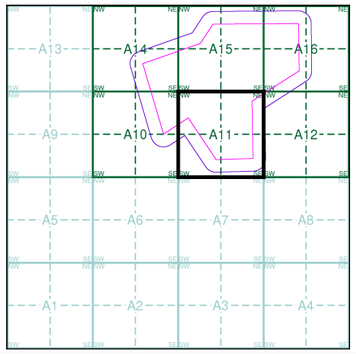


Historical Map - Segment A11



Order Details

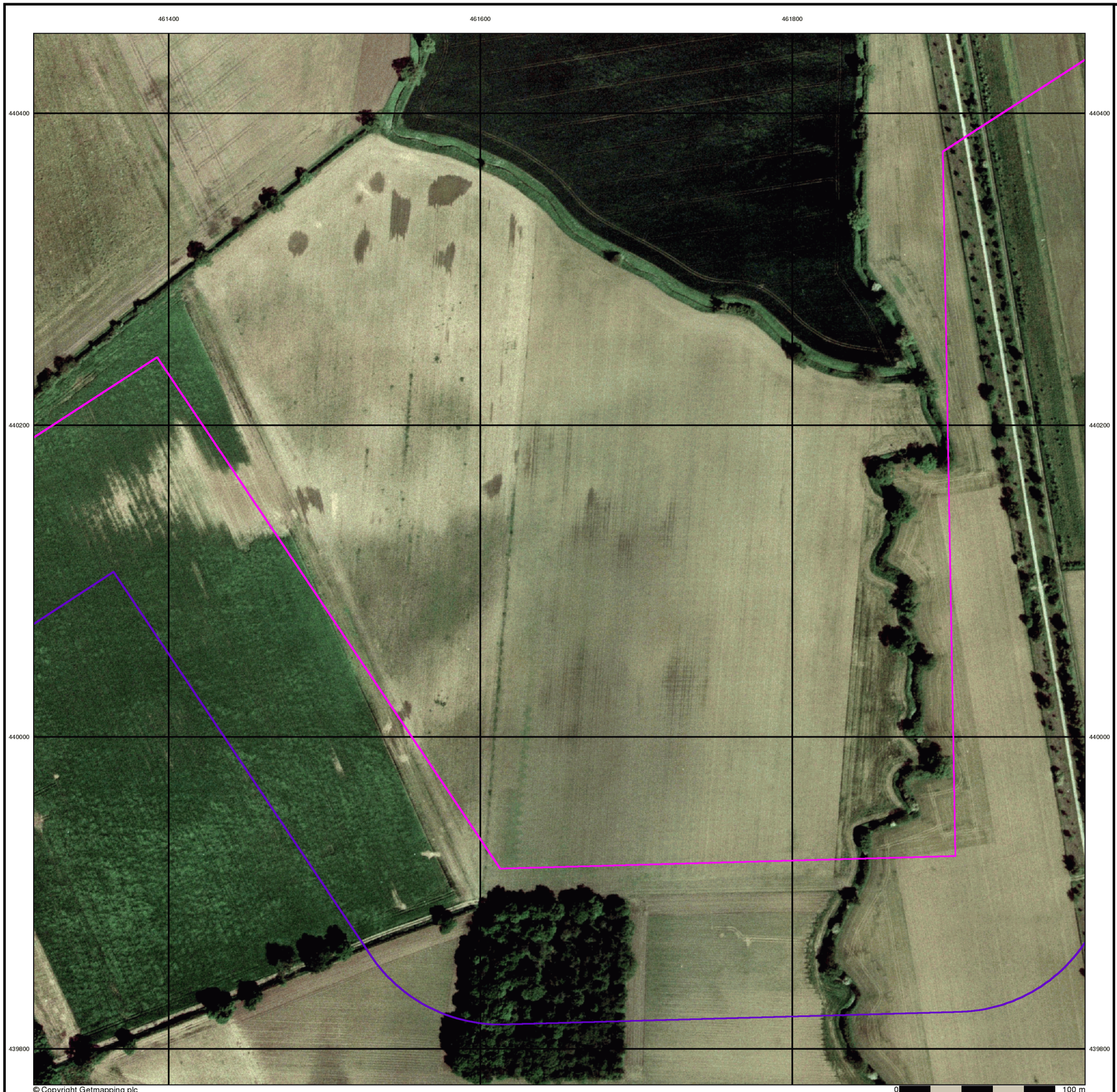
Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	100

Site Details

Site at 461540, 440390

Landmark® INFORMATION GROUP

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



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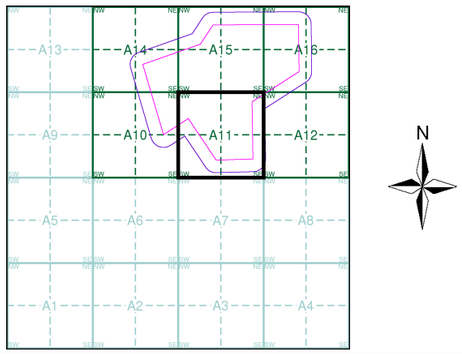
Historical Aerial Photography

Published 1999

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

Historical Aerial Photography - Segment A11



Order Details

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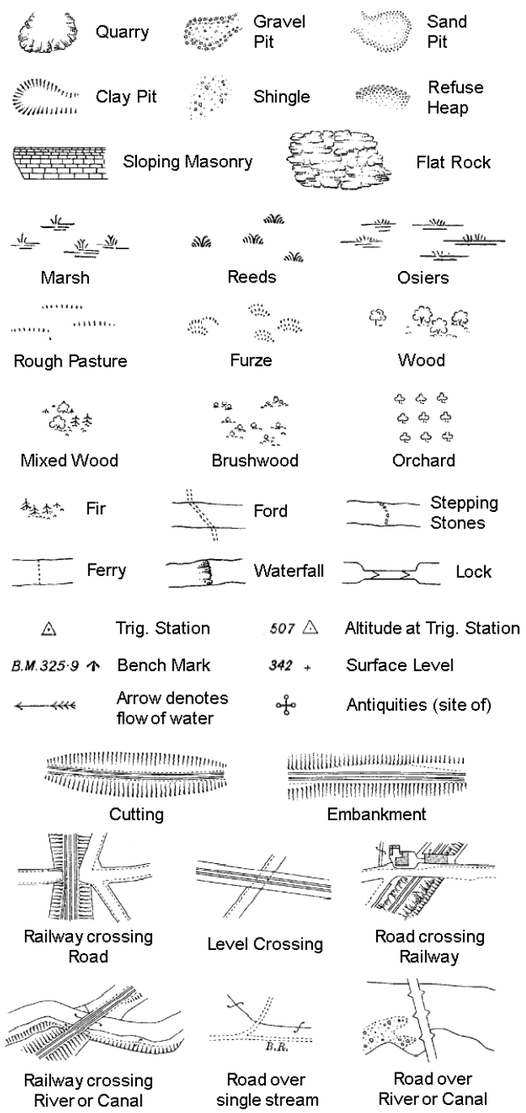
Historical Mapping Legends

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



County Boundary (Geographical)

County & Civil Parish Boundary

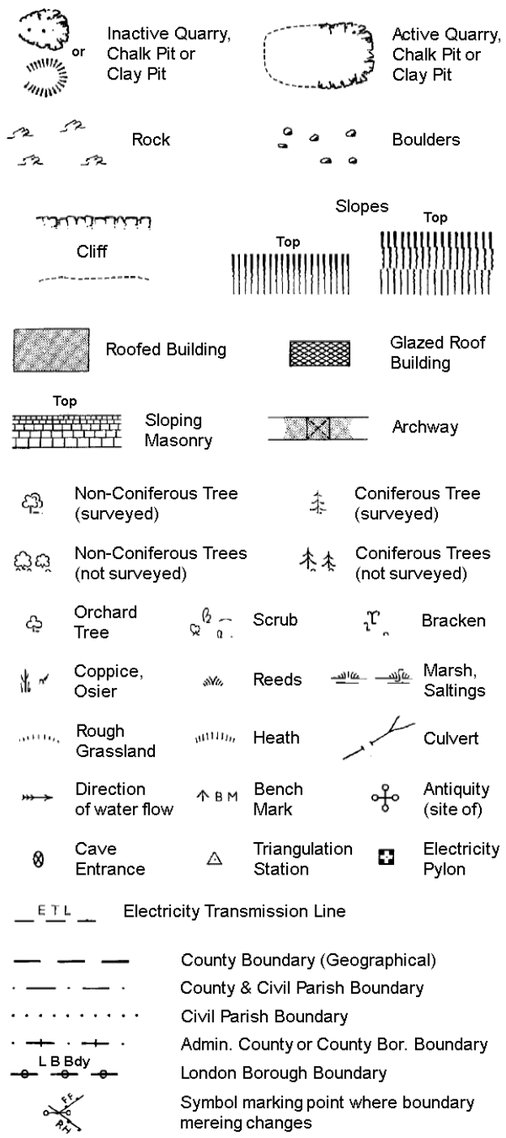
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	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



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

Admin. County or County Bor. Boundary

L B Bdy 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
El 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
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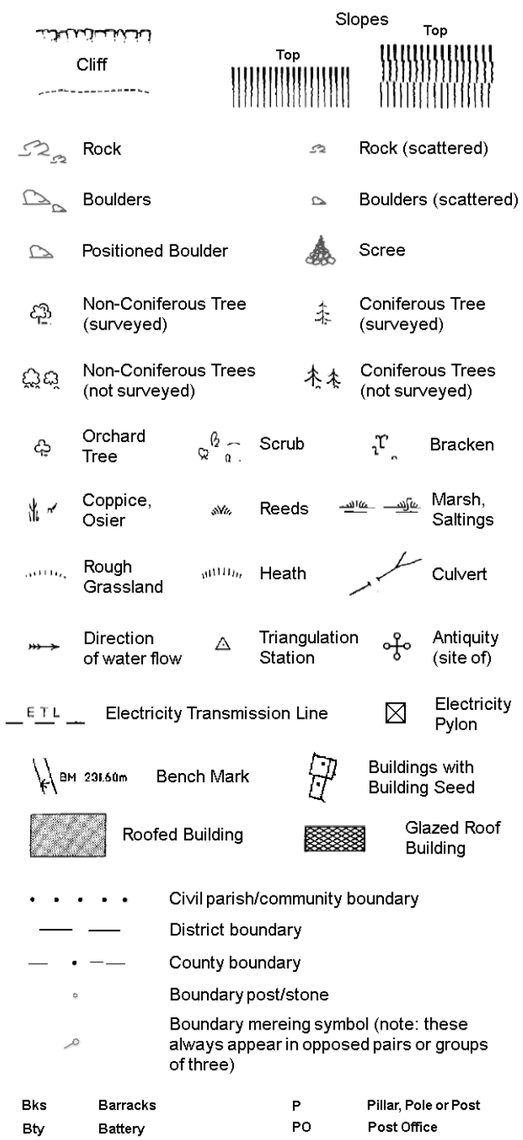
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



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
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El 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 Governer	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

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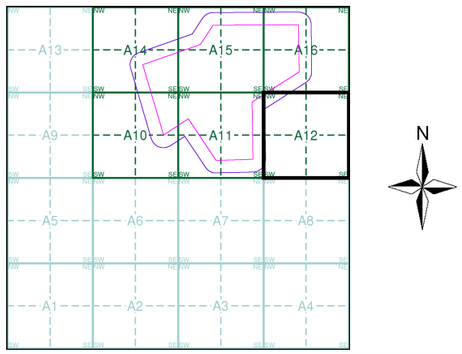
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1891	2
Yorkshire	1:2,500	1909 - 1910	3
Ordnance Survey Plan	1:2,500	1974	4
Additional SIMs	1:2,500	1987 - 1988	5
Large-Scale National Grid Data	1:2,500	1995	6
Large-Scale National Grid Data	1:2,500	1995	7
Historical Aerial Photography	1:2,500	1999	8

Historical Map - Segment A12



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	100

Site Details

Site at 461540, 440390

Landmark® INFORMATION GROUP

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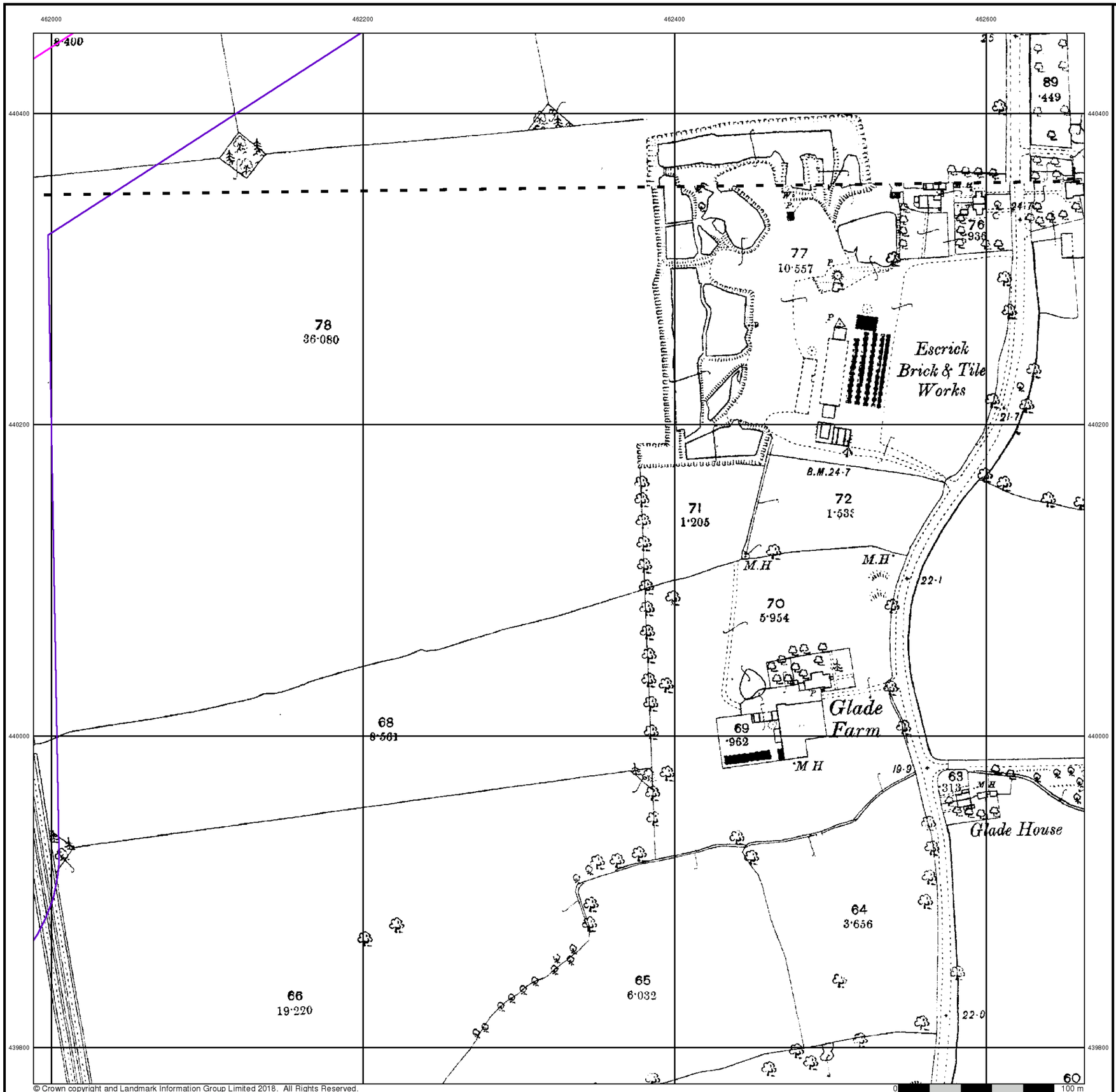

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Yorkshire

Published 1891

Source map scale - 1:2,500

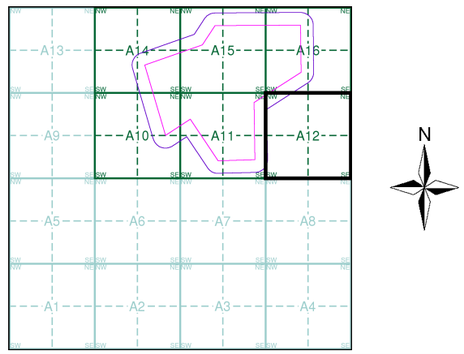
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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)

206_03
1891
1:2,500

206_07
1891
1:2,500

Historical Map - Segment A12



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
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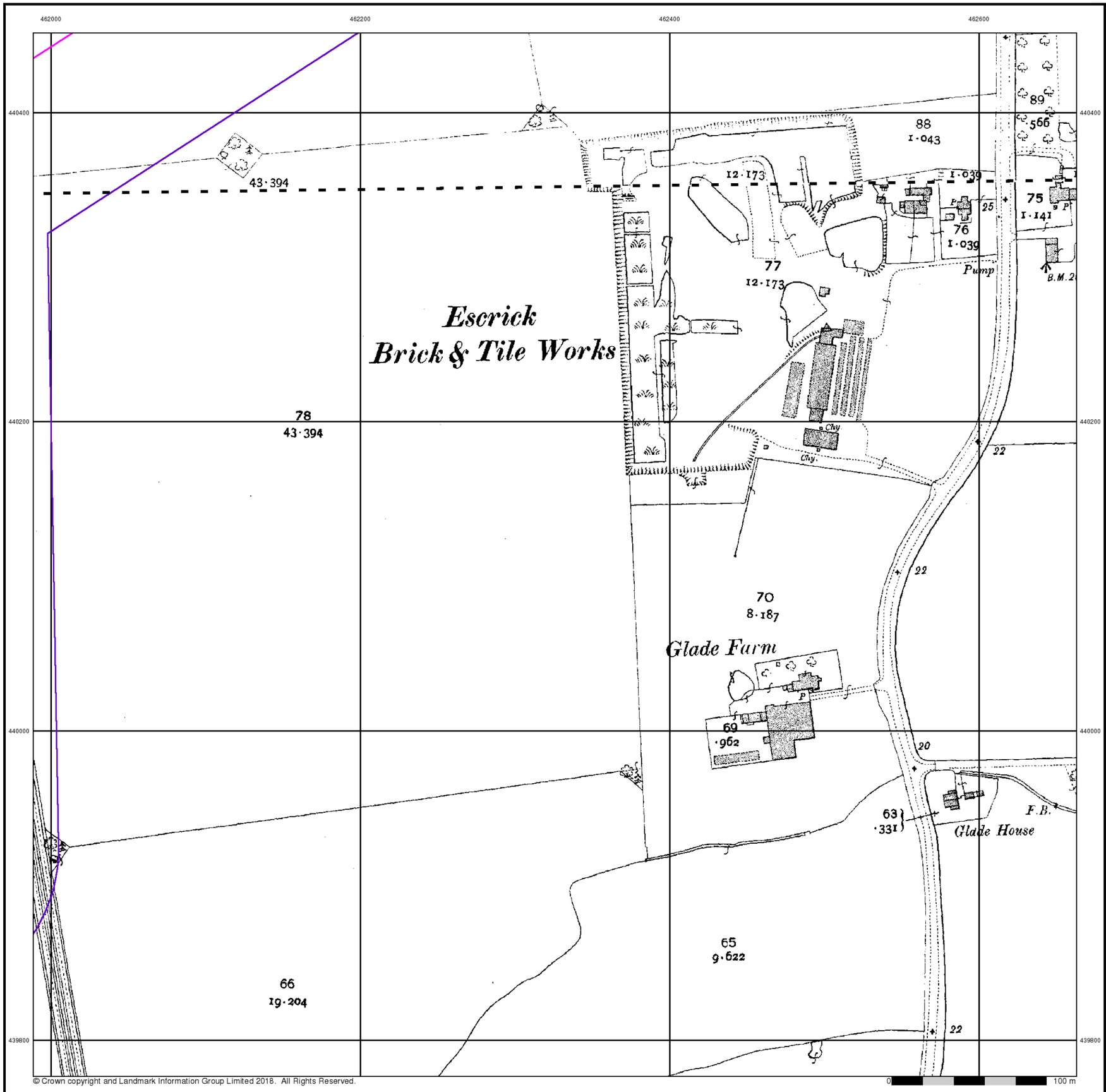

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LANDMARK INFORMATION GROUP®

Yorkshire

Published 1909 - 1910

Source map scale - 1:2,500

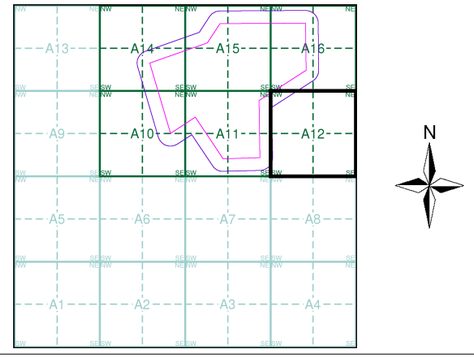
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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)

206_03
1910
1:2,500

206_07
1909
1:2,500

Historical Map - Segment A12



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
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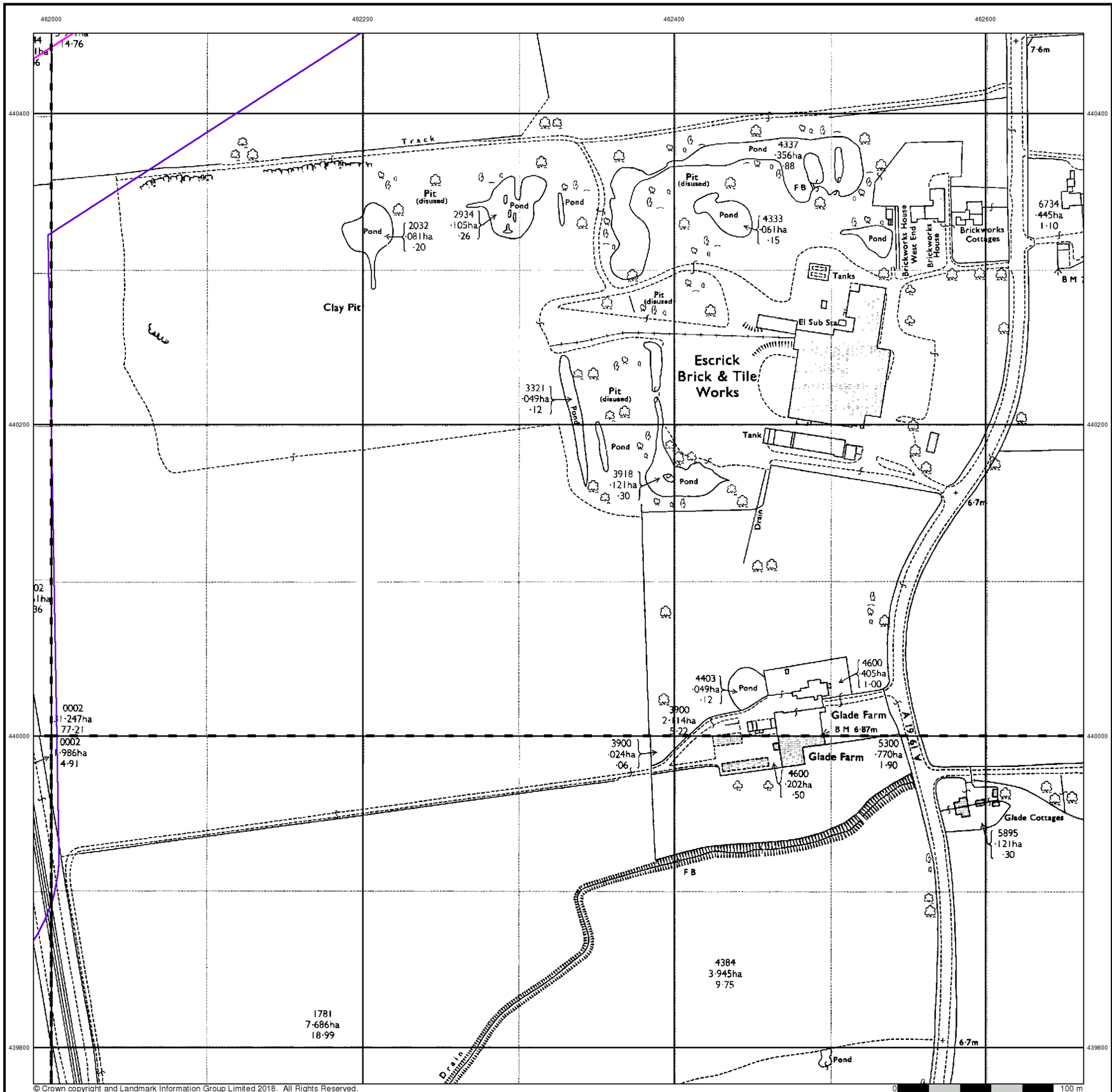

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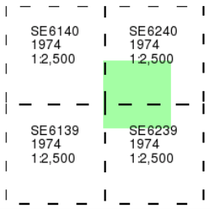
Ordnance Survey Plan

Published 1974

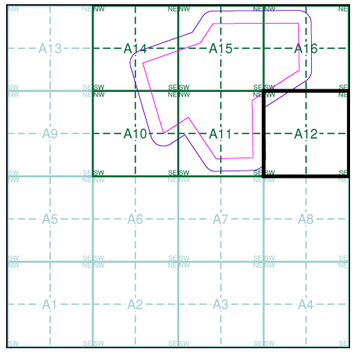
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
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Site Details

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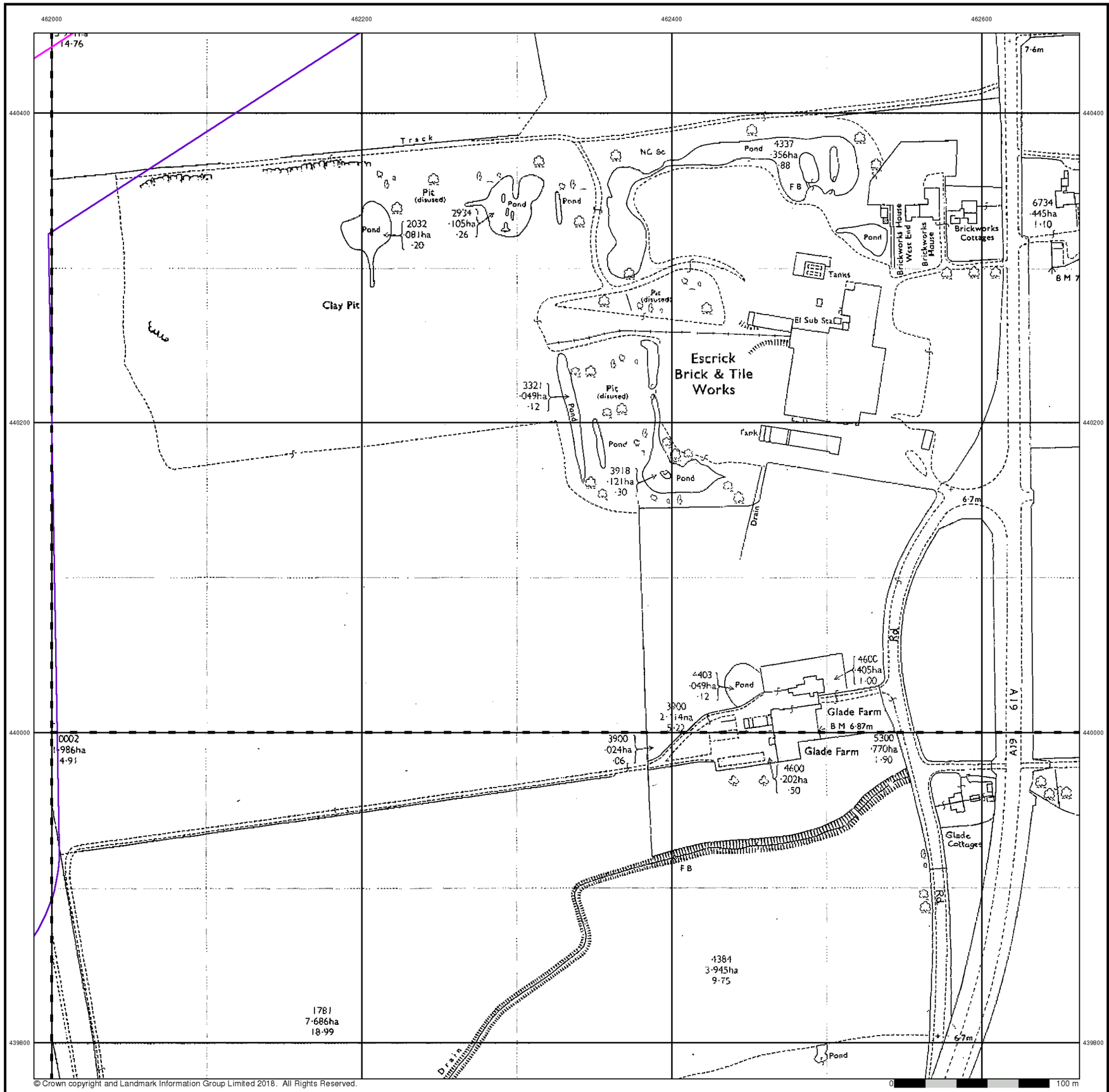

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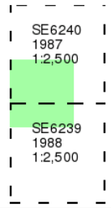
Additional SIMs

Published 1987 - 1988

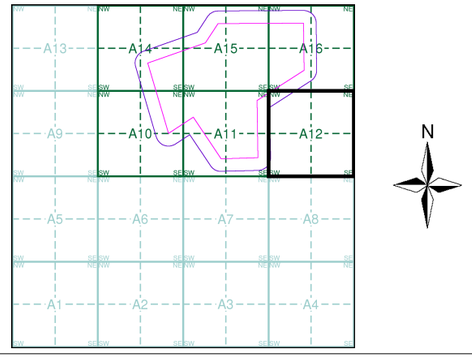
Source map scale - 1:2,500

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)



Historical Map - Segment A12



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
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Site Details

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LANDMARK INFORMATION GROUP®

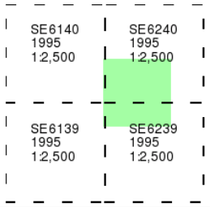
Large-Scale National Grid Data

Published 1995

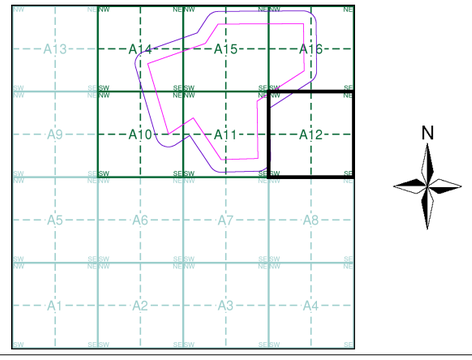
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A12



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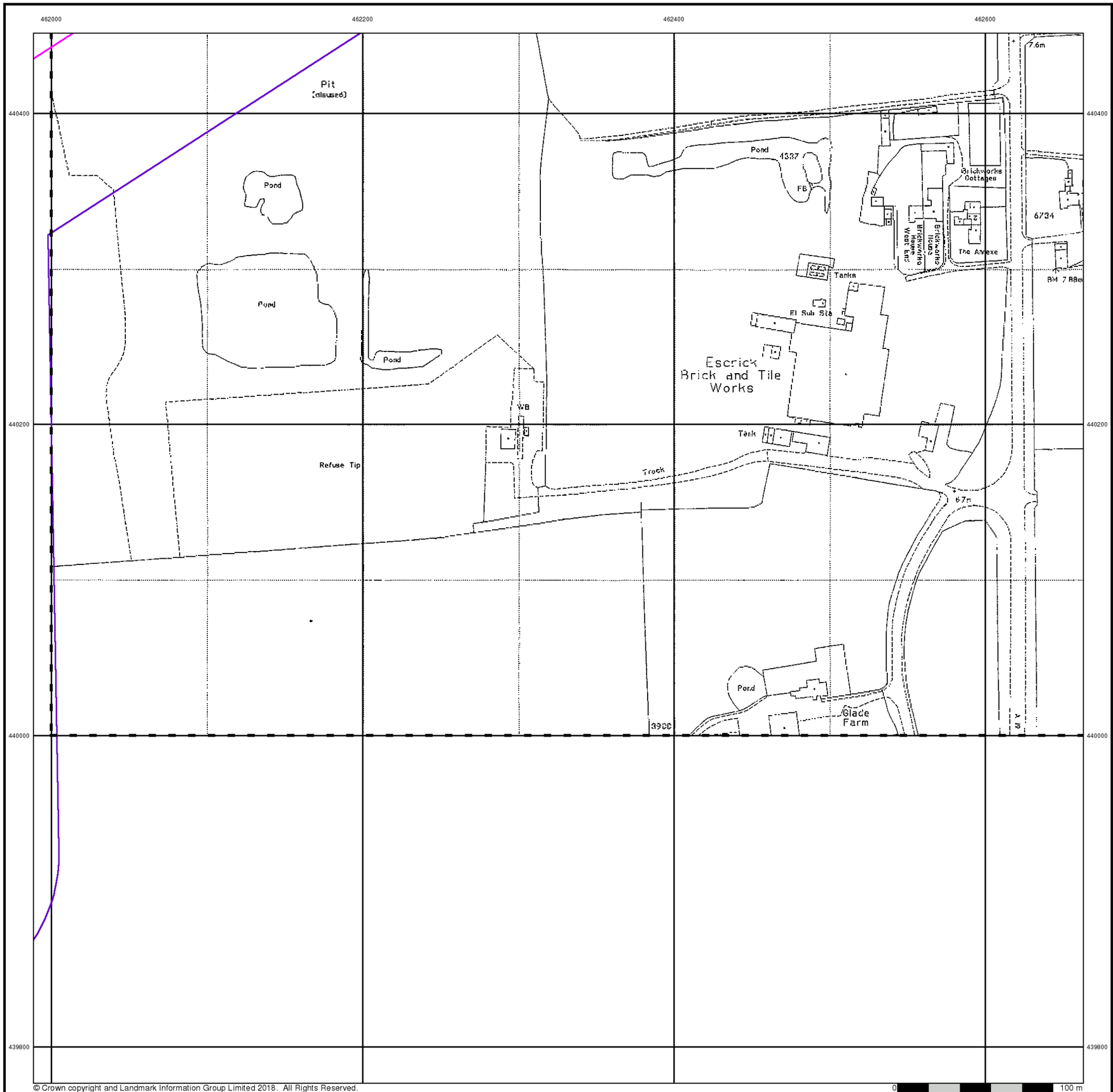

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LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1995

Source map scale - 1:2,500

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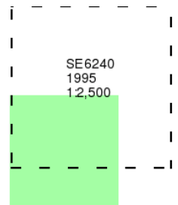
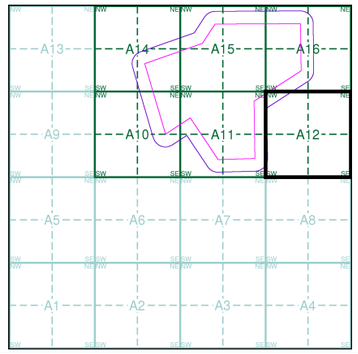


Historical Map - Segment A12



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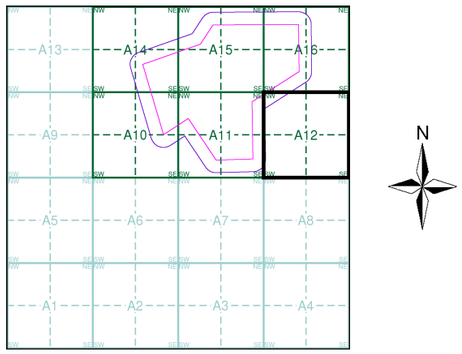
LANDMARK INFORMATION GROUP®

Historical Aerial Photography

Published 1999

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

Historical Aerial Photography - Segment A12



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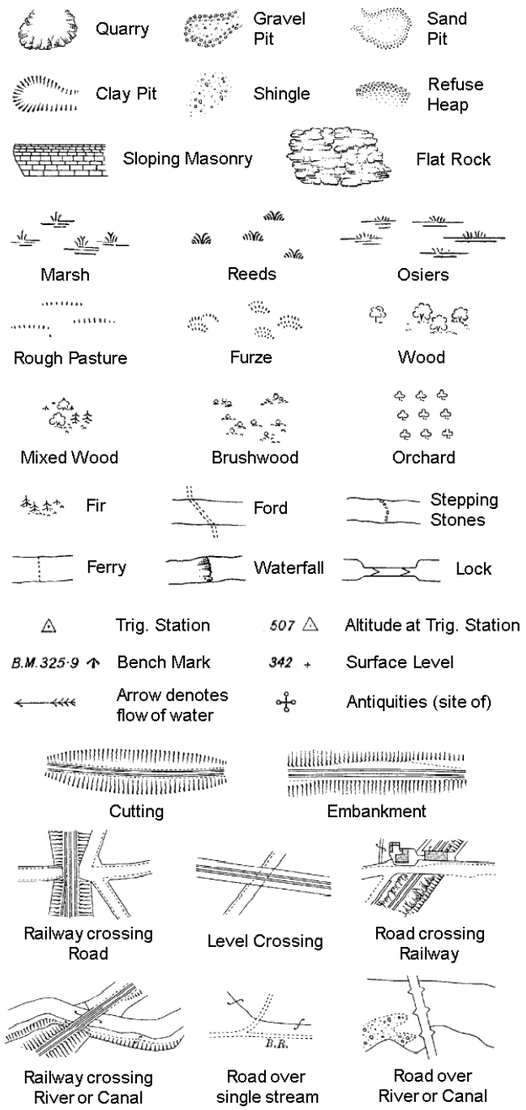

County Boundary (Geographical)

County & Civil Parish Boundary

Administrative County & Civil Parish Boundary

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Co. Burgh Bdy. County Burgh Boundary (Scotland)

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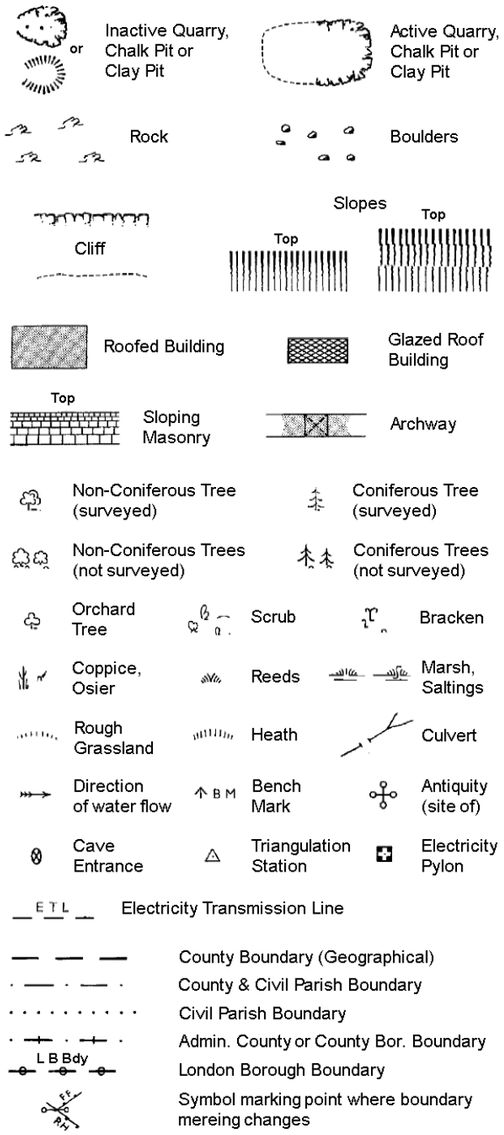
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



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County & Civil Parish Boundary

Civil Parish Boundary

Admin. County or County Bor. Boundary

L B Bdy London Borough Boundary

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FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
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LC	Level Crossing	TCP	Telephone Call Post
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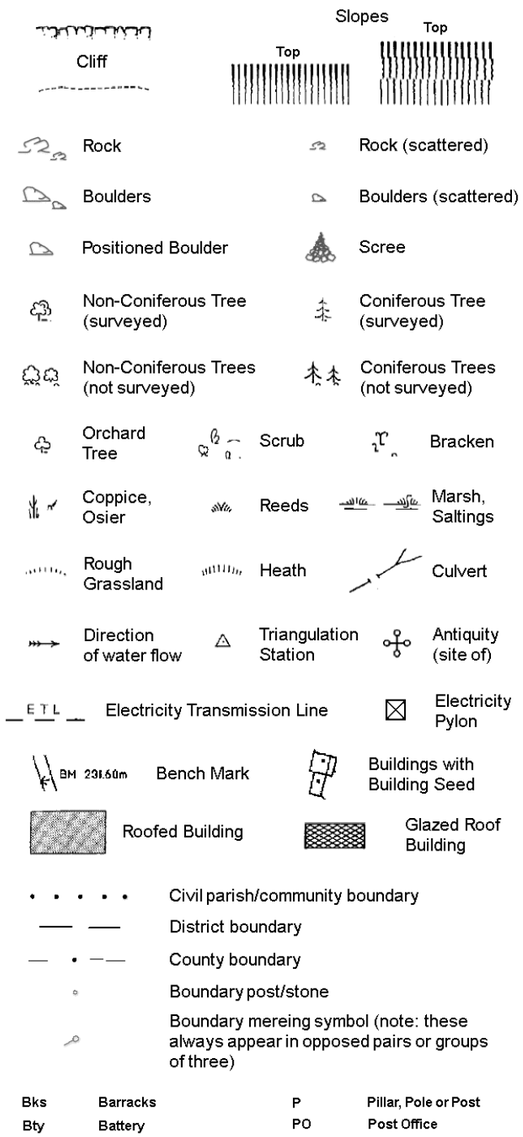
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



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District boundary

County boundary

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Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

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Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El 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 Governer	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

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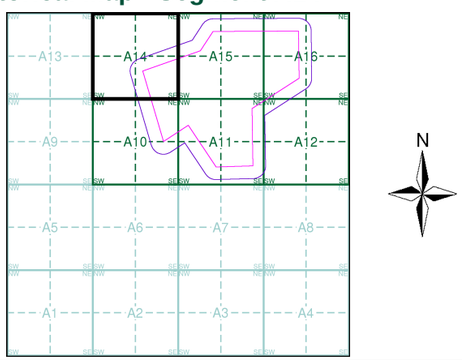
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1891	2
Yorkshire	1:2,500	1908 - 1910	3
Ordnance Survey Plan	1:2,500	1974	4
Additional SIMs	1:2,500	1984	5
Additional SIMs	1:2,500	1994	6
Large-Scale National Grid Data	1:2,500	1995	7
Large-Scale National Grid Data	1:2,500	1995	8
Historical Aerial Photography	1:2,500	1999	9

Historical Map - Segment A14



Order Details

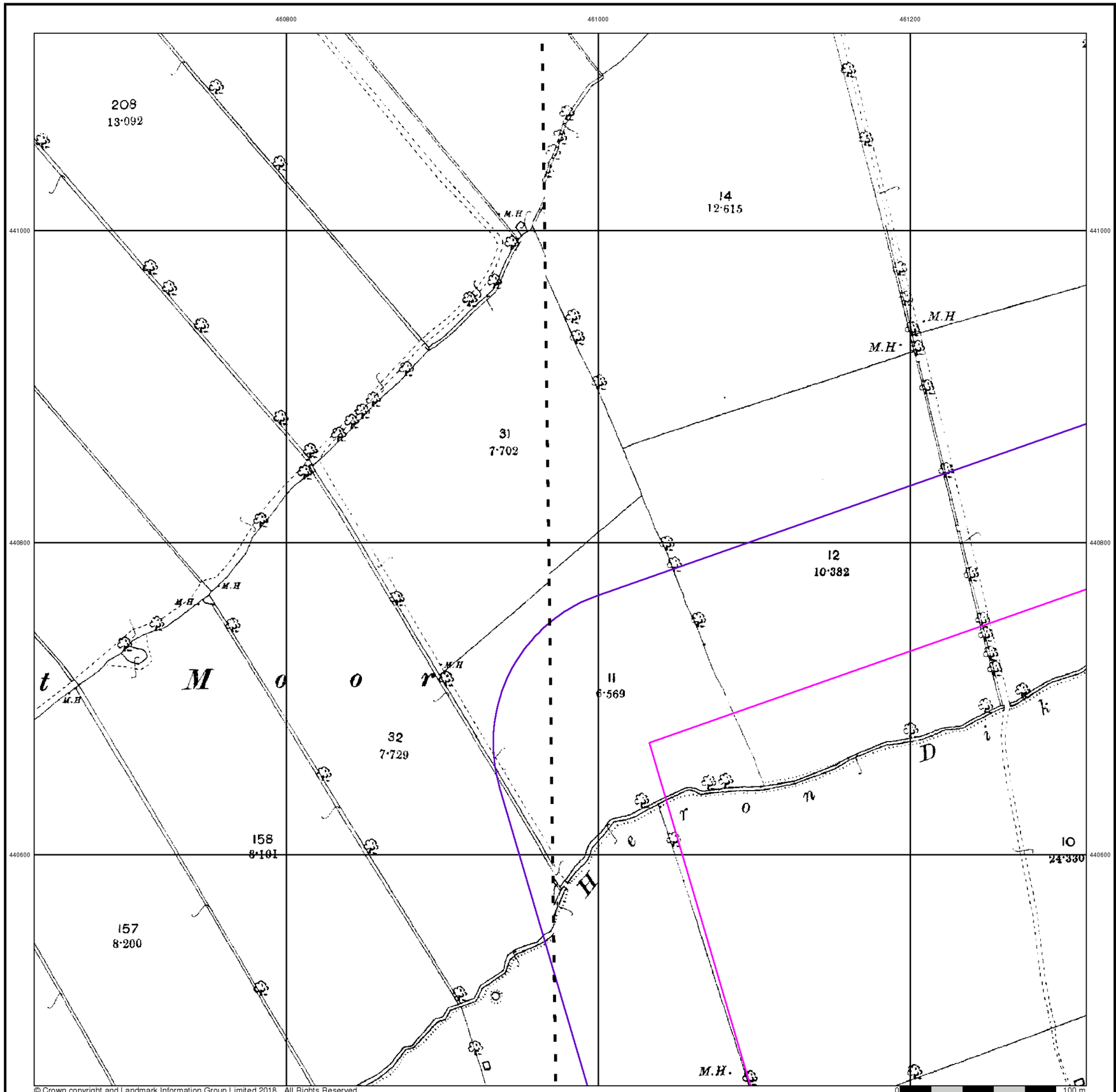
Order Number: 180692898_1_1
Customer Ref: PL/ES/JRC/2948/01
National Grid Reference: 461450, 440120
Slice: A
Site Area (Ha): 82.61
Search Buffer (m): 100

Site Details

Site at 461540, 440390

Landmark® INFORMATION GROUP

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



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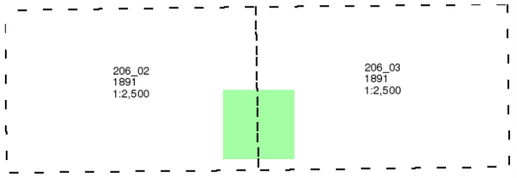
Yorkshire

Published 1891

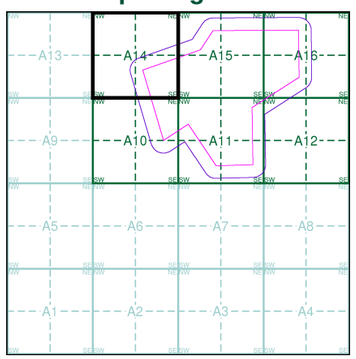
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

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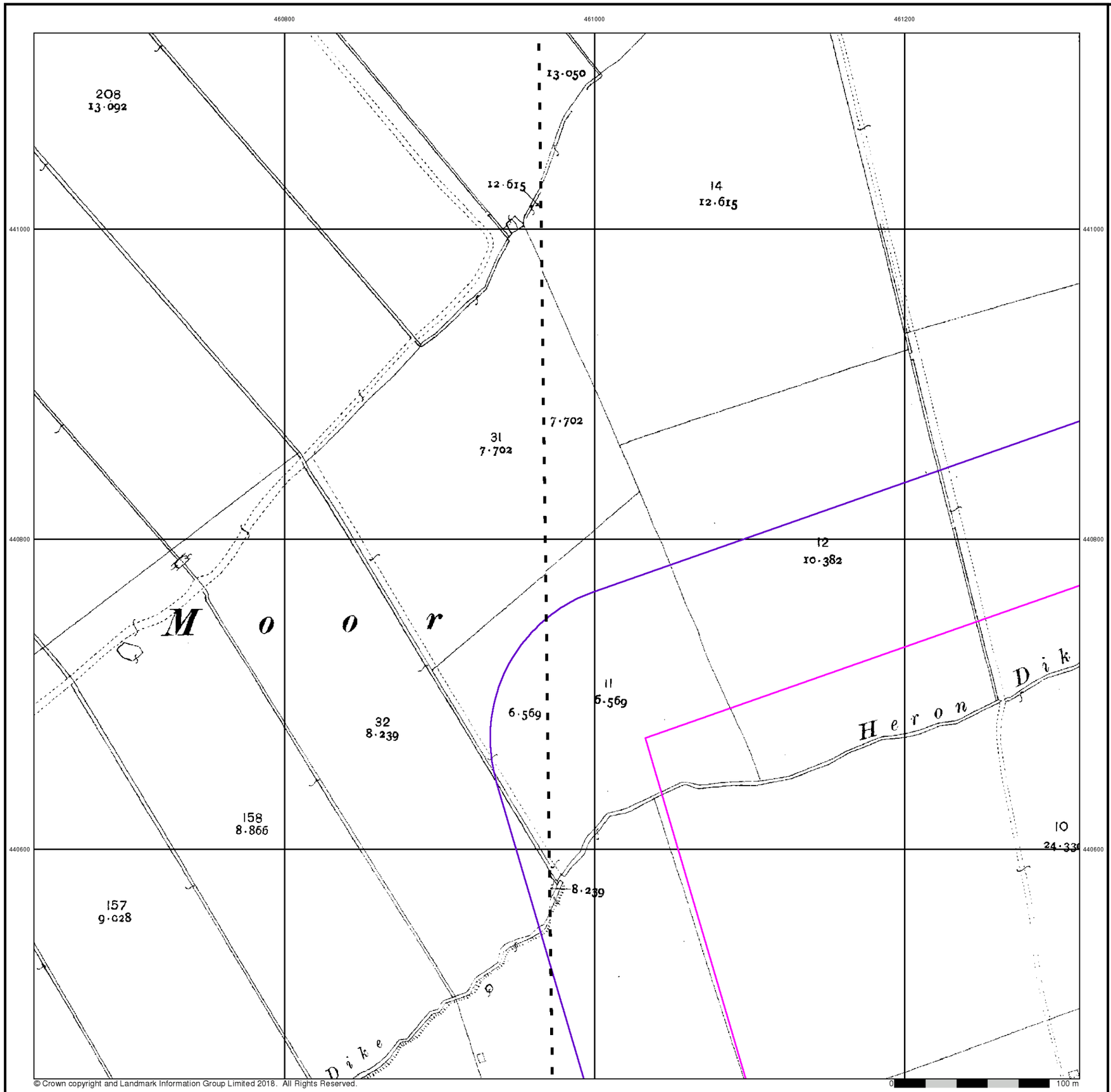

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LANDMARK INFORMATION GROUP®

Yorkshire

Published 1908 - 1910

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.

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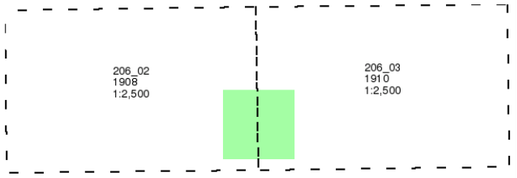
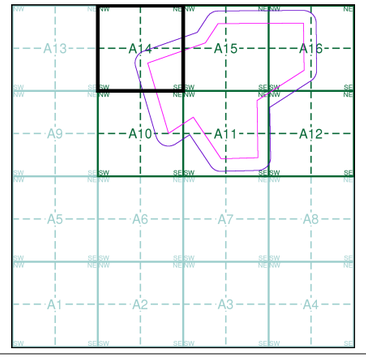


Historical Map - Segment A14



Order Details

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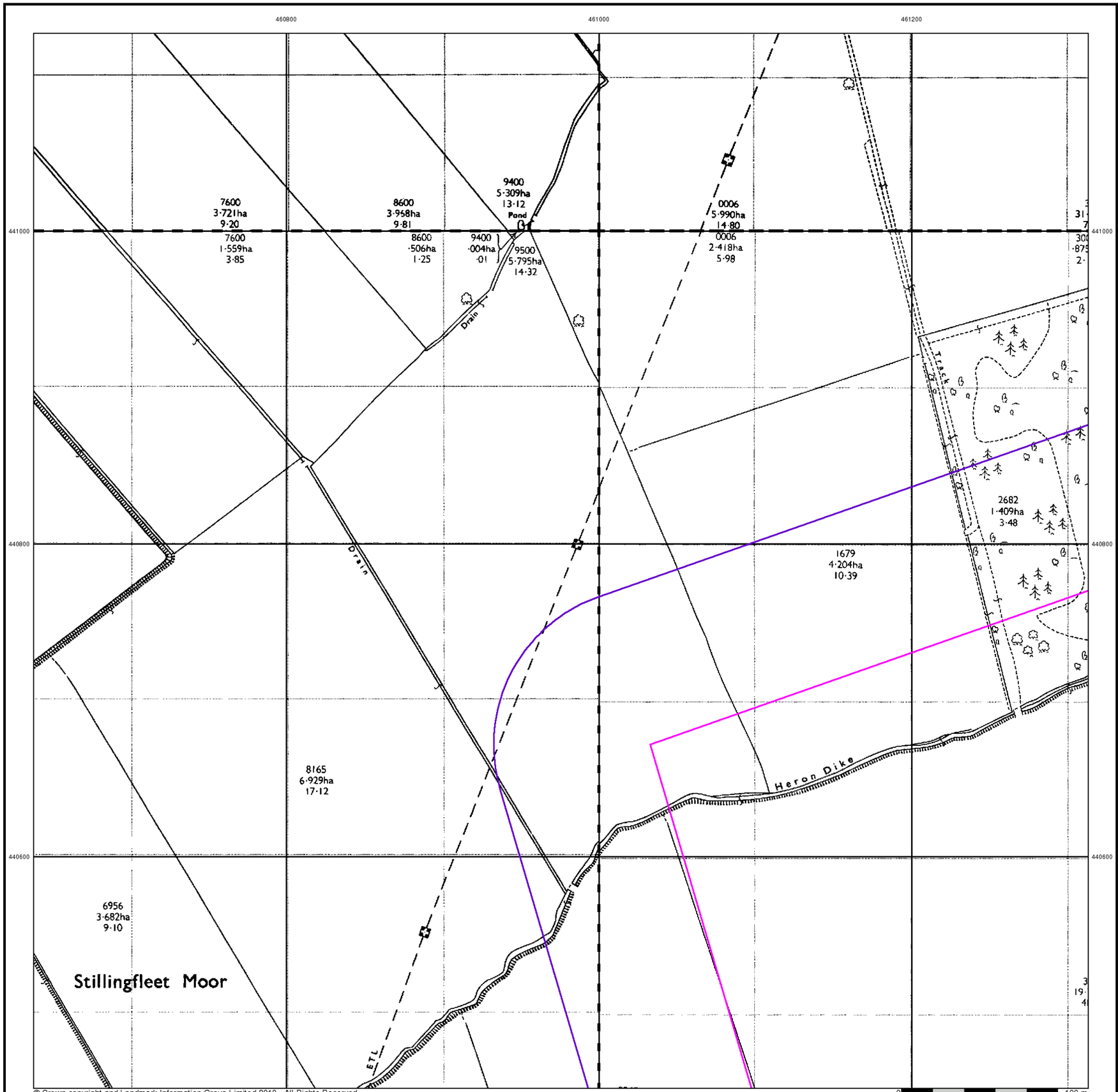

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Ordnance Survey Plan

Published 1974

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.

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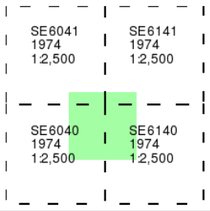
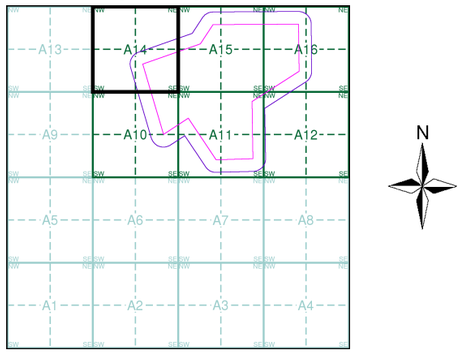


Historical Map - Segment A14



Order Details

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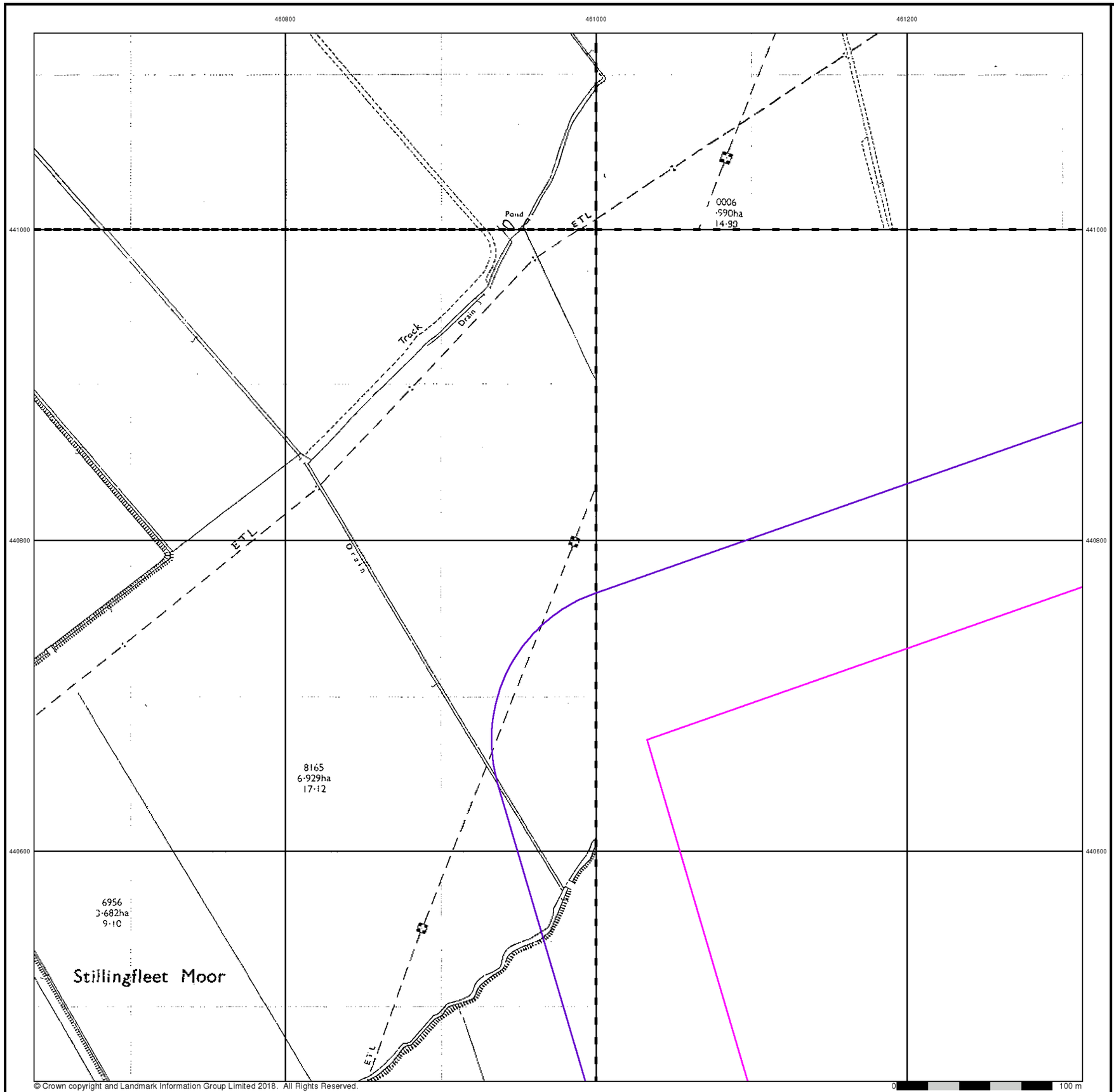

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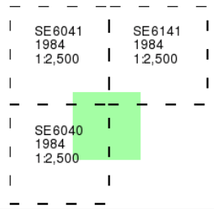
Additional SIMs

Published 1984

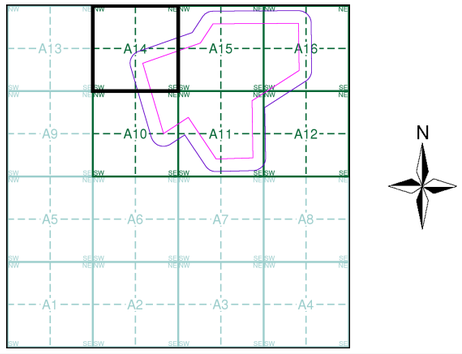
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A14



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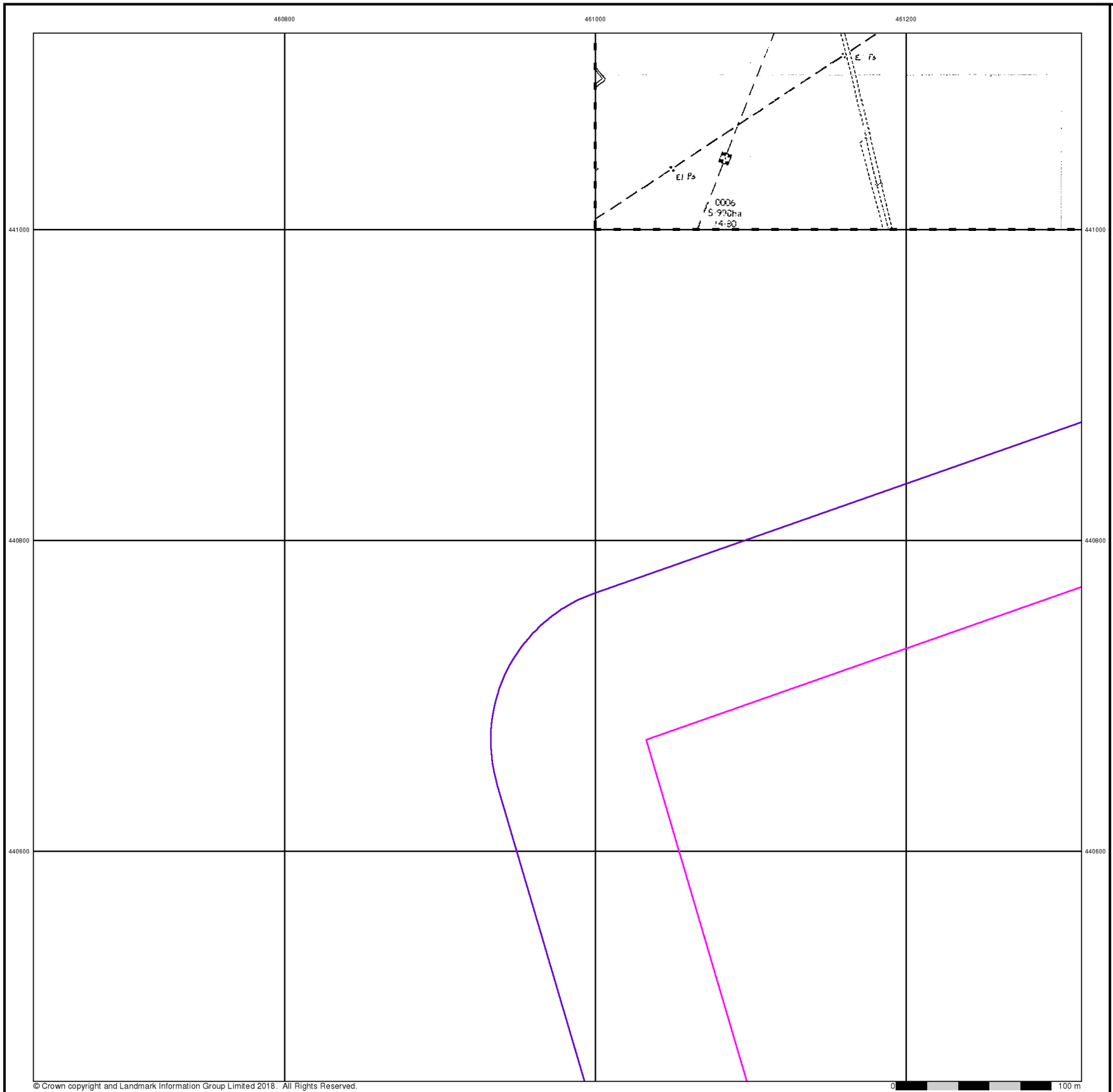

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LANDMARK INFORMATION GROUP®

Additional SIMs

Published 1994

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.

