Dean Moor
Solar Farm

Environmental Statement: Appendix 10.1 – Phase 1 Ground Conditions Assessment (GCA) (1 of 2)

on behalf of **FVS Dean Moor Limited**

March 2025
Prepared by: Stantec UK Ltd
PINS Ref: EN010155
Document Ref: 6.3
Revision: 1

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DEAN MOOR SOLAR FARM

ENVIRONMENTAL STATEMENT

APPENDIX 10.1 – PHASE 1 GROUND CONDITION ASSESSMENT

PLANNING INSPECTORATE REFERENCE EN010155

PREPARED ON BEHALF OF FVS DEAN MOOR LIMITED

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, Regulation 5(2)(a)

Project Ref:	**EN010155/Appendix 10.1: Phase 1 Ground Condition Assessment**
Status:	Final
Issue/ Rev:	1
Date:	March 2025

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1. Introduction

1.1. Preamble

1.1.1. This Phase 1 Ground Conditions Assessment (GCA) has been commissioned by FVS Dean Moor Limited (the Applicant) for the Dean Moor Solar Farm (the Proposed Development).

1.1.2. The Proposed Development will be located on approximately 276.5ha of land located between the villages of Gilgarran and Branthwaite in West Cumbria (the Site) (see Figure 1.1), which is situated within the administrative area of Cumberland Council ('the Council').

1.1.3. This report presents the findings of desk study research, the observations from a Site walkover, a contamination Tier 1 Preliminary Risk Assessment, and a preliminary ground stability assessment. It has been prepared in a planning context to support a Development Consent Order (DCO) application for the development of the Site.

1.1.4. Attention is drawn to the Essential Guidance for Report Readers included after the main report text.

1.2. Proposed Development

1.2.1. The Proposed Development comprises the construction, operation, and decommissioning of a solar photovoltaic (PV) energy generating station with a total capacity exceeding 50 Megawatts (MW) comprising solar PV arrays, grid connection infrastructure, associated infrastructure, and green infrastructure.

1.3. Context and Objectives

1.3.1. The application for development consent will be considered against Overarching National Policy Statement for Energy (EN-1)[1] and National Policy Statement for Renewable Energy Infrastructure (EN-3)[2]. Contamination is discussed as follows:

Overarching NPS EN-1

- EN-1 5.11.5 – *'Where pre-existing land contamination is being considered within a development the objective is to ensure that the site is suitable for its intended use. Risks would require consideration in accordance with the contaminated land statutory guidance as a minimum'.*
- EN-1 5.11.14 – '*Applicants are encouraged to develop and implement a Soil Management Plan which could help minimise potential land contamination. The sustainable reuse of soils needs to be carefully considered in line with good practice guidance where large quantities of soils are surplus to requirements or are affected by contamination*'.
- EN-1 5.11.17 – '*Applicants should ensure that a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination'.*
- EN-1 5.11.18 – '*For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination, and where contamination is present, applicants should consider opportunities for remediation where possible. It is important to do this as early as possible as part of engagement with the relevant bodies before the official pre-application stage'.*
- EN-1 5.11.19 – '*Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place'.*
- EN-1 5.11.28 – *'Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the Secretary of State*

[1] Department for Energy Security and Net Zero, January 2024, Overarching National Policy Statement for Energy (EN-1). Available at: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1 Accessed October 2024.

[2] Department for Energy Security and Net Zero, January 2024, Overarching National Policy Statement for Renewable Energy Infrastructure (EN-3). Available at: https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3 Accessed October 2024.

should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources'.

NPS EN-3

- EN-3 3.10.19 – '*Applicants are encouraged to develop and implement a Soil Resources and Management Plan which could help to use and manage soils sustainably and minimise adverse impacts on soil health and potential land contamination'.*
- EN-3 2.10.147 – '*Where developments are proposed on peat, to ensure the development will result in minimal disruption to the ecology, or release of CO_2, and the carbon balance savings of the scheme are maximised, the Secretary of State should be satisfied that the solar farm layout and construction methods have been designed to minimise soil disturbance during construction and maintenance of roads, tracks and other infrastructure and in England should take into account the policies set out in the England Peat Action Plan 2021'*.

1.3.2. The objective of this report is to identify the likely ground conditions using published and publicly available information (see below for sources of information accessed) and to assess whether there are land instability or contamination risks associated with the ground conditions that require management (remediation or mitigation).

1.4. Methodology – Ground Conditions – Land Instability

1.4.1. The preliminary ground stability assessment methodology adopted by the author follows the guidance on preliminary land stability assessment given in the Planning Practice Guidance for Land Stability published by the Department for Communities and Local Government (DCLG 2014). The guidance requires, at least, a desk-based study and a Site inspection visit by an appropriately qualified person.

1.4.2. The desk-based study comprises a review of existing readily available published sources of geological, geomorphological, hydrogeological and/or mining information on the Site and its surroundings and a historical review including mapping and aerial imagery, if appropriate.

1.4.3. The preliminary stability assessment includes for example, where relevant, a review of geological hazards for the Site such as natural and man-made (mining) cavities, landslide, cambering and block movement, collapsible and compressible soils, running sand, and subsidence and heave due to volumetric change in the ground.

1.5. Methodology – Ground Conditions – Contamination

1.5.1. The following summarises the ground conditions assessment methodology adopted by the author with a more detailed description in our guide entitled Methodology for Assessment of Land Contamination (England), a copy of which is presented in Appendix A.

1.5.2. This assessment has been carried out in accordance with '*established procedures*'. Our methodology follows guidance on how to assess and manage the risks from land contamination given in *'Land Contamination: Risk Management'* (LCRM) (EA, 2021) which is based on and replaces Contaminated Land Report (CLR) 11: Model Procedures for the Management of Contamination (EA, 2004).

1.5.3. The principal planning objective in respect of contamination is to ensure that any unacceptable risks to human health, buildings and other property and the natural and historical environment from the contaminated condition of the land are identified so that appropriate action can be considered and taken to address those risks.

1.5.4. LCRM presents a three-stage process to the management of contaminated land:

a. Stage 1 = risk assessment;
b. Stage 2 = options appraisal; and
c. Stage 3 = remediation.

1.5.5. The Stage 1 risk assessment is undertaken in a phased manner comprising three tiers, with the three tiers being:

a. Tier 1 – *'Preliminary Risk Assessment'* – a qualitative assessment forming part of a Phase 1 report;

b. Tier 2 – *'Generic Risk Assessment'* - a quantitative assessment using published criteria to screen Site specific ground condition data forming part of a Phase 2 report; and

c. Tier 3 – '*Detailed Risk Assessment'* – a quantitative assessment involving the generation of Site-specific assessment criteria (SSAC).

1.5.6. The underlying principle is the evaluation of '*pollutant linkages'* in order to assess whether the presence of a source of contamination could potentially lead to harmful consequences. A pollutant linkage consists of the following three elements:

a. A source of contamination or hazard that has the potential to cause harm or pollution;

b. A pathway for the hazard to move along / generate exposure; and

c. A receptor which is affected by the hazard.

1.5.7. Each tier of risk assessment comprises the following four stages:

a. Hazard Identification – identifying potential contaminant sources on and off Site;

b. Hazard Assessment – assessing the potential for unacceptable risks by identifying what pathways and receptors could be present, and what pollutant linkages could result (forming the Conceptual Site Model (CSM));

c. Risk Estimation – estimating the magnitude and probability of the possible consequences (what degree of harm might result to a defined receptor and how likely); and

d. Risk Evaluation – evaluating whether the risk needs to be, and can be, managed.

1.5.8. This report presents a Tier 1 Preliminary Risk Assessment.

1.6. Sources of Information

1.6.1. The following sources of information were used in the preparation of this report[3]:

[3] It should be noted that data supplied used a previous redline boundary, the change does not necessitate reordering data as (1) the change involved the removal of land to the east at the centre of the Site, as well as a

a. A walkover survey by the author representative on 28 and 29 March 2023 to observe existing conditions both on the Site and the surrounding area – photographs from the walkover are presented in Appendix B;

b. An 'Enviro+Geo Insight Report' and historical maps provided by Groundsure Ltd (GS, 2023) which are presented in Appendices C and D;

c. Review of the Natural Cavity and Artificial non-coal (underground) mining cavity databases managed and enhanced by The author;

d. Review of borehole records held by the British Geological Society (BGS)[4] accessed via their website;

e. Review of map records held by the BGS accessed via their website[5].

f. Review of the MAGIC (Multi-Agency Geographic Information for the Countryside) website[6]. The MAGIC website provides authoritative geographic information about the natural environment from across government;

g. A search of the authors project database to identify any ground condition reports near the Site (within 250m);

h. Search of records on the Cumberland Council (CC) online planning portal[7];

i. A freedom of information request was made to the Environment Agency for any environmental information relevant to the Site. The response is included in Appendix E;

j. A contaminated land enquiry was made to Cumberland Council. A copy of the Contaminated Land Search received in response is included in Appendix E;

k. A review of risk map records of Regional Unexploded Bomb Risk of Kent held by Zetica UXO[8];

l. A Pre-Desk Study Assessment carried out by Zetica UXO to identify potential risks related to unexploded ordnance (UXO) at the Site (Appendix F); and

m. A review of historical aerial photography accessed via Google Earth.

very limited area in the north-western corner of the Site and (2) the inclusion of additional land is only the existing road to the east of the northern parcel of the Site.

[4] http://www.bgs.ac.uk/data/boreholescans/home.html Accessed December 2024

[5] https://www.bgs.ac.uk/information-hub/bgs-maps-portal Accessed December 2024

[6] http://www.magic.gov.uk Accessed December 2024

[7] https://www.cumberland.gov.uk/planning-and-building-control/search-planning-applications Accessed December 2024

[8] https://zeticauxo.com/downloads-and-resources/risk-maps Accessed December 2024

2. Land Use Information

2.1. Introduction

2.1.1. This section presents a summary of current and historical land uses on and immediately adjacent to the Site. Historical land uses on the Site and in the immediate surrounding area identified from historical Ordnance Survey (OS) mapping for the period between 1864 and present day provided by Groundsure Ltd, copies of which are presented in Appendix C. Land use is used to inform the hazard identification element of the risk assessment.

2.2. Site Location and General Description

2.2.1. The Site is centred on National Grid Reference NY 045 236, as shown on the Site Location Plan presented as Figure 1. The Site extends to approximately 276.5ha and is located approximately 1.1km east of the Lillyhall Industrial Estate, 600m east of the small village of Gilgarran, approximately 900m west of Branthwaite, and approximately 5km southeast of Workington town centre on the west Cumbrian coast. The hamlet of Branthwaite Edge is directly adjacent to the east of the Site.

2.2.2. The northern part of the Site boundary adjoins an unclassified road, hereafter referred to as “Branthwaite Road”. The southern part of the Site boundary abuts Dean Cross Road. The north/south road between Branthwaite Road and Dean Cross Road, forming the eastern boundary of much of the Site, is Branthwaite Edge Road. The Site is bisected by an unclassified road between Gilgarran and Branthwaite Edge, hereafter referred to as the ‘Gilgarran Road’ (also locally known as Colingate Road). The layout of the Site and locations of pertinent features are presented on Figure 2.

2.2.3. The Site occupies an area of approximately 276.5ha. For the purposes of this assessment the Site is divided primarily into four areas referred to as Areas ‘A’, ‘B’, ‘C’, and ‘D’ as shown on ES Figure 3.1.

2.2.4. The Site area comprises generally agricultural land used for livestock grazing with wind turbines located in Areas A, B, and D.

2.2.5. The Site is bordered by unnamed roads to the north, east and south with fields beyond.

2.2.6. The Site is situated on ground that generally inclines southwards and slopes towards the Lostrigg Beck and Thief Gill watercourses. Natural ground levels gradually incline from the northern boundary from about 85 to 145m OD over approximately 2.3km (approximately a 1 in 45 slope) before steeply inclining towards the southern boundary from about 145 to 200m OD over 360m (approximately a 1 in 5 slope). The Thief Gill watercourse is located towards the southwest of the Site in Area C and comprises a steep-sided gorge (approximately 550m long), the stream flows in a roughly northeast direction.

2.3. Current Land Use – On Site

2.3.1. Current land-use information is based on a Site reconnaissance survey undertaken by an engineer from the author on 28th and 29th March 2023. Selected photographs taken during the Site walkover are presented in Appendix B.

2.3.2. A small fenced off area on the southwest boundary represents a protected area associated with historic standing stones, further information on the standing stones can be found here[9].

2.3.3. Land within the Site in Area C is dominated by sheep pasture and rough heathland, with localised areas of woodland. Four main watercourses are noted to traverse this area: Thief Gill, two tributaries to Thief Gill and one tributary to Lostrigg Beck. The tributaries to Thief Gill converge in the centre of the Area C, one flows in a roughly eastern direction and the other flows northeast to

[9] https://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=1014588&resourceID=5 **Accessed** December 2024

the convergence where they continue to flow roughly northeast to join Thief Gill. Thief Gill flows northeast until it exists the Site via a bridge on the eastern boundary. Near the southern boundary of the Site, Thief Gill runs through a steep gorge. The tributary to Lostrigg Beck flows to the northwest before turning to the north near the southern boundary before passing under the road on the eastern boundary.

2.3.4. Land within the Site in Areas A, B and D is similarly dominated by sheep pasture and heathland, with three wind turbines are present in the centre together with infrastructure including cabling, gravel tracks, and a control room.

2.3.5. The low-lying land within the Site to the north of the 'Gilgarran Road' was noted during the walkover to be marshy and saturated, with ponded water at the surface.

2.4. Current Land Use – Off Site

2.4.1. Land use in the area surrounding the Site is generally similar to the land use on the Site, comprising largely pastural agricultural land with moorland and sporadic areas of woodland.

2.4.2. There are scattered residential properties in the surrounding area, mostly comprising farmyards and farmhouses.

2.5. Historical Land Use – On Site

2.5.1. The Site and the surrounding area have a significant legacy of historical mining and quarrying. For a detailed review of historical mining activity on and in the vicinity of the Site please refer to the Coal Mining Hazard Assessment (CMHA) (ES Appendix 10.2).

2.5.2. The earliest available Ordnance Survey (OS) mapping, dated 1864, indicates that the southern parcel comprises rough pasture and is labelled Dean Moor. The northern parcel comprises woodland and open fields as part of Wythe Moor. Remnants of a Stone Circle are

indicated towards the Site's south-western corner and an old coal pit is indicated along the Site's southern boundary as well as a quarry near the southern boundary. In the southeast of the Site are two springs from which a tributary of Lostrigg Beck flows.

2.5.3. The 1864 OS map indicates a series of watercourses across the Site. The main watercourse is Thief Gill which flows to the north-east across the Site on an approximately south-west north-east alignment. Thief Gill has a gorge that is approximately 500m long in the south-west of Site. Two springs are indicated to the east of Thief Gill in the south-east of the Site, these belong to the tributary of Lostrigg Beck. A further watercourse named Wythemoor Sough flows towards the north-east across the Site's north-western corner.

2.5.4. The 1898 OS map indicates an Old Quarry near the south-western corner of the Site. A Quarry is also marked along the eastern side of Thief Gill in addition to a disused Shaft adjacent to the southern boundary and an Old Coal Pit adjacent to the southern boundary near the southeastern corner of the Site. The Whitehaven, Cleafor and Egremont branch of the London and North-West and Furness Joint Railway crosses through the north of the Site from east to west on an embankment.

2.5.5. The 1923 OS map indicates an old shaft located adjacent to the southern Site boundary. Several 'rises' are recorded near the stone circle in the Site's south-western corner. Further significant changes are not recorded until 1951 when the railway through the north of the Site appears to have been dismantled and is recorded as an "old wagon way".

2.5.6. Mapping dated 1989 records that part the area in the north of the Site, north of the former railway was in use as an Opencast Coalmine. The CMHA states that this opencast mine was the Potato Pot Opencast Mine within which mining commenced in July 1986 and was complete by July 1993. Information from the Coal Authority

states that coal was worked in a total of 12 coal seams to a maximum depth of approximately 76m below ground level, or 119.7m above ordnance datum (AOD).

2.5.7. The 1991 OS map indicates a set of pylons, and an electrical line traverses the Site in a roughly north-eastern direction.

2.5.8. Mapping from 1993 indicates that two buildings belonging to a farm to the immediate east of the Site (Rigg House) have been built onsite, adjacent to the eastern boundary.

2.5.9. Historical aerial imagery dated 2003 shows the opencast mine to have been backfilled and the Site to have been restored to pasture. By 2016 the three wind turbines in the centre-north of the Site have been constructed, followed by an access road along the Site's north-eastern boundary by 2018.

2.6. Historical Land Use – Off Site

2.6.1. The 1864 OS map indicates that the Site is surrounded by woodlands, fields and moorland. There are unnamed roads adjacent to the north, east and south of Site. Area C is bordered to the west by Gilgarran Plantation which comprises woods, a limekiln, a sawmill and a smithy and further to the east by Branthwaite Edge Wood. Three farms are located within 100m of the eastern boundary, including Rigg House which is adjacent to the eastern boundary of the Site.

2.6.2. Multiple coal mines, pits, shafts, collieries etc. are recorded in the area surrounding the Site, as described in the CMHA (ES Appendix 10.2). Mining activity in the vicinity of the Site includes (but is not limited to):

a. Two coal pits indicated adjacent to the south of the Southern Parcel.
b. Colingate Quarry located approximately 145m west of Site (disused by 1923).

c. A sawmill approximately 150m west of the Site (demolished by late 1960s)
d. Branthwaite Edge Quarry located approximately 280m east of Site (disused by 1923).
e. Deanmoor Colliery and associated coal shafts located approximately 280m south of Site (disused by 1947).
f. An old shaft located approximately 330m south-west of the Site.
g. Wythemoor Colliery, old shaft, shaft, reservoir and a mineral railway located approximately 300m west of Site (unlabelled by 1947).
h. Three old shafts indicated approximately 400m west of Site.
i. Two coal shafts indicated approximately 500m south-west of Site.
j. An old quarry 500m east of Site.
k. An old quarry and old shaft located between 600 and 700m south of Site.
l. Two old shafts located approximately 600m west of Site.
m. Wythemoor Pit (disused) located approximately 650m west of Site.
n. An old shaft and old air shaft located approximately 500 to 700m north-west of Site.
o. Potential quarrying activity located 750m east of Site.
p. Moorside Colliery, tramway and railway located between 750m and 1km south-east of Site (disused and dismantled by 1951).
q. Oatlands Colliery and railway located 1.65km south-west of Site (disused by 1947 and fully dismantled by 2001).

2.6.3. By 1898 the railway that crosses the Site is shown to have been constructed on an embankment. The railway remained until the 1950s when it was dismantled.

2.6.4. The 1923 OS map records a tank located within Gilgarran Plantation, approximately 100 m west the Site's south-western boundary. of the Southern parcel. The tank remained until the late 1960s when it is no longer recorded.

2.6.5. Further significant changes are not recorded until the early 1990s when an overhead transmission line is shown to have been constructed on a south-west to north-east alignment. Between 1971 and 1994 a building used as a vehicle dealership and

repair/servicing garage (stated on the company website[10] to have been operational for 40 years) was constructed adjacent to the south-eastern corner of the Site.

2.6.6. Historical arial imagery dated 2003 show an area of opencast mining or excavations approximately 500m to 1km south-west of the Site. A motocross track is indicated immediately south of the Site.

2.7. Review of Database Searches

2.7.1. Information on the industrial setting, and pertinent Environmental Regulation, Permits and authorisations for the Site and the immediate environs is presented in the Groundsure Report reproduced in Appendix C. The results of the database search are summarised in the following tables and discussed in the following sections.

[10] https://www.fultonslandrovers.co.uk/index.php Accessed December 2024

Table 2.1: Summary of Environmental Regulation and Industrial Setting

Data Type	Number on-Site [1]	Number within 0.25 km of Site [1]	Number between 0.25 and 0.5 km of Site [1]
Waste Regulation			
Historical Landfill sites (EA/NRW records)	0 (0)	0 (0)	0 (0)
Registered Landfill sites	0 (0)	0 (0)	1 (0)
Historical and Licensed Waste Management Facilities	0 (0)	0 (0)	1 (1)
Statutory Permits/Authorisations			
Pollution Prevention and Control [2]	0 (0)	0 (0)	0 (0)
Radioactive Substance Authorisations	0 (0)	0 (0)	0 (0)
Planning Hazardous Substances	0 (0)	0 (0)	0 (0)
COMAH sites [3] and NIHHS sites [4]	0 (0)	0 (0)	0 (0)
Potential Contaminative Uses			
Fuel Stations and Garages	0 (0)	1 (0)	0 (0)
Recent and Historical Industrial and Energy Land Uses	55 (46)	59 (54)	-
Licensed Discharges to Controlled Waters	0 (0)	0 (4)	0 (1)
Pollution Records			
sites Determined as Contaminated Land	0 (0)	0 (0)	0 (0)
Pollution Incidents (EA/NRW)	2	2	5

Notes:
(1) Numbers in brackets denotes number of authorisations, licences, or permits that are lapsed, revoked, cancelled, superseded, defunct, surrendered, not applicable, withdrawn or not yet started
(2) Includes Integrated Pollution Controls, Integrated Pollution Prevention and Control, Local Authority, Integrated Pollution Prevention and Control and Local Authority Pollution Prevention and control Permits.
(3) COMAH Denotes Control of Major Accident Hazards
(4) NIHHS denotes Notification of Installations Handling Hazardous Substances

Landfill

2.7.2. The Environment Agency (EA) records indicate that a permitted landfill (Lillyhall Stage 3 Landfill) is located approximately 470 m northwest of the Site. The landfill is stated to be operated by FCC Recycling (UK) Ltd under an Environmental Permit (ref:

EPR/GP3037SJ). The landfill type is stated as '*Waste Landfilling; >10 T/D with capacity > 25,000T excluding inert waste'*.

2.7.3. On the basis of the distance from the Site this landfill is not considered to present a hazard to the Site and has not been taken forward for assessment.

Garages and Fuel Stations

2.7.4. A vehicle dealership that also provides vehicle servicing is present immediately south-east of the Site. This land will be taken forwards in the assessment as a potential source of contamination.

Historical and Licenced Waste Management Facilities

2.7.5. The records indicate that there is one historical waste Site located approximately 480 m south of the Site at the former Keekle Head opencast mine. The record indicates that it is a low-level waste disposal facility, on the Site of a former coal quarry, suitable for safe and secure storage of low and very low-level radioactive waste, mostly from the demolition of Sellafield nuclear Site.

2.7.6. A licensed waste Site is located approximately 470m northeast of the Site. The waste Site is licenced (BRA001, EPR ref: EA/EPR/AP3999SD/V002, WML ref: 51521) for metal recycling (vehicle dismantling). The licence was issued in 2000, and the capacity of the Site is 25,000 tonnes.

2.7.7. On the basis of the distance from the Site and the nature of the activities, these features are not considered to present a hazard to the Site and have not been taken forward for assessment.

Recent and Historical Industrial and Energy Land Uses

2.7.8. The recent industrial and energy land uses recorded onsite relate to five pylons, one disused workings (the small quarry recorded as an "old quarry" on the 1898 historical map) and the wind farm in the north of the Site constructed by the mid-2010s. The six recent

industrial and energy land uses within 250m of the Site relate to two pylons, two[11] saw mills (located approximately 150m west [demolished by late 1960s] and 240m south-west), a motocross park and a disused quarry (Colingate Quarry).

2.7.9. On the basis of the distance from the Site, the nature of these activities and the time since the demolished/disused activities ceased operation, these features are not considered to present a hazard to the Site and have not been taken forward for assessment.

2.7.10. The historical industrial land uses generally relate to coal mining in the area and include a coal mine, heaps, ground workings, old levels, old shafts, pits (unspecified and old coal pits) and quarries. There is also a cutting on the Site which is dated 1864.

Licenced Discharges to Controlled Waters

2.7.11. Four licenced discharges to controlled waters are recorded within 250m of the Site. Three of these relate to the former opencast coal mine and permitted the discharge of '*process effluent – not water company'* and '*sewage discharges final/treated effluent – not water company'* to *'UGH'*, the Lostrigg Beck and *'unknown'.* These were revoked in 1997. The final discharge relates to '*sewage discharges final/treated effluent – not water company'* from a residential property approximately 200 m north-west of the Site. This consent was revoked in 1991.

2.7.12. On the basis of the distance from the Site and the time since these consents were revoked, these features are not considered to present a hazard to the Site and have not been taken forward for assessment.

[11] The author have been unable to identify the saw mill approximately 240 m south-west of the Site. The 1:2,500 scale historical map dated 1990-1994 labels "Saw Mill Quarry Wood" at the sawmill's indicated location and it is considered that this label has been recorded in error by Groundsure as a sawmill.

Pollution Incidents

2.7.13. The two recorded pollution incidents on the Site occurred in 2001 and 2003 and involved releases of *'ammonia/amine odour*' and '*materials and wastes'*. Both are recorded as '*Category 4 (No Impact)'* to water and at worst, '*Category 3 (Minor)*' impact to land.

2.7.14. The two off-Site pollution incidents both occurred in 2003, both involved releases of '*ammonia/amine odour*' and north are recorded as '*Category 4 (No Impact)'* to land and water. Neither of these incidents are considered to present a hazard to the Site and have not been taken forward for assessment.

2.8. Regulatory Enquiries

2.8.1. Requests for information were sent to the EA and the Contaminated Land Officer at Cumberland Council requesting information in relation to the historical land use of the Site and other relevant geo-environmental related information. A copy of the enquiry and the response from the EA are provided in Appendix E.

2.8.2. The response from the EA is reproduced below:

'There are no areas of land determined as Contaminated land under EPA 1990 Part2A in the footprint of the area or under investigation to within 250m of the site in question. We recommend that you contact the local Authority, as the prime regulator under Part2A, who will have a contaminated land strategy and may be investigating sites that the Environment Agency have not been notified of.

We also suggest that you contact the Coal Authority regarding differential settlement from former coal workings, methane emissions from mines and mine plans.'

2.8.3. The response from the Cumberland Council states that:

a. The Council has not designated any land within 250m of the Site as contaminated land under Part 2A and the Site is not viewed as a high priority for further investigation by the Council under Part IIA at this stage. Furthermore '*The Council is unaware of any evidence to suggest that a contaminant linkage exists at the above outlined location*';

b. There are no Private Water Supplies registered pursuant to the provisions of the Private Water Supply Regulations 2009, within 250m of the Site; and

c. There are no records of any known animal burial sites pursuant to the provisions of the Animal Health Act 1981 and the Animals (Miscellaneous Provisions) Order 1927, within 250m of the Site.

2.9. Review of Unexploded Ordnance Risk

2.9.1. The Zetica Ltd bomb risk map (Zetica, 2023) indicates that the Site is located in a 'Low' risk area for unexploded bombs (UXB). This designation has been given based on the density of bombing hits and the low number of potential targets in the area.

2.9.2. An Unexploded Ordnance (UXO) Pre-Desk Study Assessment (PDSA) has been commissioned from Zetica and is presented in Appendix F. The findings of the PDSA are summarised below:

a. Pre-WWI military activity on or affecting the Site – none identified;
b. WWI military activity on or affecting the Site – none identified;
c. WWI strategic targets (within 5 km of Site) – transport infrastructure and public utilities;
d. WWI bombing – none identified on the Site;
e. Interwar military activity on or affecting the Site – none identified;
f. WWII activity on or affecting the Site – none identified;
g. WWII strategic targets (within 5 km of Site) – transport infrastructure and public utilities, and anti-aircraft and anti-invasion defences;
h. WWII bombing decoys (within 5 km of Site) – 2no. The nearest was located approximately 2.5km west of the Site;
i. WWII bombing – no readily available records have been found to indicate that the Site was bombed; and
j. Post-WWII military activity on or affecting the Site – none identified.

2.9.3. The PDSA concludes that a detailed desk study is not considered essential in this instance to assess the UXO hazard level on the Site.

2.10. Summary of Potentially Contaminative Land-Uses

2.10.1. The land in the north of the Site was historically used as an opencast coal mine between the late 1980s and early-1990s.

Following cessation of mining activities, the mine was backfilled and returned to agricultural use.

2.10.2. The searches undertaken have not revealed any information about the materials used as backfill, indeed the only information provided by the Coal Authority was that the backfill was “uncompacted”. Opencast mining is stated to have been completed in 1993, followed by backfilling and restoration.

2.10.3. On the basis that the backfilling took place following the 1974 Control of Pollution Act, it is reasonable to assume that the backfilling would have been undertaken in a controlled and regulated manner, and therefore it is considered likely that the pit has been backfilled with overburden and mine arisings. These materials would not be considered to present an environmental hazard, especially in the context of the proposed end-use.

2.10.4. The majority of the land in the south of the Site has historically been used for agriculture with the exception of limited areas of quarrying and mining. The quarries recorded on the historical maps remain visible on contemporary aerial imagery, and therefore are not likely to have been infilled and as such are not considered to present an environmental hazard to the Site. A limited hazard is present relating to mine gases emanating from historical coal mines – noting that this hazard would only apply where buildings/structures with enclosed spaces are present.

2.10.5. Rigg House and the two farm buildings near the eastern boundary is identified as a potential hazard due to possible bulk storage of fuels and agrichemicals.

3. Environmental Setting

3.1. Introduction

3.1.1. Information on the environmental setting is presented in this section and the data is used to inform the Preliminary Risk Assessment and Ground Stability Assessment presented in Sections 4 and 5.

3.2. Published Geology

3.2.1. The 1:50,000 scale geological sheets of the area (BGS, 2004a and BGS, 2004b) indicate that the bedrock geology is dominated by the Carboniferous strata. The Carboniferous deposits unconformably overlie the Lower Palaeozoic Caledonian basement at depth. The Carboniferous strata are overlain by a variable but generally minor thickness of superficial deposits.

3.2.2. The structure of the area is dominated by two sets of faults, striking generally north-west and north.

3.3. Bedrock Geology (Carboniferous Strata)

3.3.1. The bedrock geology at the Site is presented on Figure 3.

Whitehaven Sandstone Formation

3.3.2. The Whitehaven Sandstone Formation forms the uppermost unit of the Carboniferous and outcrops over the southern part of the Site. This stratum is recorded as being part of the Westphalian sequence.

3.3.3. The Whitehaven Sandstone Formation was deposited by a major braided river system and is identified as a succession of red to purplish brown cross bedded sandstones, mudstones, siltstones and thin coals and limestones.

3.3.4. The Whitehaven Sandstone Formation is recorded by the BGS as being in excess of 300m thickness.

Coal Measures

3.3.5. The Middle and Lower Coal Measures underlie the Whitehaven Sandstone Formation.

3.3.6. The Middle Coal Measures comprise mudstone, siltstone and sandstone with numerous coal seams, including the Black Metal Coal, Fireclay Coal, Tenquarters Coal, Bannock Band Coal, Main Band Coal and Yard Coal. The Middle Coal Measures outcrop north of the centre and in the eastern part of Site and are indicated by the BGS to be up to 200m thick.

3.3.7. The Lower Coal Measures comprise mudstone, siltstone and sandstone with coal seams, including the Little Main Coal, Lickbank Coal, Sixquarters Coal, Upper Threequarters Coal, Lower Threequarters Coal and the Albrighton Coals. The Lower Coal Measures outcrops north of the centre and in the eastern part of Site and are indicated by the BGS to be up to 200m thick.

3.3.8. The CMHA (ES Appendix 10.2) identifies that the majority of underground mining in the area has targeted the Bannock Band, Main Band, Yard, Half Yard, Little Main, Eighteen Inch and Six Quarters Coal seams.

Geological Structures

3.3.9. From the published BGS geological map, the bedrock appears to generally dip towards the south at an angle of approximately 4º to 6º. Significant faulting is indicated throughout the local area including a series of normal faults within the Site which are generally oriented in a north-south direction.

Superficial Deposits

3.3.10. The superficial geology at the Site is presented on Figure 4.

Glacial Till

3.3.11. Approximately two-thirds of the Site is overlain by Devensian Glacial Till (also known as boulder clay). The Glacial Till is described by the BGS as '*a heterogenous mixture of clay, sand, gravel, and boulders varying widely in size and shape'*.

Alluvium

3.3.12. Alluvium is located within the vicinity of Thief Gill and its tributaries and the tributary to Lostrigg Beck and is generically described by the BGS as unconsolidated clay, silt, sand and gravel.

Peat

3.3.13. Peat is mainly located near the eastern flowing tributary of Thief Gill as well as an area near the southwestern corner of the Site. It is made up of partially decomposed semi-carbonized vegetation and organic matter.

Landslide Deposits

3.3.14. Three areas of the Site are indicated to contain landslide deposits, the largest crosses the southern boundary near the southeastern corner of the Site and extends to the west. Approximately 400m west of this area is another area of landslide deposits. The third and smallest area of landslide deposits is located on the western boundary of the Site. Landslide deposits are the resulting debris of former landslides. Landslide deposits tend to be composited of the same constituent material as is present in the areas upslope of the deposits.

Alluvial Fan Deposits

3.3.15. Alluvial Fan Deposits are located at the mouth of tributary valleys. They are described by the BGS as '*low, outspread, relatively flat to gently sloping masses of loose rock material'*.

Artificial Ground

3.3.16. The areas of artificial ground are presented on Figure 3b.

Infilled Deposits

3.3.17. Approximately half of the land within the Site to the north of 'Gilgarran Road' is shown to be underlain by "Infilled Deposits". No description of these deposits is provided by the BGS however it is inferred that these deposits relate to the backfilling of the former opencast coal mine and therefore their extents correspond to the extent of the mine. The composition and thickness of any such Infilled Deposits is unidentified.

Made Ground

3.3.18. The remainder of the northern Site area is shown to be underlain by Made Ground. It is likely that the extent of the Made Ground corresponds to the extent of the wider area of disturbed ground associated with the mine (extending beyond the backfilled mine). The composition, thickness and precise extent of any such Made Ground is unidentified.

BGS Archive borehole records

3.3.19. A search of the BGS's GeoIndex (Onshore) website[12] records (BGS, 2023) that there are fourteen boreholes on the Site, four of which are confidential and six are records of old shafts and disused adits which do not include any information on the strata beneath the Site. There are nine borehole records within 50m of the Site, one is confidential and three are records of old shafts. The remaining four borehole records are all located near the north of the land within the Site to the north of the 'Gilgarran Road', within the area of Infilled Ground recorded by the BGS. All of these boreholes were drilled prior to the start of opencast coal mining and therefore will not be

[12] http://mapapps.bgs.ac.uk/geologyofbritain/home.html Accessed December 2024

representative of the existing ground conditions. A summary of the ground conditions encountered is given in Table 3.1.

Table 3.1: Summary of Ground Conditions

Strata	Depth Encountered (mbgl)	Range in Thickness (m)
Topsoil	0.00 – 0.5	0.15 – 0.50
Peat*	0.15 – 1.80	1.65
Made Ground**	0.25 – 3.25	1.10 – 2.90
Glacial Till	0.15 – 22.40	1.90 – 22.20
Coal Measures	4.70 - >23.05	>2.70

Notes:
*Peat was only encountered in one borehole near the northern boundary of the Site.
**Made Ground was only encountered in 3 boreholes in or near the northern parcel of the Site.

3.4. Soil Resource (Agricultural Land)

3.4.1. The Groundsure Report, Natural England's 1:250,000 scale Agricultural Land Classification (ALC) map for the North West and the ALC and Outline Soil Management Plan has been produced for the Site (ES Appendix 5.3) show the majority of the land within the Site to be of Grade 4 (Poor). An area (approximately 20 % of the total Site area) in the centre of the Site is shown to be of Grade 3b (Moderate) with a further small (<5% of Site area) area of Grade 3b in the north-west of the Site.

3.4.2. Agricultural Land of Grades 1 to 3a is classified as *'Best and Most Versatile'* (BMV).

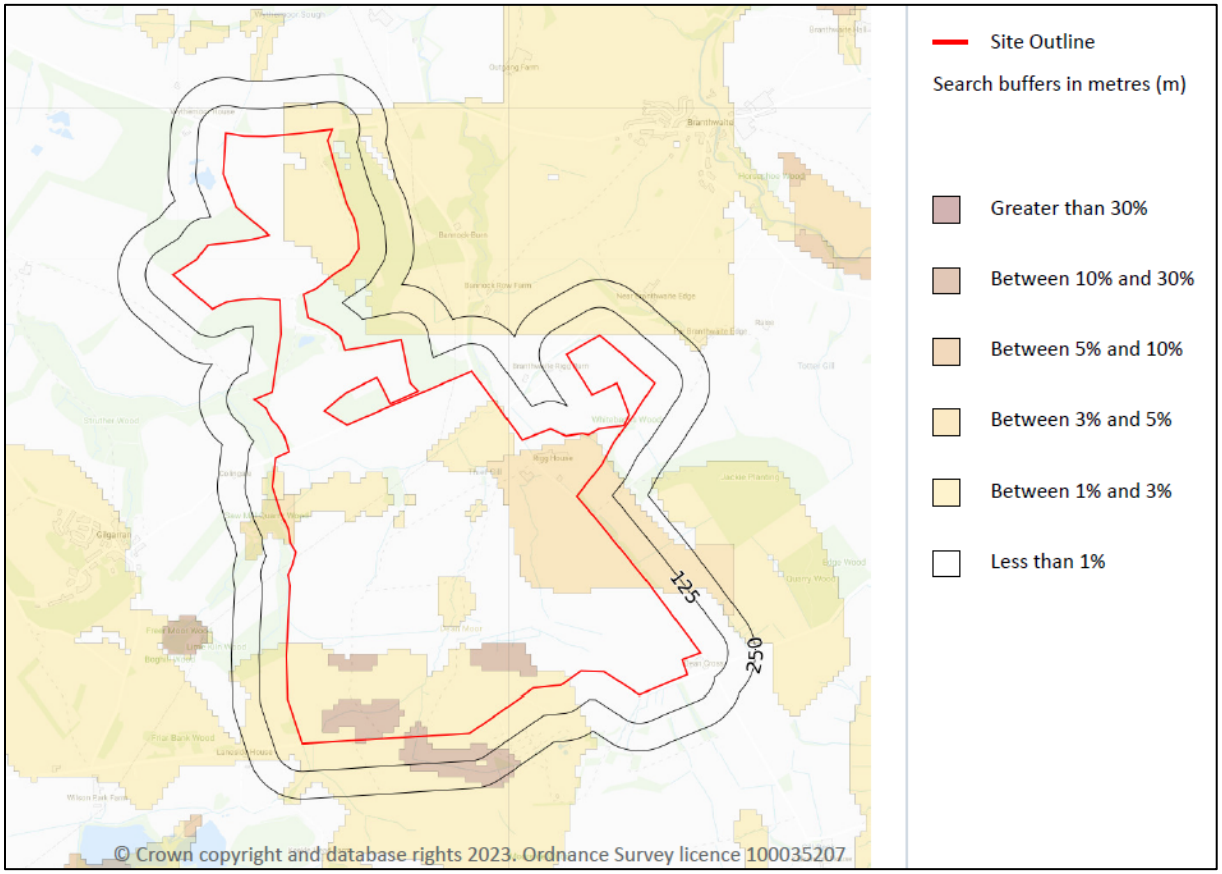
3.4.3. The photovoltaic panels which comprise the majority of the proposed solar farm will not require significant in-ground construction works (e.g., large foundations etc.), on which basis it is not considered that the development would represent a significant *'loss'* of agricultural land. Additionally, the majority of the development is temporary/reversible. There also remains the possibility of the land remaining in agricultural use for livestock grazing.

3.4.4. On this basis soil as a resource will not be taken forward in this assessment and will not be considered a sensitive receptor.

3.5. Radon

3.5.1. The Groundsure report indicates that whilst approximately 50 % is located within an area where less than 1% of properties are estimated to be at or above the UK Health Security Agency Radon Action Level, parts of the Site are located in areas of higher radon risk where between 10 % and 30 % of properties are estimated to be at or above the UK Health Security Agency Radon Action Level, as shown on the extract below.

Extract 3.1: Map Showing Radon Potential



3.5.2. As the majority of the proposed development comprises infrastructure such as buried cables and solar panels the recommendations regarding radon protection measures would apply only to new occupied structures e.g., staff / control buildings (if such

structures were to be constructed) at the solar farm. If possible, these should be sited in areas mapped as below the action level.

3.6. Hydrogeological Setting

3.6.1. Table 3.2 summarises information recorded regarding hydrogeology and groundwater vulnerability.

Table 3.2: Summary of the Hydrogeology and Groundwater Vulnerability Related Information

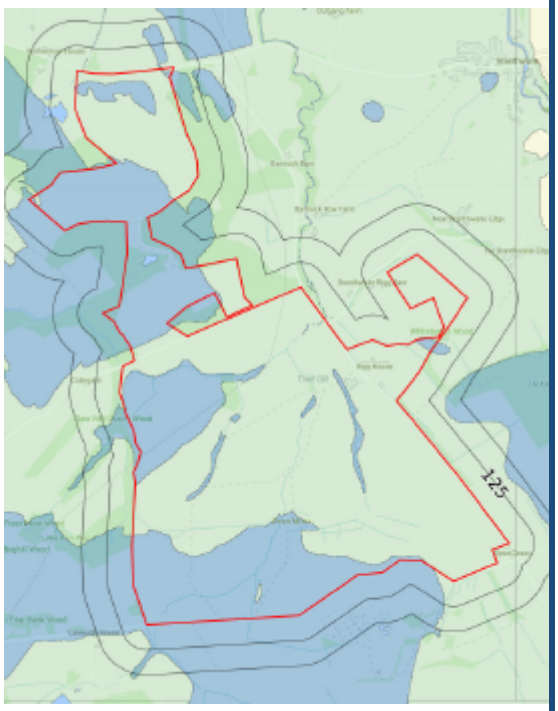
Item and Provenance	Details
Aquifer Classification Groundsure Report Groundsure 2023)[13]	**Superficial Deposits** The Alluvium and Alluvial Fan Deposits are classified by the Environment Agency as Secondary A Aquifers, defined as '*permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers'*. The Glacial Till is classified by the Environment Agency a Secondary Undifferentiated Aquifer. The Environment Agency use this classification where '*it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value'*. The deposits of Peat are classified by the Environment Agency as an Unproductive Stratum Aquifer, defined as strata which are '*largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them'.* **Bedrock Geology** All of the bedrock strata recorded by the BGS onsite are classified by the Environment Agency as Secondary A aquifers.
Groundwater Flow Direction Professional judgement	The groundwater is likely to flow in a roughly northern direction due to the topography on the Site generally falling

[13] Classification Definitions: Available at: https://www.gov.uk/government/publications/protect-groundwater-and-prevent-groundwater-pollution/protect-groundwater-and-prevent-groundwater-pollution

Item and Provenance	Details
	towards the north as well as the location of Lostrigg Beck.
Groundwater Vulnerability Groundsure Report (Groundsure 2023)[14]	Due to the highly variable bedrock and superficial geology, and the history of opencast coal mining at the Site, the groundwater within the aquifers beneath the Site is similarly highly variable. Groundwater within both the superficial and bedrock aquifers is recorded as being between Low and High Vulnerability The EA define "High" vulnerability as 'Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits'. The EA define "Low" vulnerability as "Areas that provide the greatest protection to groundwater from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability".
Groundwater (Catchment Planning)[15]	The groundwater beneath the Site is part of the Derwent and West Cumbria Lower Palaeozoic and Carboniferous Aquifers Groundwater Body which received a Water Framework Directive (WFD) overall classification of Poor in 2019. This can further be broken down to classifications of Good for quantitative supply and Poor for chemical quality.
Source Protection Zone (SPZ) Groundsure Report (Groundsure 2023)	The Site is not located within a groundwater Source Protection Zone and no such zones are present within 1.0 km of the Site.
Groundwater Abstraction Groundsure Report (Groundsure 2023)	A groundwater abstraction is recorded approximately 80 m south-west of the Site at Home Farm. Abstraction of groundwater was permitted under licence no 2775014001 for the purposes of "general use relating to

[14] https://www.gov.uk/government/publications/protect-groundwater-and-prevent-groundwater-pollution/protect-groundwater-and-prevent-groundwater-pollution#groundwater-vulnerability

[15] https://environment.data.gov.uk/catchment-planning/WaterBody/GB41202G103700

Item and Provenance	Details
	secondary category (medium loss)". The abstraction is indicated to have been licenced in 1965 and may still be active.
Drinking Water Safeguard Zone Groundsure Report (Groundsure 2023)[16]	The Site is not located within a Drinking Water Safeguard Zone (Groundwater).
Groundwater Flood Risk Groundsure Report (Groundsure 2023)	The Site is shown to be at either negligible (blue) or low *green) risk of groundwater flooding as shown in the extract below.  Crown copyright and database rights 2023. Ordnance Survey licence 100035207.