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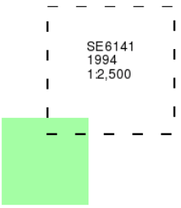
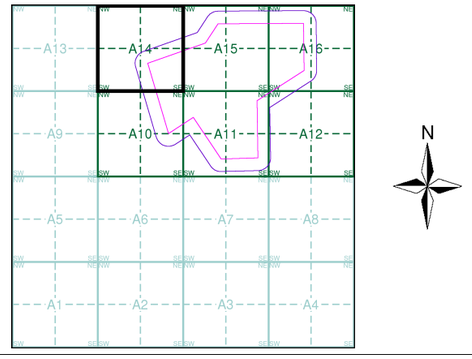


Historical Map - Segment A14



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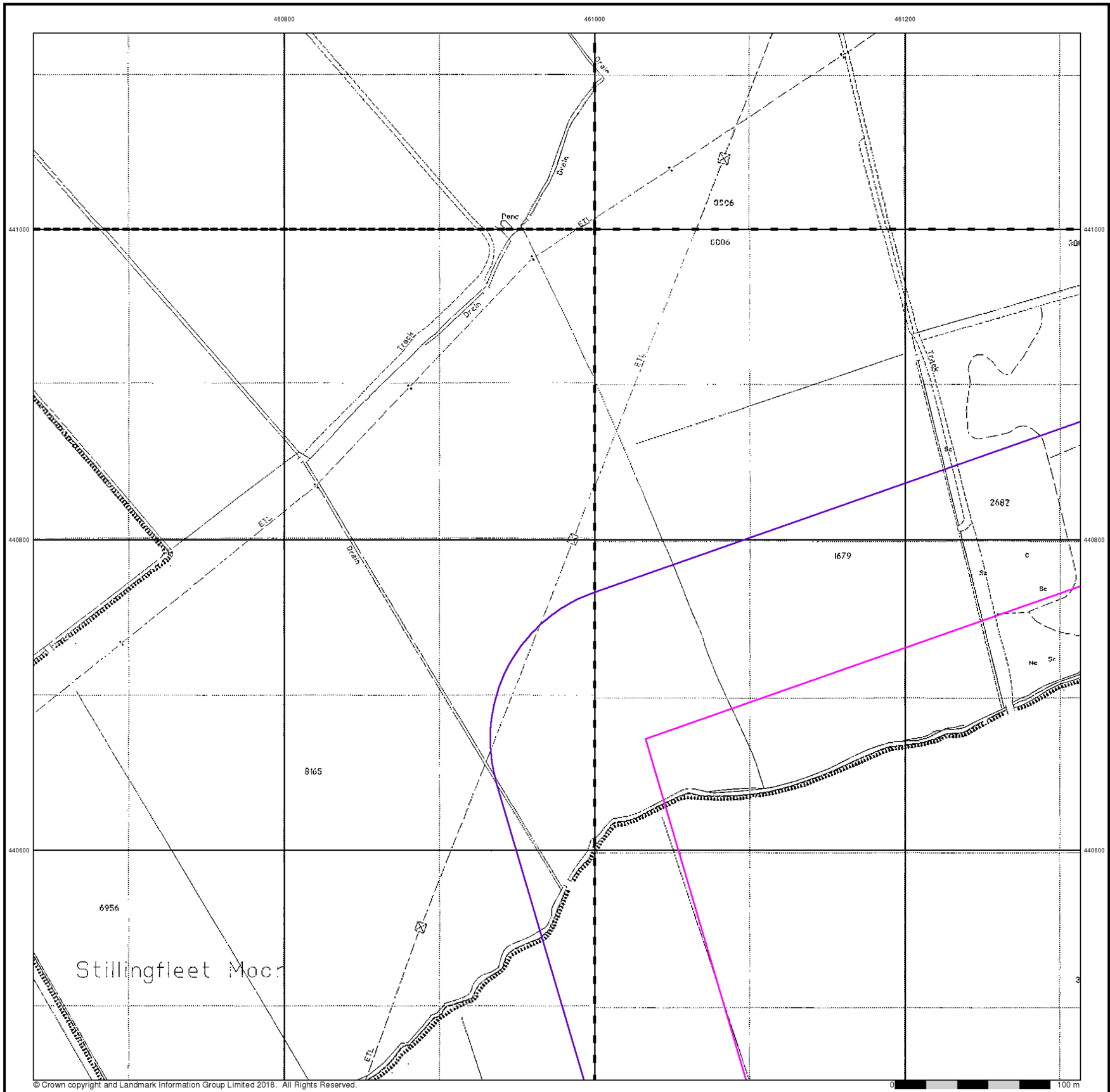

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LANDMARK INFORMATION GROUP®

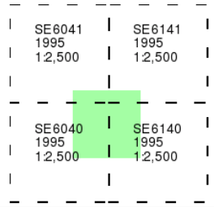
Large-Scale National Grid Data

Published 1995

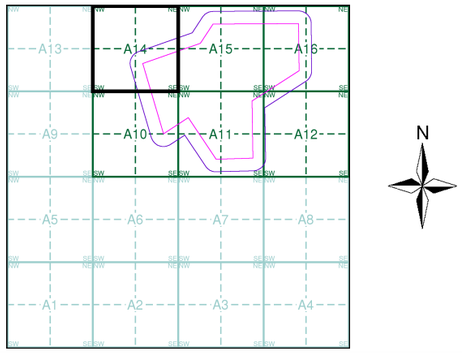
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A14



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Site at 461540, 440390

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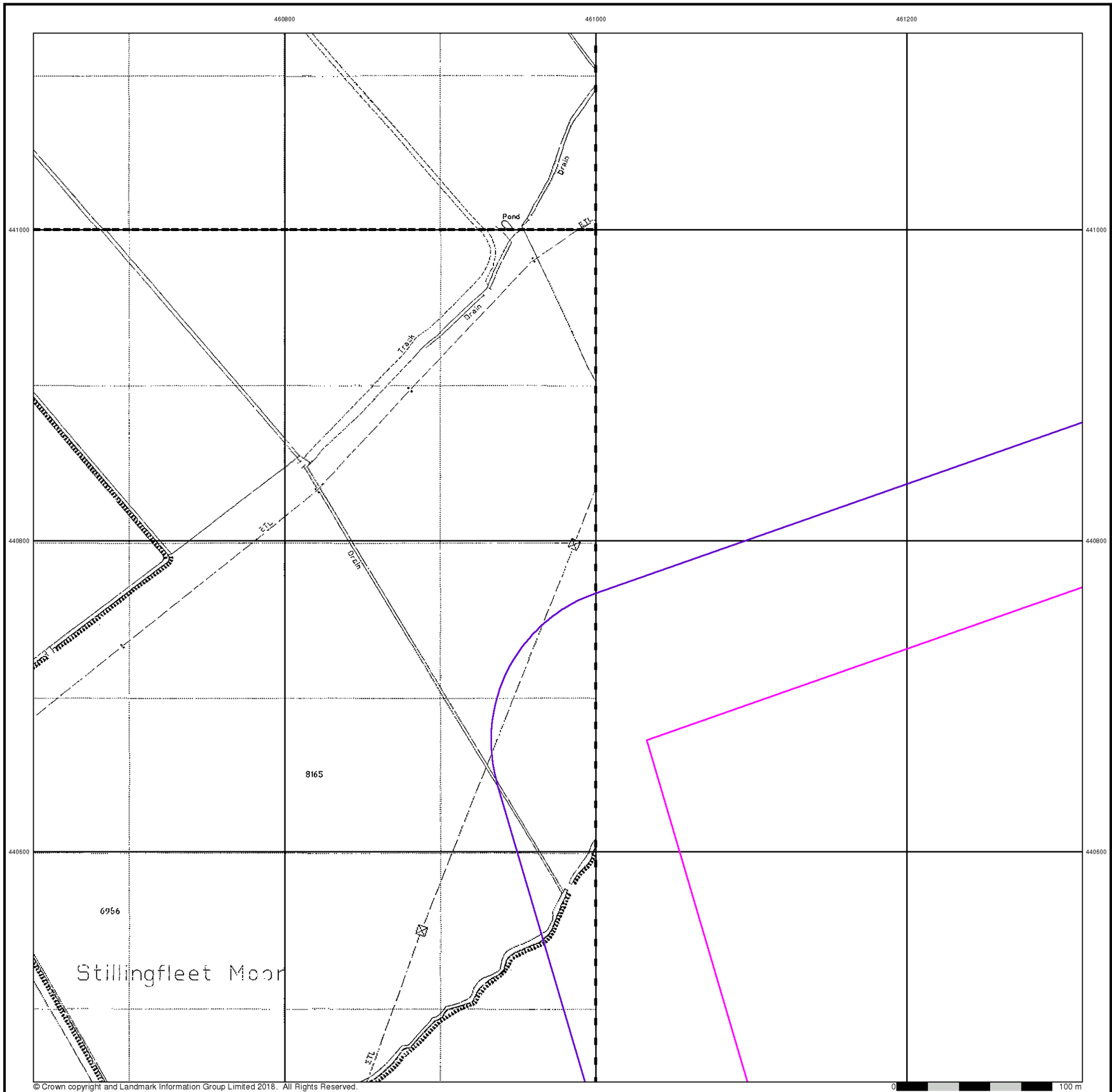

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LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1995

Source map scale - 1:2,500

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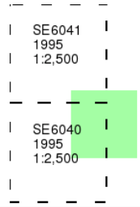
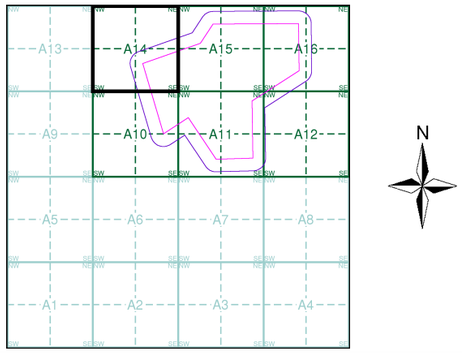


Historical Map - Segment A14



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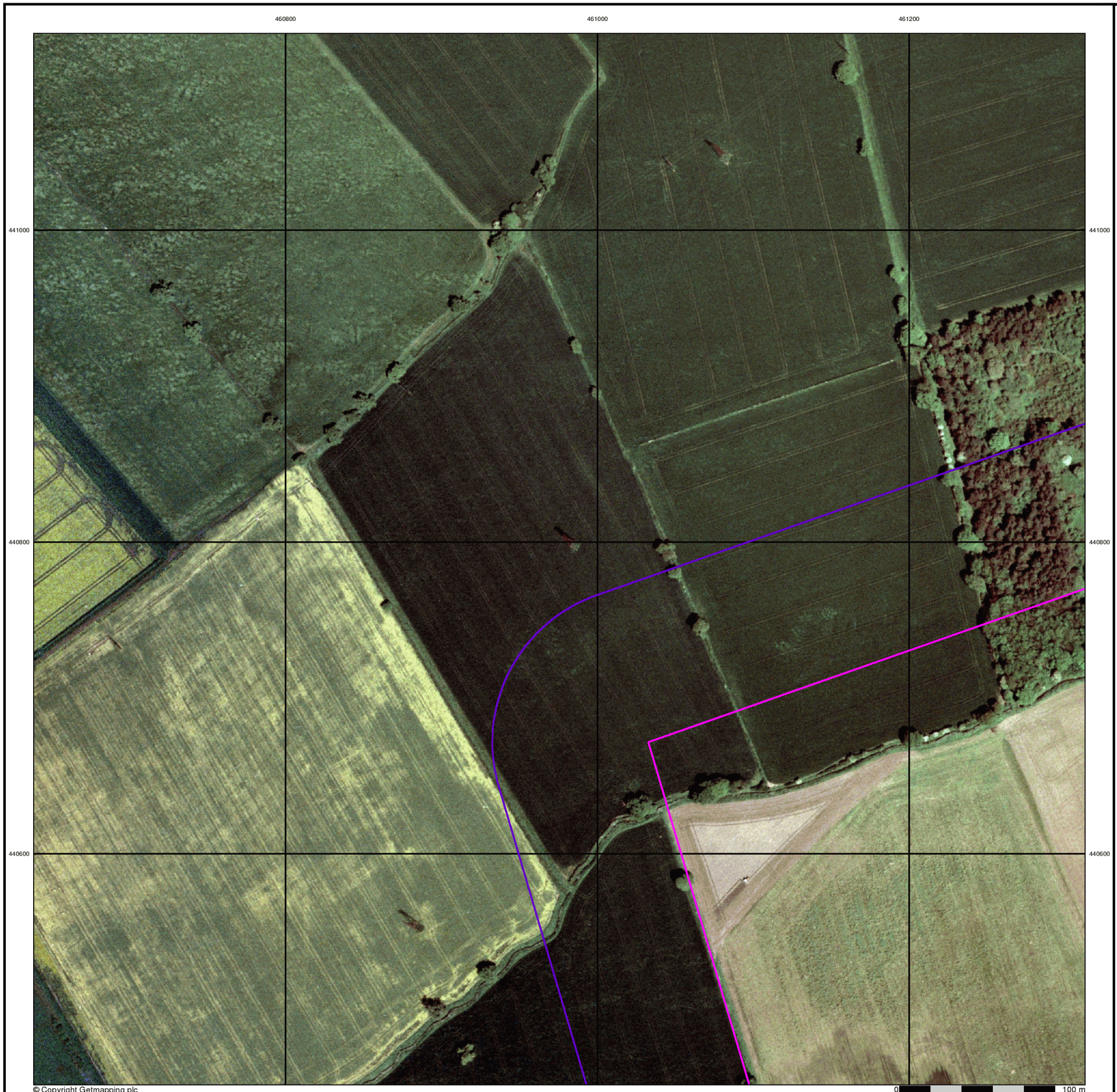

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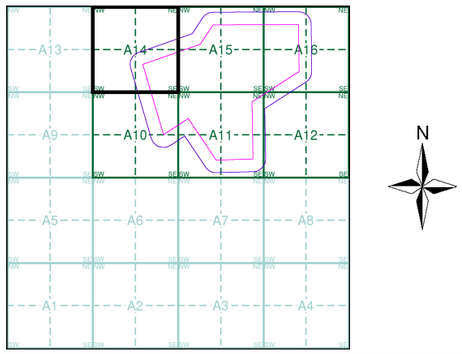
Historical Aerial Photography

Published 1999

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

Historical Aerial Photography - Segment A14



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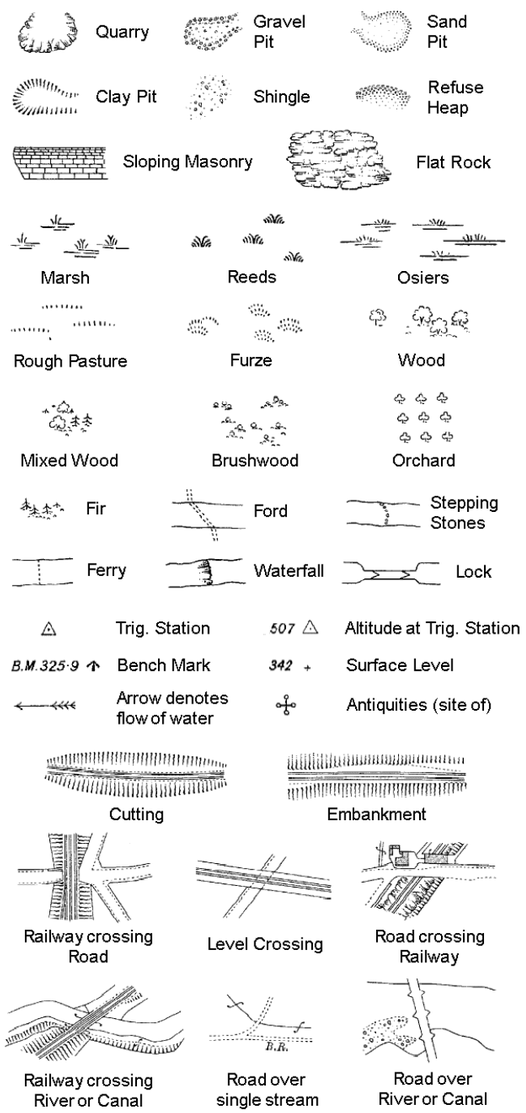
Historical Mapping Legends

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



County Boundary (Geographical)

County & Civil Parish Boundary

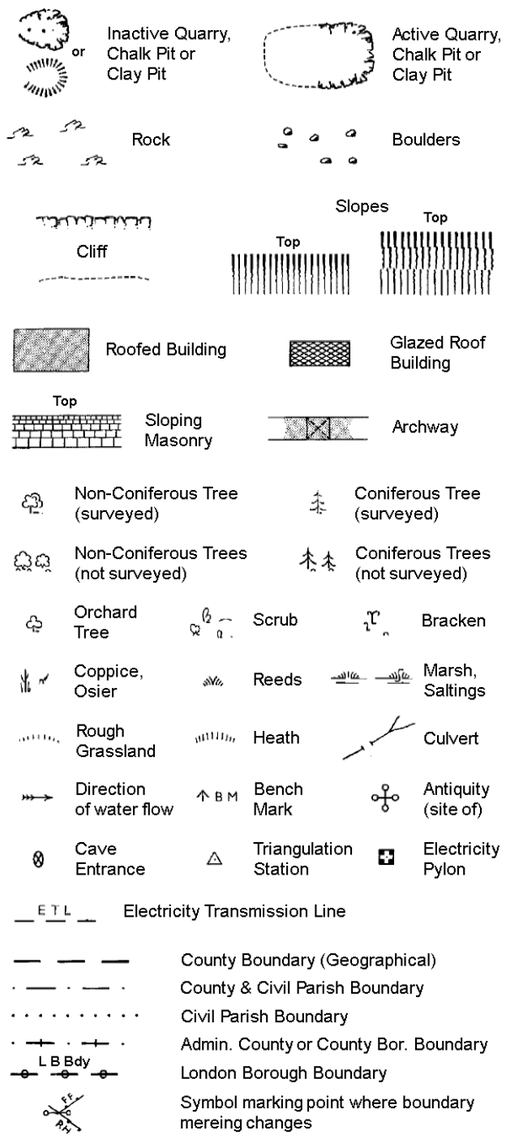
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	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



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

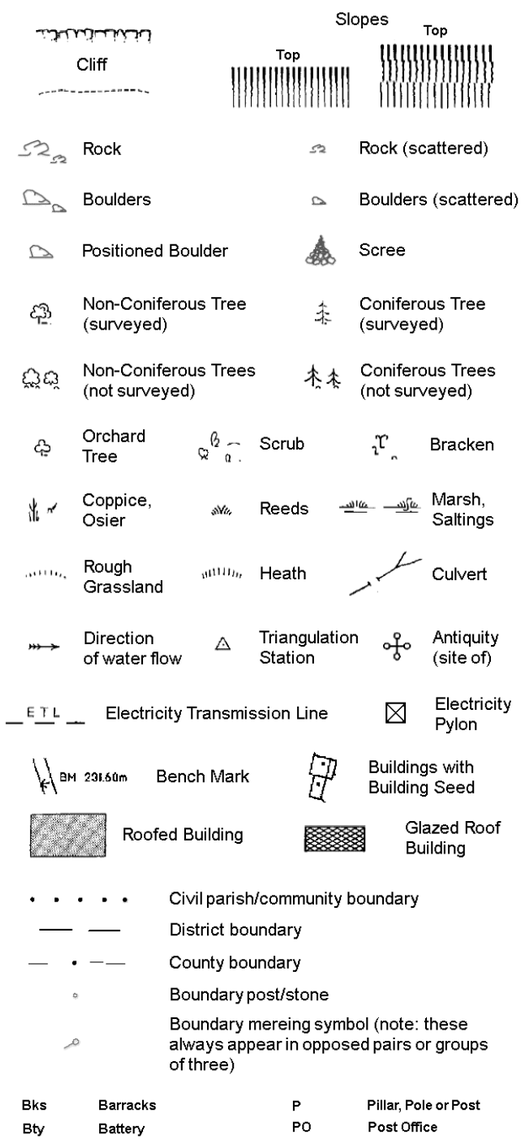
Admin. County or County Bor. Boundary

L B Bdy 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
El 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



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
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El 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 Governer	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

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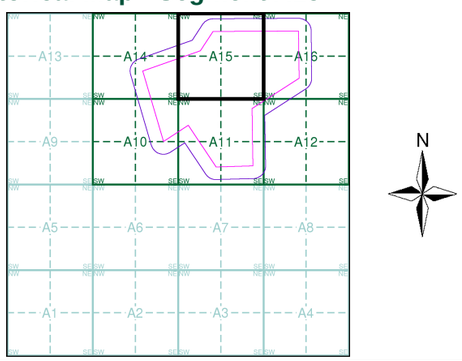
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1891	2
Yorkshire	1:2,500	1910	3
Ordnance Survey Plan	1:2,500	1974	4
Additional SIMs	1:2,500	1984	5
Additional SIMs	1:2,500	1994	6
Large-Scale National Grid Data	1:2,500	1995	7
Historical Aerial Photography	1:2,500	1999	8

Historical Map - Segment A15



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Site Details

Site at 461540, 440390

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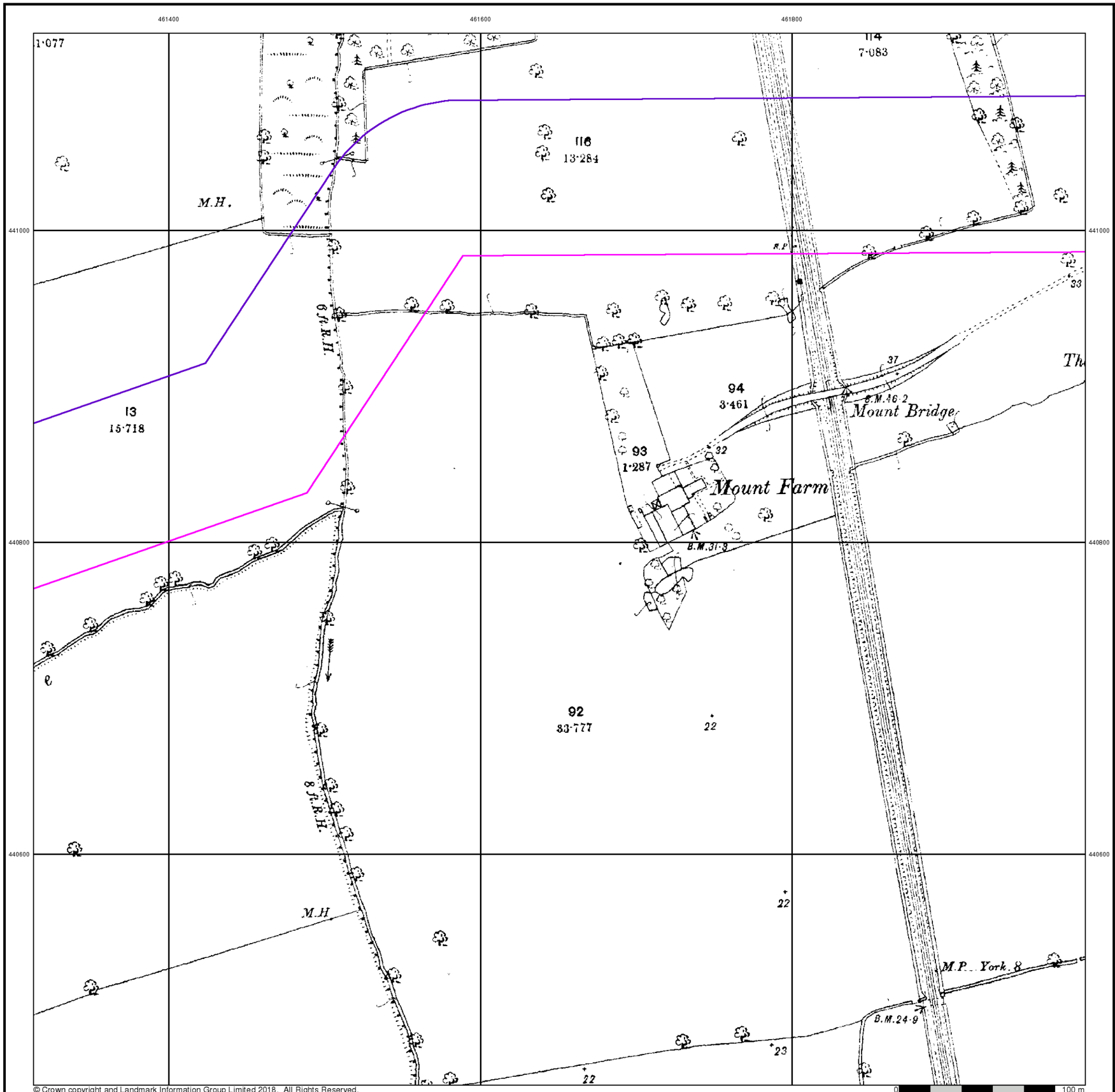

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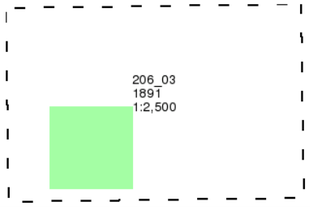
Yorkshire

Published 1891

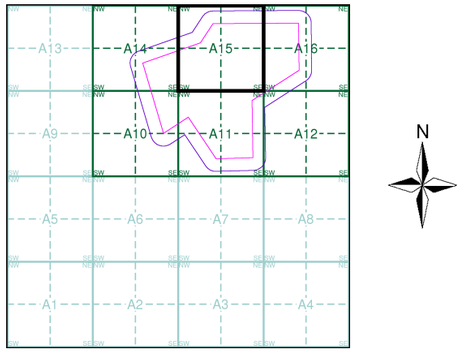
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A15



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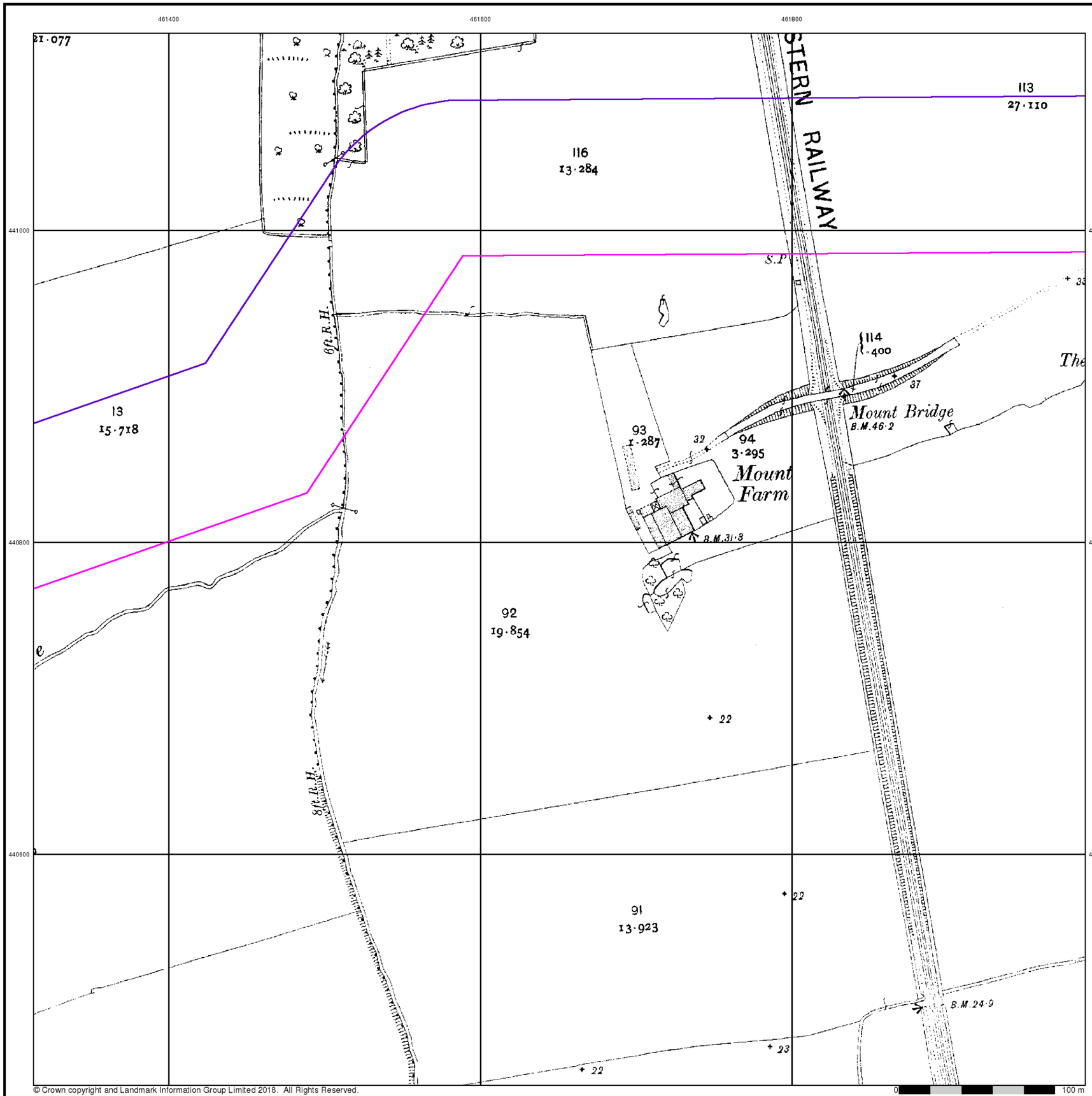

Envirocheck®

LANDMARK INFORMATION GROUP®

Yorkshire

Published 1910

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.

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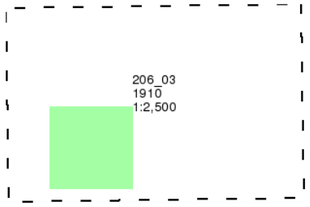
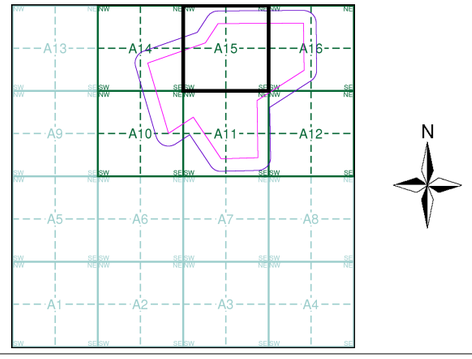


Historical Map - Segment A15



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	100

Site Details

Site at 461540, 440390

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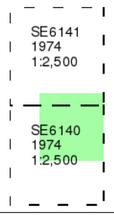
Ordnance Survey Plan

Published 1974

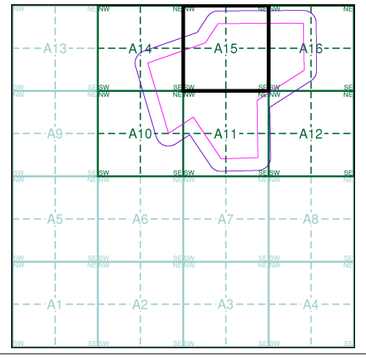
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A15



Order Details

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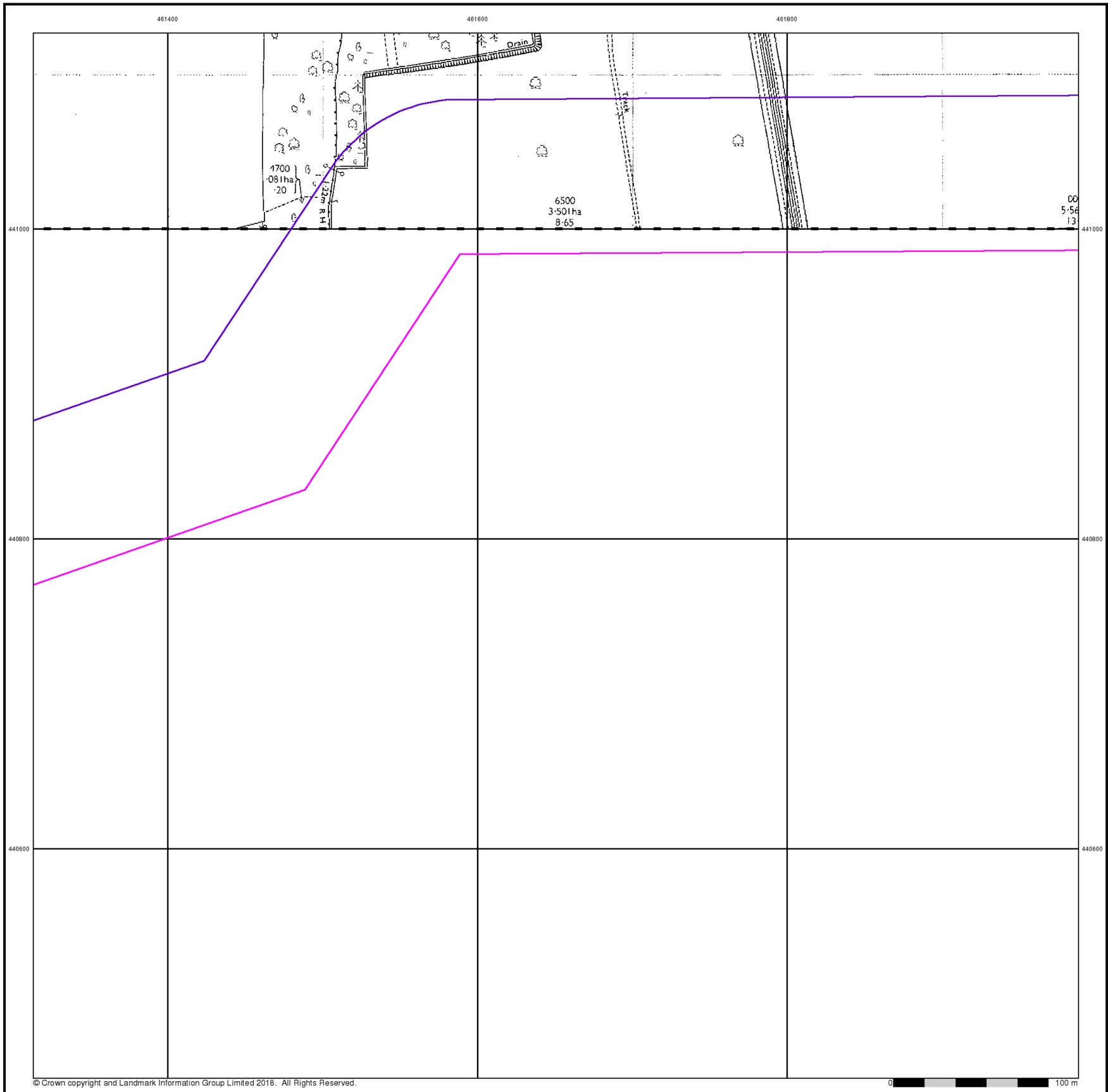

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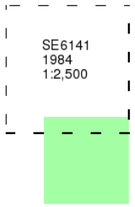
Additional SIMs

Published 1984

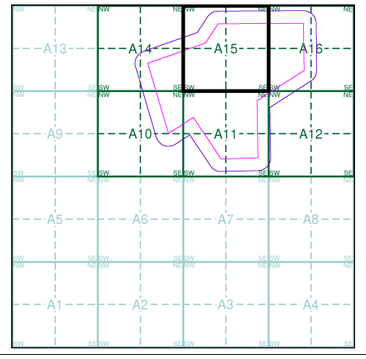
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A15



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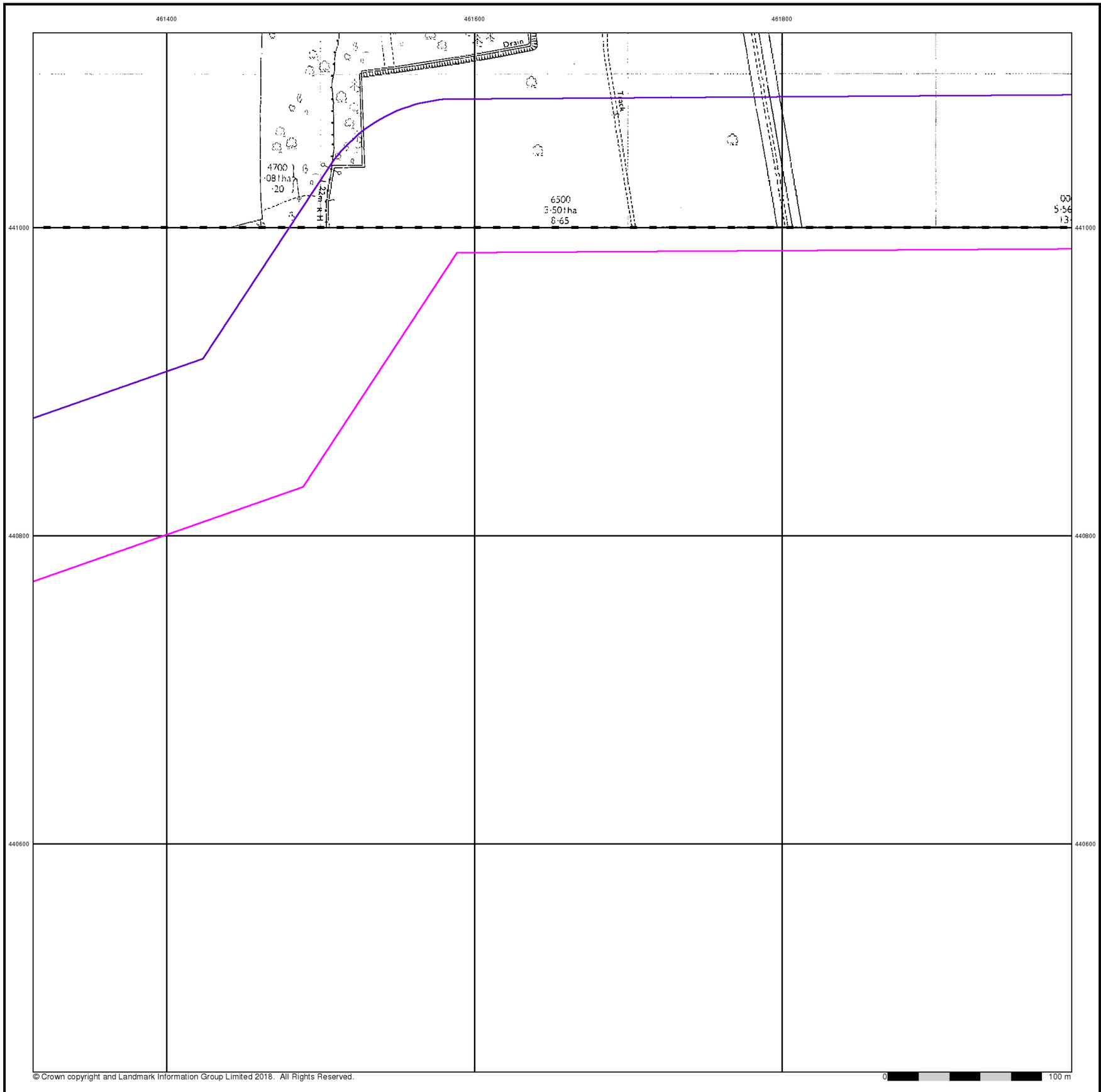

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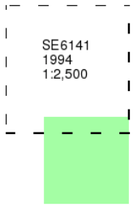
Additional SIMs

Published 1994

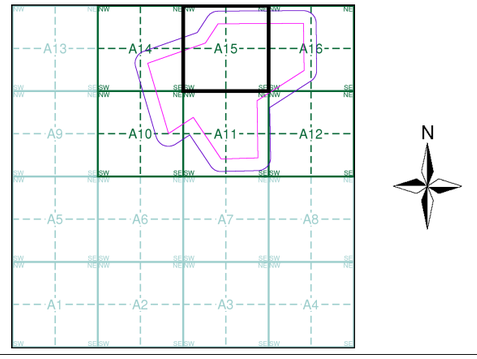
Source map scale - 1:2,500

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)



Historical Map - Segment A15



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Slice:	A
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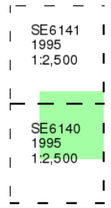
Large-Scale National Grid Data

Published 1995

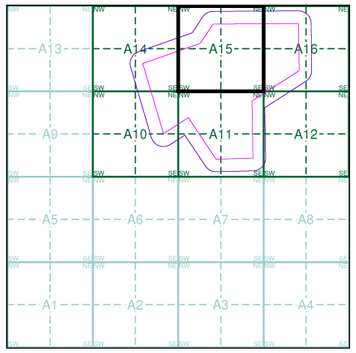
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A15



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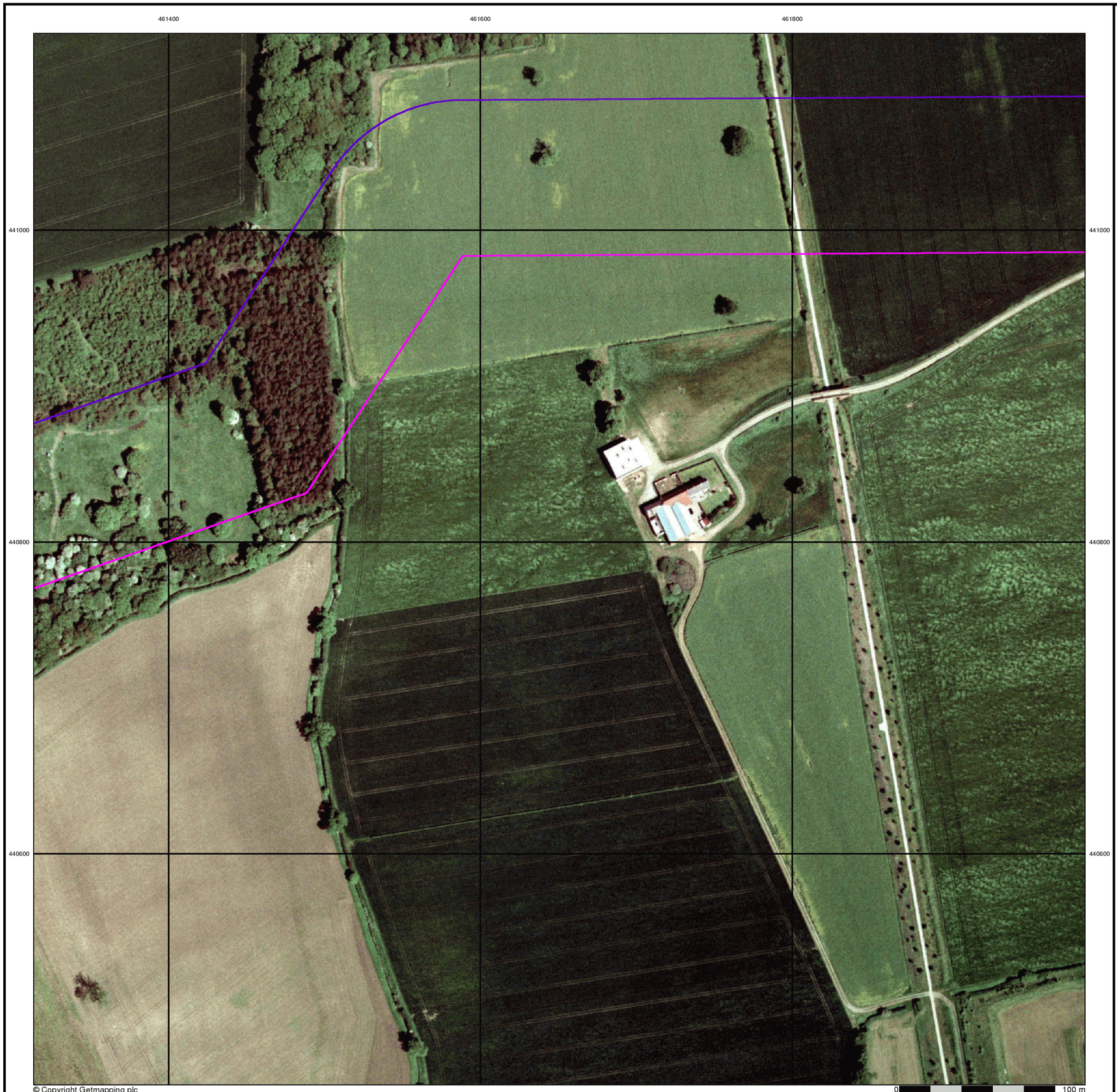

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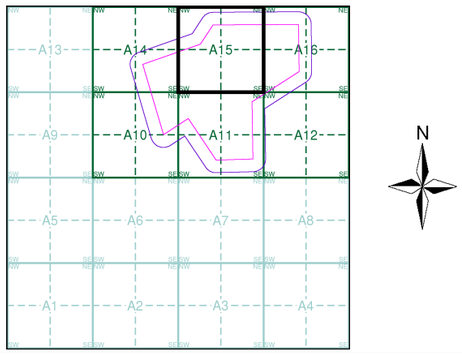
Historical Aerial Photography

Published 1999

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

Historical Aerial Photography - Segment A15



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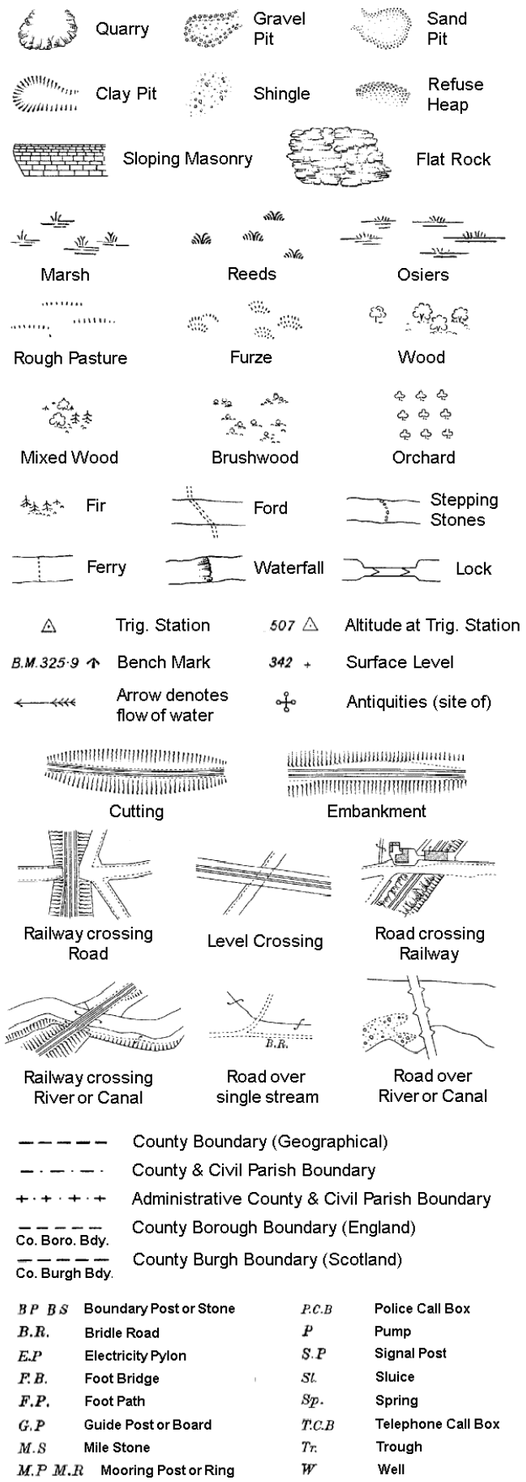
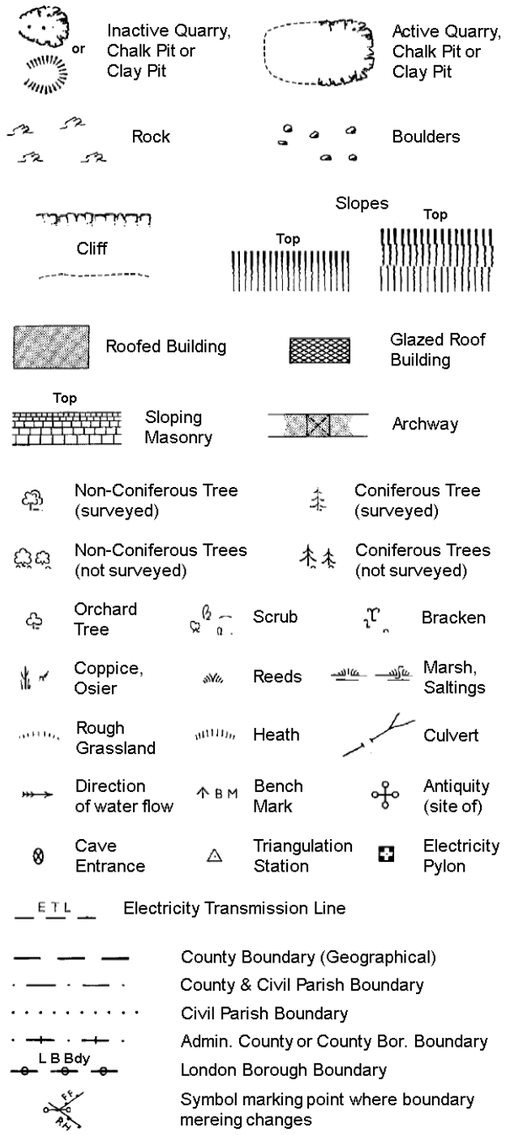
Historical Mapping Legends

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



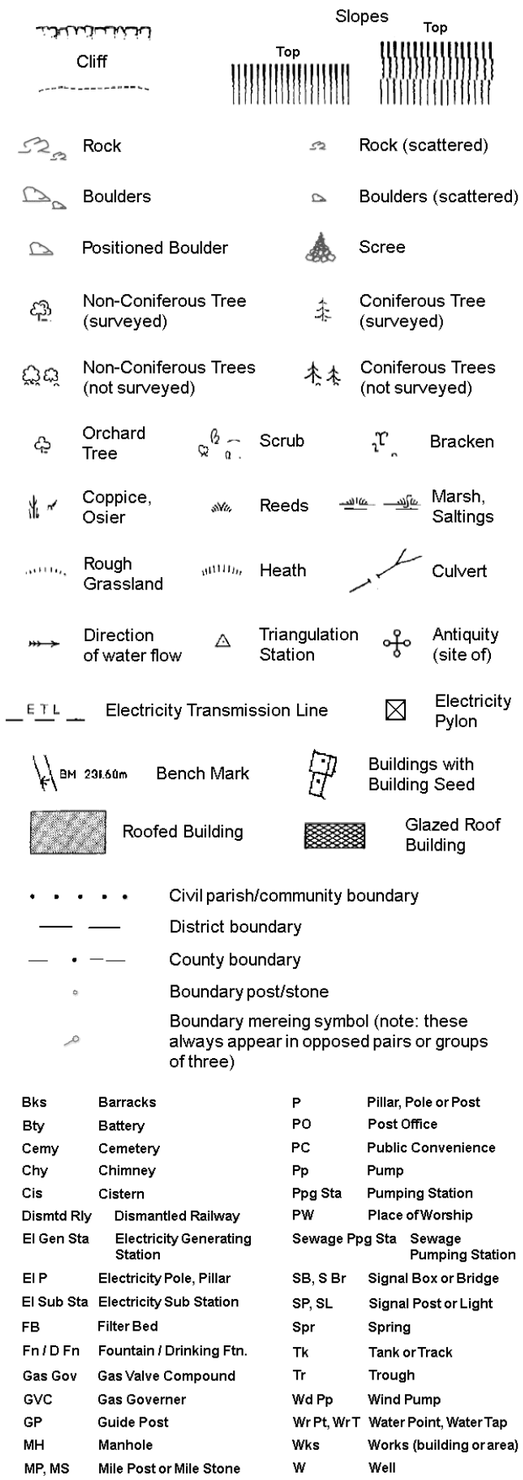
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



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
El 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



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
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El 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 Governer	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

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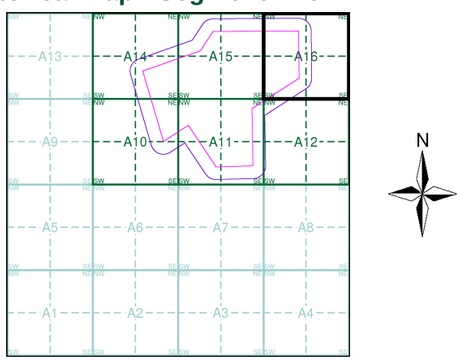
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1891	2
Yorkshire	1:2,500	1910	3
Ordnance Survey Plan	1:2,500	1974	4
Additional SIMs	1:2,500	1984 - 1987	5
Additional SIMs	1:2,500	1994	6
Large-Scale National Grid Data	1:2,500	1995	7
Large-Scale National Grid Data	1:2,500	1995	8
Historical Aerial Photography	1:2,500	1999	9

Historical Map - Segment A16



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	100

Site Details

Site at 461540, 440390

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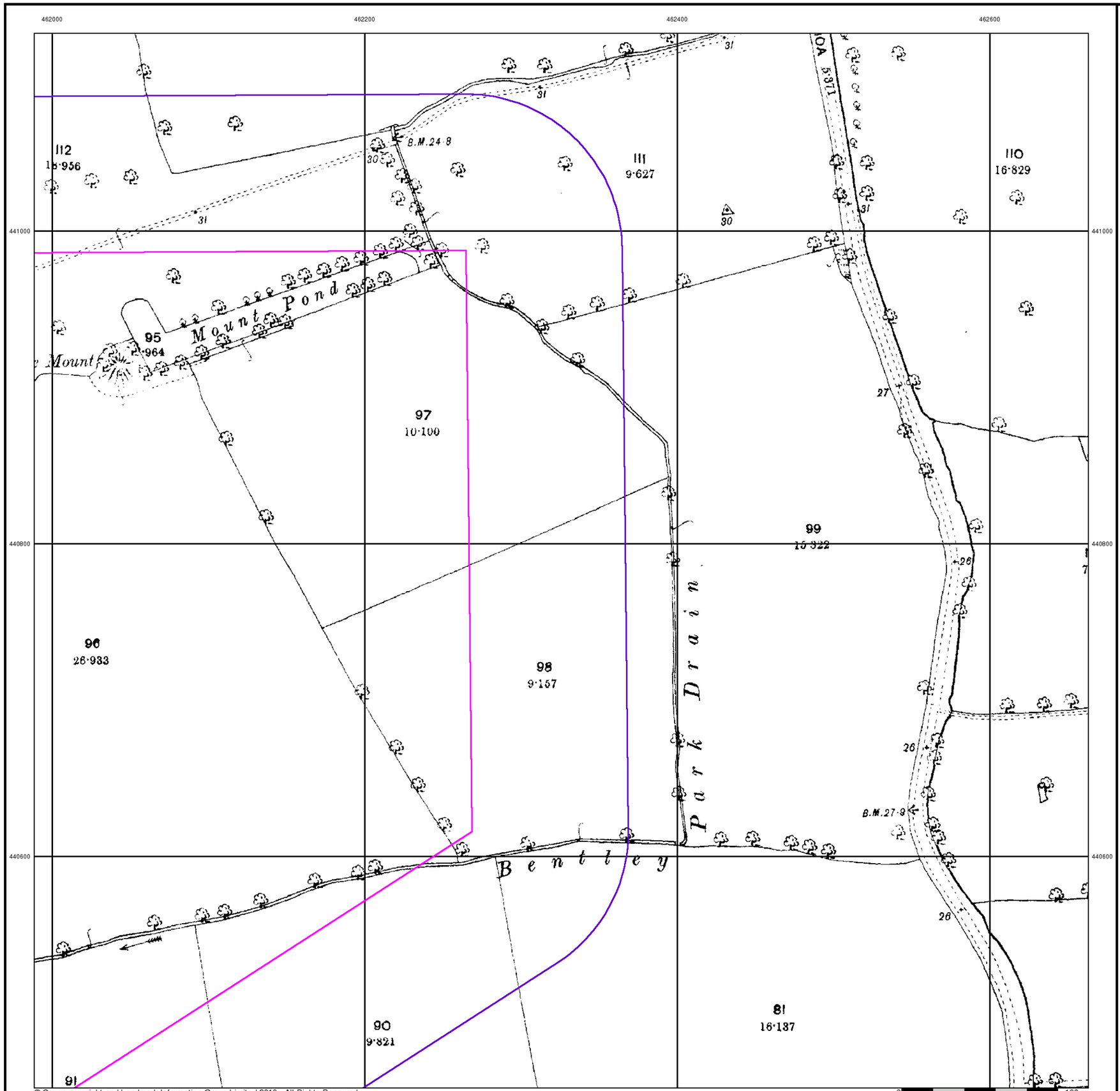

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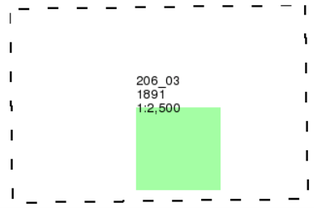
Yorkshire

Published 1891

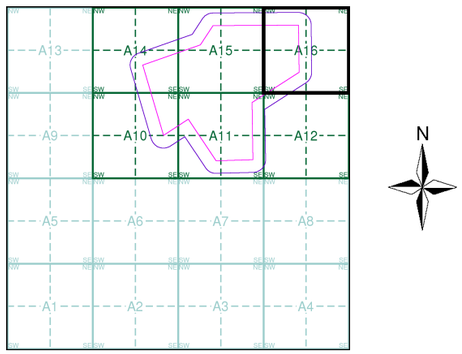
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A16



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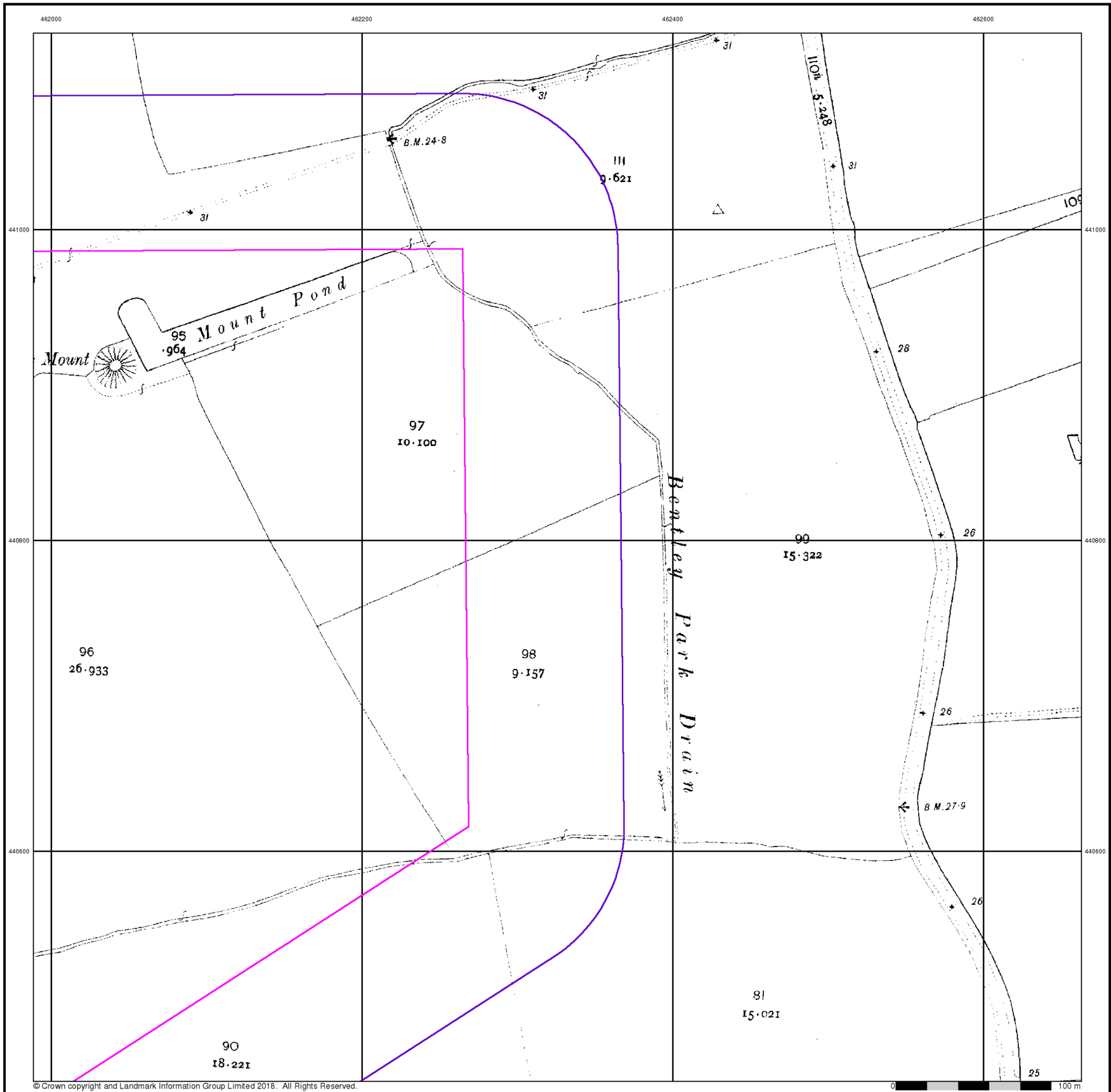

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Yorkshire

Published 1910

Source map scale - 1:2,500

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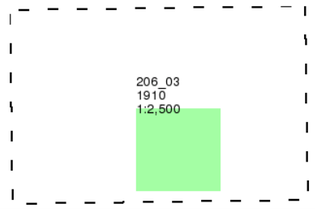
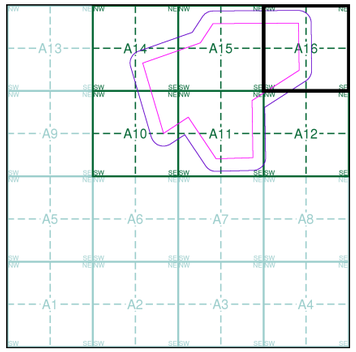


Historical Map - Segment A16



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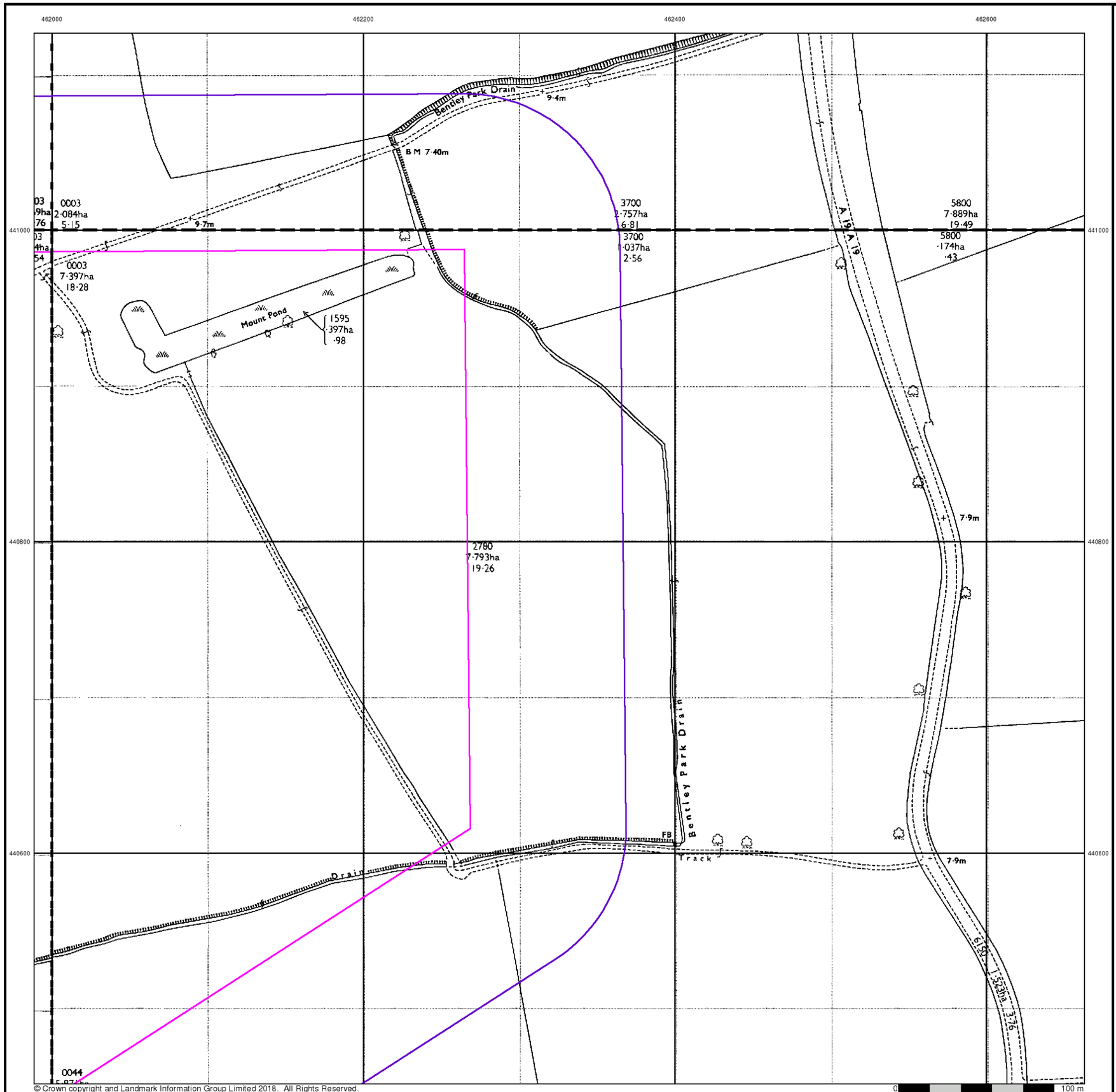

0 100 m

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Ordnance Survey Plan

Published 1974

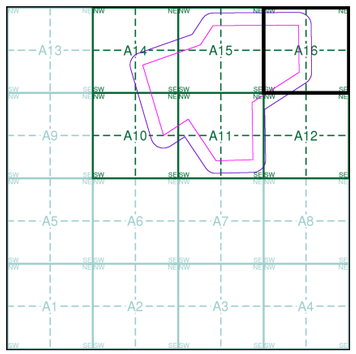
Source map scale - 1:2,500

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)

SE6141 1974 1:2,500
SE6241 1974 1:2,500
SE6140 1974 1:2,500
SE6240 1974 1:2,500

Historical Map - Segment A16



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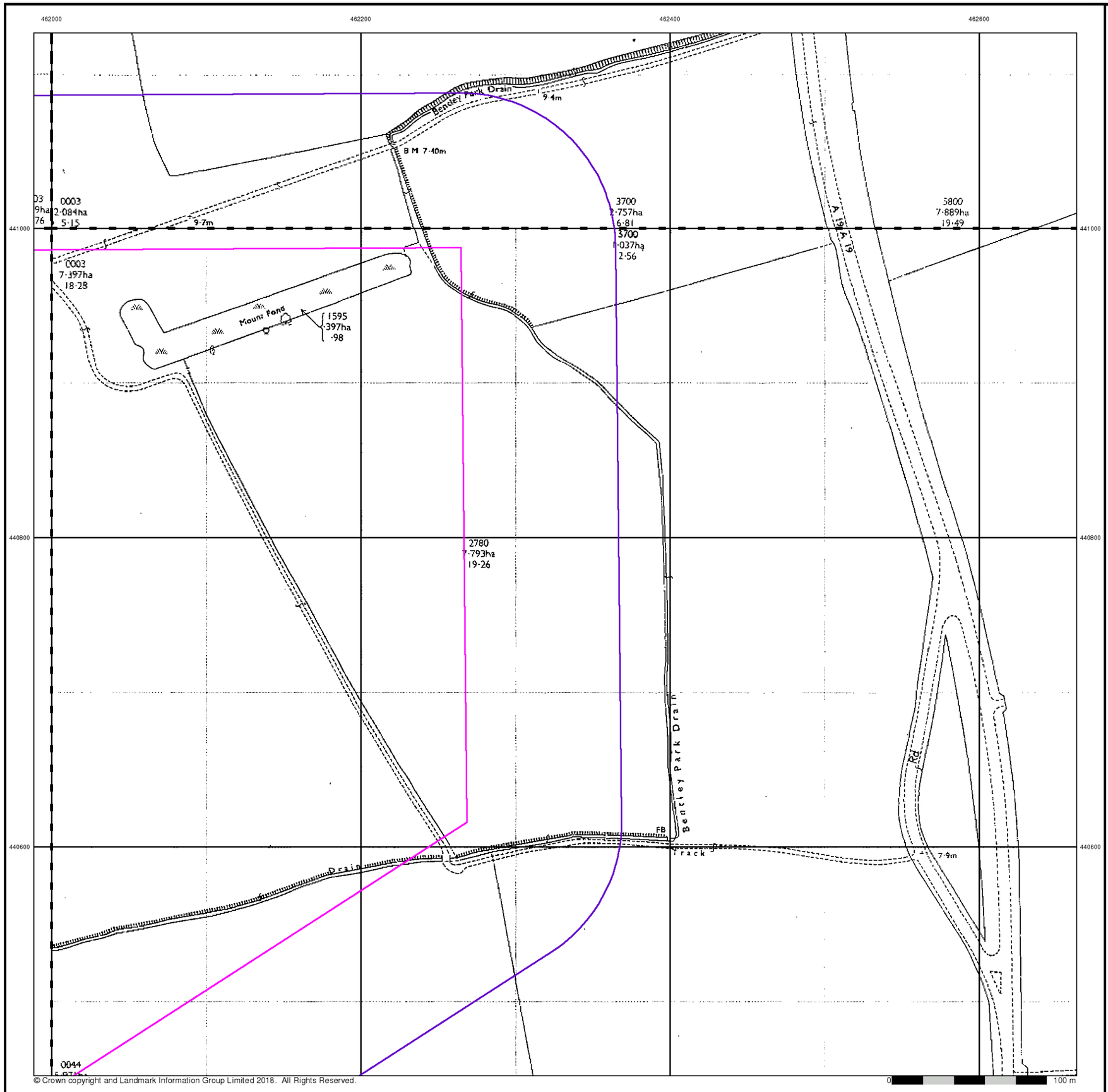

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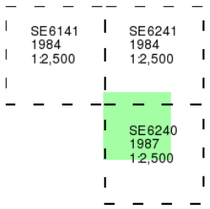
Additional SIMs

Published 1984 - 1987

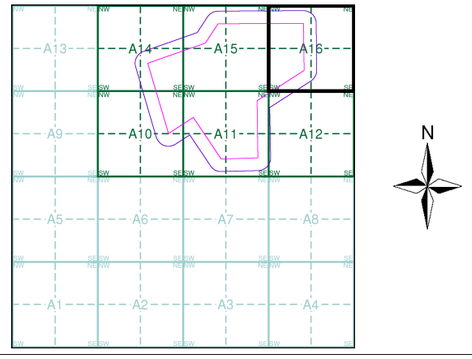
Source map scale - 1:2,500

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)



Historical Map - Segment A16



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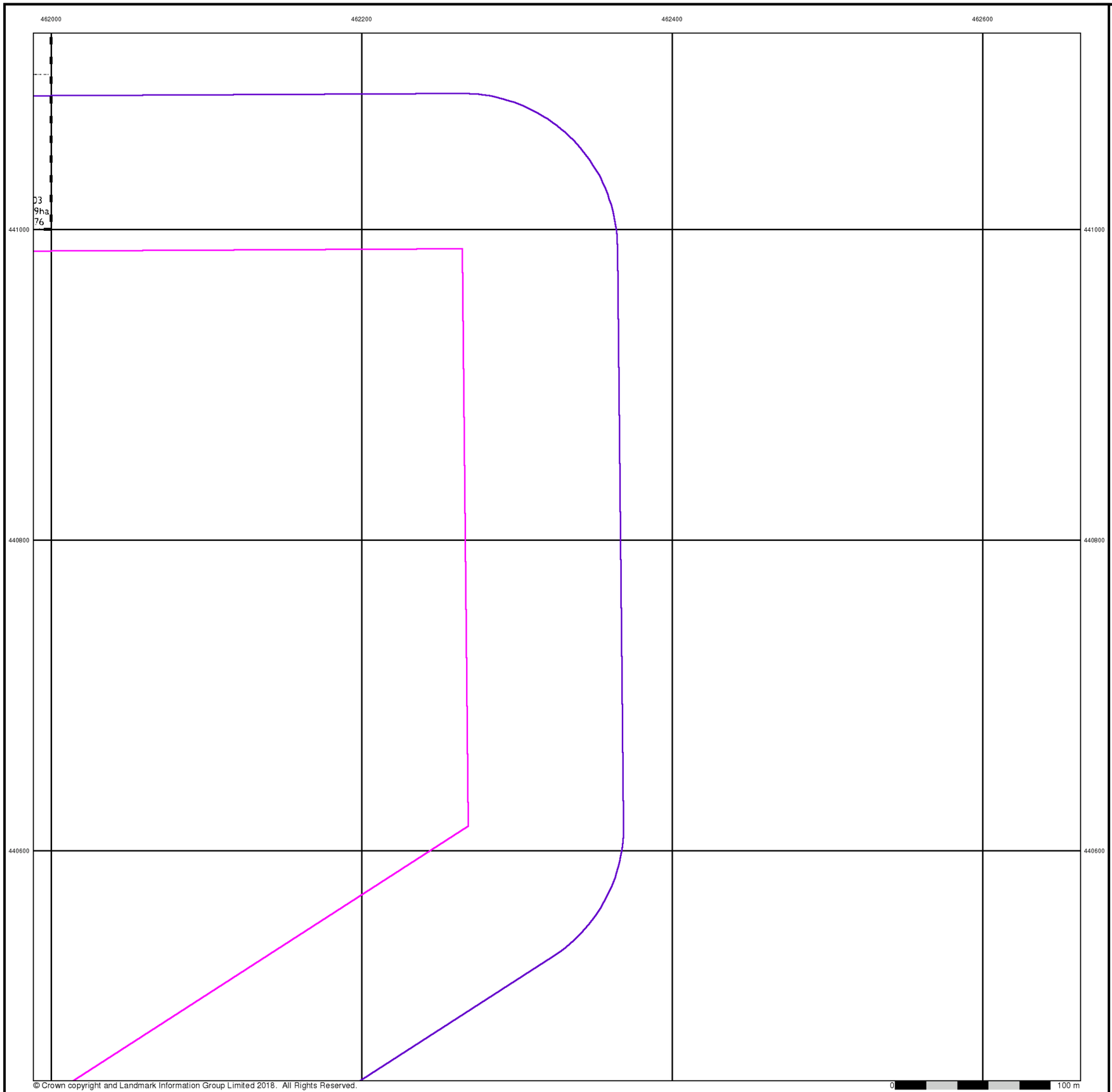

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Additional SIMs

Published 1994

Source map scale - 1:2,500

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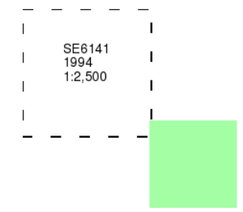
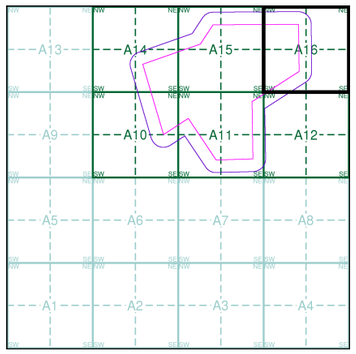


Historical Map - Segment A16



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461450, 440120
Slice:	A
Site Area (Ha):	82.61
Search Buffer (m):	100

Site Details

Site at 461540, 440390

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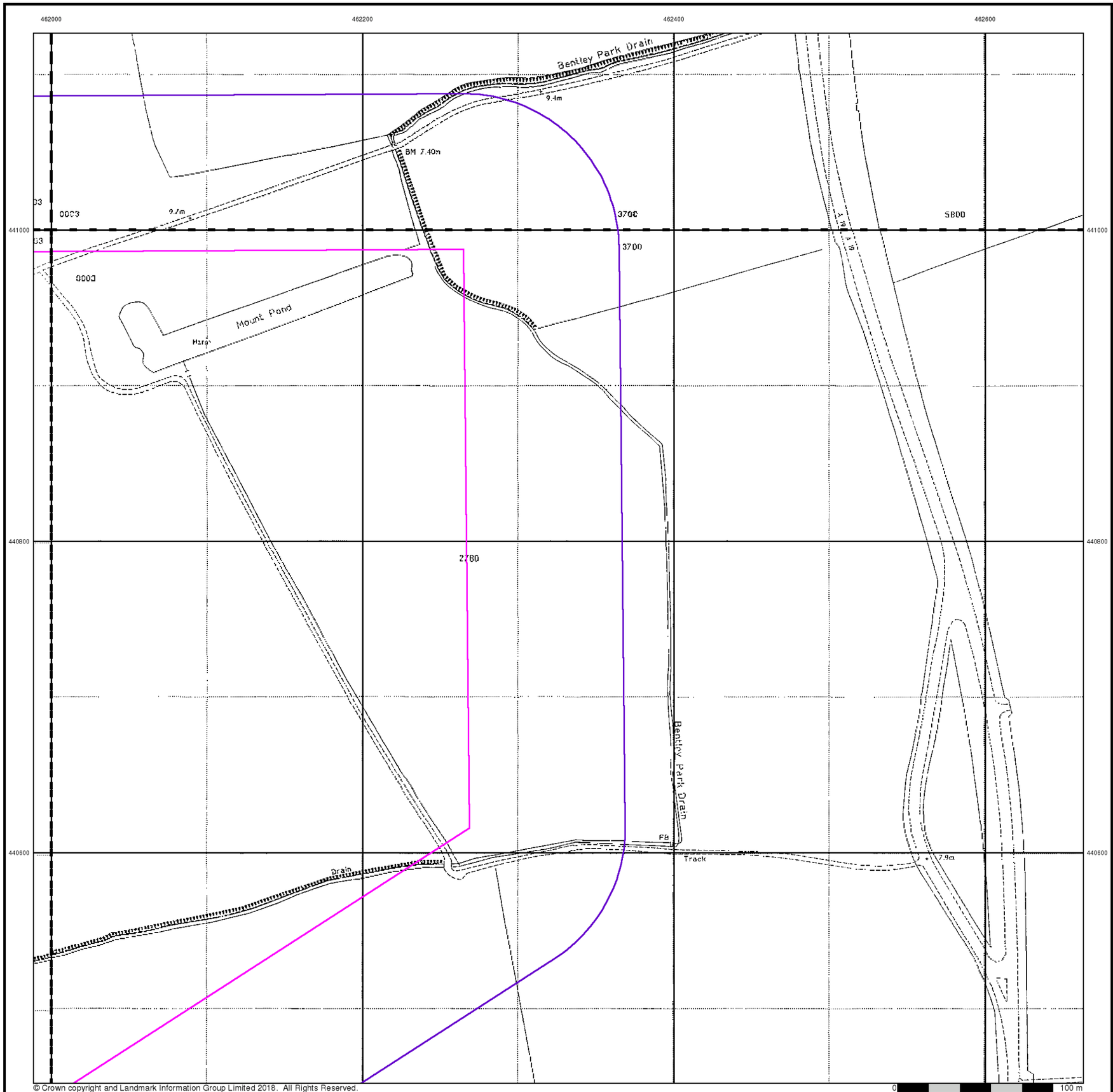
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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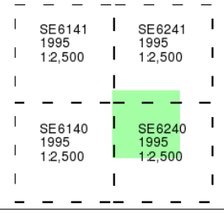
Large-Scale National Grid Data

Published 1995

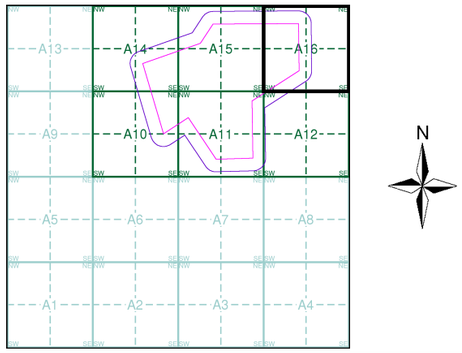
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A16



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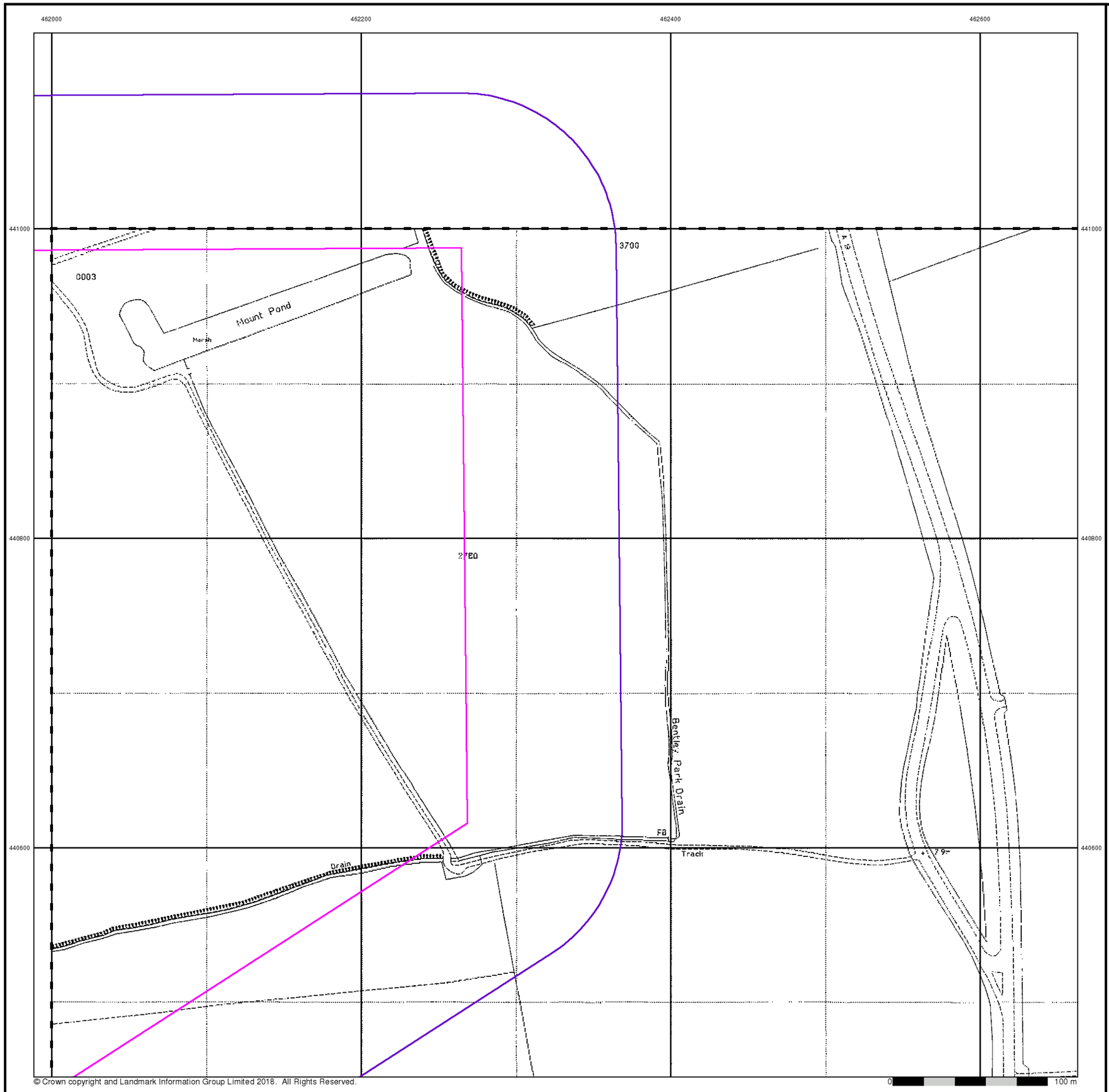

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LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1995

Source map scale - 1:2,500

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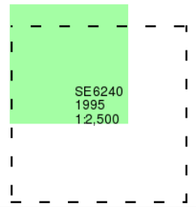
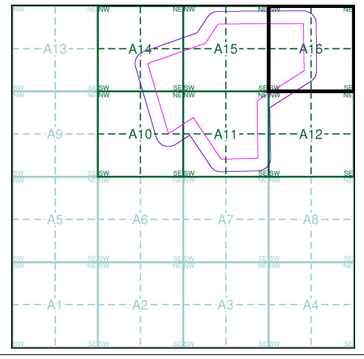


Historical Map - Segment A16



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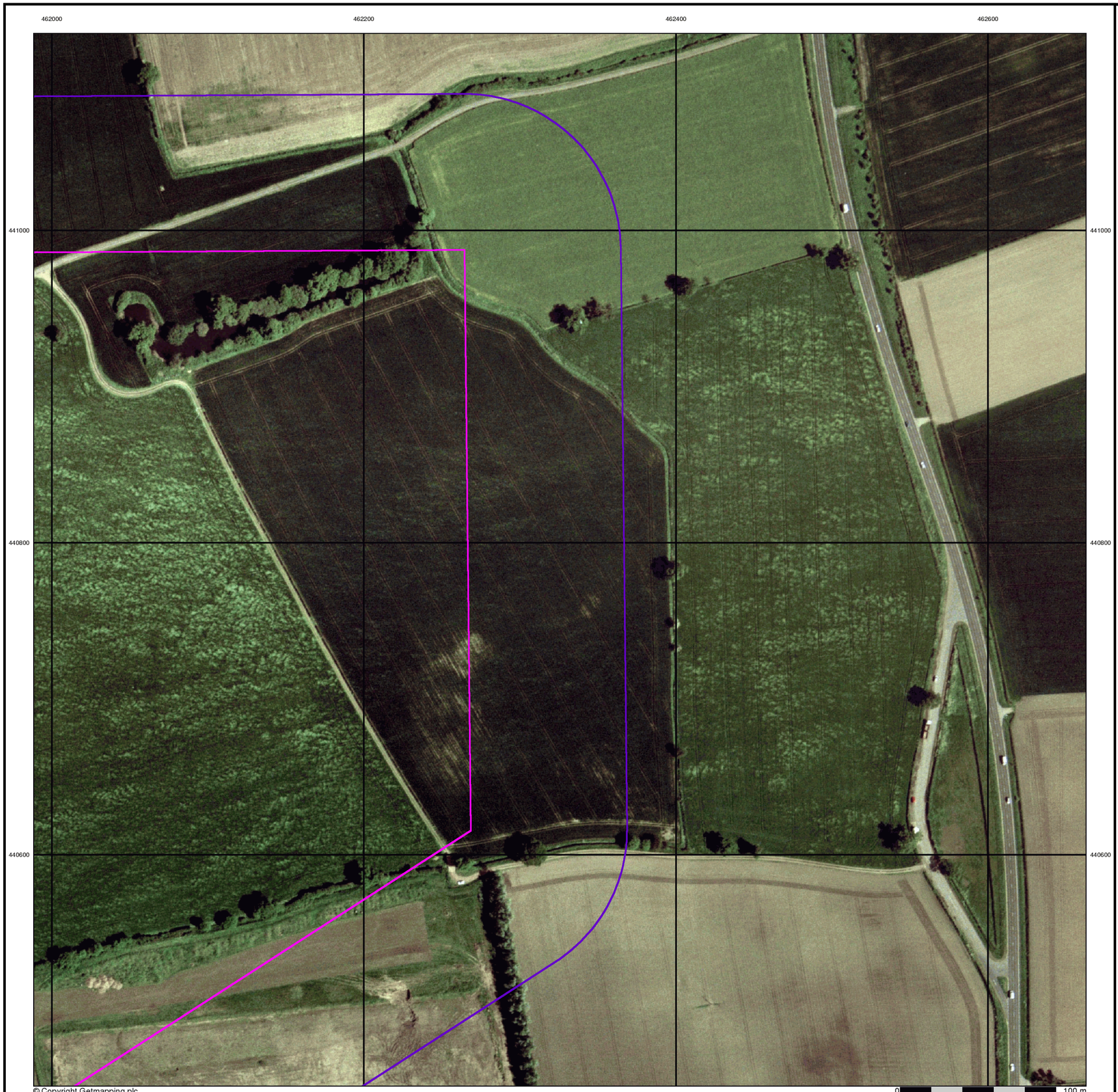

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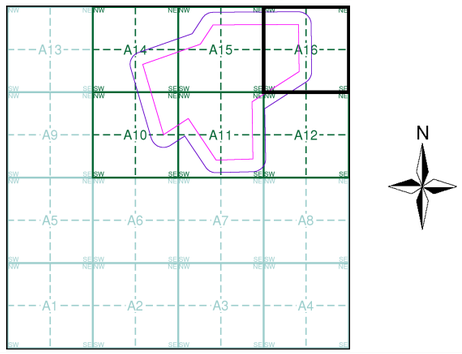
Historical Aerial Photography

Published 1999

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

Historical Aerial Photography - Segment A16



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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
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
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Standard Gauge Single Track
Road Under
Road Over
Level Crossing
Foot Bridge
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)
BM 123.45 m 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

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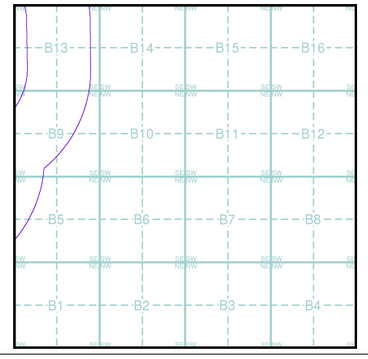
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1851	2
Yorkshire	1:10,560	1892	3
Yorkshire	1:10,560	1909 - 1910	4
Yorkshire	1:10,560	1952	5
Ordnance Survey Plan	1:10,000	1958	6
Ordnance Survey Plan	1:10,000	1965	7
Ordnance Survey Plan	1:10,000	1979	8
Ordnance Survey Plan	1:10,000	1980	9
Ordnance Survey Plan	1:10,000	1989	10
Ordnance Survey Plan	1:10,000	1990	11
10K Raster Mapping	1:10,000	1999	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2018	14

Historical Map - Slice B



Order Details

Order Number: 180692898_1_1
Customer Ref: PL/ES/JRC/2948/01
National Grid Reference: 462920, 440440
Slice: B
Site Area (Ha): 82.61
Search Buffer (m): 1000

Site Details

Site at 461540, 440390

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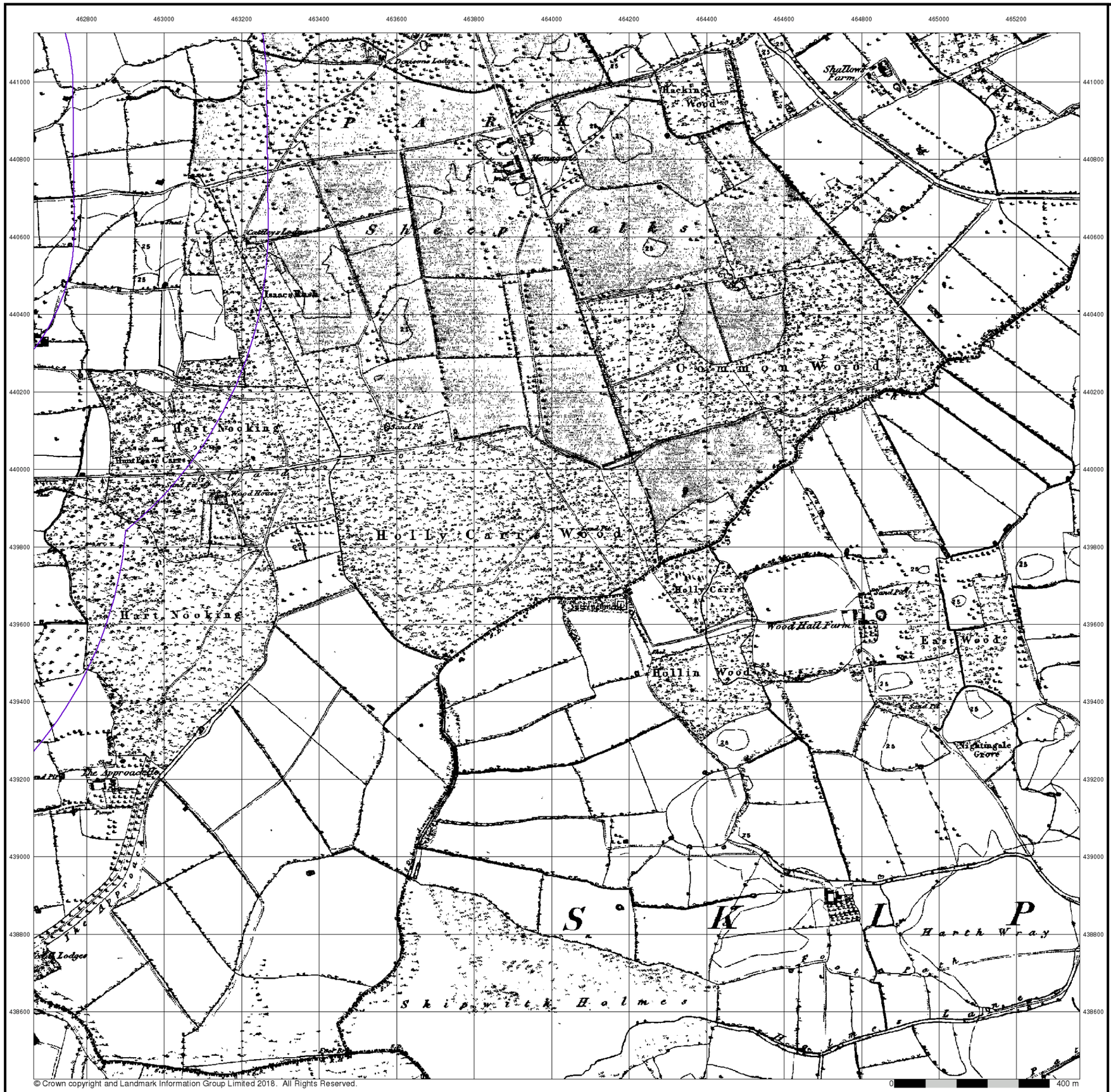
Web: www.envirocheck.co.uk



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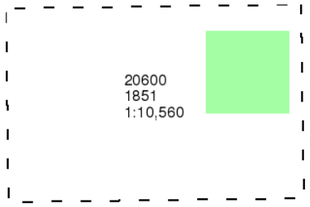
Yorkshire

Published 1851

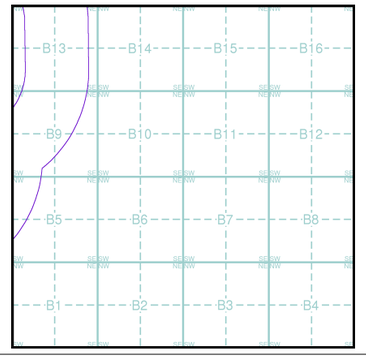
Source map scale - 1:10,560

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 B



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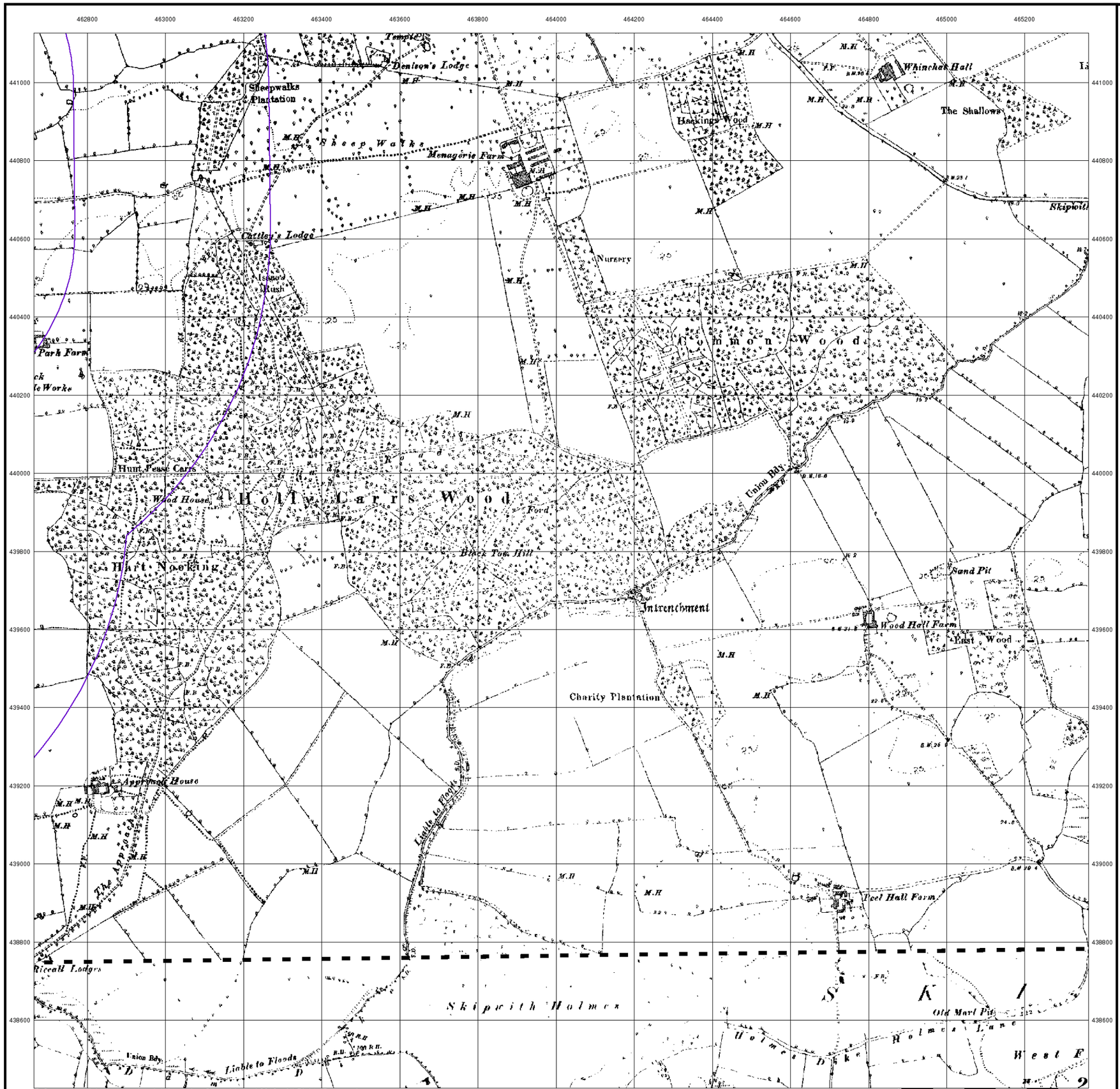

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Yorkshire

Published 1892

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.

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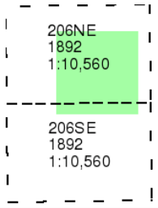
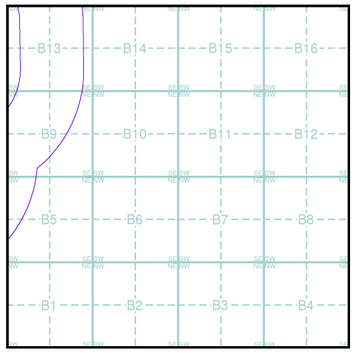


Historical Map - Slice B



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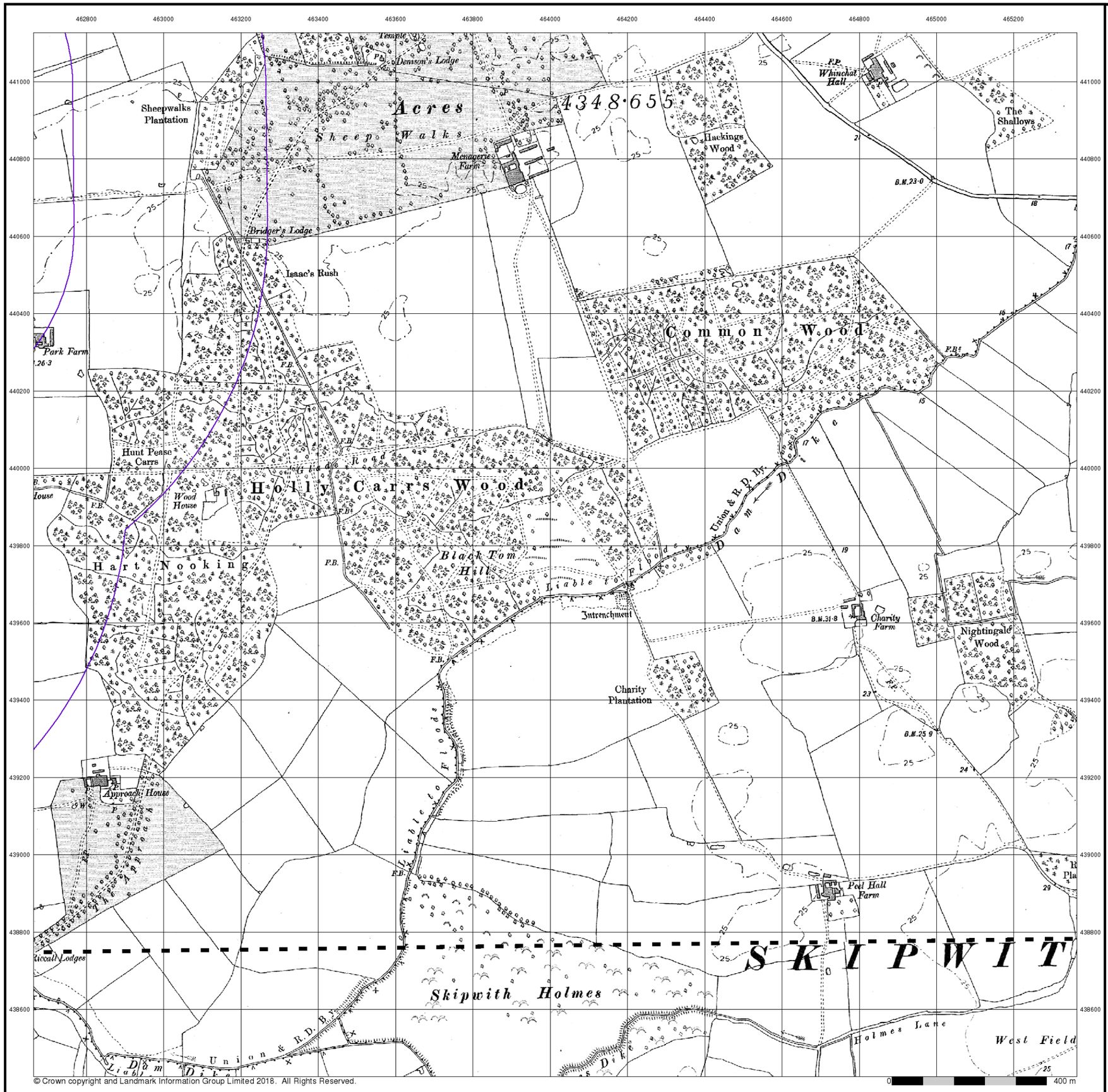

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Yorkshire

Published 1909 - 1910

Source map scale - 1:10,560

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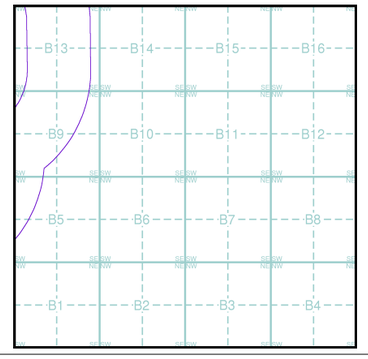
Map Name(s) and Date(s)

206NE
1910
1:10,560

206SE
1909
1:10,560

Historical Map - Slice B



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Yorkshire

Published 1952

Source map scale - 1:10,560

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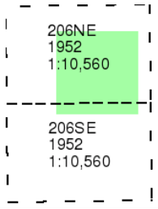
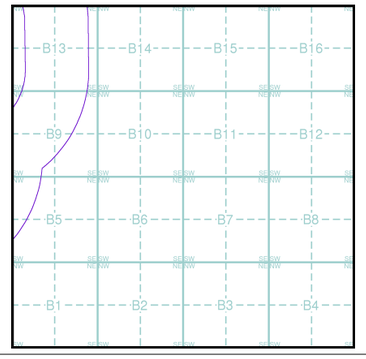


Historical Map - Slice B



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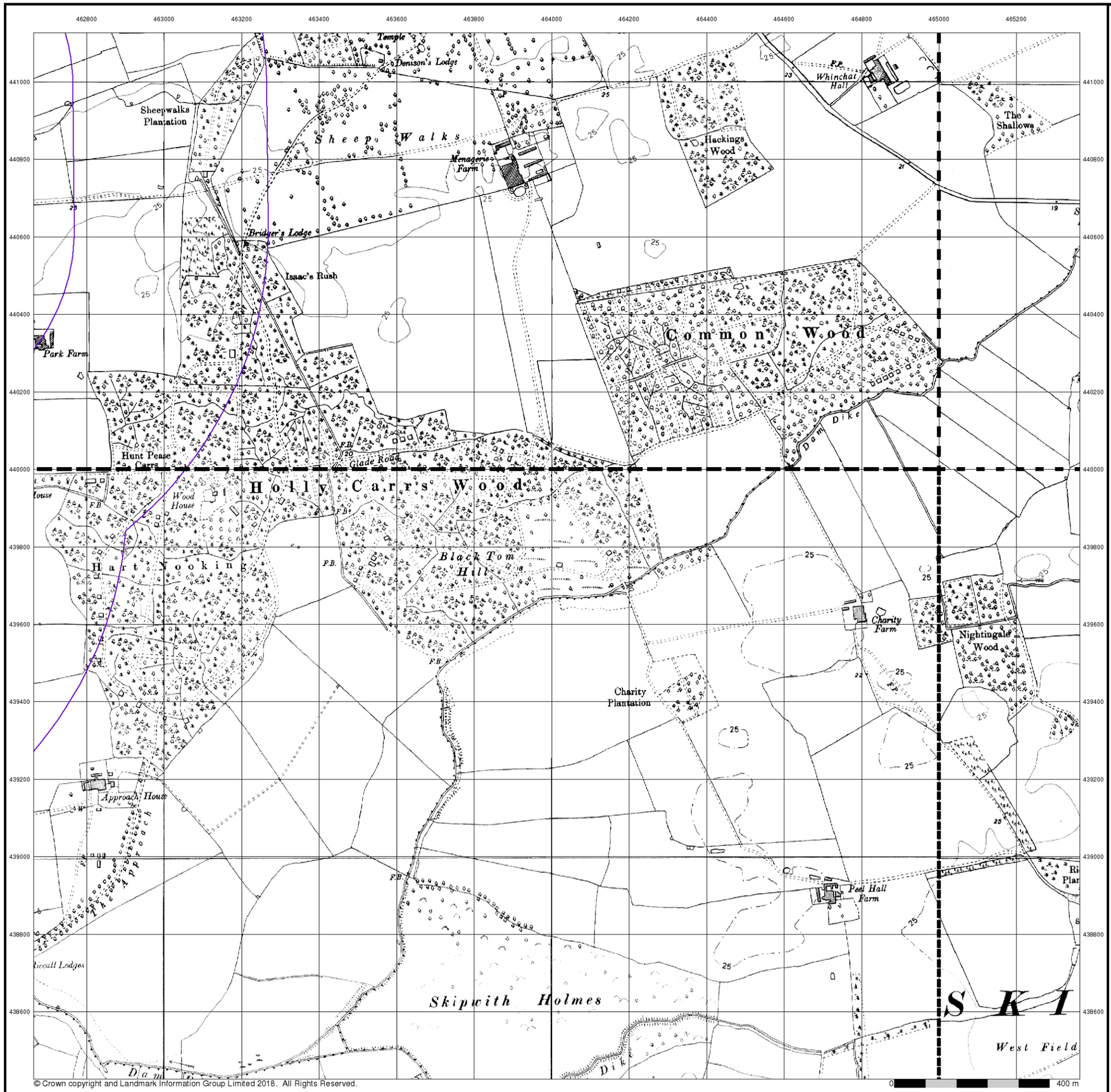

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Ordnance Survey Plan

Published 1958

Source map scale - 1:10,000

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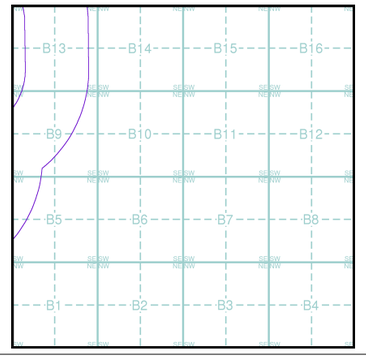
Map Name(s) and Date(s)

SE64SW 1958 1:10,560	SE64SE 1958 1:10,560
SE63NW 1958 1:10,560	SE63NE 1958 1:10,560

Historical Map - Slice B



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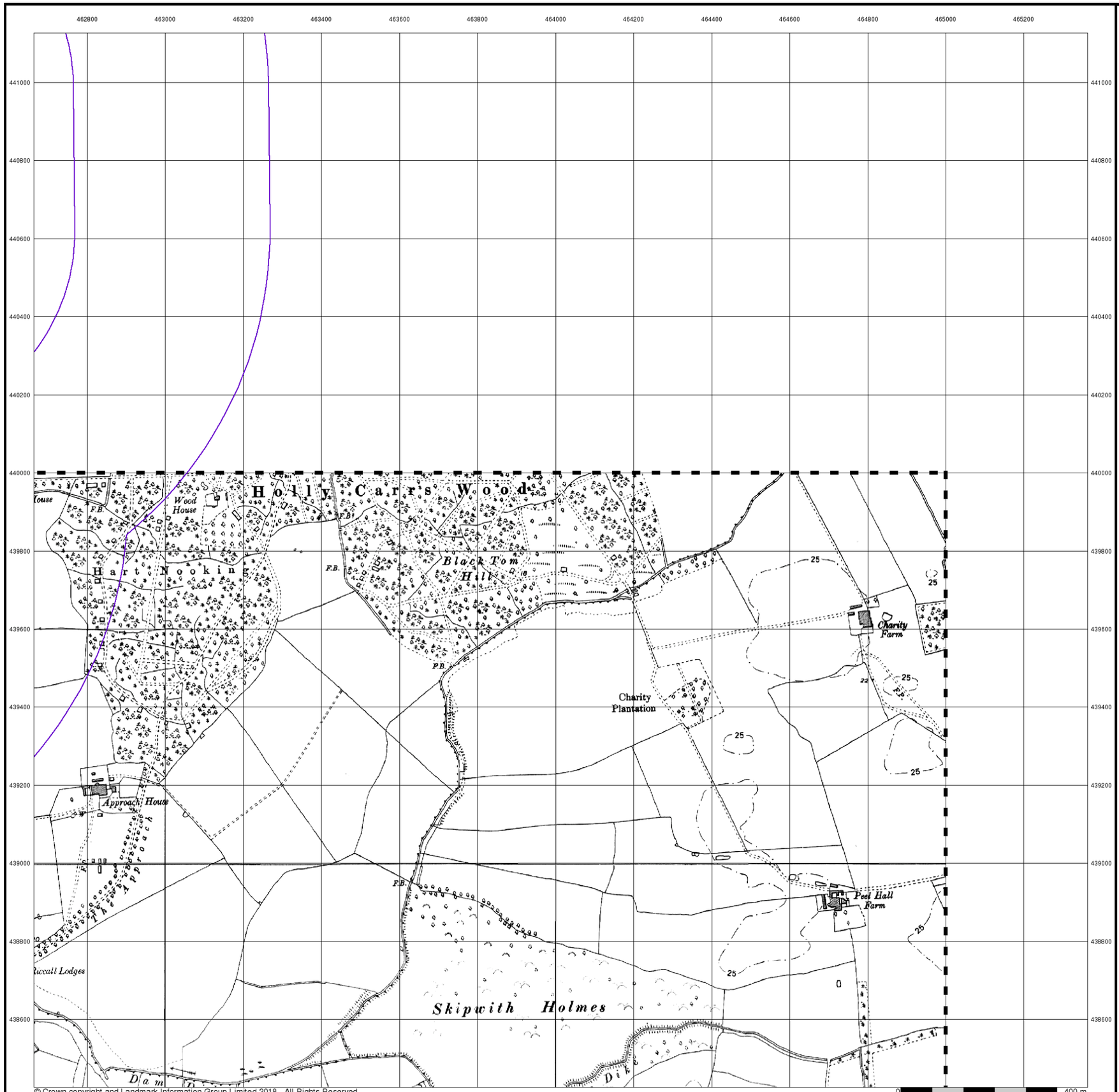

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Ordnance Survey Plan

Published 1965

Source map scale - 1:10,000

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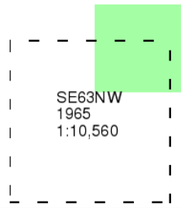
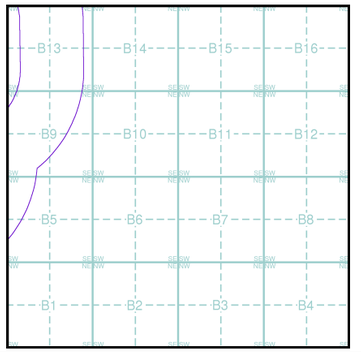


Historical Map - Slice B



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Site Details

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0 400 m

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Ordnance Survey Plan

Published 1979

Source map scale - 1:10,000

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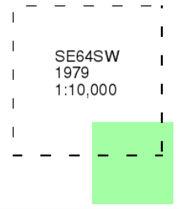
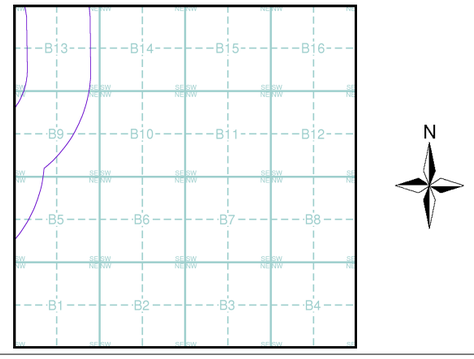
Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	462920, 440440
Slice:	B
Site Area (Ha):	82.61
Search Buffer (m):	1000

Site Details

Site at 461540, 440390

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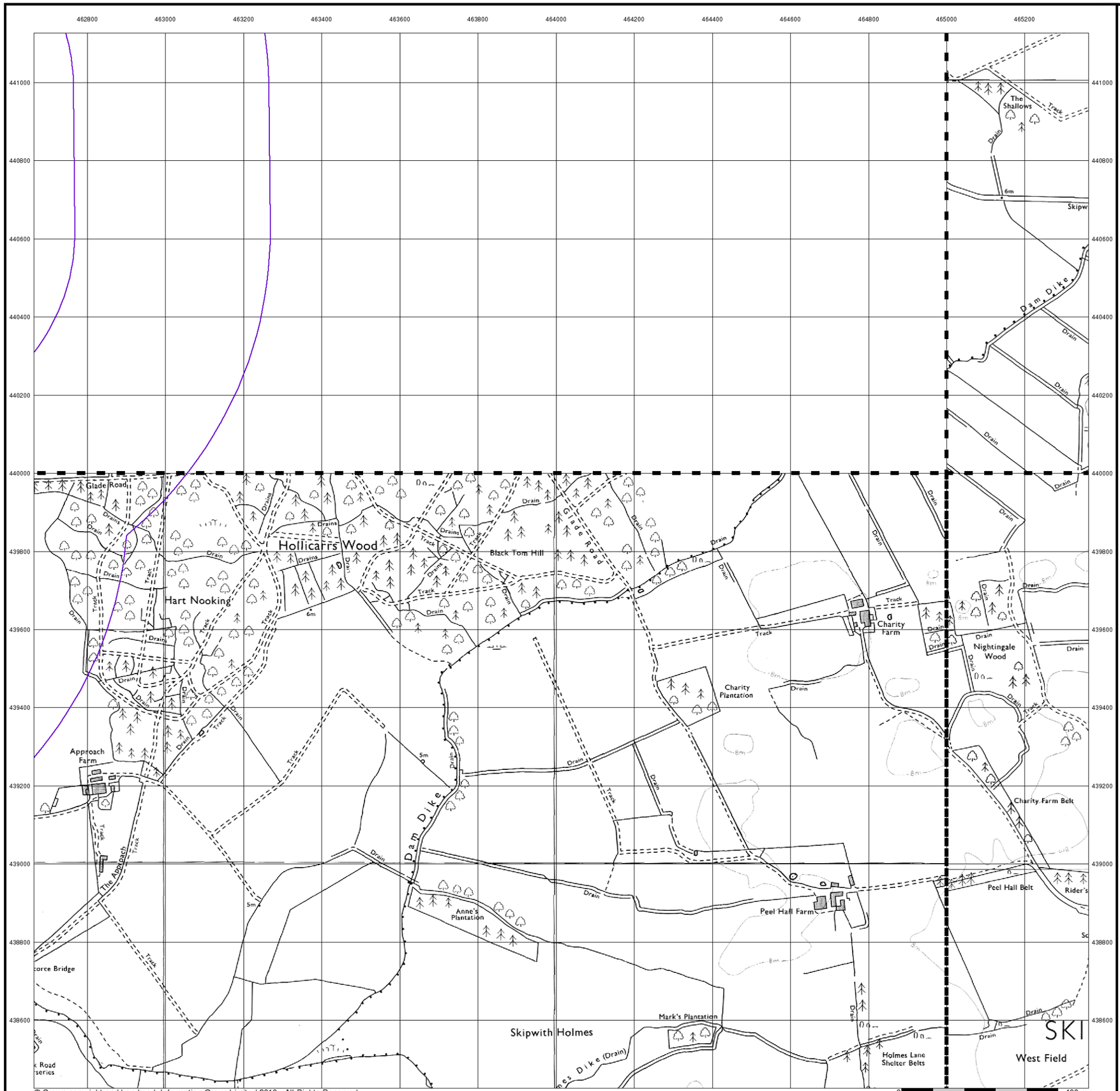
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Ordnance Survey Plan

Published 1980

Source map scale - 1:10,000

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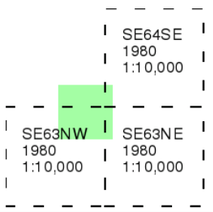
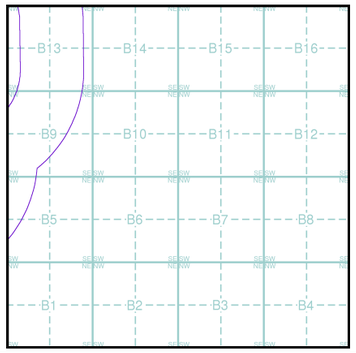


Historical Map - Slice B



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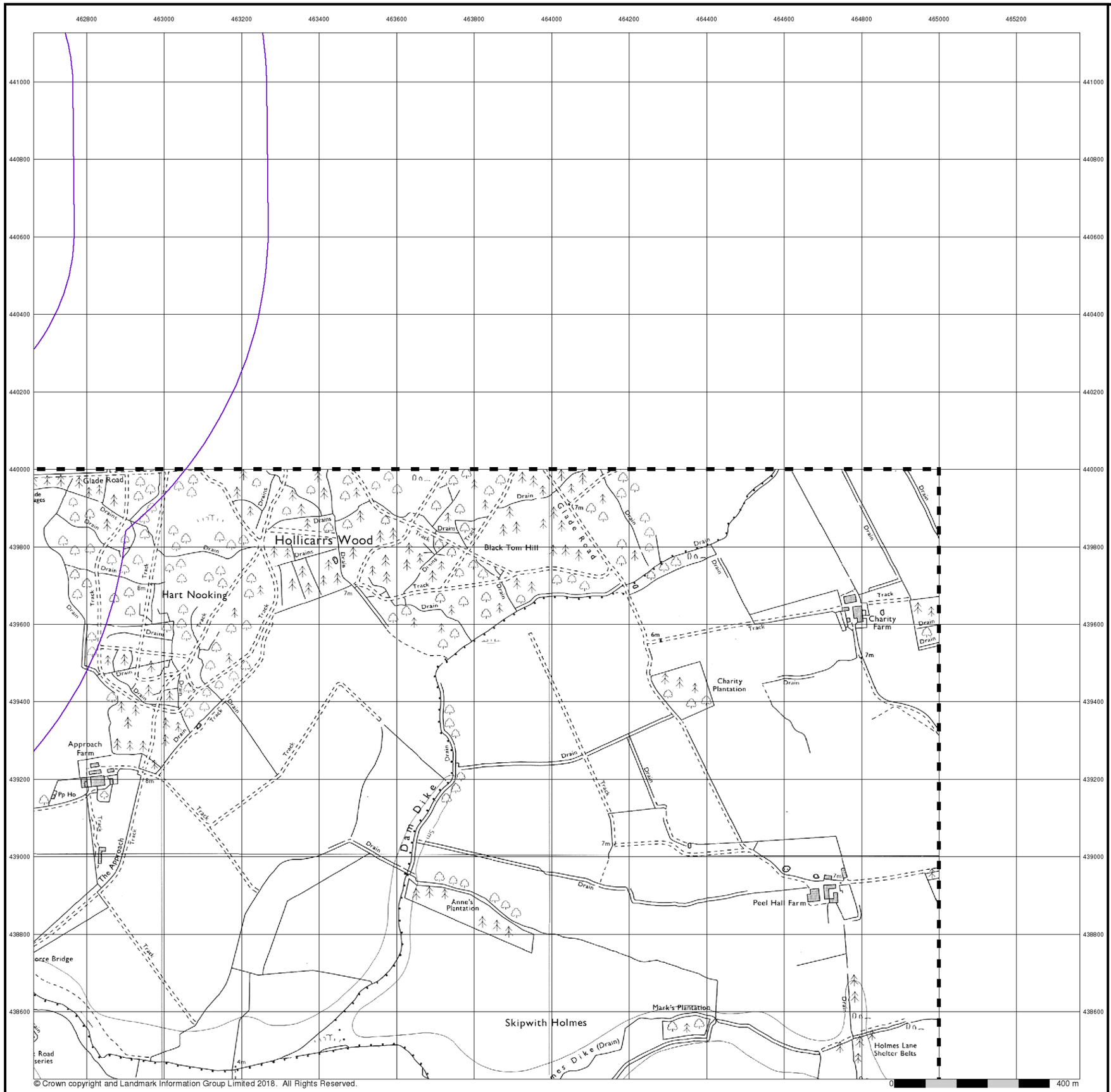

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Ordnance Survey Plan

Published 1989

Source map scale - 1:10,000

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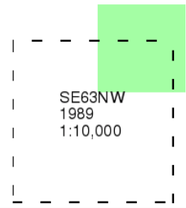
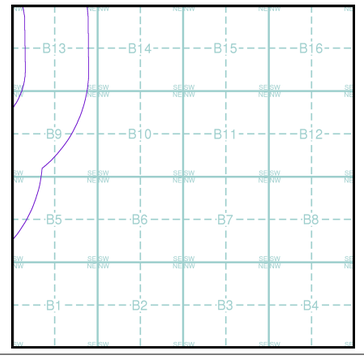


Historical Map - Slice B



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Ordnance Survey Plan

Published 1990

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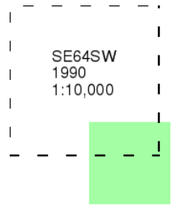
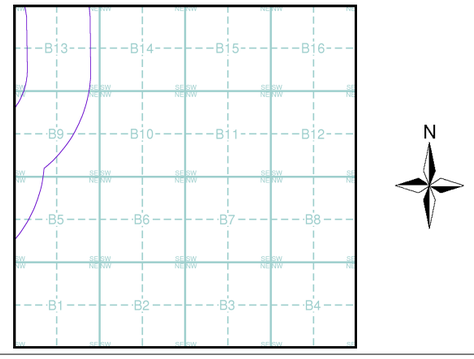


Historical Map - Slice B



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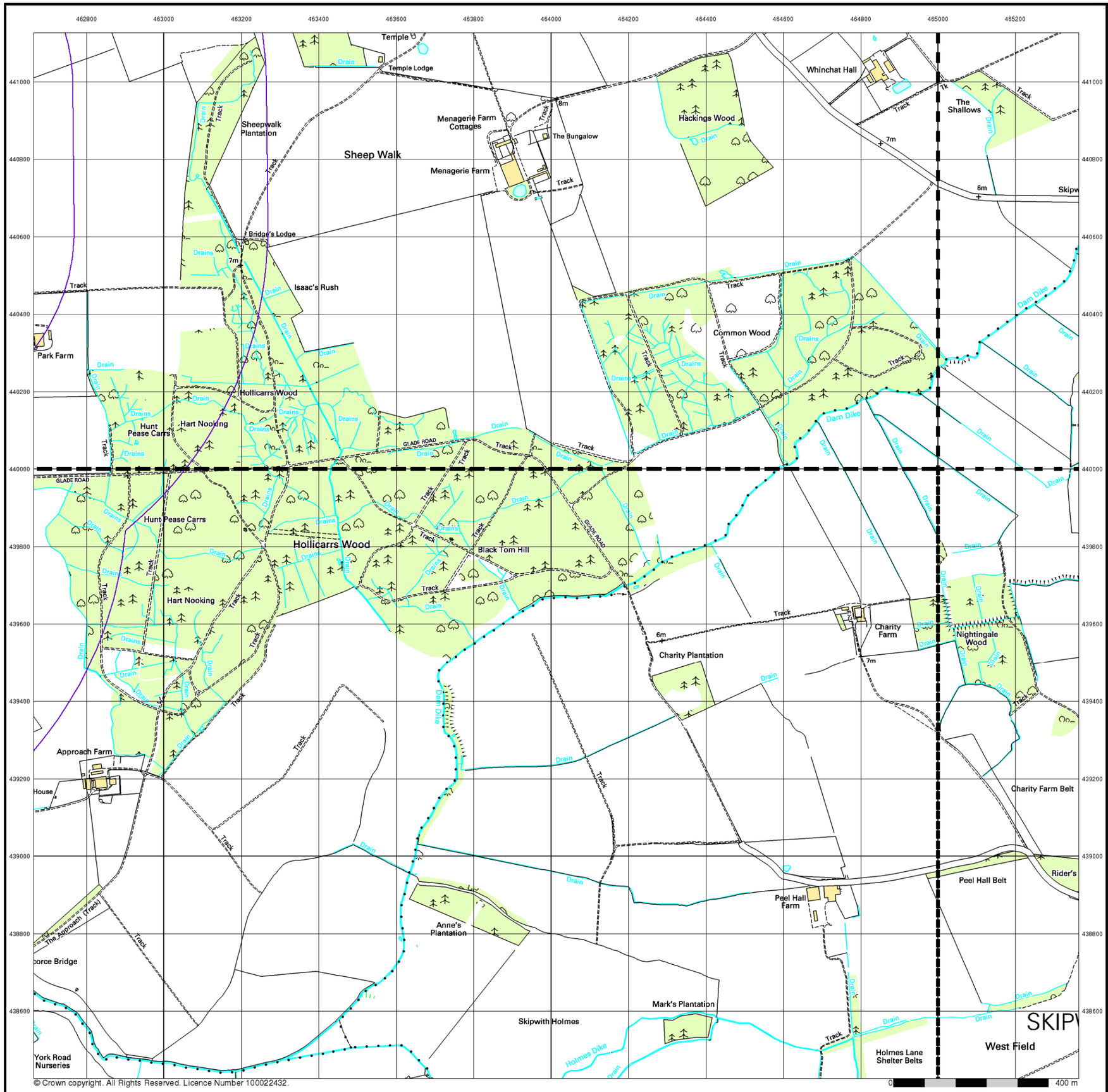

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10k Raster Mapping

Published 1999

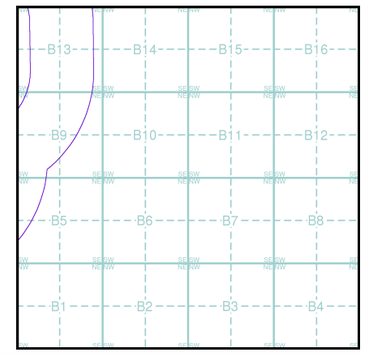
Source map scale - 1:10,000

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)

SE64SW 1999 1:10,000	SE64SE 1999 1:10,000
SE63NW 1999 1:10,000	SE63NE 1999 1:10,000

Historical Map - Slice B



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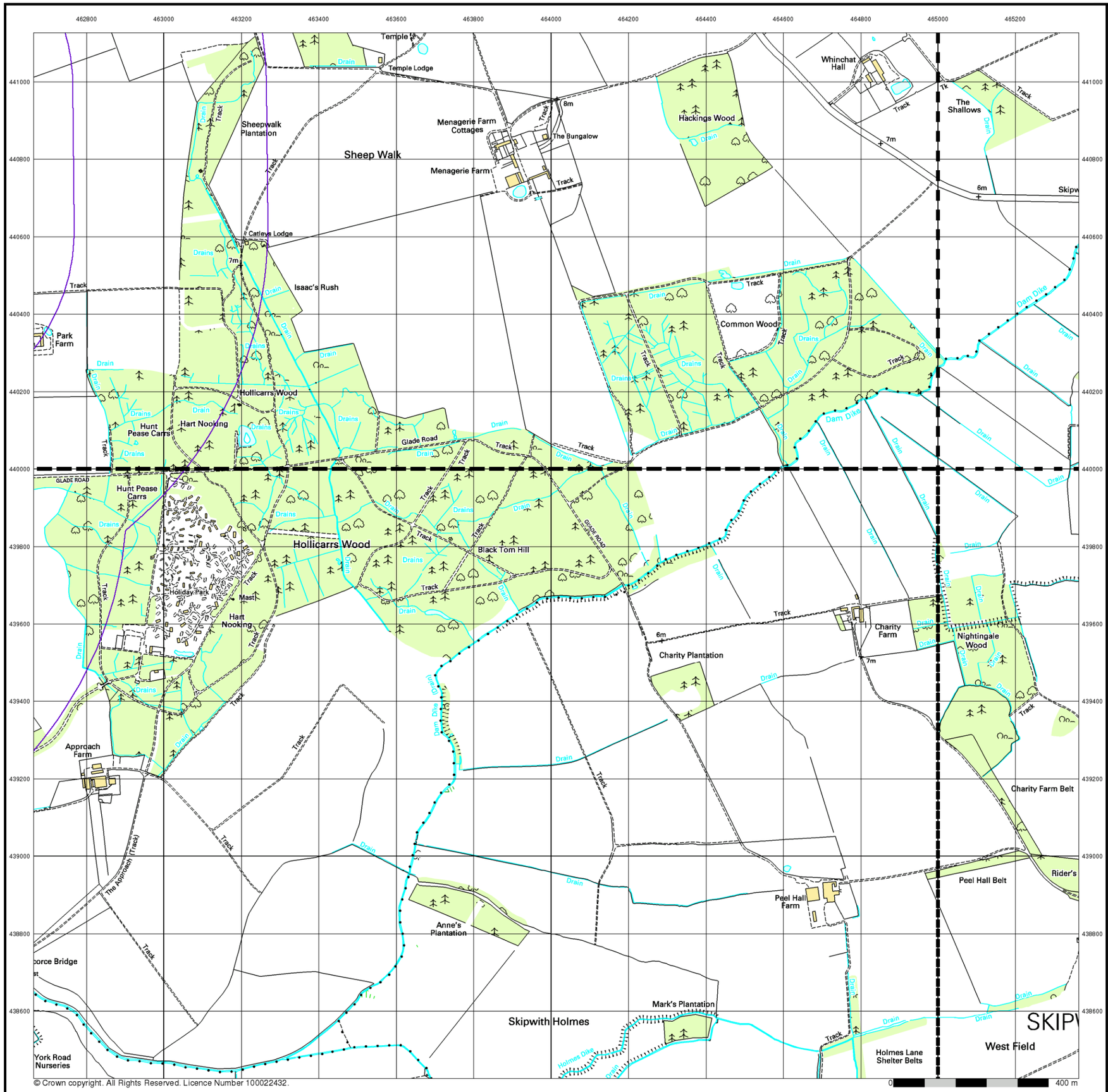

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10k Raster Mapping

Published 2006

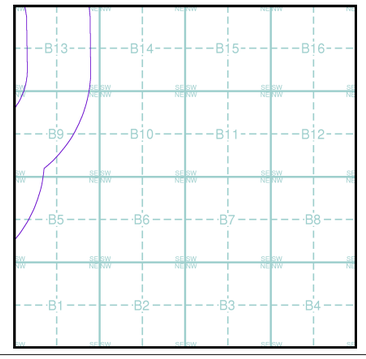
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SE64SW 2006 1:10,000	SE64SE 2006 1:10,000
SE63NW 2006 1:10,000	SE63NE 2006 1:10,000

Historical Map - Slice B



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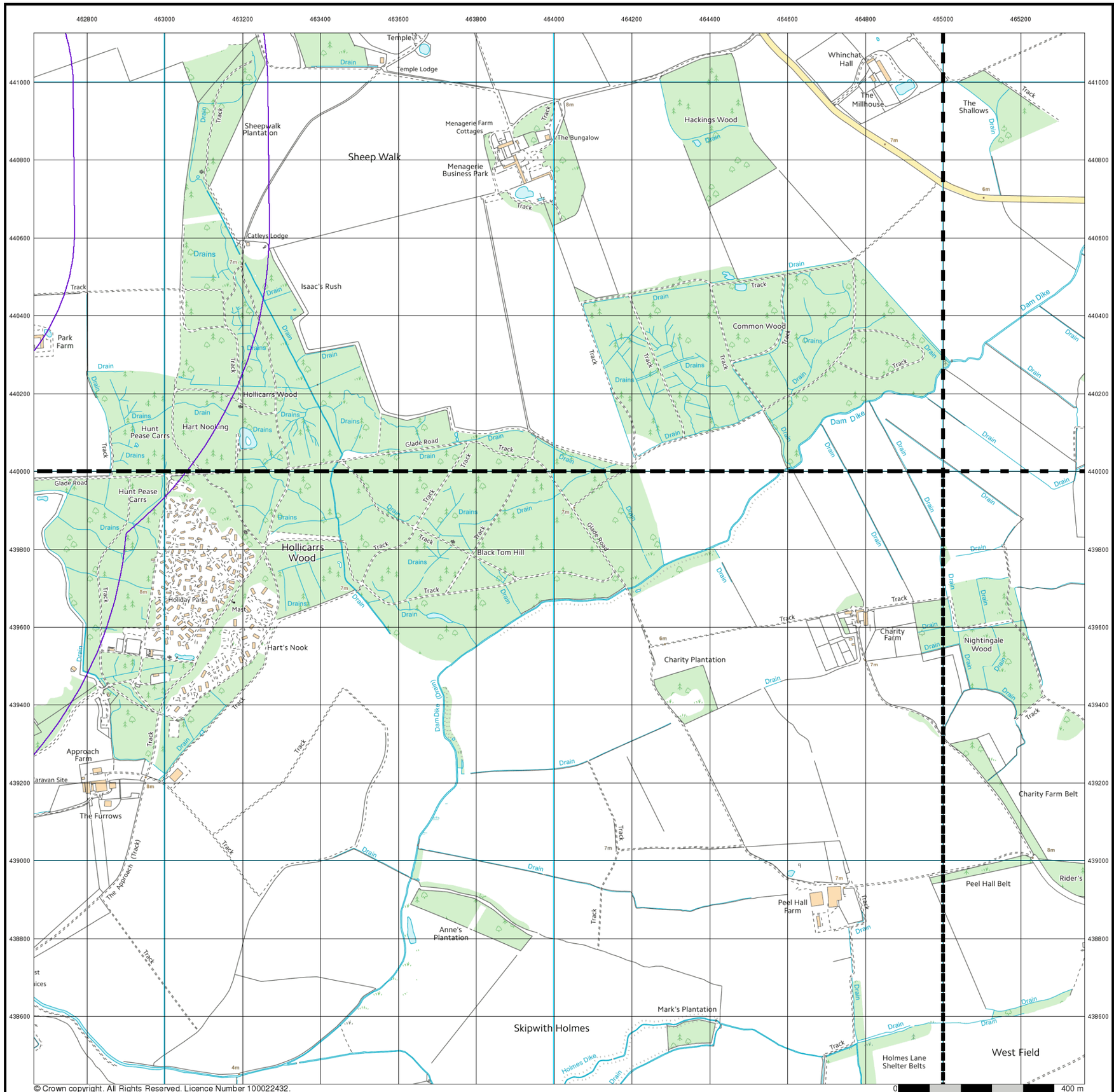

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VectorMap Local

Published 2018

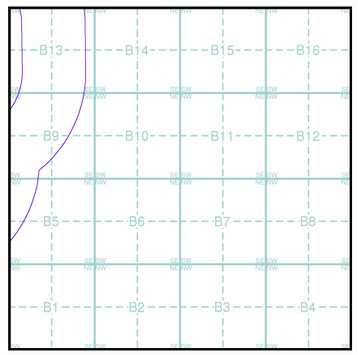
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

SE64SW 2018 Variable	SE64SE 2018 Variable
SE63NW 2018 Variable	SE63NE 2018 Variable

Historical Map - Slice B



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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
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
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Pylon
Electricity Transmission Line
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
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
Mud
Sand
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)
BM 123.45 m 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