3.6.2. Due to the presence of the superficial and bedrock aquifers beneath the Site, hydrogeology will be taken forward in this assessment and will be considered as a sensitive receptor.

3.7. Hydrology

3.7.1. Table 3.3 summarises the information regarding hydrology and surface water.

[16] https://magic.defra.gov.uk/MagicMap.aspx

Table 3.3: Summary of Surface Water Related Information

Item and Provenance	Description
Nearest Surface Water Feature Site Walkover Visit – May 2023 Groundsure Report (Groundsure 2023)	Multiple streams are present on the Site, generally flowing in a northeast/eastern direction from a variety of locations within the southern parcel to a point near the north-eastern corner of the southern parcel. A number of smaller watercourses within the Site originate from springs located on the Site (generally within the coal measures). The main watercourse on the Site is Thief Gill. In addition, there are a number of drains lining the boundaries of fields in the northern parcel. The River Keekle is also located approximately 100m south of the Site.
Catchment & River Quality https://environment.data.gov.uk/catchment-planning/WaterBody/GB112075070550 https://environment.data.gov.uk/catchment-planning/WaterBody/GB112074070040 https://environment.data.gov.uk/catchment-planning/WaterBody/GB112074070030	The EA's Catchment Data Explorer indicates that the Site straddles the Lostrigg Beck, Marron, Lowca Beck and Keekle (upper) catchments. The Marron catchment received a WFD Ecological classification of Good in 2019 whilst the remaining three catchments received a WFD Ecological classification of Moderate. All four catchments received and a Chemical classification of Fail in 2019 due to priority hazardous substances mercury, and polybrominated diphenyl ethers (PBDE)
Abstractions Groundsure Report (Groundsure 2023)	There are no recorded active or historical surface water abstractions recorded within 500m of the Site.
Drinking Water Safeguard Zone and Drinking Water Protected Area (Surface Water) https://magic.defra.gov.uk/	The Site is not located within a drinking water safeguard zone (surface water) or a drinking water protected area (surface water)
Fluvial Flood Risk* https://flood-map-for-planning.service.gov.uk/	The whole of the Site is shown to be located within a Flood Zone 1, defined by the EA as "*land having a less than 1 in 1,000 annual probability of river or sea flooding*".
*The scope of this report does not include a flood risk assessment.	

3.7.2. Due to the presence of nearby surface water receptors, surface water (biodiversity) will be taken forward in this assessment and will be considered a sensitive receptor. On the basis that surface waters are not indicated to be utilised, surface water (resource) will not be taken forward as a receptor for consideration in this assessment.

3.8. Terrestrial Ecology

3.8.1. The DEFRA's MAGIC viewer (DEFRA, 2023) and the Groundsure Report indicate that within the Site there are no Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Local or National Nature Reserves (LNR / NNR), Groundwater Dependent Terrestrial Ecosystem (GWDTE) or Ramsar convention internationally designated wetland.

3.8.2. Dean Moor County Wildlife Site ('CWS') is partially located within the southern part of the Site. This CWS is designated for acidic moorland habitats.

3.8.3. Saw Mill Quarry Wood on the western boundary and Jackie Planting approximately 180 m east of the Site are designated ancient woodlands.

3.8.4. The River Marron, located (at most proximal) approximately 900 m to the north-west is classified as a SSSI, SPA, SAC and GWDTE. The Site is located within the risk zone associated with this SSSI, requiring a consultation with Natural England for any solar scheme with a footprint of > 0.5 ha.

3.8.5. Terrestrial ecology will be taken forward and considered as a plausible receptor in this assessment.

3.9. Geological Designations

3.9.1. Geodiversity can be defined as *'The natural range (diversity) of geological (rocks, minerals, fossils), geomorphological (landforms, topography, physical processes), soil and hydrological features. It includes their assemblages, structures, systems and contributions to landscapes'* (Gray, 2013). These protected sites include geological sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Geology sites (also known as RIGS - Regionally Important Geological and Geomorphological sites).

3.9.2. DEFRA's MAGIC viewer (DEFRA, 2022) and the Groundsure Report indicate that the Site is not located within 1.0 km of any geologically designated SSSI.

3.9.3. Information relating to Regionally Important Geological sites (RIGS), referred to in Cumbria as *'Local Geological sites'* (LGS) is presented on the Cumbria GeoConservation website[17]. A review of this information indicates that the Site is not located within 1.0 km of any geologically designated Local Geological Site with public access. Branthwaite Edge, a LGS without public access is located approximately 170 m east of the Site

3.9.4. Due to the distance and limited ground disturbance by the Proposed Development geodiversity will not be taken forward as a receptor for consideration in this assessment.

3.10. Archaeological Setting and Buildings

3.10.1. A preliminary appraisal of readily available sources of information has been undertaken to determine whether archaeological settings and property requires consideration within the ground condition assessment. It should be noted the statement regarding the archaeological setting does not purport to be an archaeological risk assessment which would require a separate commission.

3.10.2. DEFRA's MAGIC viewer, Historic England's Heritage Gateway viewer and the Groundsure Report (GS, 2023) have been reviewed and pertinent features on or within 250 m of the Site are noted below:

a. A Grade II listed property (Wythemoor Sough and Adjoining Barn and Stable) is located approximately 170m north-west of Site.
b. A Scheduled Ancient Monument (stone circle) is present in the south-western corner of the Site.

[17] https://www.cbdc.org.uk/cumbrialgs_home-new-test/cumbrialgs-publicmap/ Accessed December 2024

3.10.3. On the basis of the above, archaeological setting will not be taken forward in this assessment as a receptor for consideration as the proposed development is for either limited-construction surface infrastructure (solar panels) or small-scale surface development (e.g., substations). The development proposals are therefore unlikely to introduce impacts e.g., vibration or groundwater level change, that could affect the on and off-Site archaeological and building receptors.

3.11. Minerals Resource

3.11.1. Policy DC15 of Cumbria County Council's adopted Minerals and Waste Local Plan 2015 to 2030[18] states that:

> *'The Mineral Planning Authority will safeguard those mineral resources that are shown on the Policies Map. Within those areas, the Mineral Planning Authority should be consulted by the Local Planning Authorities on any planning applications they receive for non-minerals development that would be likely to affect the winning and working of minerals.*
>
> *All non-minerals development proposals within the Mineral Safeguarding Area should extract any viable mineral resources present, in advance of construction. Proposals for non-mineral development within the Mineral Safeguarding Areas that do not allow for the prior extraction of minerals will only be permitted where:*
>
> *a. The need for the development outweighs the need to extract the mineral; or*
> *b. It can be clearly demonstrated that it is not environmentally acceptable or economically viable to extract the mineral prior to non-mineral development taking place; or*
> *c. It can be clearly demonstrated that the mineral is either not present or of no economic value or would lead to land stability problems or is too deep to extract in relation to the proposed development; or*
> *d. The development would not prevent minerals extraction taking place in the future; or*
> *e. The development within the mineral safeguarding area is exempt, as set out in the exemption list in table 15.1.*
> *f. All of the mineral safeguarding areas together, are contiguous with the mineral consultation area.'*

3.11.2. Solar facility developments are not exempted from the requirements of Policy DC15 in Table 15.1 of the Minerals Plan.

[18] Whilst Cumbria Council has now been replaced, Cumberland Council appears to have adopted the Cumbria Council Minerals and Waste Local Plan. https://legacy.cumberland.gov.uk/planning-environment/policy/minerals_waste/MWLP/home.asp

3.11.3. A review of the minerals safeguarding map that accompanies Cumbria Council's Minerals and Waste Local Plan[19] indicates that the Site is located within a Minerals Safeguarding Area for Brick Clay.

3.11.4. On this basis minerals resources are taken forward as a receptor for consideration in this assessment.

[19] https://www.cumbria.gov.uk/eLibrary/Content/Internet/538/755/1929/4298491253.pdf

4. Preliminary Ground Stability Assessment

4.1. Introduction

4.1.1. In accordance with the requirements of the National Planning Policy Framework (MHCLG, 2023), the potential for the proposed development to contribute to, or to be adversely affected by, land instability has been assessed.

4.1.2. The potential for land instability at the Site has been considered, in relation to;

a. Naturally Occurring Geological Hazards;
b. Natural and Mining Cavities;
c. Slope Stability; and
d. Potentially Adverse Foundation Conditions.

4.1.3. Consideration is given below to the risk of these potential geotechnical constraints arising from existing ground conditions at the Site, as identified in this data review. The geological constraints to the development are those relating to the natural ground conditions and any geological hazards on the Site, and the constraints relating to the previous and current use of the Site.

4.2. Naturally Occurring Geological Hazards

4.2.1. An assessment of potential geological hazards that may give rise to instability or adverse foundation or construction conditions as supplied by the BGS from their National Geoscience Information Service (NGIS) are presented in the Groundsure Report reproduced in Appendix C. The assessment is generated automatically based on digital geological maps and the scope and the accuracy is limited by the methods used to create the dataset and is therefore only indicative for the search area.

4.2.2. The information contained in the report has been reviewed and reassessed by the author considering the specific information available for the Site with the potential hazard being rated very low,

low, moderate, high or very high in general accordance with the criteria given by the BGS property hazard rating system. The assessment of the potential for geological hazards to be present on the Site is summarised in the table below.

Table 4.1: The Assessment of Naturally Occurring Geological Hazards On-Site

Hazard	Hazard Potential On-Site	Comment
Collapsible Ground	Very Low	The generic assessment presented in the Groundsure report states "*deposits with the potential to collapse when loaded and saturated are unlikely to be present*". It is the author's assessment that the natural ground conditions are such that potentially collapsible ground is not anticipated.
Compressible Ground	Very Low to Moderate	The generic assessment presented in the Groundsure report states that "*Deposits with potential to collapse when loaded and saturated are unlikely to be present*". The author have reviewed the geological information as shown on the BGS maps and consider that: • A Moderate potential for compressible ground is present where peat and alluvium are present. • The remaining areas of the Site are considered to have a Very Low potential for compressible ground. (Extent of compressible ground is indicated on **Figure 5**)
Dissolution	Very Low	The generic assessment presented in the Groundsure report states that "*soluble rocks are either thought not to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present*". It is the author's assessment that hazards associated with dissolution of rocks are very unlikely to be present.
Landslides / Slope Stability	High	The generic assessment presented in the Groundsure report states that across the majority of the Site "s*lope instability problems are not likely to occur*" however in the south of the Site, where steeper slopes are present "*Slope instability problems almost certainly present and may be active. Significant constraint on land use*".

Hazard	Hazard Potential On-Site	Comment
		There are several steep sloping areas of the Site, particularly in the south of the Site where there is a steep, north facing slope. A large area of the slope near the southern boundary is identified on geological mapping as 'landslide deposits' which are indicative of an active area of slope instability. Multiple smaller areas are also identified which are generally identified due to their topography, in addition. Extent of landslide / slope stability hazard is indicated on **Figure 5**.
Running Sand	Low	The generic assessment presented in the Groundsure report states that for the majority of the Site, "*running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions*". It is the author's assessment that running sand conditions are unlikely to occur across the majority of the Site, however the ground conditions are such that running sand may be present where alluvium is present or where sandy layers/lenses are present within the diamicton.
Shrinking or Swelling Clay	Very Low to Low	The generic assessment presented in the Groundsure report states that across the majority of the Site "*ground conditions are predominantly low plasticity*". It is the author's assessment that the areas underlain by the Middle and Lower Pennine Coal Measures may have a low volume change potential. The area in the south underlain by the Whitehaven Sandstone Formation, and the limited area in the centre of the Site recorded by the BGS as being underlain by sandstones of the Middle Coal Measures are likely to be non-plastic. Whilst the Alluvium and Till may contain a higher proportion of clay, they are likely to have a low volume change potential due to the typical presence of granular constituents.

4.3. Natural Cavities

4.3.1. The Natural Cavities Database maintained and updated by the author has been searched for relevant natural cavity records. The

search was carried out at a 200m buffer around the Site. No recorded natural cavities were identified.

4.4. Faults

4.4.1. Numerous faults are indicated on the Site by the geological mapping and it is anticipated that more, unrecorded, minor faults exist. Faults can remain as plains of weakness even when they are no longer active. Faulted rock is often more susceptible to weathering than non-faulted material and consideration of variable ground conditions in these areas will be necessary as part of any future groundworks / development at the Site.

4.5. Aggressive Ground Conditions

4.5.1. The coal measures strata beneath the Site contain sulphate minerals which in the presence of groundwater and air can give rise to aggressive conditions for buried concrete i.e., the production of chemical agents that are destructive to buried concrete. This is normal in these materials and should be assessed through future ground investigation such that appropriate concrete design parameters can be defined.

4.6. Mining Related Hazards

4.6.1. There is a history of coal mining on the Site and within the Site setting which is widespread and has likely left a legacy of relics and liabilities onsite and within the wider area. The author has undertaken a desk-based CMHA, which should be read in conjunction with this report.

4.6.2. The potential adverse ground conditions as a result of mining on the Site and in the local area include:

a. Subsidence as a result of ground collapse (areas where shallow or underground mining has occurred).
b. Subsidence as a result of settlement of infilled material (former Potatopot Opencast Mine).

c. Rockfalls and landslides at the walls of old quarries (abandoned quarries).
d. Mine gas release (all areas where mining has occurred).
e. Presence of recorded mine entries noting that there could also be unrecorded mine entries.
f. Differential settlement in the vicinity of the high wall of the opencast mine.

4.7. Hazard Evaluation

4.7.1. Overall, the geotechnical constraints to the Dean Moor Solar development associated with the ground conditions, potential geological hazards and the historical and present land uses is considered to be **Very Low** to **High.**

Naturally Occurring Hazards

4.7.2. **Very Low** potential hazards were identified for collapsible ground and for shrinking and swelling ground; **Low** potential hazard for running sand associated with alluvium deposits; **Medium** potential hazard for compressible ground associated with peat and alluvium deposits, and faulting within the bedrock; and **High** potential hazard for landslides particularly associated with the steep slope in the south of the Site.

4.7.3. With regards to slope instability / landslide, in the event that development was pursued in these areas then detailed ground assessment and subsequent slope stabilisation measures are likely to be required to facilitate development. It is therefore anticipated that areas of steep topography and associated areas of slope instability / landslide hazard would generally be avoided within any development layout.

4.7.4. Compressible ground conditions pose a risk to the construction and operation of proposed development. Primarily, the differential settlement of foundations at the boundary between materials with varying compressibility.

4.7.5. The temporary works design for any cable trenches or foundations should consider the potential for ingress of groundwater (and any associated running sands, if excavations are required in areas of alluvium, or where sand layers/lenses are present within the diamicton) and also any requirements for shoring to maintain excavation stability.

Mining Related Hazards

4.7.6. The CMHA (ES Appendix 10.2) identifies numerous mine entry features together with the infilled opencast mine being recorded at the Site, together with potential for unrecorded mine entry features and unrecorded shallow mine workings also being present. Areas of increased hazard potential have been identified around these features.

4.7.7. Where development is proposed in such areas, then provision of ground investigation via geophysical and / or intrusive exploratory works will be necessary in order to confirm conditions present and establish any stabilisation / mitigation measures necessary to facilitate development.

4.7.8. It is recommended that any permanent buildings should, if possible, avoid areas identified as potential slope stability risk and potential compressible ground. The ground conditions anticipated in Area A and B (the area of colliery spoil) do not preclude the placement of panel arrays or inverters (being light loading structures) assuming the foundations are designed appropriately. The foundations for the PV arrays will comprise either:

a. Mini-piles, metal beams with a footprint of approximately 0.0014 m^2, driven to a maximum depth of 4.0 m below ground level using an attachment for an excavator.
b. Screw piles, typically hollow metal tubes that are ‘screwed’ into the ground using an attachment for an excavator.
c. Use of ballast to weigh down the frameworks. This option is non-intrusive and uses concrete blocks or another form of ballast to anchor the frameworks.

5. Tier 1 Preliminary Geoenvironmental Risk Assessment

5.1. Approach and Outline Conceptual Model

5.1.1. The land contamination risk assessment presented in this section is a Tier 1 Preliminary Risk Assessment (PRA). A summary of the guidance for the assessment of land contamination and the approach developed and adopted by the author is presented in Appendix A.

5.1.2. A conceptual model identifies the types and locations of potential contamination sources, the identification of potential receptors and the identification of potential transport/migration pathways.

5.1.3. Guidance requires a risk assessment to include the following steps:

a. Identify the hazard - establish contaminant sources.
b. Assess the hazard - use a source-pathway-receptor (S-P-R) pollutant linkage approach to find out if there is the potential for unacceptable risk.
c. Estimate the risk - predict what degree of harm or pollution might result and how likely it is to occur.
d. Evaluate the risk - decide whether a risk is unacceptable.

5.1.4. The findings for each step are summarised in the following subsections.

5.2. Hazard Identification (Sources of Potential Contamination)

5.2.1. The on-Site and off-Site sources of potential contamination (SPCs) identified and associated contaminants of concern (COC) are presented in Table 5.1 below.

Table 5.1: Summary of Potential Sources of Contamination and Contaminants of Concern

SPC Reference	Description and Hazard Classification Score (HCS)	Potential Contaminants of Concern (COC)
On-Site		
1	Agricultural land HCS = 1	Agrichemical Residues
2	Buildings belonging to Rigg House (Farm) located on the Site's eastern boundary. HCS = 2	Bulk storage of Agrichemicals and Fuels
3	Former railway branch line. HCS = 2	Polycyclic aromatic hydrocarbons, asbestos.
4	Farm tracks and lanes made from unknown materials. HCS = 2	Asbestos
5	Former opencast mine and associated artificial ground HCS = 3	Metals, Mine gases
Off-Site		
5	Agricultural land. HCS = 1	Agrichemical Residues
6	Vehicle dealership with servicing and repair garage. HCS = 2	Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, solvents.

5.3. Hazard Assessment

5.3.1. To determine whether the identified hazards represent a risk it is necessary to identify the presence of potential receptors and pathways by which these receptors can be exposed to the hazard.

Identification of Potential Pathways

5.3.2. Potential environmental hazards need a pathway connecting the source (if present) to potential receptors in order to be able to impact upon the receptors. These pathways are capable of conveying the contaminants. Pathways can be anthropogenic (artificial) or natural.

5.3.3. Anthropogenic pathways are artificial routes capable of conveying contaminants and include such routes as surface water drains, foundations, and persons disturbing contamination sources in such a way as to liberate contaminants.

5.3.4. Natural pathways include via surface water in the main watercourses and drainage ditches and via groundwater in the underlying geology. The Whitehaven Sandstone Formation are likely to be comprised of predominantly high permeability sandstones and the potential for lateral and vertical migration of potential contaminants in groundwater within these deposits is considered to be high.

5.3.5. Pathways such as dermal contact, inhalation or ingestion for future users are considered unlikely given the nature of the Proposed Development where the likelihood of exposure would be considered less than, for example, a public park.

5.3.6. In the case of workers carrying out groundworks (e.g., to lay foundations) direct contact with potential contamination in the ground is likely and therefore pathways such as dermal contact or inhalation are potentially active.

5.3.7. Table 3 in the methodology presented in Appendix A describes possible pathways for each receptor type. Each of these possible pathways is then considered when assessing the possible pollutant linkage.

Receptor Identification

5.3.8. The receptors considered as part of this land contamination assessment are summarised in Table 5.2 and based on the information reviewed either eliminated from further consideration or allocated a sensitivity score in accordance with the Methodology. The sensitivity score informs the consequence element of the risk estimation process, definitions of which can be found in Table 2 of Appendix A.

Table 5.2: Potential Receptors and Sensitivity Score

Receptor Type	Comment	Sensitivity Score
Human Health – On Site	Construction –Groundworkers Operation – Workers / maintenance staff at solar farm. Ephemeral use of footpaths by members of the public.	High (4)
Human Health – Off-Site	Ephemeral use of footpaths by members of the public. Residents of Rigg House (off Site).	Very High (5)
Groundwater (resource)	Site is not located within a groundwater SPZ. Superficial - Secondary Undifferentiated Aquifer (Glacial Till), predominately clayey / low permeability. Superficial – Secondary A Aquifers (Alluvium, Alluvial Fan Deposits), likely clay, silt, sand and gravel – variable permeability. Bedrock – Secondary A Aquifers (Coal Measures and Whitehaven Sandstone Formation), sandstone, mudstone and siltstone beds – variable permeability.	Very Low (1) Low (2) Low (2)
Surface Water	Ordinary water courses within the Site are part of a WFD RBMP with a Chemical status of 'Fail' and Ecological status of Moderate to Good. Potential for abstraction limited based on size/flow of nearby surface water bodies. Abstraction not identified within 0.5 km. GWDTE present approximately 900 m.	Moderate (3) Very High (5)
Property – Buildings / Archaeology	Scheduled Ancient Monument (stone circle) in south-western corner of the Site. Existing off-Site Grade II* Listed building approximately 170 m to the north-west. The development comprises solar panels with limited	High (4)

Receptor Type	Comment	Sensitivity Score
	'construction' required. Possible small control / transformer room may be required. The Proposed Development comprises surface level infrastructure. Impacts upon adjacent properties are not anticipated.	Low (1)
Terrestrial Ecology	Areas of Ancient woodland are present immediately adjacent Site. Dean Moor County Wildlife Site ('CWS') is partially located within the Site.	Low (2)
Geodiversity	Branthwaite Edge LGS is located to the east of the Site. Due to the distance and limited ground disturbance by the Proposed Development this is not a credible receptor.	Eliminated
Minerals (resource)	The Site is located within a Minerals Safeguarding Area for brick clay.	Eliminated (see below)
Soils (resource)	The proposed panels will not require significant in-ground construction works, on which basis it is not considered that the development would represent a significant 'loss' of agricultural land (>20ha). There also remains the possibility of the land remaining in agricultural use for livestock grazing.	Eliminated

5.3.9. Whilst minerals as a resource has been identified as a potential development constraint due to the Site's location within a Minerals Safeguarding Area, the risk to minerals as a resource from sources of potential contamination has not been assessed. As per policy DC15 of the adopted Minerals and Waste Local Plan, consultation with the Mineral Planning Authority will be required as part of the development proposals in order to confirm that development does not present an unacceptable impact on / sterilisation of the identified mineral resource.

5.4. Risk Estimation

5.4.1. When there is a pollutant linkage (and therefore some measure of risk) it is necessary to determine whether the risk is significant and therefore whether further action is required.

5.4.2. Risk estimation involves predicting the likely consequence (what degree of harm might result) and the probability that the consequences will arise (how likely the outcome is given the likely scale of contamination and the probability of exposure).

5.4.3. Preliminary risk estimation is based the evaluation of available data (which has been summarised and presented in this report). Without actual data from intrusive investigation works, there is always a degree of uncertainty regarding the actual presence of potentially harmful contamination.

5.4.4. The estimated risk for each of the receptors associated with the source of potential contamination with the highest score (backfilled former open caste mine) is summarised in Table 5.3 below. This table is derived from the tables in Appendix G which identifies the assigned probability for each potential pollutant linkage. Definitions for probability and consequence are in Table 4 and Table 5 of Appendix A (respectively).

5.4.5. It is noted that where there are multiple receptors within a single class e.g., for human health where residents may be present in some areas but absent from others, the ‘worst-case’ sensitivity for that receptor is adopted to provide a conservative assessment.

Table 5.3: Summary of Estimated Risk (Contamination Hazards)

Receptor	Construction without Mitigation	Completed Development without Mitigation
Human Health – On-Site	Moderate	Low
Human Health – Off-Site	Low	Low
Groundwater (shallow)	Low	Very Low
Groundwater (deep)	Very Low	Very Low
Surface Water (on-Site)	Moderate/Low	Very Low
Property – on-Site Archaeology	Low	Low
Property – off-Site	Very Low	Very Low
Terrestrial Ecology	Very Low	Very Low

5.5. Risk Evaluation

5.5.1. Possible pollutant linkages are determined using professional judgement. If a linkage is considered possible, it is considered that this represents a potentially 'unacceptable risk' and therefore requires further consideration. This may be through remediation or mitigation or through further tiers of assessment.

5.5.2. Even without mitigation the majority of the pollutant linkages during both construction and operation have an estimated risk of **Very Low** to **Low**. A Very Low is defined as '*there is a low possibility that harm could arise to a receptor and in the event of such harm being realised it is not likely to be severe*'. A Low risk is defined as '*it is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this hard, if realised, would normally be mild'*.

5.5.3. The highest estimated risk is Moderate, which is defined as 'It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not

already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term'. A Moderate risk is estimated for construction workers and surface water without mitigation measures reflecting the potential ground disturbance and degree of contact and exposure during construction phase.

5.5.4. It is considered unlikely that the Site would be designated statutory contaminated land under Part 2A of the Environmental Protection Act 1990.

6. Conclusions and Recommendations

6.1. Conclusions

6.1.1. The Site remained in agricultural use until the mid-1980s when the land to the north of the road that bisects the Site was part of an opencast coal mine. Mining continued until the early 1990s, after which the mine was backfilled (likely with arisings and overburden) and restored to agricultural use.

6.1.2. A farm (Rigg House) has been present to the east of the Site since the 1800s and two farm buildings belonging to Rigg House have been located in the east of the Site since the early 1990s. A vehicle dealership / repair and servicing garage was constructed in the 1980s immediately south of the Site's south-eastern corner.

6.1.3. The potential for the identified sources of potential contamination to affect receptors (human health, groundwater, surface water, ecology, buildings) has been assessed during each phase of the development (baseline, construction phase, operational phase) and a number of plausible pollutant linkages have been identified with potentially unacceptable risk associated with each. A worst-case risk estimate of **Moderate** has been identified for construction workers without mitigation measures. A Moderate risk is defined as '*It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term*'.

6.1.4. The estimated risk has been generated using worst case assumptions, including the scale and nature of contamination and the likelihood of the harm occurring without mitigation. In reality the degree of ground disturbance for the Proposed Development is

minimal. In addition, implementation of health and safety at work legislation including the Construction (Design & Management) Regulations (CDM 2015) and the Control of Asbestos Regulations (CAR 2012) require risk assessments and method statements to be prepared. It is therefore considered that such risks can be adequately mitigated through adoption of standard mitigation measures, which will be justified as being appropriate by ground investigation to confirm the actual ground conditions present.

6.1.5. Both naturally occurring and man-made ground stability hazards have been identified on the Site. Due to the nature of the proposed development, it is considered that these do not represent significant constraints, subject to confirmation of actual ground conditions. It is anticipated that the hazards can be mitigated through design, such as exclusion zones around mine entries and selection of adjustable foundation solutions for the solar arrays.

6.1.6. A plan presenting the assessed geotechnical and geoenvironmental constraints to the Site is presented as Figure 4.

6.2. Data Gaps and Uncertainty

6.2.1. The available ground condition data is preliminary in nature, based solely on desk-based study and other sources of publicly available data in general proximity of the Site. However, it is considered that there is a reasonable level of confidence that the information presented in this report provides a good understanding of the likely ground conditions and enables identification of potential risks.

6.2.2. On the basis that the ground conditions information used in this report is largely qualitative in nature, there remains a degree of uncertainty as to the actual ground conditions present. It is recommended that an intrusive investigation is undertaken to confirm the anticipated low levels of potential contaminants and/or allow for further stages of assessment and to support the design of the Proposed Development.

6.3. Recommendations

6.3.1. It is recommended that any permanent buildings should if possible avoid areas identified as potential slope stability risk and potential compressible ground. The ground conditions anticipated in Area A and B (the area of colliery spoil) do not preclude the placement of panel arrays or inverters (being light loading structures) assuming the foundations are designed appropriately. Foundation options for such structures include adjustable 'legs' anchored into the ground using spikes.

6.3.2. Ground investigation will be necessary in order to confirm conditions present in areas of potential geoenvironmental and / or instability hazard. The investigation should produce results which enable a detailed design for foundations of both permanent and semi-permanent structures on the Site and enable an assessment to be carried out to inform the delivery and layout of the Proposed Development.

Essential Guidance for Report Readers

1) This report has been prepared within an agreed timeframe and to an agreed budget that will necessarily apply some constraints on its content and usage. The remarks below are presented to assist the reader in understanding the context of this report and any general limitations or constraints. If there are any specific limitations and constraints, they are described in the report text.

2) The opinions and recommendations expressed in this report are based on statute, guidance, and best practice current at the time of its publication. The author does not accept any liability whatsoever for the consequences of any future legislative changes or the release of subsequent guidance documentation, etc. Such changes may render some of the opinions and advice in this report inappropriate or incorrect and the report should be returned to us and reassessed if required for re-use after one year from date of publication. Following delivery of the report, the author has no obligation to advise the Client or any other party of such changes or their repercussions.

3) Some of the conclusions in this report may be based on third party data. No guarantee can be given for the accuracy or completeness of any of the third-party data used.

4) Historical maps and aerial photographs provide a “snapshot” in time about conditions or activities at the Site and cannot be relied upon as indicators of any events or activities that may have taken place at other times. It is possible for developments to have occurred between surveys that are not shown or for the map record to have been censored for military security.

5) The absence of cavity records in the authors natural and mining cavities (non-coal) databases is not considered as conclusive as to the absence of these features and we do not warranty that the data is complete or error free.

6) The conclusions and recommendations made in this report and the opinions expressed are based on the information reviewed and/or the ground conditions encountered in exploratory holes and the results of any field or laboratory testing undertaken. There may be ground conditions at the Site that have not been disclosed by the information reviewed or by the investigative work undertaken. Such undisclosed conditions cannot be considered in any analysis and reporting.

7) It should be noted that this report is a land condition assessment and does not purport to be an ecological, flood risk or archaeological survey and additional specific surveys may be required.

8) The identification of invasive and/or noxious plants such as Japanese Knotweed is outside the remit of our appointment.

9) This report has been written for the sole use of the Client stated at the front of the report in relation to a specific development or scheme. The conclusions and recommendations presented herein are only relevant to the scheme or the phase of project under consideration. This report shall not be relied upon or transferred to any other party without the expressed written authorisation of the author. Any such party relies upon the report at its own risk.

10) The interpretation carried out in this report is based on scientific and engineering appraisal carried out by suitably experienced and qualified technical consultants based on the scope of our engagement. We have not considered the perceptions of, for example, banks, insurers, other funders, lay people, etc., unless the report has been prepared specifically for that purpose. Advice from other specialists may be required such as the legal, planning and architecture professions, whether specifically recommended in our report or not.

11) Public or legal consultations or enquiries, or consultation with any Regulatory Bodies (such as the Environment Agency, Natural England or Local Authority) have taken place only as part of this work where specifically stated.

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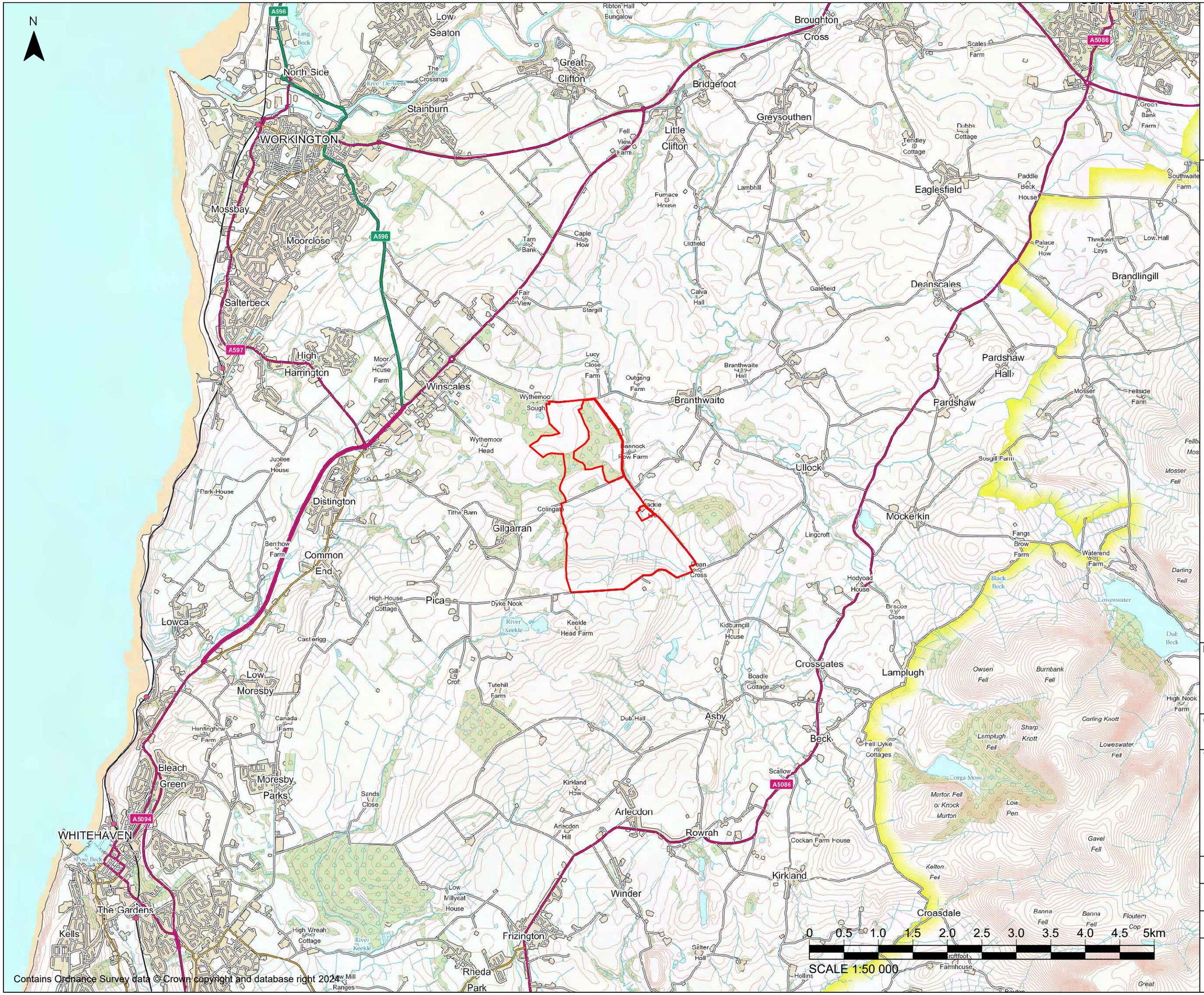
Figures



N

19
20
Existing Building
Subsidence Feature
Northern Parcel
Felled woodland and timber piles
Bannock Row Farm
Wind Turbine WTG1
21
Rotting organic material storage
Wind Turbine WTG2
22
Fly tipping
Wind Turbine WTG3
Culvert/Drain
Culvert/Drain
23
2
1
Culvert
Rigg House
Culvert/Drain Structure unknown
Vehicle bridge and culvert
Footbridge
Materials Storage and Stockpiles/ Tracked Excavator
3
Footbridge
Footbridge
Vehicle bridge and culvert
18
Footbridge
Footbridge
4
Culvert
Footbridge
Potentially asbestos-containing materials
Potentially asbestos-containing materials
Material Storage area
Footbridge
5
Vehicle bridge and culvert
Humocky Ground - possible mineshafts
Exposed Bedrock - Sedimentary Strata
Hummocky Ground - possible mineshafts
Southern Parcel
Vehicle bridge and culvert
13
12
Footbridge
11
10
9
Possible mineshaft
Quarry
Vehicle bridge and culvert
16
17
Standing Stones - Heritage Site
15
8
7
6
Odour noted in outfall
Surface depression - possible mineshaft
Quarry Face
Thief Gill
14
Culvert

0 20 40 60 80 100m
SCALE 1:12500

Legend

- Approximate Site Boundary
- Drainage Ditch
- Pond/Surface Water
- Overhead Power Cable
- Pylons
- Assumed Underground Power Cables
- Wind Turbine
- Steep Banking and visual evidence of Slope Failure
- Platformed/Filled land - gravel set-down area
- Photo location

Project Title

Dean Moor Solar Farm

Client

FVS Dean Moor Limited

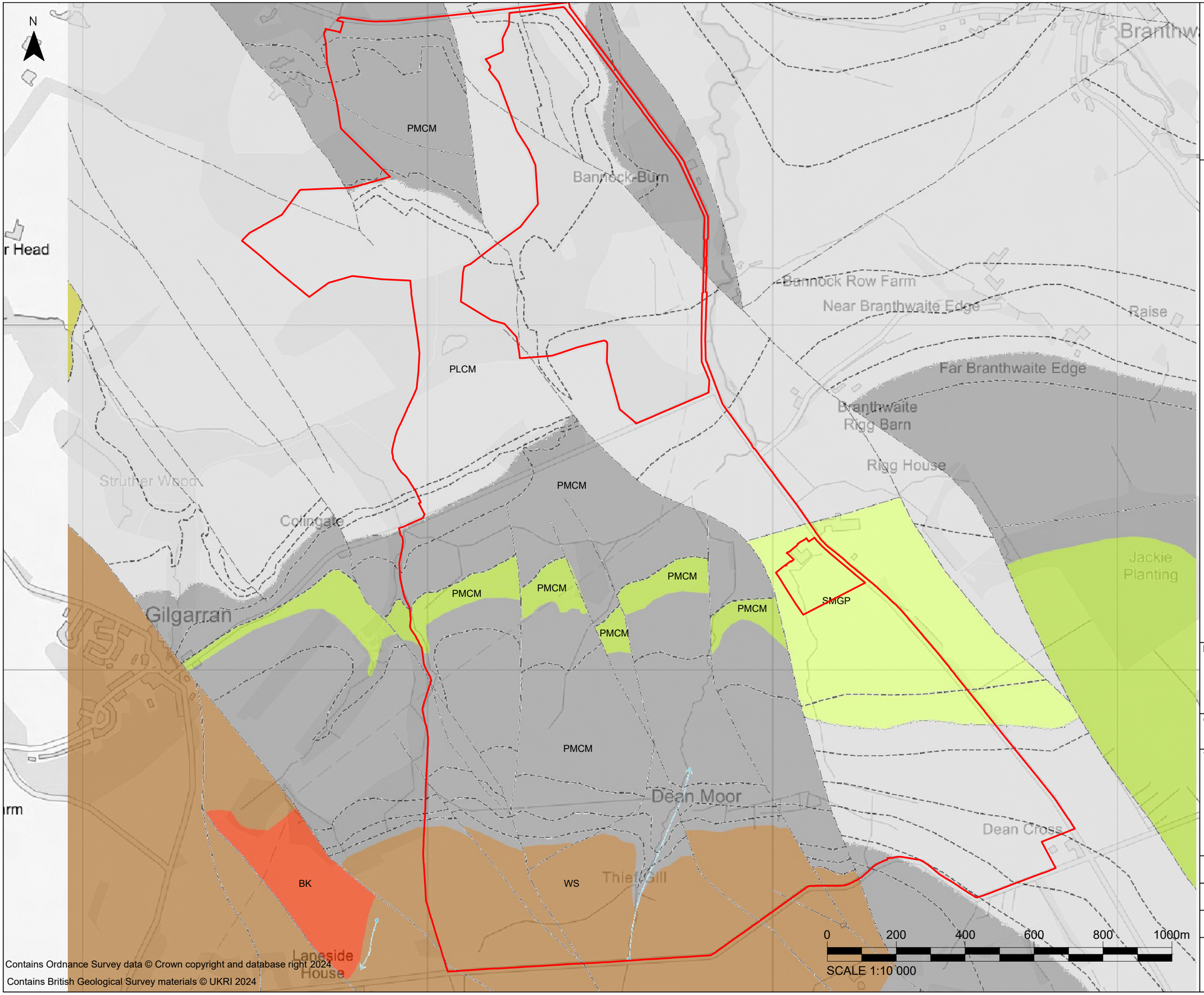
Title

DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER

Site Layout Plan and Site Reconnaissance Observations

Scale: 1:5000 @ A1	Date: 16/10/2024
Drawn: davco	Checked: NH
Figure:2	Sheet 1 of 1 | Rev: A

Stantec



Legend

- Approximate Site Boundary
- WS — Whitehaven Sandstone Formation
- PMCM — Pennine Middle Coal Measures Formation - Mudstone Siltstone and Sandstone
- PMCM — Pennine Middle Coal Measures Formation - Sandstone
- SMGP — Stainmore Formation
- PLCM — Pennine Lower Coal Measures Formation
- BK — Brockram - Breccia
- Coal Seam (inferred)
- Fault
- Glacial Meltwater Channel

Project Title: Dean Moor Solar Farm

Client: FVS Dean Moor Limited

Title: DEAN MOOR SOLAR FARM DEVELOPMENT CONSENT ORDER

Bedrock Geology

Scale: 1:10 000 @ A3	Date: 16/10/2024
Drawn: davco	Checked: NH
Figure: 3	Sheet 1 of 1 — Rev: A

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N

Worked Ground

TILL

Bannock-Burn

Made Ground

Infilled Ground

TILL

Bannock Row Farm

Near Branthwaite Edge

Raise

Far Branthwaite Edge

Branthwaite Rigg Barn

Rigg House

ALV

Jackie Planting

ALV

PEAT

ALF

ALF

PEAT

TILL

ALV

Dean Moor

Landslide Deposits

Dean Cross

Thief Gill

Gilgarran

Colingate

Strumar Wood

Laneside House

r Head

rm

0 200 400 600 800 1000m

SCALE 1:10 000

Legend

- Approximate Site Boundary
- Made Ground
- Infilled Ground
- Worked Ground
- Landslide Deposits
- ALV Alluvium
- TILL Till
- PEAT Peat
- ALF Alluvial Fan Deposits

Project Title

Dean Moor Solar Farm

Client

FVS Dean Moor Limited

Title

DEAN MOOR SOLAR FARM
DEVELOPMENT CONSENT ORDER

Superficial Geology

Scale: 1:10 000 @ A3	Date: 16/10/2024
Drawn: davco	Checked: NH
Figure: 4	Sheet 1 of 1 | Rev: A

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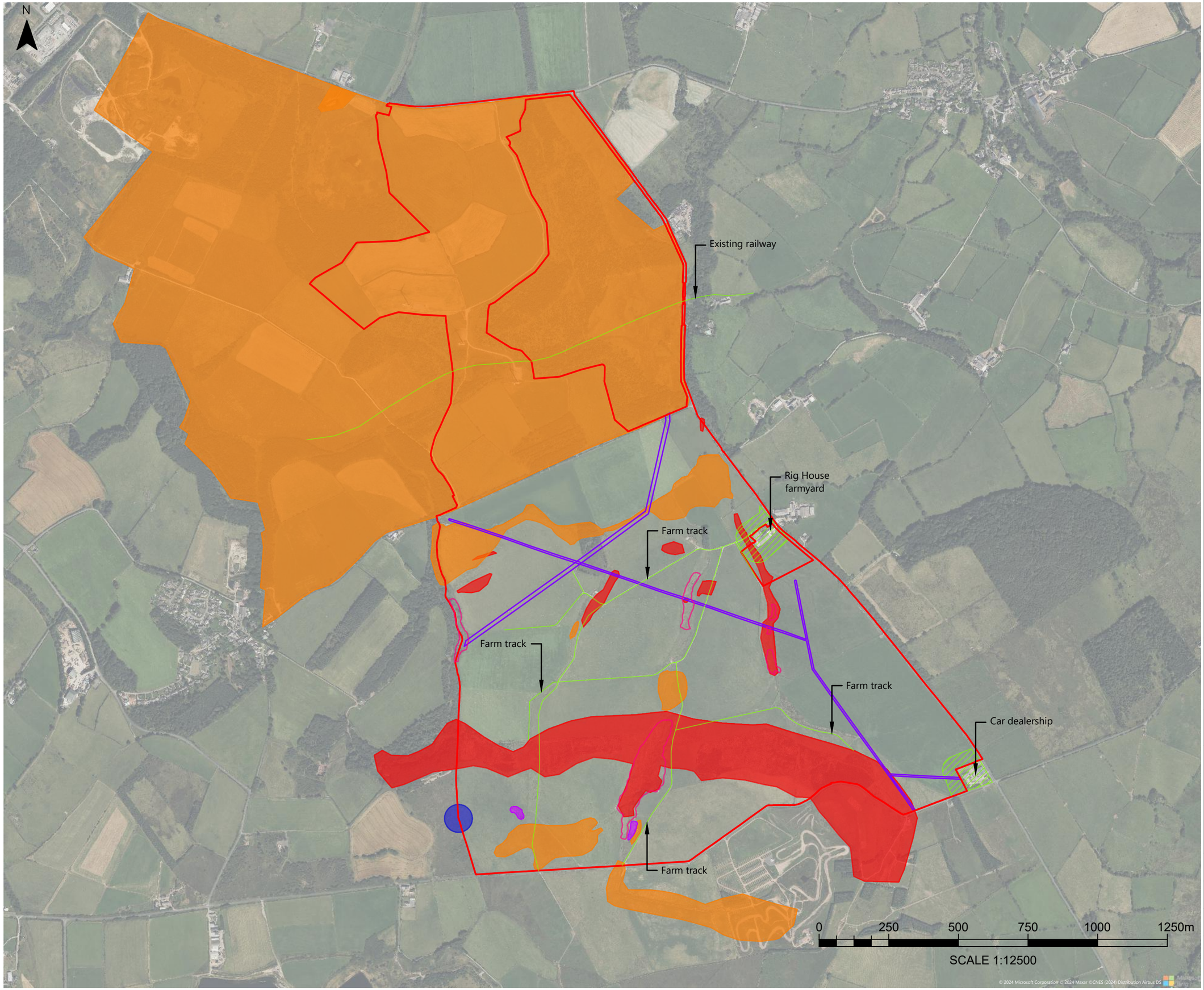

Legend

- Approximate Site Boundary
- Potential compressible ground risk
- Potential slope stability hazard - as indicated by Groundsure (GS, 2023)
- Potential slope stability hazard - as observed during site walkover
- Potential sources of contamination
- Old quarry
- Standing stone buffer
- Electrical line exclusion zones

Project Title

Dean Moor Solar Farm

Client

FVS Dean Moor Limited

Title

DEAN MOOR SOLAR FARM
DEVELOPMENT CONSENT ORDER

Geotechnical and Geoenvironmental Constraints

Scale: 1:12 500 @ A3	Date: 16/10/2024
Drawn: davco	Checked: NH
Figure: 5 Sheet 1 of 1	Rev: A

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Appendix A Methodology for Assessment of Assessment of Land Contamination (England)

Stantec Guide: Methodology for Assessment of Land Contamination (England)

1 INTRODUCTION

This document defines the approach adopted by Stantec in relation to the assessment of land contamination in England. The aim is for the approach to (i) be systematic and objective, (ii) provide for the assessment of uncertainty and (iii) provide a rational, consistent, transparent framework.