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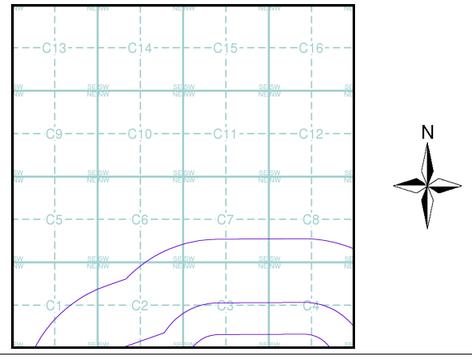
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1851	2
Yorkshire	1:10,560	1892 - 1893	3
Yorkshire	1:10,560	1893	4
Yorkshire	1:10,560	1909 - 1910	5
Yorkshire	1:10,560	1910	6
Yorkshire	1:10,560	1952	7
Ordnance Survey Plan	1:10,000	1958	8
Ordnance Survey Plan	1:10,000	1979	9
Ordnance Survey Plan	1:10,000	1987	10
Ordnance Survey Plan	1:10,000	1990	11
10K Raster Mapping	1:10,000	1999	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2018	14

Historical Map - Slice C



Order Details

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Customer Ref: PL/ES/JRC/2948/01
National Grid Reference: 461610, 441510
Slice: C
Site Area (Ha): 82.61
Search Buffer (m): 1000

Site Details

Site at 461540, 440390

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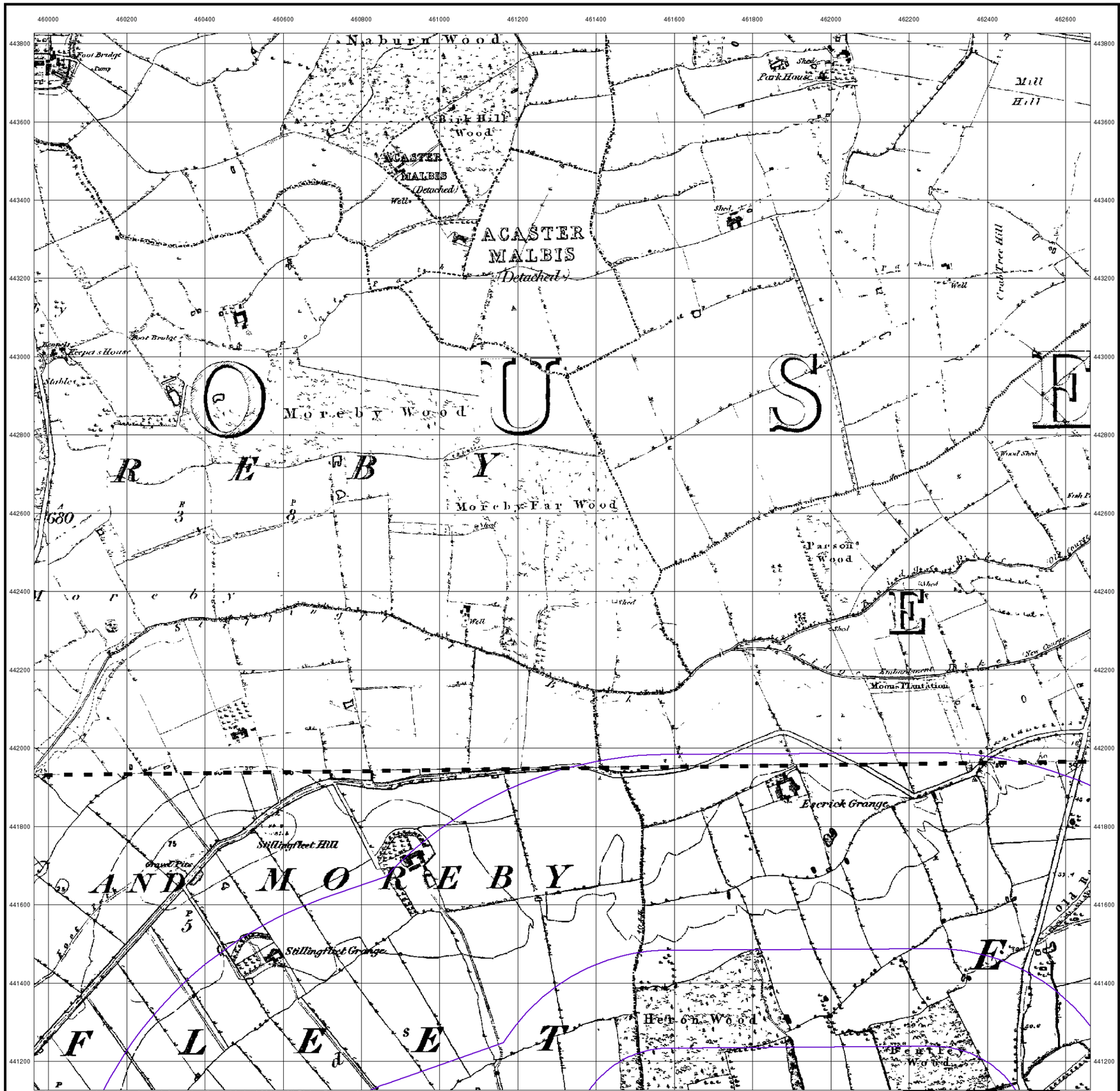

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Yorkshire

Published 1851

Source map scale - 1:10,560

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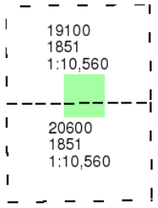
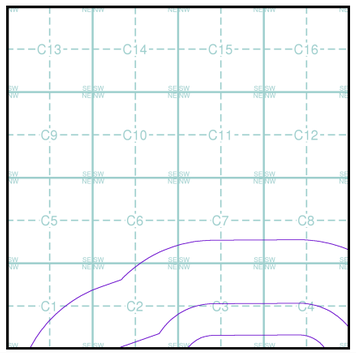


Historical Map - Slice C



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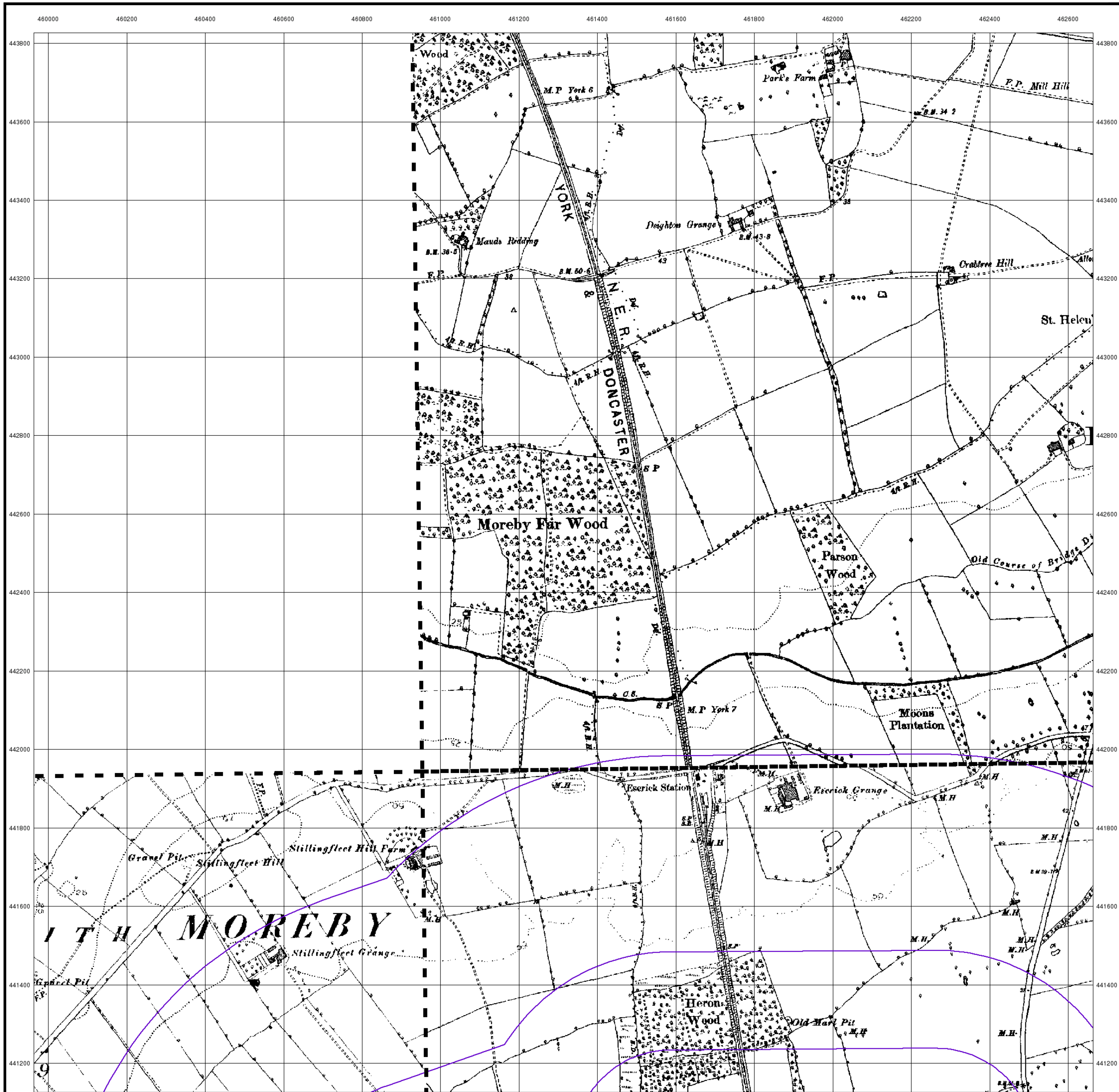

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Yorkshire

Published 1892 - 1893

Source map scale - 1:10,560

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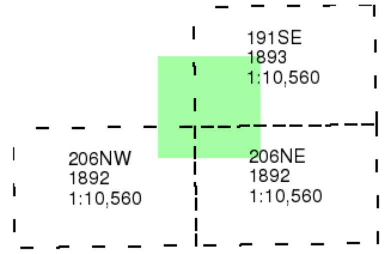
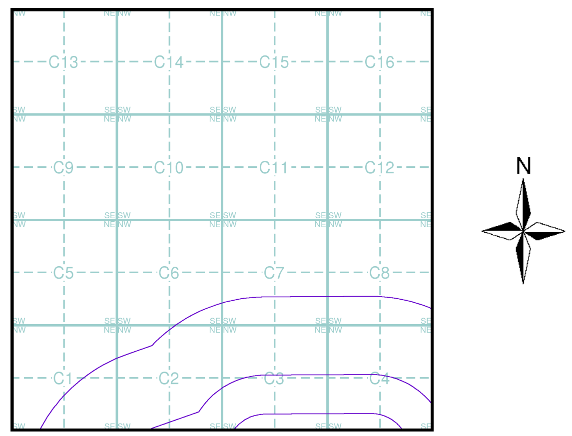


Historical Map - Slice C



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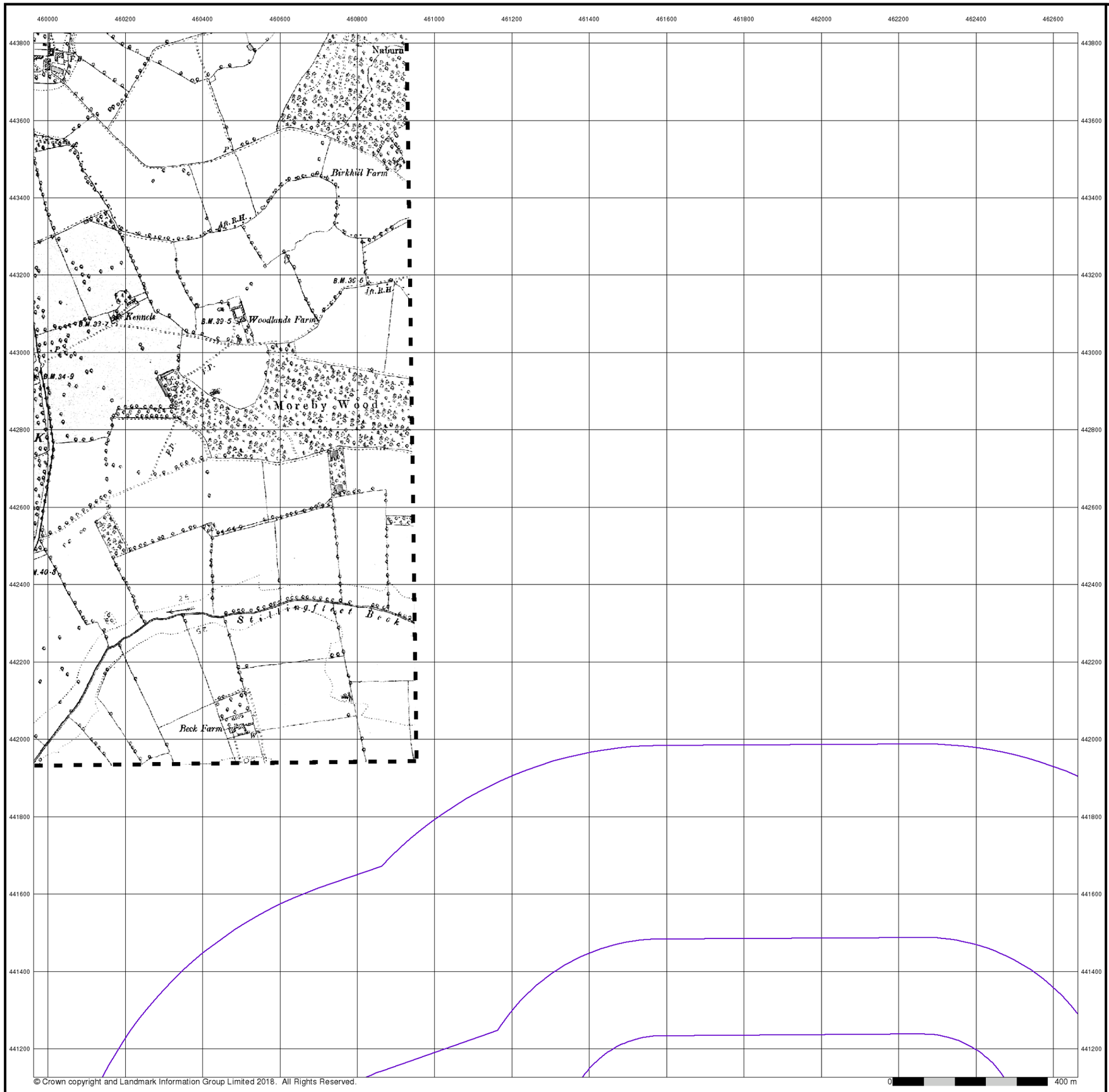

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Yorkshire

Published 1893

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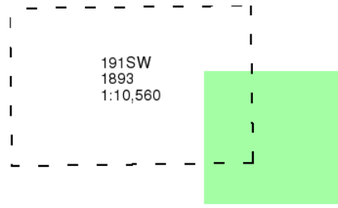
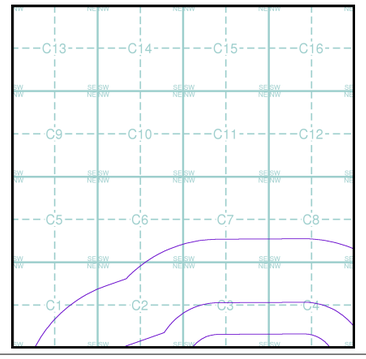


Historical Map - Slice C



Order Details

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Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461610, 441510
Slice:	C
Site Area (Ha):	82.61
Search Buffer (m):	1000

Site Details

Site at 461540, 440390

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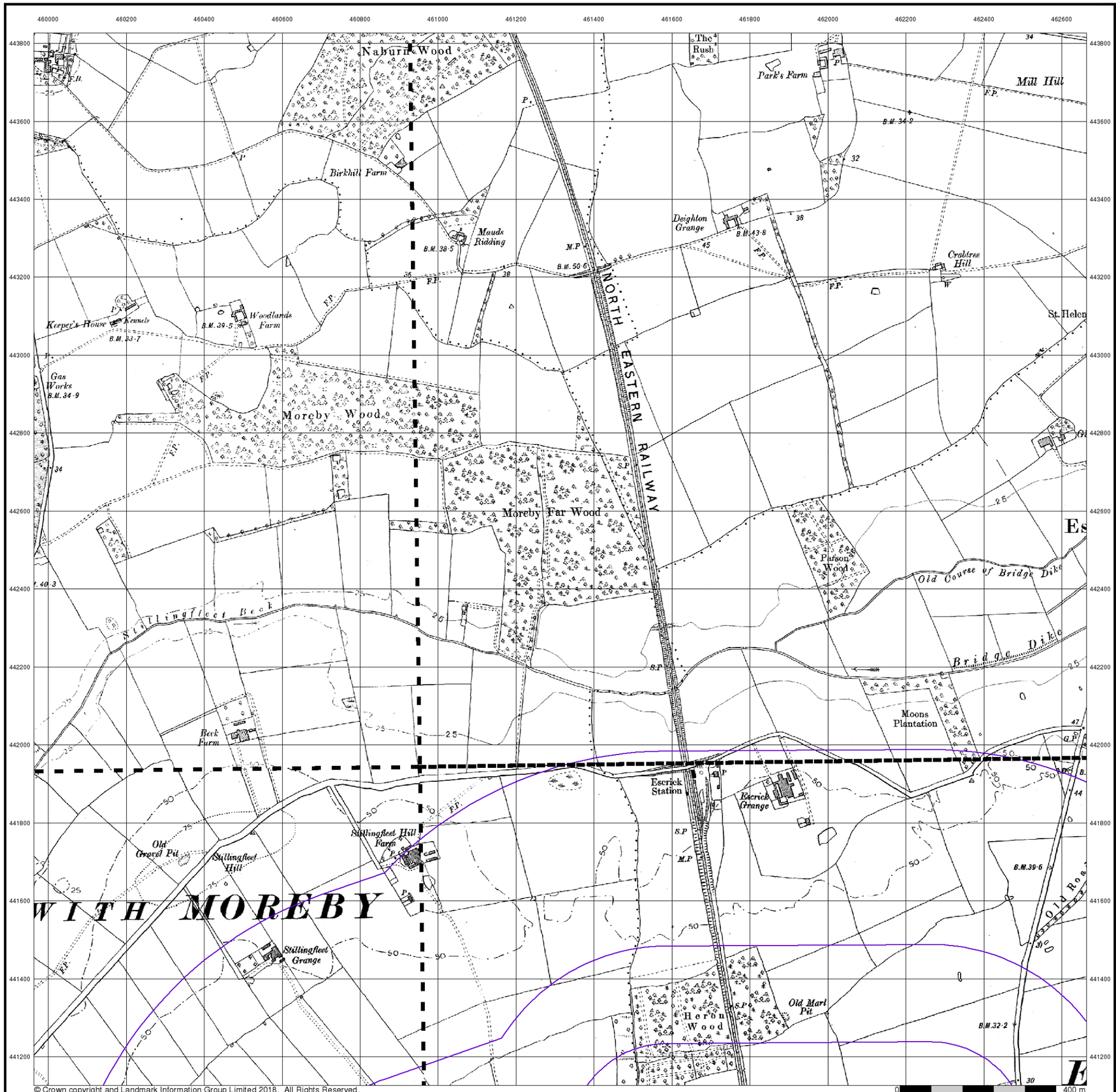

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Yorkshire

Published 1909 - 1910

Source map scale - 1:10,560

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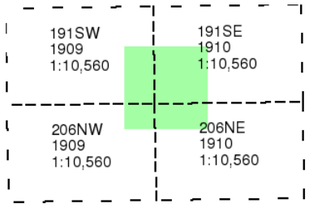

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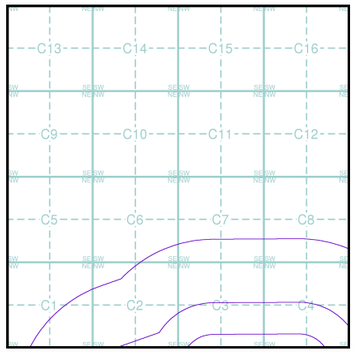

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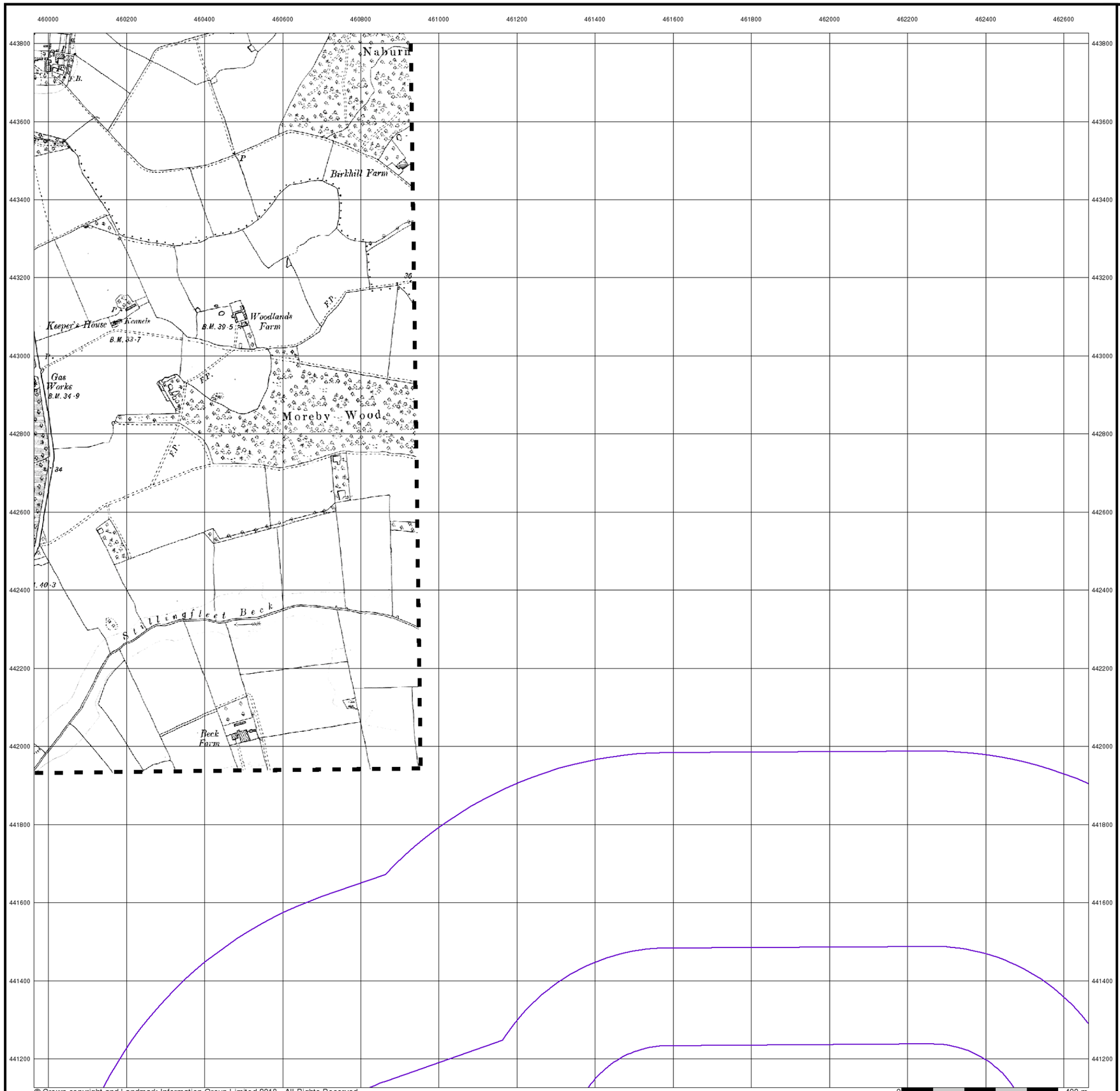

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Yorkshire

Published 1910

Source map scale - 1:10,560

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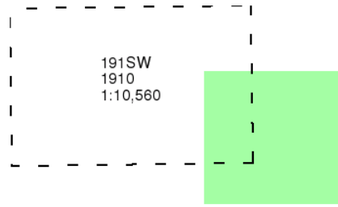

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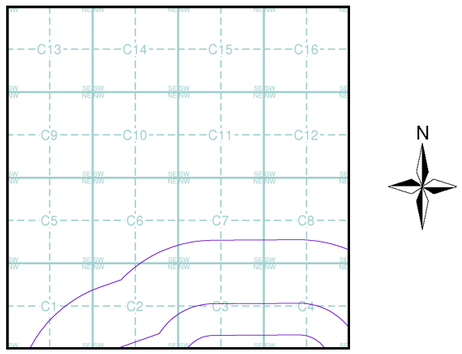

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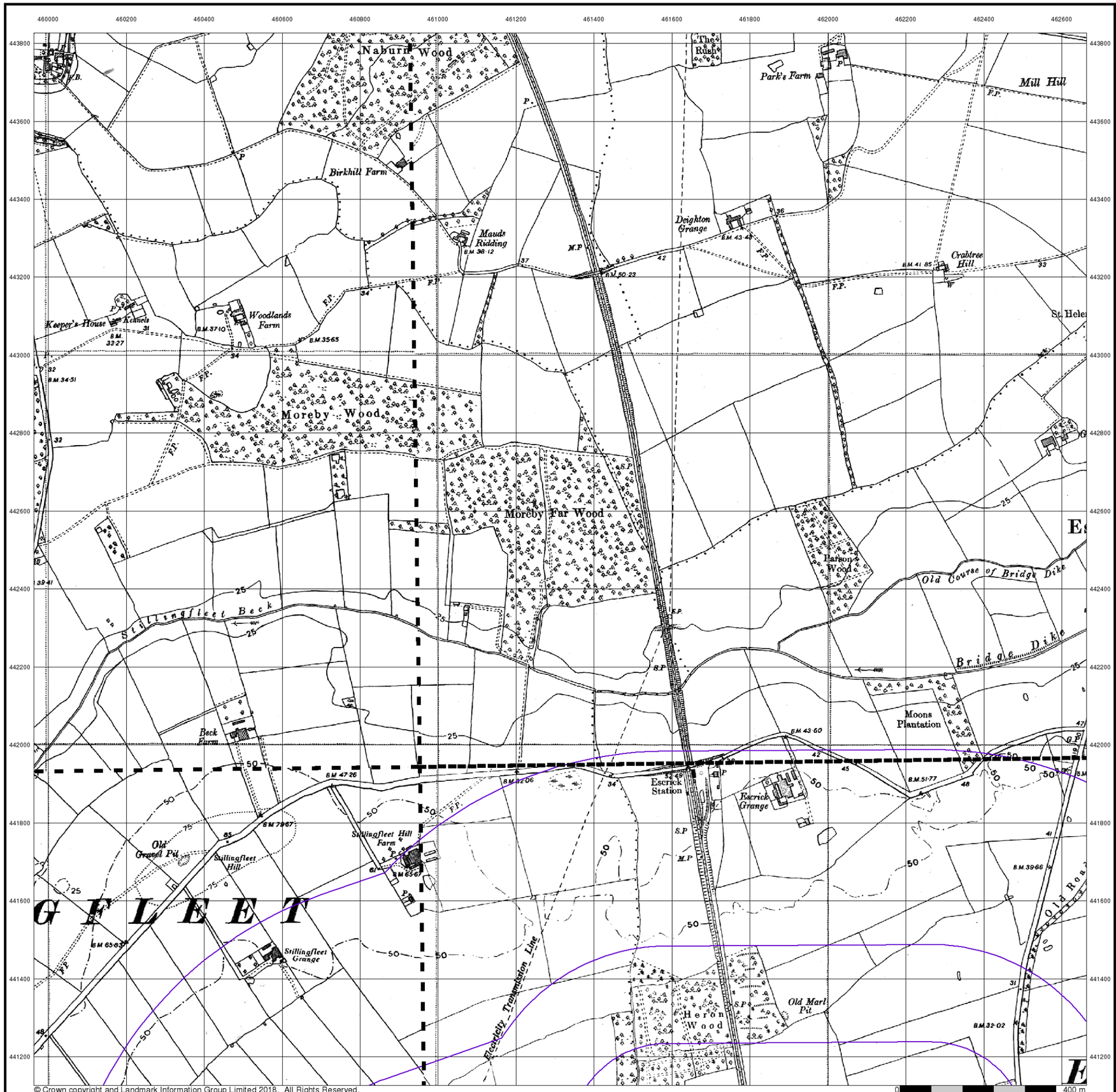

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Yorkshire

Published 1952

Source map scale - 1:10,560

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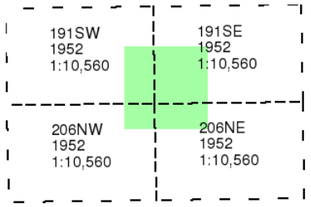
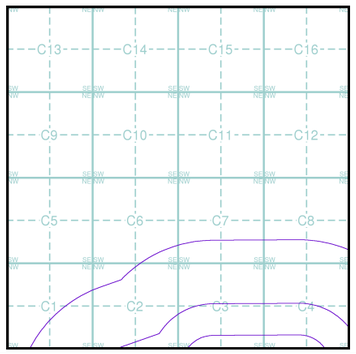


Historical Map - Slice C



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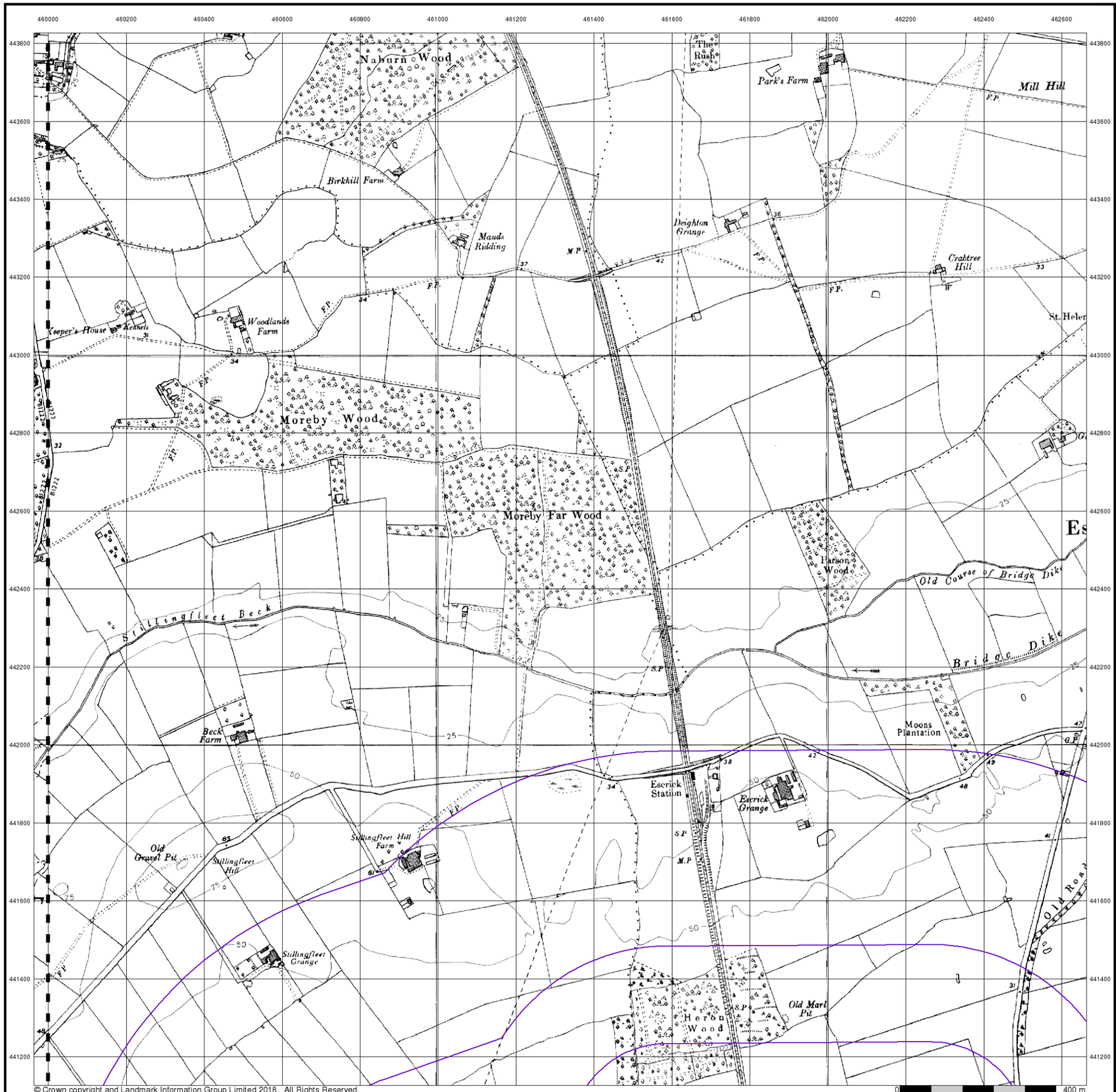

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Ordnance Survey Plan

Published 1958

Source map scale - 1:10,000

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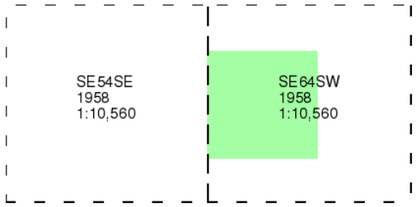
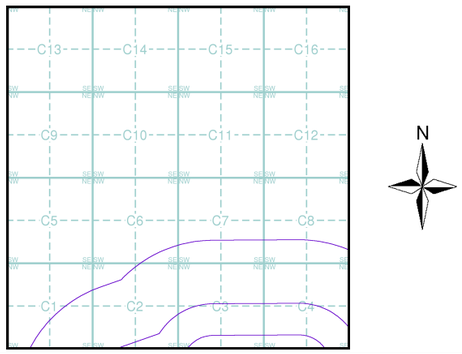


Historical Map - Slice C



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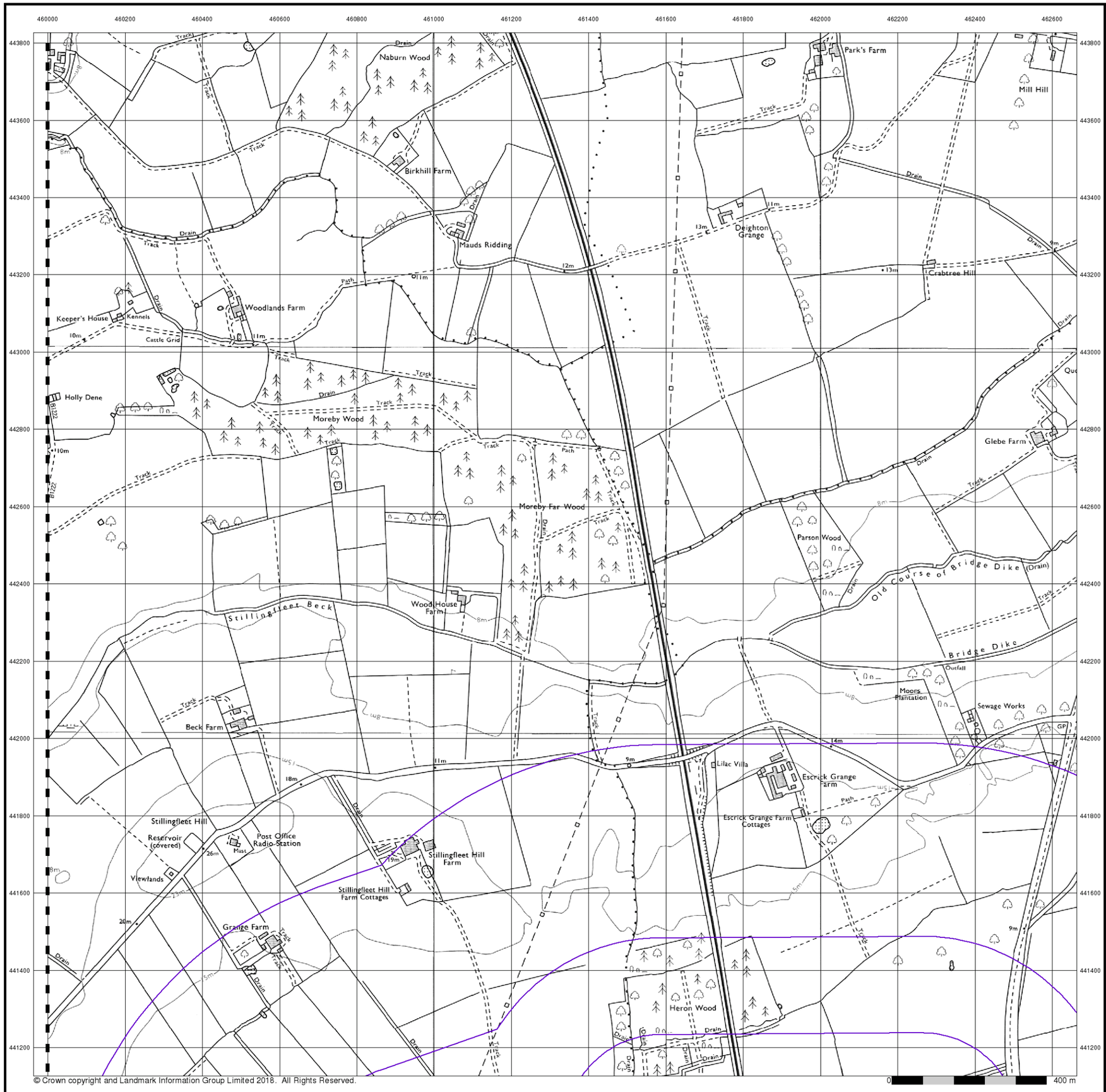

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Ordnance Survey Plan

Published 1979

Source map scale - 1:10,000

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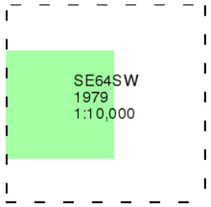
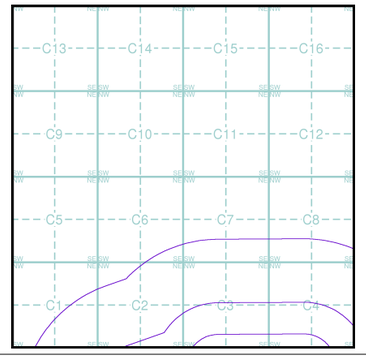


Historical Map - Slice C



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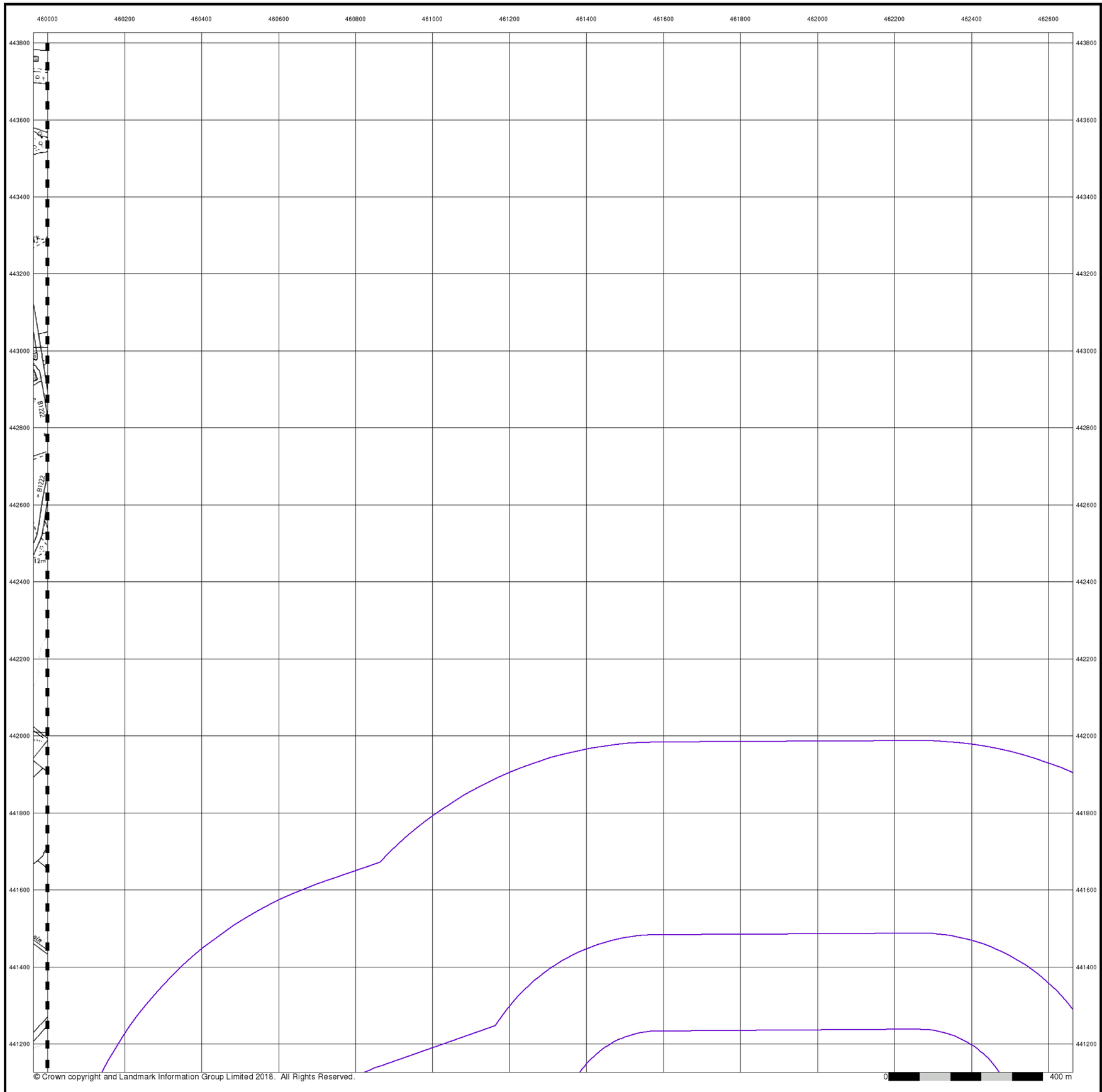

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Ordnance Survey Plan

Published 1987

Source map scale - 1:10,000

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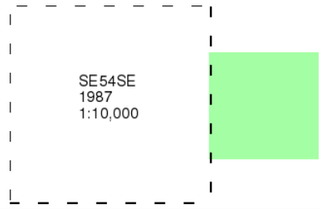
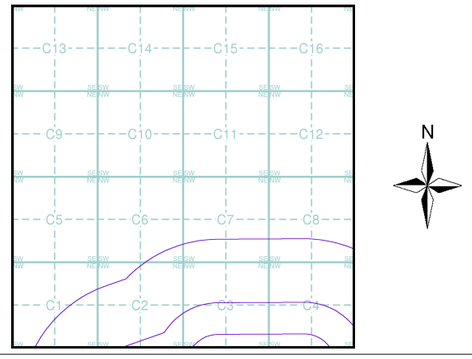


Historical Map - Slice C



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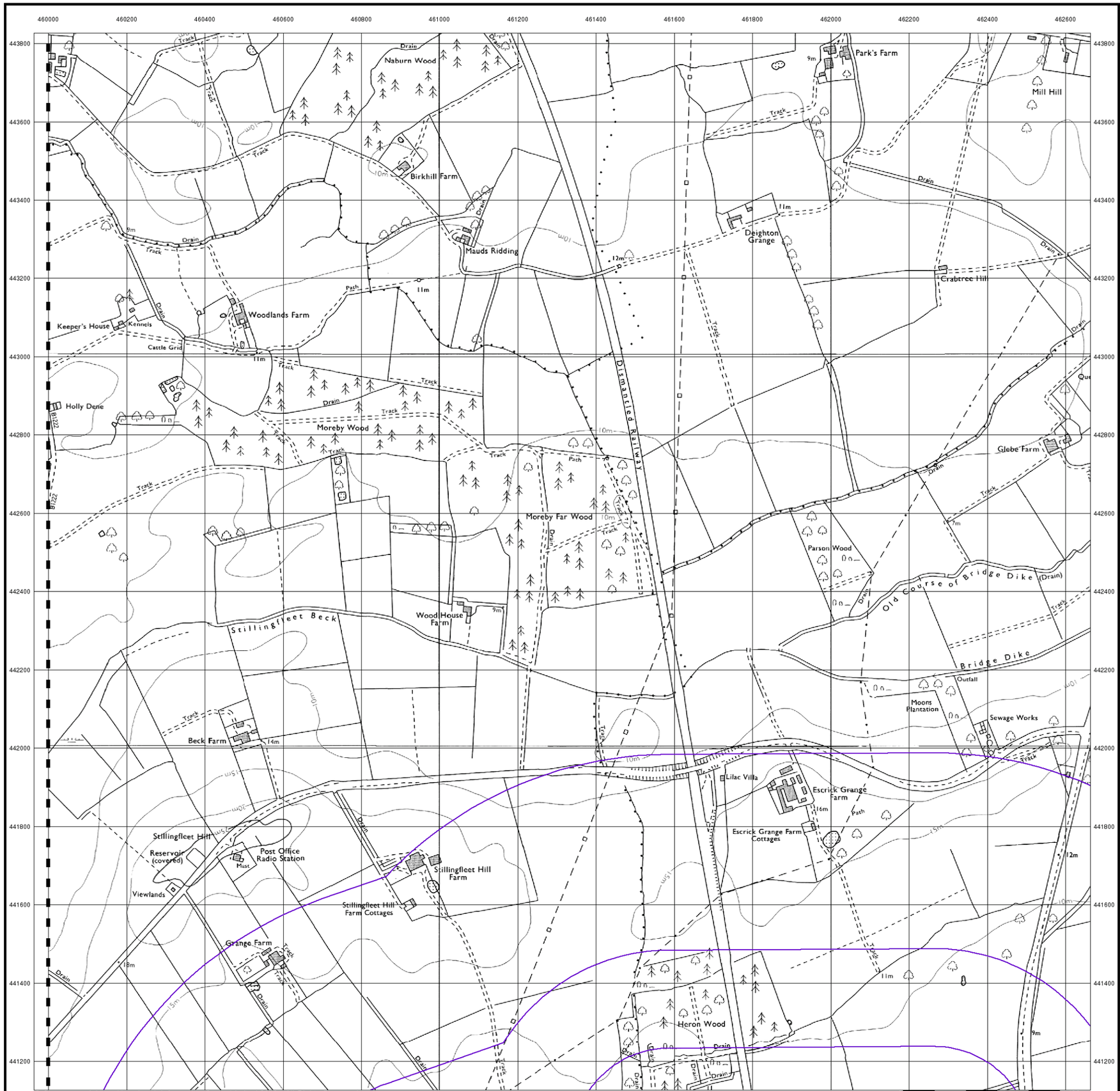

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Ordnance Survey Plan

Published 1990

Source map scale - 1:10,000

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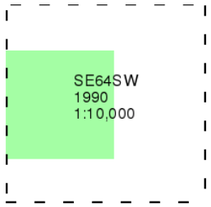

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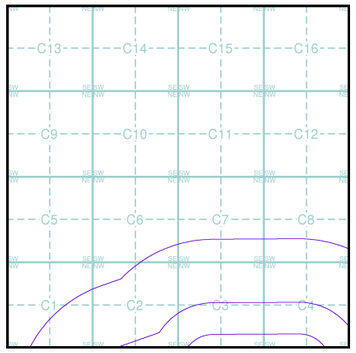

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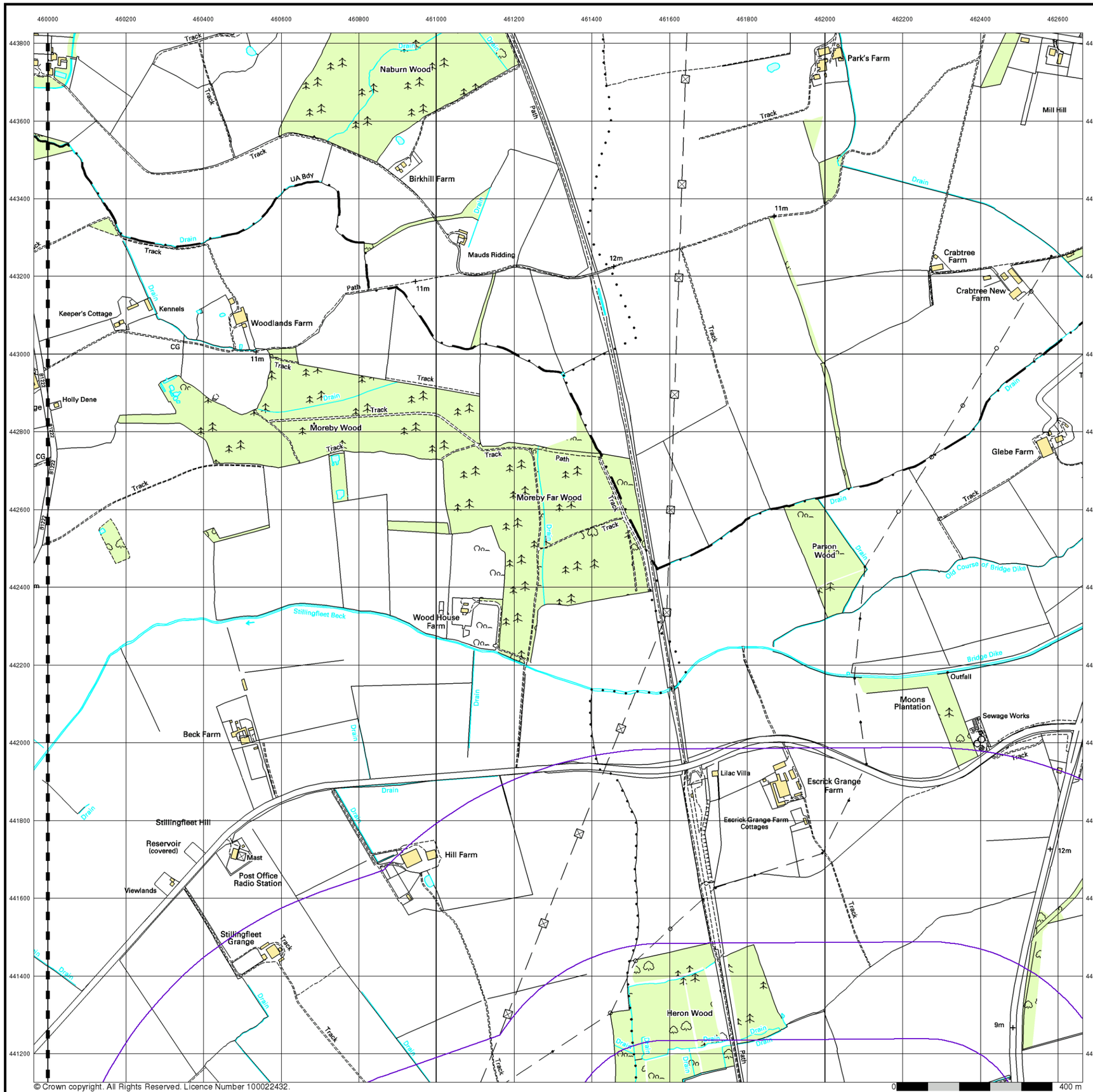

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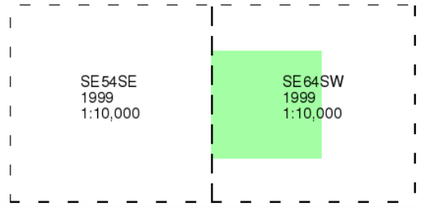
10k Raster Mapping

Published 1999

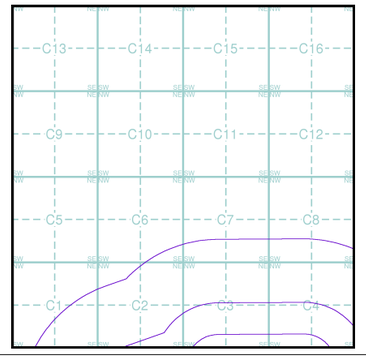
Source map scale - 1:10,000

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)



Historical Map - Slice C



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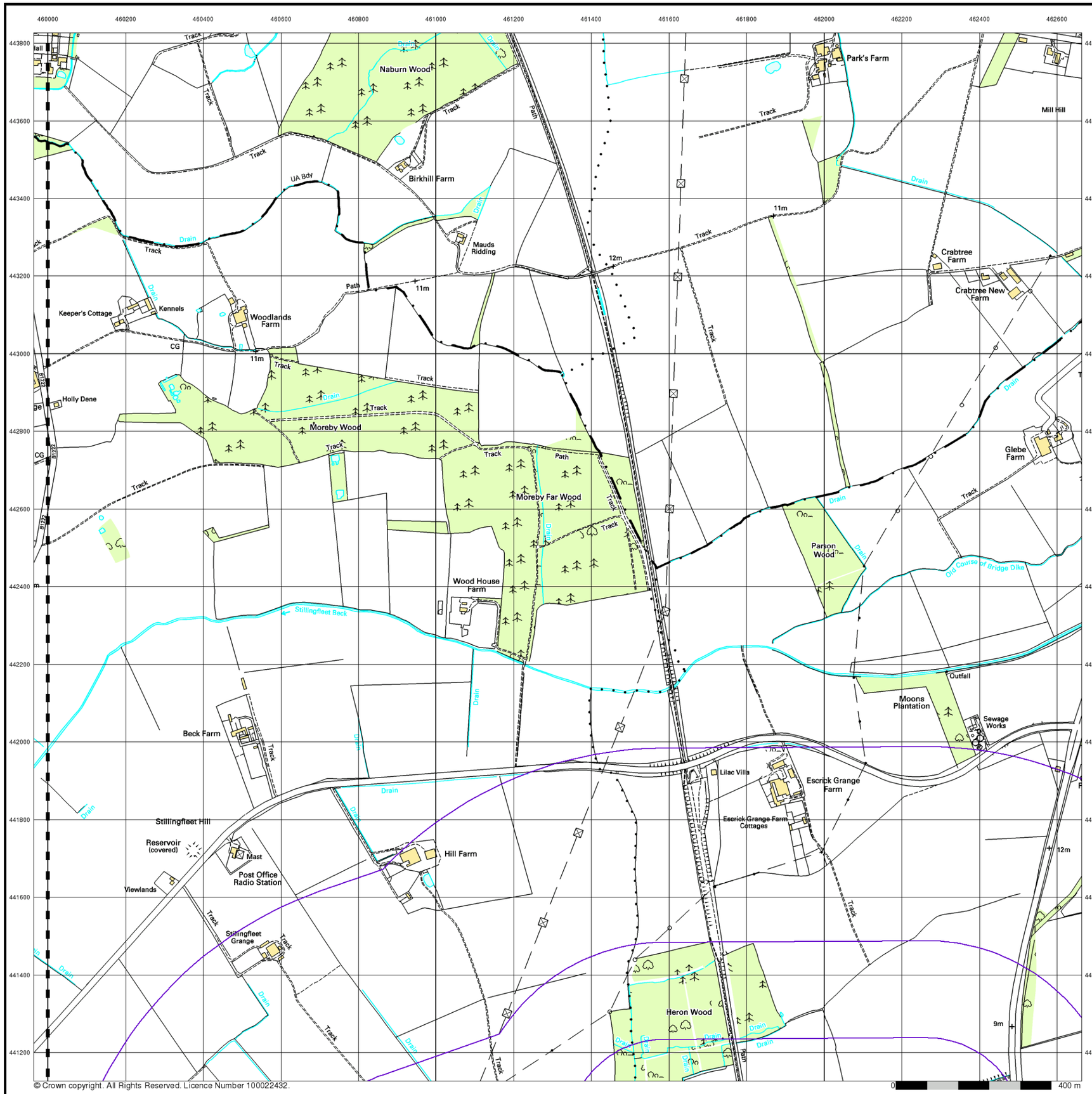

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10k Raster Mapping

Published 2006

Source map scale - 1:10,000

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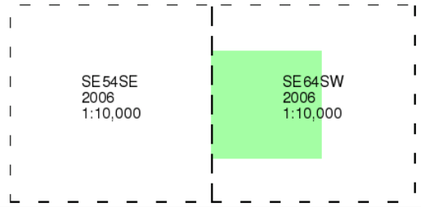
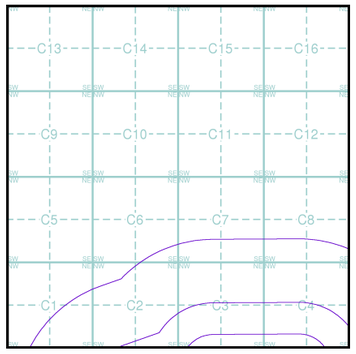


Historical Map - Slice C



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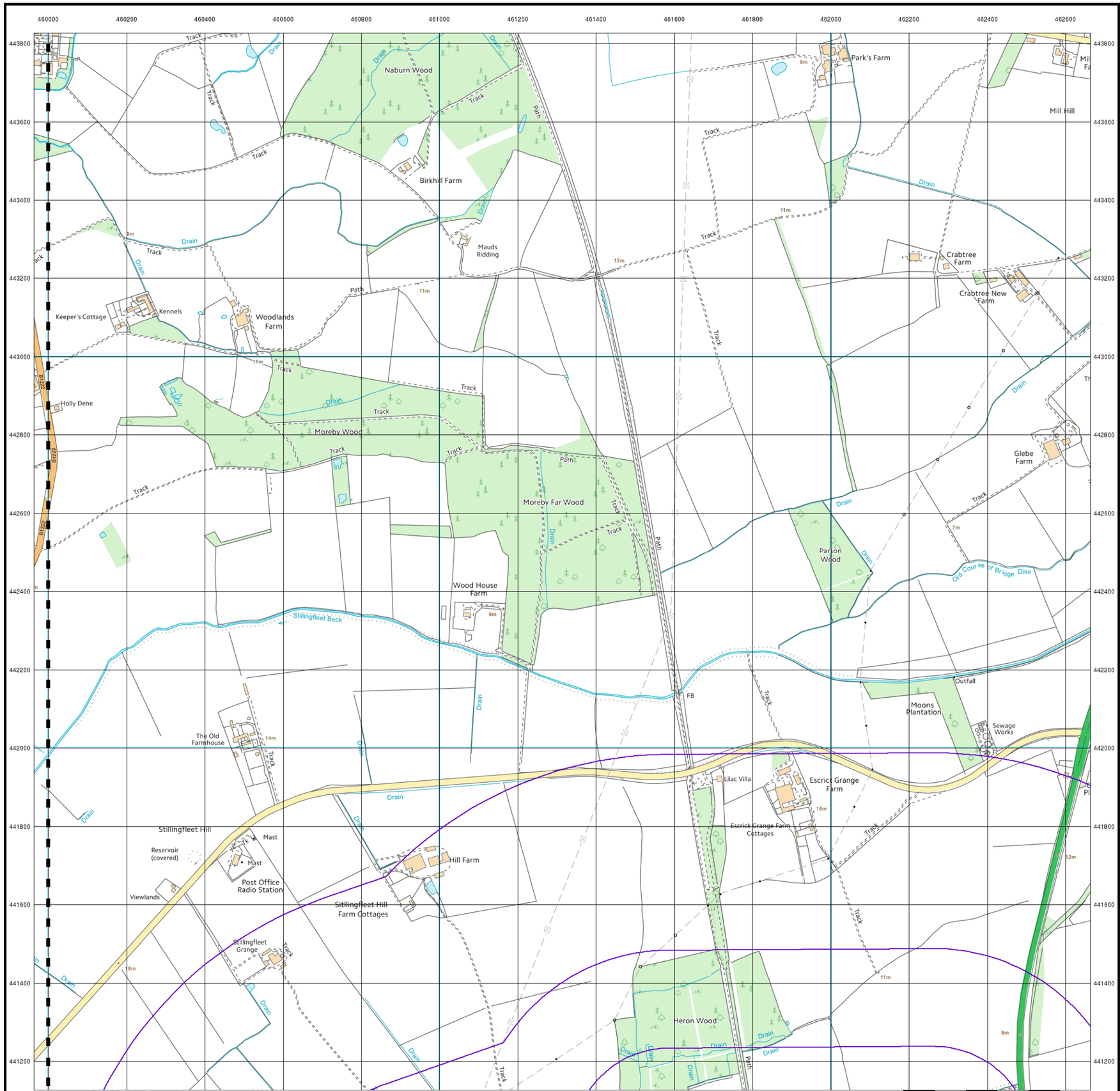

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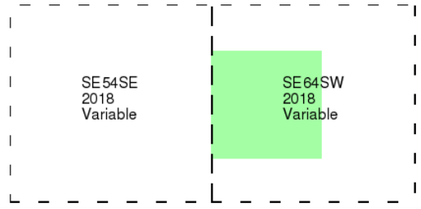
VectorMap Local

Published 2018

Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



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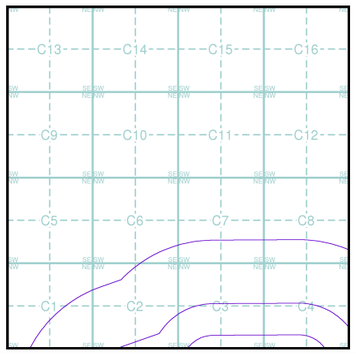

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Site at 461540, 440390

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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
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
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
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)
BM 123.45 m 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

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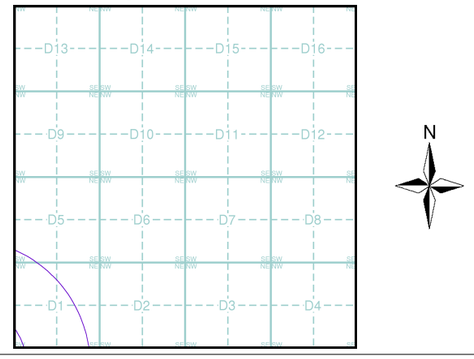
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1851	2
Yorkshire	1:10,560	1892 - 1893	3
Yorkshire	1:10,560	1910	4
Yorkshire	1:10,560	1952	5
Ordnance Survey Plan	1:10,000	1958	6
Ordnance Survey Plan	1:10,000	1979	7
Ordnance Survey Plan	1:10,000	1980	8
Ordnance Survey Plan	1:10,000	1990	9
10K Raster Mapping	1:10,000	1999	10
10K Raster Mapping	1:10,000	2006	11
VectorMap Local	1:10,000	2018	12

Historical Map - Slice D



Order Details

Order Number: 180692898_1_1
Customer Ref: PL/ES/JRC/2948/01
National Grid Reference: 462900, 441430
Slice: D
Site Area (Ha): 82.61
Search Buffer (m): 1000

Site Details

Site at 461540, 440390

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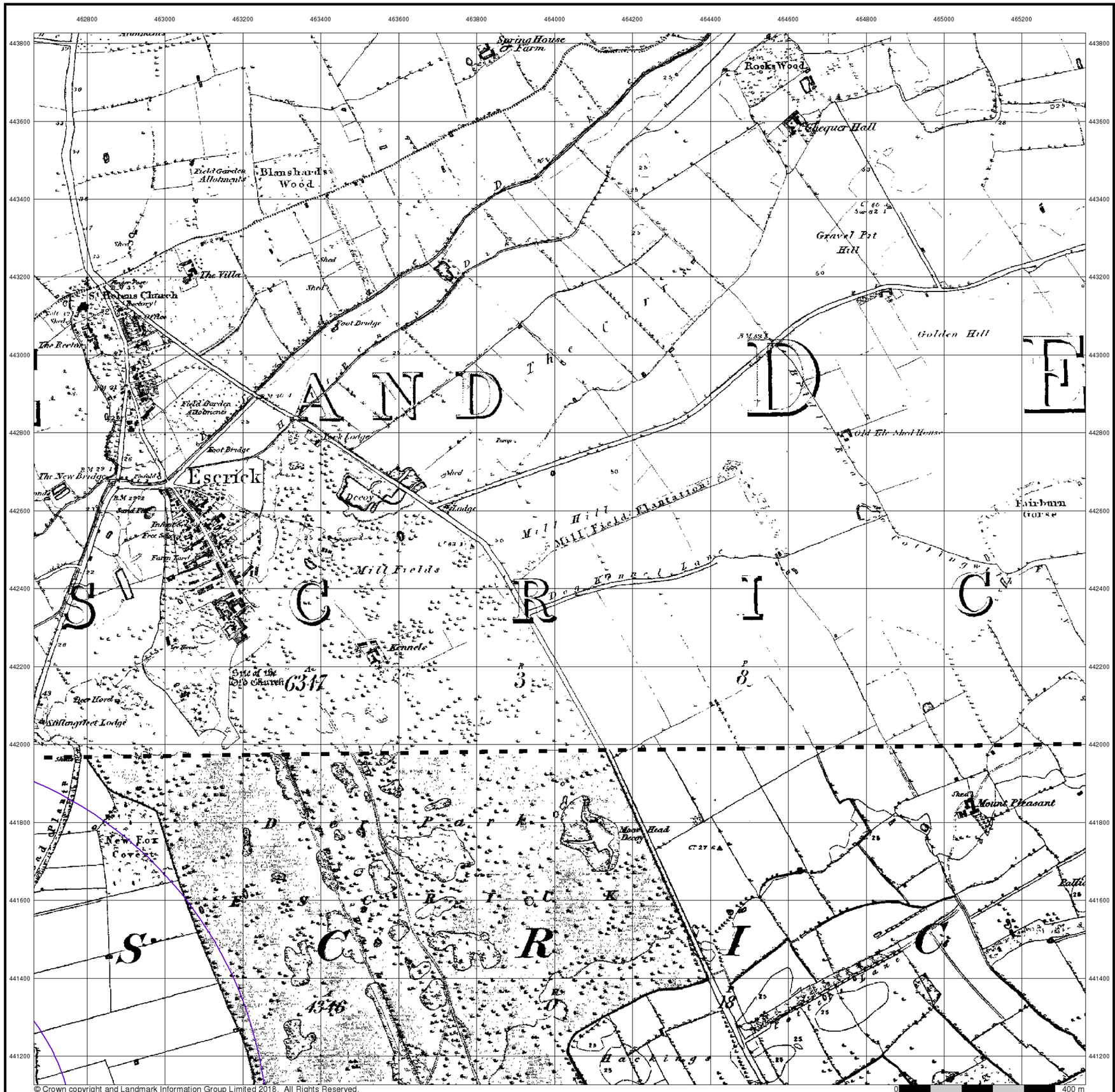

0 400 m

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Yorkshire

Published 1851

Source map scale - 1:10,560

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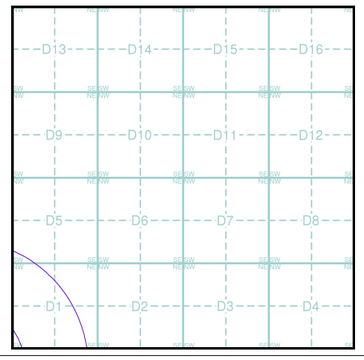
Map Name(s) and Date(s)