When preparing our methodology, we have made reference to various technical guidance documents and legislation referenced in Section 7 of which the principal documents are (I) Contaminated Land Statutory Guidance (Defra 2012), (ii) online guidance Land Contamination Risk Management (LCRM) accessed from GOV.UK which has replaced Contaminated Land Research (CLR) Report 11: Model Procedures for the Management of Contamination (EA 2004). LCRM has been revised (July 2023) and CLR 11 is archived, (iii) Contaminated land risk assessment: A guide to good practice (C552) (CIRIA 2001) (iv) National Planning Policy Framework (NPPF, 2019) (v) BS 10175 Investigation of potentially contaminated sites - Code of Practice (BSI 2017) and (vi) The series of British Standards on Soil Quality BS 18400.

2 DEALING WITH LAND CONTAMINATION

Government policy on land contamination aims to prevent new contaminated land from being created and promotes a risk-based approach to addressing historical contamination. For historical contamination, regulatory intervention is held in reserve for land that meets the legal definition and cannot be dealt with through any other means, including through planning. Land is only considered to be "*contaminated land*" in the legal sense if it poses an unacceptable risk.

UK legislation on contaminated land is principally contained in Part 2A of the Environmental Protection Act, 1990 (which was inserted into the 1990 Act by section 57 of the Environment Act 1995). Part 2A was introduced in England on 1 April 2000 and provides a risk-based approach to the identification and remediation of land where contamination poses an unacceptable risk to human health or the environment.

The Model Procedures for the Management of Land Contamination (CLR 11), were developed to provide the technical framework for applying a risk management process when dealing with land affected by contamination. The process involves identifying, making decisions on, and taking appropriate action to deal with land contamination in a way that is consistent with government policies and legislation within the UK. The approach, concepts and principles for land contamination management promoted by LCRM (and its predecessor CLR 11) are applied to the determination of planning applications. The guidance given in LCRM follows the same principles.

Other legislative regimes may also provide a means of dealing with land contamination issues, such as the regimes for waste, water, environmental permitting, and environmental damage. Further, the law of statutory nuisance may result in contaminants being unacceptable to third parties whilst not attracting action under Part 2A or other environmental legislation.

2.1 Part 2A

The Regulations and Statutory Guidance that accompanied the Act, including the Contaminated Land (England) Regulations 2006, has been revised with the issue of The Contaminated Land (England) (Amendment) Regulations 2012 (SI 2012/263) and the Contaminated Land Statutory Guidance for England 2012.

Part 2A defines contaminated land as "*land which appears to the Local Authority in whose area it is situated to be in such a condition that, by reason of substances in, on or under the land that significant harm is being caused, or there is a significant possibility that such significant harm (SPOSH) could be caused, or significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution (SPOSP) being caused*".

Harm is defined as "*harm to the health of living organisms or other interference with the ecological systems of which they form part, and in the case of man, includes harm to his property*".

Part 2A provides a means of dealing with unacceptable risks posed by land contamination to human health and the environment, and under the guidance enforcing authorities should seek to find and deal with such land. It states that "*under Part 2A the starting point should be that land is not contaminated land unless there is reason to consider otherwise. Only land where unacceptable risks are clearly identified, after a risk assessment has been undertaken in accordance with the Guidance, should be considered as meeting the Part 2A definition of contaminated land*". Further, the guidance makes it clear that *"regulatory decisions should be based on what is reasonably likely, not what is hypothetically possible".*

The overarching objectives of the Government's policy on contaminated land and the Part 2A regime are:

"(a) To identify and remove unacceptable risks to human health and the environment.

(a) To seek to ensure that contaminated land is made suitable for its current use.

(b) To ensure that the burdens faced by individuals, companies and society as a whole are proportionate, manageable and compatible with the principles of sustainable development".

The enforcing authority may need to decide whether and how to act in situations where decisions are not straight forward, and where there is uncertainty. "*In so doing, the authority should use its judgement to strike a reasonable balance between: (a) dealing with risks raised by contaminants in land and the benefits of remediating land to remove or reduce those risks; and (b) the potential impacts of regulatory intervention including financial costs to whoever will pay for remediation, health and environmental impacts of taking action, property blight, and burdens on affected people".*

The authority is required to "*take a precautionary approach to the risks raised by contamination, whilst avoiding a disproportionate approach given the circumstances of each case".* The aim is "*that the regime produces net benefits, taking account of local circumstances*".

The guidance recognises that *"normal levels of contaminants in soils should not be considered to cause land to qualify as contaminated land, unless there is a particular reason to consider otherwise".* Normal levels are quoted as:

"a) *natural presence of contaminants'* such as from underlying geology *'that have not been shown to pose an unacceptable risk to health and the environment*

b) *…low level diffuse pollution, and common human activity…"*

Similarly the guidance states that significant pollution or significant possibility of significant pollution of controlled waters is required for land to be considered contaminated and the "*fact that substances are merely entering water"* or "*where discharge from land is not discernible at a location immediately downstream"* does not constitute contaminated land.

To help achieve a more targeted approach to identifying and managing contaminated land in relation to the risk (or possibility) of harm to human health, the revised Statutory Guidance presented a new four category system for considering land under Part 2A, ranging from Category 4, where there is no risk that land poses a significant possibility of significant harm (SPOSH), or the level of risk is low, to Category 1, where the risk that land poses a significant possibility of significant harm (SPOSH) is unacceptably high.

For land that cannot be readily placed into Categories 1 or 4 further assessment is required. If there is sufficient concern that the risks could cause significant harm or have the significant possibility of significant harm the land is to be placed into Category 2. If the concern is not met land is considered Category 3.

The technical guidance clearly states that the currently published Soil Guidance Values (SGV's) and Generic Assessment Criteria (GAC's) represent *"cautious estimates of level of contaminants in soils"* which should be considered *"no risk to health or, at most, a minimal risk"*. These values do not represent the boundary between categories 3 and 4 and "*should be considered to be comfortably within Category 4".*

At the end of 2013 technical guidance in support of Defra's revised Statutory Guidance (SG) was published and then revised in 2014 (CL: AIRE 2014) with further publications in 2021, 2023 and 2024 which provided:

- A methodology for deriving C4SLs for four generic land-uses comprising residential, commercial, allotments and public open space; and

- A demonstration of the methodology, via the derivation of C4SLs for twelve substances – arsenic, benzene, benzo(a)pyrene, cadmium, chromium (VI), lead, vinyl chloride, trichloroethene, tetrachloroethene, trans-1,2-dichloroethene, cic-1,2-dichloroethene, 1,2-dichloroethane and naphthalene.

For controlled waters, the revised Statutory Guidance states that the following types of pollution should be considered to constitute significant pollution of controlled waters:

"(a) Pollution equivalent to "environmental damage" to surface water or groundwater as defined by The Environmental Damage (Prevention and Remediation) Regulations 2009, but which cannot be dealt with under those Regulations.

(b) Inputs resulting in deterioration of the quality of water abstracted, or intended to be used in the future, for human consumption such that additional treatment would be required to enable that use.

(c) A breach of a statutory surface water Environment Quality Standard, either directly or via a groundwater pathway.

(d) Input of a substance into groundwater resulting in a significant and sustained upward trend in concentration of contaminants (as defined in Article 2(3) of the Groundwater Daughter Directive (2006/118/EC)".

The guidance also states that, in some circumstances, significant concentrations at a compliance point (in groundwater or surface water) may constitute pollution of controlled waters.

As with SPOSH for human health, the revised Statutory Guidance presents a four-category system for Significant Pollution of controlled waters. Category 1 covers land where there is a strong and compelling case for SPOSP, for example where significant pollution would almost certainly occur if no action was taken to avoid it. Category 4 covers

land where there is no risk or the risk is low, for example, where the land contamination is having no discernible impact on groundwater or surface water quality. Category 2 is for land where the risks posed to controlled waters are not high enough to consider the land as Category 1 but nonetheless are of sufficient concern to constitute SPOSP, Category 3 is for land where the risks posed to controlled waters are higher than low but not of sufficient concern to constitute SPOSP.

2.2 Planning

The Local Planning Authority (LPA) is responsible for the control of development, and in doing so it has a duty to take account of all material considerations, including contamination.

The principal planning objective is to ensure that any unacceptable risks to human health, buildings and other property and the natural and historical environment from the contaminated condition of the land are identified so that appropriate action can be considered and taken to address those risks.

The National Planning Policy Framework (NPPF, 2023), includes the following.

Paragraph 124 states that planning policies and decisions should "*(c) give substantial weight to the value of using suitable brownfield land within settlements for homes and other identified needs, and support appropriate opportunities to remediate despoiled, degraded, derelict, contaminated or unstable land*."

Paragraph 190 states "*Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner*".

Paragraph 180 states "*planning policies and decisions should contribute to and enhance the natural and local environment by:*

(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; *and*

(f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

Paragraph 189 describes the policy considerations the Government expects LPA's to have in regard to land affected by contamination when preparing policies for development plans and in taking decisions on applications.

Paragraph 189 states "*planning policies and decisions should ensure that:*

(a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);

(b) after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and

c) adequate site investigation information, prepared by a competent person, is available to inform these assessments."

Paragraph 194 states "*The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities.*"

The Glossary in Annex 2 provides the following:

***Brownfield land registers**: Registers of previously developed land that local planning authorities consider to be appropriate for residential development, having regard to criteria in the Town and Country Planning (Brownfield Land Registers) Regulations 2017. Local planning authorities will be able to trigger a grant of permission in principle for residential development on suitable sites in their registers where they follow the required procedures.*

***Competent person (to prepare site investigation information)**: A person with a recognised relevant qualification, sufficient experience in dealing with the type(s) of pollution or land instability, and membership of a relevant professional organisation.*

***Previously developed land**: Land which is or was occupied by a permanent structure, including the curtilage of the developed land (although it should not be assumed that the whole of the curtilage should be developed) and any associated fixed surface infrastructure. This excludes: land that is or was last occupied by agricultural or forestry buildings; land that has been developed for minerals extraction or waste disposal by landfill, where provision for restoration has been made through development management procedures; land in built-up areas such as residential gardens, parks, recreation grounds and allotments; and land that was previously developed but where the*

remains of the permanent structure or fixed surface structure have blended into the landscape.

***Site investigation information**: Includes a risk assessment of land potentially affected by contamination, or ground stability and slope stability reports, as appropriate. All investigations of land potentially affected by contamination should be carried out in accordance with established procedures (such as BS10175 Investigation of Potentially Contaminated Sites – Code of Practice).*

Stantec adopt the principle that a Preliminary Investigation (Desk Study and Site Reconnaissance) and Preliminary Risk Assessment (see below) is the minimum assessment requirement to support a planning application.

The level at which contamination is deemed to be unacceptable, or, gives rise to adverse effects under a planning context has not been identified but is envisaged to be more precautionary than the level required to determine land as contaminated under Part 2A.

2.3 Building Control

The building control department of the local authority or private sector approved inspectors are responsible for the operation and enforcement of the Building Regulations (DCLG 2010) to protect the health, safety and welfare of people in and around buildings. Approved Document C requires the protection of buildings and associated land from the effects of contamination, to be applied (non-exclusively) in all changes of use from commercial or industrial premises, to residential property.

3 APPROACH

As with CLR11 the guidance given in LCRM presents three stages of land contamination management: -

(a) Stage 1 - Risk Assessment;

(b) Stage 2 - Options Appraisal; and

(c) Stage 3 - Remediation.

Each stage has three tiers. The three tiers of Stage 1 Risk Assessment are: -

- Tier 1 - Preliminary Risk Assessment (PRA) - first tier of RA that develops the outline conceptual model (CM) and establishes whether there are any potentially unacceptable risks.

- Tier 2 - Generic Quantitative Risk Assessment (GQRA) - carried out using generic assessment criteria and assumptions to estimate risk.

- Tier 3 - Detailed Quantitative Risk Assessment (DQRA) - carried out using detailed site-specific information to generate Site Specific Assessment Criteria (SSAC) as risk evaluation criteria.

For each tier of a Stage 1 - Risk Assessment you must:

1. Identify the hazard - establish contaminant sources.

2. Assess the hazard - use a source-pathway-receptor (S-P-R) pollutant linkage approach to find out if there is the potential for unacceptable risk.

3. Estimate the risk - predict what degree of harm or pollution might result and how likely it is to occur.

4. Evaluate the risk - decide whether a risk is unacceptable.

A Stantec Preliminary Investigation report normally comprises a desk study, walkover site reconnaissance and preliminary risk assessment (PRA). The project specific proposal defines the actual scope of work which might include review of ground investigation data in which case the report includes a GQRA.

Risk estimation involves identifying the magnitude of the potential consequence (taking into account both the potential severity of the hazard and the sensitivity of the receptor) and the magnitude of the likelihood i.e. the probability (taking into account the presence of the hazard and the receptor and the integrity of the pathway). This approach is promoted in current guidance such as R&D 66 (NHBC 2008).

For a PRA, Stantec's approach is that if a pollution linkage is identified then it represents a potentially unacceptable risk which either (1) remediation / direct risk management or (2) progression to further tiers of risk assessment (GQRA and GQRA) requiring additional data collection and enabling refinement of the CM using the site specific data.

4 IDENTIFICATION OF POLLUTANT LINKAGES AND DEVELOPMENT OF A CONCEPTUAL MODEL (CM)

For all Tiers of a Stage 1 Risk Assessment, the underlying principle to ground condition assessment is the identification of *pollutant linkages* in order to evaluate whether the presence of a source of contamination could potentially lead to harmful consequences. A pollutant linkage consists of the following three elements: -

- A source/hazard – a substance or situation which has the potential to cause harm or pollution;
- A pathway – a means by which the hazard moves along / generates exposure; and
- A receptor/target – an entity which is vulnerable to the potential adverse effects of the hazard.

The *Conceptual Model* identifies the types and locations of potential contaminant sources/hazards and potential receptors and potential migration/transportation pathway(s). The CM is refined through progression to further tiers of risk assessment (GQRA and GQRA) requiring additional data collection.

4.1 Hazard Identification

A hazard is a substance or situation that has the potential to cause harm. Hazards may be chemical, biological or physical.

In a PRA the potential for hazards to be present is determined from consideration of the previous or ongoing activities on or near to the site in accordance with the criteria presented in the **Table 1**.

Based on the land use information Contaminants of Potential Concern (COPC) are identified. The COPC direct the scope of the collection of site-specific data and the analytical testing selected for subsequent Tiers.

At Tier 2 the site-specific data is evaluated using appropriate published assessment criteria (refer to Stantec document entitled Rationale for the Selection of Evaluation Criteria for a Generic Quantitative Risk Assessment (GQRA)). In general, published criteria have been developed using highly conservative assumptions and therefore if the screening criterion is not exceeded (and if enough samples from appropriate locations have been analysed) then the COPC is eliminated as a potential Hazard. It should be noted that exceedance does not necessarily indicate that a site is contaminated and/or unsuitable for use only that the COPC is retained as a potential Hazard. Published criteria are generated using models based on numerous and complex assumptions. Whether or not these assumptions are appropriate or sufficiently protective requires confirmation on a project by project basis. Manipulation of the default assumptions would normally form part of a Tier 3 Detailed Quantitative Risk Assessment (DQRA).

When reviewing or assessing site specific data Stantec utilise published guidance on comparing contamination data with a critical concentration (CL:AIRE/CIEH 2008) which presents a structured process for employing statistical techniques for data assessment purposes.

4.2 Receptor and Pathway Identification

For all Tiers the potential receptors (for both on site and adjoining land) that will be considered are:

- Human Health – including current and future occupiers, construction and future maintenance workers, and neighbouring properties/third parties;
- Ecological Systems; [1]
- Controlled Waters [2] – Under section 78A(9) of Part 2A the term "pollution of controlled waters" means the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter. The term "controlled waters" in relation to England has the same meaning as in Part 3 of the Water Resources Act 1991, except that "ground waters" does not include waters contained in underground strata but above the saturation zone.
- Property - Animal or Crop (including timber; produce grown domestically, or on allotments, for consumption; livestock; other owned or domesticated animals; wild animals which are the subject of shooting or fishing rights); and
- Property - Buildings (any structure or erection, and any part of a building including any part below ground level, but does not include plant or machinery comprised in a building, or buried services such as sewers, water pipes or electricity cables including archaeological sites and ancient monuments).

If a receptor is taken forward for further assessment it will be classified in terms of its sensitivity, the criteria for which are presented in **Table 2**. Table 2 has been generated using descriptions of environmental receptor importance/value given in various guidance documents including R&D 66 (NHBC 2008), EA 2017 and Transport Analysis Guidance (based on DETR 2000). Human health and buildings classifications have been generated by Stantec using the attribute description for each class. Surface water sensitivity is classified using the Water Framework Directive (WFD) status for the River Basin obtained from: https://environment.data.gov.uk/catchment-planning/

[1] International or nationally designated sites (as defined in the statutory guidance (Defra Circular 04/12)) "*in the local area*" will be identified as potential ecological receptors. A search radius of 1, 2 or 5km will be utilised depending on the site-specific circumstances (see also pathway identification). The Environment Agency has published an ecological risk assessment framework (EA 2008) which promotes (as opposed to statutorily enforces) consideration of additional receptors to include locally protected sites and protected or notable species. These additional potential receptors will only be considered if a Phase 1 habitat survey, undertaken in accordance with guidance (JNCC 1993), is commissioned and the data provided to Stantec. It should be noted that without such a survey a Land Contamination risk assessment may conclude that the identification of potential ecological receptors is inconclusive (refer to Stantec Specification for a Preliminary Investigation (Desk Study and Site Reconnaissance).

[2] The definition of "pollution of controlled water" was amended by the introduction of Section 86 of the Water Act 2003. For the purposes of Part 2A groundwater does not include waters above the saturated zone and our assessment does not therefore address perched water other than where development causes a pathway to develop.

The exposure pathway and modes of transport that will be considered are presented in **Table 3**.

4.3 Note regarding Ecological Systems

The Environment Agency (EA) has developed an ecological risk assessment framework which aims to provide a structured approach for assessing the risks to ecology from chemical contaminants in soils (EA 2008). In circumstances where contaminants in water represent a potential risk to aquatic ecosystems then risk assessors will need to consider this separately.

The framework consists of a three-tiered process: -

- Tier 1 is a screening step where the site soils chemical data is compared to a soil screening value (SSV)
- Tier 2 uses various tools (including surveys and biological testing) to gather evidence for any harm to the ecological receptors
- Tier 3 seeks to attribute the harm to the chemical contamination

Tier 1 is preceded by a desk study to collate information about the site and the nature of the contamination to assess whether pollutant linkages are feasible. The framework presents ten steps for ecological desk studies and development of a conceptual model as follows.

1. Establish Regulatory Context
2. Collate and Assess Documentary Information
3. Summarise Documentary Information
4. Identify Contaminants of Potential Concern
5. Identify Likely Fate Transport of Contaminants
6. Identify Potential Receptors of Concern
7. Identify Potential Pathways of Concern
8. Create a Conceptual Model
9. Identify Assessment and Measurement Endpoints
10. Identify Gaps and Uncertainties

The information in a standard PRA report covers Steps 1 to 4 inclusive. Step 5 considers fate and transport of contaminants and it should be noted that our standard report adopts a simplified approach considering only transport mechanisms. A simplified approach has also been adopted in respect of Steps 6 and 7 receptors (a detailed review of the ecological attributes has not been undertaken) and pathways (a food chain assessment has not been undertaken). Step 9 is outside the scope of our standard PRA report.

It should be noted that the PRA report will present an assessment for ecological systems (where identified as a receptor for a land contamination assessment) considering the viability of the mode of transport given the site-specific circumstances and not specific pathways. The PRA may conclude that the risk to potential ecological receptors is inconclusive.

4.4 Note regarding controlled waters

Controlled waters are rivers, estuaries, coastal waters, lakes and groundwaters, but not perched waters.

The EU Water Framework Directive (WFD) 2000/60/EC provides for the protection of sub-surface, surface, coastal and territorial waters through a framework of river basin management. The EU Updated Water Framework Standards Directive 2014/101/EU amended the EU WFD to update the international standards therein; it entered into force on 20 November 2014 with the requirements for its provisions to be transposed in Member State law by 20 May 2016. Other EU Directives in the European water management framework include:

- the EU Priority Substances Directive 2013/39/EU;
- EU Groundwater Pollutants Threshold Values Directive 2014/80/EU amending the EU Groundwater Directive 2006/118/EC; and
- EU Biological Monitoring Directive 2014/101/EU.

The Ground Water Daughter Directive (GWDD) was enacted by the Groundwater Regulations (2009), which were subsumed by the Environmental Permitting Regulations (2010) which provide essential clarification including on the four objectives specifically for groundwater quality in the WFD: -

Achieve ‘Good’ groundwater chemical status by 2015, commonly referred to as ‘status objective’;
Achieve Drinking Water Protected Area Objectives;
Implement measures to reverse any significant and sustained upward trend in groundwater quality, referred to as ‘trend objective’; and

Prevent or limit the inputs of pollutants into groundwater, commonly referred to as ‘prevent or limit’ objectives

The Water Act 2003 (Commencement No.11) Order 2012 amends the test for 'contaminated land' which relates to water pollution so that pollution of controlled waters must now be "significant" to meet the definition of contaminated land.

The Water Framework Directive (WFD) requires the preparation, implementation and review of River Basin Management Plans (RBMP) on a six-year cycle. River basins are made up of lakes, rivers, groundwaters, estuaries and coastal waters, together with the land they drain. River Basin Districts (RBD) and the WFD Waterbodies that they comprise are important spatial management units, regularly used in catchment management studies. River Basin Management Plans (RBMP) have been developed for the 11 River Basin Districts in England and Wales.

These were released by Defra in 2009 (Defra 2009) and updated in 2015.

These RBMP's establish the current status of waters within the catchments of the respective Districts and the current status of adjoining waters identified. As part of a Tier 2 risk assessment water quality data is screened against the WFD assessment criteria. Comparison with the RBMP's current status of waters for the catchment under consideration would form part of a Tier 3 assessment.

5 RISK ESTIMATION

Risk estimation classifies what degree of harm might result to a receptor (defined as consequence) and how likely it is that such harm might arise (probability).
At Tier 1 the consequence classification is generated by multiplying the hazard classification score and the receptor sensitivity score. This approach follows that presented in the republished R&D 66 (NHBC 2008).

The criteria for classifying probability are set out in **Table 4** and have been taken directly from Table 6.4 CIRIA C552 (CIRIA 2001). Probability considers the integrity of the exposure pathway.

The consequence classifications detailed in **Table 5** have been adapted from Table 6.3 presented in C552 and R&D 66 (Annex 4 Table A4.3).

The Tier 1 risk classification is estimated for each pollutant linkage using the matrix given in **Table 6** which is taken directly from C552 (Table 6.5).

Subsequent Tiers refine the CM through retention or elimination of potential hazards and pollutant linkages.

6 RISK EVALUATION

Evaluation criteria are the parameters used to judge whether harm or pollution needs further assessment or is unacceptable. The evaluation criteria used will depend on:

- the reasons for doing the RA and the regulatory context such as Part 2A or planning;
- the CM and pollutant linkages present;
- any criteria set by regulators;
- any advisory requirements such as from Public Health England;
- the degree of confidence and precaution required;
- the level of confidence required to judge whether a risk is unacceptable;
- how you've used or developed more detailed assessment criteria in the later tiers of RA;
- the availability of robust scientific data;
- how much is known - for example, about the pathway mechanism and how the contaminants affect receptors; and
- any practical reasons such as being able to measure or predict against the criteria.

In order to put the Tier 1 risk classification into context the likely actions are described in **Table 7** which is taken directly from Table 6.6 of C552 (CIRIA 2001).

REFERENCES

BSI 2017 BS 10175:2011+A2:2017 Investigation of potentially contaminated sites - Code of Practice

BSI 2019 BS 8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings

CIRIA 2001: Contaminated land risk assessment – a guide to good practice C552.

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EA 2004: Contaminated Land Research (CLR) Report 11: The Model Procedures for the Management of Land Contamination CRL 11 by the Environment Agency (EA).

EA 2008 Ecological Risk Assessment Science Report Series SC070009 published by the Environment Agency (EA).

EA 2017 New groundwater vulnerability mapping methodology in England and Wales Report – SC040016/R Environment Agency (EA) September 2017

JNCC 1993 Handbook for Phase 1 Habitat Survey – A Technical for Environmental Audit prepared by the Joint Nature Conservancy Council (JNCC)

NHBC/EA/CIEH 2008: R&D Publication 66 Guidance for the safe development of housing on land affected by contamination.

National Planning Policy Framework (February 2019 revised), published by the Ministry of Housing, Communities and Local Government (MHCLG) at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

Table 1: Criteria for Classifying Hazards / Potential for Generating Contamination

Classification/Score	Potential for generating contamination/gas based on land use
Very Low 1	Land Use: Residential, retail or office use, agriculture Contamination: Limited. Gas generation potential: Soils with low organic content
Low 2	Land Use: Recent small scale industrial and light industry Contamination: locally slightly elevated concentrations. Gas generation potential: Soils with high organic content (limited thickness)
Moderate 3	Land Use: Railway yards, collieries, scrap yards, engineering works. Contamination: Possible widespread slightly elevated concentrations and locally elevated concentrations. Gas generation potential: Dock silt and substantial thickness of organic alluvium/peat
High 4	Land Use: Heavy industry, non-hazardous landfills. Contamination: Possible widespread elevated concentrations. Gas generation potential: Shallow mine workings Pre 1960s landfill
Very High 5	Land Use: Hazardous waste landfills, gas works, chemical works, Contamination: Likely widespread elevated concentrations. Gas generation potential: Landfill post 1960

"Greenfield" is land which has not been developed and there has been no use of agrochemicals

Table 2: Criteria for Classifying Receptor Sensitivity/Value

Classification	Definition
Very Low 1	Receptor of limited importance • Groundwater: Unproductive strata (Strata with negligible significance for water supply or river baseflow) (previously Non-aquifer), Secondary B (water-bearing parts of non-aquifers), Secondary undifferentiated (previously minor or non-aquifer, but information insufficient to classify as secondary A or B) • Surface water: WFD Surface Water status Bad • Ecology: No local designation • Buildings: Replaceable • Human health: Unoccupied/limited access
Low 2	Receptor of local or county importance with potential for replacement • Groundwater: Secondary A aquifer • Surface water: WFD Surface Water status Poor • Ecology: local habitat resources • Buildings: Local value • Human health: Minimum score 4 where human health identified as potential receptor
Moderate 3	Receptor of local or county importance with potential for replacement • Groundwater: Principal aquifer • Surface water: WFD Surface Water status Moderate • Ecology: County wildlife sites, Areas of Outstanding Natural Beauty (AONB) • Buildings: Area of Historic Character • Human health: Minimum score 4 where human health identified as potential receptor
High 4	Receptor of county or regional importance with limited potential for replacement • Groundwater: Source Protection Zone 2 or 3 • Surface water: WFD Surface Water status Good • Ecology: SSSI, National or Marine Nature Reserve (NNR or MNR) • Buildings: Conservation Area • Human health: Minimum score 4 where human health identified as potential receptor
Very High 5	Receptor of national or international importance • Groundwater: Source Protection Zone (SPZ) 1 • Surface water: WFD Surface Water status High • Ecology: Special Areas of Conservation (SAC and candidates), Special Protection Areas (SPA and potentials) or wetlands of international importance (RAMSAR) • Buildings: World Heritage site • Human health: Residential, open spaces and uses where children are present

Table 3: Exposure Pathway and Modes of Transport

Receptor	Pathway	Mode of transport
Human health	Ingestion	Fruit or vegetable leaf or roots
		Contaminated water
		Soil/dust indoors
		Soil/dust outdoors
	Inhalation	Particles (dust / soil) – outdoor
		Particles (dust / soil) - indoor
		Vapours – outdoor - migration via natural or anthropogenic pathways
		Vapours - indoor - migration via natural or anthropogenic pathways
	Dermal absorption	Direct contact with soil
		Direct contact with waters (swimming / showering)
		Irradiation
Groundwater	Leaching	Gravity / permeation
	Migration	Natural – groundwater as pathway Anthropogenic (e.g. boreholes, culverts, pipelines etc.)
Surface Water	Direct	Runoff or discharges from pipes
	Indirect	Recharge from groundwater
	Indirect	Deposition of windblown dust
Buildings	Direct contact	Sulphate attack on concrete, hydrocarbon corrosion of plastics
	Gas ingress	Migration via natural or anthropogenic paths
Ecological systems	See Notes	Runoff/discharge to surface water body
	See Notes	Windblown dust
	See Notes	Groundwater migration
	See Notes	At point of contaminant source
Animal and crop	Direct	Windblown or flood deposited particles / dust / sediments
	Indirect	Plants via root up take or irrigation. Animals through watering
	Inhalation	By livestock / fish - gas / vapour / particulates / dust
	Ingestion	Consumption of vegetation / water / soil by animals

Table 4: Classification of Probability

Classification	Definition
High likelihood	There is a pollution linkage and an event either appears very likely in the short-term and almost inevitable over the long-term, or there is already evidence at the receptor of harm / pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter-term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long-term.

Table 5: Classification of Consequence (score = magnitude of hazard and sensitivity of receptor)

Classification / Score	Examples
Severe **17-25** **(3 out of 25 outcomes)**	Human health effect - exposure likely to result in "significant harm" as defined in the Defra (2012) Part 2A Statutory Guidance [1]. Controlled water effect - short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Equivalent to EA Category 1 incident (persistent and/or extensive effects on water quality leading to closure of potable abstraction point or loss of amenity, agriculture or commercial value. Major fish kill. Ecological effect - short-term exposure likely to result in a substantial adverse effect. Catastrophic damage to crops, buildings or property
Medium **10-16** **(7 out of 25 outcomes)**	Human health effect - exposure could result in "significant harm" [1]. Controlled water effect - equivalent to EA Category 2 incident requiring notification of abstractor Ecological effect - short-term exposure may result in a substantial adverse effect. Damage to crops, buildings or property
Mild **5-9** **(7 out of 25 outcomes)**	Human health effect - exposure may result in "significant harm" [1]. Controlled water effect - equivalent to EA Category 3 incident (short lived and/or minimal effects on water quality). Ecological effect - unlikely to result in a substantial adverse effect. Minor damage to crops, buildings or property. Damage to building rendering it unsafe to occupy (for example foundation damage resulting in instability).
Minor **1-4** **(8 out of 25 outcomes)**	No measurable effect on humans. Protective equipment is not required during site works. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Repairable effects to crops, buildings or property. The loss of plants in a landscaping scheme. Discolouration of concrete.

[1] Significant harm includes death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. The local authority may also consider other health effects to constitute significant harm such as physical injury; gastrointestinal disturbances; respiratory tract effects; cardio-vascular effects; central nervous system effects; skin ailments; effects on organs such as the liver or kidneys; or a wide range of other health impacts. Whether or not these would constitute significant harm would depend on the seriousness of harm including impact on health, quality of life and scale of impact.

Table 6: Classification of Risk (Combination of Consequence Table 5 and Probability Table 4)

	Consequence			
Probability	***Severe***	***Medium***	***Mild***	***Minor***
High likelihood	Very high	High	Moderate	Low
Likely	High	Moderate	Moderate/	Low
Low likelihood	Moderate	Moderate	Low	Very low
Unlikely	Low	Low	Very low	Very low

Table 7: Description of Risks and Likely Action Required

Risk Classification	Description
Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation is likely to be required in the short term.
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short-term and are likely over the longer-term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Appendix B Site Walkover Photographs

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 1 **Photo Location:** 1 **Direction:** South **Survey Date:** **Comments:** Access to southern parcel from unnamed road.	
Photograph ID: 2 **Photo Location:** 2 **Direction:** East **Survey Date:** **Comments:** View towards Rigg House Farm.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 3 **Photo Location:** 3 **Direction:** Northwest **Survey Date:** **Comments:** Tracked excavator and farm storage.	
Photograph ID: 4 **Photo Location:** 4 **Direction:** East **Survey Date:** **Comments:** View towards eastern site boundary over a stream.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 5 **Photo Location:** 5 **Direction:** North **Survey Date:** **Comments:** View downflow of a stream to the southeast of the site.	
Photograph ID: 6 **Photo Location:** 6 **Direction:** Southwest **Survey Date:** **Comments:** Southern boundary near southeastern corner.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 7 **Photo Location:** 7 **Direction:** Northwest **Survey Date:** **Comments:** Access to southern parcel from southern boundary and potentially engineered ground.	
Photograph ID: 8 **Photo Location:** 8 **Direction:** Northwest **Survey Date:** **Comments:** Surface depression, possible mineshaft.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 9 **Photo Location:** 9 **Direction:** Northwest **Survey Date:** **Comments:** Track through wooded area near southern boundary.	
Photograph ID: 10 **Photo Location:** 10 **Direction:** South **Survey Date:** **Comments:** Water-filled surface depression, possible mineshaft.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 11 **Photo Location:** 11 **Direction:** North **Survey Date:** **Comments:** View over southern parcel.	

Photograph ID: 12 **Photo Location:** 12 **Direction:** South **Survey Date:** **Comments:** Mouth (north) of steep valley.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 13 **Photo Location:** 13 **Direction:** North **Survey Date:** **Comments:** View downstream of Theif Gill from mouth of steep valley.	
Photograph ID: 14 **Photo Location:** 14 **Direction:** East **Survey Date:** **Comments:** Access to southern parcel from southern boundary at the top of steep valley.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 15 **Photo Location:** 15 **Direction:** South **Survey Date:** **Comments:** Former quarry.	
Photograph ID: 16 **Photo Location:** 16 **Direction:** Northeast **Survey Date:** **Comments:** View towards mouth of the steep valley from top of the valley.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 17 **Photo Location:** 17 **Direction:** South **Survey Date:** **Comments:** Stone circle at western boundary.	
Photograph ID: 18 **Photo Location:** 18 **Direction:** North **Survey Date:** **Comments:** Farm storage area and concrete wall.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 19 **Photo Location:** 19 **Direction:** South **Survey Date:** **Comments:** Access to northern parcel from nothern boundary.	
Photograph ID: 20 **Photo Location:** 20 **Direction:** South **Survey Date:** **Comments:** Exsisting building.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 21 **Photo Location:** 21 **Direction:** Southwest **Survey Date:** **Comments:** Access to wind turbines and wind turbine WTG1.	
Photograph ID: 22 **Photo Location:** 22 **Direction:** Southwest **Survey Date:** **Comments:** Wind turbine WTG2 and pond.	

Client:	**FVS Dean Moor Limited**	**Project:**	**332511471**
Site Name:	**Dean Moor Solar Farm**	**Site Location:**	**Gilgarran, Workington, Cumbria**

Photograph ID: 23

Photo Location:
23

Direction:
Northwest

Survey Date:

Comments:
Fields in northern parcels and wind turbines WTG3, WTG2 and WTG1 (from left to right).