19100
1851
1:10,560

20600
1851
1:10,560

Historical Map - Slice D



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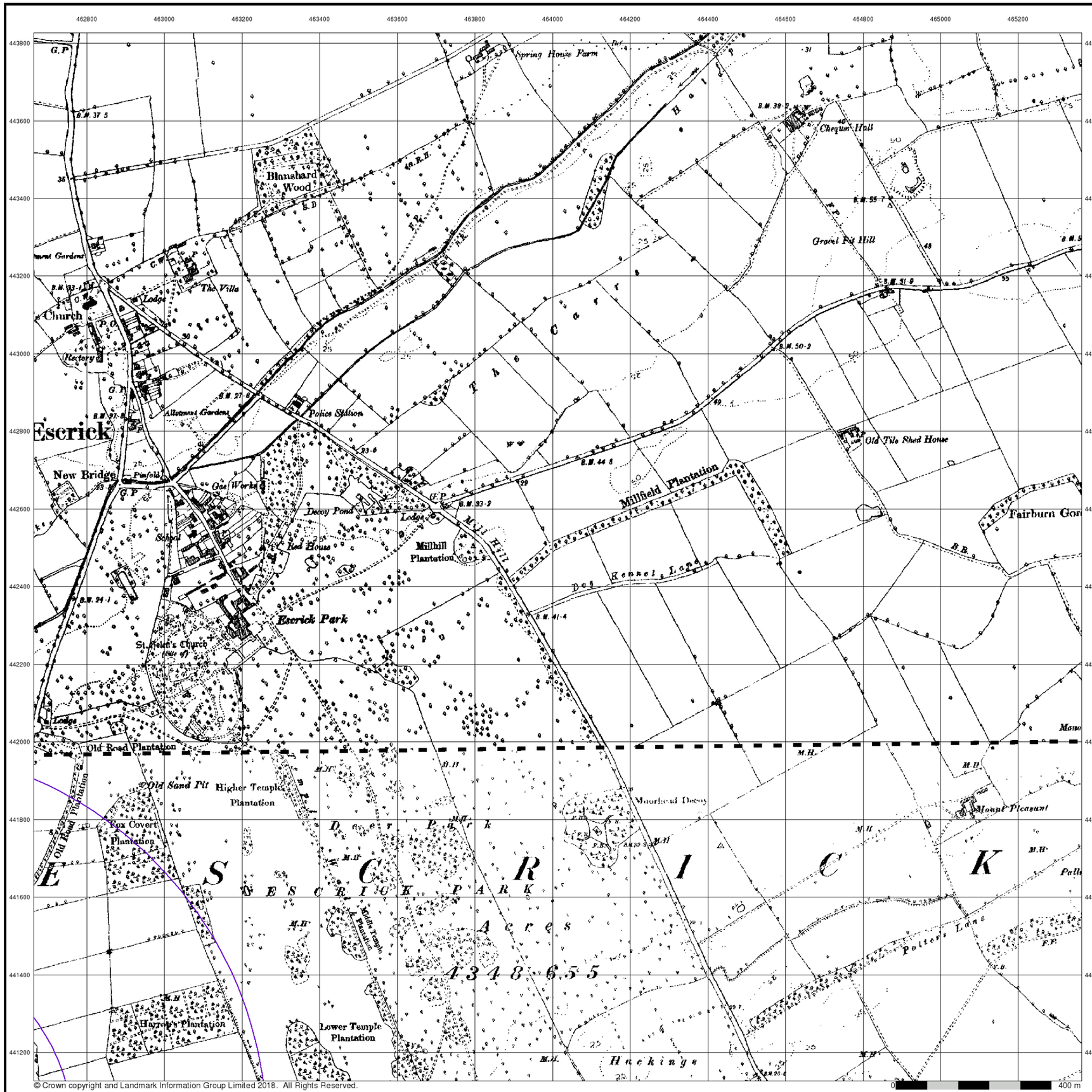

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Yorkshire

Published 1892 - 1893

Source map scale - 1:10,560

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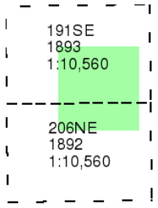
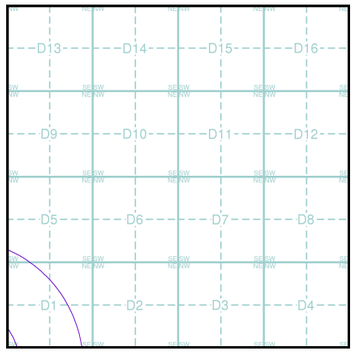
Map Name(s) and Date(s)



Historical Map - Slice D



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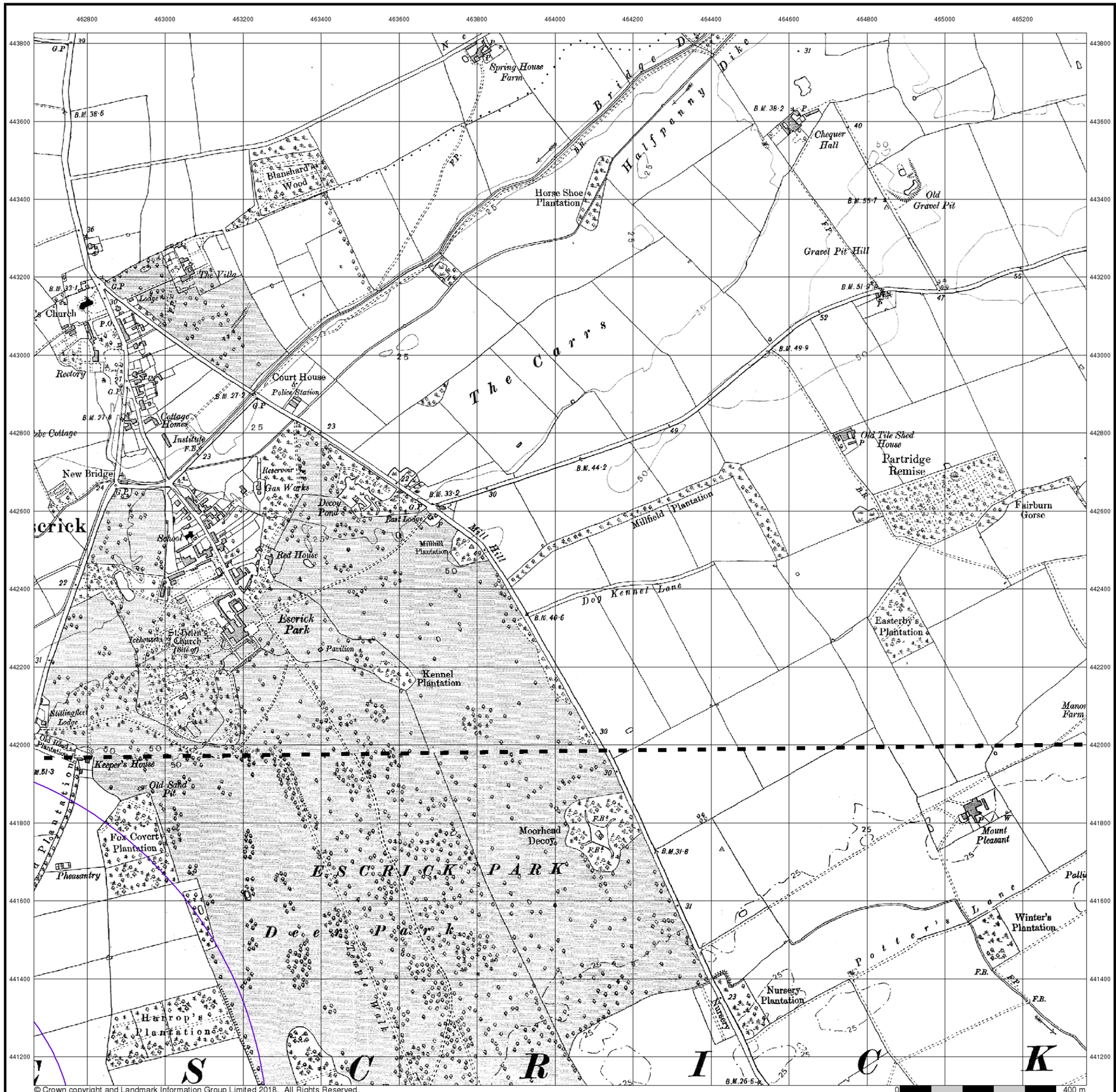

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Yorkshire

Published 1910

Source map scale - 1:10,560

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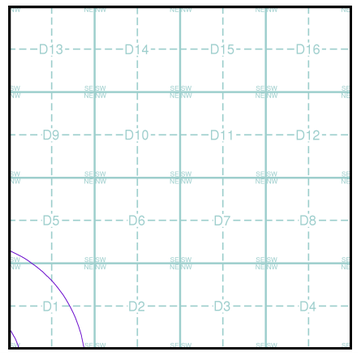
Map Name(s) and Date(s)

191SE
1910
1:10,560

206NE
1910
1:10,560

Historical Map - Slice D



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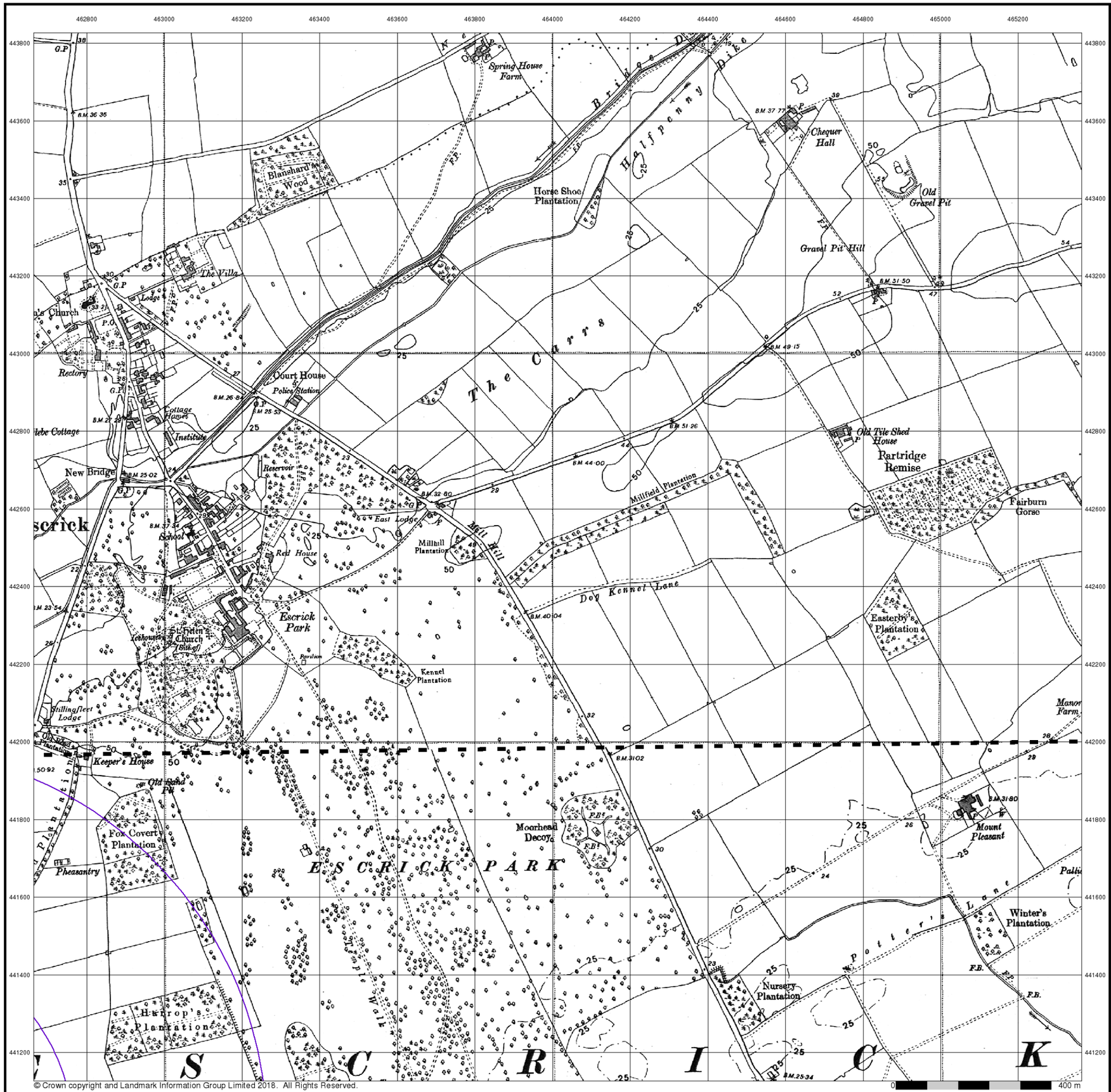

0 400 m

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Yorkshire

Published 1952

Source map scale - 1:10,560

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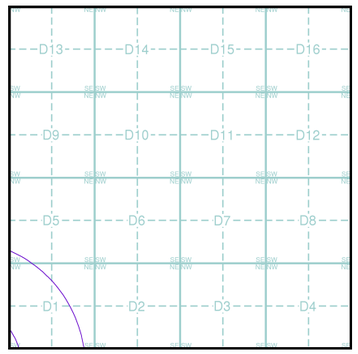
Map Name(s) and Date(s)

191SE
1952
1:10,560

206NE
1952
1:10,560

Historical Map - Slice D



Order Details

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National Grid Reference:	462900, 441430
Slice:	D
Site Area (Ha):	82.61
Search Buffer (m):	1000

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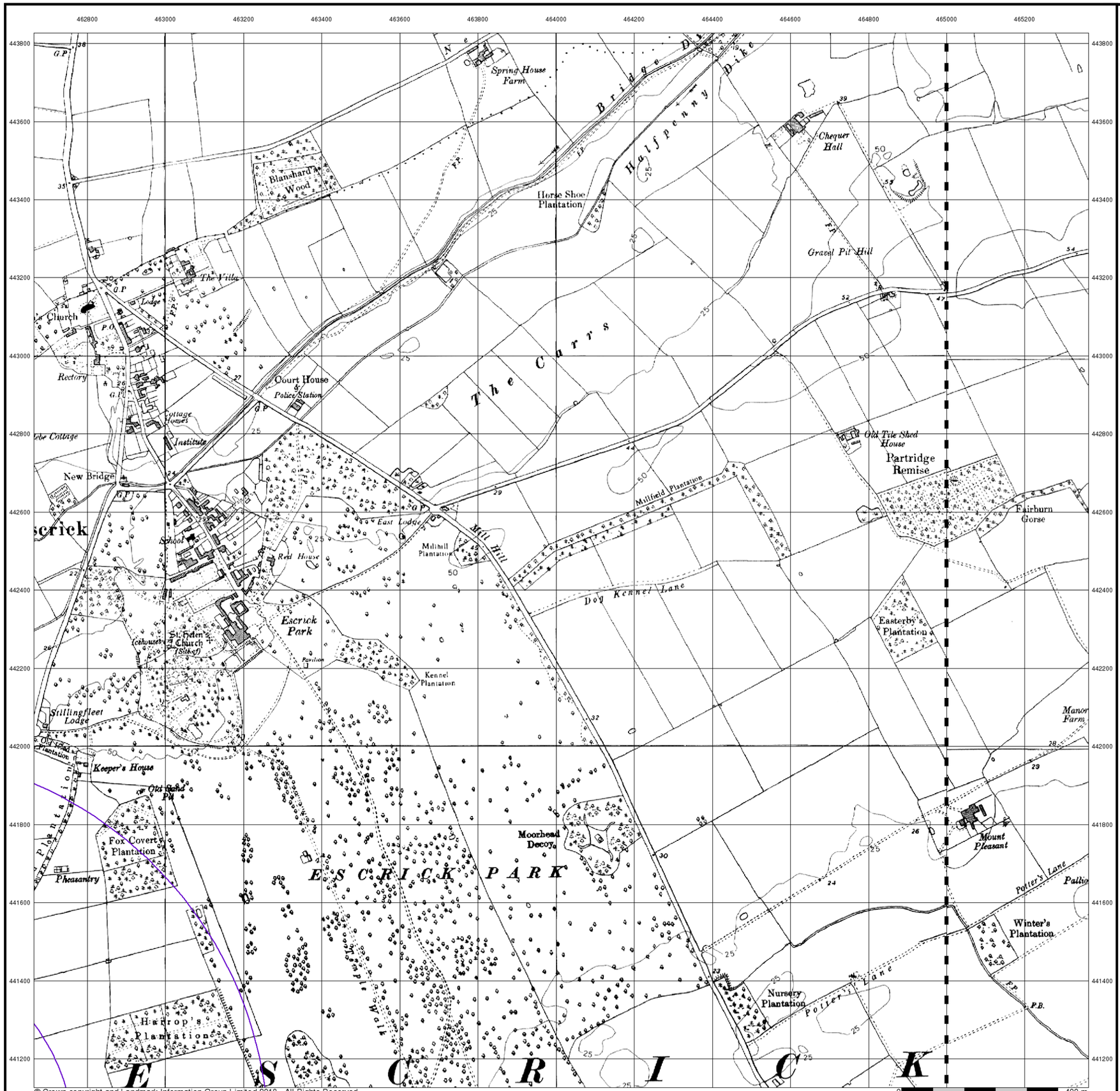

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Ordnance Survey Plan

Published 1958

Source map scale - 1:10,000

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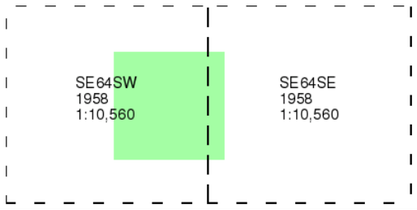
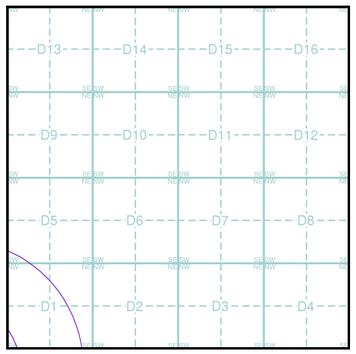
Map Name(s) and Date(s)



Historical Map - Slice D



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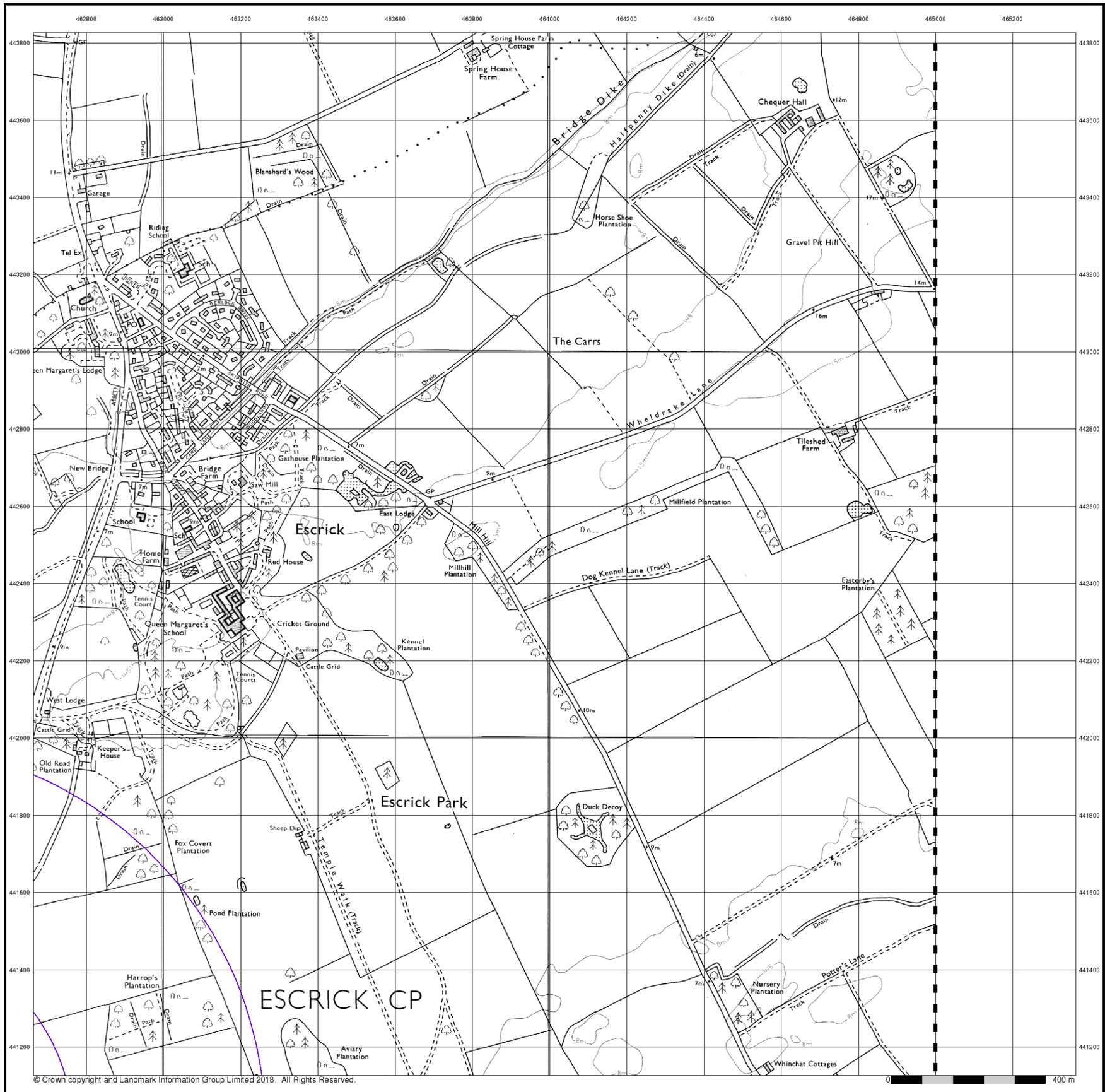

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Ordnance Survey Plan

Published 1979

Source map scale - 1:10,000

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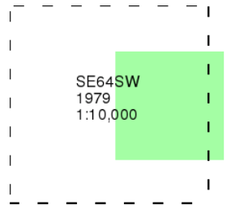
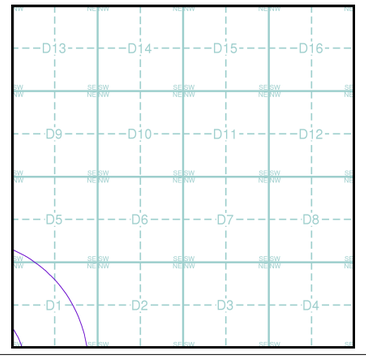


Historical Map - Slice D



Order Details

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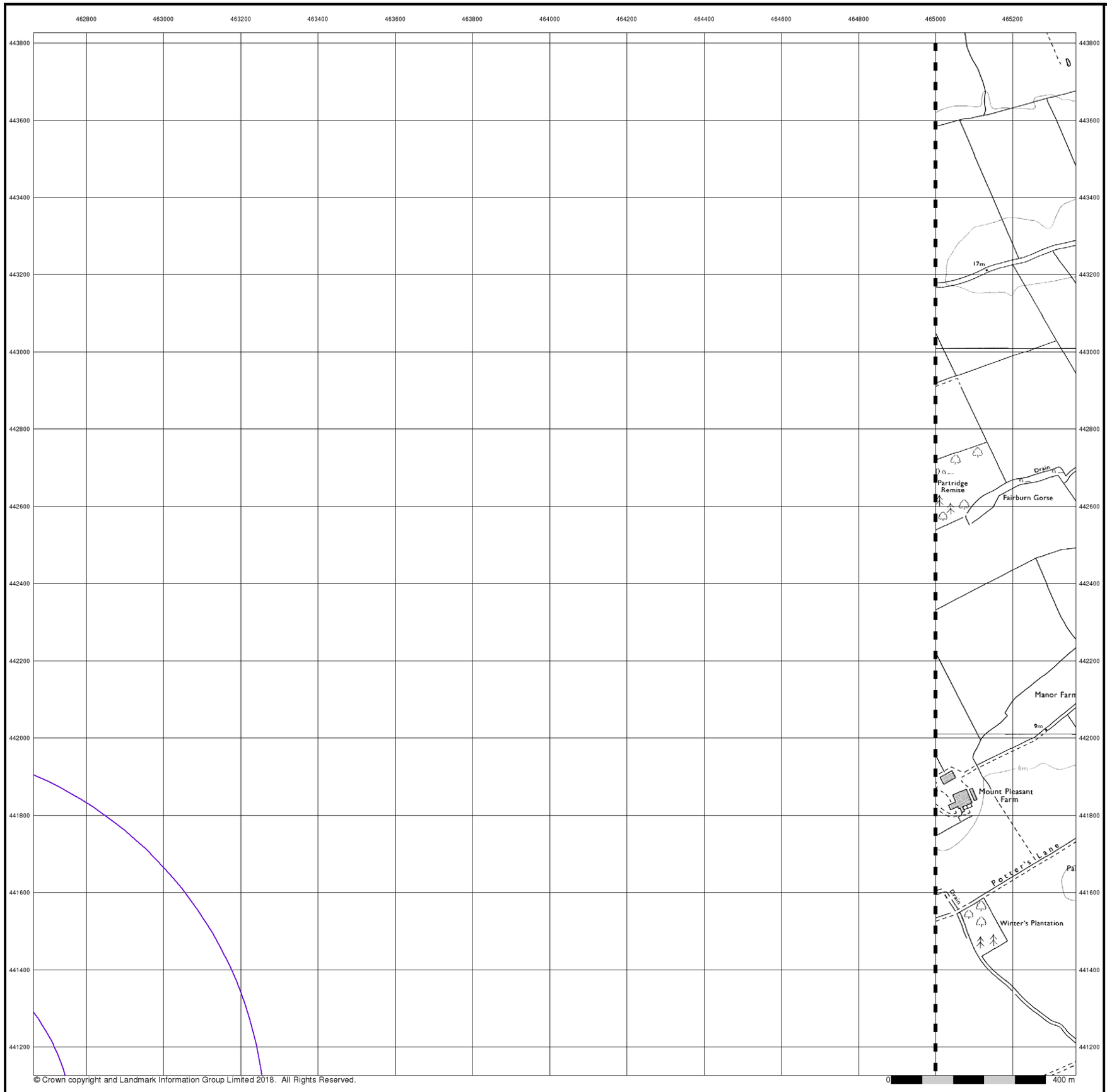

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Ordnance Survey Plan

Published 1980

Source map scale - 1:10,000

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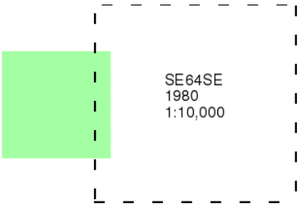
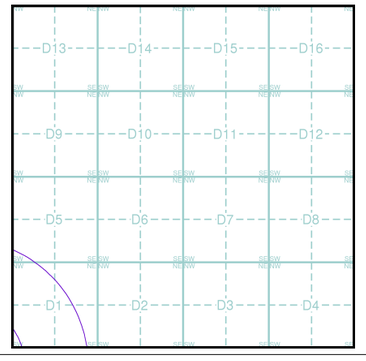
Map Name(s) and Date(s)



Historical Map - Slice D



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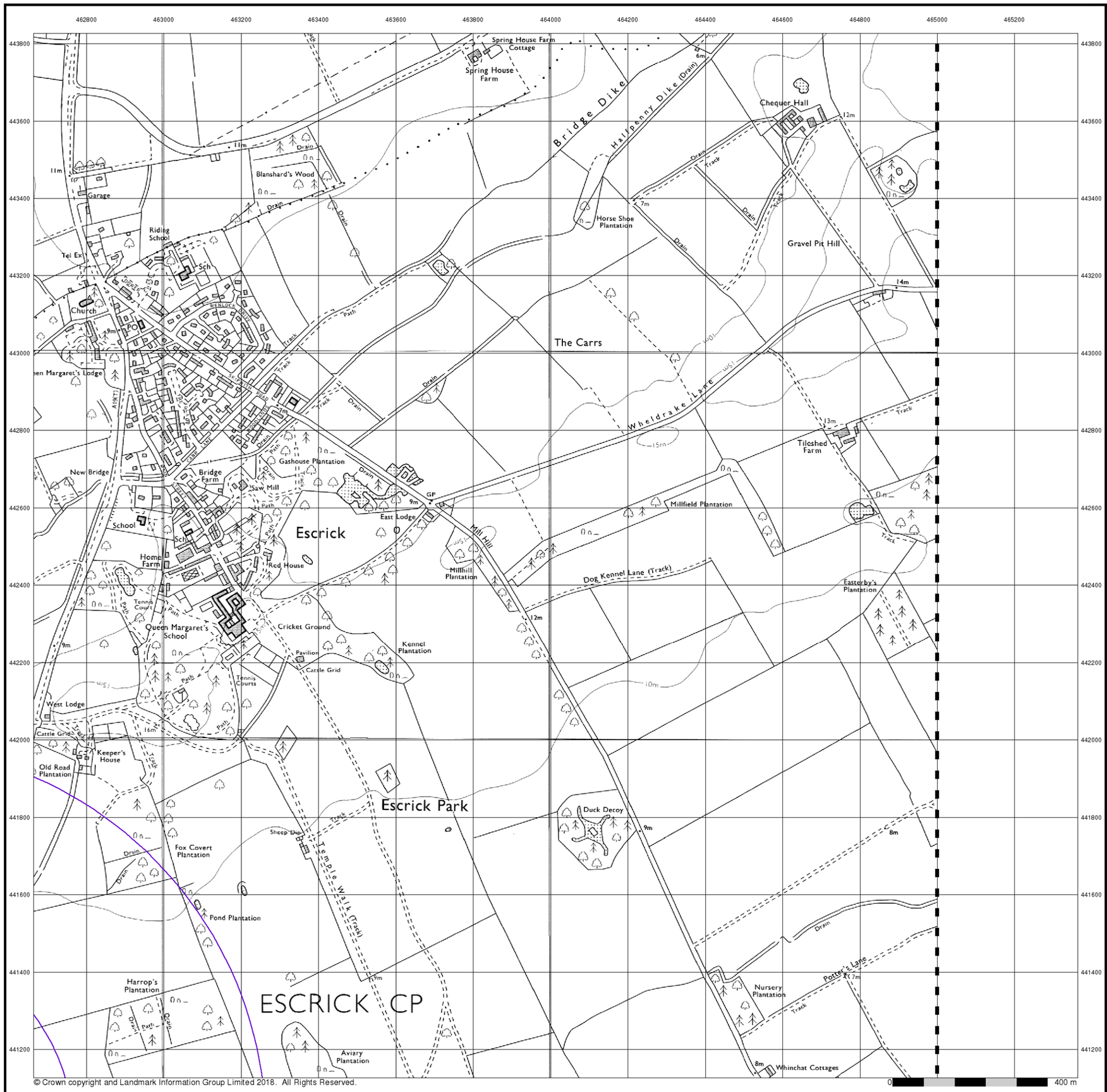

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Ordnance Survey Plan

Published 1990

Source map scale - 1:10,000

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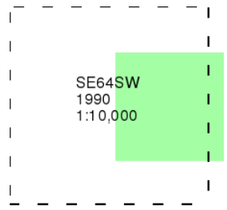
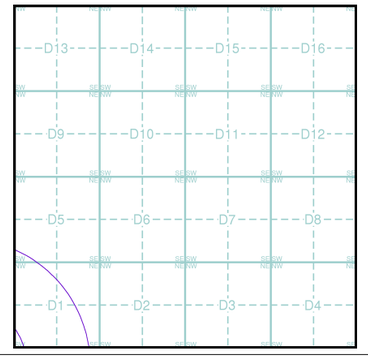


Historical Map - Slice D



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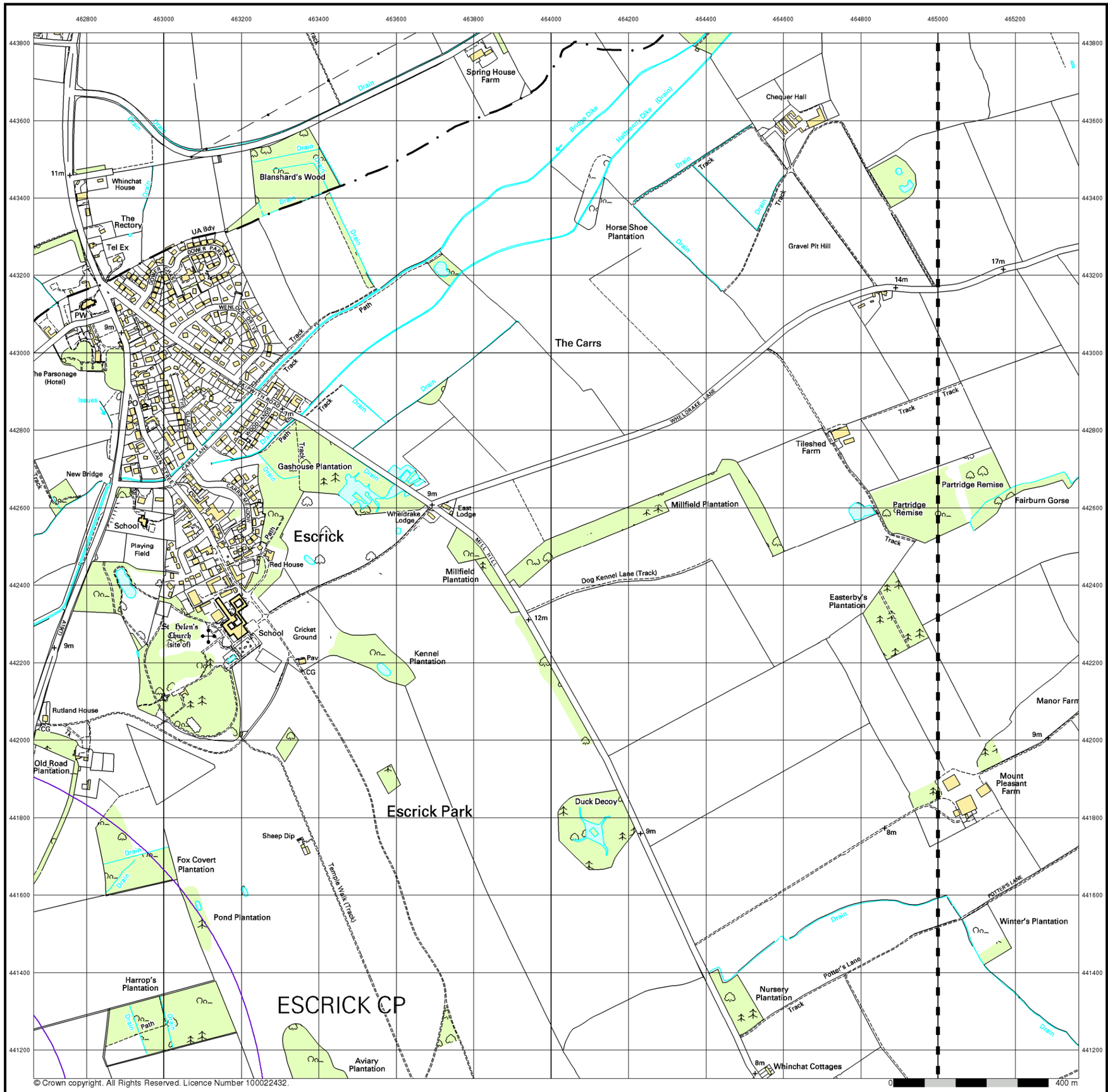

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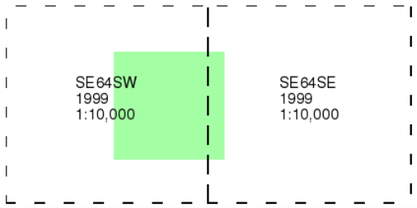
10k Raster Mapping

Published 1999

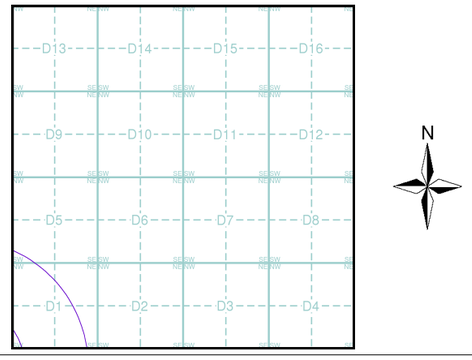
Source map scale - 1:10,000

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)



Historical Map - Slice D



Order Details

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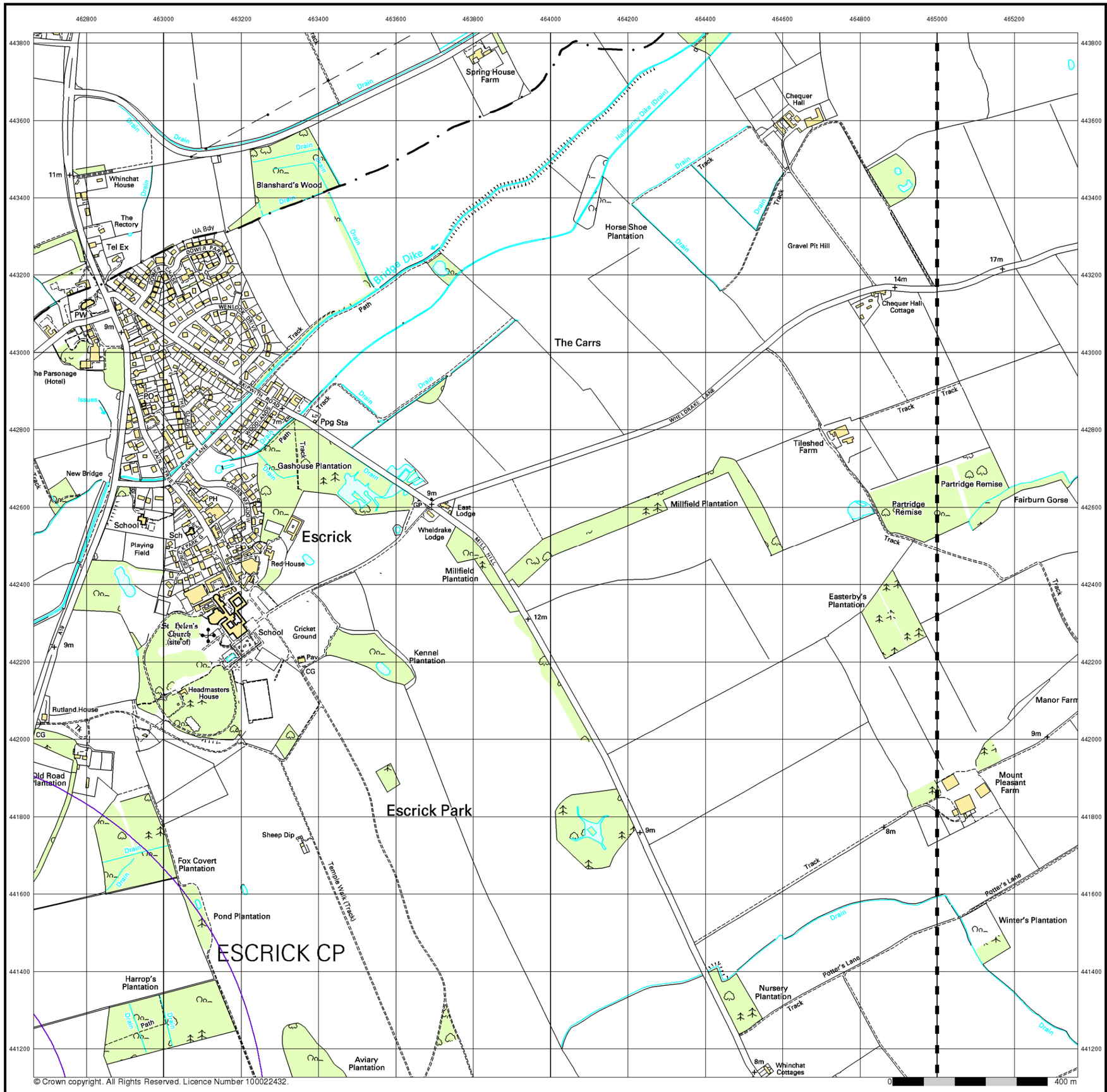
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	462900, 441430
Slice:	D
Site Area (Ha):	82.61
Search Buffer (m):	1000

Site Details

Site at 461540, 440390

Landmark INFORMATION GROUP

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



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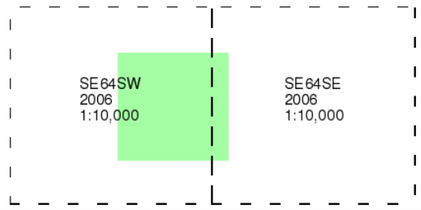
10k Raster Mapping

Published 2006

Source map scale - 1:10,000

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

Map Name(s) and Date(s)



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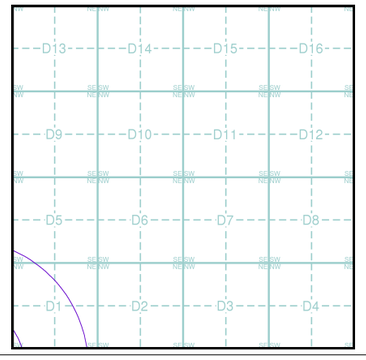

Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	462900, 441430
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Site Area (Ha):	82.61
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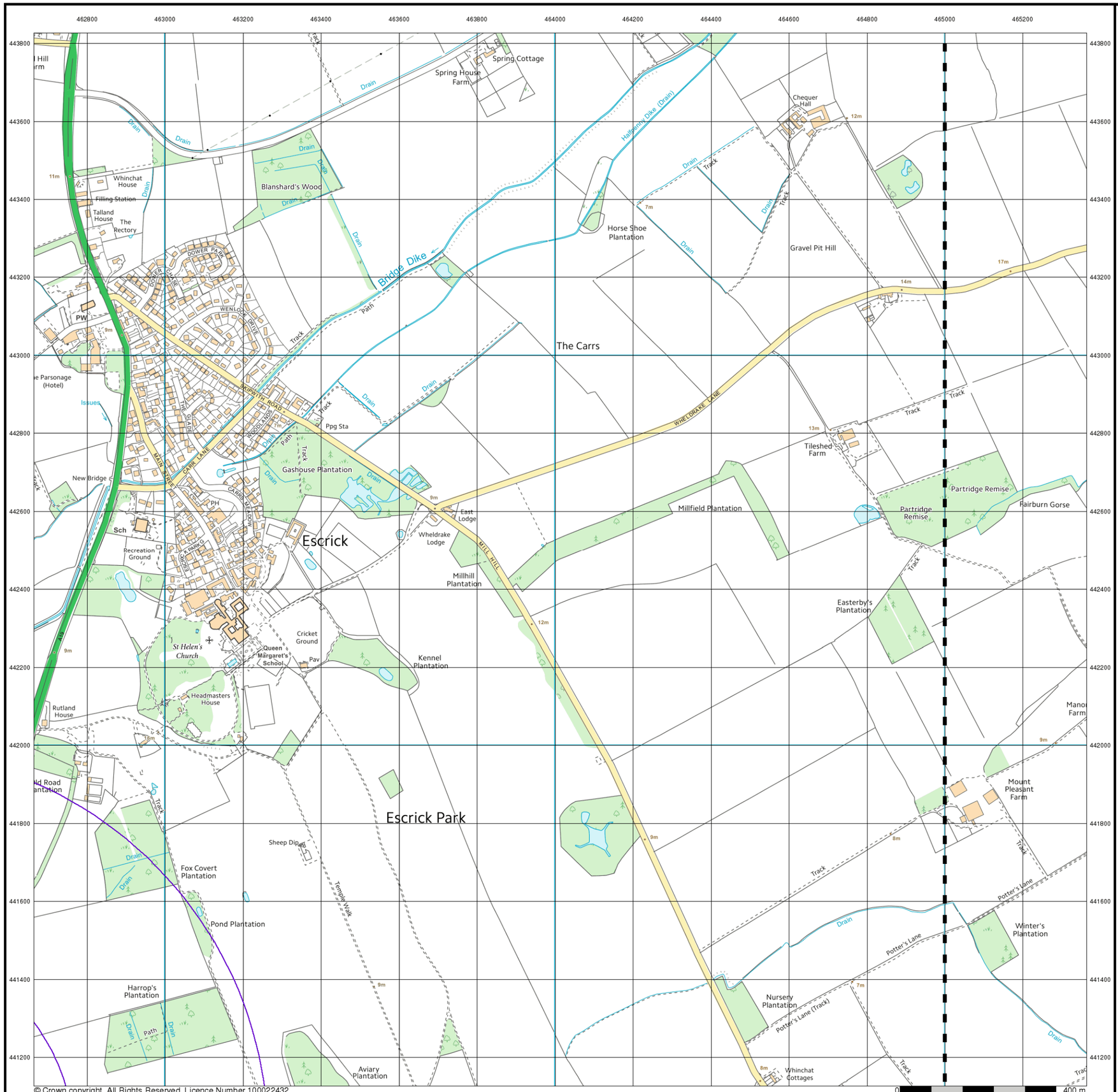

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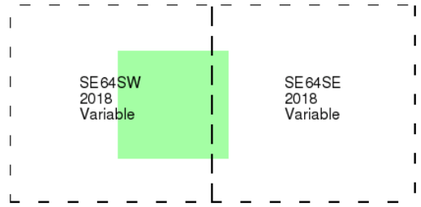
VectorMap Local

Published 2018

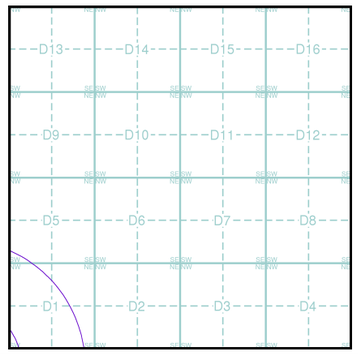
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice D



Order Details

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Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	462900, 441430
Slice:	D
Site Area (Ha):	82.61
Search Buffer (m):	1000

Site Details

Site at 461540, 440390

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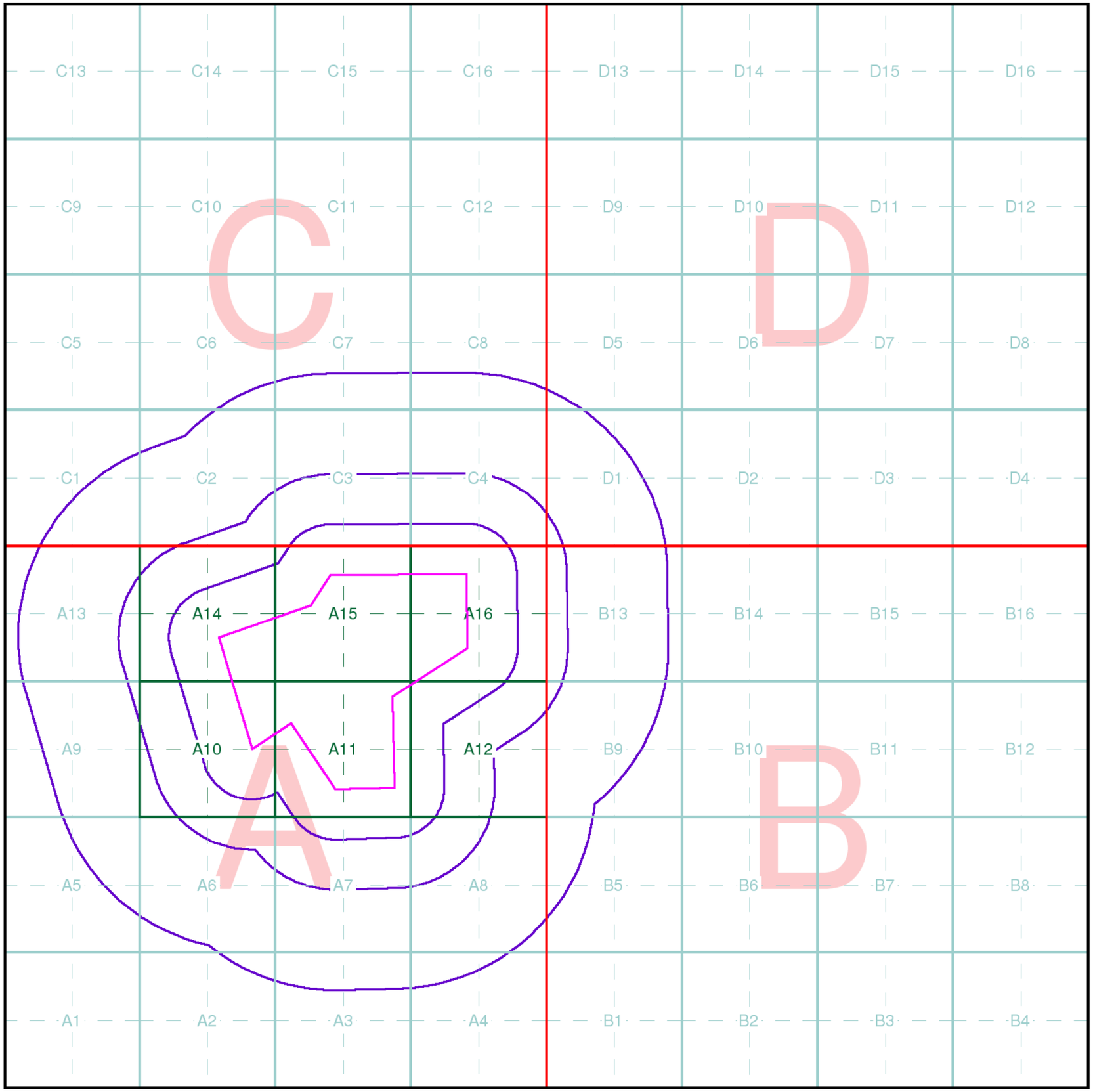

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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Environment Agency

NATURAL ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Client Details

J Amphlett, MJCA, Baddesley Collier Offices, Main Road, Baxterley, Atherstone, Warwickshire, CV9 2LE

Order Details

Order Number:	180692898_1_1
Customer Ref:	PL/ES/JRC/2948/01
National Grid Reference:	461670, 440520
Site Area (Ha):	82.61
Search Buffer (m):	1000

Site Details

Site at 461540, 440390

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

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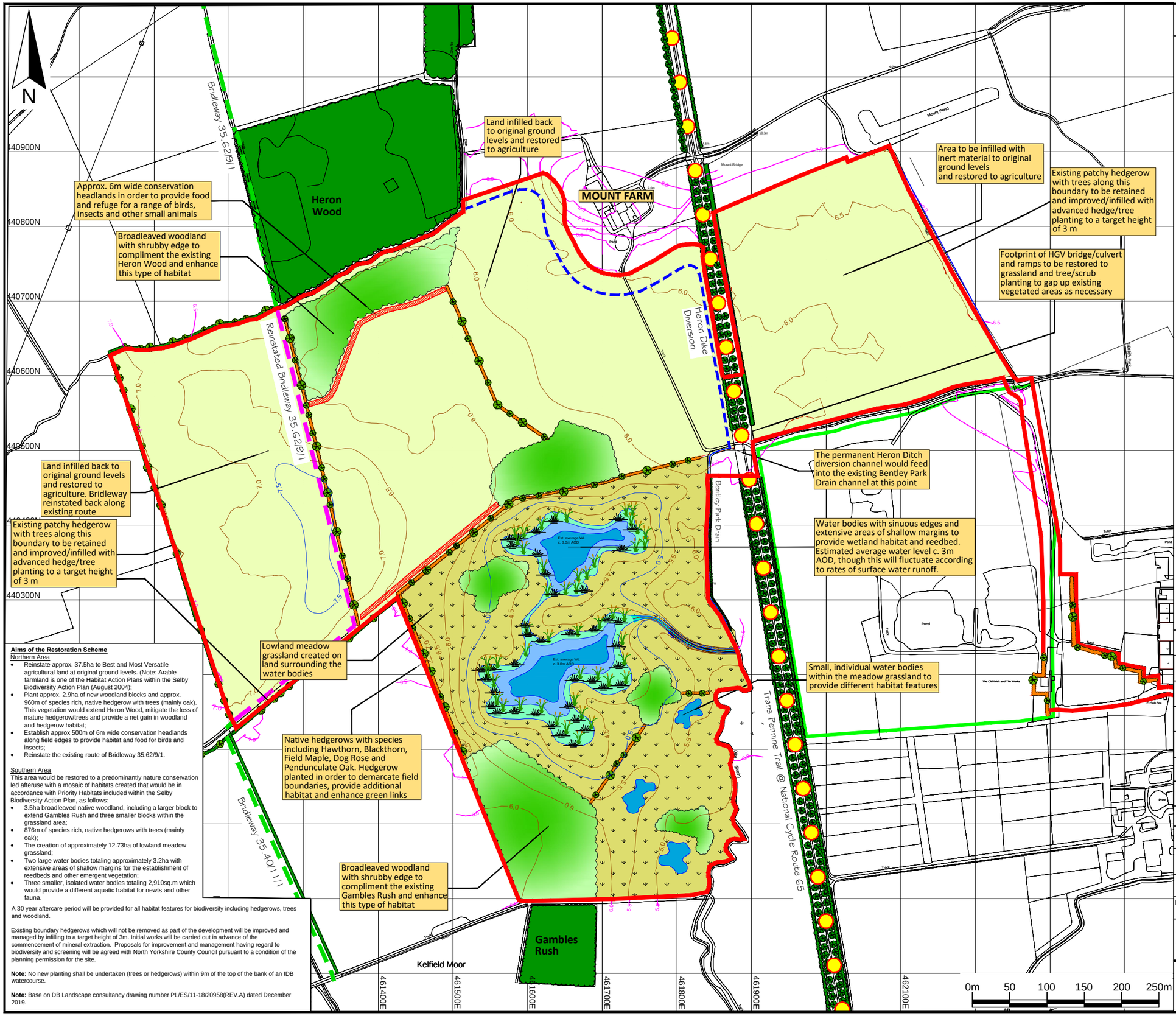
APPENDIX ESSD E

DRAWING REFERENCE PL/ES/03-20/21229REVE



Aims of the Restoration Scheme

Northern Area

- Reinstate approx. 37.5ha to Best and Most Versatile agricultural land at original ground levels. (Note: Arable farmland is one of the Habitat Action Plans within the Selby Biodiversity Action Plan (August 2004);
- Plant approx. 2.9ha of new woodland blocks and approx. 960m of species rich, native hedgerow with trees (mainly oak). This vegetation would extend Heron Wood, mitigate the loss of mature hedgerow/trees and provide a net gain in woodland and hedgerow habitat;
- Establish approx 500m of 6m wide conservation headlands along field edges to provide habitat and food for birds and insects;
- Reinstate the existing route of Bridleway 35.62/9/1.

Southern Area

This area would be restored to a predominantly nature conservation led afteruse with a mosaic of habitats created that would be in accordance with Priority Habitats included within the Selby Biodiversity Action Plan, as follows:

- 3.5ha broadleaved native woodland, including a larger block to extend Gambles Rush and three smaller blocks within the grassland area;
- 876m of species rich, native hedgerows with trees (mainly oak);
- The creation of approximately 12.73ha of lowland meadow grassland;
- Two large water bodies totaling approximately 3.2ha with extensive areas of shallow margins for the establishment of reedbeds and other emergent vegetation;
- Three smaller, isolated water bodies totaling 2,910sq.m which would provide a different aquatic habitat for newts and other fauna.

A 30 year aftercare period will be provided for all habitat features for biodiversity including hedgerows, trees and woodland.

Existing boundary hedgerows which will not be removed as part of the development will be improved and managed by infilling to a target height of 3m. Initial works will be carried out in advance of the commencement of mineral extraction. Proposals for improvement and management having regard to biodiversity and screening will be agreed with North Yorkshire County Council pursuant to a condition of the planning permission for the site.

Note: No new planting shall be undertaken (trees or hedgerows) within 9m of the top of the bank of an IDB watercourse.

Note: Base on DB Landscape consultancy drawing number PL/ES/11-18/20958(REV.A) dated December 2019.

Key / Notes

- Planning application boundary
- The current Escrick site
- Proposed restoration contours (@ 0.5m intervals)
- Trans Pennine Trail & National Route 65
- Existing bridleway
- Bridleway 35.62/9/1 reinstated along existing route
- Land reinstated to approximate original ground levels and restored to best and most versatile agriculture at land
- 6m wide conservation headland to provide habitat and food for birds, insects and other animals
- Water bodies with shallows planted with common reed and marginal aquatic vegetation
- Isolated, unconnected ponds to provide a habitat suitable for newts and other amphibians
- Lowland meadow grassland: seeded with emorsgate seeds: EM10 'tussocky meadow mix'
- Proposed native broadleaved woodland with shrubby edges
- Proposed species rich native hedgerows with occasional trees (mainly Pendunculate Oak) target hedgerow height of 3m
- Diverted route of Heron Dike (Drain)
- Existing woodland blocks
- Existing hedgerows with occasional trees

Rev	Status	Drn	App	Chk	Date
E	Amendment to text	SRW	GT	LC	05/05/20
D	Amendment to text and hedgerows	SRW	SE	GT	09/04/20
C	Amendment to hedgerows	HM	SE	LC	28/02/20
B	Restoration scheme updated	HM	SE	LC	31/01/20
A	Restoration scheme updated	HL	SE	GT	10/01/20
	Final	KR	SE	LC	31/07/19

Site: ESCRICK

Client: Plasmor Limited

Title: The restoration plan

Figure PS 6 | Scale: 1:5,000@A3

Drawing Ref: PL/ES/03-20/21229revE

MJCA
Technical advisers on environmental issues
Baddesley Colliery Offices, Main Road, Baxterley, Atherstone, Warwickshire, CV9 2LE.
Telephone : 01827 717891
Fax : 01827 718507

APPENDIX ESSD F

DRAWING REFERENCE ESC009REV.B

Schedule of Plant Material

			Block/Hedge	B1	B2	B3	B4	B5	B6	AB1	S1	AH1*	AH2**	AH3***	AH4****	AH5****	AH6****	H1	H2	H3	H4	H5	
			Area m^2/Length m	17,600	11,500	4,300	3,200	24,900	2,700	180	1,872	200m	35m	440m	38m	160m	28m	427m	256m	468m	128m	47m	
			Total no. of Bare Root Transplants	2,816	1,840	688	512	3,984	432	50	468	1,000	175	2,200	190	800	70	2,135	1,280	2,340	640	235	
Species	**Common Name**	**Size/cm**	**Protection & support**																				**Total**
Primary Tree Species																							
Acer Camestre	Field Maple	60-80cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	385	250	65	50	575	50	5	50	100	25	260	32	100	15	225	160	275	45	25	**2,692**
Alnus glutinosa	Alder	60-80cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	346	225	35	25	525	25														**1,181**
Pinus sylvestris	Scots Pine	60-80cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	335	275	25	25	450	25														**1,135**
Quercus robur	Pendunculate Oak	60-80cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	375	275	65	50	525	42														**1,332**
Quercus robur	Pendunculate Oak	Light Standard (Rootballed, 6 - 8cm girth, approx. 2.5 - 3m height)	Single, round, peeled & treated softwood stake (75mm diameter), 35mm tree block, 35mm rubber belting and clout nails. 90cm Tubex shelter added for protection									9	7	15	1	20		16	9	15	5	2	**99**
Secondary Tree Species																							
Betula pendula	Silver Birch	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	100	65	35	25	109	15														**349**
Corylus avellana	Hazel	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	100	75	50	35	200	25	5	50	100	25	250	25	100	15	225	160	255	50	25	**1,770**
Crataegus monogyna	Hawthorn	40-60cm bare root transplant (1+2)	60cm Spiral Guard/90cm cane	125	75	25	27	200	25	15	100	350	54	725	60	250	15	725	375	775	250	70	**4,241**
Prunus avium	Wild Cherry	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	100	75	50	25	125	25														**400**
Prunus spinosa	Blackthorn	40-60cm bare root transplant (1+2)	60cm Spiral Guard/90cm cane	125	50	25	25	175	25	5	100	250	25	525	27	105		525	275	550	200	50	**3,062**
Salix caprea	Goat Willow (Sallow)	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	75	75	33	25	200	25	5													**438**
Sorbus aucuparia	Mountain Ash (Rowan)	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	100	75	50	35	125	15	5	50												**450**
Sorbus torminalis	Wild Service Tree	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	100	75	25	25	175	25	5													**430**
Understorey Shrubs																							
Cornus sanguinea	Dogwood	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	100	50	25	25	175	25		25												**425**
Euonymus europaea	Spindle	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	100	25	50	35	75	15	5	25												**330**
Rosa canina	Dog Rose	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	75	50	30	15	100	15		15												**300**
Sambucus nigra	Elder	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	100	25	50	25	75	25		25	100	25	225	25	100	15	215	160	250	45	30	**1,515**
Viburnum lantana	Wayfaring Tree	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	100	50	25	15	75	15	5	10												**295**
Viburnum opulus	Guelder Rose	40-60cm bare root transplant (1+2)	60cm Tubex Shelter/90cm stake	75	50	25	25	100	15		18	100	20	200	20	125	10	220	150	235	50	25	**1,463**
		Total (including bare root transplants and rootballed light standard oaks)		**2,816**	**1,840**	**688**	**512**	**3,984**	**432**	**50**	**468**	**1,009**	**181**	**2,200**	**190**	**800**	**70**	**2,151**	**1,289**	**2,355**	**645**	**227**	**21,907**

* AH1 Consists of five separate areas along the existing patchy hedge. The exact space available and the numbers of plants required will need to be checked and confirmed on site

** AH2 is an existing hedgerow which requires gapping up in places. Estimated total length c. 35m. Exact numbers of plants required will need to be checked and confirmed on site

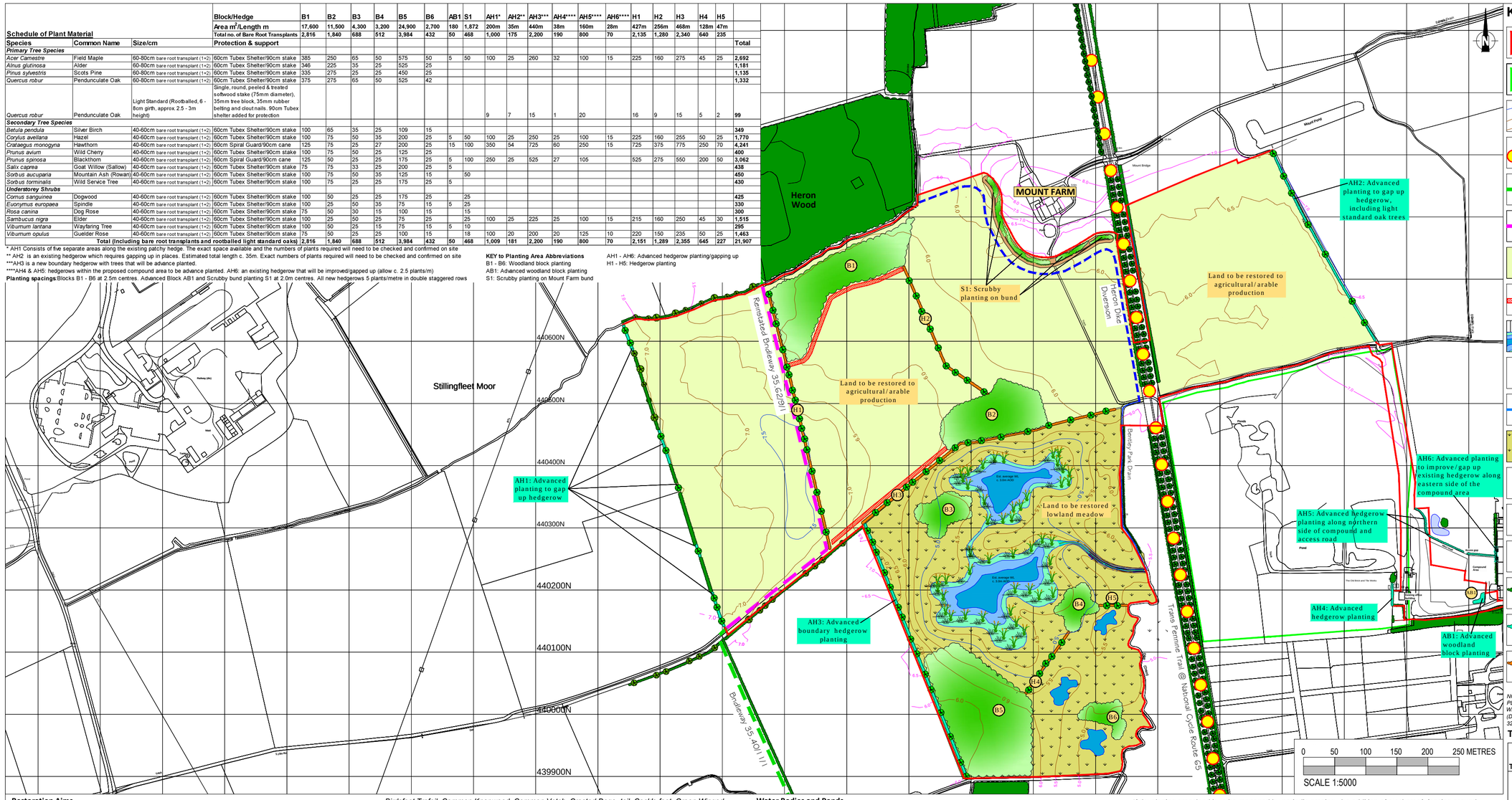
***AH3 is a new boundary hedgerow with trees that will be advance planted.

****AH4 & AH5: hedgerows within the proposed compound area to be advance planted. AH6: an existing hedgerow that will be improved/gapped up (allow c. 2.5 plants/m)

Planting spacings: Blocks B1 - B6 at 2.5m centres. Advanced Block AB1 and Scrubby bund planting S1 at 2.0m centres. All new hedgerows 5 plants/metre in double staggered rows

KEY to Planting Area Abbreviations
B1 - B6: Woodland block planting
AB1: Advanced woodland block planting
S1: Scrubby planting on Mount Farm bund

AH1 - AH6: Advanced hedgerow planting/gapping up
H1 - H5: Hedgerow planting



KEY

- PLANNING PERMISSION BOUNDARY
- THE CURRENT ESCRICK SITE
- PROPOSED RESTORATION CONTOURS (@ 0.5m INTERVALS)
- TRANS PENNINE TRAIL & NATIONAL CYCLE NETWORK ROUTE 65
- EXISTING BRIDLEWAY
- BRIDLEWAY 35.62/9/1 REINSTATED ALONG EXISTING ROUTE
- LAND REINSTATED TO APPROX. ORIGINAL GROUND LEVELS & RESTORED TO BEST & MOST VERSATILE AGRICULTURAL LAND
- 6m WIDE CONSERVATION HEADLAND TO PROVIDE HABITAT AND FOOD FOR BIRDS, INSECTS AND OTHER ANIMALS
- WATER BODIES WITH SHALLOWS PLANTED WITH COMMON REED
- ISOLATED, UNCONNECTED PONDS TO PROVIDE A HABITAT SUITABLE FOR NEWTS AND OTHER AMPHIBIANS
- HERON DIKE DITCH PERMANENTLY DIVERTED DURING EXTRACTION PHASES
- SPECIES RICH, LOWLAND MEADOW GRASSLAND
- EXISTING WOODLAND BLOCKS/ HEDGEROWS
- PROPOSED NATIVE BROADLEAVED WOODLAND WITH SHRUBBY EDGES (INCLUDING PLANTING BLOCK NUMBER)
- ADVANCED WOODLAND BLOCK PLANTING WITHIN COMPOUND AREA (INCLUDING PLANTING BLOCK NUMBER)
- EXISTING HEDGEROWS WITH OCCASIONAL TREES
- PROPOSED ADVANCED PLANTING & HEDGEROW GAPPING UP
- PROPOSED SPECIES RICH NATIVE HEDGEROWS WITH OCCASIONAL TREES: PENDUNCULATE OAK (INCLUDING HEDGEROW PLANTING NUMBER)

NOTE: THIS DRAWING IS BASED ON THE RESTORATION PLAN (DRAWING NO. PLIES/03-20/21229revE). THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE WRITTEN RESTORATION AND OUTLINE AFTERCARE STRATEGY (DATED MAY 2020) AND WRITTEN DETAILS PURSUANT TO CONDITIONS 29 AND 32 (PLANNING PERMISSION REF. C8/2019/0917/CPO), DATED MAY 2021

Typical Annual Planting Maintenance Programme

Time of Year	No. of Visits	Operations to be Carried Out as Necessary
Late April to early June	1	1) Glyphosate spot spray (woodland blocks) or band spray (hedge) 2) Selective noxious weed spray within block (if necessary) 3) Re-firm and re-adjust spirals/guards and supports. Pull grass growing inside spirals/guards
Mid August to mid October	1 (Provisional, if Necessary)	1) Glyphosate spot spray (woodland blocks) or band spray (hedge) 2) Selective noxious weed spray within block (if necessary)
November to March	1	1) Replacement of planting failures 2) Re-firm and re-adjust spirals/guards and supports. Pull grass growing inside spirals/guards 3) Stock fencing checked and repaired

Restoration Aims

The general aims of the restoration scheme are as follows:

Northern Area: reinstate agricultural/arable land at levels similar to existing and incorporate additional woodland blocks and hedgerows with specimen oak trees to reflect existing landscape character and enhance nature conservation.

Southern Area: nature conservation led restoration of land to species rich, lowland meadow grassland surrounding two large water bodies with shallows and reedbeds, plus smaller isolated ponds, woodland blocks and hedgerows with specimen oak trees.

Restoration Earthworks and Final Soil Placement

Formation levels would be achieved by the placement of imported inert material to 1.2m below final levels across land to be restored to agricultural/arable use and to 500mm below final levels across land to be restored to lowland meadow grassland. The upper 1.2m profile across the agricultural land would comprise c. 600mm of overburden/screened inert material, 300mm subsoil and 300mm topsoil, with soils loosely placed (onto a cross ripped formation surface) in accordance with Loose Tipping: Best Practice Guide (The Land Regeneration and Urban Greenspace Research Group - Forest Research, 2014 - refer to Appendix B, written Details Pursuant to Conditions 29 & 32, dated November 2021). The upper 500mm across the lowland meadow grassland would comprise loosely placed, poorer quality subsoil/overburden or 'soil type material' screened from the imported inert material. Land in all restored areas would be suitably cultivated to remove weeds and produce a fine, firm seedbed. If necessary, replaced soil would be tested for pH and N,P,K and Mg levels to determine its physical properties and inform the final choice of grass seed.

Agricultural/Arable Land (Northern Area) - Seeding and Aftercare Works

Land would initially be seeded in autumn/spring with the following A15 'reclamation' mix from Germinal (or similar, subject to the results of soil analysis):

Strong Creeping Red Fescue 35%, Perennial Ryegrass 30%, Crested Dogstail 15%, Chewings Fescue 10%, Browntop Bent 5%, Miniature White Clover 2.5%, Creeping Bent 2.5%.

Following successful establishment of the 'nurse' grassland sward after 1-2 years of aftercare, land would be ploughed, cultivated and seeded with a suitable crop (i.e. winter wheat or barley) to assess the productivity of the land over a minimum 3 year period. This would be assessed annually at an aftercare meeting on site, with a report prepared, thereafter to inform the following years works.

Aftercare would aim to develop a soil quality equivalent to ALC Grade 2 (BMV). Initially, the 'nurse cover' grassland would be seasonal mown then after one or two years of grassland establishment, the land will be ploughed, cultivated and a suitable crop sown (winter wheat or barley). The development of the soil and performance of the cropped land will be assessed each year, with the land being ploughed and different areas being re-cropped with an alternative crop each spring.

Lowland Meadow Grassland (Southern Area) - Seeding and Aftercare Works

Land would be seeded in autumn/spring with the same A15 'reclamation' mix from Germinal as noted above (again, subject to soil analysis and pH levels) but without the ryegrass component as it is too vigorous. This will be replaced with some additional wildflower species from the following to improve species diversity and to benefit nature conservation. Exact species to be selected will depend on the chemical characteristics and pH of the seedbed:

Birdsfoot Trefoil, Common Knapweed, Common Vetch, Crested Dogs -tail, Cock's-foot, Green Winged Orchid, Greater Butterfly Orchid, Field Scabious, Fritillary, Lady's Bedstraw, Meadow Buttercup, Meadow Foxtail, Musk Mallow, Oxeye Daisy, Pepper Saxifrage, Red Campion, Red Clover, Salad Burnet, Self-Heal, Sweet Vernal-grass, Wild Carrot, Wood Bitter Vetch, Yarrow, Yellow Rattle.

If possible, green hay brashings forage harvested from an appropriate local source would also be used, either in place of or additional to purchased seed, to introduce locally suitable and desirable species into the developing grassland sward. This option would be investigated further at the time if considered viable and discussed with the MPA, as necessary

Aftercare would concentrate on nature conservation as opposed to productivity of the land. Initially, weeds are likely to flourish and will be removed by repeated topping, after which the developing sward will be mown in late summer/early autumn, after the flowers have set seed, with the arisings removed or raked to the side/corner of the field. Different areas may be mown later or earlier in the year to stagger the work and create a mosaic of species development. Alternatively, if grazing is deemed viable this will be adopted for periods when ground conditions are suitable, and possibly in combination with mowing. Infestations of broadleaved weeds would be dealt with by localised topping or knapsack application of selective herbicide such as MCPA, Grazon 90 or 2,4-D. Any low areas that develop as ephemeral wet spots will be incorporated into the restoration scheme. They will provide an alternative habitat to the slightly higher, lowland meadow grassland areas.

Note: a useful guidance document of relevance to the intended type of grassland creation is the Forest Research BPG note 17: Lowland Neutral Grassland - Creation and Management in Land Regeneration. The document is available at the following webpage:

https://www.forestresearch.gov.uk/tools-and-resources/urban-regeneration-and-greenspace-partnership/urban-regeneration-and-greenspace-partnership-resources/best-practice-guidance

Cereal Field Margins - Seeding and Aftercare Works

Approximately 500m of 6m wide cereal field margins (wildlife strips) would be created adjacent to the edge of the restored agricultural area in two locations, as shown on the drawing above. The margin will be flanked by a 1m 'sterile strip' between the margin and the restored nurse grassland/arable crop, which will help avoid the margin being affected by pesticide drift and also avoid aggressive weeds colonising the arable crop.

The margin will be ploughed seeded in early spring or autumn each year with a mixed cereal crop consisting of the following: Wheat, Barley, Oilseed Rape, Sorghum, Mustard and Quinoa. Alternatively, separate sections of the margins will be cultivated at different times (i.e. on rotation) to create a range of vegetation heights and to allow recolonization of the less mobile invertebrates from other sections of the margins. In addition, a specialist bumble bee and/or butterfly seed mix may be added to increase the value of the margin for these species. No fertiliser or herbicide would be used.

Water Bodies and Ponds

The drawing above indicates the approximate levels and profiles to be achieved by the restoration infilling and earthworks, in order to create the two large water bodies, in combination with accurate surveying and marking out with profile boards and level markers. The key design feature will be to create a number of shallow margins around the edge of the lake which gradually extend down to a max depth of between 1.0 - 1.5m, incorporating shelves and variations in the profile to add variety. Common Reed (*Phragmites australis*) would be planted at locations to be determined at the time, once suitable shallows have been formed and identified as viable for reed establishment after a period of monitoring (min 1 year). It is assumed that the water bodies and ponds will naturally regenerate with marginal plants, although if deemed necessary/desirable, additional species will be planted. Refer to the written Restoration and Outline Aftercare strategy document (submitted as part of the application documents, dated January 2020) for further reed planting details and a species list palette of marginal plants for different water depths.

Advanced Hedgerow and Restoration Hedgerow Planting (AH1 - AH6 and H1 - H5)

New hedgerow planting preparation will consist of strimming and/or herbicide application (eg. glyphosate) along the planting strip to remove existing vegetation, followed by rotovation to create a suitably cultivated route, if necessary. New hedgerow's will be planted with native species of local provenance if possible in accordance with the Schedule of Plant Material. Plants will be notch planted at 5 plants per metre in double staggered rows, with 50cm between rows and 30cm between plants in each row. Species other than hawthorn or blackthorn will be randomly spaced in groups of 3 - 5 throughout the hedgerow. Light standard oaks will be planted as per the plan above, within the hedgerows. AH1 and AH6 are existing hedgerows with gaps that will be planted or thin areas that will be beefed up with additional planting, as necessary.

Woodland Block Planting (B1 - B6), Advanced Planting Block (AB1), and Scrubby Planting on Mount Farm Bunds (S1)

Woodland blocks and the scrubby bund planting will be planted with species in accordance with the Schedule of Plant Material. The woodland planting would comprise native species (of local origin where possible) containing primary/secondary tree species and shrubby understorey/woodland edge species, in order to establish a range of vegetation types and sizes throughout the planting blocks. Advanced woodland block AB1 would be planted at average 2.0m centres. Woodland planting blocks B1 - B6 would be at centres of between 2.0m and 3.0m (i.e. to give an average of 2.5m centres) and randomly located as opposed to adhering to a strict planting grid, which can look unnatural. Woodland planting would be planted in random groups of 3 - 7 and the outer edge of blocks B1 - B6 would consist mainly of more shrubby species to encourage a gradual variation from a shrubby woodland edge through to the main woodland block.

Scrubby planting on the Mount Farm bund would comprise native shrub planting at centres of between 1.5m and 2.5m (i.e. to give an average of 2.0m centres), in random groups of 3 - 5.

Woodland and Hedgerow Plant Protection

All planting stock will be protected in accordance with the Schedule of Plant Material. All 60cm spiral guards will be supported by 90cm x 12/14lbs bamboo canes. All 60cm Tubex shelters will be supported by 90cm x 32mm x 32mm treated softwood or cleft chestnut stake. If deer damage becomes apparent or is expected, the 60cm Tubex shelters will be replaced with 1.2m shelters as necessary.

If developing grassland is to be managed by periodic grazing, the addition of stockproof fencing around young woodland and hedgerows will be necessary, as well as other animal husbandry infrastructure such as drinking facilities. Broadleaf root dip (or equivalent) to be used on all planting stock prior to planting.

Light standard oak trees within hedgerows will be supported by a single post, 75mm in diameter, with a 35mm tree block and 35mm rubber belting, secured with clout nails. Trees would be protected by 90cm Tubex shelters.

Aftercare - General

Areas to be restored to various habitats for the benefit of biodiversity will be subject to a 30 year aftercare scheme, as agreed with NYCC, starting from completion of final restoration earthworks for distinct areas of the site, as they are progressively restored. The 30 years will include an initial, statutory 5 year duration and then a further 25 years secured through the legal agreement. Therefore aftercare will include all soil cultivation, seeding, planting, vegetation establishment and management operations.

Aftercare: Woodlands and Hedgerows - Woodland blocks and hedgerows will be kept weed free by the application of glyphosate herbicide (e.g. Roundup) at least twice every year, in early spring and early/mid summer, for at least the first three seasons, with review thereafter. Hedgerows will be strip sprayed along their length and within planting blocks all grass and weeds in min. 0.8m diameter around each tree will be spot sprayed. Excessive tall and noxious weeds within planting areas will be controlled by selective spraying (e.g. using 2,4-D or similar) or mowing/strimming if absolutely necessary (although this can encourage more vigorous weed growth). All chemical applications will be in accordance with guidelines as set out in the Pesticide Control Act 1996.

Plants, guards and canes which become loose, over-tight or broken will be re-firmed and adjusted on an annual basis. All planting/seeding failures would be replaced on an annual basis, during the first five years of aftercare, to ensure at least 100% stocking. All replacements will use plants of the same species or other such species as may be agreed with NYCC. For aftercare years five - ten, stocking density would be annually monitored and kept to minimum 90%. All natural regeneration of desirable species arising within planting areas will be accepted. In aftercare years five - ten thinning requirements would be assessed and operations undertaken as necessary to remove nurse species and create scalloped edges to planting blocks to let in light. Refer to the Typical Annual Planting Maintenance Programme table beneath the Key for timings of operations summarised above.

Annual Aftercare Meetings and Report Preparation

The Operator will submit reports for the previous 12 months and proposals for the subsequent 12 months to the NYCC. This information would be submitted prior to each annual aftercare inspection/site meeting, to be arranged preferably in early to mid spring, at the request of NYCC.

Client: Plasmor

Site	*ESCRICK QUARRY*
Project	*QUARRY EXTENSION*
Drawing Title	*ADVANCE PLANTING, RESTORATION PLANTING AND AFTERCARE PLAN*
Date	*FEBRUARY 2022*
Drawing No.	*ESC009Rev.B*
Scale	*1:5,000 @ A2*
File Ref.	*2202_008.007_ESC009Rev.B_Planting and AC plan*
Revision	*B*

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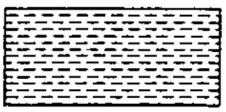
APPENDIX ESSD G

THE LOGS OF MINERAL PROVING AND GROUNDWATER MONITORING BOREHOLES DRILLED AT THE SITE

KEY

Topsoil/made ground

Upper Lacustrine Sand



Lacustrine Clay

Sandy unit in Lacustrine Clay

Lower Lacustrine Sand/Sherwood Sandstone

D	Disturbed sample
BD	Bulk Disturbed sample
W	Water sample
▽	Groundwater strike
▼	Groundwater rest level

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK — BOREHOLE 1

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 1 OF 3

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
										7.05
							Dark brown sandy TOPSOIL.	0.00 / 0.50		6.55
0.80	BD						Light grey stained light orange-brown fine to medium SAND with bands of sandy silty clay and with silt filled fissures			
1.30	BD		▽1					1.40		5.65
2.00	D									
3.00	D									
4.00	D						Stiff to very stiff medium brown silty CLAY with partings of light brown fine sandy silt.			
5.00	D									
6.00	D									
			▽2							
7.00	D									
8.00	D									

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive
crew

type & dia.	depth
Cable tool percussive 200mm	0-20.20

start date 10.4.90 — finish date 11.4.90

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK — BOREHOLE 1

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 2 OF 3

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
9.00	D									
10.00	D							9.40		-2.35
11.00	D						Dark brown fine to medium SAND.	9.70		-2.65
12.00	D						Stiff to very stiff medium brown silty CLAY with partings of light brown fine sandy silt.			
13.00	D							12.50		-5.45
14.00	D						Very stiff medium reddish brown slightly silty CLAY.			
15.00	D							15.50		-8.45
		16.00	DRY				Very stiff medium brown silty CLAY with partings of light brown fine sandy silt.			
17.00	D									

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m
					1.40		
					6.80		
					9.40		
				8.60	18.30		

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

Seepages of ground-water were noted at 1.40m, 6.80m and between 9.40m and 9.70m during boring Ground-water was encountered at a depth of 18.30m. Water level rose to 8.60m below ground level on leaving to stand for 30 minutes.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive 200mm	0-20.20

start date 10.9.80 — finish date 11.9.80

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

uk WASTE

PROJECT ESCRICK — BOREHOLE 1

LOCATION N YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 3 OF 3

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
18.00	D		▽4							
	W		18.30					18.30		-11.25
	BD						Medium brown and light orange-brown fine to medium SAND.			
20.20	BD							20.20		-13.15
							END OF BOREHOLE.			

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive 200mm	0-20.20

start date 10.9.80 — finish date 11.9.80

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK — BOREHOLE 2

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 1 OF 3

SAMPLING depth	sample type	depth of casing	depth to water	PROPERTIES strength KN/m	W %	SPT N	STRATA description	depth m	legend	level m O.D.
								0.00		6.65
							Dark brown sandy TOPSOIL	0.45		6.20
0.80	D						Light grey stained light orange-brown fine to medium SAND with bands of fine sandy silty clay becoming frequent with depth.	2.00		4.65
1.50	D		▽¹							
2.00	D									
		2.50	DRY							
			DRY							
3.00	D									
4.00	D									
5.00	D		▼²				Stiff to very stiff medium brown silty CLAY with partings of light brown fine sandy silt.			
6.00	D									
7.00	D									
8.00	D									

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive
crew

type & dia.	depth
Cable tool percussive 200 mm	0 - 20.20

start date 3.9.80 — finish date 4.9.80

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK — BOREHOLE 2

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 2 of 3

SAMPLING depth	sample type	depth of casing	depth to water	PROPERTIES strength KN/m	W %	SPT N	STRATA description	depth m	legend	level m O.D.
9.00	D		▼3							
			▽1					9.80		-3.15
10.00	D						Dark brown fine to medium SAND with bands of silty clay.	10.10		-3.45
11.00	D	11.00	5.00				Stiff to very stiff medium brown silty CLAY with partings of light brown fine sandy silt.			
			10.00							
12.00	D							12.50		-5.85
13.00	D						Very stiff medium reddish-brown slighty silty clay.			
14.00	D									
15.00	D	15.00	DRY					15.50		-8.85
			9.25							
16.00	D						Very stiff medium brown silty CLAY with partings of light brown fine sandy silt.			

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive
crew

type & dia.	depth
Cable tool percussive 200 mm	0-20.20

start date 3.9.90 — finish date 4.9.90

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK — BOREHOLE 2

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 3 of 3

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
			▽3							
18.35	BD		18.30					18.30		-11.65
19.00	BD						Medium brown and light orange-brown fine to medium SAND.			
20.20	BD		9.00					20.20		-13.55
							END OF BOREHOLE.			

GROUNDWATER

date	am/pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m
					1.50		
				5.00	9.80		
				9.00	18.30		

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

A slight seepage of ground-water was noted at a depth of 1.50m during boring. ground-water was again encountered at a depth of 9.80. Water level rose to 5.00m below ground level on leaving to stand for 38 minutes. Ground-water was partially cut off by advancement of lining tubes below 10.10m. Ground-water was again encountered at a depth of 18.30m. Water level rose to 9.00m below ground level on leaving to stand for 30 minutes.

BORING

plant Cable tool percussive

crew

type & dia.	depth
Cable tool percussive 200mm	0-20.20

start date 3.9.80 — finish date 4.9.80

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

UK WASTE

PROJECT ESCRICK — BOREHOLE 3

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 1 OF 3

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
										6.64
								0.00		
							Dark brown sandy CLAY.	0.64		6.04
1.00	D						Medium grey mottled orange-brown fine SAND.	1.60		5.04
2.00	D						Stiff medium grey-brown silty CLAY with bands of grey mottled orange-brown fine sand.	2.50		4.14
3.00	D						Stiff medium grey-brown silty CLAY with partings of silty fine SAND.	3.50		3.14
4.00	D	4.00	DRY							
			DRY							
5.00	D						Stiff thinly laminated medium brown slightly silty CLAY.	6.50		0.14
6.00	D									
7.00	D						Very stiff thinly laminated medium brown silty CLAY with partings of light brown silty fine sand.			
8.00	D									

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive 200mm	0-14.20

start date 27.8.80 — finish date 28.8.80

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

UK WASTE

PROJECT ESCRICK — BOREHOLE 3

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 2 OF 3

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
9.00	D		▼²							
9.80	W		▽¹					9.80		-3.16
		10.00					Dark brown fine to medium SAND with bands of medium brown silty clay.			
10.50	BD							11.20		-4.56
12.00	D	12.00	9.80							
			9.80							
13.00	D									
14.00	D						Very stiff slightly reddish medium brown slightly silty CLAY.			
15.00	D									
		15.30	DRY							
			5.40							
16.10	D									
		16.30	DRY							
			7.50							

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive 200mm	0 - 19.20

start date 27.8.80 — finish date 28.8.80

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

UK WASTE

PROJECT ESCRICK — BOREHOLE 3

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 3 OF 3

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
			▽ 9							
17.30	BD							17.30		-10.66
							Modium brown fine to medium SAND.			
19.20		19 00	9 00					19.20		-12.56
							END OF BOREHOLE.			

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m
				9.00	9.80 17.20		

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

Ground-water was encountered at a depth of 9.80m during boring. Ground-water was again encountered at a depth of 17.20m. Water level rose to 9.00m below ground level on leaving to stand for 30 minutes.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive 800 mm	0-19.20

start date 27.8.80 — finish date 28.8.80

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK. BOREHOLE 4

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. Sheet 1 OF 4.

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
								0.00		7.38
							Loose sandy and clayey TOPSOIL.	1.50		5.88
1.5–2.0	BD						Soft grey-brown silty sandy CLAY.	2.50		4.88
2.5–3.0	BD									
4.0–4.5	BD						Firm to stiff grrey-red-brown silty slightly sandy iron rich laminated CLAY.			
5.5–6.0	BD									
7.0–7.5	BD									

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive	

start date finish date

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK. BOREHOLE 4

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. Sheet 2 OF 4.

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
8.5–9.0			1 2				(cont.)			
10.0–10.5	BD									
11.5–12.0	BD		1							
13.0–13.5	BD							13.50		-6.12
13.5–14.0	BD						Soft to firm reddish brown–black highly laminated silty slightly sandy CLAY. Distinct iron staining along planes of lamination at 14.00m.			
15.0–15.5	BD							16.00		-8.62
16.5–17.0	BD						Firm brown–red–orange sandy silty laminated CLAY. Sand occuring within laminations.			

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive	

start date finish date

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK. BOREHOLE 4

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. Sheet 3 OF 4.

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
							(cont.)			
			▽							
18.0–18.5	BD									
●								19.00		-11.62
19.5–20.0	BD						Reddish orange SAND.			
								21.00		-13.62
21.0–21.5	BD									
							Grey / black highly weathered SANDSTONE with black carbonated organic matter.			
22.5–23.0	BD									
●										
								24.50		-17.12
24.0–24.5	BD									

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive	

start date finish date

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK. BOREHOLE 4

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. Sheet 4 OF 4.

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
25.5–26.0	BD						Grey moderately weathered SANDSTONE with some fragments of fresh medium to coarse sandstone and grey mudstone. Weak mudstone layer between 26.50m and 27.00m.			
26.5–27.0	BD							27.00		-19.62
							END OF BOREHOLE.			

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m
26/02/92		12.00	11.00	10.20	12.00		
27/02/92		18.50	15.00	10.20	18.30		

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

Gravel pack from 27.00m to 19.00m, slotted screen from 26.50m to 20.50m, Bentonite seal from 19.00 to 18.00m
Backfill from 18.00m to 0.50m
Bentonite seal from 0.50m to 0.00m.
Plain 100mm diameter casing to surface.

BORING

plant Cable tool percussive
crew

type & dia.	depth
Cable tool percussive 200mm	0–27.00

start date 26/02/92 finish date 28/02/92

A.J.Garland.

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK — BOREHOLE 4A

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 1 OF 2

SAMPLING depth	sample type	depth of casing	depth to water	PROPERTIES strength KN/m	W %	SPT N	STRATA description	depth m	legend	level m O.D.
								0.00		-2.05
			1				Firm medium brown silty CLAY with partings and thin bands of light brown silty fine sand.			
			2					3.50		-5.55
5.00	D						Very stiff thinly laminated slightly reddish medium brown slightly silty CLAY.			
6.10	D									
7.20	D									
8.10	D									
8.50	W									

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive 200mm	0-10.40

start date 21.8.80 — finish date 21.8.80

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

uk WASTE

PROJECT ESCRICK — BOREHOLE 4A

LOCATION N.YORKS — CONTRACTOR WIMPEY LABS Ltd. — Sheet 2 OF 2

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
							(Cont.)			
9.20	D	9.20	2 ▽ +0.90					9.20		-11.25
							Medium brown fine to medium SAND with bands of medium brown clay.	9.80		-11.85
10.00	BD	10.00	+0.90				Medium brown fine to medium SAND.	10.40		-12.45
							END OF BOREHOLE.			

GROUNDWATER							
date	am pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

A slight seepage of ground-water was noted at a depth of 2.10m. ground-water was again encountered at a depth of 9.20m. Water level rose to 4.00m below ground level on leaving to stand for 30 minutes and finally stabalised at 0.90m above ground level. On completion of boring the borehole was sealed from 10.40m to ground level with bentonite and cement.

BORING

plant Cable tool percussive
crew

type & dia.	depth
Cable tool percussive 200mm	0-10.40

start date 21.8.80 — finish date 21.8.80

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK — BOREHOLE 5

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. — Sheet 1 of 2

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
								0.00		6.61
							Clayey and sandy TOPSOIL.	0.30		6.31
							Soft reddish-orange very sandy CLAY.	1.70		4.91
1.50-2.00	BD						Soft to firm reddish brown very slightly sandy becoming sandy laminated CLAY. Horizon of very sandy clay between 4.20m and 4.30m			
3.00-3.50	BD									
4.50-5.00	BD									
6.00-6.50	BD		▼							
			▽					6.90		-0.29
6.90-7.40	BD						Brown very silty and clayey SAND.	7.80		-1.19
7.50-8.00	BD									

GROUNDWATER							REMARKS	BORING	
date	am pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m	symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.	plant Cable tool percussive crew
									type & dia. / depth: Cable tool percussive
									start date / finish date

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK. BOREHOLE 5

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. Sheet 2 OF 2

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
9.00–9.50	BD						Firm to stiff dark reddish brown laminated silty slightly sandy CLAY.	10.20		-3.59
							END OF BOREHOLE.			

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m
02/03/92		6.90	6.00	6.20	6.90		

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

Gravel pack from 10.20m to 5.90m.
Slotted screen from 9.90m to 6.90m.
Bentonite seal from 5.90m to 4.90m.
Backfill to surface
Plain 60mm I.D. casing to surface

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive 150mm	0–10.20m

start date 02/03/92 finish date 02/03/92

B.Smith.

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

UK WASTE

PROJECT ESCRICK. BOREHOLE 6

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. Sheet 1 of 2.

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
										5.46
							Brick fill	0.10		5.36
							Sandy and clayey TOPSOIL.	0.50		4.86
							Reddish brown very clayey SAND.	1.90		3.56
1.00-2.00	BD									
2.00-2.50	BD									
3.50-4.00	BD						Firm to stiff dark brown silty and sandy laminated CLAY Becomes very sandy towards top and base.			
5.00-5.50	BD									
6.50-7.00	BD							7.10		-1.64
7.10-7.50	BD						Brownish red clayey SAND.	7.50		-2.04
7.50-8.00	BD						Firm to stiff brown silty very slightly sandy CLAY.			

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive	

start date finish date

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

UK WASTE

PROJECT ESCRICK. BOREHOLE 6

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. Sheet 2 OF 2

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
							(Cont.)			
9.00–9.50	BD						Firm to stiff brown silty very slightly sandy CLAY.	10.00		-4.54
							END OF BOREHOLE.			

GROUNDWATER

date	am/pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m
No water seepage noted during drilling							

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

Gravel pack from 10.00m to 6.00m.
Slotted screen from 10.00m to 7.00m.
Bentonite seal from 6.00m to 5.00m.
Backfill from 5.0m to surface.
Plain 60mm diameter casing to surface.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive 150mm	0.00–10.00m

start date 02/03/92 finish date 03/03/92

B.Smith.

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK. BOREHOLE 7

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. Sheet 1 of 2

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
										7.00
								0.00		
							Brick and clay FILL.	0.50		6.50
0.50-1.00	BD						Red loose slightly clayey and silty SAND.	1.70		5.30
1.70-2.00	BD									
3.00-3.50	BD						Soft becoming soft to firm dark brown-yellow silty slightly sandy laminated CLAY Becoming more sandy towards base.			
4.50-5.00	BD									
5.50-6.00	BD									
								7.20		-0.20
7.00-7.50	BD						Reddish-brown clayey SAND.			
7.50-8.00	BD							8.00		-1.00
8.00-8.50	BD						Firm to stiff brown-yellowish-orange sandy very slightly silty CLAY.			

GROUNDWATER								REMARKS	BORING	
date	am pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m	symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.	plant Cable tool percussive crew	
									type & dia.	depth
									Cable tool percussive	
									start date	finish date

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK — BOREHOLE 7

LOCATION N.YORKSHIRE — CONTRACTOR SOIL MECHANICS. — Sheet 2 OF 2

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
9.50–10.0	BD						Firm to stiff brown–yellowish–orange sandy very slightly silty CLAY.	10.00		-3.00
							END OF BOREHOLE.			

GROUNDWATER

date	am/pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m
No water seepage noted during drilling							

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

Gravel pack from 10.00m to 6.00m
Slotted screen from 10.00m to 7.00m
Bentonite seal from 6.00m to 5.00m
Backfill from 5.00m to surface
Plain 60mm diameter casing to surface.

BORING

plant Cable tool percussive
crew

type & dia.	depth
Cable tool percussive 150mm	0.00–10.00m

start date 03/03/92 — finish date 03/03/92

B.Smith

UK WASTE MANAGEMENT LTD.

BOREHOLE RECORD

UK WASTE

PROJECT ESCRICK — BOREHOLE 8

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS. — Sheet 1 OF 2

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
								0.00		6.49
							Clayey TOPSOIL.	0.30		6.19
							Yellow-orange clayey SAND.	1.00		5.49
1.50-2.00	BD						Firm becoming soft reddish brown silty slightly sandy becoming sandy laminated CLAY.	7.30		-0.81
3.00-3.50	BD									
4.50-5.00	BD									
6.00-6.50	BD									
7.30-7.80	BD						Yellow-orange clayey and silty SAND.	8.00		-1.51
8.00-8.50	BD									

GROUNDWATER

date	am / pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive	

start date — finish date

UK WASTE MANAGEMENT LTD.
BOREHOLE RECORD

PROJECT ESCRICK. BOREHOLE 8

LOCATION N.YORKSHIRE. CONTRACTOR SOIL MECHANICS Sheet 2 OF 2

SAMPLING				PROPERTIES			STRATA			
depth	sample type	depth of casing	depth to water	strength KN/m	W %	SPT N	description	depth m	legend	level m O.D.
9.50–10.0							Stiff becoming firm to stiff dark brown silty and sandy becoming slightly sandy laminated CLAY.	10.20		-3.71
							END OF BOREHOLE.			

GROUNDWATER

date	am/pm	depth of hole m	depth of casing m	depth to water m	depth struck m	flow rate m/s	depth sealed m

No water seepage noted during drilling.

REMARKS

symbols and abbreviations are explained on the accompanying key all linear dimensions are in metres.

Gravel pack from 10.20m to 6.20m
Slotted screen from 10.00m to 7.00m
Bentonite seal from 5.20m to 5.50m
Backfill from 5.50m to 0.50m
Bentonite seal from 0.50m to surface.
Plain 50mm diameter casing to surface.

BORING

plant Cable tool percussive crew

type & dia.	depth
Cable tool percussive 150mm	0.00–10.20m

start date 03/03/92 finish date 04/03/92

B.Smith

DAILY BORE HOLE LOG

Plant No. _____ Contract Hepworths Brickworks No. _____

O.D. Level _____ Diam. _____ Date 8·1·01

Inclination _____ _____ Bore Hole No. ONE.

Weather _____ Visitors _____

Depth of Casing	Samples				Strata			
	Type	No.	Depth	Blows	Depth	Description	Core Recovery	Tools in use
					0	At start of day Brown silty topsoil		
					·75	Soft orange & grey brown silty sandy clay		
	U	1	1m	1·45				
	U	2	2m	2·45	2m	Soft brown silty sandy clay		
	U	3	3m	3·45	3m	Very firm brown silty clay		
	U	4	4m	4·45				
	U	5	5m	5·45				
	U	6	6m	6·45			6m.	
	U	7	7m	7·45				
	U	8	8m	8·45				
	U	9	9m	9·45	9m	Moist thin sand bands in brown silty clay		
	D	10	9·60	10m	9·60	Orange brown sand.		
					10m.	At end of day.		

U4—Undisturbed D—Disturbed W—Water R—Raymond Tin

Water levels

Morning/first encountered _____

Evening _____

Core Bit No. _____

Reaming Shell No. _____

Casting Bit No. _____

Remarks

Breakdowns or Delays

Allocation	Hours
Drilling	
Moving and erecting	
Removing casing	
Loading and unloading transport	
Inclement weather	
Travelling	
Total hours worked	

Labour		
Name	Hrs.	Designation

DAILY BORE HOLE LOG

No. _____ Contract Hepworths Brickworks No. _____

R.D. Level _____ Diam. _____ Date 8.01.01.

Inclination _____ _____ Bore Hole No. Two.

Weather _____ Visitors _____

Depth of Casing	Samples				Strata			
	Type	No.	Depth	Blows	Depth	Description	Core Recovery	Tools in use
					0	At start of day Brown silty topsoil.		
	U	1	1m	145	1·70	Orange sand.		
					1·60	Banded orange & grey silt & sand.		
	U	2	2m	245	2·50	Moist brown silt		
	U	3	3m	345	2·70	Very firm brown silty clay.		
	U	4	4m	435				
	U	5	5m	545				
	U	6	6m	645			7·3m.	
	U	7	7m	745				
	U	8	8m	845				
	U	9	9m45	945				
					10m	At end of day.		

U4—Undisturbed D—Disturbed W—Water R—Raymond Tin

Water levels

Morning/first encountered _____

Evening _____

Core Bit No. _____

Reaming Shell No. _____

Casting Bit No. _____

Remarks	Breakdowns or Delays

Allocation	Hours
Drilling	
Moving and erecting	
Removing casing	
Loading and unloading transport	
Inclement weather	
Travelling	
Total hours worked	

Labour		
Name	Hrs.	Designation

DAILY BORE HOLE LOG

Plant No. _____ Contract Hepworths Brickworks No. _____

O.D. Level _____ Diam. _____ Date 8·1·01.

Inclination _____ _____ Bore Hole No. Three.

Weather _____ Visitors _____

Depth of Casing	Samples				Strata			
	Type	No.	Depth	Blows	Depth	Description	Core Recovery	Tools in use
					0	At start of day Brown silty topsoil.		
					70	Orange silty sand.		
	U	1	1m	145	145	Firm orange & grey banded silty sand.		
	U	2	2m	245	195	Very firm brown silty clay		
	U	3	3m	345				
	U	4	4m	445			4.7m	
	U	5	5m	545				
	U	6	6m	645	645	Very firm grey brown laminated silty clay.		
	U	7	7m	745	7m	Moist silty sand band.		
	U	8	8m	845				
	U	9	9m	945				
					10m	At end of day.		

U4—Undisturbed D—Disturbed W—Water R—Raymond Tin

Water levels

Morning/first encountered _____

Evening _____

Core Bit No. _____

Reaming Shell No. _____

Casting Bit No. _____

Remarks

Breakdowns or Delays

Allocation	Hours
Drilling	
Moving and erecting	
Removing casing	
Loading and unloading transport	
Inclement weather	
Travelling	
Total hours worked	

Labour		
Name	Hrs.	Designation

DAILY BORE HOLE LOG

Plant No. _____ Contract Hepworths Brickworks No. _____

O.D. Level _____ Diam. _____ Date 9.1.01

Inclination _____ Bore Hole No. Four.

Weather _____ Visitors _____

Depth of Casing	Samples				Strata			
	Type	No.	Depth	Blows	Depth	Description	Core Recovery	Tools in use
					0	At start of day Brown silty topsoil.		
					.70	Soft orange & grey sandy silt.		
	U	1	1m	130				
	U	2	2m	245	2m	Firm brown laminated silty clay.		
	U	3	3m	345	280	Firm brown clay.		
	U	4	4m	4445				
	U	5	5m	545				
	U	6	6m	645			5.2m.	
	U	7	7m	745				
	U	8	8m	845	8m	Thin sand bands in brown clay.		
	U	9	9m	945	9m	Firm brown silty sandy clay. silt.	?	
					10m	At end of day.		

U4—Undisturbed D—Disturbed W—Water R—Raymond Tin

Water levels

Morning/first encountered _____

Evening _____

Core Bit No. _____

Reaming Shell No. _____

Casting Bit No. _____

Remarks

Breakdowns or Delays

Allocation	Hours
Drilling	
Moving and erecting	
Removing casing	
Loading and unloading transport	
Inclement weather	
Travelling	
Total hours worked	

Labour		
Name	Hrs.	Designation

DAILY BORE HOLE LOG

Plant No. _____ Contract Hepworths Brickworks No. _____

O.D. Level _____ Diam. _____ Date 9.1.01

Inclination _____ _____ Bore Hole No. Five.

Weather _____ Visitors _____

Depth of Casing	Samples				Strata			
	Type	No.	Depth	Blows	Depth	Description	Core Recovery	Tools in use
					0	At start of day Brown silty topsoil.		
					70	Orange silty sand.		
	U	1	1m	130				
	U	2	2m	245	2m	Brown laminated silty clay.		
	U	3	3m	345	3m	Firm brown silty clay.		
	U	4	4m	445				
	U	5	5m	545			5m	
	U	6	6m	645				
	U	7	7m	745				
	U	8	8m	845	8m	moist silty sand bands in firm brown		
	U	9	9m	945		clay.	2	
					10m	At end of day.		

U4—Undisturbed D—Disturbed W—Water R—Raymond Tin

Water levels

Morning/first encountered _____

Evening _____

Core Bit No. _____

Reaming Shell No. _____

Casting Bit No. _____

Remarks

Breakdowns or Delays

Allocation	Hours
Drilling	
Moving and erecting	10m. 40mm S/P.
Removing casing	Installed
Loading and unloading transport	
Inclement weather	
Travelling	
Total hours worked	

Labour		
Name	Hrs.	Designation
	1hr.	

DAILY BORE HOLE LOG

Plant No. _____ Contract Hepworths Brickworks. No. _____

O.D. Level _____ Diam. _____ Date 9.1.01

Inclination _____ Bore Hole No. Six

Weather _____ Visitors _____

Depth of Casing	Samples				Strata			
	Type	No.	Depth	Blows	Depth	Description	Core Recovery	Tools in use
					0	At start of day Brown silty topsoil.		
					70	Orange silty sand some thin silt bands.		
	U	1	1m	145	160	Orange sand.		
	U	2	2m	245	3m	Firm brown silty clay.		
	U	3	3m	345				
	U	4	4m	445				
	U	5	5m	545			6.45	
	U	6	6m	645				
	U	7	7m	746				
	U	8	8m	845	845	moist silty sand bands in firm brown		
	U	9	9m	945		clay.	?	
					10m	At end of day.		

U4—Undisturbed D—Disturbed W—Water R—Raymond Tin

Water levels

Morning/first encountered _____

Evening _____

Core Bit No. _____

Reaming Shell No. _____

Casting Bit No. _____

Remarks

Breakdowns or Delays

Allocation	Hours
Drilling	
Moving and erecting	
Removing casing	
Loading and unloading transport	
Inclement weather	
Travelling	
Total hours worked	

Labour		
Name	Hrs.	Designation

STRUCTURAL SOILS

02/1

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 01

Job No	Start	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	21/08/02			1 of 2
	End 22/08/02			

Samples and In-situ Tests				Water	Instru-mentation	Description of Strata	Depth (Thick-ness)	Legend
Depth	No	Type	Blows					
						TOPSOIL (Drillers description)	(0.40)	
							0.40	
0.80	1	D				Firm brown sandy CLAY with laminae of fine sand/silt.	(1.10)	
1.50	2	D					1.50	
						Brown slightly clayey fine to medium SAND	(0.60)	
2.10	3	D					2.10	
2.50-2.95	4	U	(32)			Firm to stiff dark brown locally slightly sandy thinly laminated CLAY. Laminae of silt.		
2.95-3.15	5	D						
3.40	6	D						
3.50-3.95	7	U	(41)					
4.40	8	D						
4.50-4.95	9	U	(54)					
4.95-5.15	10	D						
5.40	11	D						
5.50-5.95	12	U	(52)					
5.95-6.15	13	D						
6.40	14	D						
6.50-6.95	15	U	(43)				(9.05)	
6.95-7.15	16	D						
7.40	17	D						
7.50-7.95	18	U	(59)					
7.95-8.15	19	D						
8.40	20	D						
8.50-8.95	21	U	(44)					

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
21/08/02	pm	6.15	2.50	150	Dry
22/08/02	am	6.15	2.50	150	Dry
22/08/02		7.50	2.50	150	Seepage
22/08/02	pm	11.15	2.50	150	Wet

Chiselling

From	To	Hours

General Remarks

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	AD	RL	

STRUCTURAL SOILS

02h

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 01

Job No	Start / End	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	Start 21/08/02 End 22/08/02			2 of 2

Samples and In-situ Tests				Water	Instrumentation	Description of Strata	Depth (Thickness)	Legend
Depth	No	Type	Blows					
8.95-9.15	22	D				CLAY (As sheet 1)		
9.40	23	D						
9.50-9.95	24	U	(48)					
9.95-10.15	25	D						
10.40	26	D						
10.50-10.95	27	U	(54)					
10.95-11.15	28	D						
							11.15	
						Borehole ends at 11.15m.		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
21/08/02	pm	6.15	2.50	150	Dry
22/08/02	am	6.15	2.50	150	Dry
22/08/02		7.50	2.50	150	Seepage
22/08/02	pm	11.15	2.50	150	Wet

Chiselling		
From	To	Hours

General Remarks

All dimensions in metres Scale 1:50	Method Cable Percussion	Drilled By AD	Logged By RL	Checked By

STRUCTURAL SOILS

0212

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 02

Job No	Start / End	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	Start 22/08/02 End 22/08/02			1 of 2

Samples and In-situ Tests				Water	Instru-mentation	Description of Strata	Depth (Thick-ness)	Legend
Depth	No	Type	Blows					
0.20	1	D				Dark grey brown, clayey fine to medium SAND (TOPSOIL). Rare fine subangular gravel of mudstone. Rootlets	(0.50)	
							0.50	
0.90	15	D				Brown and yellow brown very clayey fine to medium SAND. Rare subangular fine gravel of sandstone and mudstone. Rootlets	(0.80)	
1.40	3	D					1.30	
						Brown slightly clayey fine to medium SAND. Rare angular fine gravel of sandstone and mudstone.	(1.00)	
2.00	4	D						
2.30	5	D					2.30	
2.60-3.05	6	U	(16)			Firm to stiff brown sandy CLAY with occasional laminae of fine sand.	(0.70)	
							3.00	
3.10	7	D				Firm to stiff brown slightly sandy frequently thinly laminated CLAY. Laminae of silt.		
3.40	8	D						
3.60-4.00	NR	U+	(19)					
3.60 -4.00	9	B						
4.10-4.55	10	U	(20)					
4.50	11	D						
4.80	12	D						
5.00	2	D						
5.10-5.55	13	U	(22)					
5.60	14	D						
6.20-6.65	16	U	(25)					
6.70	17	D						
7.00	18	D					(7.80)	
7.20-7.65	19	U	(19)	≈				
7.60	20	D						
8.00	21	D						
8.25-8.70	22	U	(35)					
8.75	23	D						

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
22/08/02		1.90		150	Damp
22/08/02		7.20	4.50	150	Seepage
22/08/02	pm	10.80	4.50	150	10.50

Chiselling

From	To	Hours

General Remarks

Hand dug inspection pit to 1.20m

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	SK	RL	

STRUCTURAL SOILS

0212

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 02

Job No	Start	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	22/08/02			2 of 2
	End 22/08/02			

Samples and In-situ Tests				Water	Instrumentation	Description of Strata	Depth (Thickness)	Legend
Depth	No	Type	Blows					
9.00	24	D						
9.20-9.65	25	U	(20)			CLAY (As sheet 1)		
9.70	26	D						
10.00	27	D						
10.30-10.75	NR	U+	(35)					
10.30 -10.80	28	B					10.80	
						Borehole ends at 10.80m.		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
22/08/02		1.90		150	Damp
22/08/02		7.20	4.50	150	Seepage
22/08/02	pm	10.80	4.50	150	10.50

Chiselling

From	To	Hours

General Remarks

Hand dug inspection pit to 1.20m

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	SK	RL	

STRUCTURAL SOILS

0213

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 03

Job No	Start	End	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	23/08/02	23/08/02			1 of 2

Samples and In-situ Tests				Water	Instru-mentation	Description of Strata	Depth (Thick-ness)	Legend
Depth	No	Type	Blows					
						MADE GROUND: Dark grey brown clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine clinker brick and sandstone.	(0.70)	
0.40	1	D					0.70	
0.80	2	D				Brown and yellow brown very clayey fine to medium SAND. Rare subangular fine gravel of sandstone and mudstone.	(0.70)	
							1.40	
1.50	3	D				Orange brown slightly clayey fine to medium SAND.	(0.90)	
2.30	4	D					2.30	
2.50-2.95	5	U	(14)			Soft to firm brown slightly sandy CLAY with occasional fine sand lenses.		
3.00	6	D						
3.25	7	D				Strata becomes firm to stiff slightly sandy frequently thinly laminated CLAY at approximately 3.00m.		
3.50-3.95	8	U	(19)					
4.00	9	D						
4.25	10	D						
4.50-4.95	11	U	(20)					
5.00	12	D						
5.25	13	D						
5.40-5.85	14	U	(25)					
5.90	15	D						
6.25	16	D						
6.50-6.95	17	U	(37)					
7.00	18	D						
7.25	19	D						
7.50-7.95	20	U	(20)				(10.20)	
7.90	21	D						
8.25	22	D				Strata becomes slightly friable at 8.25m.		
8.45-8.90	23	U	(36)					

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
23/08/02	pm	2.70		150	Seepage
23/08/02		8.30		150	Seepage
23/08/02		9.70		150	11.00
23/08/02		9.00		150	20 mins
23/08/02	pm	12.50	10.50	150	11.00

Chiselling

From	To	Hours

General Remarks

63mm gas / water monitoring standpipe installed with geotextile wrap.

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	SK	RL	

STRUCTURAL SOILS

0213

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 03

Job No	Start / End	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	Start 23/08/02 End 23/08/02			2 of 2

Samples and In-situ Tests				Water	Instrumentation	Description of Strata	Depth (Thickness)	Legend
Depth	No	Type	Blows					
8.95	24	D				CLAY (As sheet 1)		
9.25	25	D						
9.50-9.95	26	U	(26)			Driller records sand bands between 9.70 and 10.60m.		
10.10-10.55	NR	U+	(47)					
10.10 -10.60	27	B						
11.10	28	D						
12.10	29	D					12.50	
						Borehole ends at 12.50m.		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
23/08/02	pm	2.70		150	Seepage
23/08/02		8.30		150	Seepage
23/08/02		9.70		150	11.00
23/08/02		9.00		150	20 mins
23/08/02	pm	12.50	10.50	150	11.00

Chiselling

From	To	Hours

General Remarks

63mm gas / water monitoring standpipe installed with geotextile wrap.

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	SK	RL	

STRUCTURAL SOILS

0214

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 04

Job No	Start / End	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	Start 22/08/02 End 27/08/02			1 of 3

Samples and In-situ Tests				Water	Instru-mentation	Description of Strata	Depth (Thick-ness)	Legend
Depth	No	Type	Blows					
						MADE GROUND: Ash brick CLAY (Drillers description).	(0.80)	
							0.80	
0.90	1	D				MADE GROUND: Light brown clayey slightly gravelly fine to medium SAND. Gravel is subangular fine to medium brick.	(0.80)	
							1.60	
1.80	2	D				Orange brown slightly clayey fine to medium SAND.	(0.80)	
2.40	3	D					2.40	
						Firm to stiff slightly sandy thinly laminated CLAY. Laminae of silt.		
3.00	4	D						
4.00	5	D						
5.00	6	D						
6.00	7	D						
7.00	8	D						
8.00	9	D						

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
22/08/02	pm	14.00	8.00	200	Damp
22/08/02		7.50		200	Seepage
23/08/02	strike	18.80	18.80	150	16.57
23/08/02		16.57	18.80	150	20 mins
27/08/02	am	21.00	21.00	150	4.50

Chiselling

From	To	Hours

General Remarks

63mm gas / water monitoring standpipe installed with geotextile wrap.

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	SK	RL	

STRUCTURAL SOILS

0214

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 04

Job No	Start / End	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	Start 22/08/02 End 27/08/02			2 of 3

Samples and In-situ Tests				Water	Instru-mentation	Description of Strata	Depth (Thick-ness)	Legend
Depth	No	Type	Blows					
9.00	10	D				CLAY (As sheet 1)		
10.00	11	D						
						Driller records sand lense between 10.50 and 11.10m.	(16.40)	
11.00	12	D						
12.00	13	D						
13.00	14	D						
14.00	15	D						
15.00	16	D						
16.00	17	D						
17.00	18	D						

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
22/08/02	pm	14.00	8.00	200	Damp
22/08/02		7.50		200	Seepage
23/08/02	strike	18.80	18.80	150	16.57
23/08/02		16.57	18.80	150	20 mins
27/08/02	am	21.00	21.00	150	4.50

Chiselling

From	To	Hours

General Remarks

63mm gas / water monitoring standpipe installed with geotextile wrap.

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	SK	RL	

STRUCTURAL SOILS

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 04

Job No	Start	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	22/08/02			3 of 3
	End 27/08/02			

Samples and In-situ Tests				Water	Instru-mentation	Description of Strata	Depth (Thick-ness)	Legend
Depth	No	Type	Blows					
18.00	19	D				CLAY (As sheet 1)	18.80	
19.00	20	D				Brown slightly clayey fine to medium SAND.	(5.20)	
20.00	21	D						
21.00	22	D						
22.00	23	D						
23.00	24	D						
24.00	25	D				Borehole ends at 24.00m.	24.00	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
22/08/02	pm	14.00	8.00	200	Damp
22/08/02		7.50		200	Seepage
23/08/02	strike	18.80	18.80	150	16.57
23/08/02		16.57	18.80	150	20 mins
27/08/02	am	21.00	21.00	150	4.50

Chiselling

From	To	Hours

General Remarks

63mm gas / water monitoring standpipe installed with geotextile wrap.

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	SK	RL	

STRUCTURAL SOILS

0215

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 05

Job No	Start / End	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	Start 21/08/02 End 21/08/02			1 of 2

Samples and In-situ Tests				Water	Instru-mentation	Description of Strata	Depth (Thick-ness)	Legend
Depth	No	Type	Blows					
0.20	1	D				Dark grey very sandy CLAY (TOPSOIL) Rootlets	(0.40) 0.40	
0.80	2	D				Firm light brown sandy CLAY.	(0.80) 1.20	
1.50	3	D				Orange brown slightly clayey fine to medium SAND.	(1.10) 2.30	
2.30	4	D						
2.50-2.95	5	U	(41)			Firm brown thinly laminated CLAY. Laminae of silt.		
2.95-3.15	6	D						
3.40	7	D						
3.50-3.95	8	U	(49)					
4.40	9	D						
4.50-4.95	10	U	(41)					
5.40	11	D						
5.50-5.95	12	U	(47)					
5.95-6.15	13	D				Rare subangular fine gravel of mudstone.	(7.80)	
6.40	14	D						
6.50-6.95	15	U	(58)					
6.95-7.15	16	D						
7.40	17	D						
7.50-7.95	18	U	(81)	≈				
7.95-8.15	19	D						
8.40	20	D						
8.50-8.95	NR	U+	(56)					

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
21/08/02		7.00		150	Seepage
21/08/02	pm	10.10	3.50	150	Wet

Chiselling

From	To	Hours

General Remarks

Hand dug inspection pit to 1.20m

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	SK	RL	

STRUCTURAL SOILS

0215

BOREHOLE LOG

Contract	Client	Borehole No
Escrick	Plasmor	BH 05

Job No	Start / End	Ground Level (m AOD)	Co-Ordinates	Sheet
26811	Start 21/08/02 End 21/08/02			2 of 2

Samples and In-situ Tests				Water	Instrumentation	Description of Strata	Depth (Thickness)	Legend
Depth	No	Type	Blows					
9.00	21	D				CLAY (As sheet 1)		
9.50-9.95	22	U	(58)					
10.10	23	D					10.10	
						Borehole end at 10.10m.		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Casing Diameter	Water Depth
21/08/02		7.00		150	Seepage
21/08/02	pm	10.10	3.50	150	Wet

Chiselling

From	To	Hours

General Remarks

Hand dug inspection pit to 1.20m

All dimensions in metres	Method	Drilled By	Logged By	Checked By
Scale 1:50	Cable Percussion	SK	RL	

G. Level < 6.00m. OD

ESCRICK 2015

Soft Ground Daily Drillers Log

Rig Set up

Depth, m	Description of Strata	Sample/Test Type	Sample/Test No.	Depth, m From	Depth, m To	U Sample Blow	U Sample Rec	Standard Penetration Tests 75	75	Pen	75	75	75	75	Pen
	Start of Shift/Borehole														
OL	Dark brown	D	1	0.5											
	top soil	D	2	1m											
		S	3	1.20	1.65			2	3		3	3	4	3NR	
0.4	Orange brown	D	4	2m											
	Silty medium	S	5	2m	2.45			2	2		2	2	3	4	
	Soft dense	U	6	3m	3.45	45	0.4								
	Sand	D	7	4m											
		S	8	4m	4.45			2	2		2	3	2	4	
2.20	Dark brown	U	9	5m	5.45	45	UR								
	Grey Silty	D	10	550											
	laminated	S	11	6m	6.45			2	2		3	3	3	3	
	Firm clay	U	12	7m	7.45	45	0.4	8							
		D	13	7.45	7.50										
		S	14	8m	8.45			2	3		3	4	5	5	
		D	15	9m											
		U	16	950	9.95	45	0.4								
		D	17	9.95	10m										
	End of Shift Borehole (complete/incomplete)			10m											

Casing Depth,m	Water mBGL

CHISELLING From,m	To,m	Time, h

WATER ENCOUNTERED	1	2	3
DRY			
Time struck			
Depth struck, m			
Casing depth, m			
Depth 5min, m			
Depth 10min, m			
Depth 15min, m			
Depth 20min, m			
Sample Y/N			
Sealed, m			

WATER ADDED	From, m	To. m
Depth, m		
Depth, m		
Depth, m		

BH DIAMETER From, m	To, m	Diam, mm
OL	3m	150m

ADDITIONAL PLANT

INSPECTION PIT DIMENSIONS: 1 hour

BACKFILL/ INSTALLATION

(sketch including pipe dia etc)

KEY U-Undisturbed NR-No recovery S-SPT C-SPT Solid cone P-Piston sample B-Bulk disturbed D-Disturbed tub W-Water ES-Environmental sample
Pon-Penetration for last increment (mm) L-Liner

S/C	D	B	U	W	ES	P	L

REMARKS (Inspection Pit/Moves/Standing/Dayworks details, etc)

From (time)	To (time)	Details

Drilling Company: FSG

Crew Names: Bobby & James

Rig Type: Dando 2000

Drillers Signature

Client's Signature

Date: 1/8/15

Start Time: 8:00

End Time

B.H.I.D.: EPIS/1

WEATHER: Overcast / Sunny / Rain / Snow

Contract Name: Escrick

Contract No. FSD26-15

RD DRILLING LTD
Mobile: 07872899661
Email: rddrilling@gmail.com

G. Level ≤ 6.00m OD

ESCRICK 2015

Soft Ground Daily Drillers Log

Rig Set up

Depth, m	Description of Strata	Sample/Test Type	Sample/Test No.	Depth, m From	Depth, m To	U Sample Blow	U Sample Rec	Standard Penetration Tests 75	75	Pen	75	75	75	75	Pen
	Start of Shift/Borehole														
0.5	Dark brown	D	1	0.5											
	topsoil	D	2	1m											
		S	3	1.2m	1.65			1	2		2	2	2	2	
0.5	orange brown	D	4	2m											
	silty CLAY	S	5	2m	2.45			2	2		3	3	2	3	
	Sand	D	6	2.6m											
		U	7	3m	3.45	45	CL								
2.6m	Dark brown	D	8	4m											
	grey silty	S	9	4m	4.45			2	2		3	3	3	4	
	laminated	U	10	5m	5.45	45	CLAY								
	clay	D	11	6m											
		S	12	6m	6.45			2	2		3	3	3	3	
		U	13	7m	7.45	60	CL								
		D	14	7.45	7.5										
		S	15	8m	8.45			2	2		2	3	4	6	
		U	16	9.50	9.95	45	CL								
		D	17	9.95	10m										
			18												
	End of Shift Borehole (complete/incomplete)														

Casing Depth,m	Water mBGL

CHISELLING From,m	To,m	Time, h

WATER ENCOUNTERED			
Dry	1	2	3
Time struck			
Depth struck, m			
Casing depth, m			
Depth 5min, m			
Depth 10min, m			
Depth 15min, m			
Depth 20min, m			
Sample Y/N			
Sealed, m			

WATER ADDED		
	From, m	To, m
Depth, m		
Depth, m		
Depth, m		

BH DIAMETER From, m	To, m	Diam, mm
0.5	3m	150

ADDITIONAL PLANT

INSPECTION PIT DIMENSIONS: 1 hour

BACKFILL/ INSTALLATION

(sketch including pipe dia etc)

KEY U-Undisturbed NR-No recovery S-SPT C-SPT Solid cone P-Piston sample B-Bulk disturbed D-Disturbed tub W-Water ES-Environmental sample
Pon-Penetration for last increment (mm) L-Liner

S/C	D	B	U	W	ES	P	L

REMARKS (Inspection Pit/Moves/Standing/Dayworks details, etc)

From (time)	To (time)	Details

Drilling Company: ESG

Crew Names: R Bowers

Rig Type: Dando 2000

Drillers Signature

Client's Signature

Date: 11/6/15

Start Time: 8:00

End Time

B.H.I.D.: EP15/2

WEATHER: Overcast / Sunny / Rain / Snow

Contract Name: Escrick

Contract No. ESCK-15

RD DRILLING LTD
Mobile: 07872899661
Email: rddrilling@gmail.com

G. Level ≈ +6.00m OD

ESCRICK

Soft Ground Daily Drillers Log

Rig set up

Depth, m	Description of Strata	Sample/Test Type	Sample/Test No.	Depth, m From	Depth, m To	U Sample Blow	U Sample Rec	Standard Penetration Tests 75	75	Pen	75	75	75	75	Pen
	Start of Shift/Borehole														
0.4	Dark brown	D	1	0.5											
	topsoil	D	2	m											
		S	3	2	1.65			3	4		3	3	4	5	
0.3	Orange brown	D	4	2m											
	Slightly	S	5	2m	2.45			2	2		3	3	4	4	
	clayey medium	D	6	2.40											
	dense sand	U	7	3m	3.45	35	0.45								
		D	8	3.45	3.50										
2.60	Dark grey	D	9	4m											
	brown silty	S	10	4m	4.45			2	2		3	3	3	4	
	contaminated	U	11	5m	5.45	45	0.45								
	clay	D	12	5.45	5.50										
		D	13	6m											
		S	14	6m	6.45			2	2		2	3	4	4	
		U	15	7m	7.45	45	0.35								
		D	16	8m											
		S	17	8m	8.45			2	3		3	4	4	5	
		D	18	9m											
		U	19	9.50	9.95	45	0.35								
		D	20	10m											
	End of Shift Borehole (complete/incomplete)														

Casing Depth,m	Water mBGL

CHISELLING From,m	To,m	Time, h

WATER ENCOUNTERED	1	2	3
Time struck			
Depth struck, m			
Casing depth, m			
Depth 5min, m			
Depth 10min, m			
Depth 15min, m			
Depth 20min, m			
Sample Y/N			
Sealed, m			

WATER ADDED	From, m	To, m
Depth, m		
Depth, m		
Depth, m		

BH DIAMETER From, m	To, m	Diam, mm

ADDITIONAL PLANT

INSPECTION PIT DIMENSIONS: 1 hour

BACKFILL/ INSTALLATION

(sketch including pipe dia etc)

KEY U-Undisturbed NR-No recovery S-SPT C-SPT Solid cone P-Piston sample B-Bulk disturbed D-Disturbed tub W-Water ES-Environmental sample
Pon-Penetration for last increment (mm) L-Liner

S/C	D	B	U	W	ES	P	L

REMARKS (Inspection Pit/Moves/Standing/Dayworks details, etc)

From (time)	To (time)	Details

Drilling Company: ESG

Drillers Signature:

Date: 01/15

Start Time: 8:30

End Time: 5:00

Crew Names: Bobby & James

Client's Signature:

B.H.I.D. EP15/3

Rig Type: Dando 2000

WEATHER: Overcast / Sunny / Rain / Snow

Contract Name: Escrick

Contract No. ESG70-15

RD DRILLING LTD
Mobile: 07872899661
Email: rddrilling@gmail.com

G. Lord

ESCRICK 2015.

Soft Ground Daily Drillers Log

mob to Site / Rig set up

Depth, m	Description of Strata	Sample/Test Type	Sample/Test No.	Depth, m From	Depth, m To	U Sample Blow	U Sample Rec	Standard Penetration Tests 75	75	Pen	75	75	75	75	Pen	Casing Depth,m	Water mBGL
	Start of Shift/Borehole																
9c	Dark brown	D	1	0.5													
	top-soil	D	2	1m													
		S	3	1.20	1.65			3	4		4	6	6	6			
6.2	orange brown	D	4	2m													
	slightly clayey	U	5	2m	2.45	75	0.45										
	medium dense	D	6	2.45	2.50												
	sand.	S	7	3m	3.45			2	2		3	4	4	5			
		D	8	4m													
1.90	Firm grey brown	U	9	4m	4.45	1.5	0.45										
	slightly silty	D	10	5m													
	Interbedded	S	11	5m	5.45			1	2		2	2	3	4			
	clay	D	12	6m													
		U	13	6m	6.45	45	0.45										
		D	14	6.45	6.50m												
		D	15	7m													
		S	16	7m	7.45			2	2		3	4	4	4			
		D	17	8m													
		U	18	8m	8.45	60	0.35										
		D	19	8.45	9.50m												
		D	20	9m													
		S	21	9.50	9.95			4	4		4	5	7	8			
		D	22	10m													
	End of Shift Borehole (complete/incomplete) 10m																

CHISELLING From,m	To,m	Time, h

WATER ENCOUNTERED			
Dry	1	2	3
Time struck			
Depth struck, m			
Casing depth, m			
Depth 5min, m			
Depth 10min, m			
Depth 15min, m			
Depth 20min, m			
Sample Y/N			
Sealed, m			

WATER ADDED	From, m	To, m
Depth, m		
Depth, m		
Depth, m		

BH DIAMETER From, m	To, m	Diam, mm
9c	3m	150m

ADDITIONAL PLANT

INSPECTION PIT DIMENSIONS: 1 hour

BACKFILL/ INSTALLATION

(sketch including pipe dia etc)

KEY U-Undisturbed NR-No recovery S-SPT C-SPT Solid cone P-Piston sample B-Bulk disturbed D-Disturbed tub W-Water ES-Environmental sample
Pen-Penetration for last increment (mm) L-Liner

S/C	D	B	U	W	ES	P	L

REMARKS (Inspection Pit/Moves/Standing/Dayworks details, etc)

From (time)	To (time)	Details

Drilling Company [redacted] ESG

Crew Names Bobby & James

Rig Type Dando 2000

Drillers Signature

Client's Signature

Date 10/8/15

Start Time 8:30

End Time 5:00

B.H.I.D. EP1514

WEATHER: Overcast / Sunny / Rain / Snow

Contract Name Escrick

Contract No. ESOBO-15

RD DRILLING LTD
Mobile: 07872899661
Email: rddrilling@gmail.com

Borehole Log

PRELIMINARY

ESG

Drilled AD	Start	Equipment, Methods and Remarks	Depth from (m)	to (m)	Diameter (mm)	Casing Depth (m)	Ground Level		
Logged ST	20/10/2015	Dando 3000.	0.00	9.45	150	3.10	Coordinates (m)		
Checked	End	Cable percusion boring.					National Grid		
Approved	20/10/2015								

Samples and Tests					Strata Description				
Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			Dark brown clayey fine to medium SAND.		(0.40) 0.40		
					Orangy brown clayey fine to medium SAND.		(1.30) 1.70		
2.00 - 2.45	U 1	21 blows 100% rec	0.00	Dry	Soft to firm slightly silty, slightly gravelly CLAY, with some local sand pockets.		(1.30) 3.00		
3.00 - 3.45	U 2	22 blows 100% rec	2.80	Dry	Firm to stiff laminated slightly silty brown CLAY, with some local silty partings. At 5.00m becomes stiff.				
4.00 - 4.45	U 3	29 blows 100% rec	3.10	Dry			(3.00) 6.00		
5.00	U 4	60 blows 100% rec	3.10	Dry					
6.00 - 6.45	U 5	40 blows 100% rec	3.10	Dry	Firm brown laminated slightly silty CLAY, with some local silty partings. At 7.00m becomes silty.				
7.00 - 7.45	U 6	59 blows 100% rec	3.10	Dry			(2.80) 8.80		
8.00 - 8.45	U 7	60 blows 100% rec	3.10	Dry					
9.00 - 9.45	U 8	50 blows 100% rec	3.10	Damp	Firm brown slightly sandy CLAY, with some sandy pockets.		(0.50) 9.30		
			20/10/15 3.10	1800	SAND wet. (Drillers description)		(0.10) 9.40		
					END OF EXPLORATORY HOLE				

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	9.30		

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project: ESCRICK ADDITIONAL BOREHOLES

Project No.: A5501-15

Carried out for:

Borehole: BH05

Sheet 1 of 1

Borehole Log

PRELIMINARY

ESG

Drilled	AD	Start	Equipment, Methods and Remarks	Depth from (m)	to (m)	Diameter (mm)	Casing Depth (m)	Ground Level	
Logged	ST	21/10/2015	Dando 3000.	0.00	9.45	150	3.10	Coordinates (m)	
Checked		End	Cable percussion boring.					National Grid	
Approved		21/10/2015							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Time Casing	Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-9.45 Hand excavated inspection pit.			Crop over, dark brown clayey fine to medium SAND.		(0.30) 0.30		
					Orangey clayey fine to coarse SAND.		(1.00) 1.30		
					Soft to firm laminated brown slightly silty sandy CLAY, with some local silty sandy pockets.		(0.60) 1.90		
2.00 - 2.45	U 1	No Recovery			Dark silty SAND.		(0.40) 2.30		
2.00 - 2.45	B				(Drillers description)				
					Firm laminated brown slightly silty CLAY, with some local silty partings.				
3.00 - 3.45	U 2	22 blows 100% rec							
4.00 - 4.45	U 3	45 blows 60% rec							
5.00 - 5.45	U 4	56 blows 100% rec							
6.00 - 6.45	U 5	49 blows 100% rec					(7.15)		
7.00 - 7.45	U 6	47 blows 100% rec							
8.00 - 8.45	U 7	56 blows 100% rec							
9.00 - 9.45	U 8	55 blows 100% rec							
			21/10/15 3.10	1800					
					END OF EXPLORATORY HOLE		9.45		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	9.30		

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project: ESCRICK ADDITIONAL BOREHOLES

Project No.: A5501-15

Carried out for:

Borehole: BH06

Sheet 1 of 1

Borehole Log

PRELIMINARY

ESG

Drilled AD	Start	Equipment, Methods and Remarks	Depth from (m)	to (m)	Diameter (mm)	Casing Depth (m)	Ground Level		
Logged ST	20/10/2015	Dando 3000.	0.00	9.45	150	4.60	Coordinates (m)		
Checked	End	Cable percussion boring.					National Grid		
Approved	20/10/2045								

Samples and Tests

Depth	Type & No.	Records	Date Casing	Time Water
		0.00-1.20 Hand excavated inspection pit.		
2.00 - 2.45	U 1	12 blows 100% rec		
3.00 - 3.45	U 2	20 blows 100% rec		
4.00 - 4.45	U 3	25 blows 100% rec		
5.00 - 5.45	U 4	26 blows 100% rec		
6.00 - 6.45	U 5	26 blows 100% rec		
7.00 - 7.45	U 6	14 blows 100% rec		
8.00 - 8.45	U 7	25 blows 100% rec		
9.00 - 9.45	U 8	30 blows 100% rec		
			20/10/15 4.60	1800

Strata Description

Description	Detail	Depth, Level (Thickness)
Crop over brown clayey fine to medium SAND.		(0.50)
Orange fine to coarse SAND.		0.50 (0.90)
Soft orangey brown sandy CLAY with some local sandy pockets. Sand is fine to medium.		1.40 (0.30)
Firm laminated brown locally mottled grey slightly sandy CLAY. Sand is fine to medium.		1.70 (0.90)
Soft laminated brown silty sandy CLAY, with some local silty/sandy pockets. Sand is fine to medium, at 2.75 becomes soft to firm.		2.60 (0.70)
Firm laminated brown silty silty CLAY, with some silty partings.		3.30 (0.20)
Firm laminated brown CLAY.		3.50 (2.50)
Firm to stiff laminated brown, slightly silty CLAY, with some silty partings.		6.00 (2.80)
Soft to firm laminated brown silty sandy CLAY, with some local silty/sandy pockets. Sand is fine to medium.		6.80 (0.20)
Firm to stiff laminated brown CLAY.		9.00 (0.45)
END OF EXPLORATORY HOLE		9.45

Legend

Backfill

Groundwater Entries				Depth Related Remarks		Hard Boring		
No.	Depth Strike (m)	Remarks	Depth Sealed (m)	Depths (m)	Remarks	Depths (m)	Duration (mins)	Tools used
1	9.45							

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK ADDITIONAL BOREHOLES

Project No. A5501-15

Carried out for

Borehole 157

BH07

Sheet 1 of 1

Borehole Log

PRELIMINARY

ESG

Drilled AD	Start	Equipment, Methods and Remarks	Depth from (m)	to (m)	Diameter (mm)	Casing Depth (m)	Ground Level
Logged ST	21/10/2015	Dando 3000. Cable percussion boring.	0.00	9.45	150	4.50	Coordinates (m)
Checked	End						National Grid
Approved	22/10/2015						

Samples and Tests

Depth	Type & No.	Records	Date Casing	Time Water
		0.00-1.20 Hand excavated inspection pit.		
2.00 - 2.45	U 1	25 blows 100% rec		
3.00 - 3.45	U 2	30 blows 100% rec	21/10/15 3.10	1800
			22/10/15 3.10	0800
4.00 - 4.45	U 3	32 blows 100% rec		
5.00 - 5.45	U 4	40 blows 100% rec		
6.00 - 6.45	U 5	44 blows 100% rec		
7.00 - 7.45	U 6	49 blows 100% rec		
8.00 - 8.45	U 7	50 blows 100% rec		
9.00 - 9.45	U 8	50 blows 100% rec	22/10/15 4.50	0000

Strata Description

Material	Detail	Depth, Level (Thickness)	Legend	Backfill
Crop over, dark brown clayey fine to medium SAND.		(0.30) 0.30		
Orange fine to coarse clayey SAND.		(1.70) 2.00		
Firm brown laminated silty CLAY, with some local silty partings. At 2.00m becomes slightly silty.		(7.45) 9.45		
END OF EXPLORATORY HOLE				

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools Used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK ADDITIONAL BOREH[illegible]S

Project No. A5501-15

Carried out for

Borehole BH06

Sheet 1 of 1

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	15/08/2017	Dando 175. Cable percussion boring.	1.20	2.00	150		**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		15/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.30) 0.30		
0.50	D 1				Firm brown slightly gravelly sandy CLAY. Gravel is subangular to subrounded fine to coarse of flint and quartzite.		(0.50) 0.80		
1.00	D 2				Firm thinly laminated orangish brown silty CLAY. Frequent silt dustings on laminae.		(1.00) 1.80		
2.00	D 3		15/08/17	1720 dry	Firm to stiff occasionally fissured greyish brown CLAY. Fissures are randomly orientated.		(0.20) 2.00		
					END OF EXPLORATORY HOLE				

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks
0.00 - 2.00	No groundwater encountered during drilling.