Appendix C Groundsure Report (GS, 2023)

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

CA14 Rigg House

Order Details

Date: 12/04/2023

Your ref: CA14 Rigg House

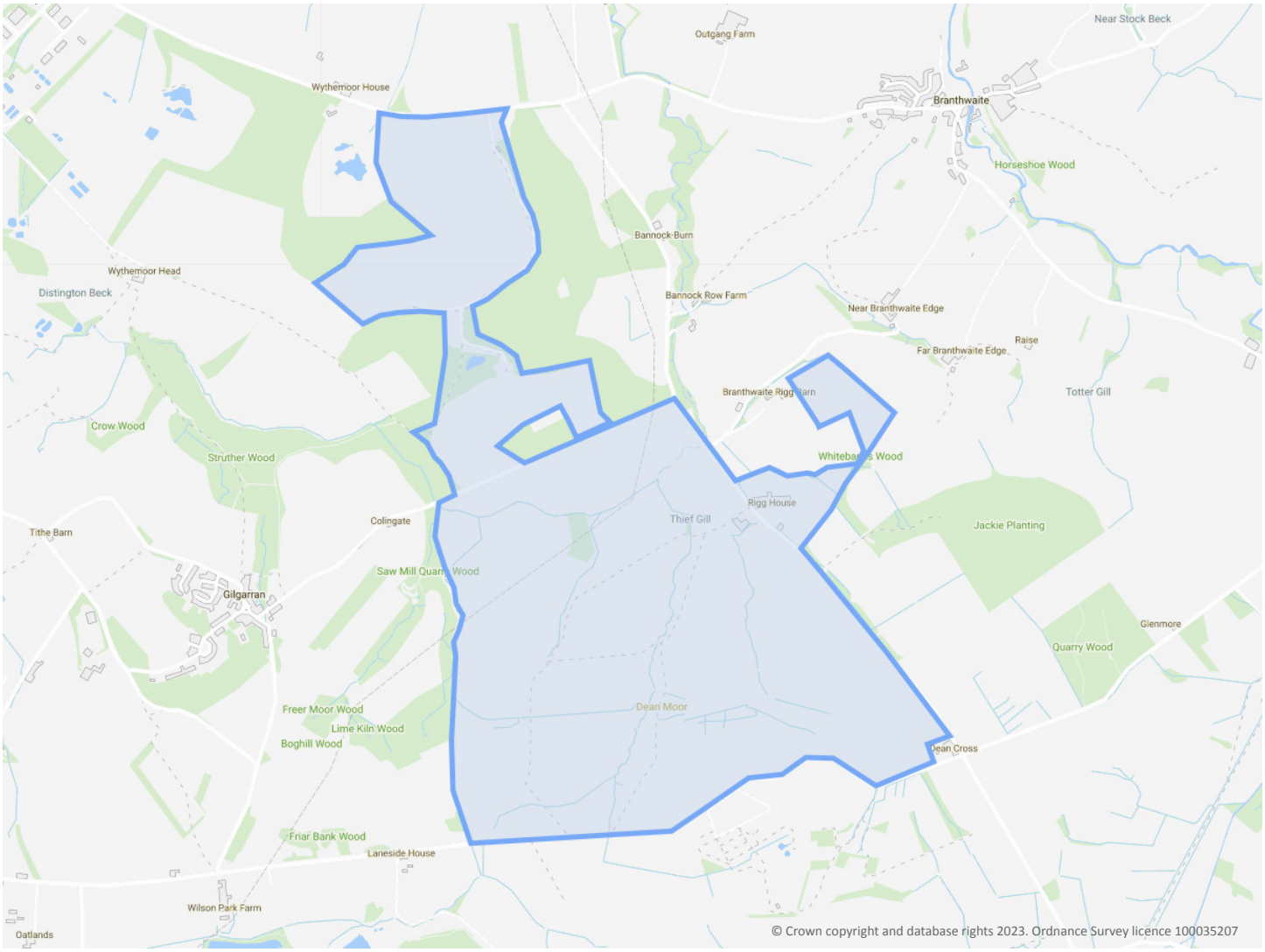
Our Ref: GSIP-2023-13300-12631

Site Details

Location: 304511 523639

Area: 286.39 ha

Authority: Cumberland Council, Cumberland Council



Contact us with any questions at:
info@groundsure.com
01273 257 755

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	45	8	45	75	-
20	1.2	Historical tanks	0	0	1	2	-
20	1.3	Historical energy features	0	0	0	0	-
21	1.4	Historical petrol stations	0	0	0	0	-
21	1.5	Historical garages	0	0	0	0	-
21	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
22	2.1	Historical industrial land uses	88	11	75	112	-
33	2.2	Historical tanks	0	0	1	2	-
33	2.3	Historical energy features	0	0	0	0	-
33	2.4	Historical petrol stations	0	0	0	0	-
34	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
35	3.1	Active or recent landfill	0	0	0	1	-
36	3.2	Historical landfill (BGS records)	0	0	0	0	-
36	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
36	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
36	3.5	Historical waste sites	0	0	0	1	-
37	3.6	Licensed waste sites	0	0	0	2	-
38	3.7	Waste exemptions	96	8	6	52	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
52	4.1	Recent industrial land uses	10	1	5	-	-
54	4.2	Current or recent petrol stations	0	0	0	0	-
54	4.3	Electricity cables	0	0	0	0	-
54	4.4	Gas pipelines	0	0	0	0	-
54	4.5	Sites determined as Contaminated Land	0	0	0	0	-

54	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
55	4.7	Regulated explosive sites	0	0	0	0	-
55	4.8	Hazardous substance storage/usage	0	0	0	0	-
55	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
55	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
55	**4.11**	**Licensed pollutant release (Part A(2)/B)**	0	0	1	0	-
56	4.12	Radioactive Substance Authorisations	0	0	0	0	-
56	**4.13**	**Licensed Discharges to controlled waters**	0	1	3	1	-
57	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
57	4.15	Pollutant release to public sewer	0	0	0	0	-
57	4.16	List 1 Dangerous Substances	0	0	0	0	-
58	4.17	List 2 Dangerous Substances	0	0	0	0	-
58	**4.18**	**Pollution Incidents (EA/NRW)**	2	0	3	5	-
59	4.19	Pollution inventory substances	0	0	0	0	-
59	4.20	Pollution inventory waste transfers	0	0	0	0	-
60	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
61	**5.1**	**Superficial aquifer**	Identified (within 500m)				
64	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
66	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
75	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
75	5.5	Groundwater vulnerability- local information	None (within 0m)				
76	**5.6**	**Groundwater abstractions**	0	0	2	0	2
78	**5.7**	**Surface water abstractions**	0	0	0	0	9
80	5.8	Potable abstractions	0	0	0	0	0
80	5.9	Source Protection Zones	0	0	0	0	-
81	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
82	**6.1**	**Water Network (OS MasterMap)**	91	37	65	-	-

97	**6.2**	**Surface water features**	1	22	43	-	-
98	**6.3**	**WFD Surface water body catchments**	4	-	-	-	-
98	**6.4**	**WFD Surface water bodies**	1	0	1	-	-
99	**6.5**	**WFD Groundwater bodies**	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
100	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
100	7.2	Historical Flood Events	0	0	0	-	-
100	7.3	Flood Defences	0	0	0	-	-
101	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
101	7.5	Flood Storage Areas	0	0	0	-	-
102	7.6	Flood Zone 2	None (within 50m)				
102	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
103	**8.1**	**Surface water flooding**	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding					
105	**9.1**	**Groundwater flooding**	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
106	**10.1**	**Sites of Special Scientific Interest (SSSI)**	0	0	0	0	7
107	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
107	**10.3**	**Special Areas of Conservation (SAC)**	0	0	0	0	1
108	10.4	Special Protection Areas (SPA)	0	0	0	0	0
108	10.5	National Nature Reserves (NNR)	0	0	0	0	0
108	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
109	**10.7**	**Designated Ancient Woodland**	1	0	1	3	9
109	10.8	Biosphere Reserves	0	0	0	0	0
110	10.9	Forest Parks	0	0	0	0	0
110	10.10	Marine Conservation Zones	0	0	0	0	0
110	10.11	Green Belt	0	0	0	0	0
110	10.12	Proposed Ramsar sites	0	0	0	0	0

110	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
111	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
111	10.15	Nitrate Sensitive Areas	0	0	0	0	0
111	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
112	**10.17**	**SSSI Impact Risk Zones**	5	-	-	-	-
115	**10.18**	**SSSI Units**	0	0	0	0	1
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
117	11.1	World Heritage Sites	0	0	0	-	-
118	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
118	11.3	National Parks	0	0	0	-	-
118	**11.4**	**Listed Buildings**	0	0	1	-	-
119	11.5	Conservation Areas	0	0	0	-	-
119	**11.6**	**Scheduled Ancient Monuments**	1	0	0	-	-
119	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
120	**12.1**	**Agricultural Land Classification**	Grade 3 (within 250m)				
122	**12.2**	**Open Access Land**	1	3	0	-	-
122	**12.3**	**Tree Felling Licences**	2	0	3	-	-
123	**12.4**	**Environmental Stewardship Schemes**	4	3	3	-	-
123	**12.5**	**Countryside Stewardship Schemes**	14	4	5	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
126	**13.1**	**Priority Habitat Inventory**	11	7	18	-	-
128	**13.2**	**Habitat Networks**	2	0	0	-	-
128	13.3	Open Mosaic Habitat	0	0	0	-	-
129	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
130	**14.1**	**10k Availability**	Identified (within 500m)				
131	14.2	Artificial and made ground (10k)	0	0	0	0	-
132	14.3	Superficial geology (10k)	0	0	0	0	-

132	14.4	Landslip (10k)	0	0	0	0	-
133	14.5	Bedrock geology (10k)	0	0	0	0	-
133	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
134	15.1	50k Availability	Identified (within 500m)				
135	15.2	Artificial and made ground (50k)	6	1	3	0	-
136	15.3	Artificial ground permeability (50k)	6	1	-	-	-
137	15.4	Superficial geology (50k)	14	1	1	7	-
138	15.5	Superficial permeability (50k)	Identified (within 50m)				
139	15.6	Landslip (50k)	3	0	1	1	-
140	15.7	Landslip permeability (50k)	Identified (within 50m)				
141	15.8	Bedrock geology (50k)	33	0	10	8	-
144	15.9	Bedrock permeability (50k)	Identified (within 50m)				
145	15.10	Bedrock faults and other linear features (50k)	78	1	26	28	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
151	16.1	BGS Boreholes	15	11	20	-	-
Page	Section	Natural ground subsidence					
154	17.1	Shrink swell clays	Very low (within 50m)				
156	17.2	Running sands	Low (within 50m)				
158	17.3	Compressible deposits	High (within 50m)				
160	17.4	Collapsible deposits	Very low (within 50m)				
161	17.5	Landslides	High (within 50m)				
163	17.6	Ground dissolution of soluble rocks	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
165	18.1	Natural cavities	0	0	0	0	-
166	18.2	BritPits	2	0	3	2	-
167	18.3	Surface ground workings	70	9	55	-	-
172	18.4	Underground workings	14	6	2	19	17
174	18.5	Historical Mineral Planning Areas	0	0	0	0	-

175	**18.6**	**Non-coal mining**	2	0	2	0	2
176	18.7	Mining cavities	0	0	0	0	0
176	18.8	JPB mining areas	None (within 0m)				
176	**18.9**	**Coal mining**	Identified (within 0m)				
176	18.10	Brine areas	None (within 0m)				
177	18.11	Gypsum areas	None (within 0m)				
177	18.12	Tin mining	None (within 0m)				
177	18.13	Clay mining	None (within 0m)				

Page	Section	Radon					
178	**19.1**	**Radon**	Between 10% and 30% (within 0m)				

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
180	**20.1**	**BGS Estimated Background Soil Chemistry**	253	24	-	-	-
190	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
190	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
191	21.1	Underground railways (London)	0	0	0	-	-
191	21.2	Underground railways (Non-London)	0	0	0	-	-
192	21.3	Railway tunnels	0	0	0	-	-
192	**21.4**	**Historical railway and tunnel features**	0	0	3	-	-
192	21.5	Royal Mail tunnels	0	0	0	-	-
192	21.6	Historical railways	0	0	0	-	-
193	21.7	Railways	0	0	0	-	-
193	21.8	Crossrail 1	0	0	0	0	-
193	21.9	Crossrail 2	0	0	0	0	-
193	21.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 09/04/2021

Site Area: 286.39ha

Recent site history - 2019 aerial photograph

Capture Date: 24/08/2019

Site Area: 286.39ha

Recent site history - 2016 aerial photograph

Capture Date: 16/08/2016

Site Area: 286.39ha

Recent site history - 2008 aerial photograph

Capture Date: 05/10/2008

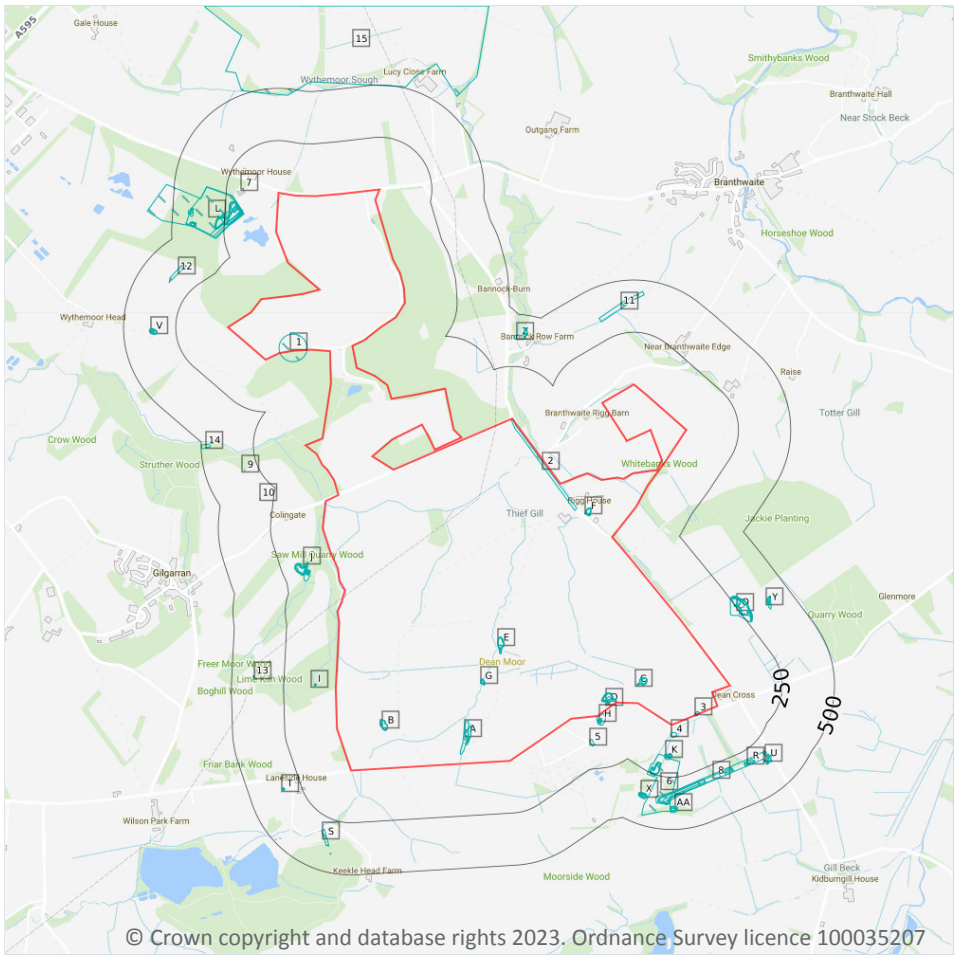
Site Area: 286.39ha

Recent site history - 2000 aerial photograph

Capture Date: 16/06/2000

Site Area: 286.39ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

1.1 Historical industrial land uses

Records within 500m	173

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
1	**On site**	**Coal Mine**	**1991**	**555530**

ID	Location	Land use	Dates present	Group ID
2	On site	Cuttings	1864	584803
3	On site	Old Coal Pit	1864 - 1898	601373
A	On site	Unspecified Heap	1951	561951
A	On site	Unspecified Old Quarry	1898	575195
A	On site	Unspecified Ground Workings	1923 - 1926	599701
A	On site	Unspecified Quarry	1864	611253
A	On site	Unspecified Quarry	1947	624139
B	On site	Unspecified Old Quarry	1898	575193
B	On site	Unspecified Ground Workings	1923	596288
B	On site	Unspecified Pit	1926 - 1991	627492
C	On site	Unspecified Old Level	1951	577688
C	On site	Unspecified Heap	1927	591147
C	On site	Unspecified Old Level	1927	600965
C	On site	Unspecified Heap	1923 - 1971	621186
C	On site	Unspecified Heap	1898	624457
C	On site	Old Level	1923	627478
C	On site	Unspecified Old Level	1898	628491
C	On site	Unspecified Old Level	1927	637649
D	On site	Unspecified Disused Shaft	1971	585481
D	On site	Unspecified Old Shaft	1951	587001
D	On site	Unspecified Heap	1898	596878
D	On site	Unspecified Old Shaft	1927	599925
D	On site	Unspecified Heap	1927	603009
D	On site	Unspecified Old Shaft	1927	603846
D	On site	Unspecified Ground Workings	1923	612842
D	On site	Old Shaft	1923	615208
D	On site	Unspecified Heap	1951 - 1971	618401
D	On site	Unspecified Heap	1927	627215

ID	Location	Land use	Dates present	Group ID
E	**On site**	**Unspecified Heap**	**1927 - 1951**	**592851**
E	**On site**	**Unspecified Heap**	**1923**	**596379**
E	**On site**	**Unspecified Old Level**	**1927**	**600650**
E	**On site**	**Unspecified Old Level**	**1951**	**606711**
E	**On site**	**Old Level**	**1923**	**620441**
E	**On site**	**Unspecified Old Level**	**1898**	**621661**
E	**On site**	**Unspecified Old Level**	**1927**	**629032**
F	**On site**	**Unspecified Heap**	**1927 - 1971**	**594535**
F	**On site**	**Unspecified Ground Workings**	**1923**	**613615**
F	**On site**	**Unspecified Heap**	**1927**	**616287**
G	**On site**	**Unspecified Heap**	**1898**	**596042**
G	**On site**	**Old Level**	**1923**	**604153**
G	**On site**	**Unspecified Old Level**	**1927**	**613436**
G	**On site**	**Unspecified Old Level**	**1927 - 1951**	**615898**
G	**On site**	**Unspecified Heap**	**1923**	**618156**
G	**On site**	**Unspecified Old Level**	**1898**	**623334**
H	5m SE	Coal Pit	1864	552021
H	16m SE	Old Coal Pit	1923	604257
H	17m SE	Old Coal Pit	1898	596777
H	17m SE	Old Coal Pit	1947 - 1951	609549
H	19m SE	Old Coal Pit	1926	625507
H	24m SE	Unspecified Disused Mine	1971	567560
H	28m SE	Unspecified Tank	1864	550989
4	36m SE	Coal Pit	1864	552022
I	95m SW	Unspecified Tank	1927 - 1951	598966
I	96m SW	Tank	1923	635451
5	108m SE	Unspecified Works	1971	552693
J	117m W	Smithy	1864	580586

ID	Location	Land use	Dates present	Group ID
J	121m W	Unspecified Disused Quarry	1967	624450
J	124m W	Unspecified Commercial/Industrial	1967 - 1991	604502
J	129m W	Sawmill	1898	594744
J	129m W	Sawmill	1927	617469
J	129m W	Sawmill	1927	593294
J	129m W	Disused Quarry	1923	590369
J	129m W	Sawmill	1923	616697
J	131m W	Unspecified Disused Quarry	1927	604748
J	133m W	Sawmill	1951	637092
J	135m W	Unspecified Quarry	1864 - 1898	624283
J	136m W	Unspecified Disused Quarry	1991	602333
J	136m W	Unspecified Disused Quarry	1951	638543
K	136m SE	Unspecified Heap	1947	590933
K	137m SE	Unspecified Ground Workings	1923	612076
J	139m W	Sawmill	1864	638699
K	146m SE	Unspecified Heap	1951 - 1971	606524
6	151m SE	Colliery	1898	576410
L	159m NW	Colliery	1923	605630
M	160m NW	Colliery	1938	636018
M	166m NW	Unspecified Heap	1967	561961
M	171m NW	Refuse Heap	1923	611711
M	172m NW	Refuse Heap	1938	630993
M	172m NW	Refuse Heap	1938	636772
M	174m NW	Refuse Heap	1947	610363
M	177m NW	Mineral Railway Sidings	1938	589919
M	177m NW	Mineral Railway Sidings	1923	605207
M	178m NW	Refuse Heap	1951	618717
N	189m SE	Unspecified Pit	1898	582804

ID	Location	Land use	Dates present	Group ID
N	189m SE	Unspecified Heap	1947	613168
N	189m SE	Unspecified Heap	1923 - 1926	638634
N	197m SE	Unspecified Heap	1951 - 1971	610718
O	207m E	Unspecified Disused Quarry	1951 - 1971	611497
N	242m SE	Unspecified Old Shaft	1898	587000
O	244m E	Disused Quarry	1923	603015
O	244m E	Unspecified Disused Quarry	1927	621315
O	248m E	Unspecified Quarry	1898	589839
O	248m E	Unspecified Disused Quarry	1927	627945
M	249m NW	Refuse Heap	1923	618983
M	249m NW	Refuse Heap	1923	620789
M	249m NW	Refuse Heap	1923	632830
M	249m NW	Refuse Heap	1923	634107
M	251m NW	Shaft	1923	597363
M	252m NW	Refuse Heap	1951	611432
O	258m E	Unspecified Quarry	1864	631416
M	274m NW	Unspecified Shaft	1938	609366
8	291m SE	Tramway Sidings	1898	558378
P	297m SE	Unspecified Heap	1947	635834
Q	299m SE	Unspecified Heap	1971	627075
Q	299m SE	Unspecified Heap	1947 - 1951	617387
R	300m SE	Unspecified Heap	1947	636489
Q	301m SE	Unspecified Old Levels	1926	611869
P	304m SE	Unspecified Heap	1951 - 1971	597190
R	304m SE	Unspecified Heap	1951 - 1971	609420
S	309m SW	Tramway Sidings	1864	558380
T	328m SW	Unspecified Disused Shaft	1991	585472
T	333m SW	Unspecified Old Shaft	1898	586885

ID	Location	Land use	Dates present	Group ID
T	333m SW	Old Coal Shaft	1947	605892
T	334m SW	Old Coal Shaft	1926	625745
T	335m SW	Old Coal Shaft	1923	601438
T	335m SW	Old Coal Shaft	1923	620357
T	336m SW	Unspecified Disused Shaft	1967	585473
T	336m SW	Old Coal Shaft	1951	614116
11	337m NE	Cuttings	1971	584804
U	337m SE	Unspecified Ground Workings	1947 - 1951	596848
V	341m NW	Old Coal Shaft	1938	622106
V	341m NW	Old Coal Shaft	1951	620112
V	341m NW	Unspecified Ground Workings	1923	632386
V	342m NW	Unspecified Heap	1947	561959
W	346m SE	Old Levels	1923	621774
U	347m SE	Unspecified Ground Workings	1971	601523
12	351m NW	Unspecified Heap	1951	561956
X	351m SE	Unspecified Old Levels	1947	595153
V	352m NW	Old Coal Shaft	1947	607165
X	352m SE	Old Levels	1923	611582
X	354m SE	Unspecified Old Levels	1926	592366
X	356m SE	Unspecified Ground Workings	1971	581462
W	358m SE	Unspecified Level	1898	577213
X	358m SE	Unspecified Old Levels	1951	639315
V	358m NW	Unspecified Old Shaft	1898	587009
X	359m SE	Unspecified Tank	1898	550988
V	360m NW	Old Coal Shaft	1923	611290
X	361m SE	Unspecified Old Level	1898	577689
S	374m SW	Coal Shaft	1864	570917
Y	374m E	Unspecified Pit	1971	596605

ID	Location	Land use	Dates present	Group ID
Y	377m E	Unspecified Pit	1951	612130
Z	380m N	Unspecified Heap	1967	561950
Y	383m E	Unspecified Ground Workings	1927	581460
L	384m NW	Refuse Heap	1938	609206
Y	385m E	Unspecified Pit	1927	625157
L	386m NW	Unspecified Old Shaft	1947	621719
L	386m NW	Shaft	1923	618529
L	386m NW	Refuse Heap	1947	601593
L	387m NW	Refuse Heap	1951	630729
L	387m NW	Refuse Heap	1923	591327
L	387m NW	Refuse Heap	1923	595283
L	387m NW	Unspecified Shaft	1938	595064
L	388m NW	Unspecified Old Shaft	1951	598350
AA	389m SE	Unspecified Heap	1923	638636
AA	390m SE	Unspecified Heap	1947	597746
AA	392m SE	Unspecified Heap	1926	606371
AA	392m SE	Unspecified Heap	1926	633227
13	393m SW	Lime Kiln	1864	578378
AA	399m SE	Unspecified Heap	1951 - 1971	613013
L	399m NW	Unspecified Old Shaft	1898	587012
L	402m NW	Refuse Heap	1923	619499
Z	404m N	Unspecified Pit	1927 - 1951	612942
L	405m NW	Unspecified Heap	1898	561960
Z	405m N	Unspecified Pit	1927	639043
Z	406m N	Cuttings	1923	590513
L	407m NW	Old Coal Shaft	1923	616894
L	407m NW	Old Coal Shaft	1951	595862
L	407m NW	Old Coal Shaft	1938	618471

ID	Location	Land use	Dates present	Group ID
L	408m NW	Unspecified Old Shaft	1947	587011
S	409m SW	Coal Shaft	1864	570916
14	457m W	Cuttings	1967	584747
15	469m N	Opencast Workings	1981	556607

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**3**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
7	169m NW	Tank or Trough	1866	75604
9	314m W	Tank or Trough	1862	75603
10	315m W	Tank or Trough	1862	75602

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**0**

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

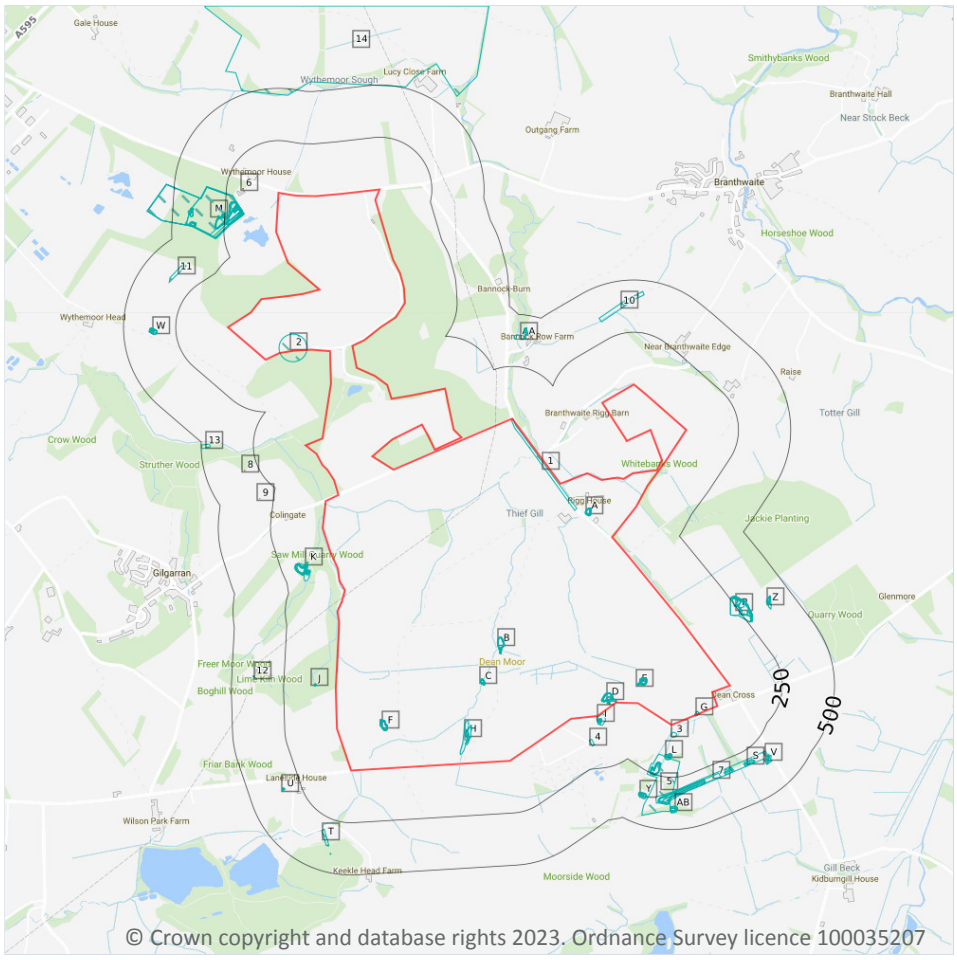
1.6 Historical military land

Records within 500m	0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

2.1 Historical industrial land uses

Records within 500m	286

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 22**

ID	Location	Land Use	Date	Group ID
1	**On site**	**Cuttings**	**1864**	**584803**
2	**On site**	**Coal Mine**	**1991**	**555530**
A	**On site**	**Unspecified Heap**	**1927**	**594535**

ID	Location	Land Use	Date	Group ID
A	On site	Unspecified Heap	1951	594535
A	On site	Unspecified Heap	1971	594535
A	On site	Unspecified Ground Workings	1923	613615
A	On site	Unspecified Ground Workings	1923	613615
A	On site	Unspecified Ground Workings	1923	613615
A	On site	Unspecified Heap	1927	616287
A	On site	Unspecified Heap	1927	616287
B	On site	Unspecified Heap	1927	592851
B	On site	Unspecified Old Level	1927	600650
B	On site	Unspecified Old Level	1898	621661
B	On site	Unspecified Old Level	1951	606711
B	On site	Unspecified Heap	1951	592851
B	On site	Unspecified Heap	1923	596379
B	On site	Old Level	1923	620441
B	On site	Unspecified Heap	1923	596379
B	On site	Old Level	1923	620441
B	On site	Old Level	1923	620441
B	On site	Unspecified Heap	1923	596379
B	On site	Unspecified Old Level	1927	629032
B	On site	Unspecified Old Level	1927	629032
C	On site	Unspecified Old Level	1927	615898
C	On site	Unspecified Heap	1898	596042
C	On site	Unspecified Old Level	1898	623334
C	On site	Unspecified Old Level	1951	615898
C	On site	Old Level	1923	604153
C	On site	Unspecified Heap	1923	618156
C	On site	Old Level	1923	604153
C	On site	Unspecified Heap	1923	618156

ID	Location	Land Use	Date	Group ID
C	On site	Unspecified Heap	1923	618156
C	On site	Old Level	1923	604153
C	On site	Unspecified Old Level	1927	613436
C	On site	Unspecified Old Level	1927	613436
D	On site	Unspecified Heap	1927	603009
D	On site	Unspecified Old Shaft	1927	599925
D	On site	Unspecified Heap	1898	596878
D	On site	Unspecified Old Shaft	1951	587001
D	On site	Unspecified Heap	1951	618401
D	On site	Unspecified Heap	1971	618401
D	On site	Unspecified Disused Shaft	1971	585481
D	On site	Unspecified Ground Workings	1923	612842
D	On site	Old Shaft	1923	615208
D	On site	Unspecified Ground Workings	1923	612842
D	On site	Old Shaft	1923	615208
D	On site	Old Shaft	1923	615208
D	On site	Unspecified Ground Workings	1923	612842
D	On site	Unspecified Heap	1927	627215
D	On site	Unspecified Old Shaft	1927	603846
D	On site	Unspecified Heap	1927	627215
D	On site	Unspecified Old Shaft	1927	603846
E	On site	Unspecified Old Level	1927	600965
E	On site	Unspecified Heap	1927	621186
E	On site	Unspecified Heap	1898	624457
E	On site	Unspecified Old Level	1898	628491
E	On site	Unspecified Old Level	1951	577688
E	On site	Unspecified Heap	1951	621186
E	On site	Unspecified Heap	1971	621186

ID	Location	Land Use	Date	Group ID
E	On site	Unspecified Heap	1923	621186
E	On site	Old Level	1923	627478
E	On site	Old Level	1923	627478
E	On site	Unspecified Heap	1923	621186
E	On site	Unspecified Heap	1923	621186
E	On site	Old Level	1923	627478
E	On site	Unspecified Old Level	1927	637649
E	On site	Unspecified Heap	1927	591147
E	On site	Unspecified Old Level	1927	637649
E	On site	Unspecified Heap	1927	591147
F	On site	Unspecified Pit	1947	627492
F	On site	Unspecified Pit	1951	627492
F	On site	Unspecified Pit	1967	627492
F	On site	Unspecified Pit	1991	627492
F	On site	Unspecified Old Quarry	1898	575193
F	On site	Unspecified Ground Workings	1923	596288
F	On site	Unspecified Ground Workings	1923	596288
F	On site	Unspecified Pit	1926	627492
F	On site	Unspecified Pit	1926	627492
G	On site	Old Coal Pit	1898	601373
G	On site	Old Coal Pit	1864	601373
H	On site	Unspecified Heap	1951	561951
H	On site	Unspecified Quarry	1947	624139
H	On site	Unspecified Old Quarry	1898	575195
H	On site	Unspecified Quarry	1864	611253
H	On site	Unspecified Ground Workings	1923	599701
H	On site	Unspecified Ground Workings	1923	599701
H	On site	Unspecified Ground Workings	1926	599701

ID	Location	Land Use	Date	Group ID
H	**On site**	**Unspecified Ground Workings**	**1926**	**599701**
I	5m SE	Coal Pit	1864	552021
I	16m SE	Old Coal Pit	1923	604257
I	16m SE	Old Coal Pit	1923	604257
I	17m SE	Old Coal Pit	1947	609549
I	17m SE	Old Coal Pit	1898	596777
I	19m SE	Old Coal Pit	1926	625507
I	19m SE	Old Coal Pit	1926	625507
I	24m SE	Old Coal Pit	1951	609549
I	24m SE	Unspecified Disused Mine	1971	567560
I	28m SE	Unspecified Tank	1864	550989
3	36m SE	Coal Pit	1864	552022
J	95m SW	Unspecified Tank	1927	598966
J	96m SW	Tank	1923	635451
J	96m SW	Tank	1923	635451
J	96m SW	Tank	1923	635451
J	96m SW	Unspecified Tank	1951	598966
J	96m SW	Unspecified Tank	1927	598966
4	108m SE	Unspecified Works	1971	552693
K	117m W	Smithy	1864	580586
K	121m W	Unspecified Disused Quarry	1967	624450
K	124m W	Unspecified Commercial/Industrial	1967	604502
K	124m W	Unspecified Commercial/Industrial	1991	604502
K	129m W	Sawmill	1927	617469
K	129m W	Sawmill	1898	594744
K	129m W	Sawmill	1927	593294
K	129m W	Disused Quarry	1923	590369
K	129m W	Disused Quarry	1923	590369

ID	Location	Land Use	Date	Group ID
K	129m W	Disused Quarry	1923	590369
K	129m W	Sawmill	1923	616697
K	129m W	Sawmill	1923	616697
K	129m W	Sawmill	1923	616697
K	131m W	Unspecified Disused Quarry	1927	604748
K	133m W	Sawmill	1951	637092
K	135m W	Unspecified Disused Quarry	1927	604748
K	135m W	Unspecified Quarry	1898	624283
K	136m W	Unspecified Disused Quarry	1951	638543
K	136m W	Unspecified Disused Quarry	1991	602333
L	136m SE	Unspecified Heap	1947	590933
L	137m SE	Unspecified Ground Workings	1923	612076
L	137m SE	Unspecified Ground Workings	1923	612076
K	139m W	Sawmill	1864	638699
K	142m W	Unspecified Quarry	1864	624283
L	146m SE	Unspecified Heap	1951	606524
L	146m SE	Unspecified Heap	1971	606524
5	151m SE	Colliery	1898	576410
M	159m NW	Colliery	1923	605630
M	159m NW	Colliery	1923	605630
M	159m NW	Colliery	1923	605630
M	159m NW	Colliery	1923	605630
N	160m NW	Colliery	1938	636018
N	160m NW	Colliery	1938	636018
N	166m NW	Unspecified Heap	1967	561961
N	171m NW	Refuse Heap	1923	611711
N	171m NW	Refuse Heap	1923	611711
N	171m NW	Refuse Heap	1923	611711

ID	Location	Land Use	Date	Group ID
N	171m NW	Refuse Heap	1923	611711
N	172m NW	Refuse Heap	1938	630993
N	172m NW	Refuse Heap	1938	636772
N	174m NW	Refuse Heap	1947	610363
N	177m NW	Mineral Railway Sidings	1938	589919
N	177m NW	Mineral Railway Sidings	1923	605207
N	177m NW	Mineral Railway Sidings	1923	605207
N	177m NW	Mineral Railway Sidings	1923	605207
N	177m NW	Mineral Railway Sidings	1923	605207
N	178m NW	Refuse Heap	1951	618717
O	189m SE	Unspecified Heap	1947	613168
O	189m SE	Unspecified Pit	1898	582804
O	189m SE	Unspecified Heap	1923	638634
O	189m SE	Unspecified Heap	1923	638634
O	191m SE	Unspecified Heap	1926	638634
O	191m SE	Unspecified Heap	1926	638634
O	197m SE	Unspecified Heap	1951	610718
O	197m SE	Unspecified Heap	1971	610718
P	207m E	Unspecified Disused Quarry	1951	611497
P	207m E	Unspecified Disused Quarry	1971	611497
O	242m SE	Unspecified Old Shaft	1898	587000
P	244m E	Disused Quarry	1923	603015
P	244m E	Disused Quarry	1923	603015
P	244m E	Disused Quarry	1923	603015
P	244m E	Unspecified Disused Quarry	1927	621315
P	248m E	Unspecified Disused Quarry	1927	627945
P	248m E	Unspecified Quarry	1898	589839
N	249m NW	Refuse Heap	1923	634107

ID	Location	Land Use	Date	Group ID
N	249m NW	Refuse Heap	1923	632830
N	249m NW	Refuse Heap	1923	620789
N	249m NW	Refuse Heap	1923	618983
N	251m NW	Shaft	1923	597363
N	251m NW	Shaft	1923	597363
N	251m NW	Shaft	1923	597363
N	251m NW	Shaft	1923	597363
N	252m NW	Refuse Heap	1951	611432
P	258m E	Unspecified Quarry	1864	631416
N	274m NW	Unspecified Shaft	1938	609366
N	274m NW	Unspecified Shaft	1938	609366
7	291m SE	Tramway Sidings	1898	558378
Q	297m SE	Unspecified Heap	1947	635834
R	299m SE	Unspecified Heap	1971	627075
R	299m SE	Unspecified Heap	1947	617387
S	300m SE	Unspecified Heap	1947	636489
R	301m SE	Unspecified Old Levels	1926	611869
R	301m SE	Unspecified Old Levels	1926	611869
Q	304m SE	Unspecified Heap	1951	597190
Q	304m SE	Unspecified Heap	1971	597190
S	304m SE	Unspecified Heap	1951	609420
S	304m SE	Unspecified Heap	1971	609420
R	306m SE	Unspecified Heap	1951	617387
T	309m SW	Tramway Sidings	1864	558380
U	328m SW	Unspecified Disused Shaft	1991	585472
U	333m SW	Unspecified Old Shaft	1898	586885
U	333m SW	Old Coal Shaft	1947	605892
U	334m SW	Old Coal Shaft	1926	625745

ID	Location	Land Use	Date	Group ID
U	335m SW	Old Coal Shaft	1923	620357
U	335m SW	Old Coal Shaft	1923	601438
U	336m SW	Old Coal Shaft	1951	614116
U	336m SW	Unspecified Disused Shaft	1967	585473
10	337m NE	Cuttings	1971	584804
V	337m SE	Unspecified Ground Workings	1947	596848
V	338m SE	Unspecified Ground Workings	1951	596848
W	341m NW	Old Coal Shaft	1938	622106
W	341m NW	Old Coal Shaft	1951	620112
W	341m NW	Unspecified Ground Workings	1923	632386
W	341m NW	Unspecified Ground Workings	1923	632386
W	341m NW	Unspecified Ground Workings	1923	632386
W	341m NW	Unspecified Ground Workings	1923	632386
W	342m NW	Unspecified Heap	1947	561959
X	346m SE	Old Levels	1923	621774
X	346m SE	Old Levels	1923	621774
V	347m SE	Unspecified Ground Workings	1971	601523
11	351m NW	Unspecified Heap	1951	561956
Y	351m SE	Unspecified Old Levels	1947	595153
W	352m NW	Old Coal Shaft	1947	607165
Y	352m SE	Old Levels	1923	611582
Y	352m SE	Old Levels	1923	611582
Y	354m SE	Unspecified Old Levels	1926	592366
Y	354m SE	Unspecified Old Levels	1926	592366
Y	356m SE	Unspecified Ground Workings	1971	581462
X	358m SE	Unspecified Level	1898	577213
Y	358m SE	Unspecified Old Levels	1951	639315
W	358m NW	Unspecified Old Shaft	1898	587009

ID	Location	Land Use	Date	Group ID
Y	359m SE	Unspecified Tank	1898	550988
W	360m NW	Old Coal Shaft	1923	611290
W	360m NW	Old Coal Shaft	1923	611290
W	360m NW	Old Coal Shaft	1923	611290
W	360m NW	Old Coal Shaft	1923	611290
Y	361m SE	Unspecified Old Level	1898	577689
T	374m SW	Coal Shaft	1864	570917
Z	374m E	Unspecified Pit	1971	596605
Z	377m E	Unspecified Pit	1951	612130
AA	380m N	Unspecified Heap	1967	561950
Z	383m E	Unspecified Ground Workings	1927	581460
M	384m NW	Refuse Heap	1938	609206
M	384m NW	Refuse Heap	1938	609206
Z	385m E	Unspecified Pit	1927	625157
Z	385m E	Unspecified Pit	1927	625157
M	386m NW	Unspecified Old Shaft	1947	621719
M	386m NW	Shaft	1923	618529
M	386m NW	Shaft	1923	618529
M	386m NW	Shaft	1923	618529
M	386m NW	Shaft	1923	618529
M	386m NW	Refuse Heap	1947	601593
M	387m NW	Refuse Heap	1951	630729
M	387m NW	Refuse Heap	1923	595283
M	387m NW	Refuse Heap	1923	591327
M	387m NW	Refuse Heap	1923	591327
M	387m NW	Refuse Heap	1923	591327
M	387m NW	Unspecified Shaft	1938	595064
M	387m NW	Unspecified Shaft	1938	595064

ID	Location	Land Use	Date	Group ID
M	388m NW	Unspecified Old Shaft	1951	598350
AB	389m SE	Unspecified Heap	1923	638636
AB	389m SE	Unspecified Heap	1923	638636
AB	390m SE	Unspecified Heap	1947	597746
AB	392m SE	Unspecified Heap	1926	633227
AB	392m SE	Unspecified Heap	1926	606371
12	393m SW	Lime Kiln	1864	578378
AB	399m SE	Unspecified Heap	1951	613013
AB	399m SE	Unspecified Heap	1971	613013
M	399m NW	Unspecified Old Shaft	1898	587012
M	402m NW	Refuse Heap	1923	619499
M	402m NW	Refuse Heap	1923	619499
M	402m NW	Refuse Heap	1923	619499
M	402m NW	Refuse Heap	1923	619499
AA	404m N	Unspecified Pit	1927	612942
AA	404m N	Unspecified Pit	1927	612942
M	405m NW	Unspecified Heap	1898	561960
AA	405m N	Unspecified Pit	1927	639043
AA	406m N	Cuttings	1923	590513
AA	406m N	Cuttings	1923	590513
M	407m NW	Old Coal Shaft	1923	616894
M	407m NW	Old Coal Shaft	1923	616894
M	407m NW	Old Coal Shaft	1923	616894
M	407m NW	Old Coal Shaft	1923	616894
M	407m NW	Old Coal Shaft	1951	595862
M	407m NW	Old Coal Shaft	1938	618471
AA	407m N	Unspecified Pit	1951	612942
M	408m NW	Unspecified Old Shaft	1947	587011

ID	Location	Land Use	Date	Group ID
T	409m SW	Coal Shaft	1864	570916
13	457m W	Cuttings	1967	584747
14	469m N	Opencast Workings	1981	556607

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**3**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 22**

ID	Location	Land Use	Date	Group ID
6	169m NW	Tank or Trough	1866	75604
8	314m W	Tank or Trough	1862	75603
9	315m W	Tank or Trough	1862	75602

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**0**

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	**0**

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

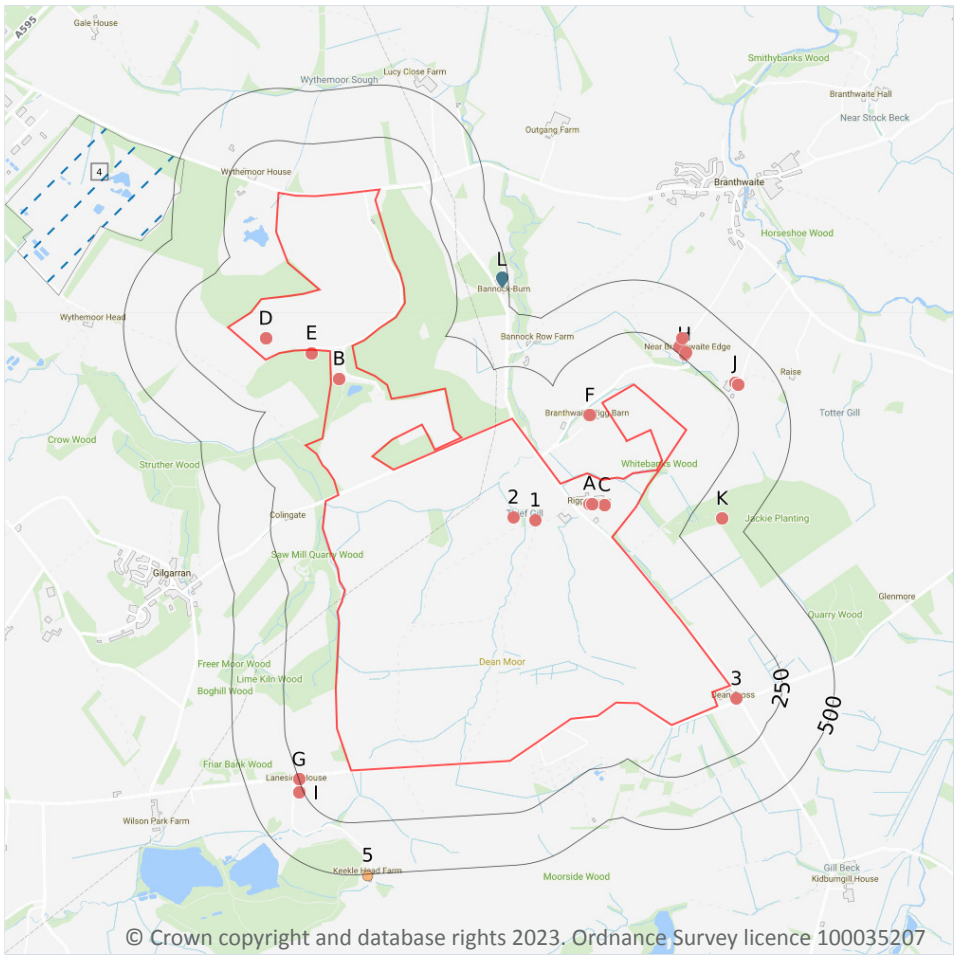
2.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Active or recent landfill

Historical waste sites

Licensed waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	1

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 35**

ID	Location	Details	
4	466m NW	Operator: FCC Recycling (UK) Limited Site Address: Lillyhall Stage3 Landfill Site, Joseph Noble Road, Cumbria, CA14 4JH	WML Number: 0 EPR Reference: - Landfill type: WASTE LANDFILLING; >10 T/D WITH CAPACITY >25,000T EXCLUDING INERT WASTE Status: Effective IPPC Reference: - EPR Number: -

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m	0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m	1

Waste site records derived from Local Authority planning records and high detail historical mapping.