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-01

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	14/08/2017	Dando 175. Cable percussion boring.	1.20	18.00	150	12.00	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		15/08/2017							

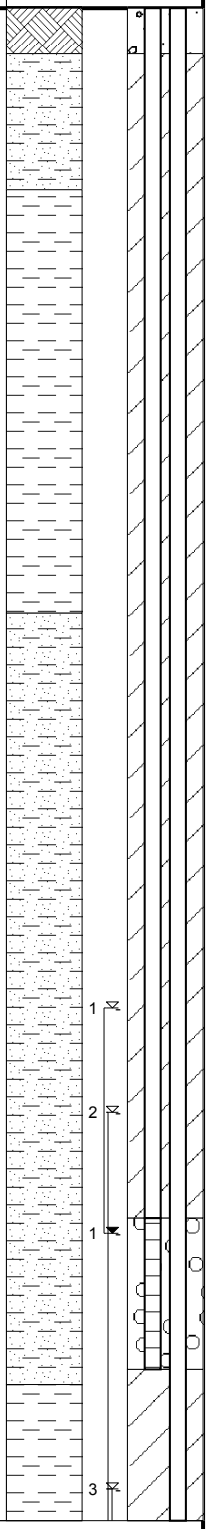
Samples and Tests

Depth	Type & No.	Records	Date Casing	Time Water
		0.00-1.20 Hand excavated inspection pit.		
0.30	D 1			
0.70	D 2			
1.50 - 1.95	U 3	24 blows 100% rec	1.50	dry
1.95 - 2.15	D 4			
3.00 - 3.45	U NR	17 blows No Recovery	3.00	dry
4.00 - 4.45	U 6	32 blows 100% rec	4.00	dry
4.45 - 4.65	D 7			
5.00 - 5.45	U 8	34 blows 100% rec	5.00	dry
5.45 - 5.65	D 9			
6.00 - 6.45	U 10	31 blows 100% rec	6.00	dry
6.45 - 6.65	D 11			
7.00 - 7.45	U 12	42 blows 100% rec	7.00	dry
7.45 - 7.65	D 13			
8.00 - 8.45	U 14	39 blows 100% rec	7.50	1.50
8.45 - 8.65	D 15			
9.00 - 9.45	U NR	36 blows No Recovery	9.00	7.90
9.45 - 9.65	D 17			
			14/08/17 9.00	1700 dry

Strata Description

Main	Detail	Depth, Level (Thickness)
TOPSOIL.		(0.30) 0.30
Firm reddish brown, mottled orangish brown, sandy CLAY.		(0.90) 1.20
Firm brown thinly to thickly laminated CLAY with silt laminae. Occasional sand pockets (approximately 200x100mm).		(2.80) 4.00
Firm to stiff thickly laminated brown, locally mottled grey, CLAY with silt dustings on laminae.		(5.10) 9.10
Stiff fissured greyish brown CLAY. Fissures are randomly orientated, smooth and clean.		(1.15)

Legend **Backfill**



Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	8.10	Rose to 6.61 m after 20 minutes.	9.80

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-01A

Borehole Log

PRELIMINARY

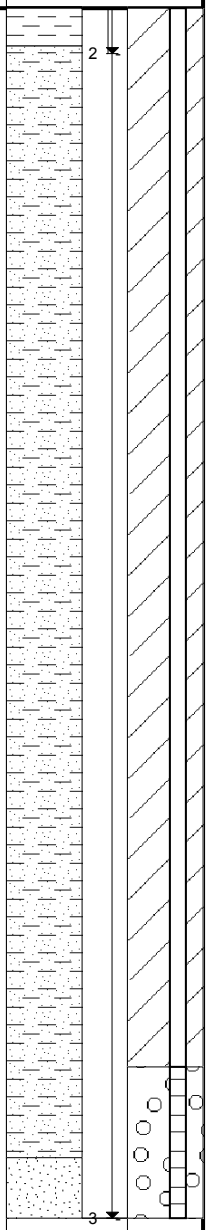
Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	14/08/2017	Dando 175. Cable percussion boring.	1.20	18.00	150	12.00	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		15/08/2017							

Samples and Tests

Depth	Type & No.	Records	Date / Casing	Time / Water
10.00 - 10.45	U 18	34 blows 100% rec	10.00 15/08/17 9.00	dry 0800 dry
10.45 - 10.65	D 19			
11.00	D 20			
12.00	D 21			
13.00	D 22			
14.00	D 24			
15.00	D 25			
16.00	D 26			
17.00	D 27			
			15/08/17 12.00	1720 9.79
18.00	D 28			

Strata Description

Main	Detail	Depth, Level (Thickness)
Stiff fissured greyish brown CLAY. Fissures are randomly orientated, smooth and clean.		
Firm thickly laminated slightly sandy CLAY. Occasional silt dustings on laminae.		10.25
		(7.35)
Orangish brown and grey fine to medium SAND.		17.60 (0.40)
END OF EXPLORATORY HOLE		18.00



Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
2	10.30	Rose to 7.30 m after 20 minutes.	10.50
3	18.00	Rose to 9.79 m after 20 minutes.	

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-01A

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	22/08/2017	Dando 175. Cable percussion boring.	1.20	3.00	150		**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		22/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Time Casing / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.		TOPSOIL.		(0.30) 0.30		
0.50	D 1			Brown fine SAND.				
1.00	D 2					(1.20) 1.50		
2.00	D 3			Orangish brown and dark brown fine silty SAND.				
			22/08/17 1140 dry			(1.30) 2.80		
3.00	D 4			Stiff laminated brown CLAY.		(0.20) 3.00		
				END OF EXPLORATORY HOLE				

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks
0.00 - 3.00	No groundwater encountered during drilling.

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-02

Borehole Log

PRELIMINARY

ESG

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	21/08/2017	Dando 175. Cable percussion boring.	1.20	18.00	150	13.50	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		21/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.30)		
0.30	D 1				Dark brown silty SAND.		0.30		
							(0.70)		
1.00	D 2				Orangish brown, mottled yellowish brown, fine to medium SAND.		1.00		
2.00	D 3						(2.60)		
3.00	D 4								
3.50	D 5						3.60		
4.00 - 4.65	U NR	41 blows No Recovery	3.00	dry	Soft laminated brown CLAY.				
4.00 - 4.65	B 6								
5.00 - 5.45	U 7	39 blows 100% rec	4.50	dry					
5.45 - 5.65	D 8					5.45-8.20 becomes firm thickly laminated brown clay			
6.00 - 6.45	U 9	41 blows 100% rec	6.00	dry					
6.45 - 6.65	D 10						(5.60)		
7.00 - 7.45	U 11	38 blows 100% rec	6.00	dry					
7.45 - 7.65	D 12								
8.00 - 8.45	U 13	33 blows 100% rec	6.00	dry					
8.45 - 8.65	D 14								
9.00 - 9.45	U 15	28 blows 100% rec	6.00	8.00					
9.45 - 9.65	D 16				Soft thinly to thickly laminated brown, mottled greyish brown, CLAY.		9.20		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	8.90	Rose to 7.38 m after 20 minutes.	9.10

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

AGS

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-02A

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	21/08/2017	Dando 175. Cable percussion boring.	1.20	18.00	150	13.50	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		21/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 10.45	U 17	36 blows 100% rec	9.00	8.00	Soft thinly to thickly laminated brown, mottled greyish brown, CLAY.		(1.80)		
10.45 - 10.65	D 18								
11.00	D 19				Stiff greyish brown CLAY.		11.00		
12.00	D 20							2	
13.00	D 21						(4.20)		
14.00	D 22								
15.00	D 23								
					Firm laminated reddish brown CLAY with silt dustings on laminae.		15.20		
16.00	D 24								
							(2.50)		
17.00	D 25								
			21/08/17 13.50	1700 dry	Soft brown sandy CLAY with pocket of sand (approximately 100x150mm).		17.70 (0.30)		
18.00	D 26				END OF EXPLORATORY HOLE		18.00		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
2	12.00	Rose to 7.40 m after 20 minutes.	12.10

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-02A

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	18/08/2017	Dando 175. Cable percussion boring.	1.20	2.00	150		**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		18/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Casing	Time / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.30) 0.30		
					Soft brown sandy silty CLAY.		(0.60) 0.90		
					Soft orangish brown and dark brown sandy CLAY.		(0.80) 1.70		
			18/08/17	1720 dry	Soft to firm thinly to thickly laminated sandy CLAY with sand and silt on laminae.		(0.30) 2.00		
					END OF EXPLORATORY HOLE				

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks
0.00 - 2.00	No groundwater encountered during drilling.

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-03

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	MS	23/08/2017	Dando 175. Cable percussion boring.	1.20	2.50	150		**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		23/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
0.20	D 1	0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.40)		
0.50	D 2				Orangish brown fine to coarse SAND.		0.40		
1.00	D 3						(2.00)		
2.40	D 4		24/08/17	1730 dry	Firm brown slightly sandy CLAY.		2.40 (0.10)		
					END OF EXPLORATORY HOLE		2.50		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks
0.00 - 2.50	No groundwater encountered during drilling.

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-05

Borehole Log

PRELIMINARY

ESG

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	22/08/2017	Dando 175.	1.20	9.00	200	9.00	**Coordinates (m)**	
Checked		**End**	Cable percussion boring.	9.00	10.65	150	13.50	**National Grid**	
Approved		23/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.30)		
0.30	D 1				Brown slightly gravelly fine SAND. Gravel is angular to subangular fine to medium of brick and flint. (MADE GROUND)		0.30		
1.00	D 2						(1.00)		
					Orangish brown fine to medium SAND.		1.30		
2.00 - 2.49	U 3	19 blows 100% rec		dry			(1.20)		
2.45 - 2.65	D 4				Firm thinly to thickly laminated brown CLAY.		2.50		
3.00 - 3.45	U 5	23 blows 100% rec	3.00	dry			(0.80)		
3.45 - 3.65	D 6				Stiff fissured greyish brown CLAY. Fissures are randomly orientated, smooth and clean.		3.30		
4.00 - 4.45	U 7	39 blows 89% rec	3.00	dry					
4.45 - 4.65	D 8								
5.00 - 5.45	U 9	43 blows 100% rec	3.00	dry					
5.45 - 5.65	D 10						(3.90)		
6.00 - 6.45	U 11	44 blows 100% rec	6.00	dry					
6.45 - 6.65	D 12								
7.00 - 7.45	U 13	28 blows 100% rec	6.00	dry					
7.45 - 7.65	D 14				Firm laminated brown silty CLAY with silt dustings on laminae.		7.20		
8.00 - 8.45	U 15	43 blows 100% rec	6.00	dry			(1.00)		
8.45 - 8.65	D 16				Orangish brown fine to medium SAND.		8.20		
9.00 - 9.45	U 17	31 blows 100% rec	22/08/17 6.00 23/08/17 6.00	1700 7.49 0800 4.10			(1.30)		
9.45 - 9.65	D 18				Firm thinly to thickly laminated greyish brown CLAY. Occasional sand pockets (approximately 200x150mm).		9.50		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	8.50	Rose to 7.49 m after 20 minutes.	9.00
2	10.00	Rose to 7.30 m after 20 minutes.	

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

AGS

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-05A

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	22/08/2017	Dando 175.	1.20	9.00	200	9.00	**Coordinates (m)**	
Checked		**End**	Cable percussion boring.	9.00	10.65	150	13.50	**National Grid**	
Approved		23/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 10.65	U NR	22 blows No Recovery	9.00	4.1	Firm thinly to thickly laminated greyish brown CLAY. Occasional sand pockets (approximately 200x150mm).		(1.10)		
							10.60		
					Soft to firm thinly to thickly laminated reddish brown sandy CLAY.				
11.00	D 19						(0.80)		
							11.40		
					Firm thickly laminated reddish brown CLAY with silt dustings on laminae.				
12.00	D 20								
13.00	D 21						(3.80)		
14.00	D 22								
15.00	D 23								
					Yellowish brown fine to medium SAND.		15.20		
							(1.30)		
16.00	D 24								
			23/08/17 13.50	1730 8.10					
					END OF EXPLORATORY HOLE		16.50		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-05A

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	MS	29/08/2017	Dando 175. Cable percussion boring.	1.20	2.50	150		**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		29/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.70)		
0.50	D 1						0.70		
1.00	D 2				Brown clayey fine to coarse SAND.		(1.60)		
			29/08/17	1300 dry			2.30		
2.50	D 3				Firm thinly laminated brown CLAY.		(0.20)		
					END OF EXPLORATORY HOLE		2.50		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks
0.00 - 2.50	No groundwater encountered during drilling.

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-06

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	MS	29/08/2017	Dando 175. Cable percussion boring.	1.20	2.00	150		**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		29/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.90)		
0.30	D 1						0.90		
1.00	D 2				Orangish brown fine to coarse SAND.		(0.20) 1.10		
1.50	D 3				Stiff brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of coal and sandstone.		(0.60)		
			29/08/17	1100 dry	Firm thinly laminated brown CLAY.		1.70 (0.30)		
2.00	D 4				END OF EXPLORATORY HOLE		2.00		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks
0.00 - 2.00	No groundwater encountered during drilling.

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-07

Borehole Log

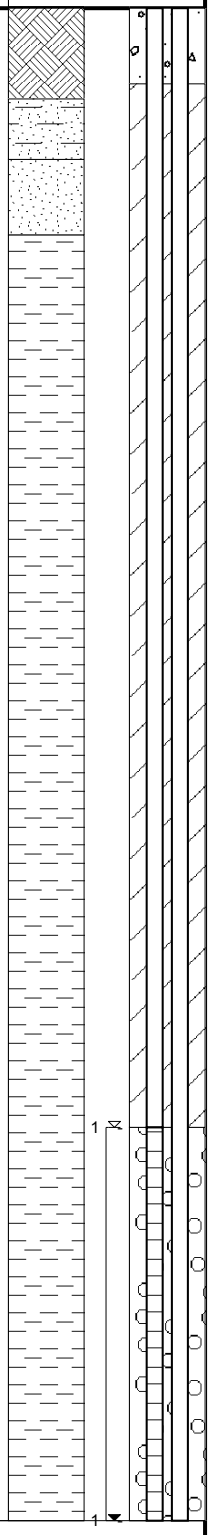
PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	MS	25/08/2017	Dando 175.	1.20	10.00	200	10.00	**Coordinates (m)**	
Checked		**End**	Cable percussion boring.	10.00	19.50	150	19.50	**National Grid**	
Approved		25/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.				
0.30	D 1						(0.60)		
					Orangish brown and brown clayey fine to coarse SAND.		0.60		
0.80	D 2						(0.40)		
1.00	D 3				Orangish brown fine to coarse SAND.		1.00		
							(0.50)		
1.50	D 4				Firm, locally indistinctly laminated, brown, locally grey, CLAY.		1.50		
2.00 - 2.45	U 5	22 blows 100% rec	1.50	dry					
2.45 - 2.65	D 6								
3.00 - 3.45	U 7	26 blows 100% rec	3.00	dry					
3.45 - 3.65	D 8								
4.00 - 4.45	U 9	29 blows 100% rec	3.00	dry					
4.45 - 4.65	D 10								
5.00 - 5.45	U 11	32 blows 100% rec	4.50	dry					
5.45 - 5.65	D 12								
							(8.50)		
6.00 - 6.45	U 13	37 blows 100% rec	6.00	dry					
6.45 - 6.65	D 14								
7.00 - 7.45	U 15	36 blows 100% rec	6.00	dry					
7.45 - 7.65	D 16								
8.00 - 8.45	U 17	27 blows 100% rec	6.00	dry					
8.45 - 8.65	D 18								
9.00 - 9.45	U 19	26 blows 100% rec	6.00	dry					
9.45 - 9.65	D 20								
							10.00		



Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	10.00	Rose to 7.40 m after 20 minutes.	10.30

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-07A

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	MS	25/08/2017	Dando 175.	1.20	10.00	200	10.00	**Coordinates (m)**	
Checked		**End**	Cable percussion boring.	10.00	19.50	150	19.50	**National Grid**	
Approved		25/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Time Casing / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 10.65 10.00	U NR D 21	18 blows No Recovery	6.00 dry	Brown clayey fine to medium SAND.		(0.30)		
				Stiff dark brown CLAY.		10.30 (0.70)		
11.00	D 22			Firm thinly to thickly laminated brown CLAY with rare silt laminations		11.00	2	
12.00	D 23							
13.00	D 24							
14.00	D 25							
						(7.50)		
15.00	D 26							
16.00	D 27							
17.00	D 28							
18.00	D 29							
				Brown silty fine to medium SAND.		18.50	2	
19.00	D 30		25/08/17 1730 19.00 9.90			(1.00)		
				END OF EXPLORATORY HOLE		19.50		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
2	18.50	Rose to 10.90 m after 20 minutes.	

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-07A

Borehole Log

PRELIMINARY

Drilled SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**		
Logged MS	29/08/2017	Dando 175.	1.20	2.00	150		**Coordinates (m)**		
Checked	**End**	Cable percussion boring.					**National Grid**		
Approved	29/08/2017								

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.60)		
0.30	D 1						0.60		
					Brown and orangish brown clayey fine to medium SAND.		(1.10)		
1.00	D 2								
			29/08/17	1530 dry	Firm thinly laminated brown CLAY with occasional silt laminations.		1.70 (0.30)		
2.00	D 3				END OF EXPLORATORY HOLE		2.00		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks
0.00 - 2.00	No groundwater encountered during drilling.

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-08

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	MS	29/08/2017	Dando 175. Cable percussion boring.	1.20	2.00	150		**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		29/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Time Casing / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.		TOPSOIL.		(0.60)		
				Brown and orangish brown clayey fine to coarse SAND.		0.60 (0.70)		
1.00	D 1			Firm thinly laminated brown CLAY.		1.30 (0.70)		
			29/08/17 1340 dry					
2.00	D 2			END OF EXPLORATORY HOLE		2.00		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks
0.00 - 2.00	No groundwater encountered during drilling.

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-09

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	MS	24/08/2017	Dando 175.	1.20	9.00	200	9.00	**Coordinates (m)**	
Checked		**End**	Cable percussion boring.	9.00	18.50	150	18.00	**National Grid**	
Approved		24/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.				
0.30	D 1						(0.60)		
					Orangish brown, locally clayey, fine to coarse SAND.		0.60		
1.00	D 2						(0.70)		
					Firm brown, mottled grey, CLAY.		1.30		
1.50	D 3								
2.00 - 2.45	U 4	21 blows 100% rec	1.50	dry			(1.15)		
2.45 - 2.65	D 5				Firm brown CLAY with rare silt laminations.		2.45		
3.00 - 3.45	U 6	26 blows 100% rec	3.00	dry					
3.45 - 3.65	D 7								
4.00 - 4.45	U 8	20 blows 100% rec	3.00	dry			(3.00)		
4.45 - 4.65	D 9								
5.00 - 5.45	U 10	32 blows 100% rec	4.50	dry					
5.45 - 5.65	D 11				Firm thinly to thickly laminated brown CLAY with rare silt laminations.		5.45		
6.00 - 6.45	U 12	28 blows 100% rec	6.00	damp					
6.45 - 6.65	D 13								
7.00 - 7.45	U 14	33 blows 100% rec	6.00	damp					
7.45 - 7.65	D 15								
8.00 - 8.45	U 16	31 blows 100% rec	6.00	damp					
8.45 - 8.65	D 17								
9.00 - 9.45	U NR	26 blows No Recovery	6.00	6.80					

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	8.80	Rose to 7.04 m after 20 minutes.	9.00

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-09A

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	MS	24/08/2017	Dando 175.	1.20	9.00	200	9.00	**Coordinates (m)**	
Checked		**End**	Cable percussion boring.	9.00	18.50	150	18.00	**National Grid**	
Approved		24/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Casing	Time / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 10.45	U 20	47 blows 100% rec	10.00	dry	Firm thinly to thickly laminated brown CLAY with rare silt laminations.				
10.45 - 10.65	D 21								
11.00	D 22						(11.55)		
12.00	D 23								
13.00	D 24								
14.00	D 25								
15.00	D 26								
16.00	D 27								
17.00	D 28				Brown silty fine to medium SAND.		17.00		
							(1.50)		
			24/08/17 18.00	1730 dry					
					END OF EXPLORATORY HOLE		18.50		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
2	17.00	Rose to 12.50 m after 20 minutes.	

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-09A

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	16/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	10.00	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		16/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.30) 0.30		
0.50	D 1				Soft brown slightly sandy silty CLAY.				
1.00	D 2						(1.40)		
2.00 - 2.45	U 4	21 blows 100% rec		dry	Soft to firm thinly to thickly laminated brown CLAY. Frequent silt dustings on laminae.		1.70		
2.45 - 2.65	D 5								
3.00 - 3.45	U NR	22 blows No Recovery	3.00	dry			(2.30)		
3.45 - 3.65	D 6								
4.00 - 4.45	U 7	27 blows 100% rec	3.00	dry	Firm to stiff greyish brown CLAY.		4.00		
4.45 - 4.65	D 8								
5.00 - 5.45	U 9	38 blows 100% rec	3.00	dry			(2.20)		
5.45 - 5.65	D 10								
6.00 - 6.45	U 11	41 blows 100% rec	6.00	dry					
6.45 - 6.65	D 12				Soft thinly to thickly laminated orange CLAY with silt dustings on laminae.		6.20		
7.00 - 7.45	U 13	37 blows 100% rec	6.00	dry					
7.45 - 7.65	D 14						(2.90)		
8.00 - 8.45	U 15	35 blows 100% rec	6.00	dry					
8.45 - 8.65	D 16							1	
9.00 - 9.45	U 17	29 blows 100% rec	9.00	dry					
					Reddish brown fine to medium SAND.		9.10	1	
9.45 - 9.65	D 18						(0.40)		
					Stiff greyish brown, mottled grey, CLAY.		9.50		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	9.20	Rose to 8.36 m after 20 minutes.	9.40

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-10

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	16/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	10.00	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		16/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Casing	Time / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 10.45	U 19	38 blows 100% rec	10.00	dry	Stiff greyish brown, mottled grey, CLAY.		(1.15)		
10.45 - 10.65	D 20		16/08/17 10.00	1730 dry			10.65		
					END OF EXPLORATORY HOLE				

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-10

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	16/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	7.50	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		16/08/2017							

Samples and Tests

Depth	Type & No.	Records	Date Casing	Time Water
		0.00-1.20 Hand excavated inspection pit.		
0.50	D 1			
0.70	D 2			
1.00	D 3			
2.00	D 4			
3.00 - 3.45	U 5	21 blows 100% rec	3.00	dry
3.45 - 3.65	D 6			
4.00 - 4.45	U 7	26 blows 100% rec	3.00	dry
4.45 - 4.65	D 8			
5.00 - 5.45	U 9	52 blows 100% rec	4.50	dry
5.45 - 5.65	D 10			
6.00 - 6.45	U 11	41 blows 100% rec	6.00	dry
6.45 - 6.65	D 12			
7.00 - 7.45	U 13	38 blows 100% rec	6.00	dry
7.45 - 7.65	D 14			
8.00 - 8.45	U 15	43 blows 100% rec	7.50	dry
8.45 - 8.65	D 16			
9.00 - 9.45	U 17	42 blows 100% rec	7.50	dry
9.45 - 9.65	D 18			

Strata Description

Main	Detail	Depth, Level (Thickness)
TOPSOIL.		(0.30) 0.30
Greyish brown fine SAND.		(0.40) 0.70
Orangish brown, locally mottled greyish brown, fine to medium SAND.		(2.10) 2.80
Firm and stiff brown CLAY.		(3.90) 6.70
Firm thinly to thickly laminated orangish brown CLAY. Frequent silt dustings on laminae.		(2.75) 9.45
Firm to stiff fissured greyish brown CLAY. Fissures are randomly orientated, smooth and clean.		

Legend

Backfill

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-11

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	16/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	7.50	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		16/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Casing	Time / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 10.45	U 19	38 blows 100% rec	7.50	dry	Firm to stiff fissured greyish brown CLAY. Fissures are randomly orientated, smooth and clean.		(1.20)		
10.45 - 10.65	D 20		16/08/17 7.50	1730 dry					
					END OF EXPLORATORY HOLE		10.65		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-11

Borehole Log

PRELIMINARY

ESG

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	17/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	9.00	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		17/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
		0.00-1.20 Hand excavated inspection pit.			TOPSOIL.		(0.30)		
0.30	D 1				Dark brown silty fine to medium SAND.		0.30		
1.00	D 2						(2.30)		
2.00	D 3								
					Orangish brown fine to coarse SAND.		2.60		
3.00	D 4						(1.80)		
4.00	D 5								
4.50 - 4.95	U 6	20 blows 100% rec	4.50	dry	Firm to stiff greyish brown CLAY.		4.40		
4.95 - 5.15	D 7								
5.20 - 5.65	U 8	38 blows 100% rec	4.50	dry					
6.00 - 6.45	U 9	31 blows 100% rec	6.00	dry					
6.45 - 6.65	D 10						(3.80)		
7.00 - 7.45	U 11	28 blows 100% rec	6.00	dry					
7.45 - 7.65	D 12								
8.00 - 8.45	U 13	33 blows 100% rec	7.50	dry					
					Firm thinly to thickly laminated reddish brown CLAY. Occasional silt dustings on laminae		8.20		
8.45 - 8.65	D 14								
9.00 - 9.45	U 15	44 blows 100% rec	9.00	dry					
9.45 - 9.65	D 16						(2.45)		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

AGS

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-12

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	17/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	9.00	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		17/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Casing	Time / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 10.45	U 17	38 blows 100% rec	9.00	damp	Firm thinly to thickly laminated reddish brown CLAY. Occasional silt dustings on laminae				
10.45 - 10.65	D 18		17/08/17	0000 damp					
					END OF EXPLORATORY HOLE		10.65		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-12

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	17/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	9.00	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		18/08/2017							

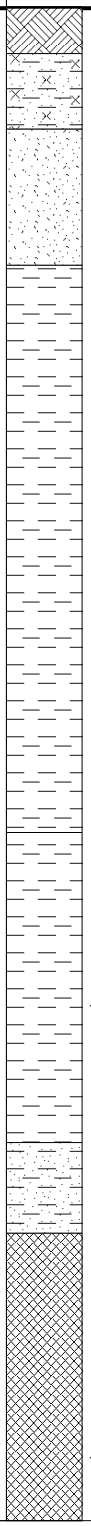
Samples and Tests

Depth	Type & No.	Records	Date Casing	Time Water
		0.00-1.20 Hand excavated inspection pit.		
0.20	D 1			
0.50	D 2			
1.00	D 3			
2.00 - 2.45	U 4	18 blows 100% rec		dry
2.45 - 2.65	D 5			
3.00 - 3.45	U 6	23 blows 100% rec	3.00	dry
3.45 - 3.65	D 7			
4.00 - 4.45	U 8	27 blows 100% rec	3.00	dry
4.45 - 4.65	D 9			
5.00 - 5.45	U 10	38 blows 100% rec	4.50	dry
5.45 - 5.65	D 11			
6.00 - 6.45	U 12	36 blows 100% rec	6.00	dry
6.45 - 6.65	D 13			
7.00 - 7.45	U 14	33 blows 100% rec	6.00	dry
7.45 - 7.65	D 15			
			17/08/17 7.50	1720 dry
8.00 - 8.45	U 16	22 blows 100% rec	~~7.50~~	~~3.20~~
			18/08/17 7.50	0800 3.20
8.45 - 8.65	D 17			
9.00 - 9.45	U 18	33 blows 100% rec	9.00	dry
9.45 - 9.65	D 19			

Strata Description

Main	Detail	Depth, Level (Thickness)
TOPSOIL.		(0.30)
		0.30
Soft orangish brown sandy silty CLAY.		(0.50)
		0.80
Brown fine to medium SAND.		(0.90)
		1.70
Firm to stiff thinly laminated brown CLAY.		(3.75)
		5.45
Firm thinly to thickly laminated reddish brown CLAY with silt dustings on laminae.		(2.05)
		7.50
Soft thinly to thickly laminated orangish brown sandy CLAY.		(0.60)
		8.10
Firm laminated brown CLAY with silt dustings on laminae.		(2.55)

Legend



Backfill

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	9.60	Rose to 6.61 m after 20 minutes.	

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-13

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	17/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	9.00	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		18/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Casing	Time / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 10.45	U NR	22 blows No Recovery	9.00	dry	Firm laminated brown CLAY with silt dustings on laminae.				
			18/08/17 9.00	1100 dry					
					END OF EXPLORATORY HOLE		10.65		

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-13

Borehole Log

PRELIMINARY

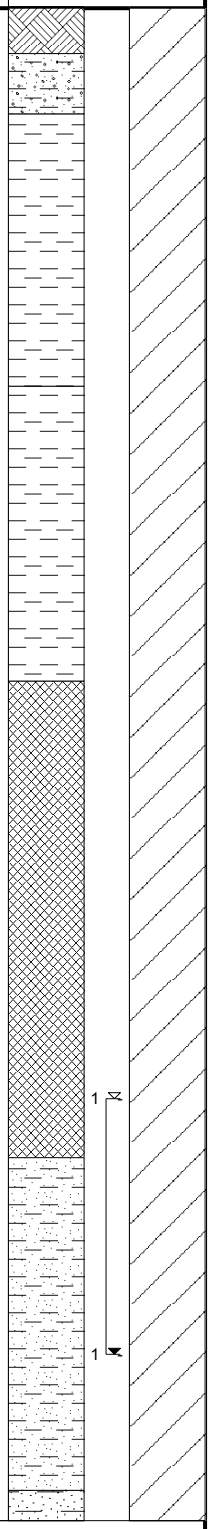
Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	18/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	7.50	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		18/08/2017							

Samples and Tests

Depth	Type & No.	Records	Date Casing	Time Water
		0.00-1.20 Hand excavated inspection pit.		
0.30	D 1			
0.60	D 2			
1.00	D 3			
2.00 - 2.45	U 4	21 blows 100% rec		dry
2.45 - 2.65	D 5			
3.00 - 3.45	U 6	22 blows 100% rec	3.00	dry
3.45 - 3.65	D 7			
4.00 - 4.45	U 8	34 blows 100% rec	3.00	dry
4.45 - 4.65	D 9			
5.00 - 5.45	U 10	32 blows 100% rec	4.50	dry
5.45 - 5.65	D 11			
6.00 - 6.45	U 12	40 blows 100% rec	6.00	dry
6.45 - 6.65	D 13			
7.00 - 7.45	U 14	30 blows 100% rec	6.00	dry
7.45 - 7.65	D 15			
8.00 - 8.45	U 16	31 blows 100% rec	7.50	dry
8.45 - 8.65	D 17			
9.00 - 9.45	U 18	32 blows 100% rec	7.50	dry
9.45 - 9.65	D 16			

Strata Description

Main	Detail	Depth, Level (Thickness)
TOPSOIL.		(0.30) 0.30
Firm brown slightly gravelly sandy CLAY. Gravel is subrounded fine to medium of flint.		(0.40) 0.70
Firm orangish brown, mottled grey, CLAY.		(1.80) 2.50
Soft thinly laminated brown CLAY with silt and silt dustings on laminae.		(1.95) 4.45
Stiff reddish brown CLAY.		(3.15) 7.60
Stiff greyish brown sandy CLAY with sand pocket (approximately 150x200mm).		(2.20) 9.80
Greyish brown and orangish brown clayey SAND.		



Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)
1	8.90	Rose to 7.21 m after 20 minutes.	

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

AGS

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

Borehole

ESP17-14

Borehole Log

PRELIMINARY

Drilled	SS	**Start**	**Equipment, Methods and Remarks**	**Depth from (m)**	**to (m)**	**Diameter (mm)**	**Casing Depth (m)**	**Ground Level**	
Logged	RTM	18/08/2017	Dando 175. Cable percussion boring.	1.20	10.65	150	7.50	**Coordinates (m)**	
Checked		**End**						**National Grid**	
Approved		18/08/2017							

Samples and Tests

Strata Description

Depth	Type & No.	Records	Date / Casing	Time / Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 10.65	U NR	22 blows No Recovery	7.50	6.9	Greyish brown and orangish brown clayey SAND.		(0.85)		
			18/08/17 7.50	1700 6.90			10.65		
					END OF EXPLORATORY HOLE				

Groundwater Entries

No.	Depth Strike (m)	Remarks	Depth Sealed (m)

Depth Related Remarks

Depths (m)	Remarks

Hard Boring

Depths (m)	Duration (mins)	Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project ESCRICK, NORTH YORKSHIRE

Project No. A7073-17

Carried out for Plasmor Limited

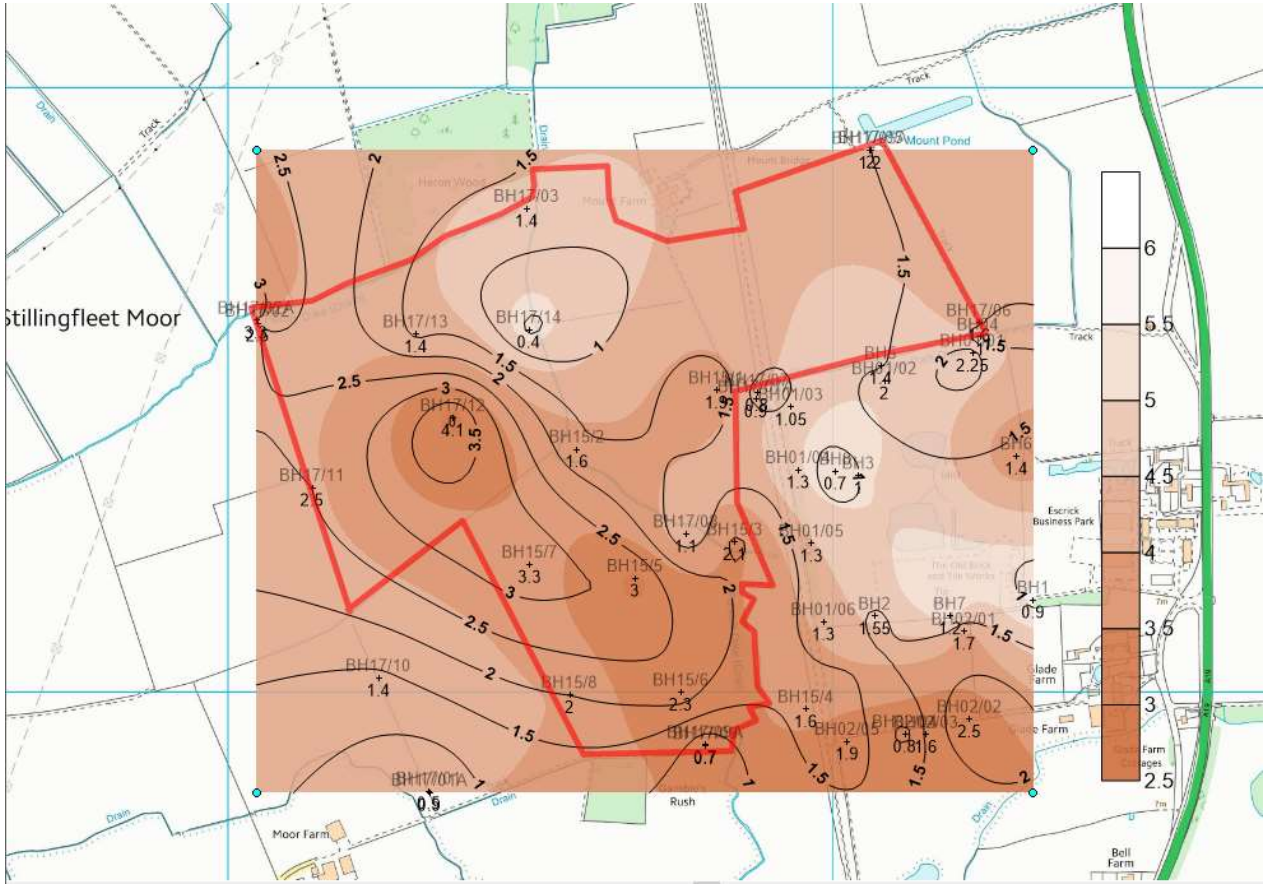
Borehole

ESP17-14

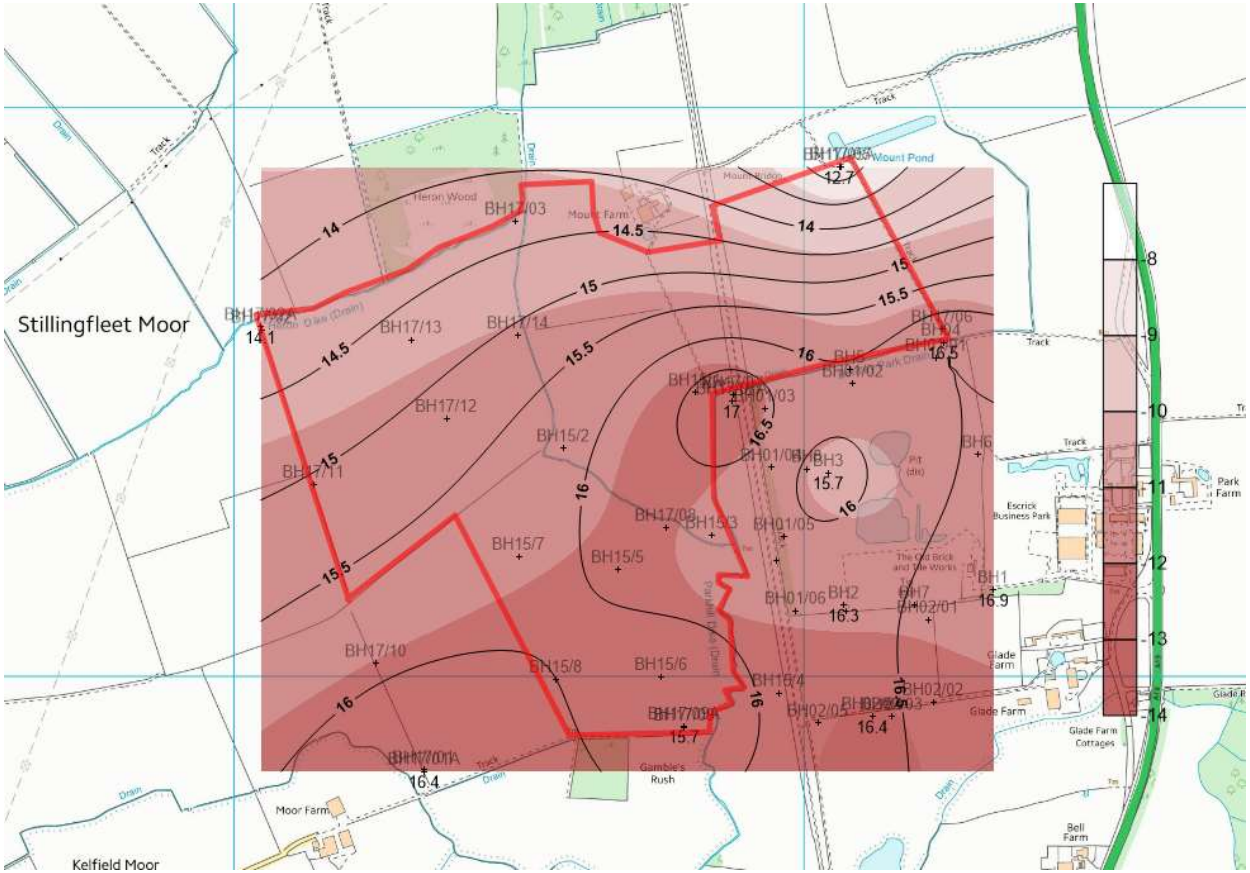
APPENDIX ESSD H

CONTOUR PLANS SHOWING THE ELEVATION AND THICKNESS OF GEOLOGICAL STRATA ACROSS THE SITE

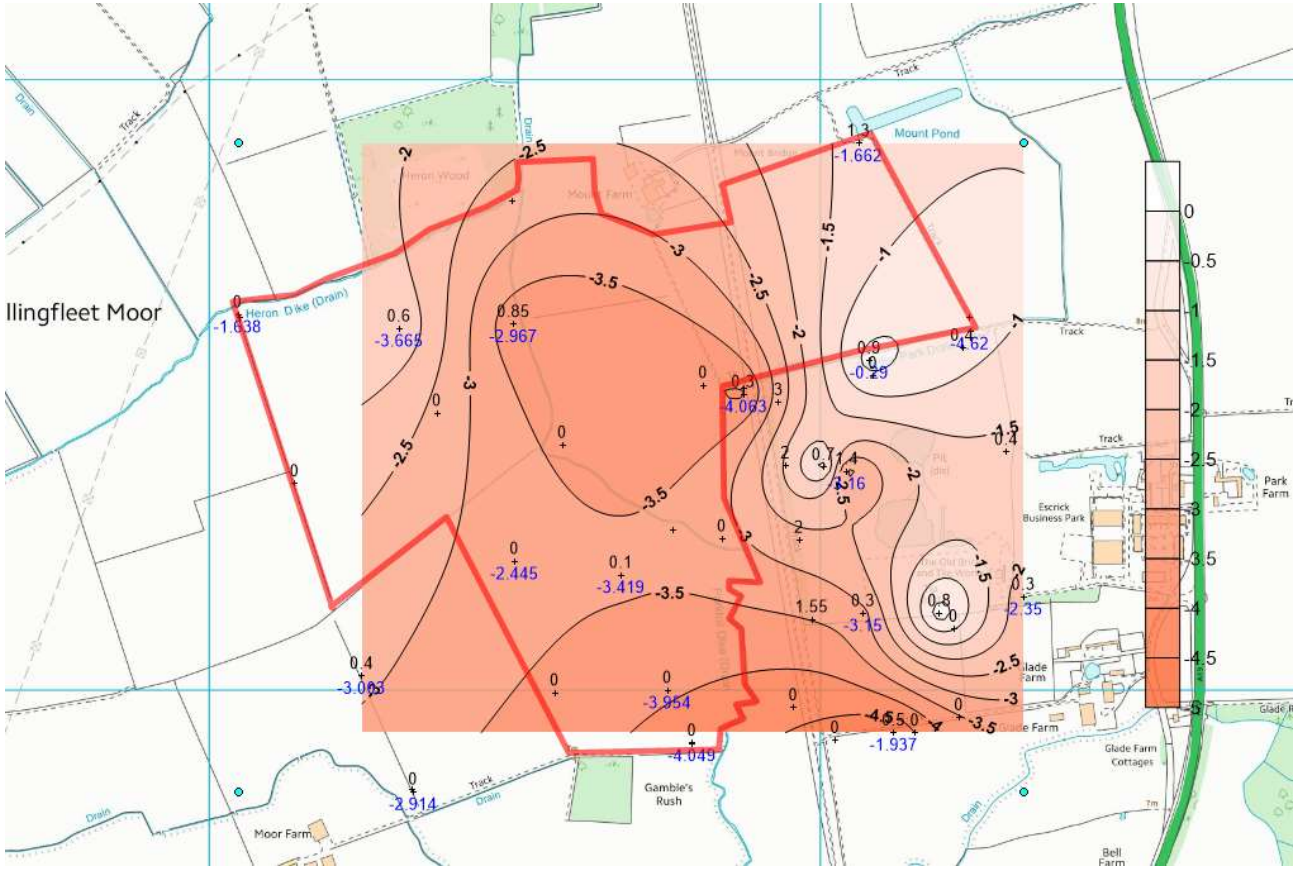
Thickness of the Skipwith Sand Member (m) (black contour lines and black text) compared with the elevation of the top of the Hemingbrough Glaciolacustrine Formation (mAOD) (colour scale)



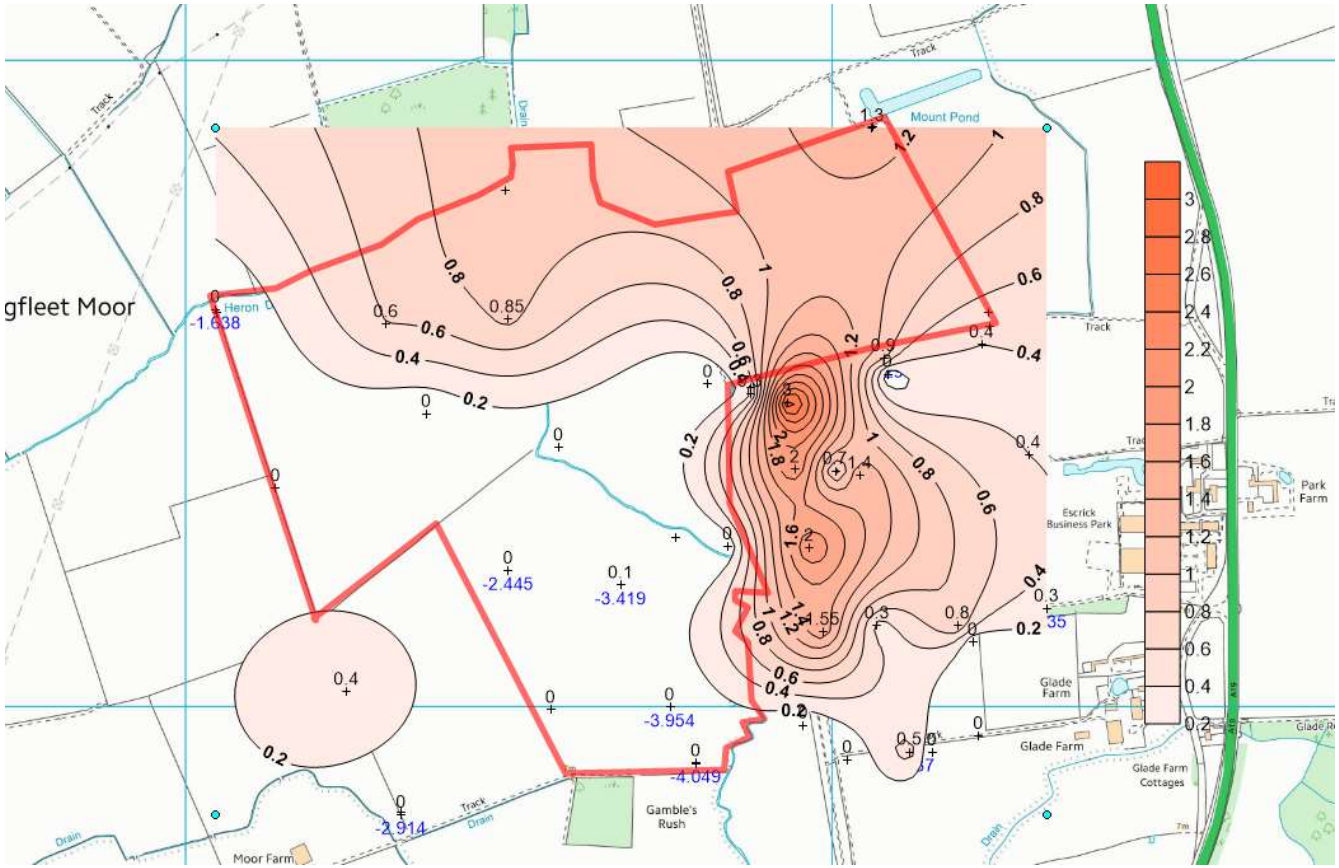
Thickness of Hemingbrough Glaciolacustrine Formation (m) (black contour lines and black text) compared with the elevation of the top of the Sherwood Sandstone Group (mAOD) (colour scale)



Elevation of the top of the Lawns House Farm Sand Member (LHFSM) (mAOD) (contour lines including colour scale), thickness of the LHFSM (m) (black text at borehole locations) and groundwater strikes recorded at or at similar elevations to the top of the LHFSM (mAOD) (blue text)

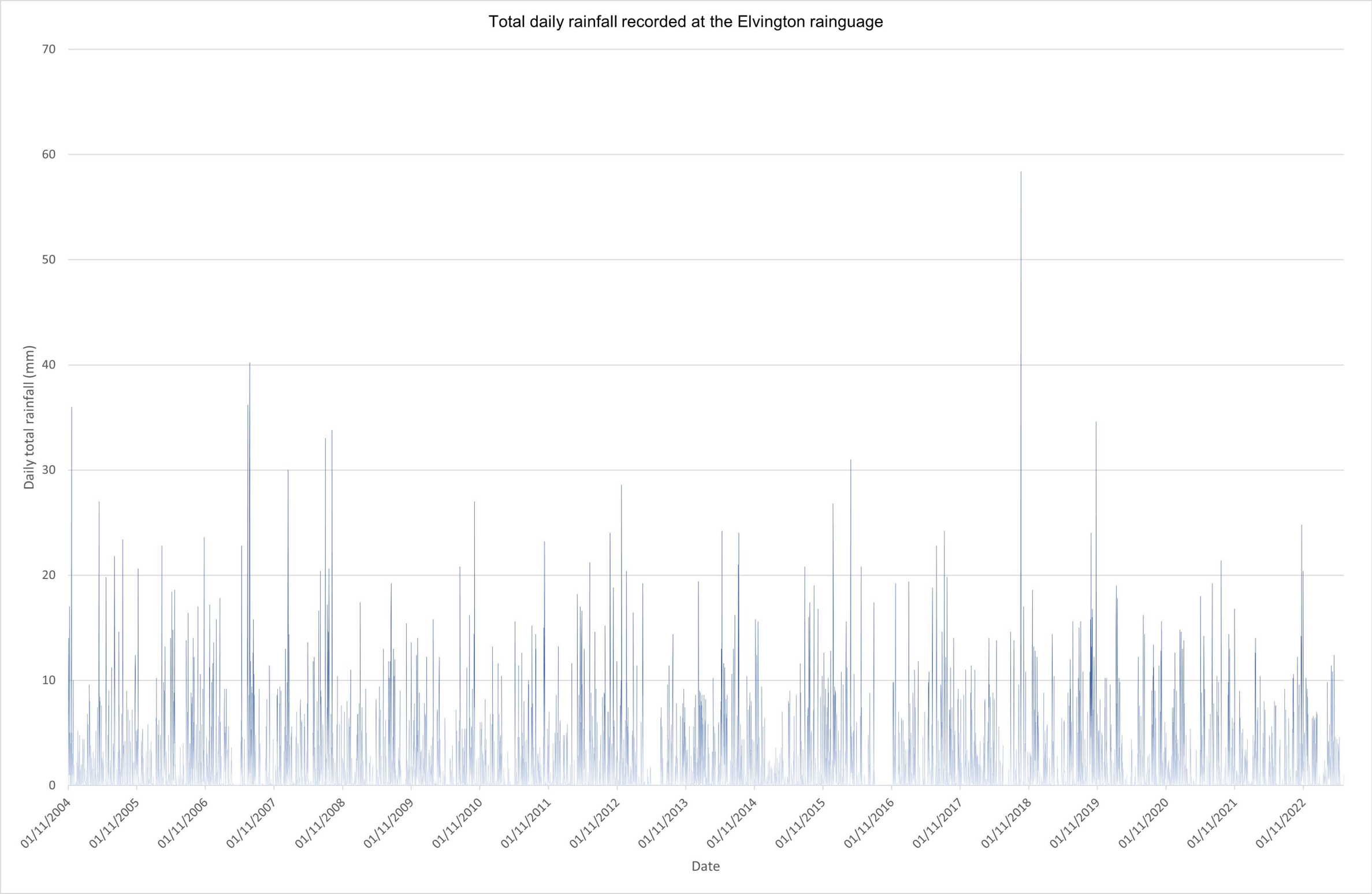


Thickness of the LHFSM (m) (contour lines including colour scale and black text) and groundwater strikes recorded at or at similar elevations to the top of the LHFSM (mAOD) (blue text)



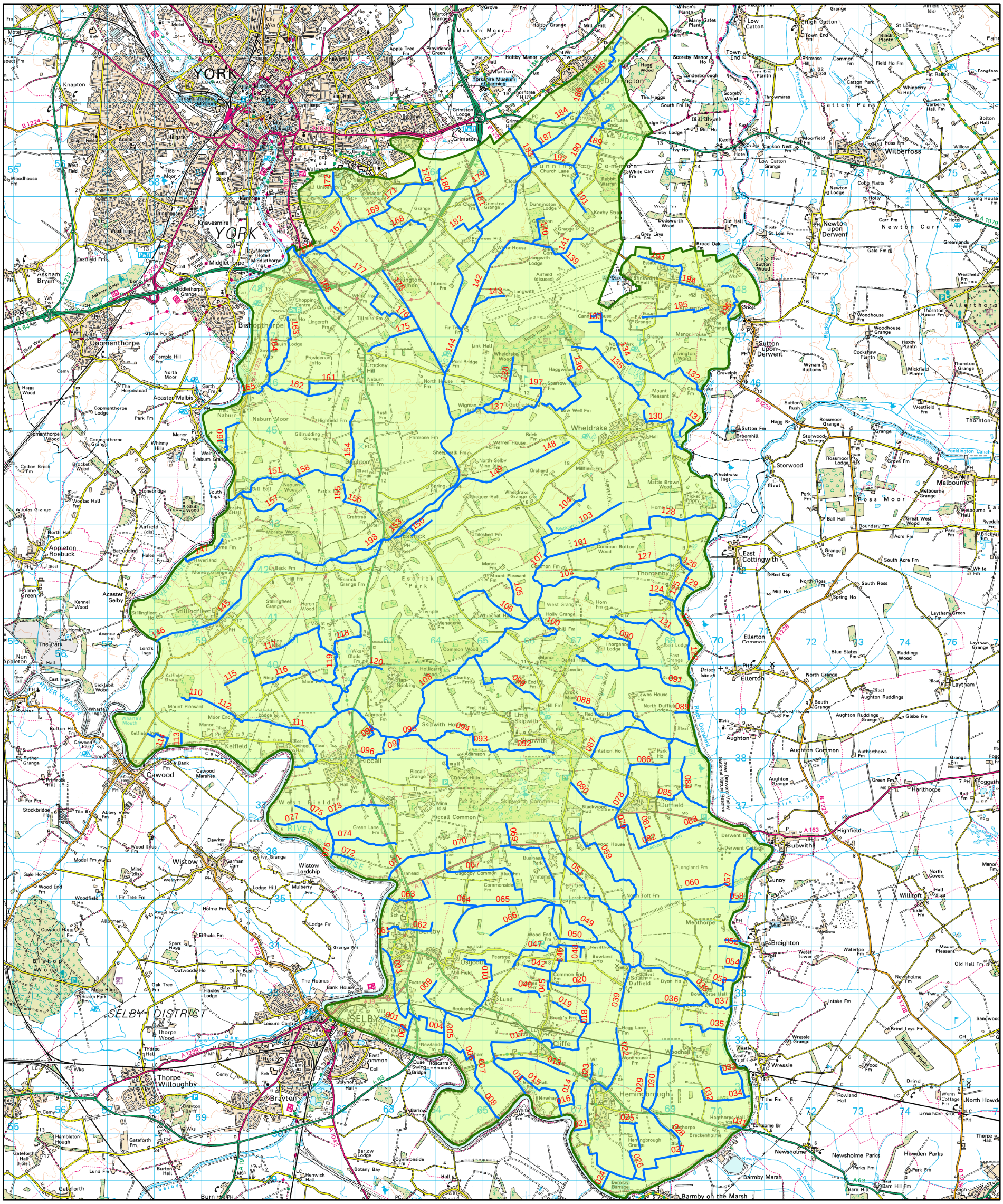
APPENDIX ESSD I

GRAPH SHOWING THE TOTAL DAILY RAINFALL RECORDED AT THE RAINGAUGE AT ELVINGTON


Total daily rainfall recorded at the Elvington rainguage
Daily total rainfall (mm)
70
60
50
40
30
20
10
0
01/11/2004
01/11/2005
01/11/2006
01/11/2007
01/11/2008
01/11/2009
01/11/2010
01/11/2011
01/11/2012
01/11/2013
01/11/2014
01/11/2015
01/11/2016
01/11/2017
01/11/2018
01/11/2019
01/11/2020
01/11/2021
01/11/2022
Date

APPENDIX ESSD J

PLAN SHOWING THE DRAINS IN THE OUSE AND DERWENT DRAINAGE BOARD AREA



York Consortium of Drainage Boards

Ouse and Derwent IDB

Legend

IDB Maintained Watercourse

IDB Boundary

0 1 2 4 Kilometers

North

Watercourses

1 Cherry Orchard Drain
2 Cherry Orchard Drain
3 Barlby Hill Drain
4 Barlby Hill Drain
5 Newlands Drain
6 Thernam hall Drain
7 Newland Clough
8 Barlow Drain
9 Osgodby Syphon Drain
10 Osgodby/Lund Village Drain
11 Goole Hall Clough
12 Goole Hall Clough
13 Old Course of River Ouse Drain
14 Newhay Drain
15 Newhay Drain
16 Newhay Drain
17 Old Mill Field Drain
18 Oxen Lane Drain
19 Fenwick Lane Drain
20 Oxen Lane Drain
21 Hemingborough Oldways Drain
22 Hagg Lane Drain
23 Northfield Drain
24 Barmby Ferry Dyke
25 Barmby Pastures Drain
26 Barmby Pastures Drain
27 Bishops meadow Drain
28 Babthorpe Farms Drain
29 Inner Moor Lane Drain
30 West Hagg Farm Drain
31 Loftsome Bridge Drain
32 Woodhall Drain
33 Hagthrope Clough
34 Hagthorpe Ings Drain
35 Woodhall Lane Drain
36 Holmes House Drain
37 Scarcemoor Dyke
38 Dyon Drain
39 S. Duffield School Drain
40 Common End Drain
41 Kisima Lane Drain
42 Kisima Lane Drain
43 Cliffe Common Drain
44 Cliffe Common Drain
45 Kisima Lane Drain
46 Cliffe Common Drain
47 Cliffe Common Drain
48 Cliffe Common Drain
49 Folly Drain
50 Folly Drain
51 Lowmoor Drain
52 Bowthorpe Ings Drain
53 Bowthorpe Ings Drain
54 Bowthorpe Ings Drain
55 Bowthorpe Ings Drain
56 Bowthorpe Ings Drain
57 N Duffield Ings Clough
58 Menthorpe Ings Drain
59 Nortoft drain
60 100 Acres Drain
61 Barlby Village Ponds
62 Barlby Village Drain
63 Woodclose Drain
64 Crabland Lane Drain
65 Clay Drain
66 Osgodby Park Drain
67 Osgodby Common Drain
68 Ox Gangs Drain
69 Ox Gangs Drain
70 Ricall Common Dyke
71 Sand Lane Drain
72 Angram Lane
73 Marsh Dyke
74 Angram Dyke
75 West Field Dyke
76 Angram Clough
77 Old Ings Dyke
78 Moses Drain
79 Westfield Drain
80 Ladypit Drain
81 Westfield Drain
82 Ladypit Drain
83 Ripley Hole
84 N Duffield Carrs Main Drain
85 N Duffield Village Drain
86 Hugh Field Drain
87 Common Drain (N Duffield)
88 Redmoor Drain
89 Lodge Dyke
90 Thorganby Wood Dyke
91 Peter Dyke
92 Southfield Drain (Skipwith)
93 Line Dyke
94 Holmes Dyke
95 Swinbank Dyke
96 West End Dyke
97 Silversides Drain
98 Garden Dyke
99 Hopney Stable Dyke
100 Rot Hole Dyke
101 Common Drain
102 Dunstall Dyke
103 Keldcarrs Drain
104 Leonard Scales Drain
105 Chatterton Dyke
106 Whinchat Dyke
107 Pallion Dyke
108 Ricall Dam (Gosling Marsh Clough)
109 Scorce Bridge
110 Kelfield Wood Drain
111 Sike Dyke
112 Kelfield Main
113 Kelfield Ings
114 Kelfield Ings
115 Whinney Lane Drain
116 Powell Dyke
117 Heron Dyke
118 Bentley Park Drain
119 Parkhill Dyke
120 Glade Dyke
121 Woodfield Drain
122 Thorganby Grange Clough
123 Thorganby Clough
124 Mill Hill Drain
125 Ings Drain
126 Habb Lane Drain
127 Southmoor Drain
128 Scarn Dyke
129 Freer Dyke
130 Broad Highway Drain
131 Carrs Drain
132 Cheesecake Dyke
133 Heeling Dyke
134 Heeling Dyke
135 Hardmoor Drain
136 Hallwood Drain
137 Dunning Dyke
138 Arnhills Dyke
139 Gypsey Wood Drain
140 Grimstone Wood Drain
141 Acomb Drain
142 Langwith Lane Drain
143 Langwith House Drain
144 Pool Bridge Dyke
145 Stillingfleet Beck
146 Stillingfleet Ings
147 Moreby Ings Drain
148 Horsecourse Dyke
149 Halfpenny Dyke
150 Carrs Drain
151 Naburn Wood Dyke
152 Carrs Drain
153 Bridge Dyke
154 Deighton Drain
155 Park Farm Drain
156 Deighton Drain
157 Attley Dyke
158 Whiteley Drain
159 Naburn Lock drain and Ings
160 Naburn Lock drain and Ings
161 Howden Dyke
162 Gravel Pit Dyke
163 Asylum Drain
164 Acres House Dykes
165 Howden Dyke
166 Tunnel Drain
167 Germany Beck
168 Outgang Drain
169 Black Drain
170 Low Lane Drain
171 Low Lane Drain
172 Low Moor Drain
173 Low Moor Drain
174 Fulford Ings
175 Crockey Hill Drain
176 Dicksons Dyke (North)
177 Dicksons Dyke (South)
178 Heslington Common Dyke
179 Hunts Drain
180 Hunts Drain
181 Ox Close Drain
182 Ox Close Drain
183 Elvington Lane Drain
184 Ings Drain (Dunnington)
185 Scawder Drain
186 Scawder Drain
187 Common Drain (Dunnington)
188 Howden Jury Drain
189 Hagg Lane Drain
190 Hagg Lane Drain
191 Parson Drain
192 Tilmire Drain
193 Elvington Industrial Estate Dyke
194 Elvington Village Dyke
195 Bound Dyke
196 Horse Dyke
197 Dunning Dyke
198 Old Course of Bridge Dyke

APPENDIX ESSD K

IDB CONSENT REFERENCE 925

OUSE & DERWENT INTERNAL DRAINAGE BOARD

(A Member of the York Consortium of Drainage Boards)

==========

Thursday 29 September 2022

Mr J Slater
Plasmor Limited
PO Box 44
Womersley Road
Knottingley
West Yorkshire
WF11 0DN

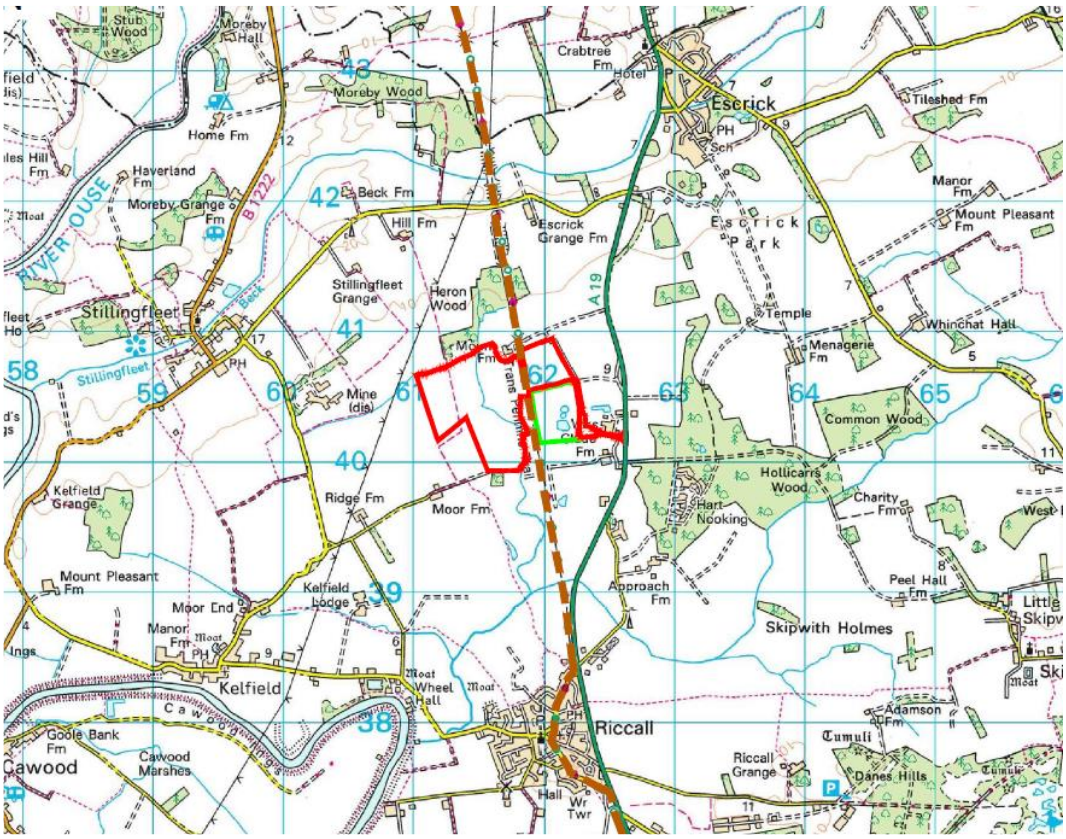
By e-mail only: Julian.Slater@plasmor.co.uk

Dear Mr Slater

Application for Consent in respect of the discharge of surface water into watercourses within/around Escrick Quarry as part of the de-watering process of the mineral extraction process
Our Reference: Consent – 925

I refer to your application for consent in respect of the discharge of surface water into watercourses within/around Escrick Quarry as part of the de-watering process of the mineral extraction process.