Features are displayed on the Waste and landfill map on **page 35**

ID	Location	Address	Further Details	Date
5	482m S	Site Address: Keekle Head, Keekle Head opencast mine, WORKINGTON, Cumbria, CA14 4QG	Type of Site: Waste Management Facility Planning application reference: 4/10/9001/0F2 Description: Scheme comprises purpose built low level waste disposal facility. The site, on the former coal quarry was chose for safe and secure storage of low and very low level radioactive waste. The material will be made up of construction and demolition waste, wh ich will mostly result from the decommissioning of Sellafield. This facility will be the first of it's kind in the UK. Works will also include early restoration of large parts of Keekle Head to a high standard, including re-instating the River Keekle nea r it's original course, before constructing the disposal facility. An application (ref: 4/10/9001/0F2) for detailed planning permission was submitted to Copeland B.C. Borehole testing permission has also been sought. We have been advised an environment al impact study has been carried, and further information on this is required by the County Council. Once this has been received, the application will go to committee and further public consultations will be carried out. Data source: Historic Planning Application Data Type: Point	-

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m	**2**

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 35**

ID	Location	Details		
L	468m N	Site Name: Branthwaite Vehicle Dismantlers Site Address: Branthwaite Vehicle Dismantlers, Bannock Burn, Branthwaite, Workington, Cumbria, CA14 4RG Correspondence Address: -	Type of Site: Metal Recycling Site (Vehicle Dismantler) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BRA001 EPR reference: EA/EPR/AP3999SD/V002 Operator: Brough Trevor Waste Management licence No: 57521 Annual Tonnage: 4999	Issue Date: 27/03/2000 Effective Date: - Modified: 13/05/2009 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified

ID	Location	Details		
L	468m N	Site Name: Bannock Burn Site Address: Bannock Burn, Branthwaite, Workington, Cumbria, CA14 4RG Correspondence Address: Bannock Burn, Branthwaite, Workington, Cumbria, CA14 4RG	Type of Site: Metal Recycling Site (Vehicle Dismantler) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BRA001 EPR reference: - Operator: Brough Trevor Waste Management licence No: 57521 Annual Tonnage: 4999	Issue Date: 27/03/2000 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m	**162**

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 35**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	**On site**	**-**	**WEX305654**	**Storing waste exemption**	**On a Farm**	**Storage of sludge**
2	**On site**	**Rigg House Farm Workington Cumbria CA14 4RQ**	**EPR/SH0579GY/A001**	**Storing waste exemption**	**Non-Agricultural Waste Only**	**Storage of sludge**
A	**On site**	**RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ**	**WEX287033**	**Using waste exemption**	**On a Farm**	**Use of waste in construction**
A	**On site**	**RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ**	**WEX287033**	**Storing waste exemption**	**On a Farm**	**Storage of sludge**
A	**On site**	**RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ**	**WEX287033**	**Disposing of waste exemption**	**On a Farm**	**Deposit of waste from dredging of inland waters**
A	**On site**	**RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ**	**WEX287033**	**Treating waste exemption**	**On a Farm**	**Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX287033	Using waste exemption	On a Farm	Pig and poultry ash
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX287033	Using waste exemption	On a Farm	Incorporation of ash into soil
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX287033	Using waste exemption	On a Farm	Spreading of plant matter to confer benefit
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX287033	Using waste exemption	On a Farm	Use of mulch
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX287033	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX287033	Using waste exemption	On a Farm	Use of sludge for the purposes of re-seeding a waste water treatment plant
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX287033	Using waste exemption	On a Farm	Burning of waste as a fuel in a small appliance
A	On site	-	WEX192769	Using waste exemption	On a Farm	Use of waste in construction
A	On site	-	WEX192769	Using waste exemption	On a Farm	Use of baled end-of-life tyres in construction
A	On site	-	WEX192769	Using waste exemption	On a Farm	Use of waste for a specified purpose
A	On site	-	WEX192769	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
A	On site	-	WEX192769	Using waste exemption	On a Farm	Use of mulch
A	On site	-	WEX192769	Using waste exemption	On a Farm	Incorporation of ash into soil
A	On site	-	WEX192769	Using waste exemption	On a Farm	Pig and poultry ash
A	On site	-	WEX192769	Treating waste exemption	On a Farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising

ID	Location	Site	Reference	Category	Sub-Category	Description
A	On site	-	WEX192769	Treating waste exemption	On a Farm	Treatment of sheep dip for disposal
A	On site	-	WEX192769	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters
A	On site	-	WEX192769	Disposing of waste exemption	On a Farm	Disposal by incineration
A	On site	-	WEX192769	Disposing of waste exemption	On a Farm	Burning waste in the open
A	On site	-	WEX192769	Storing waste exemption	On a Farm	Storage of sludge
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX143335	Using waste exemption	On a farm	Use of waste in construction
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX143335	Disposing of waste exemption	On a farm	Burning waste in the open
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX143335	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX143335	Using waste exemption	On a farm	Use of baled end-of-life tyres in construction
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX143335	Storing waste exemption	On a farm	Storage of sludge
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX143335	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX143335	Treating waste exemption	On a farm	Treatment of sheep dip for disposal
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX143335	Using waste exemption	On a farm	Use of mulch
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX143335	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters

ID	Location	Site	Reference	Category	Sub-Category	Description
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Disposing of waste exemption	On a farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Disposing of waste exemption	On a farm	Burning waste in the open
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Storing waste exemption	On a farm	Storage of sludge
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Treating waste exemption	On a farm	Treatment of waste food
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Treating waste exemption	On a farm	Treatment of sheep dip for disposal
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Using waste exemption	On a farm	Use of waste in construction
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Using waste exemption	On a farm	Use of mulch
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Using waste exemption	On a farm	Incorporation of ash into soil
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Using waste exemption	On a farm	Use of baled end-of-life tyres in construction
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Using waste exemption	On a farm	Burning of waste as a fuel in a small appliance

ID	Location	Site	Reference	Category	Sub-Category	Description
A	On site	RIGG HOUSE FARM, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX032970	Using waste exemption	On a farm	Use of waste for a specified purpose
A	On site	Rigg House Farm Branthwaite CA14 4RQ	EPR/ME5054QS/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
A	On site	Rigg House Farm Branthwaite CA14 4RQ	EPR/ME5054QS/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
A	On site	Rigg House Farm Branthwaite CA14 4RQ	EPR/ME5054QS/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
A	On site	Rigg House Farm Branthwaite CA14 4RQ	EPR/ME5054QS/A001	Treating waste exemption	Agricultural Waste Only	Treatment of sheep dip for disposal
A	On site	Rigg House Farm Branthwaite CA14 4RQ	EPR/ME5054QS/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	On site	Rigg House Farm Branthwaite CA14 4RQ	EPR/ME5054QS/A001	Using waste exemption	Agricultural Waste Only	Use of mulch
A	On site	Rigg House Farm Branthwaite CA14 4RQ	EPR/ME5054QS/A001	Using waste exemption	Agricultural Waste Only	Burning of waste as a fuel in a small appliance
A	On site	Rigg House Farm Branthwaite CA14 4RQ	EPR/ME5054QS/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
A	On site	Rigg House Farm Branthwaite CA14 4RQ	EPR/ME5054QS/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading waste on agricultural land to confer benefit
B	On site	-	WEX053759	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
B	On site	-	WEX053759	Disposing of waste exemption	On a farm	Burning waste in the open
B	On site	-	WEX053759	Treating waste exemption	On a farm	Aerobic composting and associated prior treatment

ID	Location	Site	Reference	Category	Sub-Category	Description
B	On site	-	WEX053759	Treating waste exemption	On a farm	Screening and blending of waste
B	On site	-	WEX053759	Using waste exemption	On a farm	Use of waste in construction
B	On site	-	WEX053759	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
B	On site	-	WEX053759	Using waste exemption	On a farm	Burning of waste as a fuel in a small appliance
B	On site	-	WEX053759	Using waste exemption	On a farm	Use of waste for a specified purpose
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Deposit of waste from dredging of inland waters
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Disposal by incineration
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Burning waste in the open
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Storing waste exemption	Both agricultural and non-agricultural waste	Storage of waste in secure containers
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Storing waste exemption	Both agricultural and non-agricultural waste	Storage of waste in a secure place
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Treating waste exemption	Both agricultural and non-agricultural waste	Cleaning, washing, spraying or coating relevant waste

ID	Location	Site	Reference	Category	Sub-Category	Description
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Treating waste exemption	Both agricultural and non-agricultural waste	Sorting mixed waste
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Treating waste exemption	Both agricultural and non-agricultural waste	Treatment of waste food
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Treating waste exemption	Both agricultural and non-agricultural waste	Aerobic composting and associated prior treatment
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Treating waste exemption	Both agricultural and non-agricultural waste	Preparatory treatments (baling, sorting, shredding etc)
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Treating waste exemption	Both agricultural and non-agricultural waste	Screening and blending of waste
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Treating waste exemption	Both agricultural and non-agricultural waste	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Treating waste exemption	Both agricultural and non-agricultural waste	Recovery of scrap metal
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading waste on agricultural land to confer benefit

ID	Location	Site	Reference	Category	Sub-Category	Description
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of mulch
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading of plant matter to confer benefit
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Using waste exemption	Both agricultural and non-agricultural waste	Incorporation of ash into soil
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of baled end-of-life tyres in construction
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Using waste exemption	Both agricultural and non-agricultural waste	Burning of waste as a fuel in a small appliance
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste for a specified purpose
C	On site	Rigg House Farm Workington Cumbria CA14 4RQ	EPR/FF0101FD/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste to manufacture finished goods
D	On site	Potato Pot Brantwaithe CA14 4ST	EPR/LE5084KJ/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
D	On site	Potato Pot Brantwaithe CA14 4ST	EPR/LE5084KJ/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
D	On site	Potato Pot Brantwaithe CA14 4ST	EPR/LE5084KJ/A001	Treating waste exemption	Agricultural Waste Only	Aerobic composting and associated prior treatment

ID	Location	Site	Reference	Category	Sub-Category	Description
D	**On site**	**Potato Pot Brantwaithe CA14 4ST**	**EPR/LE5084KJ /A001**	**Treating waste exemption**	**Agricultural Waste Only**	**Screening and blending of waste**
D	**On site**	**Potato Pot Brantwaithe CA14 4ST**	**EPR/LE5084KJ /A001**	**Using waste exemption**	**Agricultural Waste Only**	**Use of waste in construction**
D	**On site**	**Potato Pot Brantwaithe CA14 4ST**	**EPR/LE5084KJ /A001**	**Using waste exemption**	**Agricultural Waste Only**	**Spreading waste on agricultural land to confer benefit**
D	**On site**	**Potato Pot Brantwaithe CA14 4ST**	**EPR/LE5084KJ /A001**	**Using waste exemption**	**Agricultural Waste Only**	**Burning of waste as a fuel in a small appliance**
D	**On site**	**Potato Pot Brantwaithe CA14 4ST**	**EPR/LE5084KJ /A001**	**Using waste exemption**	**Agricultural Waste Only**	**Use of waste for a specified purpose**
E	18m NW	Potatopot, Branthwaite, Workington, CA14 4ST	WEX055967	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
E	18m NW	Potatopot, Branthwaite, Workington, CA14 4ST	WEX055967	Disposing of waste exemption	On a farm	Burning waste in the open
E	18m NW	Potatopot, Branthwaite, Workington, CA14 4ST	WEX055967	Treating waste exemption	On a farm	Aerobic composting and associated prior treatment
E	18m NW	Potatopot, Branthwaite, Workington, CA14 4ST	WEX055967	Treating waste exemption	On a farm	Screening and blending of waste
E	18m NW	Potatopot, Branthwaite, Workington, CA14 4ST	WEX055967	Using waste exemption	On a farm	Use of waste in construction
E	18m NW	Potatopot, Branthwaite, Workington, CA14 4ST	WEX055967	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
E	18m NW	Potatopot, Branthwaite, Workington, CA14 4ST	WEX055967	Using waste exemption	On a farm	Burning of waste as a fuel in a small appliance
E	18m NW	Potatopot, Branthwaite, Workington, CA14 4ST	WEX055967	Using waste exemption	On a farm	Use of waste for a specified purpose
3	71m SE	Dean Cross Cottage WORKINGTON Cumbria CA14 4RH	EPR/BF0300GR/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
F	84m NE	BRANTHWAITE RIGG BARN, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX250351	Using waste exemption	On a Farm	Use of waste in construction

ID	Location	Site	Reference	Category	Sub-Category	Description
F	84m NE	BRANTHWAITE RIGG BARN, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX279495	Using waste exemption	On a Farm	Use of waste in construction
F	84m NE	BRANTHWAITE RIGG BARN, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX140041	Using waste exemption	On a farm	Use of waste in construction
F	84m NE	BRANTHWAITE RIGG BARN, BRANTHWAITE, WORKINGTON, CA14 4RQ	WEX108151	Using waste exemption	On a farm	Use of waste in construction
F	85m NE	Branthwaite Rigg WORKINGTON Cumbria CA14 4RQ	EPR/PF0505BA /A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
G	251m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX220021	Using waste exemption	On a Farm	Use of waste in construction
G	251m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX220021	Disposing of waste exemption	On a Farm	Burning waste in the open
G	251m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX220021	Disposing of waste exemption	On a Farm	Disposal by incineration
G	251m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX220021	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters
G	251m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX220021	Treating waste exemption	On a Farm	Aerobic composting and associated prior treatment
G	251m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX220021	Treating waste exemption	On a Farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
G	251m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX220021	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
G	251m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX220021	Using waste exemption	On a Farm	Use of waste for a specified purpose
H	264m NE	Near Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/XF0030CH /A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste for a specified purpose

ID	Location	Site	Reference	Category	Sub-Category	Description
I	271m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX063870	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
I	271m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX063870	Disposing of waste exemption	On a farm	Disposal by incineration
I	271m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX063870	Disposing of waste exemption	On a farm	Burning waste in the open
I	271m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX063870	Treating waste exemption	On a farm	Aerobic composting and associated prior treatment
I	271m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX063870	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
I	271m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX063870	Using waste exemption	On a farm	Use of waste in construction
I	271m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX063870	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
I	271m SW	DYKE NOOK, WILSON PARK, PICA, WORKINGTON, CA14 4QG	WEX063870	Using waste exemption	On a farm	Use of waste for a specified purpose
H	273m NE	Near Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/JF0238YN /A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
H	275m NE	NEAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX055930	Using waste exemption	On a farm	Use of waste for a specified purpose
H	315m NE	Near Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/UF0009ZY /A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction

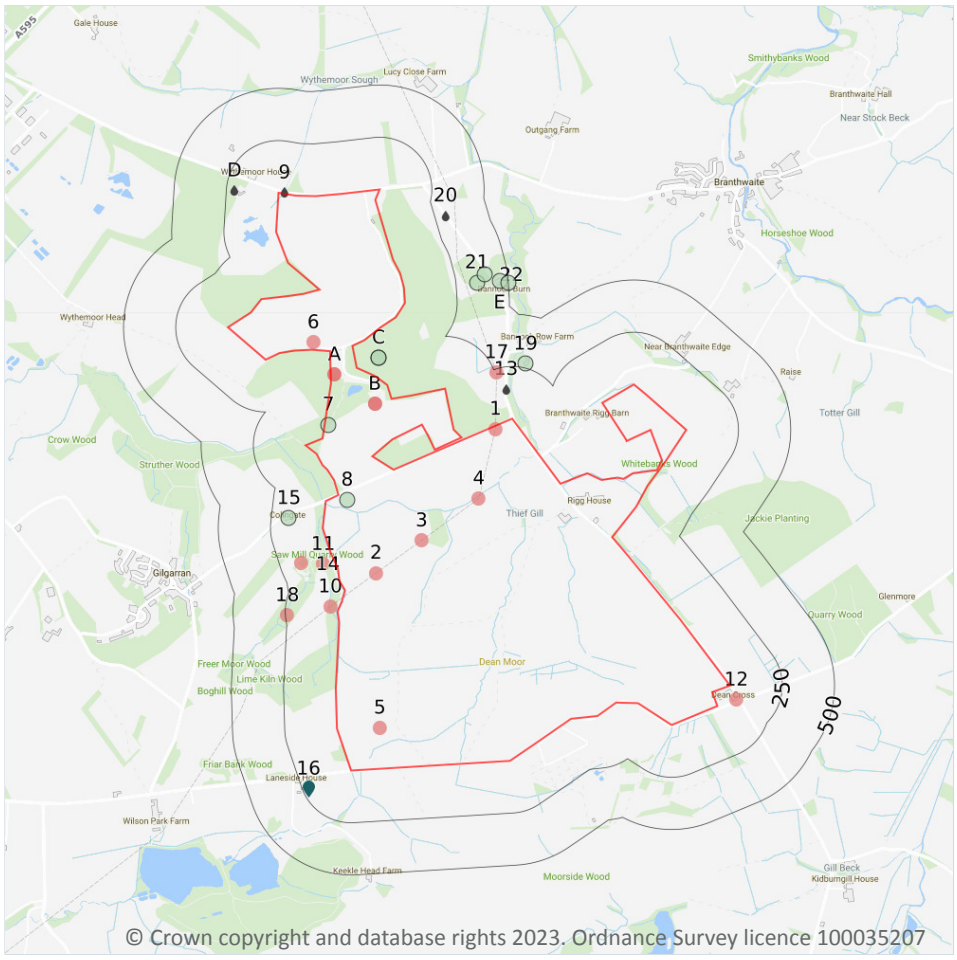
ID	Location	Site	Reference	Category	Sub-Category	Description
H	315m NE	Near Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/UF0009ZY/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste for a specified purpose
J	322m NE	Far Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/DH0170MH/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Deposit of waste from dredging of inland waters
J	322m NE	Far Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/DH0170MH/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Burning waste in the open
J	322m NE	Far Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/DH0170MH/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
J	322m NE	Far Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/DH0170MH/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading waste on agricultural land to confer benefit
J	322m NE	Far Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/DH0170MH/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading of plant matter to confer benefit
J	322m NE	Far Branthwaite Edge WORKINGTON Cumbria CA14 4TB	EPR/DH0170MH/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste for a specified purpose
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX304644	Storing waste exemption	On a Farm	Storage of waste in a secure place
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX304644	Disposing of waste exemption	On a Farm	Burning waste in the open
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX304644	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters

ID	Location	Site	Reference	Category	Sub-Category	Description
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX304644	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX304644	Using waste exemption	On a Farm	Use of waste in construction
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX171851	Using waste exemption	On a farm	Use of waste in construction
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX171851	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX171851	Disposing of waste exemption	On a farm	Burning waste in the open
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX171851	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX171851	Storing waste exemption	On a farm	Storage of waste in a secure place
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX012227	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX012227	Disposing of waste exemption	On a farm	Burning waste in the open
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX012227	Using waste exemption	On a farm	Use of waste in construction
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX012227	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX012227	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX012227	Using waste exemption	On a farm	Use of baled end-of-life tyres in construction

ID	Location	Site	Reference	Category	Sub-Category	Description
J	326m NE	FAR BRANTHWAITE EDGE, BRANTHWAITE, WORKINGTON, CA14 4TB	WEX012227	Using waste exemption	On a farm	Use of waste for a specified purpose
K	381m E	-	WEX053816	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
K	381m E	-	WEX053816	Disposing of waste exemption	On a farm	Burning waste in the open
K	381m E	-	WEX053816	Treating waste exemption	On a farm	Aerobic composting and associated prior treatment
K	381m E	-	WEX053816	Treating waste exemption	On a farm	Screening and blending of waste
K	381m E	-	WEX053816	Using waste exemption	On a farm	Use of waste in construction
K	381m E	-	WEX053816	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
K	381m E	-	WEX053816	Using waste exemption	On a farm	Burning of waste as a fuel in a small appliance
K	381m E	-	WEX053816	Using waste exemption	On a farm	Use of waste for a specified purpose

This data is sourced from the Environment Agency and Natural Resources Wales.

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Licensed pollutant release (Part A(2)/B)

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	16

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 52**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Pylon**	**Cumbria, CA14**	**Electrical Features**	**Infrastructure and Facilities**
2	**On site**	**Pylon**	**Cumbria, CA14**	**Electrical Features**	**Infrastructure and Facilities**
3	**On site**	**Pylon**	**Cumbria, CA14**	**Electrical Features**	**Infrastructure and Facilities**

ID	Location	Company	Address	Activity	Category
4	**On site**	**Pylon**	**Cumbria, CA14**	**Electrical Features**	**Infrastructure and Facilities**
5	**On site**	**Workings (Dis)**	**Cumbria, CA14**	**Unspecified Quarries Or Mines**	**Extractive Industries**
6	**On site**	**Potato Pot Windfarm**	**Cumbria, CA14**	**Energy Production**	**Industrial Features**
A	**On site**	**Potato Pot Turbine**	**Cumbria, CA14**	**Energy Production**	**Industrial Features**
A	**On site**	**Wind Turbine**	**Cumbria, CA14**	**Energy Production**	**Industrial Features**
B	**On site**	**Potato Pot Turbine**	**Cumbria, CA14**	**Energy Production**	**Industrial Features**
B	**On site**	**Wind Turbine**	**Cumbria, CA14**	**Energy Production**	**Industrial Features**
10	41m SW	Pylon	Cumbria, CA14	Electrical Features	Infrastructure and Facilities
11	55m W	Saw Mill	Cumbria, CA14	Wood Products Including Charcoal, Paper, Card and Board	Industrial Products
12	74m SE	West Cumbrian Motor Cross	Dean Cross Cottage, Branthwaite, Cumbria, CA14 4RH	Motorsport Services	Sport and Entertainment Support Services
14	148m W	Colingate Quarry (Disused)	Cumbria, CA14	Unspecified Quarries Or Mines	Extractive Industries
17	234m N	Pylon	Cumbria, CA14	Electrical Features	Infrastructure and Facilities
18	241m SW	Saw Mill	Cumbria, CA14	Wood Products Including Charcoal, Paper, Card and Board	Industrial Products

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m	1

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on **page 52**

ID	Location	Address	Details	
16	221m SW	Roxylight Agricultural Land Ltd, Keeklehead Ocs, Pica, Workington, CA24 3JZ	Process: coal/gypsum/carbon process Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	**0**

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m	**5**

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 52**

ID	Location	Address	Details	
9	5m NW	LAGOON1, OUTFALL 1, POTATO POT OCCS, LILLYHALL, CUMBRIA	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 017590144 Permit Version: 1 Receiving Water: UGH	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 27/09/1985 Revocation Date: 14/07/1997
13	144m N	LAGOON1, OUTFALL 1, POTATO POT OCCS, LILLYHALL, CUMBRIA	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 017590142 Permit Version: 1 Receiving Water: LOSTRIGG BECK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 27/09/1985 Revocation Date: 14/07/1997
D	211m NW	2A OXCLIFFE GROVE SWO, MORCAMBE, CUMBRIA	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 017490126 Permit Version: 1 Receiving Water: WYTHEMOOR SOUGH	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 10/06/1986 Revocation Date: 09/01/1991

ID	Location	Address	Details	
D	211m NW	WYTHEMOOR SOUGH FARM, BRANTHWAITE ROAD, WORKINGTON, CUMBRIA, CA14 4ST	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 017490131 Permit Version: 1 Receiving Water: UNKNOWN	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 10/06/1986 Effective Date: 10/06/1986 Revocation Date: -
20	300m N	LAGOON1, OUTFALL 1, POTATO POT OCCS, LILLYHALL, CUMBRIA	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 017590141 Permit Version: 1 Receiving Water: TRIB LOSTRIGG BECK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 27/09/1985 Revocation Date: 14/07/1997

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m	**0**

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

Records within 500m	**0**

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m	**0**

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m	10

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on **page 52**

ID	Location	Details	
7	**On site**	**Incident Date: 06/06/2001** **Incident Identification: 8694** **Pollutant: Atmospheric Pollutants and Effects** **Pollutant Description: Ammonia/Amine Odour**	**Water Impact: Category 4 (No Impact)** **Land Impact: Category 4 (No Impact)** **Air Impact: Category 2 (Significant)**
8	**On site**	**Incident Date: 20/02/2003** **Incident Identification: 138200** **Pollutant: Inert Materials and Wastes** **Pollutant Description: Other Inert Material or Waste**	**Water Impact: Category 4 (No Impact)** **Land Impact: Category 3 (Minor)** **Air Impact: Category 4 (No Impact)**
C	86m NW	Incident Date: 06/06/2001 Incident Identification: 7894 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Ammonia/Amine Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
C	86m NW	Incident Date: 06/06/2001 Incident Identification: 7894 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Ammonia/Amine Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
15	166m W	Incident Date: 22/06/2001 Incident Identification: 10738 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Ammonia/Amine Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
19	270m N	Incident Date: 22/05/2001 Incident Identification: 6350 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Ammonia/Amine Odour	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)

ID	Location	Details	
21	349m N	Incident Date: 12/06/2001 Incident Identification: 8697 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Ammonia/Amine Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
22	393m N	Incident Date: 05/06/2001 Incident Identification: 8691 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Ammonia/Amine Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
E	458m N	Incident Date: 24/05/2001 Incident Identification: 6558 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Ammonia/Amine Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
E	498m N	Incident Date: 06/06/2001 Incident Identification: 7891 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m	**0**

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m	**0**

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

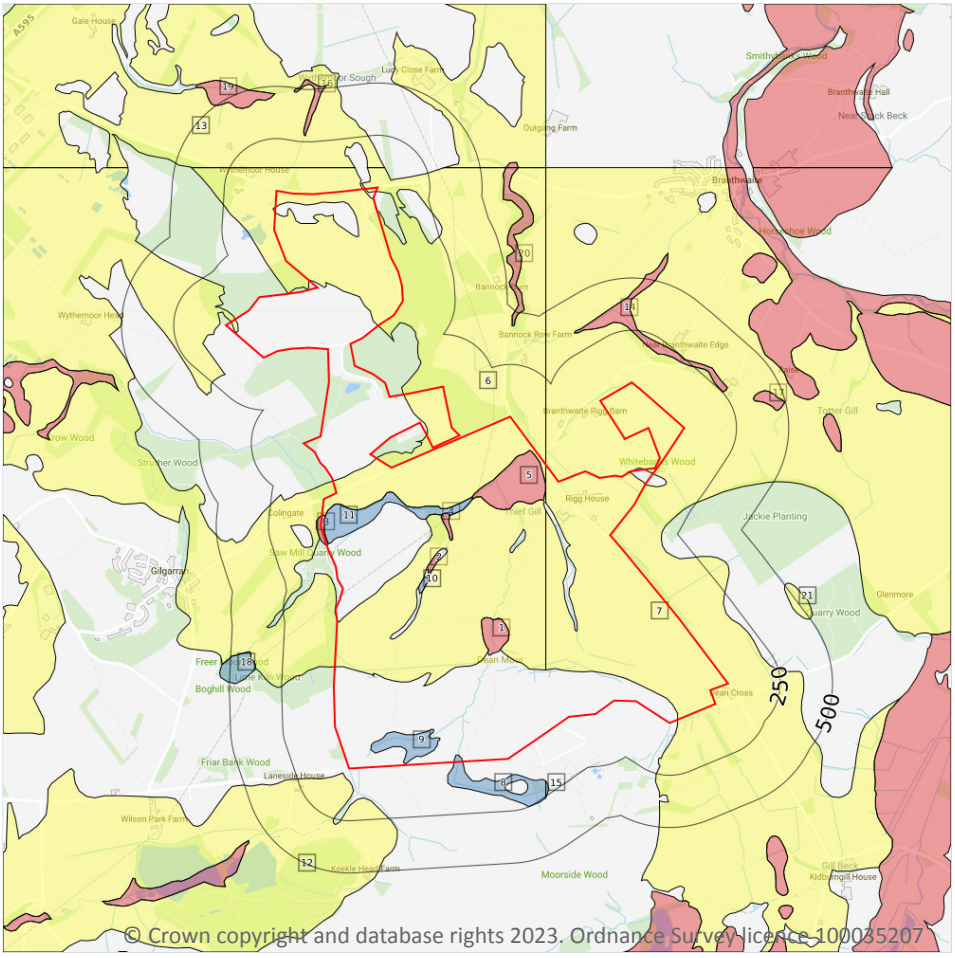
4.21 Pollution inventory radioactive waste

Records within 500m	0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer



5.1 Superficial aquifer

Records within 500m	21

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 61**

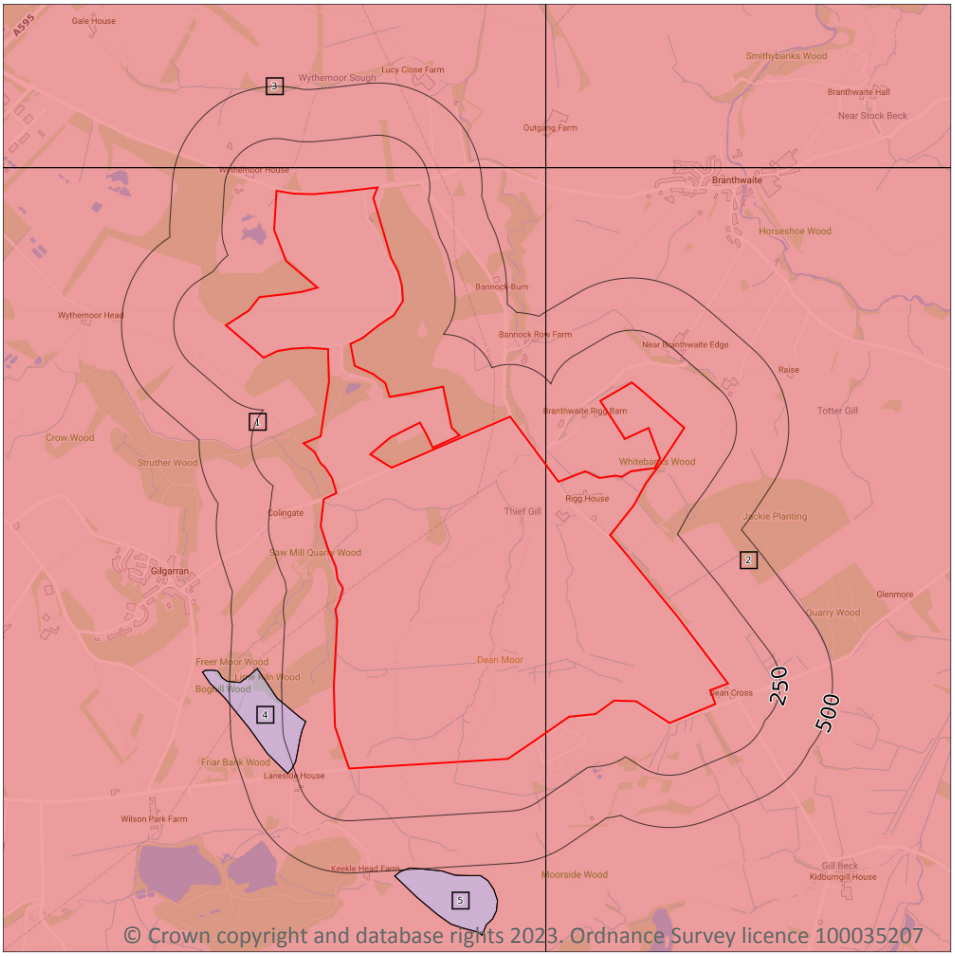
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
4	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
5	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
6	**On site**	**Secondary Undifferentiated**	**Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type**
7	**On site**	**Secondary Undifferentiated**	**Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type**
8	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
9	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
10	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
11	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
12	37m SW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
13	95m N	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
14	184m NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
15	190m S	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
16	279m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
17	359m NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
18	379m SW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
19	423m NW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
20	435m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
21	465m E	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m	5

Aquifer status of groundwater held within bedrock geology.

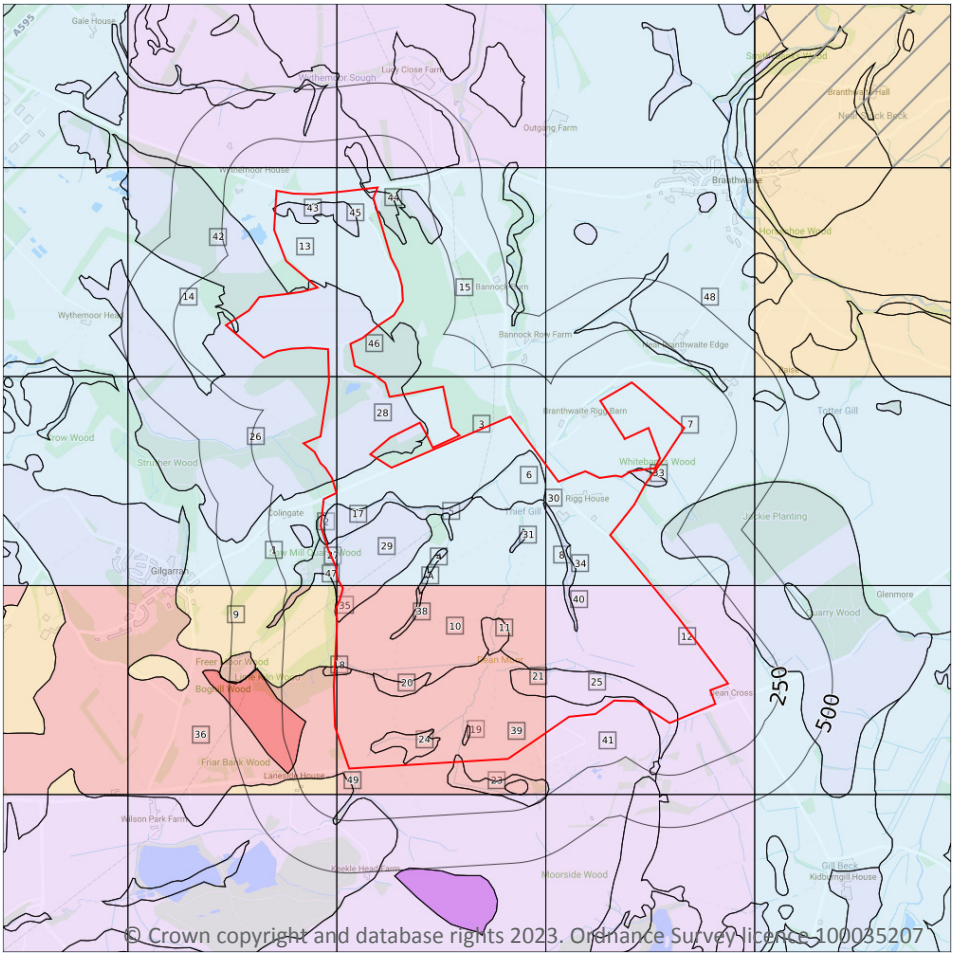
Features are displayed on the Bedrock aquifer map on **page 64**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	95m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	139m SW	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
5	493m S	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	52

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 66**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
3	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
4	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
5	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
6	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
7	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
8	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
9	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: Medium	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
10	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
11	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
12	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
13	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
14	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
15	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
16	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
17	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
18	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: - Aquifer type: Unknown (lakes+landslip) Thickness: <3m Patchiness value: <90% Recharge potential: Medium	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
19	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: Unknown (lakes+landslip) Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
20	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: Unknown (lakes+landslip) Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
21	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: Unknown (lakes+landslip) Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
22	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: Unknown (lakes+landslip) Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
23	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
24	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
25	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: Unknown (lakes+landslip) Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures
26	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
27	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
28	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
29	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
30	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
31	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
32	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
33	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
34	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
35	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Medium	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
36	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Medium	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
37	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
38	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
39	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
40	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures
41	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures
42	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
43	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
44	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
45	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
46	**On site**	**Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
A	**On site**	**Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: Unproductive Aquifer type: Unproductive Thickness: 3-10m Patchiness value: <90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
A	**On site**	**Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer**	**Leaching class: High Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: Unproductive Aquifer type: Unproductive Thickness: <3m Patchiness value: <90% Recharge potential: Low**	**Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures**
A	**On site**	**Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
47	26m W	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
48	27m NE	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
49	36m SW	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

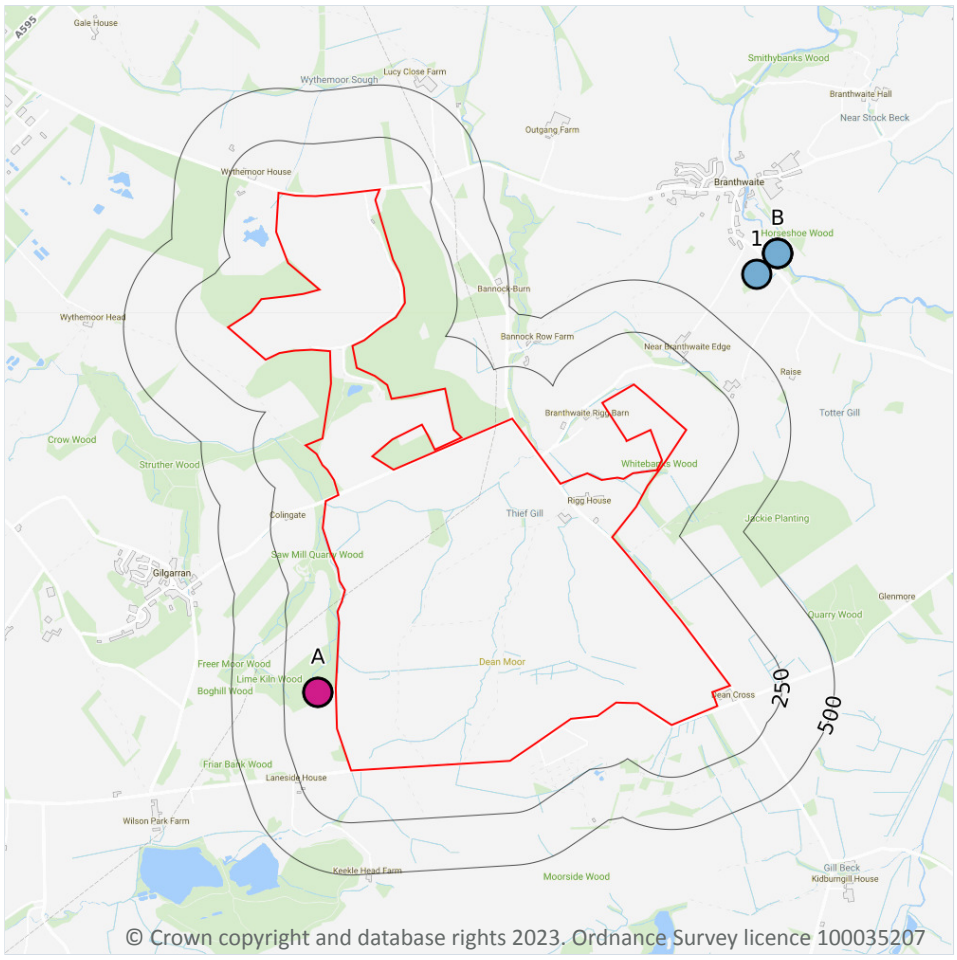
5.5 Groundwater vulnerability- local information

Records on site	0

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



- Site Outline

Search buffers in metres (m)

- Source Protection Zone 1 — Inner catchment
- Source Protection Zone 2 — Outer catchment
- Source Protection Zone 3 — Total catchment
- Source Protection Zone 4 — Zone of Special Interest
- Source Protection Zone 1c — Inner catchment - confined aquifer
- Source Protection Zone 2c — Outer catchment - confined aquifer
- Source Protection Zone 3c — Total catchment - confined aquifer
- Drinking water abstraction licences
- Drinking water abstraction licences — Polygon features
- Drinking water abstraction licences — Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m	4

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 76**

ID	Location	Details	
A	85m SW	Status: Historical Licence No: 2775014001 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "WELL AT HOME FARM,GILGARRAN, DISTINGTON,WORKINGTON" Data Type: Point Name: EDGER Easting: 303900 Northing: 522500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 16/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1965 Version End Date: -
A	85m SW	Status: Historical Licence No: 2775014001 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: WELL AT HOME FARM,GILGARRAN, DISTINGTON,WORKINGTON Data Type: Point Name: EDGER Easting: 303900 Northing: 522500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 16/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1965 Version End Date: -
-	1509m NW	Status: Active Licence No: NW/074/0001/002 Details: Laundry Use Direct Source: Ground Water - North West Region Point: BOREHOLE - LOWER COAL MEASURES - JOSEPH NOBLE ROAD Data Type: Point Name: Shortridge Ltd Easting: 302221 Northing: 525130	Annual Volume (m^3): 60,000 Max Daily Volume (m^3): 300 Original Application No: NPS/WR/015770 Original Start Date: 04/09/2018 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 04/09/2018 Version End Date: -
-	1567m NW	Status: Active Licence No: NW/074/0001/001 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE - LOWER COAL MEASURES - PITTWOOD ROAD Data Type: Point Name: Handy Concrete (Cumbria) Limited Easting: 301953 Northing: 524643	Annual Volume (m^3): 10,010 Max Daily Volume (m^3): 35 Original Application No: NPS/WR/003456 Original Start Date: 28/09/2010 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 28/09/2010 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	**9**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 76**

ID	Location	Details	
1	782m NE	Status: Active Licence No: 2775014005 Details: Fish Farm/Cress Pond Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED WATERCOURSE AT BRANTHWAITWORKINGTON Data Type: Point Name: Michael John Leigh & Janice Graham Leigh Easting: 306000 Northing: 524500	Annual Volume (m^3): 109,513 Max Daily Volume (m^3): 300 Original Application No: NPS/WR/015318 Original Start Date: 23/01/1986 Expiry Date: - Issue No: 102 Version Start Date: 27/02/2014 Version End Date: -
B	923m NE	Status: Historical Licence No: 2775014004 Details: Fish Farm/Cress Pond Throughflow Direct Source: "Surface, Non-Tidal - North West Region" Point: "R MARRON AT BRANTHWAITE, WORKINGTON,CUMBRIA" Data Type: Point Name: TALBOT Easting: 306100 Northing: 524600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 22/06/1981 Expiry Date: - Issue No: 100 Version Start Date: 22/06/1981 Version End Date: -
B	923m NE	Status: Historical Licence No: 2775014004 Details: Fish Farm/Cress Pond Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: R MARRON AT BRANTHWAITE, WORKINGTON,CUMBRIA Data Type: Point Name: TALBOT Easting: 306100 Northing: 524600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 22/06/1981 Expiry Date: - Issue No: 101 Version Start Date: 13/02/2004 Version End Date: -

ID	Location	Details	
B	923m NE	Status: Active Licence No: 2775014004 Details: Fish Farm/Cress Pond Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: RIVER MARRON AT BRANTHWAITE WORKINGTON CUMBRIA Data Type: Point Name: TALBOT Easting: 306100 Northing: 524600	Annual Volume (m^3): 1,659,290 Max Daily Volume (m^3): 4,546 Original Application No: 6242 Original Start Date: 22/06/1981 Expiry Date: - Issue No: 101 Version Start Date: 13/02/2004 Version End Date: -
B	923m NE	Status: Active Licence No: 2775014006 Details: Fish Farm/Cress Pond Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: RIVER MARRON AT BRANTHWAITE Data Type: Point Name: TALBOT Easting: 306100 Northing: 524600	Annual Volume (m^3): 4,314,154 Max Daily Volume (m^3): 11,819.60 Original Application No: 7010 Original Start Date: 30/05/1991 Expiry Date: - Issue No: 101 Version Start Date: 13/02/2004 Version End Date: -
-	1770m W	Status: Historical Licence No: 2774001001 Details: Non-Evaporative Cooling Direct Source: "Surface, Non-Tidal - North West Region" Point: "DISTINGTON BECK AT LILLYHALL, WORKINGTON" Data Type: Point Name: PECHINEY AVIATUBE LTD Easting: 301700 Northing: 524300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 29/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date: -
-	1770m W	Status: Historical Licence No: 2774001001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "DISTINGTON BECK AT LILLYHALL, WORKINGTON" Data Type: Point Name: PECHINEY AVIATUBE LTD Easting: 301700 Northing: 524300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 29/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date: -

ID	Location	Details	
-	1770m W	Status: Historical Licence No: 2774001001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: DISTINGTON BECK AT LILLYHALL, WORKINGTON Data Type: Point Name: PECHINEY AVIATUBE LTD Easting: 301700 Northing: 524300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 29/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date: -
-	1770m W	Status: Historical Licence No: 2774001001 Details: Non-Evaporative Cooling Direct Source: Surface, Non-Tidal - North West Region Point: DISTINGTON BECK AT LILLYHALL, WORKINGTON Data Type: Point Name: PECHINEY AVIATUBE LTD Easting: 301700 Northing: 524300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 29/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	**0**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	**0**

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

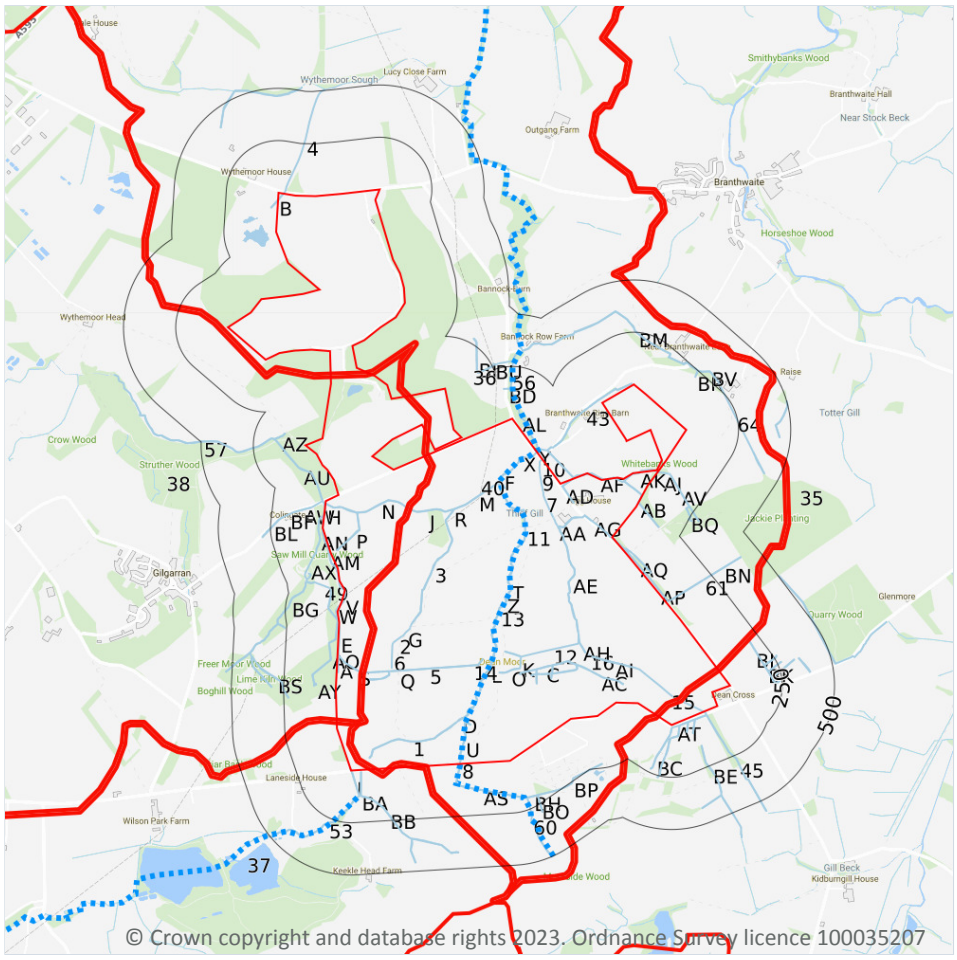
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	193

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 82**

ID	Location	Type of water feature	Ground level	Permanence	Name
1	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
2	On site	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
3	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
4	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Wythemoor Sough
5	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
6	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
8	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Thief Gill
9	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
10	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
11	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
12	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
13	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Thief Gill
14	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
15	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
16	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Wythemoor Sough
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
D	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
F	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Thief Gill
F	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
G	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
G	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Distington Beck
H	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
I	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
L	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
M	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
N	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
Q	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
Q	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
Q	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
S	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
T	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Thief Gill
U	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
V	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Distington Beck
V	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Distington Beck
W	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Distington Beck
X	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
Y	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
Y	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Thief Gill
Z	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
AA	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AA	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AA	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AB	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
AC	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AD	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AE	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AF	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AG	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AH	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AH	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AH	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AI	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AJ	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AJ	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AK	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AM	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Distington Beck

ID	Location	Type of water feature	Ground level	Permanence	Name
Y	2m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	2m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
W	3m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AN	3m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AO	3m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	4m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
W	5m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	6m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Distington Beck
AP	7m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AQ	7m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	7m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AS	7m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
43	8m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
AT	12m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
Y	12m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	12m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Lostrigg Beck
AT	12m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	14m W	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
AU	14m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Distington Beck
AT	15m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AT	16m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AT	16m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AT	16m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AT	16m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AT	18m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AT	18m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
45	19m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AL	23m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Lostrigg Beck
AT	40m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AJ	41m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
Y	43m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	43m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	44m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AT	44m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	45m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AJ	49m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AJ	54m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
49	56m W	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
AV	61m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
AT	62m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AT	64m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AW	64m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	82m W	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
AY	93m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AY	99m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AY	103m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AY	103m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AY	105m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AY	105m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AZ	113m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	116m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BA	123m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Keekle

ID	Location	Type of water feature	Ground level	Permanence	Name
BB	123m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Keekle
BA	123m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Keekle
BA	125m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Keekle
BA	127m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Keekle
53	129m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Keekle
AX	130m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	132m W	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AT	133m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
BC	138m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	140m W	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BD	143m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BE	143m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
56	145m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Lostrigg Beck

ID	Location	Type of water feature	Ground level	Permanence	Name
BF	147m W	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
57	148m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Distington Beck
AT	149m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AX	152m W	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	152m W	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	153m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	154m W	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BC	157m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	158m W	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BG	161m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BI	172m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BJ	190m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BK	190m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
BK	190m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BL	191m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
60	194m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BH	194m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill
BK	195m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BK	195m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
61	201m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
BK	204m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BK	204m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BM	206m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BN	210m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BO	210m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BP	210m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Thief Gill

ID	Location	Type of water feature	Ground level	Permanence	Name
BQ	213m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BR	215m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BK	218m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BK	218m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BQ	219m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BS	225m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BR	228m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
64	239m NE	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
BU	248m N	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BV	249m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**66**

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 82**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	4

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 82**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
35	**On site**	**River**	**Marron**	**GB112075070540**	**Derwent**	**Derwent North West**
36	**On site**	**River**	**Lostrigg Beck**	**GB112075070550**	**Derwent**	**Derwent North West**
37	**On site**	**River**	**Keekle (upper)**	**GB112074070030**	**Ehen-Calder**	**South West Lakes**
38	**On site**	**River**	**Lowca Beck**	**GB112074070040**	**Ehen-Calder**	**South West Lakes**

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	4

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 82**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
39	**On site**	**River**	**Lostrigg Beck**	**GB112075070550**	**Moderate**	**Fail**	**Moderate**	**2019**
55	131m SW	River	Keekle (upper)	GB112074070030	Moderate	Fail	Moderate	2019
-	576m NW	River	Lowca Beck	GB112074070040	Moderate	Fail	Moderate	2019
-	899m NE	River	Marron	GB112075070540	Moderate	Fail	Good	2019

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 82**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
40	**On site**	**Derwent and West Cumbria Lower Palaeozoic and Carboniferous Aquifers**	**GB41202G103700**	**Poor**	**Poor**	**Good**	**2019**

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m	0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m	0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m	0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

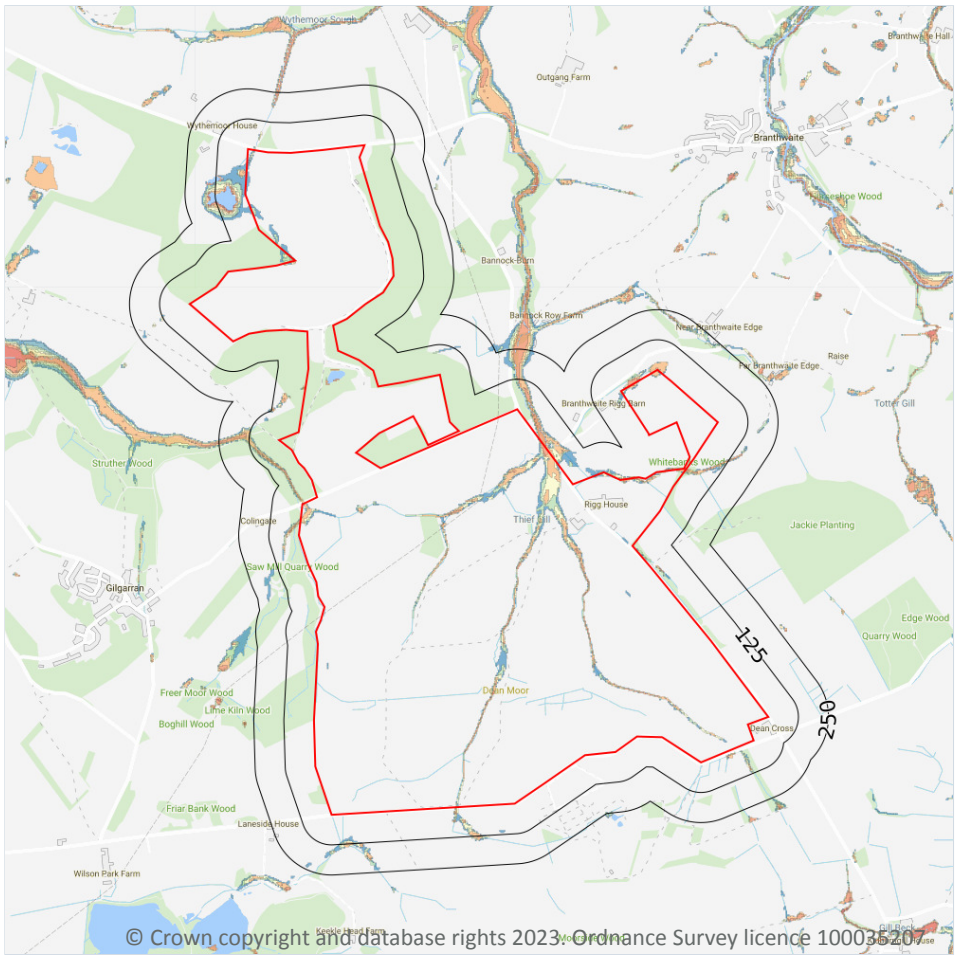
7.7 Flood Zone 3

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

8 Surface water flooding



Site Outline

Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 30 year, Greater than 1.0m**
Highest risk within 50m	**1 in 30 year, Greater than 1.0m**

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 103**

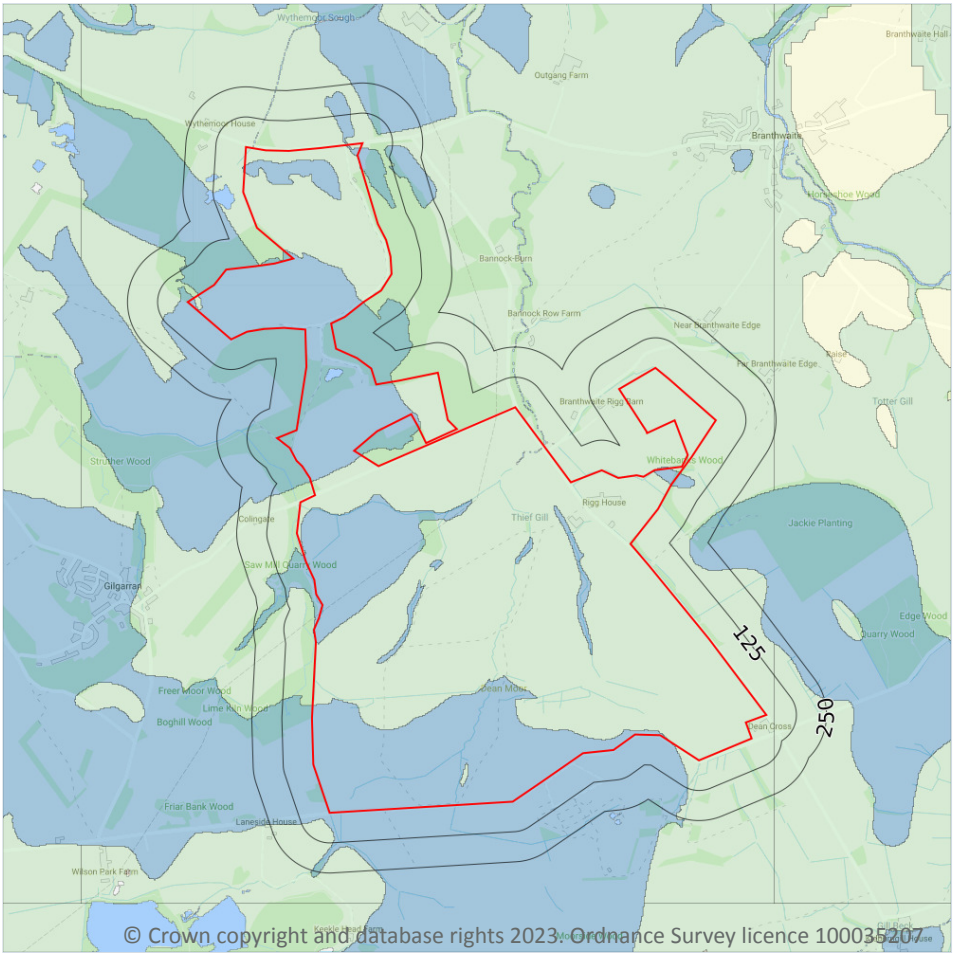
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Greater than 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

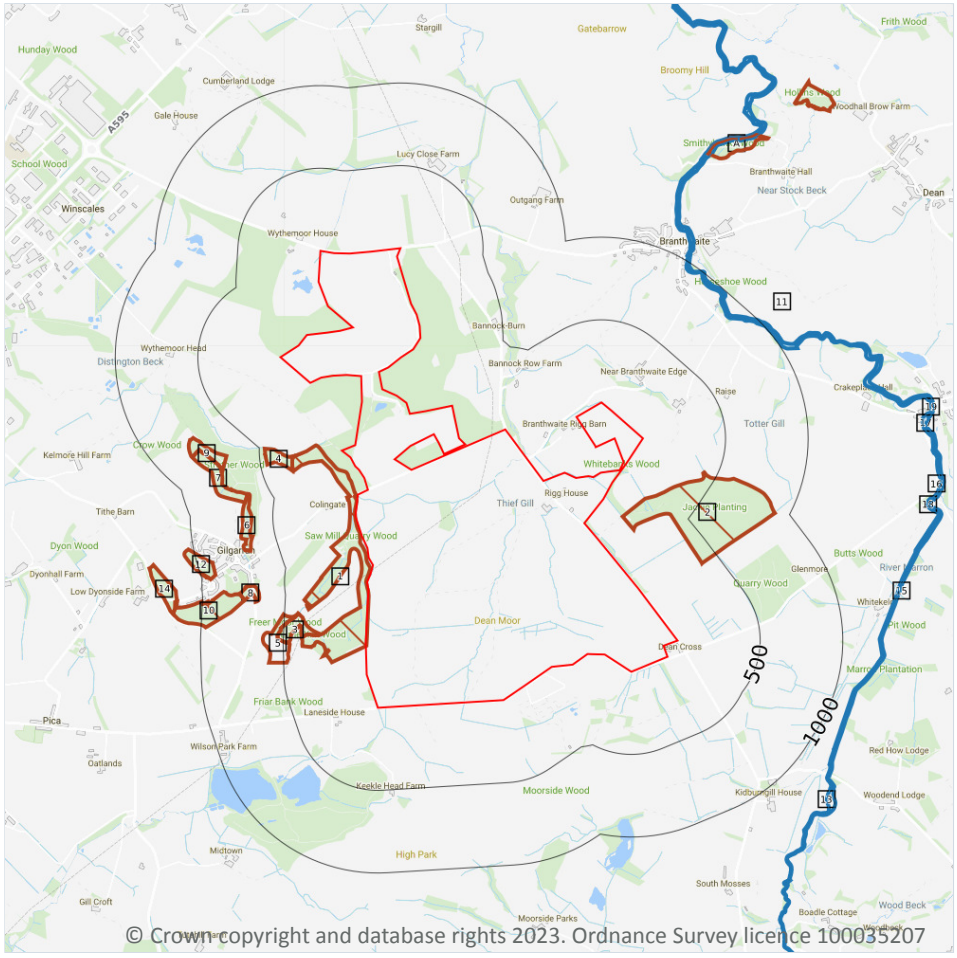
Highest risk on site	**Low**
Highest risk within 50m	**Low**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 105**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	7

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 106**

ID	Location	Name	Data source
A	891m NE	River Derwent and Tributaries	Natural England

ID	Location	Name	Data source
13	1107m SE	River Derwent and Tributaries	Natural England
15	1223m E	River Derwent and Tributaries	Natural England
16	1645m E	River Derwent and Tributaries	Natural England
17	1695m E	River Derwent and Tributaries	Natural England
18	1716m E	River Derwent and Tributaries	Natural England
19	1734m E	River Derwent and Tributaries	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m	1

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

Features are displayed on the Environmental designations map on **page 106**

ID	Location	Name	Features of interest	Habitat description	Data source
11	891m NE	River Derwent & Bassenthwaite Lake	Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels; Rivers with floating vegetation often dominated by water-crowfoot; Mixed woodland on base-rich soils associated with rocky slopes; Western acidic oak woodland; Sea lamprey; Brook lamprey; River lamprey; Atlantic salmon; Bullhead; Freshwater pearl mussel; Marsh fritillary butterfly; Otter; Floating water-plantain.	Inland water bodies (Standing water, Running water); Broad-leaved deciduous woodland; Bogs, Marshes, Water fringed vegetation, Fens	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m	0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m	0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m	14

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on **page 106**

ID	Location	Name	Woodland Type
1	**On site**	**Struthers Wood/+**	**Ancient Replanted Woodland**
2	157m E	Branthwaite Edge Wood	Ancient & Semi-Natural Woodland
3	274m SW	Struthers Wood/+	Ancient & Semi-Natural Woodland
4	282m W	Struthers Wood/+	Ancient & Semi-Natural Woodland
5	416m SW	Struthers Wood/+	Ancient Replanted Woodland
6	618m W	Unknown	Ancient & Semi-Natural Woodland
7	627m W	Unknown	Ancient Replanted Woodland
8	657m W	Unknown	Ancient & Semi-Natural Woodland
9	666m W	Unknown	Ancient & Semi-Natural Woodland
10	745m W	Unknown	Ancient Replanted Woodland
12	909m W	Unknown	Ancient Replanted Woodland
14	1152m W	Unknown	Ancient & Semi-Natural Woodland
A	1638m NE	Unknown	Ancient & Semi-Natural Woodland
-	1757m SW	Tutehill Wood	Ancient Replanted Woodland

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m	0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m	0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m	0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

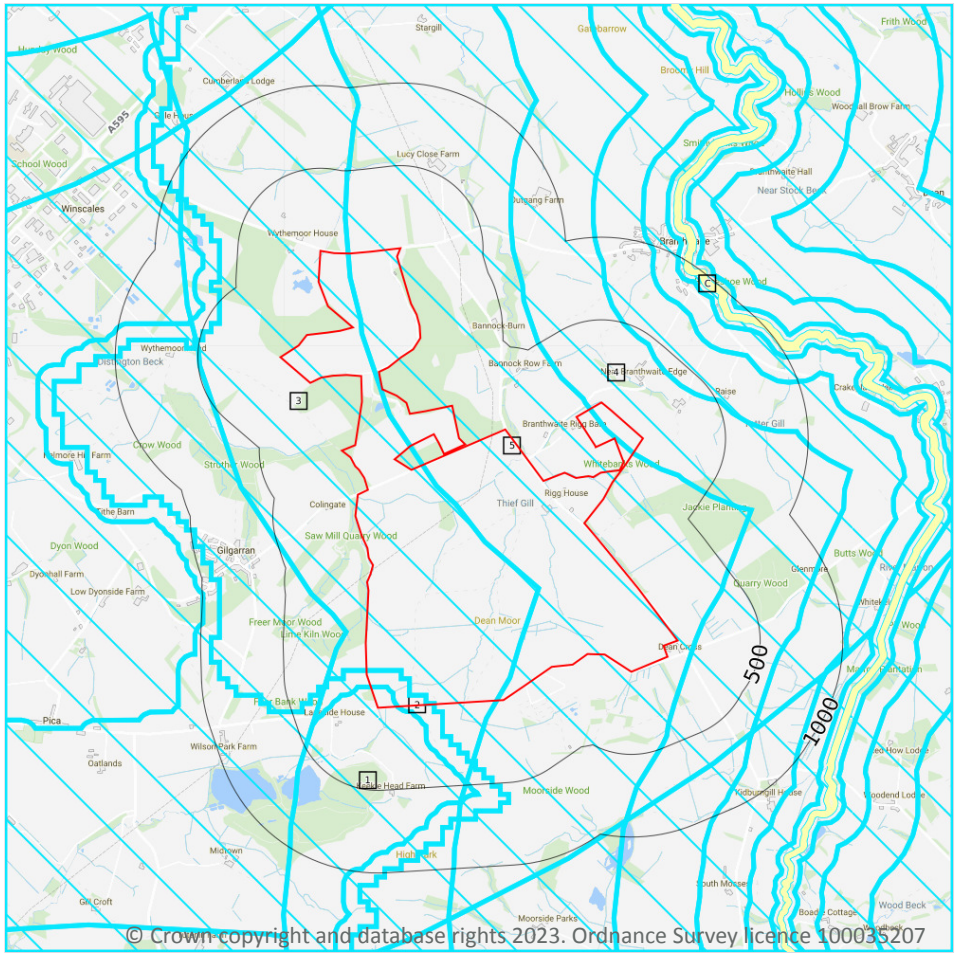
10.16 Nitrate Vulnerable Zones

Records within 2000m	0

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

This data is sourced from Natural England and Natural Resources Wales.

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	5

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 112**

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.
2	On site	Infrastructure - Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.
3	On site	Infrastructure - Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Notes: Nutrient impact area. for new development with overnight accommodation reg 63 of the conservation of habitats and species regulations 2017 must be applied and additional measures required. lpa to refer to natural england's nutrient neutrality advice.

ID	Location	Type of developments requiring consultation
4	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply . Notes: Nutrient impact area. for new development with overnight accommodation reg 63 of the conservation of habitats and species regulations 2017 must be applied and additional measures required. lpa to refer to natural england's nutrient neutrality advice.**

ID	Location	Type of developments requiring consultation
5	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more. Notes: Nutrient impact area. for new development with overnight accommodation reg 63 of the conservation of habitats and species regulations 2017 must be applied and additional measures required. lpa to refer to natural england's nutrient neutrality advice.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	**1**

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

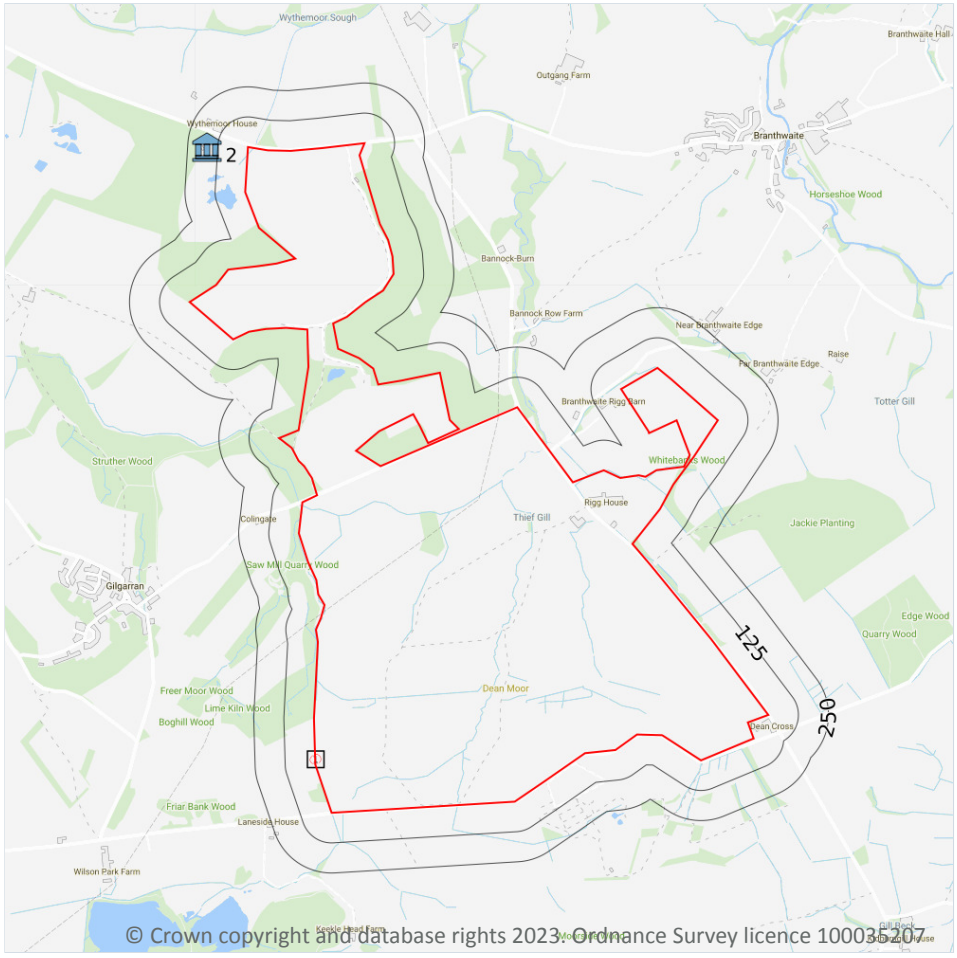
Features are displayed on the SSSI Impact Zones and Units map on **page 112**

ID:	C
Location:	891m NE
SSSI name:	River Derwent and Tributaries
Unit name:	River Marron
Broad habitat:	Rivers And Streams
Condition:	Unfavourable - Recovering
Reportable features:	

Feature name	Feature condition	Date of assessment
Atlantic salmon, Salmo salar	Unfavourable - Recovering	24/12/2010
Brook lamprey, Lampetra planeri	Unfavourable - Recovering	24/12/2010
Otter, Lutra lutra	Unfavourable - Recovering	24/12/2010
River lamprey, Lampetra fluviatilis	Unfavourable - Recovering	24/12/2010
River supporting habitat	Unfavourable - Recovering	24/12/2010
Rivers and Streams	Unfavourable - Recovering	24/12/2010
S1095 Sea lamprey, Petromyzon marinus	Unfavourable - Recovering	24/12/2010
S1096 Brook lamprey, Lampetra planeri	Unfavourable - Recovering	24/12/2010
S1099 River lamprey, Lampetra fluviatilis	Unfavourable - Recovering	24/12/2010
S1106 Atlantic salmon, Salmo salar	Unfavourable - Recovering	24/12/2010
S1355 Otter, Lutra lutra	Unfavourable - Recovering	24/12/2010
Sea lamprey, Petromyzon marinus	Unfavourable - Recovering	24/12/2010

This data is sourced from Natural England and Natural Resources Wales.

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m	0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m	1

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on **page 117**

ID	Location	Name	Grade	Reference Number	Listed date
2	172m NW	Wythemoor Sough and Adjoining Barn and Stable, Winscales, Allerdale, Cumbria, CA14	II	1327185	13/12/1985

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m	0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m	1

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

Features are displayed on the Visual and cultural designations map on **page 117**

ID	Location	Ancient monument name	Reference number
1	**On site**	**Large irregular stone circle and a round cairn on Dean Moor**	**1014588**

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

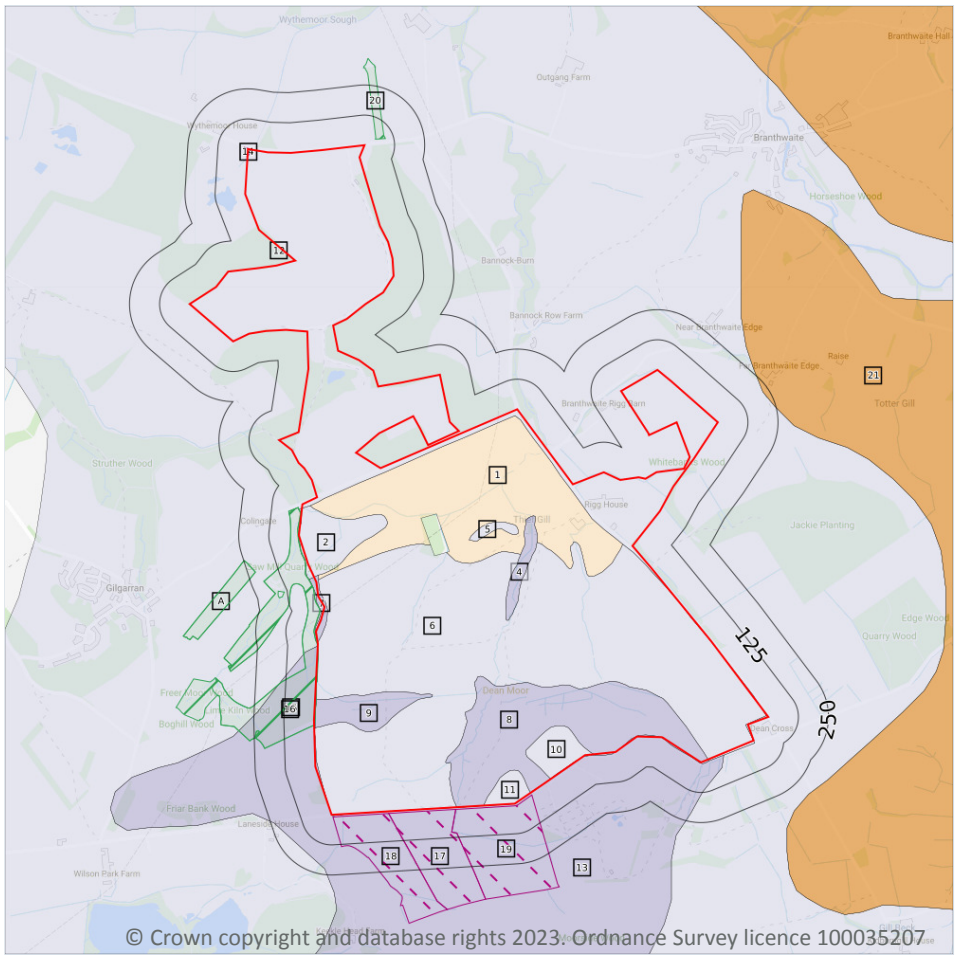
11.7 Registered Parks and Gardens

Records within 250m	0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12 Agricultural designations



Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m	13

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 120**

ID	Location	Classification	Description
1	On site	Grade 3b	**Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.**

ID	Location	Classification	Description
2	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
4	On site	Grade 5	Very poor quality agricultural land. Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.
5	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
6	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
7	On site	Grade 5	Very poor quality agricultural land. Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.
8	On site	Grade 5	Very poor quality agricultural land. Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.
9	On site	Grade 5	Very poor quality agricultural land. Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.
10	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
11	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
12	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
13	On site	Grade 5	Very poor quality agricultural land. Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

ID	Location	Classification	Description
21	225m NE	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	**4**

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

Features are displayed on the Agricultural designations map on **page 120**

ID	Location	Name	Classification	Other relevant legislation
14	**On site**	**Land at Wythemoor Sough (Cumbria)**	**Section 4 Conclusive Registered Common Land**	**-**
17	8m S	-	Section 4 Conclusive Open Country	-
18	9m S	-	Section 4 Conclusive Open Country	-
19	9m S	-	Section 4 Conclusive Open Country	-

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m	**5**

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

Features are displayed on the Agricultural designations map on **page 120**

ID	Location	Description	Reference	Application date
15	**On site**	**Selective Fell/Thin (Conditional)**	**010/203/16-17**	**23/03/2017**
16	**On site**	**Selective Fell/Thin (Unconditional)**	**010/203/16-17**	**23/03/2017**

ID	Location	Description	Reference	Application date
20	52m N	Clear Fell (Conditional)	010/90/14-15	07/10/2014
A	219m W	Clear Fell (Conditional)	010/203/16-17	23/03/2017
A	219m W	Selective Fell/Thin (Unconditional)	010/203/16-17	23/03/2017

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	**10**

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

Location	Reference	Scheme	Start Date	End date
On site	**AG00384422**	**Entry Level plus Higher Level Stewardship**	**01/03/2012**	**28/02/2022**
On site	**AG00502069**	**Entry Level Stewardship**	**01/10/2013**	**30/09/2018**
On site	**AG00330906**	**Entry Level plus Higher Level Stewardship**	**01/04/2010**	**31/03/2020**
On site	**AG00330906**	**Entry Level plus Higher Level Stewardship**	**01/04/2010**	**31/03/2020**
8m NW	AG00532511	Entry Level plus Higher Level Stewardship	01/03/2013	28/02/2023
8m NW	AG00562251	Entry Level Stewardship	01/02/2014	31/01/2019
16m NE	AG00330906	Entry Level plus Higher Level Stewardship	01/04/2010	31/03/2020
93m W	AG00384422	Entry Level plus Higher Level Stewardship	01/03/2012	28/02/2022
146m SE	AG00330906	Entry Level plus Higher Level Stewardship	01/04/2010	31/03/2020
218m N	AG00562251	Entry Level Stewardship	01/02/2014	31/01/2019

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	**23**

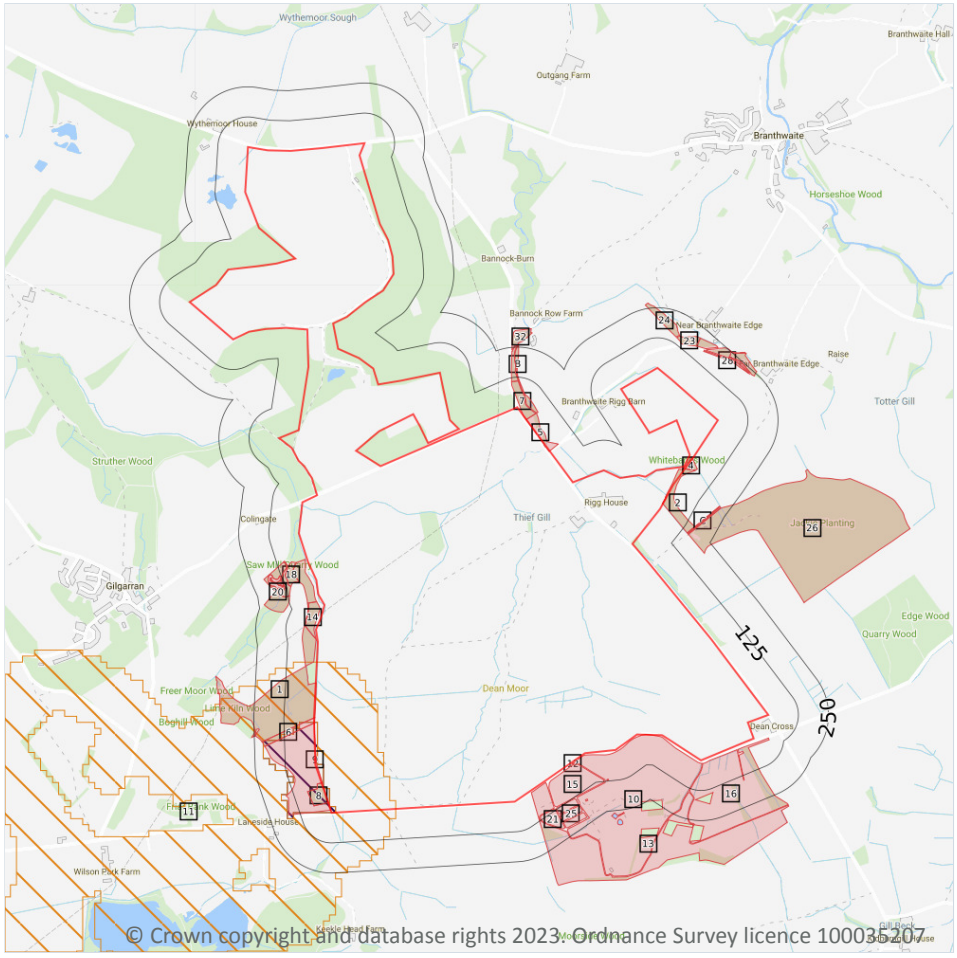
Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
On site	**492056**	**Countryside Stewardship (Middle Tier)**	**01/01/2017**	**31/12/2021**
On site	**464016**	**Countryside Stewardship (Higher Tier)**	**01/01/2018**	**31/12/2022**
On site	**464016**	**Countryside Stewardship (Higher Tier)**	**01/01/2018**	**31/12/2022**
On site	**486752**	**Countryside Stewardship (Higher Tier)**	**01/01/2017**	**31/12/2026**
On site	**486752**	**Countryside Stewardship (Higher Tier)**	**01/01/2017**	**31/12/2026**
On site	**486752**	**Countryside Stewardship (Higher Tier)**	**01/01/2017**	**31/12/2026**
On site	**486752**	**Countryside Stewardship (Higher Tier)**	**01/01/2017**	**31/12/2026**
On site	**789592**	**Woodland Management Plan**	**01/10/2019**	**30/09/2021**
On site	**789592**	**Woodland Management Plan**	**01/10/2019**	**30/09/2021**
On site	**789592**	**Woodland Management Plan**	**01/10/2019**	**30/09/2021**
On site	**1081203**	**Countryside Stewardship (Middle Tier)**	**01/01/2021**	**31/12/2025**
On site	**1081203**	**Countryside Stewardship (Middle Tier)**	**01/01/2021**	**31/12/2025**
On site	**1062389**	**Countryside Stewardship (Middle Tier)**	**01/01/2021**	**31/12/2025**
On site	**1062389**	**Countryside Stewardship (Middle Tier)**	**01/01/2021**	**31/12/2025**
8m SW	1089713	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
8m NW	822390	Countryside Stewardship (Middle Tier)	01/01/2020	31/12/2024
35m NE	819112	Countryside Stewardship (Middle Tier)	01/01/2020	31/12/2021
47m N	822390	Countryside Stewardship (Middle Tier)	01/01/2020	31/12/2024
94m NE	1062389	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
107m NE	818203	Countryside Stewardship (Middle Tier)	01/01/2020	31/12/2021
157m E	789592	Woodland Management Plan	01/10/2019	30/09/2021
218m N	822390	Countryside Stewardship (Middle Tier)	01/01/2020	31/12/2024

Location	Reference	Scheme	Start Date	End Date
223m NE	828738	Countryside Stewardship (Middle Tier)	01/01/2020	31/12/2021

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks
Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	36

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 126**

ID	Location	Main Habitat	Other habitats
1	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	**On site**	**Deciduous woodland**	**Main habitat: DWOOD (INV > 50%)**
6	**On site**	**Deciduous woodland**	**Main habitat: DWOOD (INV > 50%)**
7	**On site**	**Deciduous woodland**	**Main habitat: DWOOD (INV > 50%)**
8	**On site**	**Lowland heathland**	**Main habitat: LHEAT (FEP + HLS); Additional: LFENS (FEP 50%); PMGRP (FEP 50%)**
9	**On site**	**Lowland heathland**	**Main habitat: LHEAT (FEP + HLS); Additional: LFENS (FEP 50%); PMGRP (FEP 50%)**
10	**On site**	**No main habitat but additional habitats present**	**Additional: LDAGR (FEP 50%); PMGRP (FEP 50%); GQSIG (FEP 50%)**
A	**On site**	**Lowland heathland**	**Main habitat: LHEAT (FEP + HLS); Additional: LFENS (FEP 50%); PMGRP (FEP 50%)**
12	5m SE	No main habitat but additional habitats present	Additional: LDAGR (FEP 50%); PMGRP (FEP 50%); GQSIG (FEP 50%)
13	7m S	No main habitat but additional habitats present	Additional: LDAGR (FEP 50%); PMGRP (FEP 50%); GQSIG (FEP 50%)
14	7m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
15	11m SE	No main habitat but additional habitats present	Additional: LDAGR (FEP 50%); PMGRP (FEP 50%); GQSIG (FEP 50%)
16	14m SE	No main habitat but additional habitats present	Additional: LDAGR (FEP 50%); PMGRP (FEP 50%); GQSIG (FEP 50%)
17	38m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
18	46m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	63m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
19	87m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
20	89m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	108m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
21	110m S	No main habitat but additional habitats present	Additional: LDAGR (FEP 50%); PMGRP (FEP 50%); GQSIG (FEP 50%)
22	121m S	No main habitat but additional habitats present	Additional: LDAGR (FEP 50%); PMGRP (FEP 50%); GQSIG (FEP 50%)
23	139m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
C	150m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
24	150m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
25	154m S	No main habitat but additional habitats present	Additional: LDAGR (FEP 50%); PMGRP (FEP 50%); GQSIG (FEP 50%)
C	155m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
26	157m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
27	173m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
28	176m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
29	186m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
30	186m S	No main habitat but additional habitats present	Additional: LDAGR (FEP 50%); PMGRP (FEP 50%); GQSIG (FEP 50%)
31	228m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
32	241m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	**2**

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

Features are displayed on the Habitat designations map on **page 126**

ID	Location	Type	Habitat
11	**On site**	**Network Enhancement Zone 1**	**Not specified**
A	**On site**	**Primary Habitat**	**Lowland heathland**

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	**0**

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

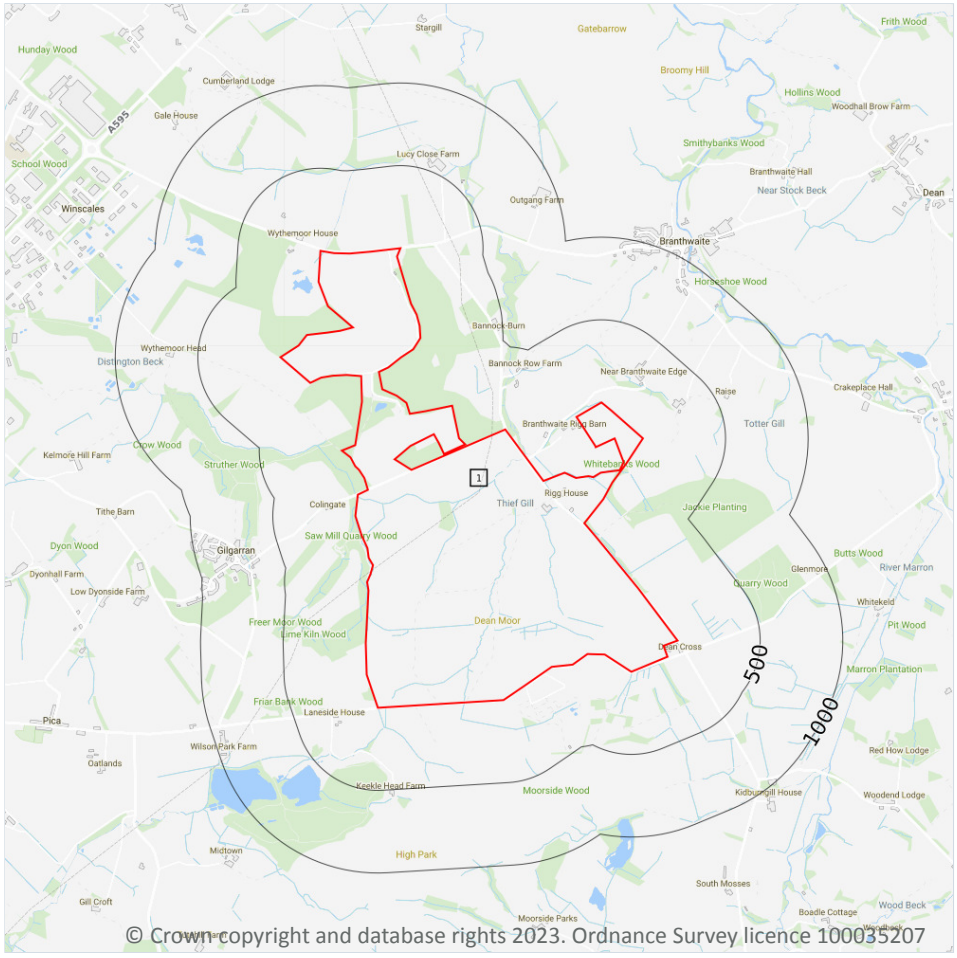
13.4 Limestone Pavement Orders

Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m	1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 130**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**No coverage**	**No coverage**	**No coverage**	**NoCov**

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground

14.2 Artificial and made ground (10k)

Records within 500m	0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m	0

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock

14.5 Bedrock geology (10k)

Records within 500m	0

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

This data is sourced from the British Geological Survey.