The location of the quarry is shown by red edging on the below plan:



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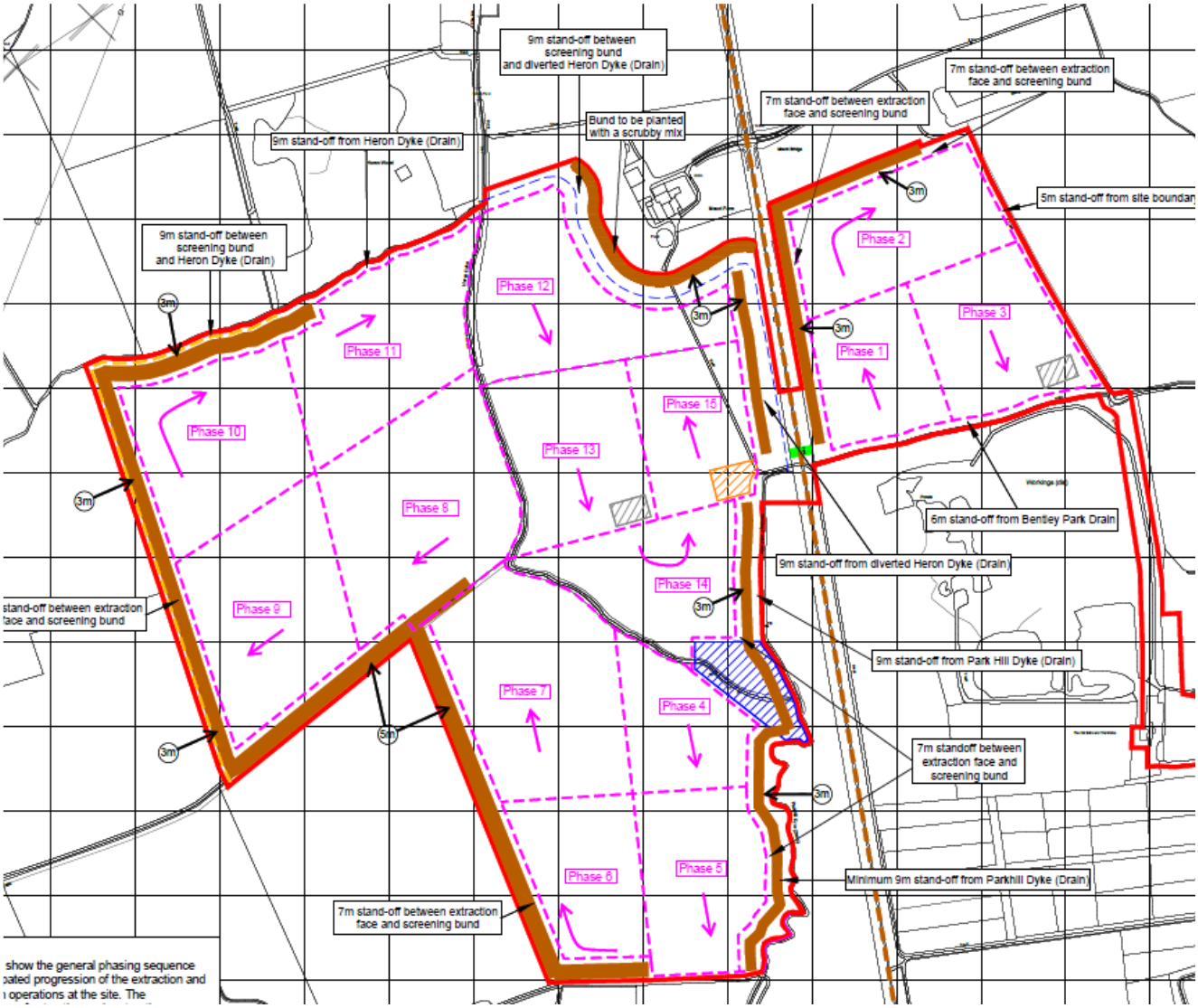
The different phases of the mineral extraction are shown on the below plan:



The discharge rate to be applied is 1.4 litres per second per hectare. The discharge rate for each phase is shown in the below table:

Working area	Area (m^2)	Number of discharge points[2]	Maximum discharge (l/s)[1,3]	Maximum discharge (m^3/d)
Phase 1	*22,000*	-	*3.1*	*268*
Phase 2	*31,500*	-	*4.4*	*380*
Phase 3	*28,500*	-	*4.0*	*346*
Phase 1 to 3	**82,000**	**1**	**11.5**	**994**
Phase 4	*22,200*	-	*3.1*	*269*
Phase 5	*33,400*	-	*4.7*	*404*
Phase 6	*24,800*	-	*3.5*	*300*
Phase 7	*47,500*	-	*6.7*	*575*
Phases 4 to 7	**127,900**	**3**	**17.9**	**1,547**

Phase 8	*48,900*	*-*	*6.8*	*588*
Phase 9	*40,500*	*-*	*5.7*	*492*
Phase 10	*36,300*	*-*	*5.1*	*441*
Phase 11	*37,700*	*-*	*5.3*	*458*
Phases 8 to 11	**163,400**	**3**	**22.9**	**1,979**
Phase 12	*38,200*	*-*	*5.3*	*458*
Phase 13	*33,300*	*-*	*4.7*	*406*
Phase 14	*29,000*	*-*	*4.1*	*354*
Phase 15	*24,200*	*-*	*3.4*	*294*
Phases 12 to 15	**124,700**	**4**	**17.5**	**1,512**

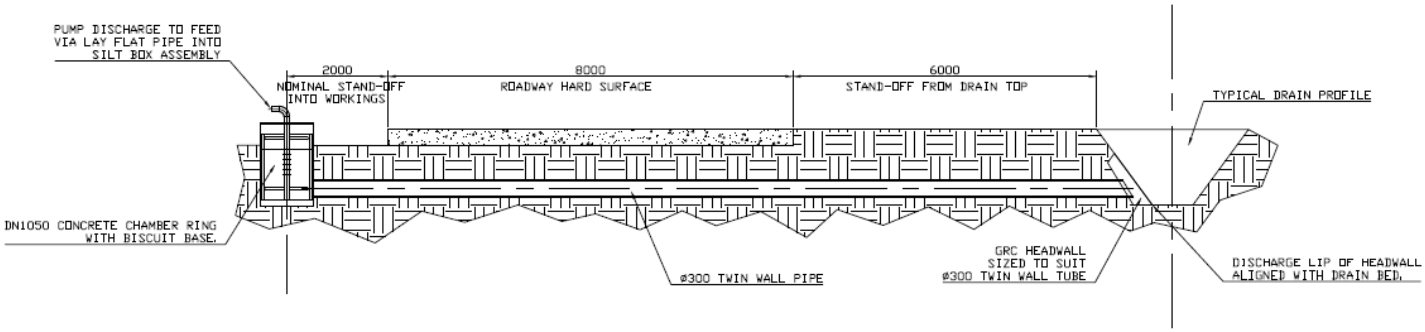
Notes

1. Maximum discharge based on working area and "greenfield site" discharge limit of 1.4 litres per second per hectare as specified at Condition 40 Condition of planning condition reference C8/2019/0917/CPO.

2. For phases 4 to 15 (Western Area) the maximum discharge applies to the combined discharge from discharge points adjacent to the working areas. The discharge points are shown on Figures 3 to 6. The discharge points are indicative and may change as the mineral extraction operations progress. The discharge points, however, will always be to the adjacent watercourse and the calculated discharge limits will not be exceeded. For instance, if two discharge points were installed for Phases 1 to 3 the maximum combined overall discharge would not exceed 11.5l/s or 994m^3/d.

3. The phase totals (**bold grey highlighted**) comprise the totals presented in Table 1 of Schedule 1 to the Application for Consent for Works Affecting Watercourses. The maximum discharge for individual phases is included to show the approximate contribution from each individual phase only.

Any discharge to the watercourse shall be in the form shown in the below diagram:



The extraction process and therefore the proposed discharge into the watercourse from the de-watering process is expected to be until around 2053.

This consent is granted strictly on this basis and is only applicable whilst the mineral extraction is taking place at the Quarry during that time.

The Board, in pursuance of their powers under both the Land Drainage Act (1991) and their Byelaws, hereby consent to the works strictly on the basis of the following:

a) The works will be carried out in accordance with the "General Byelaw Requirements" referred to overleaf.

b) The works will be carried out in accordance with the description, specifications, and other particulars given on the Application Form and ancillary documentation, as well as any correspondence with the Board.

   The Board is in particular referring to the amended Consent Application sent on 15 August 2022 and the revised Table 1 sent on 14 September 2022.

c) With regards to any outfall structure installed:

   i) The headwall structure must be properly recessed into the embankment.

   ii) The outfall pipe must be recessed into the embankment and not protrude into the usual flow of the watercourse. This is to minimise the risk of damaging the pipe when carrying out future maintenance works.

   iii) Markers must be put in place to identify the location of the installation. Again, this is to make the location of the outfall pipe clear when carrying out future maintenance works.

   iv) The applicant / landowner shall be wholly responsible for maintaining and repairing the headwall structure and outfall pipe.

   v) The applicant / land owner shall regularly clean the outfall apron to prevent the build-up of any silt.

   vi) When an outfall is removed, any damage to the embankment and the watercourse shall be made good, and reasonable notice provided to the Board to inspect the same.

d) With regards to the discharge rates:

   i) The discharge rates shall never exceed more than 1.4 litres per second per hectare for those areas which are being de-watered for the mineral extraction process. The agreed discharge rates for each phase are set out above.

   ii) The Board reserves the right to inspect the installation periodically to ensure that the discharge rate noted above remains.

   iii) For the avoidance of any doubt, you must obtain the Board's consent for any increase in the rate of discharge.

e) Any structure shall be the responsibility of the applicant. The responsibility for the continued maintenance of the installation will remain with the applicant and/or the land owner.

f) The Board claims no ownership of any watercourse, land or structure.

g) The applicant is responsible for securing any and all other permissions or approvals required in order to undertake this work including, but not limited to, land owner approval, planning

permission, highway authority approval, utility company approval, etc. The granting of this Consent does not imply any rights in this respect.

h) The applicant shall ensure that appropriate steps are taken to prevent pollution and debris entering the watercourse. Any items of debris entering the watercourse shall be removed promptly.

i) The Board will not accept silty water being discharged into the watercourse. If we become aware of the same coming from the site, then we will consider further action.

j) Any damage caused to the watercourse or its embankments, as a result of these works, must be repaired (at the applicants expense) to the Board's satisfaction.

k) No other structure, building, planting, fencing or other obstruction should be within 9 metres of the bank top of a watercourse without the Board's prior written consent.

l) Any refuelling of plant or equipment shall not be undertaken adjacent to the watercourse and all measures shall be taken to prevent fuel entering the open channel.

m) No plant equipment should be driven or stored on permeable surfaces within 1.5 metres of the bank top.

This Consent is strictly limited to the proposed works as outlined and any amendment must be communicated to the Board.

The Board, by granting Consent for these works, accepts no liability for any loss or damage, which may arise from the works.

If you have any questions about this Consent please do not hesitate to contact me.

Yours sincerely,

C. Gill

Charlotte Gill
Planning Officer
Email: Planning@yorkconsort.gov.uk

CONSENT FOR WORKS AFFECTING A WATERCOURSE
NOTES

GENERAL BYELAW REQUIREMENTS

Consent for the works does not give exemption from the requirements of the Act or of the Board's Byelaws beyond what is specifically consented, nor does it include any temporary works which may be required in the watercourse to carry out the consented works, or the damming or blocking of any watercourse or pipe.

A copy of the Byelaws may be obtained from the Board on request, but where the works have no exceptional features, it will suffice if the following guidelines are followed:-

1. No material intended for or arising from the works and no equipment or other item for use in executing the works should be stored or disposed of:
   (a) in the watercourse, or
   (b) in a position where it may fall or be washed into the watercourse.

   Any such material, equipment or other item in the watercourse should be removed immediately.

2. At all times during the course of the works the bank and any floodbank and foreshore of the watercourse should be kept clear of any such material, equipment and other item unless actually in use.

3. All surplus materials and all plant and equipment must be cleared from the site to the approval of the Board by the date specified for the completion of the works.

SPECIFICATION – GENERAL

4. The width between the banks of the watercourse shall not be diminished except with the prior written approval of the Board.

5. At all times during the course of the works the existing bank and any floodbank of the watercourse shall be preserved, or an adequate alternative flood barrier shall be provided and maintained to the full height of the bank and existing floodbank until the original bank and floodbank have been reinstated to the written approval of the Board.

6. If the execution of the works requires passage on to or over a floodbank of the watercourse, proper means for such a passage shall be provided by forming a ramp or ramps of easy gradient, surfaced with stone or other suitable material. Any such ramp shall be removed on completion of the works. The level of the floodbank crest must not be reduced.

7. Every part of the banks and channel of the watercourse which has been affected by the works shall be reinstated by replacement of topsoil and re-seeding or by turf or stone pitching to prevent scour to the approval of the Board.

PROCEDURES

8. The work must be completed within the time specified in the consent.

9. Written notice must be given to the Board at least 7 days before work starts.

10. The Clerk and/or the Board's Engineer is authorised to act on behalf of the Board for all purposes of these notes.

OTHER APPROVALS REQUIRED

11. Any planning or other permission required for the works must be obtained by the applicant.

12. Consent by the Board will not authorise any obstruction or interference with a right of way, whether public or private. Approval for doing so must be obtained by the applicant from the Highway Authority or from the private owner or occupier affected as the case may be.

13. The consent relates to the flood defence aspects of the proposed works. In the case of a proposed discharge to the watercourse a separate consent is required from the Board and may also be required from the Environment Agency under the Water Act 1989.

14. The applicant must make his own arrangements with any owner or occupier of land which may be affected by the works.

15. In the case of the construction or alteration of a culvert the consent of the District Council in whose area the works lie is also required under section 263 of the Public Health Act 1939.

16. The provisions of the Salmon and Freshwater Fisheries Act 1975 and the provisions of the Water Resources Act 1991 relating to Fisheries may also apply.

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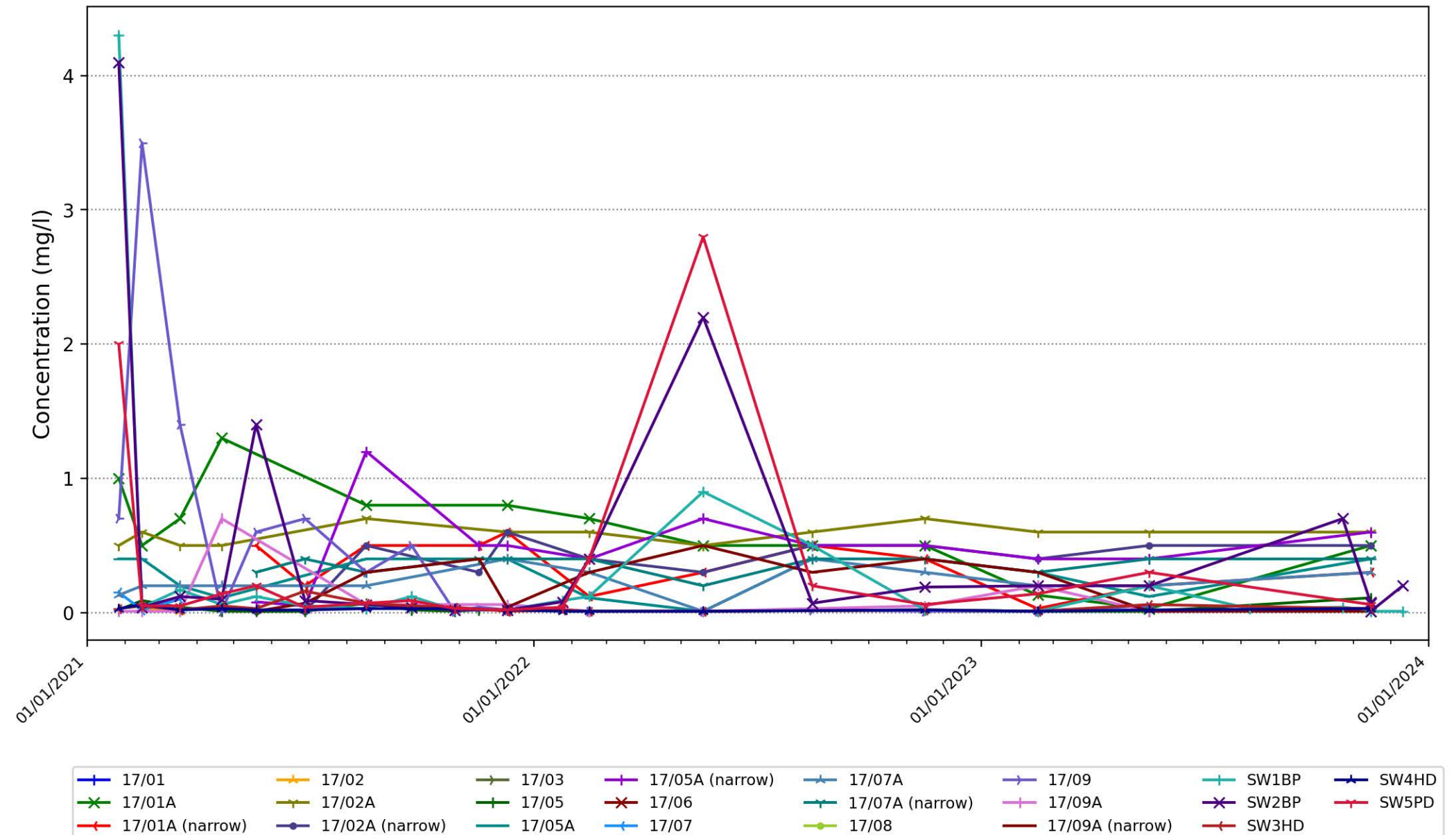
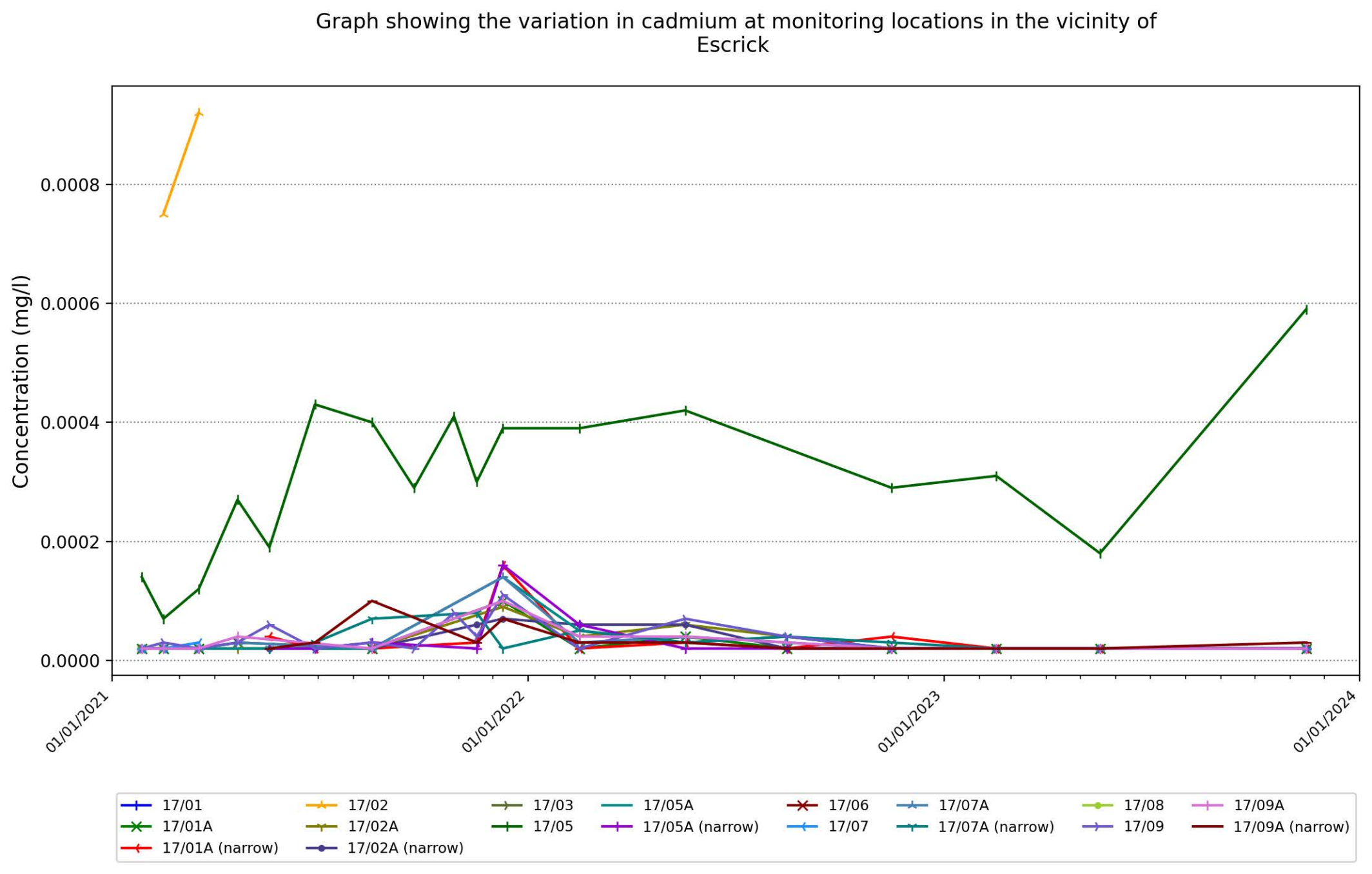
APPENDIX ESSD L

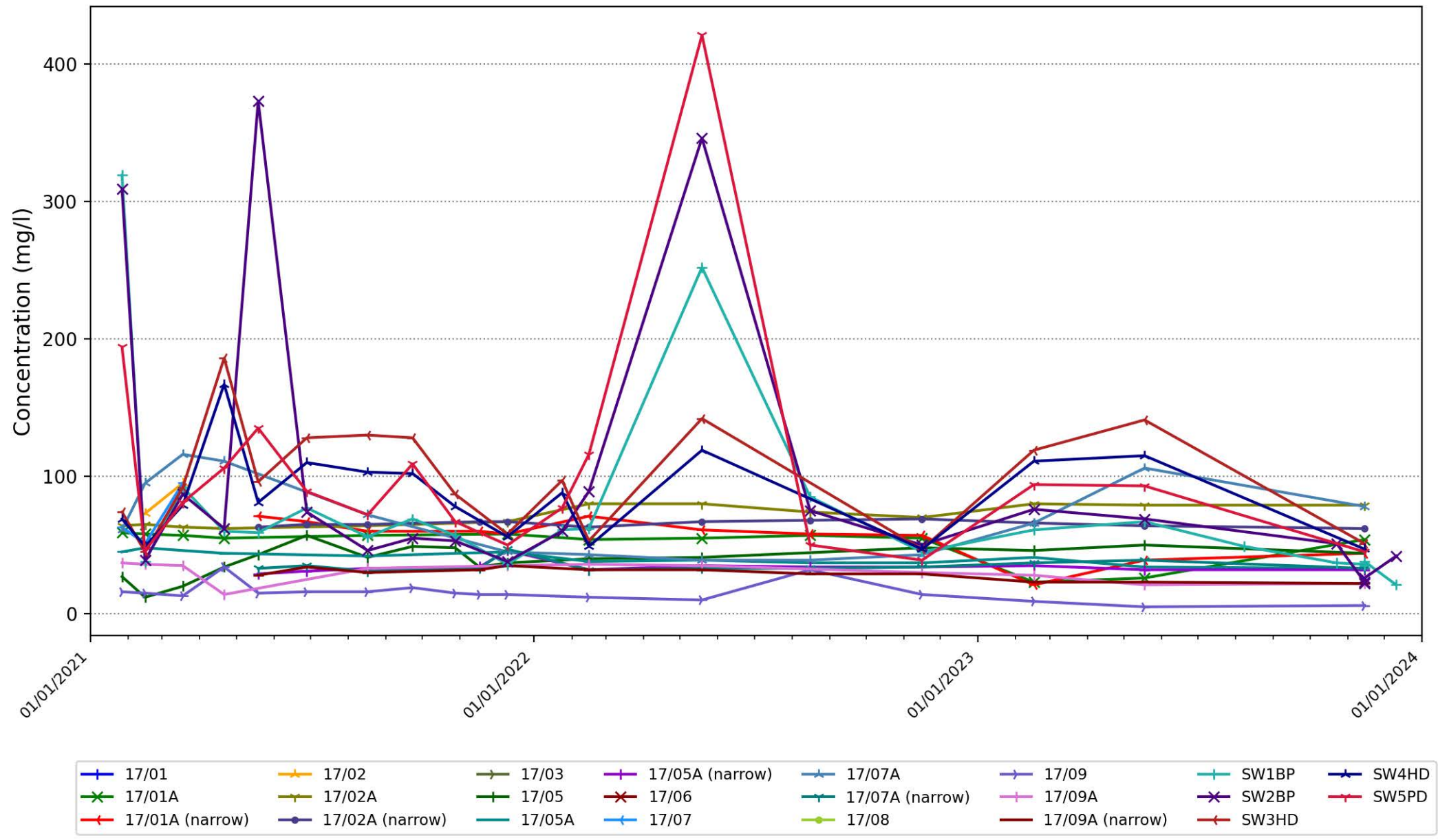
SURFACE WATER AND GROUNDWATER QUALITY CHEMOGRAPHS

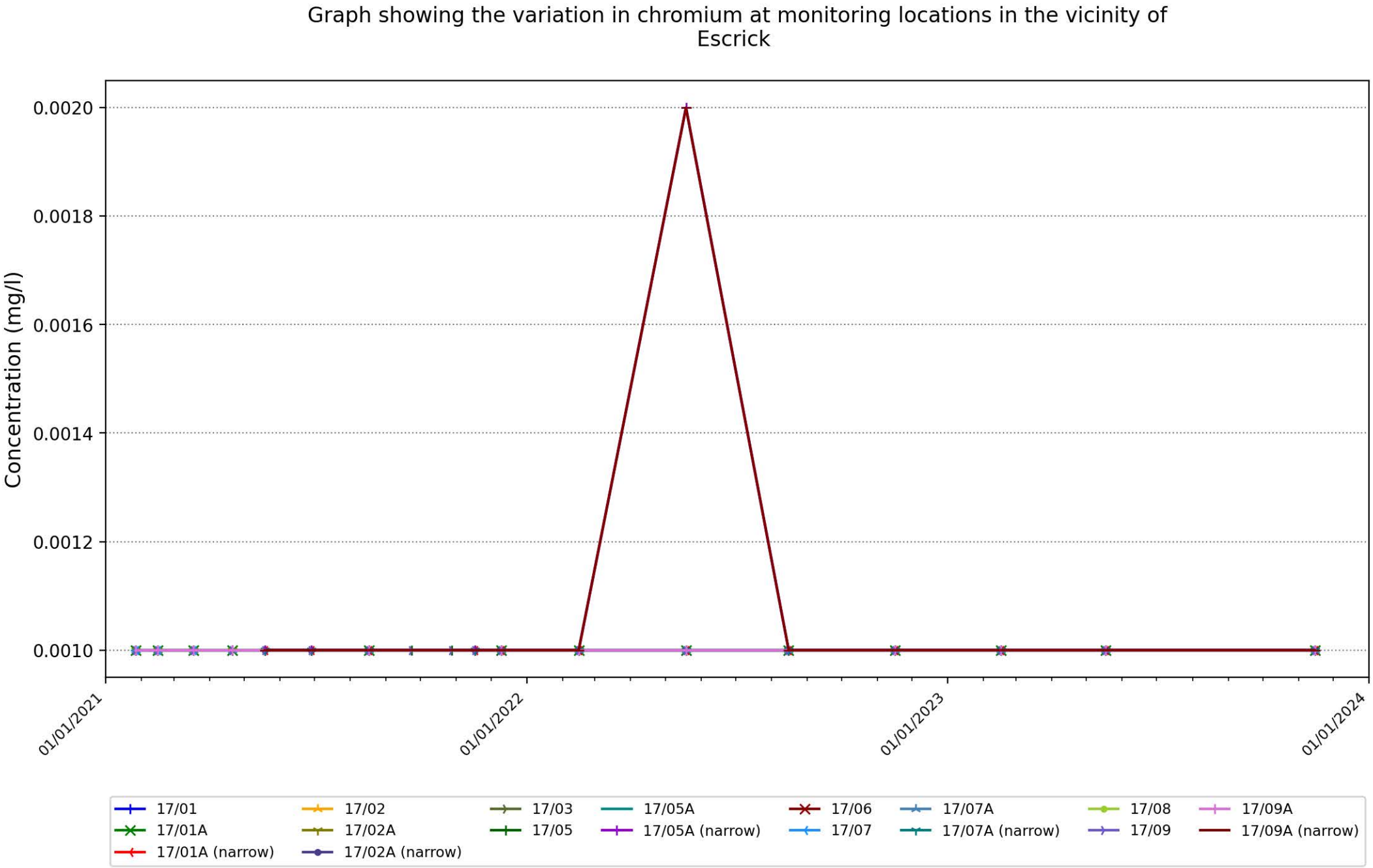
Graph showing the variation in ammoniacal nitrogen at monitoring locations in the vicinity of Escrick



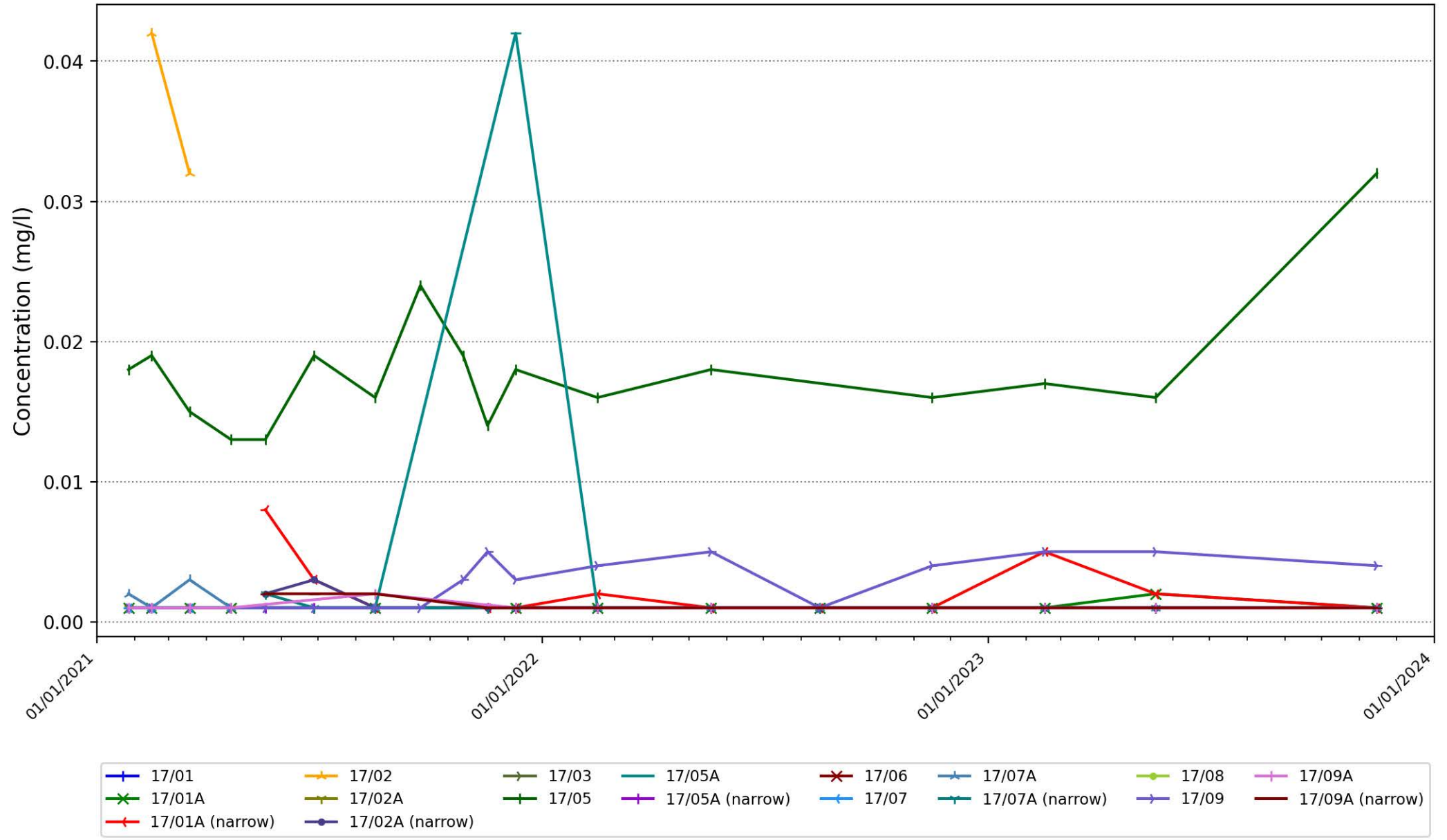

Graph showing the variation in cadmium at monitoring locations in the vicinity of Escrick
Concentration (mg/l)
0.0008
0.0006
0.0004
0.0002
0.0000
01/01/2021
01/01/2022
01/01/2023
01/01/2024
17/01
17/01A
17/01A (narrow)
17/02
17/02A
17/02A (narrow)
17/03
17/05
17/05A
17/05A (narrow)
17/06
17/07
17/07A
17/07A (narrow)
17/08
17/09
17/09A
17/09A (narrow)

Graph showing the variation in chloride at monitoring locations in the vicinity of Escrick

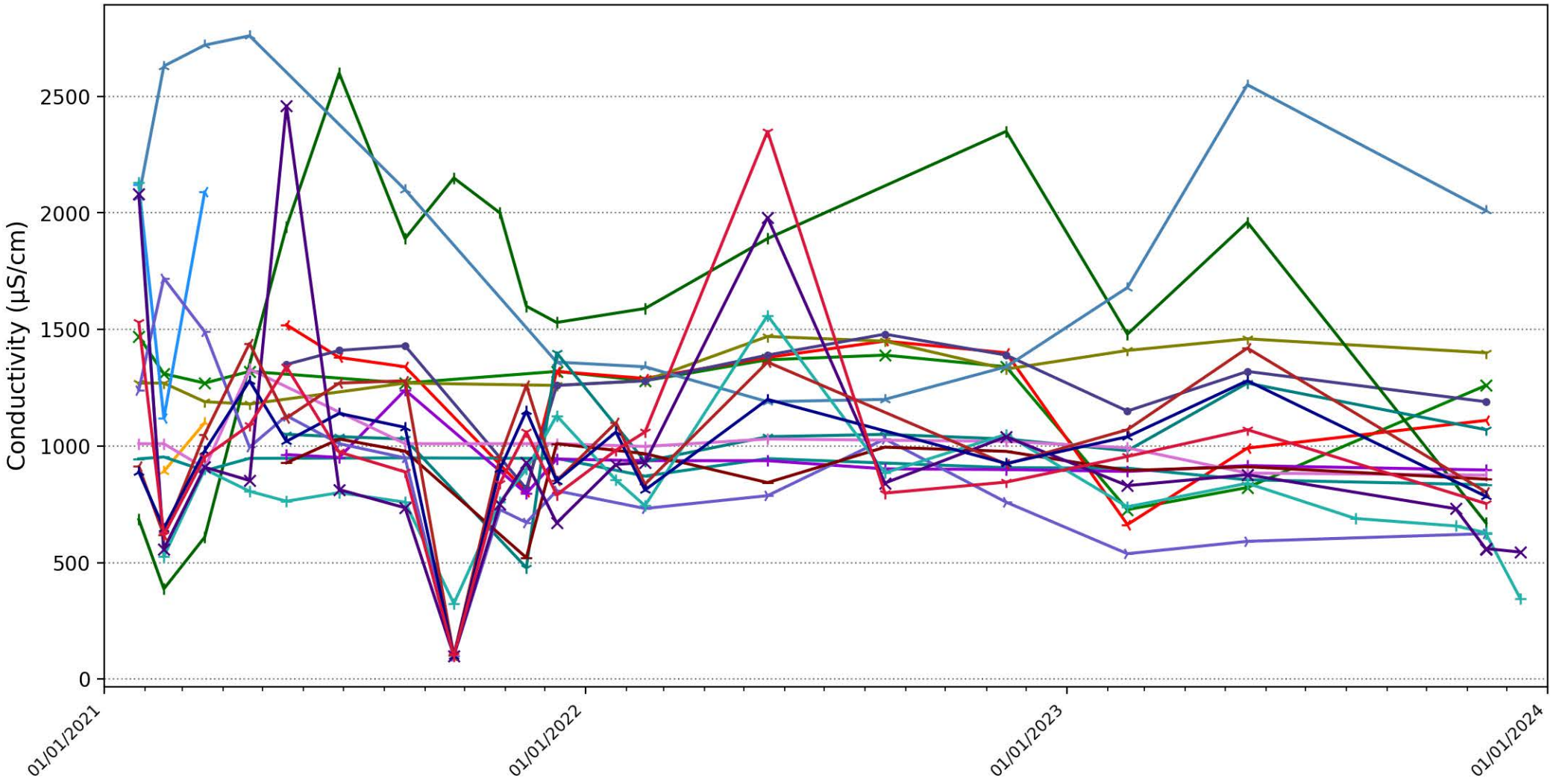


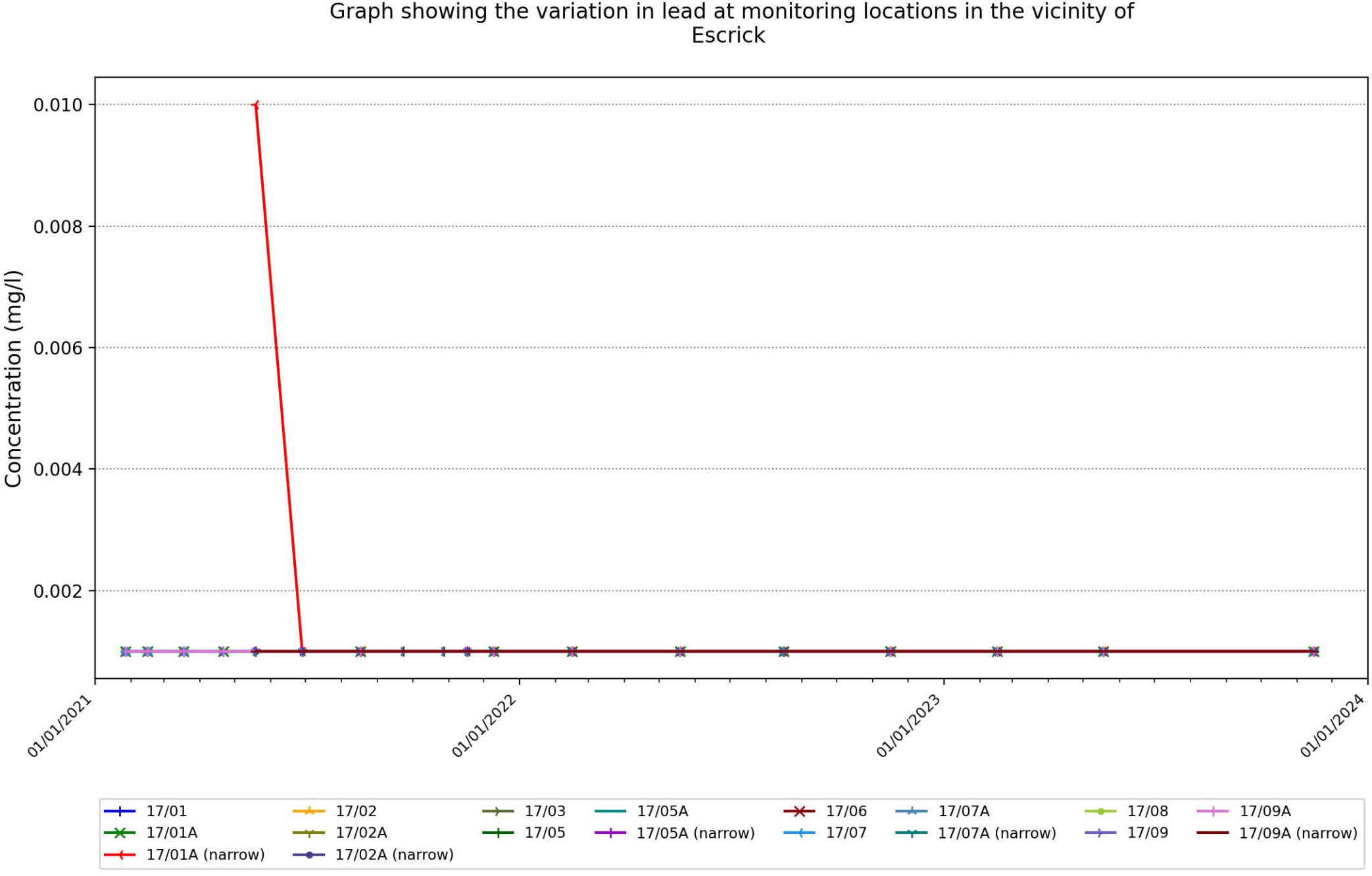

Graph showing the variation in chromium at monitoring locations in the vicinity of Escrick
Concentration (mg/l)
0.0020
0.0018
0.0016
0.0014
0.0012
0.0010
01/01/2021
01/01/2022
01/01/2023
01/01/2024
17/01
17/01A
17/01A (narrow)
17/02
17/02A
17/02A (narrow)
17/03
17/05
17/05A
17/05A (narrow)
17/06
17/07
17/07A
17/07A (narrow)
17/08
17/09
17/09A
17/09A (narrow)

Graph showing the variation in copper at monitoring locations in the vicinity of Escrick

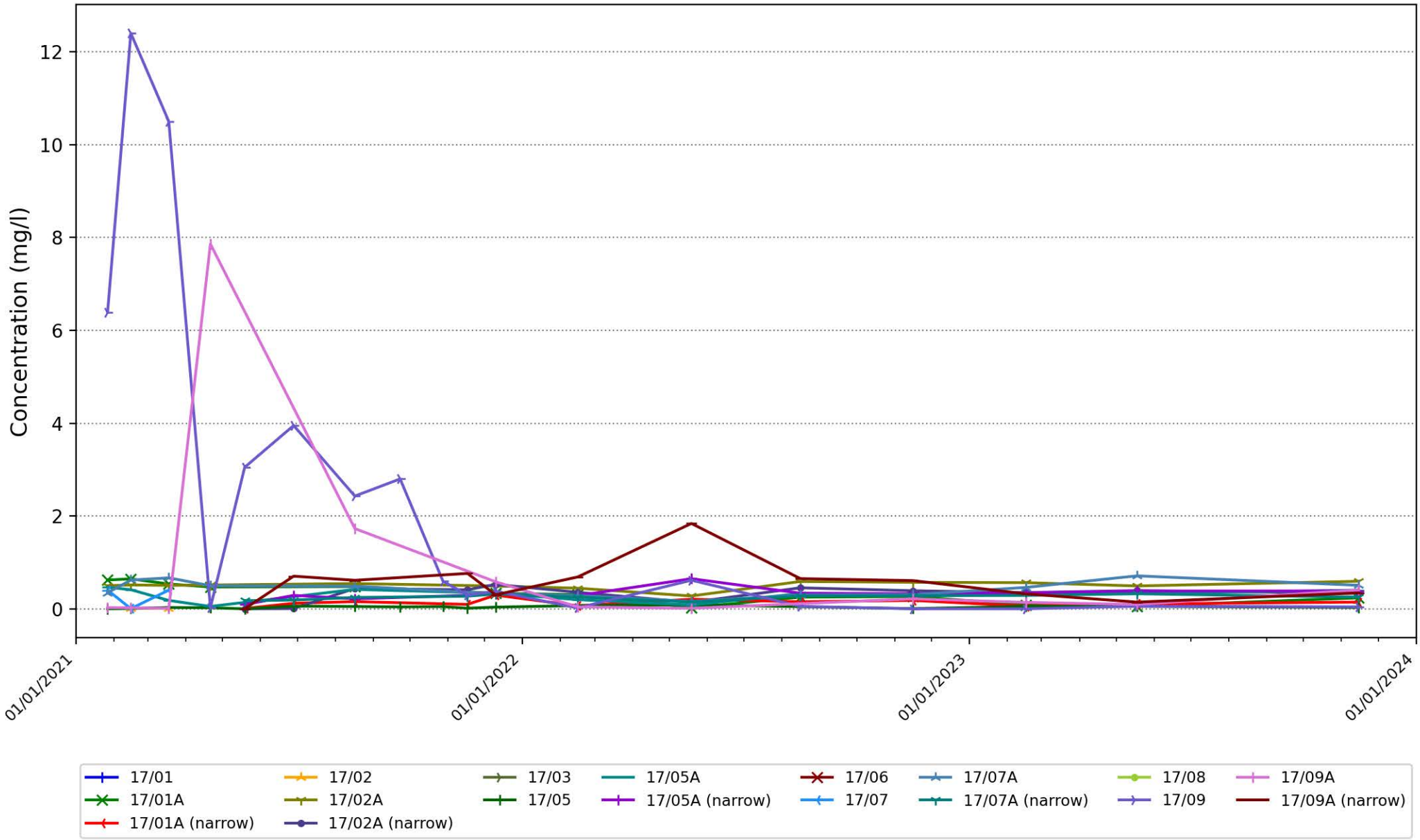


Graph showing the variation in electrical conductivity at monitoring locations in the vicinity of Escrick

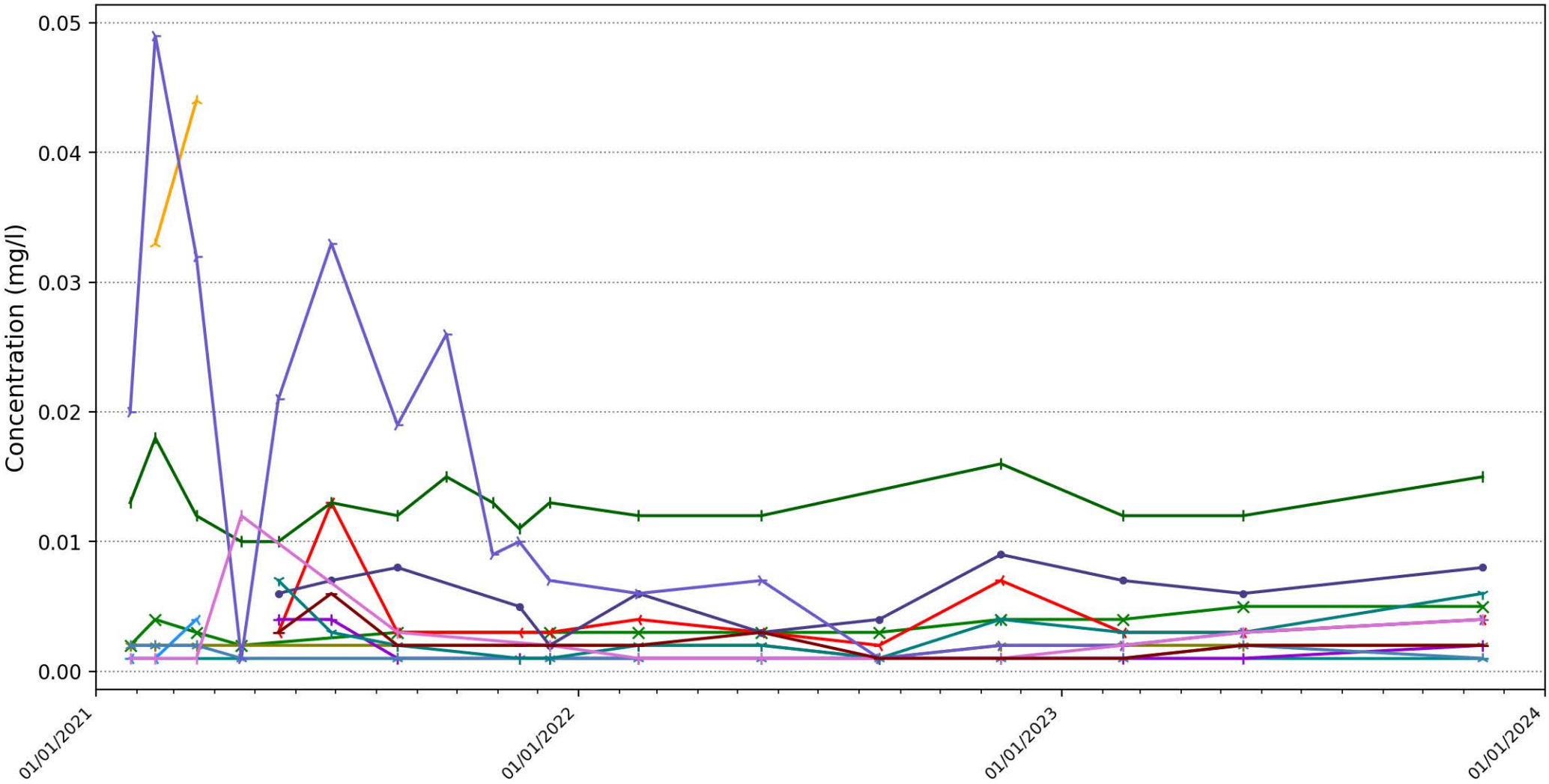



Graph showing the variation in lead at monitoring locations in the vicinity of Escrick
Concentration (mg/l)
0.010
0.008
0.006
0.004
0.002
01/01/2021
01/01/2022
01/01/2023
01/01/2024
17/01
17/01A
17/01A (narrow)
17/02
17/02A
17/02A (narrow)
17/03
17/05
17/05A
17/05A (narrow)
17/06
17/07
17/07A
17/07A (narrow)
17/08
17/09
17/09A
17/09A (narrow)

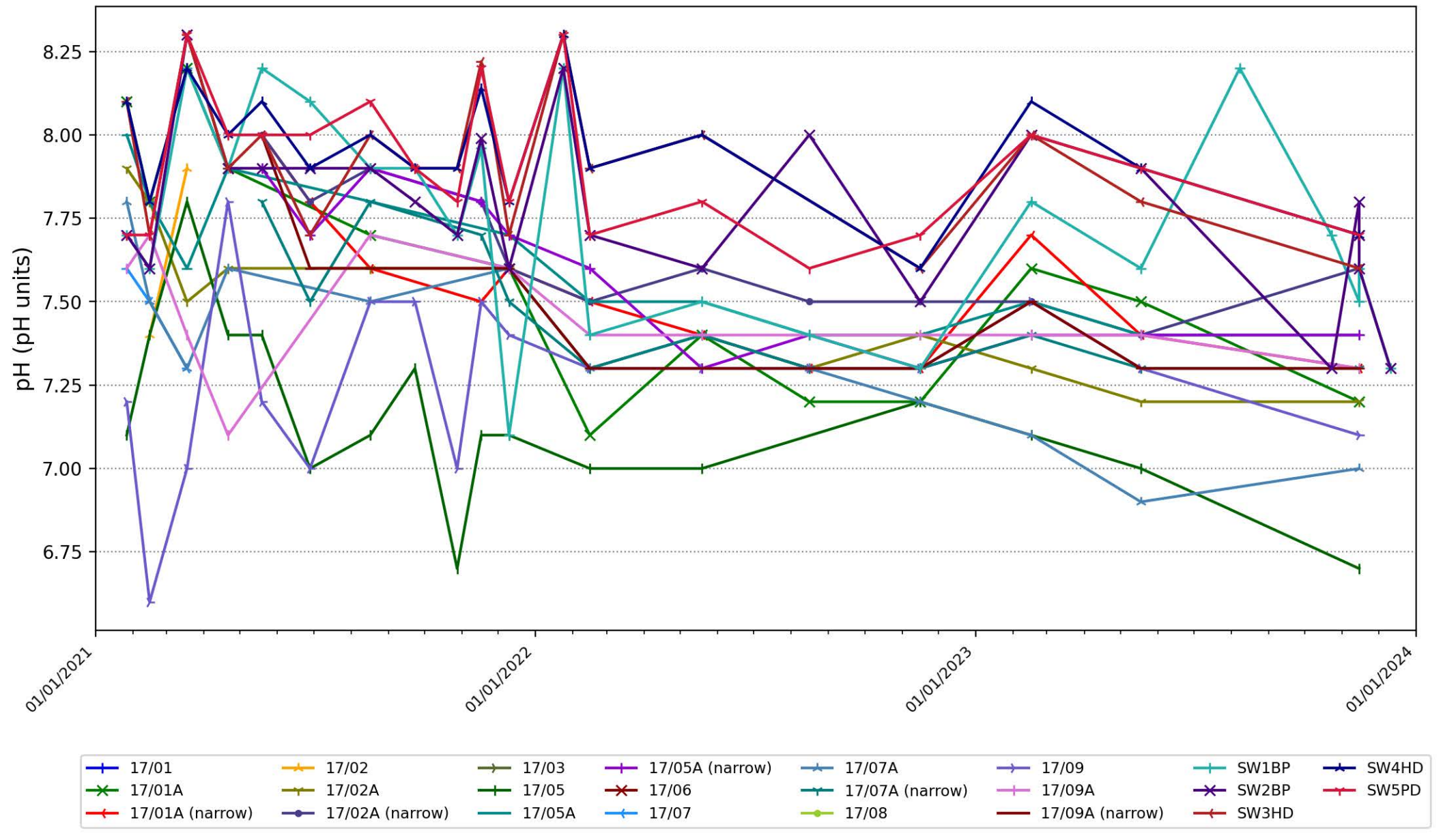
Graph showing the variation in manganese at monitoring locations in the vicinity of Escrick



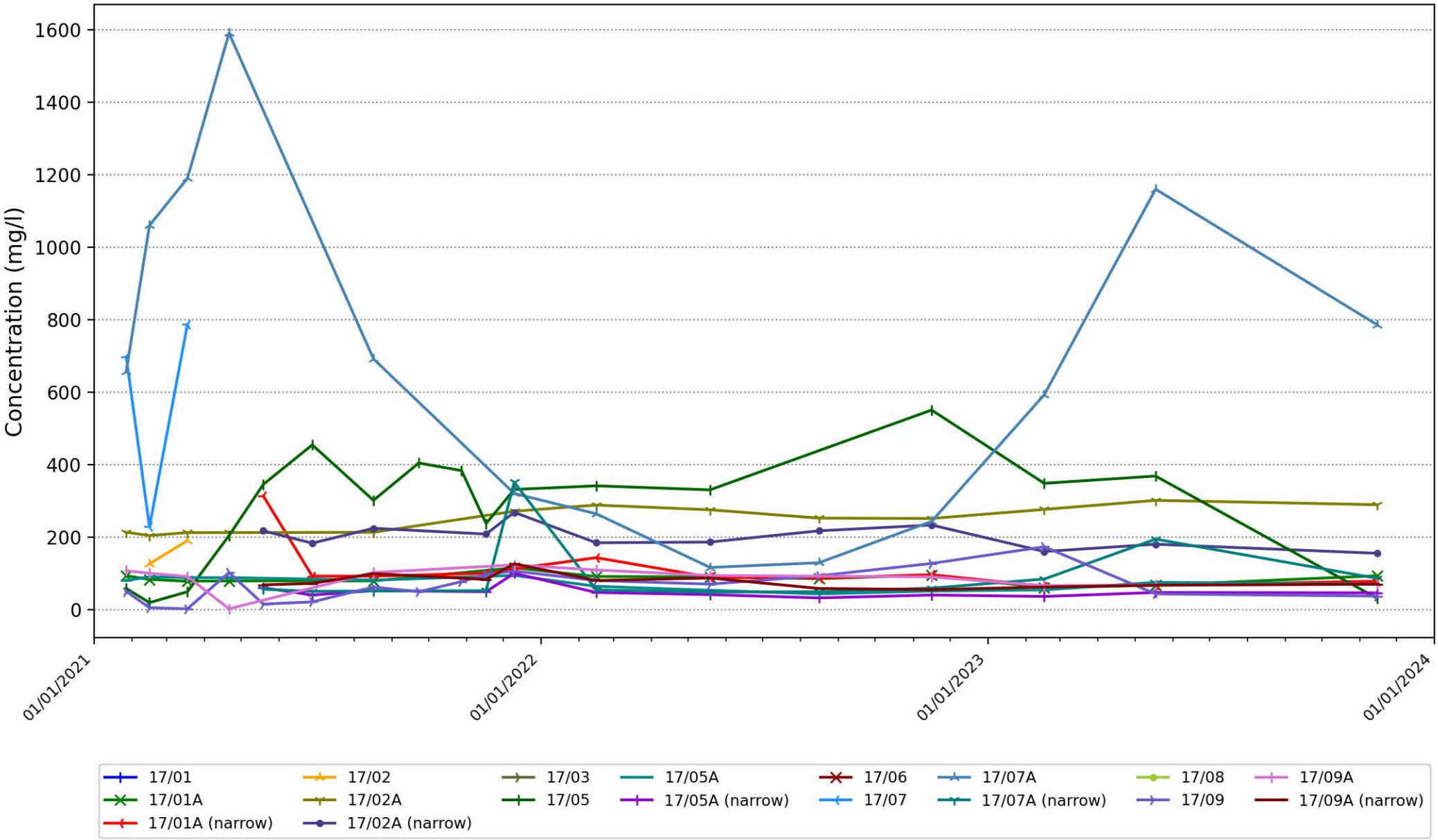
Graph showing the variation in nickel at monitoring locations in the vicinity of Escrick



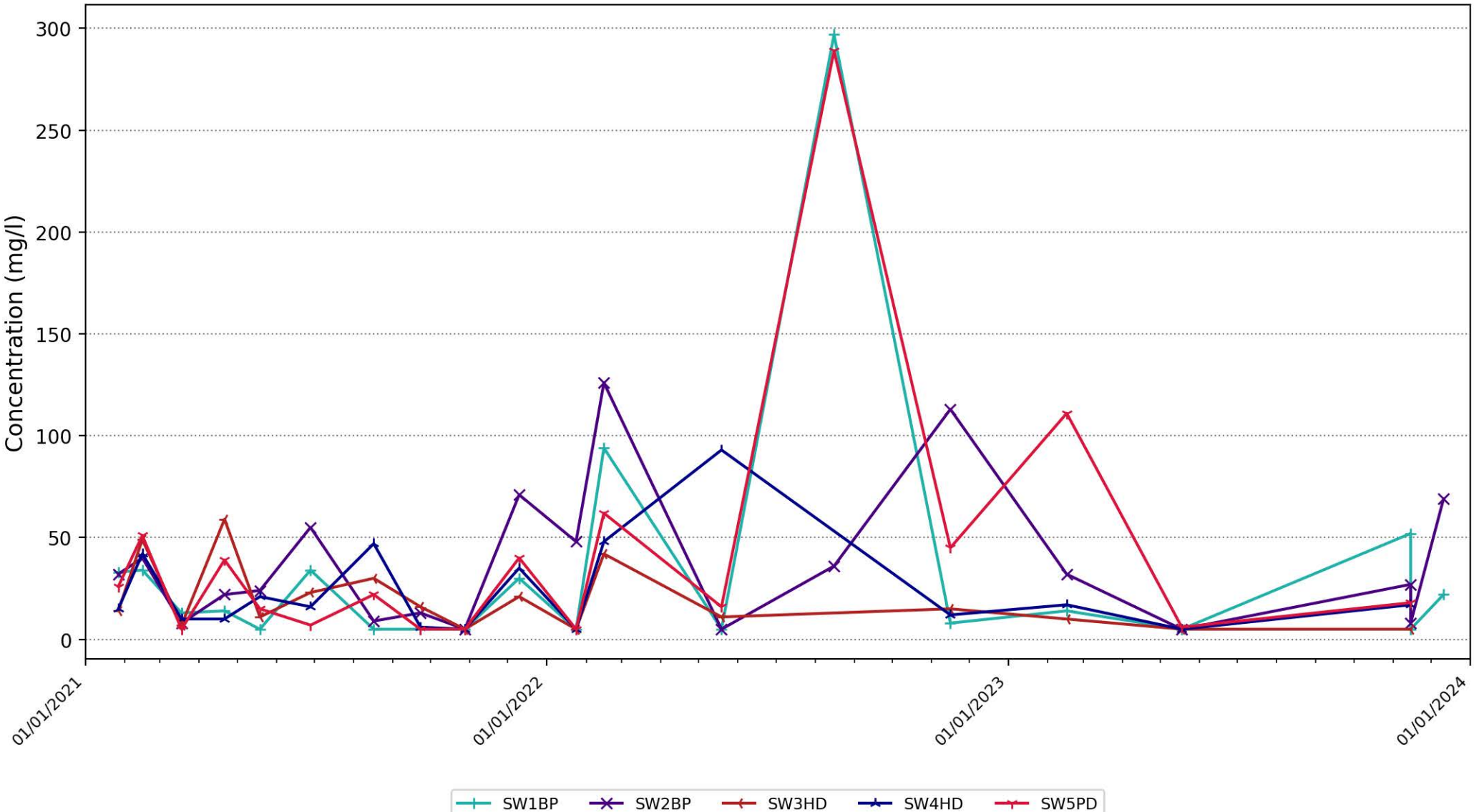
Graph showing the variation in pH (pH units) at monitoring locations in the vicinity of Escrick

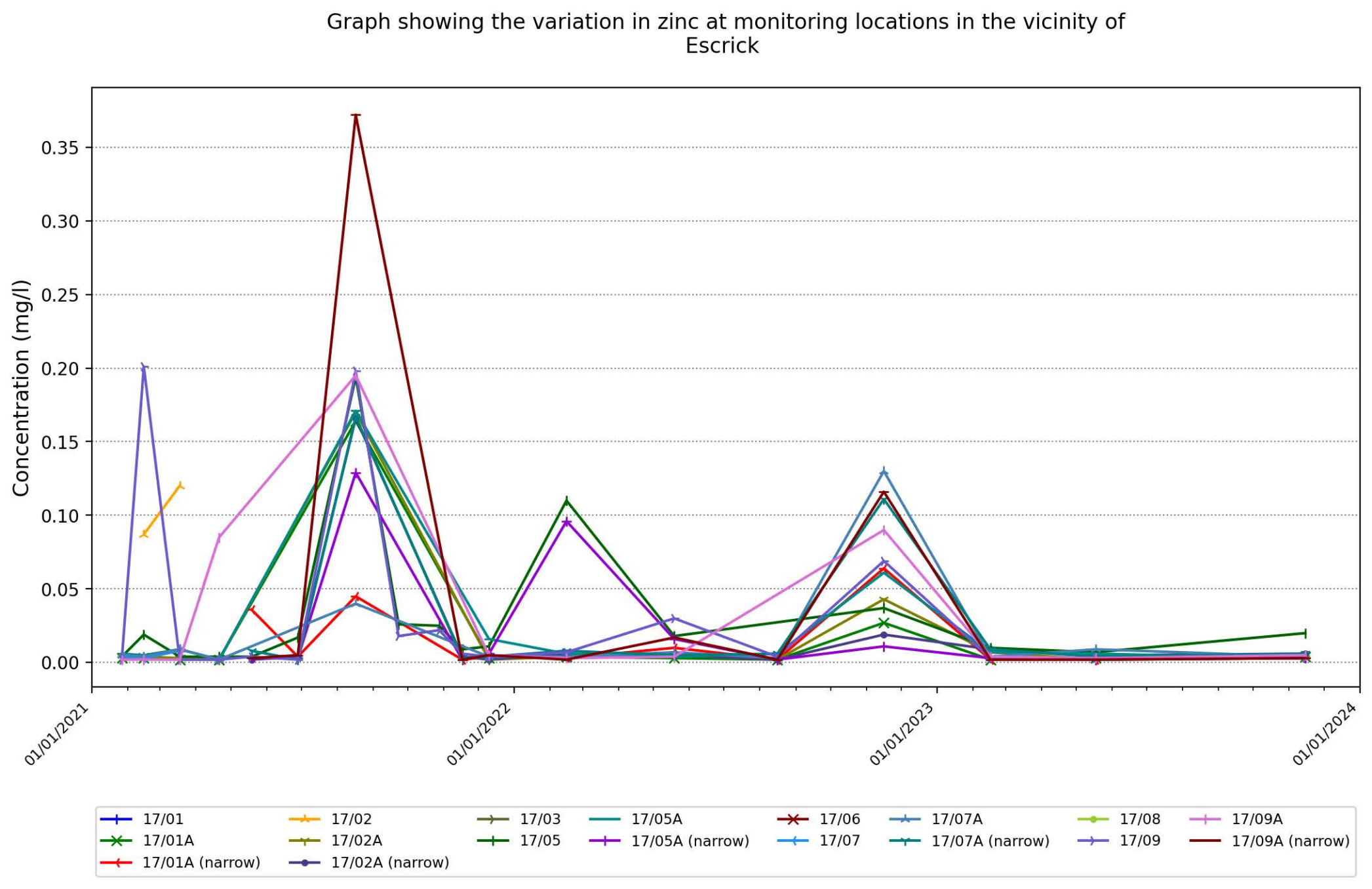


Graph showing the variation in total sulphur as SO_4 (dissolved) at monitoring locations in the vicinity of Escrick



Graph showing the variation in total suspended solids at monitoring locations in the vicinity of Escrick




Graph showing the variation in zinc at monitoring locations in the vicinity of Escrick
Concentration (mg/l)
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
01/01/2021
01/01/2022
01/01/2023
01/01/2024
17/01
17/01A
17/01A (narrow)
17/02
17/02A
17/02A (narrow)
17/03
17/05
17/05A
17/05A (narrow)
17/06
17/07
17/07A
17/07A (narrow)
17/08
17/09
17/09A
17/09A (narrow)

APPENDIX ESSD M

WATER MONITORING DATABASE