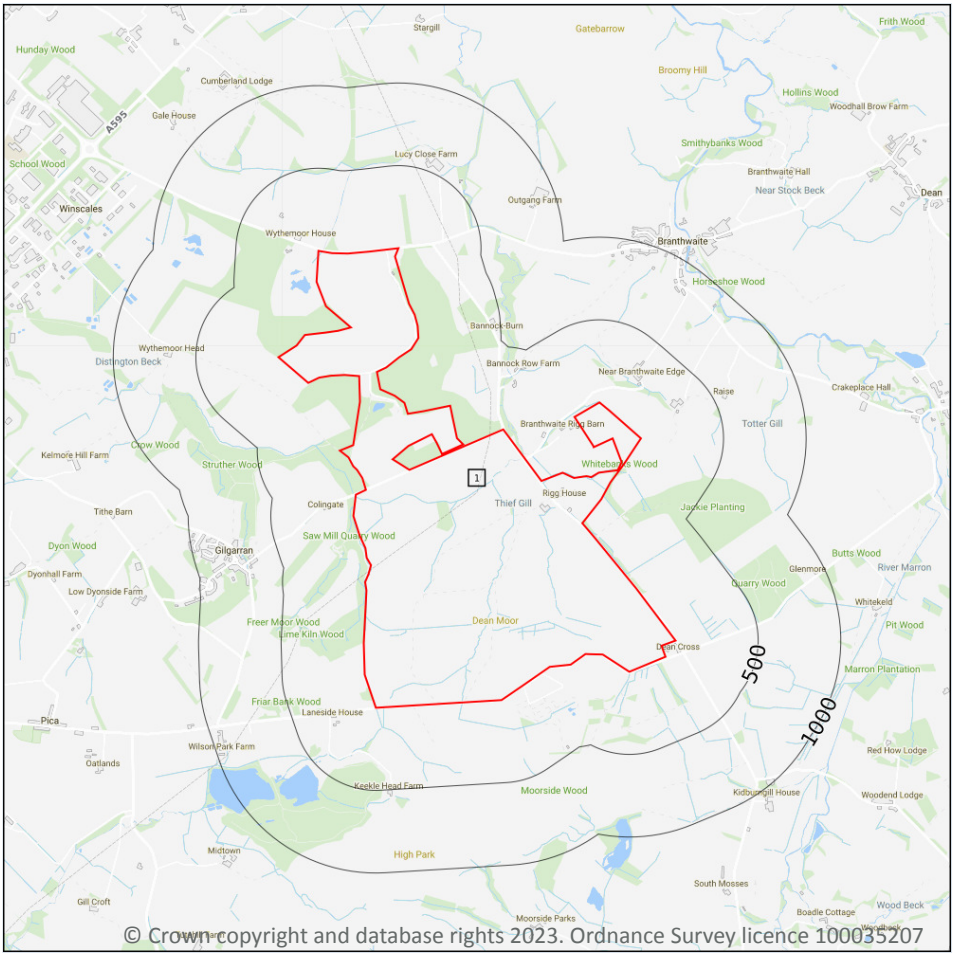
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

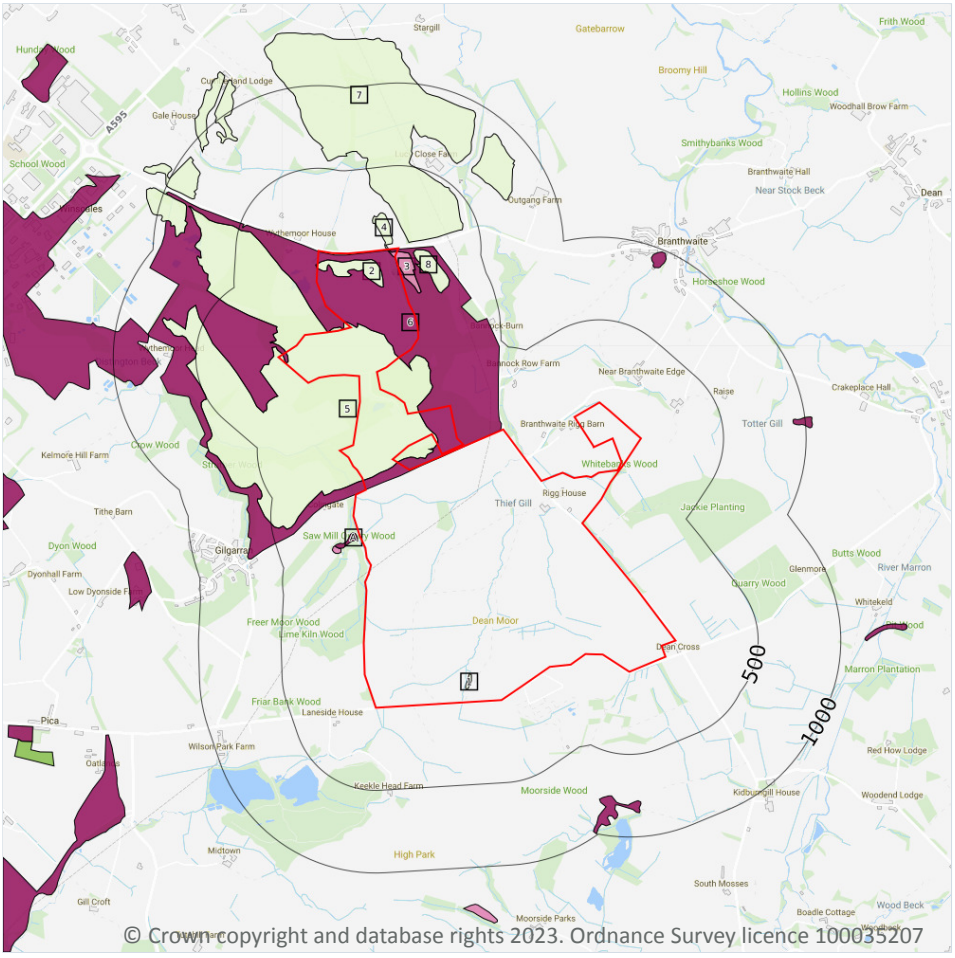
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 134**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW028_whitehaven_v4**

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground



Site Outline

Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m	10

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 135**

ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	On site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
3	On site	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
4	On site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

ID	Location	LEX Code	Description	Rock description
5	**On site**	**WMGR-ARTDP**	**INFILLED GROUND**	**ARTIFICIAL DEPOSIT**
6	**On site**	**MGR-ARTDP**	**MADE GROUND (UNDIVIDED)**	**ARTIFICIAL DEPOSIT**
A	18m W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
7	73m N	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
8	95m N	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
A	136m W	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

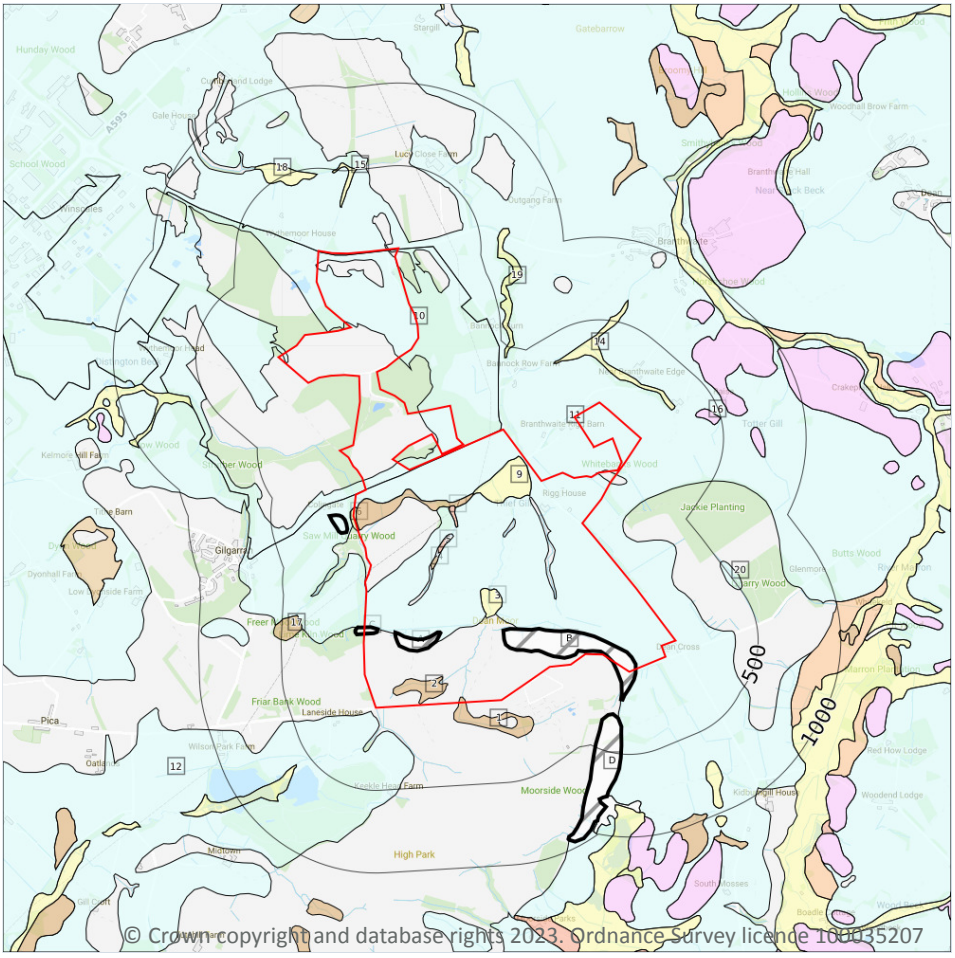
Records within 50m **7**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**Very High**	**Low**
On site	**Mixed**	**Very High**	**Low**
On site	**Mixed**	**Very High**	**Low**
On site	**Mixed**	**Very High**	**Low**
On site	**Mixed**	**Very High**	**Low**
On site	**Mixed**	**Very High**	**Low**
18m W	Mixed	Very High	Low

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m **23**

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 137**

ID	Location	LEX Code	Description	Rock description
1	On site	PEAT-P	PEAT	PEAT
2	On site	PEAT-P	PEAT	PEAT
3	On site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
4	On site	PEAT-P	PEAT	PEAT

ID	Location	LEX Code	Description	Rock description
5	**On site**	**ALF-XSV**	**ALLUVIAL FAN DEPOSITS**	**SAND AND GRAVEL**
6	**On site**	**ALV-XCZSV**	**ALLUVIUM**	**CLAY, SILT, SAND AND GRAVEL**
7	**On site**	**ALF-XSV**	**ALLUVIAL FAN DEPOSITS**	**SAND AND GRAVEL**
8	**On site**	**PEAT-P**	**PEAT**	**PEAT**
9	**On site**	**ALV-XCZSV**	**ALLUVIUM**	**CLAY, SILT, SAND AND GRAVEL**
10	**On site**	**TILLD-DMTN**	**TILL, DEVENSIAN**	**DIAMICTON**
11	**On site**	**TILLD-DMTN**	**TILL, DEVENSIAN**	**DIAMICTON**
A	**On site**	**SUPNM-UKNOWN**	**SUPERFICIAL THEME NOT MAPPED [FOR DIGITAL MAP USE ONLY]**	**UNKNOWN/UNCLASSIFIED ENTRY**
B	**On site**	**SUPNM-UKNOWN**	**SUPERFICIAL THEME NOT MAPPED [FOR DIGITAL MAP USE ONLY]**	**UNKNOWN/UNCLASSIFIED ENTRY**
C	**On site**	**SUPNM-UKNOWN**	**SUPERFICIAL THEME NOT MAPPED [FOR DIGITAL MAP USE ONLY]**	**UNKNOWN/UNCLASSIFIED ENTRY**
12	37m SW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
14	184m NE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
D	274m SE	SUPNM-UKNOWN	SUPERFICIAL THEME NOT MAPPED [FOR DIGITAL MAP USE ONLY]	UNKNOWN/UNCLASSIFIED ENTRY
15	279m N	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
16	359m NE	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
17	379m SW	PEAT-P	PEAT	PEAT
18	423m NW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
19	435m N	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
20	465m E	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	**16**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**High**	**Very Low**
On site	**Intergranular**	**High**	**Very Low**
On site	**Intergranular**	**High**	**Very Low**
On site	**Mixed**	**Very High**	**Very Low**
On site	**Mixed**	**Very High**	**Very Low**
On site	**Mixed**	**Very High**	**Very Low**
On site	**Mixed**	**Very High**	**Very Low**
On site	**Mixed**	**Low**	**Very Low**
On site	**Mixed**	**Low**	**Very Low**
On site	**Mixed**	**Low**	**Very Low**
On site	**Mixed**	**Low**	**Very Low**
On site	**Intergranular**	**Very High**	**High**
On site	**Intergranular**	**Very High**	**High**
On site	**Mixed**	**High**	**Low**
On site	**Mixed**	**High**	**Low**
37m SW	Mixed	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	**5**

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 137**

ID	Location	LEX Code	Description	Rock description
A	**On site**	**SLIP-UKNOWN**	**LANDSLIDE DEPOSITS**	**UNKNOWN/UNCLASSIFIED ENTRY**
B	**On site**	**SLIP-UKNOWN**	**LANDSLIDE DEPOSITS**	**UNKNOWN/UNCLASSIFIED ENTRY**
C	**On site**	**SLIP-UKNOWN**	**LANDSLIDE DEPOSITS**	**UNKNOWN/UNCLASSIFIED ENTRY**
13	55m W	SLIP-UKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY

ID	Location	LEX Code	Description	Rock description
D	274m SE	SLIP-UKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

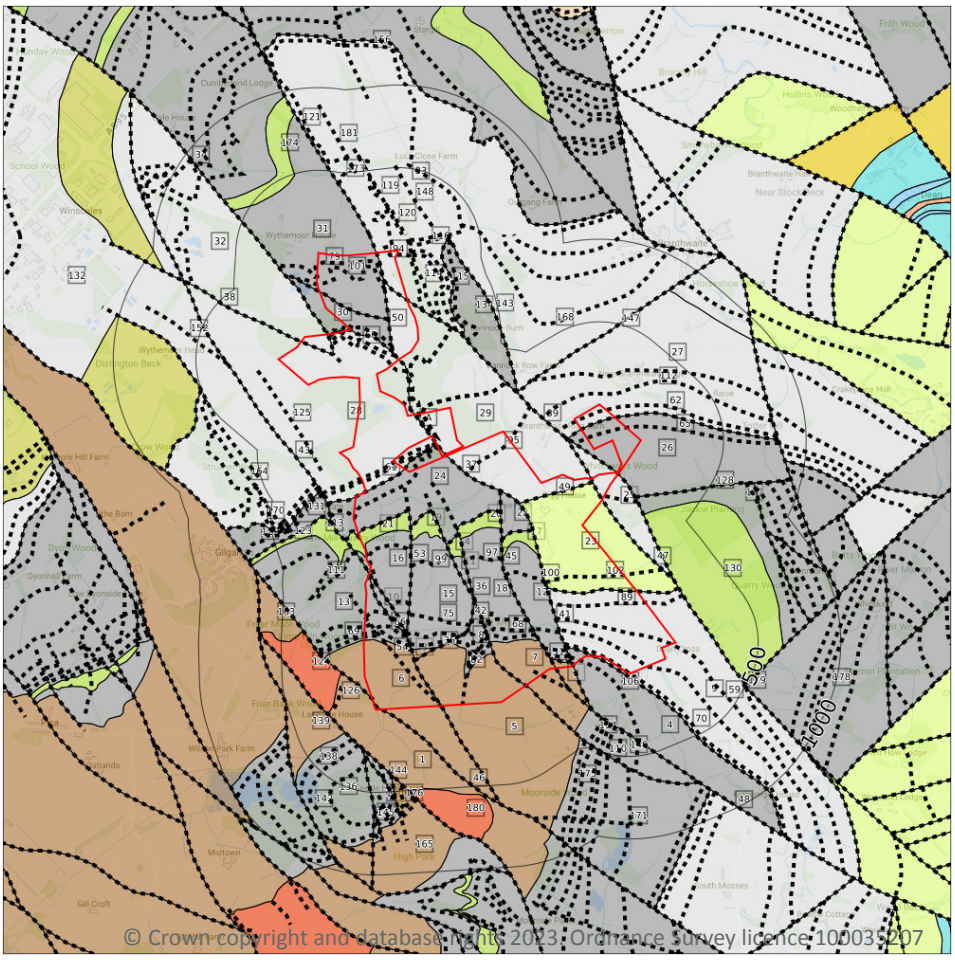
Records within 50m	**4**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

Flow type	Maximum permeability	Minimum permeability
Mixed	Very High	Low
Mixed	Very High	Low
Mixed	Very High	Low
Mixed	Very High	Low

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m	51

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 141**

ID	Location	LEX Code	Description	Rock age
1	On site	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
2	On site	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
3	On site	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
4	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	On site	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
6	On site	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
7	On site	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
8	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
9	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
11	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
12	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
13	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
14	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
15	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
16	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
18	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
19	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
20	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
21	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
22	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
23	**On site**	**SMGP-MDSS**	**STAINMORE FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**NAMURIAN**
24	**On site**	**PMCM-MDSS**	**PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
25	**On site**	**PLCM-MDSS**	**PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
26	**On site**	**PMCM-MDSS**	**PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
27	**On site**	**PLCM-MDSS**	**PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
28	**On site**	**PLCM-MDSS**	**PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
29	**On site**	**PLCM-MDSS**	**PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
30	**On site**	**PMCM-MDSS**	**PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
31	**On site**	**PMCM-MDSS**	**PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
32	**On site**	**PLCM-MDSS**	**PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
33	**On site**	**PLCM-MDSS**	**PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
113	70m W	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
122	132m W	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
124	139m SW	BK-BREC	BROCKRAM - BRECCIA	-
127	166m E	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
130	199m E	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
132	215m W	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
134	227m N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
136	227m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
139	232m SW	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
144	249m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
149	273m SE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
150	282m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
163	370m SW	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
165	397m S	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
171	429m SE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
174	441m NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
178	492m SE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
180	493m S	BK-BREC	BROCKRAM - BRECCIA	-

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m **16**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**High**	**Moderate**
On site	**Fracture**	**High**	**Moderate**
On site	**Fracture**	**High**	**Moderate**
On site	**Fracture**	**High**	**Moderate**
On site	**Fracture**	**High**	**Moderate**
On site	**Fracture**	**High**	**Moderate**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**133**

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 141**

ID	Location	Category	Description
34	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
35	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
36	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
37	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
38	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
39	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
40	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
41	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
42	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
43	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
44	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
45	**On site**	**FAULT**	**Fault, inferred, displacement unknown**

ID	Location	Category	Description
46	On site	FAULT	Fault, inferred, displacement unknown
47	On site	FAULT	Fault, inferred, displacement unknown
48	On site	FAULT	Fault, inferred, displacement unknown
49	On site	FAULT	Fault, inferred, displacement unknown
50	On site	FAULT	Fault, inferred, displacement unknown
51	On site	FAULT	Fault, inferred, displacement unknown
52	On site	FAULT	Fault, inferred, displacement unknown
53	On site	FAULT	Fault, inferred, displacement unknown
54	On site	FAULT	Fault, inferred, displacement unknown
55	On site	ROCK	Coal seam, inferred
56	On site	ROCK	Coal seam, inferred
57	On site	ROCK	Coal seam, inferred
58	On site	ROCK	Coal seam, inferred
59	On site	ROCK	Coal seam, inferred
60	On site	ROCK	Coal seam, inferred
61	On site	ROCK	Coal seam, inferred
62	On site	ROCK	Coal seam, inferred
63	On site	ROCK	Coal seam, inferred
64	On site	ROCK	Coal seam, inferred
65	On site	ROCK	Coal seam, inferred
A	On site	ROCK	Coal seam, inferred
A	On site	ROCK	Coal seam, inferred
66	On site	ROCK	Coal seam, inferred
67	On site	ROCK	Coal seam, inferred
68	On site	ROCK	Coal seam, inferred
69	On site	ROCK	Coal seam, inferred
70	On site	ROCK	Coal seam, inferred
71	On site	ROCK	Coal seam, inferred

ID	Location	Category	Description
72	On site	ROCK	Coal seam, inferred
73	On site	ROCK	Coal seam, inferred
74	On site	ROCK	Coal seam, inferred
75	On site	ROCK	Coal seam, inferred
76	On site	ROCK	Coal seam, inferred
77	On site	ROCK	Coal seam, inferred
78	On site	ROCK	Coal seam, inferred
79	On site	ROCK	Coal seam, inferred
80	On site	ROCK	Coal seam, inferred
81	On site	ROCK	Coal seam, inferred
82	On site	ROCK	Coal seam, inferred
83	On site	ROCK	Coal seam, inferred
84	On site	ROCK	Coal seam, inferred
85	On site	FOSSIL_HORIZON	Marine band
86	On site	FOSSIL_HORIZON	Marine band
87	On site	FOSSIL_HORIZON	Marine band
88	On site	FOSSIL_HORIZON	Marine band
89	On site	ROCK	Coal seam, inferred
90	On site	FOSSIL_HORIZON	Marine band
91	On site	ROCK	Coal seam, inferred
92	On site	ROCK	Coal seam, inferred
93	On site	ROCK	Coal seam, inferred
94	On site	ROCK	Coal seam, inferred
95	On site	ROCK	Coal seam, inferred
96	On site	ROCK	Coal seam, inferred
97	On site	ROCK	Coal seam, inferred
98	On site	ROCK	Coal seam, inferred
99	On site	ROCK	Coal seam, inferred

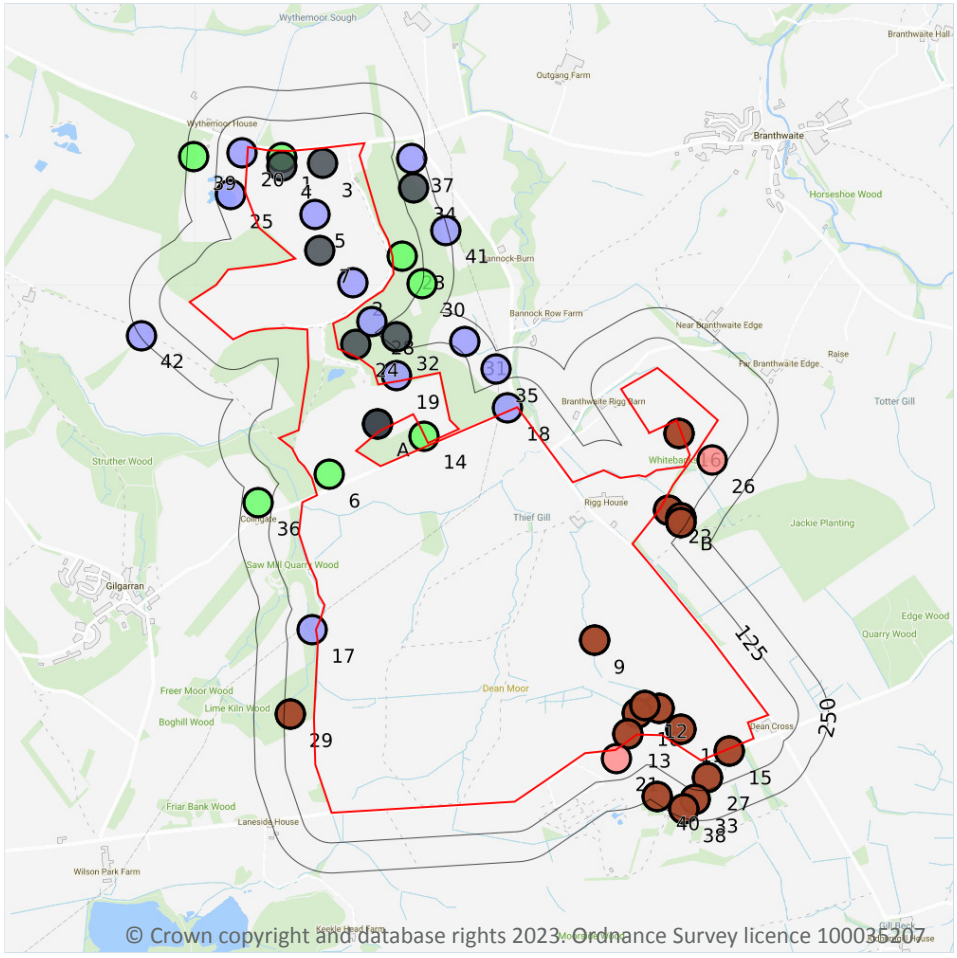
ID	Location	Category	Description
100	**On site**	**ROCK**	**Coal seam, inferred**
101	**On site**	**ROCK**	**Coal seam, inferred**
102	**On site**	**ROCK**	**Coal seam, inferred**
103	**On site**	**ROCK**	**Coal seam, inferred**
104	**On site**	**ROCK**	**Coal seam, inferred**
105	**On site**	**ROCK**	**Coal seam, inferred**
106	**On site**	**ROCK**	**Coal seam, inferred**
107	**On site**	**ROCK**	**Coal seam, inferred**
108	**On site**	**ROCK**	**Coal seam, inferred**
109	**On site**	**LANDFORM**	**Glacial meltwater channel centre line, undifferentiated**
110	38m S	FAULT	Fault, inferred, displacement unknown
111	59m W	ROCK	Coal seam, inferred
112	65m NE	ROCK	Coal seam, inferred
114	72m N	FAULT	Fault, inferred, displacement unknown
115	77m N	ROCK	Coal seam, inferred
116	77m N	ROCK	Coal seam, inferred
117	88m N	ROCK	Coal seam, inferred
118	89m N	ROCK	Coal seam, inferred
119	98m N	FAULT	Fault, inferred, displacement unknown
120	104m N	ROCK	Coal seam, inferred
121	115m N	FAULT	Fault, inferred, displacement unknown
123	132m W	ROCK	Coal seam, inferred
125	143m NW	FAULT	Fault, inferred, displacement unknown
126	143m SW	LANDFORM	Glacial meltwater channel centre line, undifferentiated
128	166m E	FAULT	Fault, inferred, displacement unknown
129	168m NE	ROCK	Coal seam, inferred
131	200m W	ROCK	Coal seam, inferred
133	215m W	FOSSIL_HORIZON	Marine band

ID	Location	Category	Description
135	227m N	FOSSIL_HORIZON	Marine band
137	227m SW	FAULT	Fault, inferred, displacement unknown
138	229m SW	ROCK	Coal seam, inferred
140	233m W	ROCK	Coal seam, inferred
141	234m W	ROCK	Coal seam, inferred
142	236m SW	ROCK	Coal seam, inferred
143	247m N	FAULT	Fault, inferred, displacement unknown
145	249m SW	FAULT	Fault, inferred, displacement unknown
146	250m N	ROCK	Coal seam, inferred
147	251m N	FAULT	Fault, inferred, displacement unknown
148	252m N	FAULT	Fault, inferred, displacement unknown
151	282m SW	FAULT	Fault, inferred, displacement unknown
152	310m NW	FAULT	Fault, inferred, displacement unknown
153	311m SW	ROCK	Coal seam, inferred
154	313m SE	ROCK	Coal seam, inferred
155	315m SE	ROCK	Coal seam, inferred
156	317m N	ROCK	Coal seam, inferred
157	318m N	ROCK	Coal seam, inferred
158	319m SE	ROCK	Coal seam, inferred
159	327m SE	ROCK	Coal seam, inferred
160	332m S	ROCK	Coal seam, inferred
161	345m SE	ROCK	Coal seam, inferred
162	357m N	ROCK	Coal seam, inferred
164	397m W	FAULT	Fault, inferred, displacement unknown
166	397m S	FAULT	Fault, inferred, displacement unknown
167	405m W	ROCK	Coal seam, inferred
168	410m N	ROCK	Coal seam, inferred
169	411m SE	ROCK	Coal seam, inferred

ID	Location	Category	Description
170	421m W	ROCK	Coal seam, inferred
172	435m W	ROCK	Coal seam, inferred
173	439m N	ROCK	Coal seam, inferred
175	460m SE	ROCK	Coal seam, inferred
176	471m S	ROCK	Coal seam, inferred
177	491m SE	ROCK	Coal seam, inferred
179	492m SE	FAULT	Fault, inferred, displacement unknown
181	493m N	FAULT	Fault, inferred, displacement unknown
182	497m SE	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.

16 Boreholes



Site Outline

Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m	46

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 151**

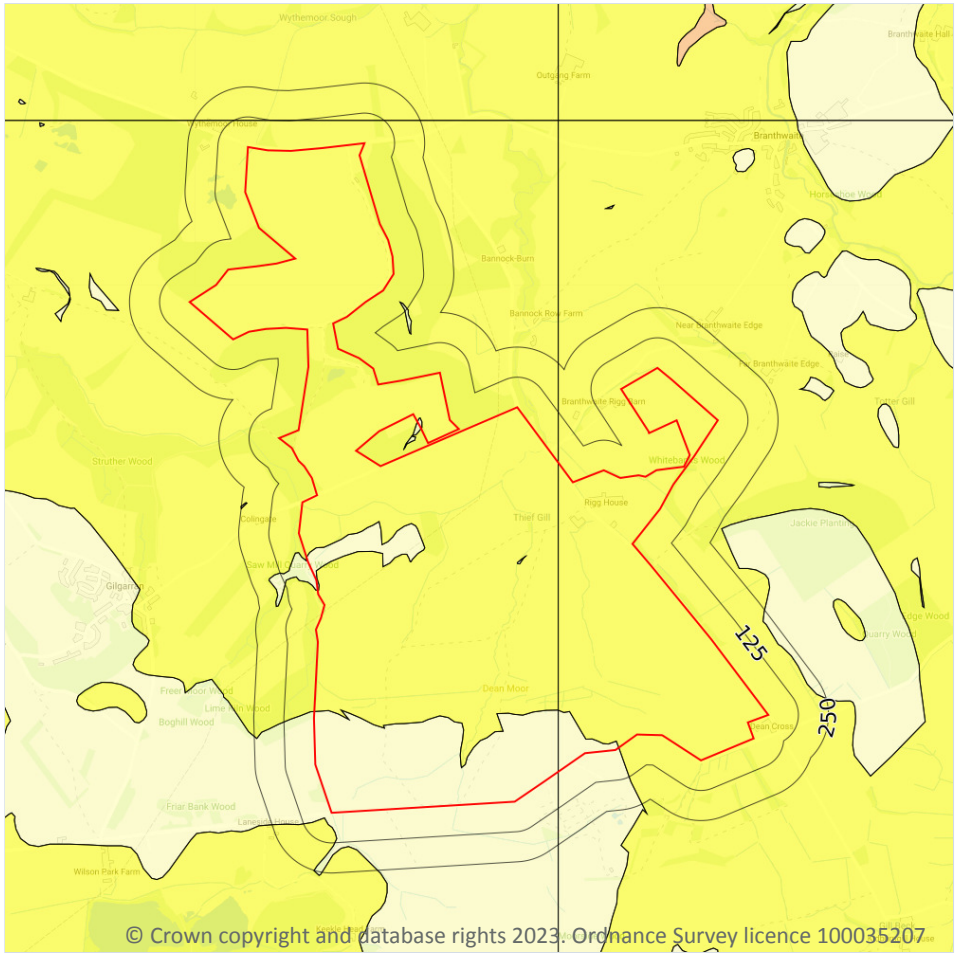
ID	Location	Grid reference	Name	Length	Confidential	Web link
1	On site	303852 524845	POTATO POT O.C.C.S. G4	10.05	N	774267
2	On site	304146 524324	POTATO POT O.C.C.S. G13	7.65	N	774276
3	On site	304020 524820	POTATO POT O/E 1801	-	Y	N/A

ID	Location	Grid reference	Name	Length	Confidential	Web link
4	**On site**	**303850 524810**	**POTATO POT O/E 1805**	**-**	**Y**	**N/A**
5	**On site**	**303990 524610**	**POTATO POT O.C.C.S. G8**	**8.7**	**N**	**774271**
6	**On site**	**304050 523530**	**POTATO POT O.C.C.S. G22, G22R + G22A**	**23.05**	**N**	**774285**
7	**On site**	**304010 524460**	**POTATO POT O/E 1803**	**-**	**Y**	**N/A**
8	**On site**	**305420 522560**	**ADIT(DISUSED)KIDBURNGILL**	**-1.0**	**N**	**793781**
9	**On site**	**305150 522840**	**OLD SHAFT BRANTHWAITE**	**-1.0**	**N**	**793785**
10	**On site**	**305330 522540**	**OLD SHAFT UNNAMED**	**-1.0**	**N**	**793783**
11	**On site**	**305510 522470**	**ADIT(DISUSED)KIDBURNGILL**	**-1.0**	**N**	**793780**
12	**On site**	**305360 522570**	**ADIT KIDBURNGILL**	**-1.0**	**N**	**793782**
13	**On site**	**305290 522450**	**OLD SHAFT (ON BASE MAPS)**	**-1.0**	**N**	**793784**
A	**On site**	**304250 523740**	**POTATO POT O/E 1807**	**-**	**Y**	**N/A**
A	**On site**	**304250 523740**	**POTATO POT O/E 1808**	**-**	**Y**	**N/A**
14	2m N	304443 523689	POTATO POT O.C.C.S. G21+ G21R	13.5	N	774284
15	10m SE	305710 522380	OLD COAL PIT KIDBURNGILL	-1.0	N	793759
16	12m NE	305500 523700	BRANTHWAITE EDGE NO. 1	-1.0	N	793878
17	15m SW	303979 522883	HARKER EGREMONT 132 KV LINE BH35	5.3	N	774156
18	16m N	304789 523808	POTATO POT O.C.C.S. G20	4.7	N	774283
19	24m N	304330 523940	POTATO POT O.C.C.S. G19	6.3	N	774282
20	25m NW	303685 524864	POTATO POT O.C.C.S. G33	8.9	N	774296
21	35m SE	305240 522350	DEAN MOOR NEW PIT	61.03	N	793643
22	36m E	305460 523380	UNNAMED SHAFT BRANTHWAITE	-1.0	N	793788
23	41m N	304353 524436	POTATO POT O.C.C.S. G11	14.7	N	774274
24	47m NW	304160 524070	POTATO POT O/E 1806	-	Y	N/A
25	62m NW	303639 524690	POTATO POT O.C.C.S. G7	6.8	N	774270
26	72m E	305640 523590	BRANTHWAITE EDGE BH1	106.24	N	793665
27	77m SE	305620 522270	COAL PIT (EDGE PIT)KIDBURNGILL	-1.0	N	793758
28	78m N	304225 524166	POTATO POT O.C.C.S. G17	9.5	N	774280
B	94m E	305510 523350	UNNAMED SHAFT BRANTHWAITE	-1.0	N	793787

ID	Location	Grid reference	Name	Length	Confidential	Web link
29	100m SW	303886 522535	HOME FARM, GILLGARRON - SPRING	-1.0	N	774169
B	104m E	305510 523330	UNNAMED SHAFT BRANTHWAITE	-1.0	N	793786
30	126m N	304436 524323	POTATO POT O.C.C.S. G14	12.8	N	774277
31	163m N	304610 524080	POTATO POT O.C.C.S. G18	7.3	N	774281
32	163m N	304330 524100	POTATO POT O/E 1810	-	Y	N/A
33	164m SE	305570 522180	AIR SHAFT KIDBURNGILL	-1.0	N	793766
34	178m N	304400 524720	POTATO POT O/E 1804	-	Y	N/A
35	181m N	304741 523967	POTATO POT O.C.C.S. G34	5.7	N	774297
36	184m W	303752 523414	POTATO POT O.C.C.S. G23	14.8	N	774286
37	202m N	304390 524840	POTATO POT O.C.C.S. G5	8.75	N	774268
38	215m SE	305520 522140	OLD SHAFT DEANMOOR COLLIERY	-1.0	N	793822
39	224m NW	303485 524849	POTATO POT O.C.C.S. G3	11.3	N	774266
40	227m SE	305410 522190	OLD STAPLE PIT DEAN MOOR COLL	-1.0	N	793823
41	243m N	304534 524543	POTATO POT O.C.C.S. G9	7.5	N	774272
42	245m NW	303268 524107	POTATO POT O.C.C.S. G31	8.25	N	774294

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.1 Shrink swell clays

Records within 50m	3

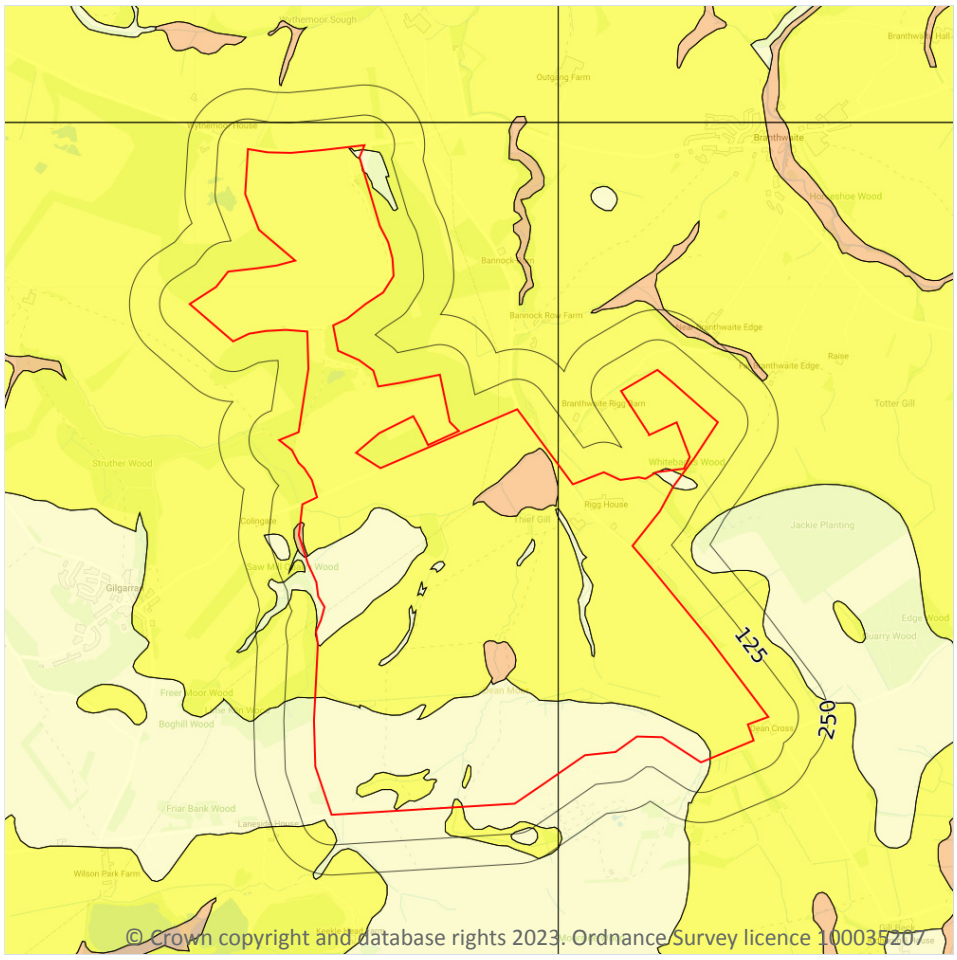
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 154**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
On site	**Very low**	**Ground conditions predominantly low plasticity.**
28m NW	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.2 Running sands

Records within 50m	4

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

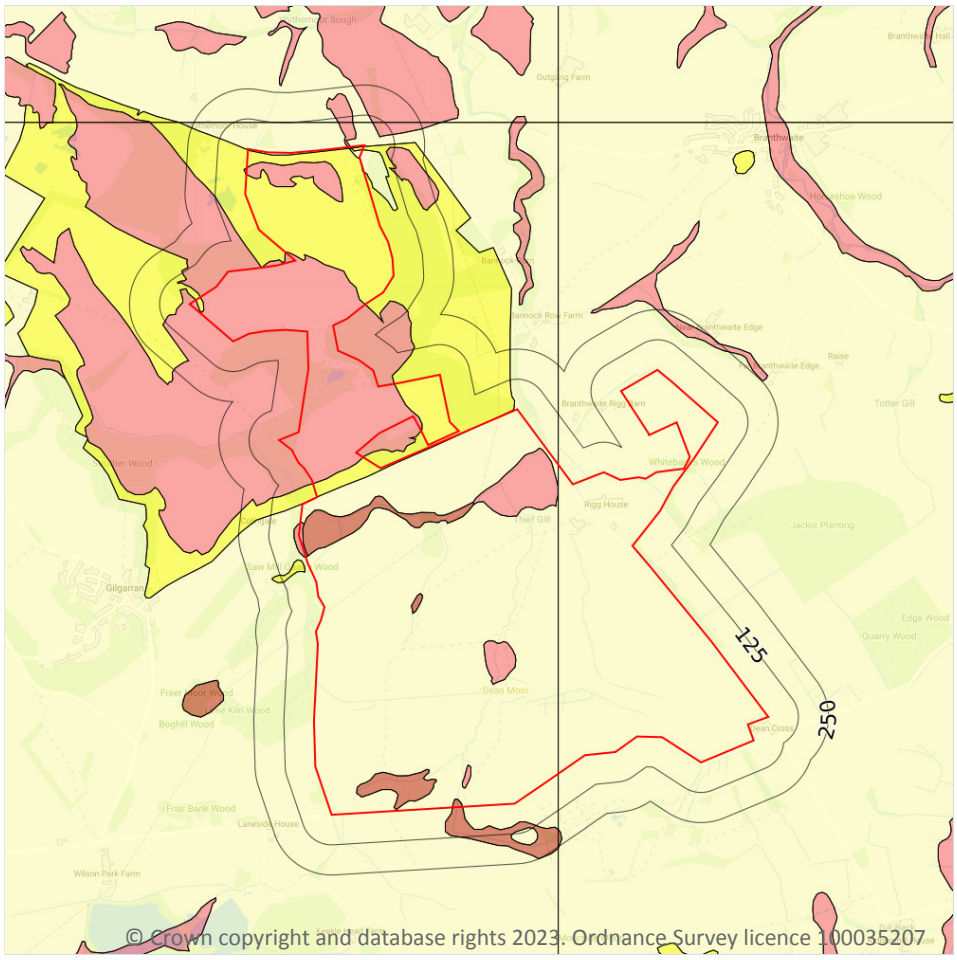
Features are displayed on the Natural ground subsidence - Running sands map on **page 156**

Location	Hazard rating	Details
On site	**Negligible**	**Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.**

Location	Hazard rating	Details
On site	**Very low**	**Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.**
On site	**Low**	**Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.**
37m SW	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.3 Compressible deposits

Records within 50m	5

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

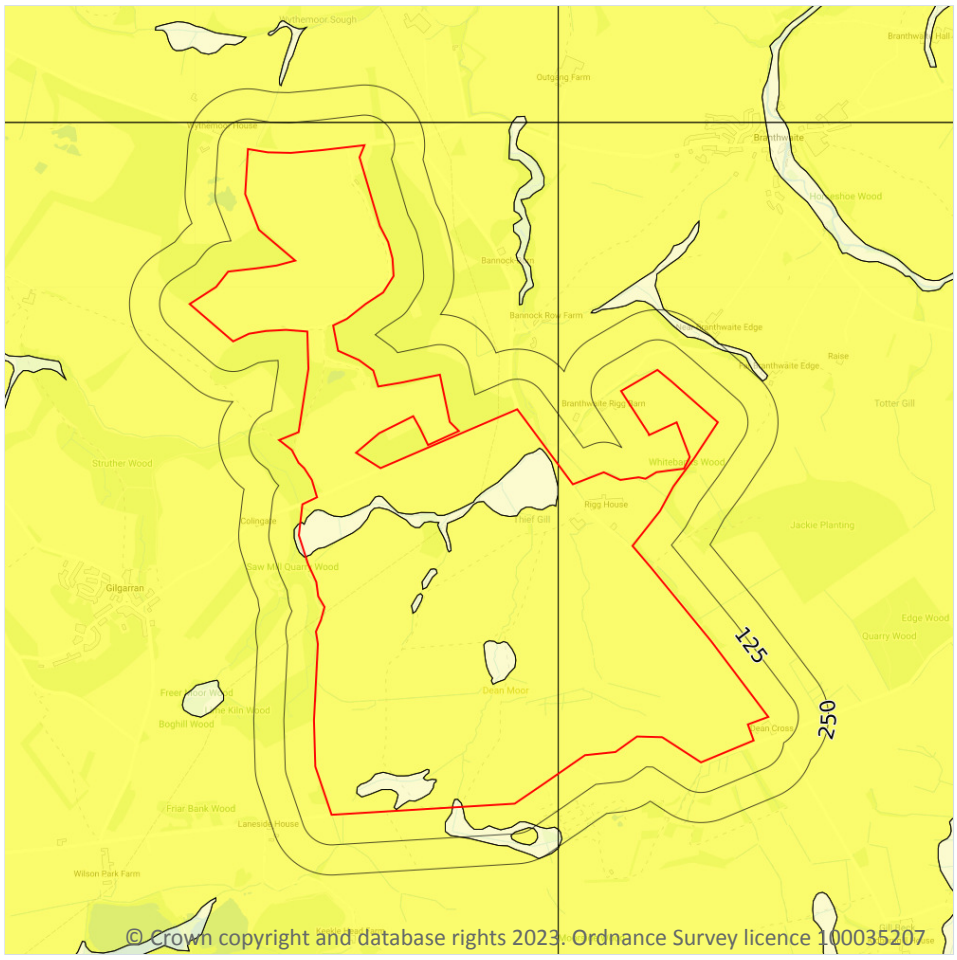
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 158**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
On site	**Very low**	**Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.**

Location	Hazard rating	Details
On site	**Moderate**	**Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.**
On site	**High**	**Highly compressible strata present. Significant constraint on land use depending on thickness.**
18m W	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m	2

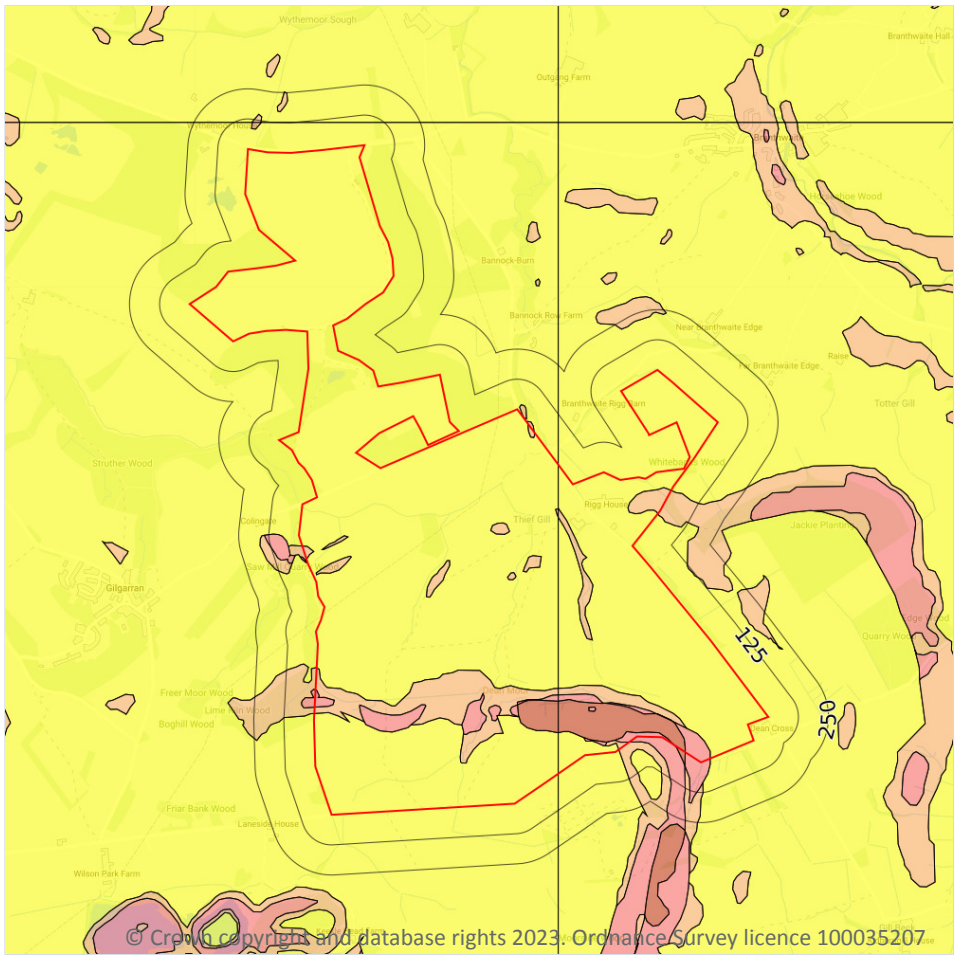
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 160**

Location	Hazard rating	Details
On site	**Negligible**	**Deposits with potential to collapse when loaded and saturated are believed not to be present.**
On site	**Very low**	**Deposits with potential to collapse when loaded and saturated are unlikely to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m	9

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

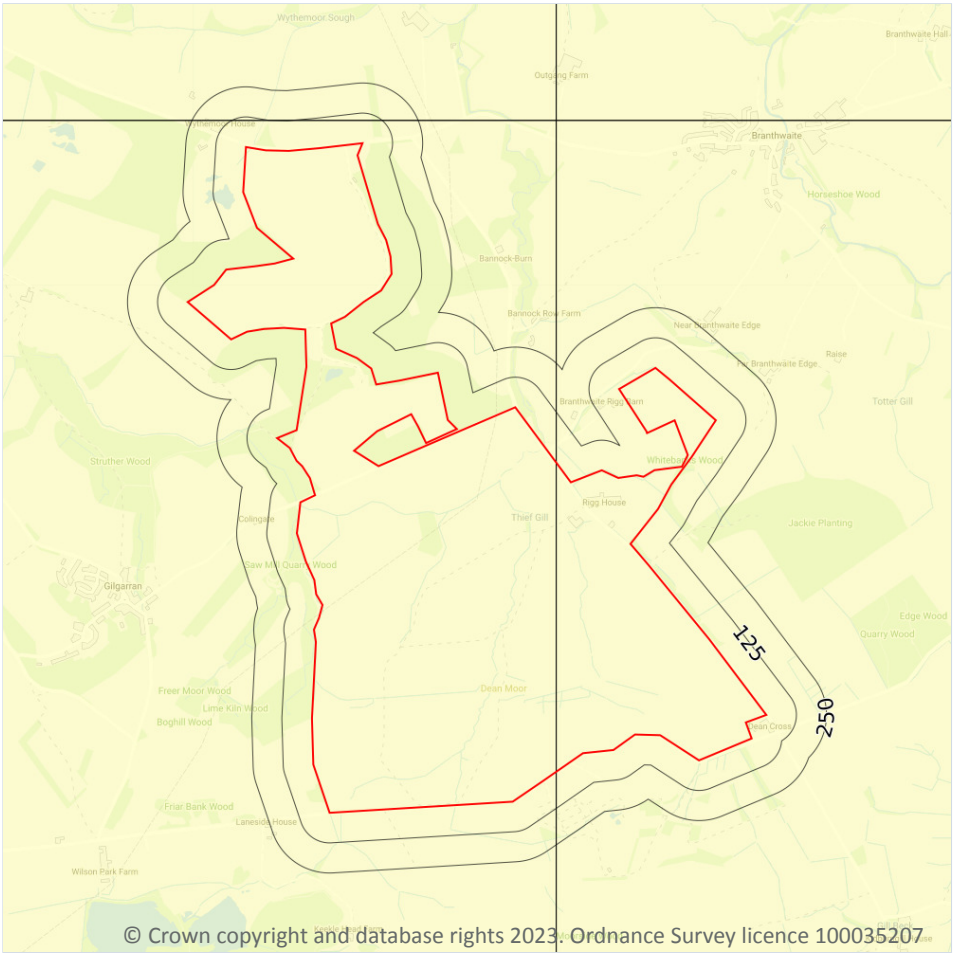
Features are displayed on the Natural ground subsidence - Landslides map on **page 161**

Location	Hazard rating	Details
On site	**Very low**	**Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.**

Location	Hazard rating	Details
On site	**Low**	**Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.**
On site	**Moderate**	**Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.**
On site	**High**	**Slope instability problems almost certainly present and may be active. Significant constraint on land use.**
1m NE	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
5m W	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
41m W	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
43m SE	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.
49m SE	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	1

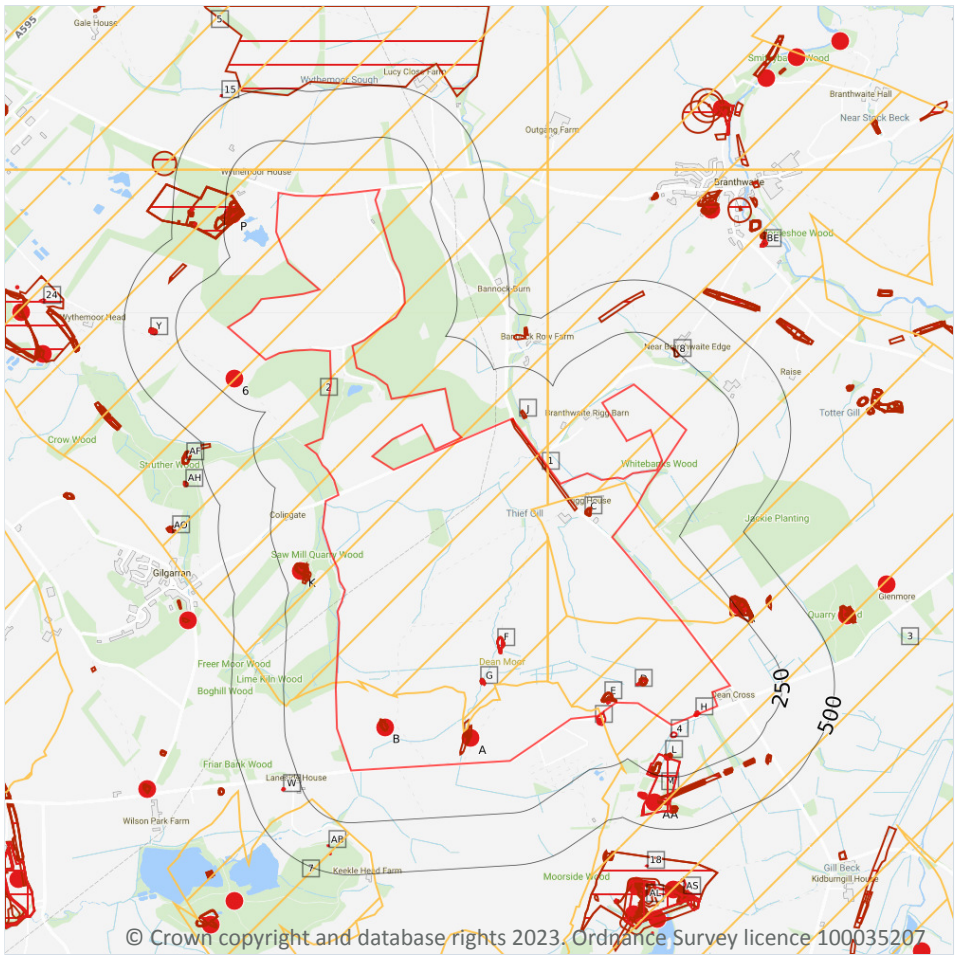
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 163**

Location	Hazard rating	Details
On site	**Negligible**	**Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.**

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m	0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m	**7**

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining, ground workings and natural cavities map on **page 165**

ID	Location	Details	Description
A	**On site**	**Name: Dean Moor** **Address: Gilgarran, WORKINGTON, Cumbria** **Commodity: Sandstone** **Status: Ceased**	**Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site** **Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority**
B	**On site**	**Name: Gilgarran Plantation** **Address: Gilgarran, WORKINGTON, Cumbria** **Commodity: Sandstone** **Status: Ceased**	**Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site** **Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority**
6	166m NW	Name: Potatopot OCCS Address: Distington, WORKINGTON, Cumbria Commodity: Coal, Surface Mined Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
K	167m W	Name: Colingate Quarry Address: Gilgarran, WORKINGTON, Cumbria Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
P	213m NW	Name: Wythemoor Colliery Address: Winscales, WORKINGTON, Cumbria Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

ID	Location	Details	Description
R	267m E	Name: Branthwaite Edge Quarry Address: Ullock, WORKINGTON, Cumbria Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AA	379m SE	Name: Deanmoor Colliery Level Address: Kidburngill, Arlecdon, WORKINGTON, Cumbria Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m **134**

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 165**

ID	Location	Land Use	Year of mapping	Mapping scale
1	**On site**	**Cuttings**	**1864**	**1:10560**
A	**On site**	**Unspecified Ground Workings**	**1926**	**1:10560**
A	**On site**	**Unspecified Ground Workings**	**1926**	**1:10560**
A	**On site**	**Unspecified Heap**	**1951**	**1:10560**
A	**On site**	**Unspecified Quarry**	**1947**	**1:10560**
A	**On site**	**Unspecified Old Quarry**	**1898**	**1:10560**
A	**On site**	**Unspecified Quarry**	**1864**	**1:10560**
A	**On site**	**Unspecified Ground Workings**	**1923**	**1:10560**
A	**On site**	**Unspecified Ground Workings**	**1923**	**1:10560**
B	**On site**	**Unspecified Pit**	**1926**	**1:10560**
B	**On site**	**Unspecified Pit**	**1947**	**1:10560**

ID	Location	Land Use	Year of mapping	Mapping scale
B	On site	Unspecified Pit	1926	1:10560
B	On site	Unspecified Pit	1951	1:10560
B	On site	Unspecified Pit	1967	1:10560
B	On site	Unspecified Pit	1991	1:10000
B	On site	Unspecified Old Quarry	1898	1:10560
B	On site	Unspecified Ground Workings	1923	1:10560
B	On site	Unspecified Ground Workings	1923	1:10560
C	On site	Unspecified Heap	1951	1:10560
C	On site	Unspecified Heap	1971	1:10000
C	On site	Unspecified Heap	1927	1:10560
C	On site	Unspecified Heap	1927	1:10560
C	On site	Unspecified Heap	1927	1:10560
C	On site	Unspecified Ground Workings	1923	1:10560
C	On site	Unspecified Ground Workings	1923	1:10560
C	On site	Unspecified Ground Workings	1923	1:10560
D	On site	Unspecified Old Level	1951	1:10560
D	On site	Unspecified Heap	1951	1:10560
D	On site	Unspecified Heap	1971	1:10000
D	On site	Unspecified Old Level	1927	1:10560
D	On site	Unspecified Heap	1927	1:10560
D	On site	Unspecified Old Level	1927	1:10560
D	On site	Unspecified Heap	1927	1:10560
D	On site	Unspecified Heap	1898	1:10560
D	On site	Unspecified Old Level	1898	1:10560
D	On site	Unspecified Old Level	1927	1:10560
D	On site	Unspecified Heap	1927	1:10560
D	On site	Unspecified Heap	1923	1:10560
D	On site	Unspecified Heap	1923	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
D	On site	Unspecified Heap	1923	1:10560
E	On site	Unspecified Heap	1951	1:10560
E	On site	Unspecified Heap	1971	1:10000
E	On site	Unspecified Heap	1927	1:10560
E	On site	Unspecified Heap	1927	1:10560
E	On site	Unspecified Heap	1898	1:10560
E	On site	Unspecified Heap	1927	1:10560
E	On site	Unspecified Ground Workings	1923	1:10560
E	On site	Unspecified Ground Workings	1923	1:10560
E	On site	Unspecified Ground Workings	1923	1:10560
F	On site	Unspecified Old Level	1927	1:10560
F	On site	Unspecified Heap	1927	1:10560
F	On site	Unspecified Old Level	1927	1:10560
F	On site	Unspecified Old Level	1898	1:10560
F	On site	Unspecified Old Level	1927	1:10560
F	On site	Unspecified Old Level	1951	1:10560
F	On site	Unspecified Heap	1951	1:10560
F	On site	Unspecified Heap	1923	1:10560
F	On site	Unspecified Heap	1923	1:10560
F	On site	Unspecified Heap	1923	1:10560
G	On site	Unspecified Old Level	1927	1:10560
G	On site	Unspecified Old Level	1927	1:10560
G	On site	Unspecified Heap	1898	1:10560
G	On site	Unspecified Old Level	1898	1:10560
G	On site	Unspecified Old Level	1927	1:10560
G	On site	Unspecified Old Level	1951	1:10560
G	On site	Unspecified Heap	1923	1:10560
G	On site	Unspecified Heap	1923	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
G	**On site**	**Unspecified Heap**	**1923**	**1:10560**
H	**On site**	**Old Coal Pit**	**1898**	**1:10560**
H	**On site**	**Old Coal Pit**	**1864**	**1:10560**
I	16m SE	Old Coal Pit	1923	1:10560
I	16m SE	Old Coal Pit	1923	1:10560
I	17m SE	Old Coal Pit	1947	1:10560
I	17m SE	Old Coal Pit	1898	1:10560
I	19m SE	Old Coal Pit	1926	1:10560
I	19m SE	Old Coal Pit	1926	1:10560
I	24m SE	Old Coal Pit	1951	1:10560
J	46m NE	Pond	1951	1:10560
J	46m NE	Pond	1967	1:10560
K	121m W	Unspecified Disused Quarry	1967	1:10560
K	128m W	Pond	1991	1:10000
K	129m W	Disused Quarry	1923	1:10560
K	129m W	Disused Quarry	1923	1:10560
K	129m W	Disused Quarry	1923	1:10560
K	131m W	Unspecified Disused Quarry	1927	1:10560
K	135m W	Unspecified Disused Quarry	1927	1:10560
K	135m W	Unspecified Quarry	1898	1:10560
K	136m W	Unspecified Disused Quarry	1951	1:10560
K	136m W	Unspecified Disused Quarry	1991	1:10000
L	136m SE	Unspecified Heap	1947	1:10560
L	137m SE	Unspecified Ground Workings	1923	1:10560
L	137m SE	Unspecified Ground Workings	1923	1:10560
K	139m W	Pond	1927	1:10560
K	142m W	Unspecified Quarry	1864	1:10560
L	146m SE	Unspecified Heap	1951	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
L	146m SE	Unspecified Heap	1971	1:10000
K	147m W	Pond	1864	1:10560
M	151m SE	Colliery	1898	1:10560
N	159m NW	Colliery	1923	1:10560
N	159m NW	Colliery	1923	1:10560
N	159m NW	Colliery	1923	1:10560
N	159m NW	Colliery	1923	1:10560
O	160m NW	Colliery	1938	1:10560
O	160m NW	Colliery	1938	1:10560
P	166m NW	Unspecified Heap	1967	1:10560
P	171m NW	Refuse Heap	1923	1:10560
P	171m NW	Refuse Heap	1923	1:10560
P	171m NW	Refuse Heap	1923	1:10560
P	171m NW	Refuse Heap	1923	1:10560
P	172m NW	Refuse Heap	1938	1:10560
P	172m NW	Refuse Heap	1938	1:10560
P	174m NW	Refuse Heap	1947	1:10560
P	178m NW	Refuse Heap	1951	1:10560
Q	189m SE	Unspecified Heap	1947	1:10560
Q	189m SE	Unspecified Pit	1898	1:10560
Q	189m SE	Unspecified Heap	1923	1:10560
Q	189m SE	Unspecified Heap	1923	1:10560
Q	191m SE	Unspecified Heap	1926	1:10560
Q	191m SE	Unspecified Heap	1926	1:10560
Q	197m SE	Unspecified Heap	1951	1:10560
Q	197m SE	Unspecified Heap	1971	1:10000
R	207m E	Unspecified Disused Quarry	1951	1:10560
R	207m E	Unspecified Disused Quarry	1971	1:10000

ID	Location	Land Use	Year of mapping	Mapping scale
8	229m NE	Pond	1864	1:10560
R	244m E	Disused Quarry	1923	1:10560
R	244m E	Disused Quarry	1923	1:10560
R	244m E	Disused Quarry	1923	1:10560
R	244m E	Unspecified Disused Quarry	1927	1:10560
R	248m E	Unspecified Disused Quarry	1927	1:10560
R	248m E	Unspecified Quarry	1898	1:10560
S	249m NW	Refuse Heap	1923	1:10560
S	249m NW	Refuse Heap	1923	1:10560
S	249m NW	Refuse Heap	1923	1:10560
S	249m NW	Refuse Heap	1923	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	**58**

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining, ground workings and natural cavities map on **page 165**

ID	Location	Land Use	Year of mapping	Mapping scale
D	**On site**	**Unspecified Old Level**	**1951**	**1:10560**
D	**On site**	**Unspecified Old Level**	**1927**	**1:10560**
D	**On site**	**Unspecified Old Level**	**1898**	**1:10560**
E	**On site**	**Unspecified Old Shaft**	**1951**	**1:10560**
E	**On site**	**Unspecified Disused Shaft**	**1971**	**1:10000**
E	**On site**	**Unspecified Old Shaft**	**1927**	**1:10560**
F	**On site**	**Unspecified Old Level**	**1927**	**1:10560**
F	**On site**	**Unspecified Old Level**	**1898**	**1:10560**
F	**On site**	**Unspecified Old Level**	**1951**	**1:10560**

ID	Location	Land Use	Year of mapping	Mapping scale
G	**On site**	**Unspecified Old Level**	**1927**	**1:10560**
G	**On site**	**Unspecified Old Level**	**1898**	**1:10560**
G	**On site**	**Unspecified Old Level**	**1951**	**1:10560**
H	**On site**	**Old Coal Pit**	**1898**	**1:10560**
H	**On site**	**Old Coal Pit**	**1864**	**1:10560**
I	5m SE	Coal Pit	1864	1:10560
I	17m SE	Old Coal Pit	1947	1:10560
I	17m SE	Old Coal Pit	1898	1:10560
I	24m SE	Old Coal Pit	1951	1:10560
I	24m SE	Unspecified Disused Mine	1971	1:10000
4	36m SE	Coal Pit	1864	1:10560
M	151m SE	Colliery	1898	1:10560
Q	242m SE	Unspecified Old Shaft	1898	1:10560
W	328m SW	Unspecified Disused Shaft	1991	1:10000
W	333m SW	Old Coal Shaft	1947	1:10560
W	333m SW	Unspecified Old Shaft	1898	1:10560
W	336m SW	Old Coal Shaft	1951	1:10560
W	336m SW	Unspecified Disused Shaft	1967	1:10560
Y	341m NW	Old Coal Shaft	1951	1:10560
Z	351m SE	Unspecified Old Levels	1947	1:10560
Y	352m NW	Old Coal Shaft	1947	1:10560
AA	358m SE	Unspecified Level	1898	1:10560
Z	358m SE	Unspecified Old Levels	1951	1:10560
Y	358m NW	Unspecified Old Shaft	1898	1:10560
Z	361m SE	Unspecified Old Level	1898	1:10560
AB	374m SW	Coal Shaft	1864	1:10560
N	386m NW	Unspecified Old Shaft	1947	1:10560
N	388m NW	Unspecified Old Shaft	1951	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
N	399m NW	Unspecified Old Shaft	1898	1:10560
N	407m NW	Old Coal Shaft	1951	1:10560
N	408m NW	Unspecified Old Shaft	1947	1:10560
AB	409m SW	Coal Shaft	1864	1:10560
15	536m NW	Old Air Shaft	1898	1:10560
AF	571m W	Unspecified Old Shaft	1898	1:10560
AH	603m W	Unspecified Old Shaft	1898	1:10560
18	681m SE	Unspecified Old Shaft	1898	1:10560
AO	723m W	Unspecified Old Shaft	1898	1:10560
AS	739m SE	Colliery	1898	1:10560
AL	756m SE	Colliery	1947	1:10560
AS	764m SE	Unspecified Old Level	1898	1:10560
AY	833m SE	Air Shaft	1947	1:10560
AY	839m SE	Air Shaft	1951	1:10560
24	884m NW	Unspecified Old Shaft	1898	1:10560
BE	896m NE	Old Coal Level	1951	1:10560
BE	896m NE	Old Coal Level	1971	1:10000
BE	903m NE	Old Coal Level	1927	1:10560
AL	904m SE	Unspecified Level	1947	1:10560
AL	913m SE	Unspecified Disused Level	1951	1:10560
BN	996m SE	Air Shaft	1898	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	**0**

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	6

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining, ground workings and natural cavities map on **page 165**

ID	Location	Name	Commodity	Class	Likelihood
2	**On site**	**Not available**	**Iron Ore (Bedded)**	**B**	**Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered**
3	**On site**	**Not available**	**Iron Ore (Bedded)**	**B**	**Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered**
5	95m N	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
7	227m SW	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
21	796m S	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
22	810m N	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site	0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	1

Areas which could be affected by past, current or future coal mining.

Location	Details
On site	**The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.**

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

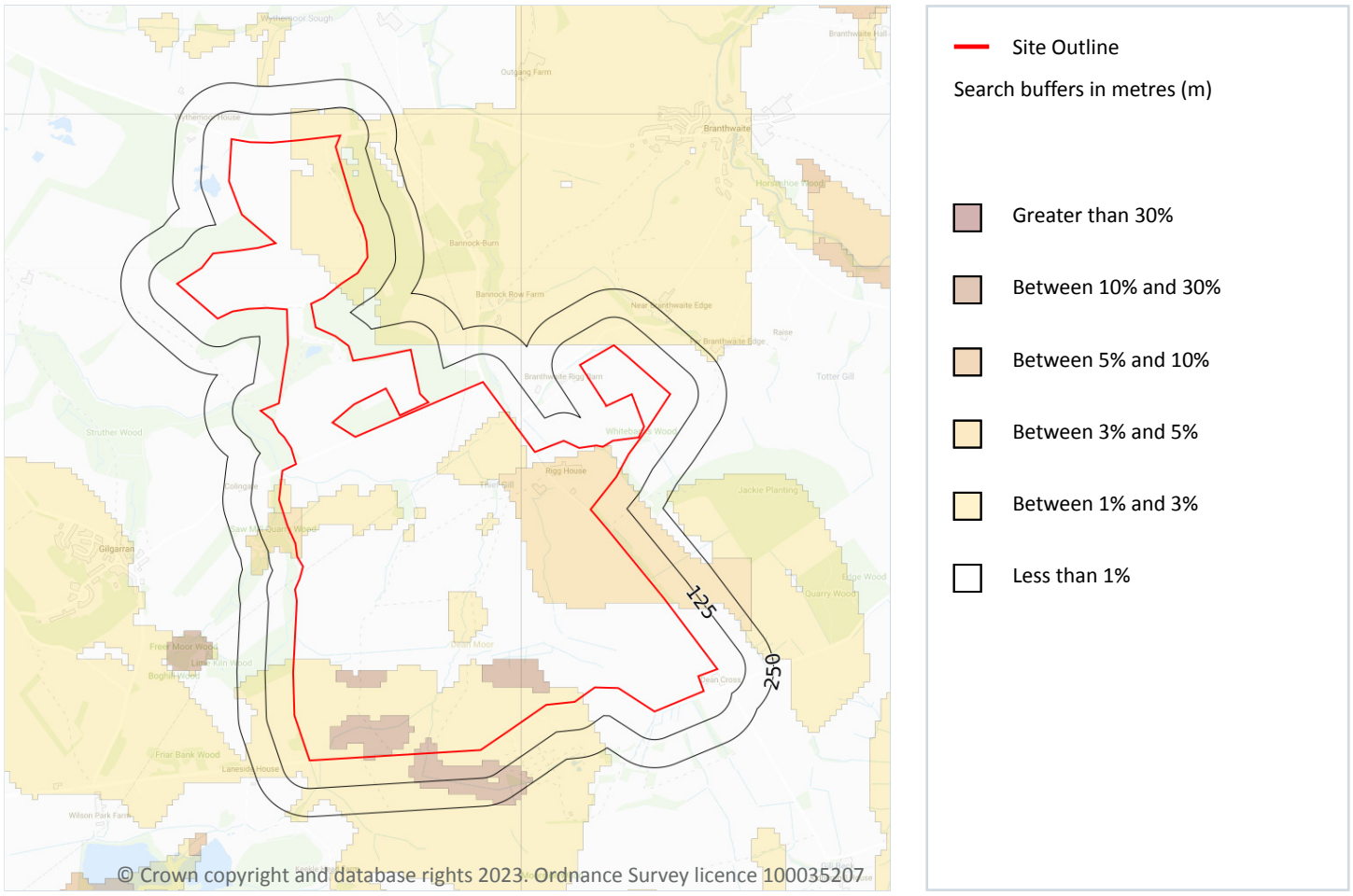
18.13 Clay mining

Records on site	0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Radon



19.1 Radon

Records on site	4

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 178**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 1% and 3%**	**None**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 3% and 5%**	**Basic**
On site	**Between 10% and 30%**	**Full**
On site	**Less than 1%**	**None**

This data is sourced from the British Geological Survey and UK Health Security Agency.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m	277

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
0m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
1m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
1m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
10m E	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
14m SE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
18m SE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
18m SE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
19m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
19m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
23m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
23m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
23m E	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
24m NW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
27m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
28m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
29m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
37m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
38m S	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
38m S	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
39m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
43m NW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
44m NW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
48m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
48m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

This data is sourced from the British Geological Survey.

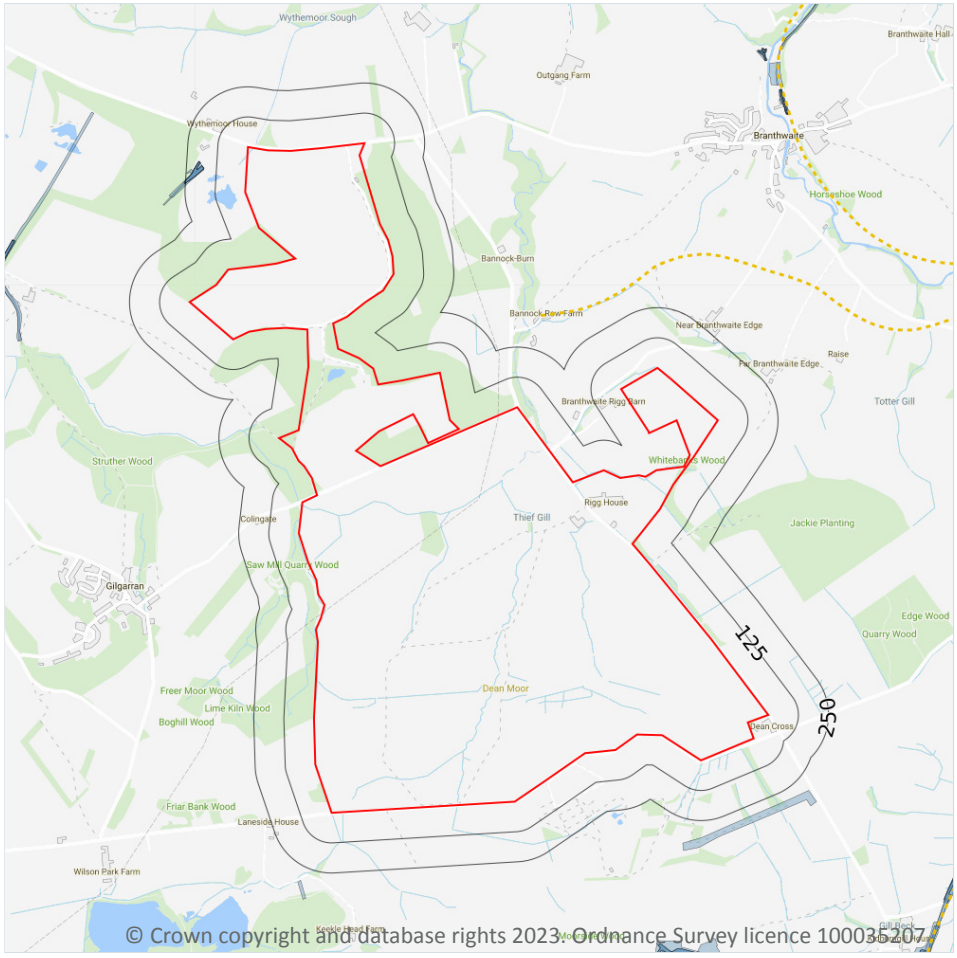
20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects



- Site Outline

Search buffers in metres (m)

- Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 Underground railways (London)

Records within 250m	0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	3

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on **page 191**

Location	Land Use	Year of mapping	Mapping scale
176m NW	Mineral Railway Sidings	1925	2500
177m NW	Mineral Railway Sidings	1938	10560
177m NW	Mineral Railway Sidings	1923	10560

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference.

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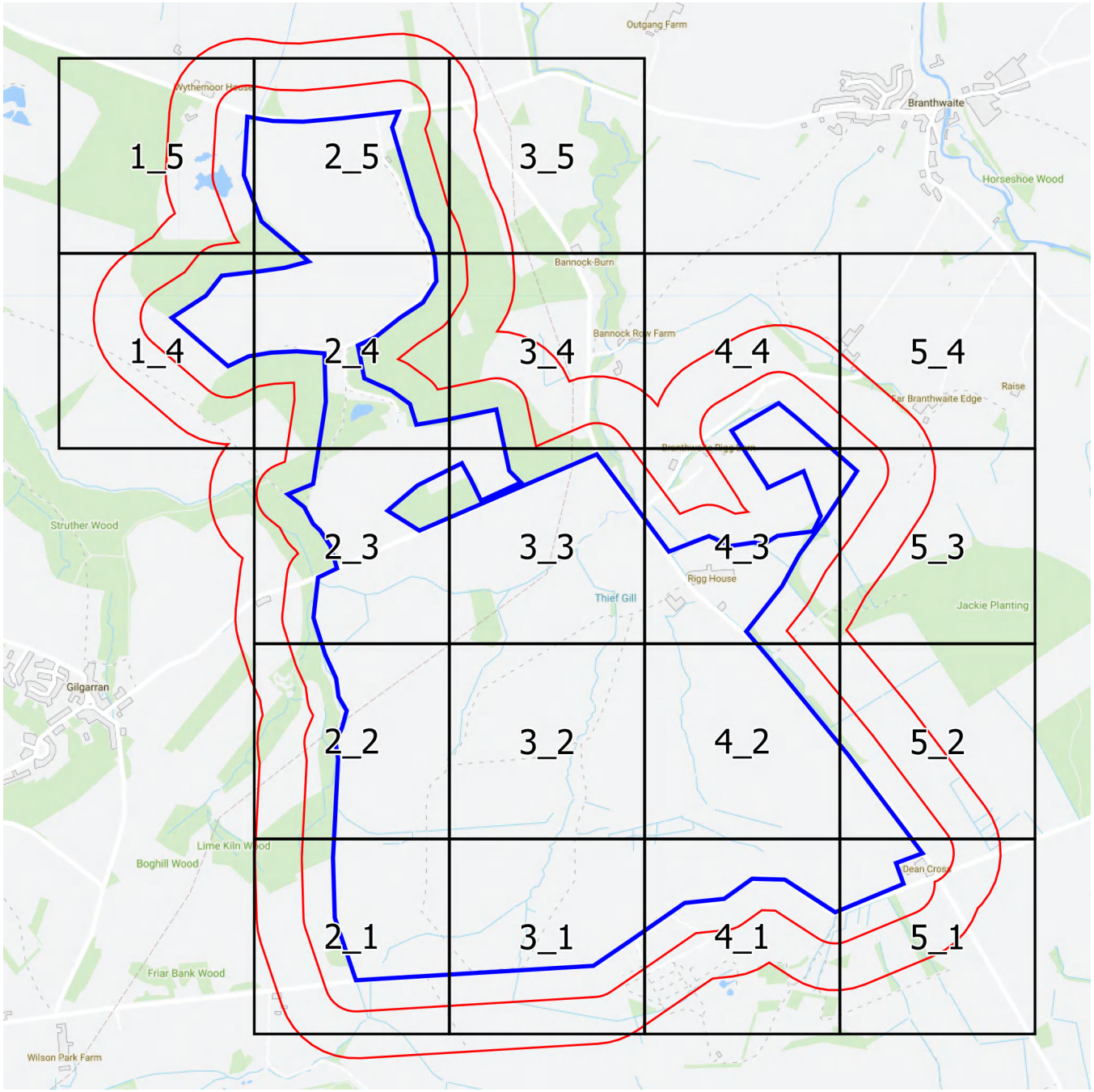
Appendix D Historical OS Maps (GS, 2023)



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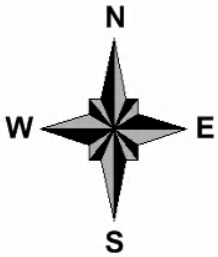
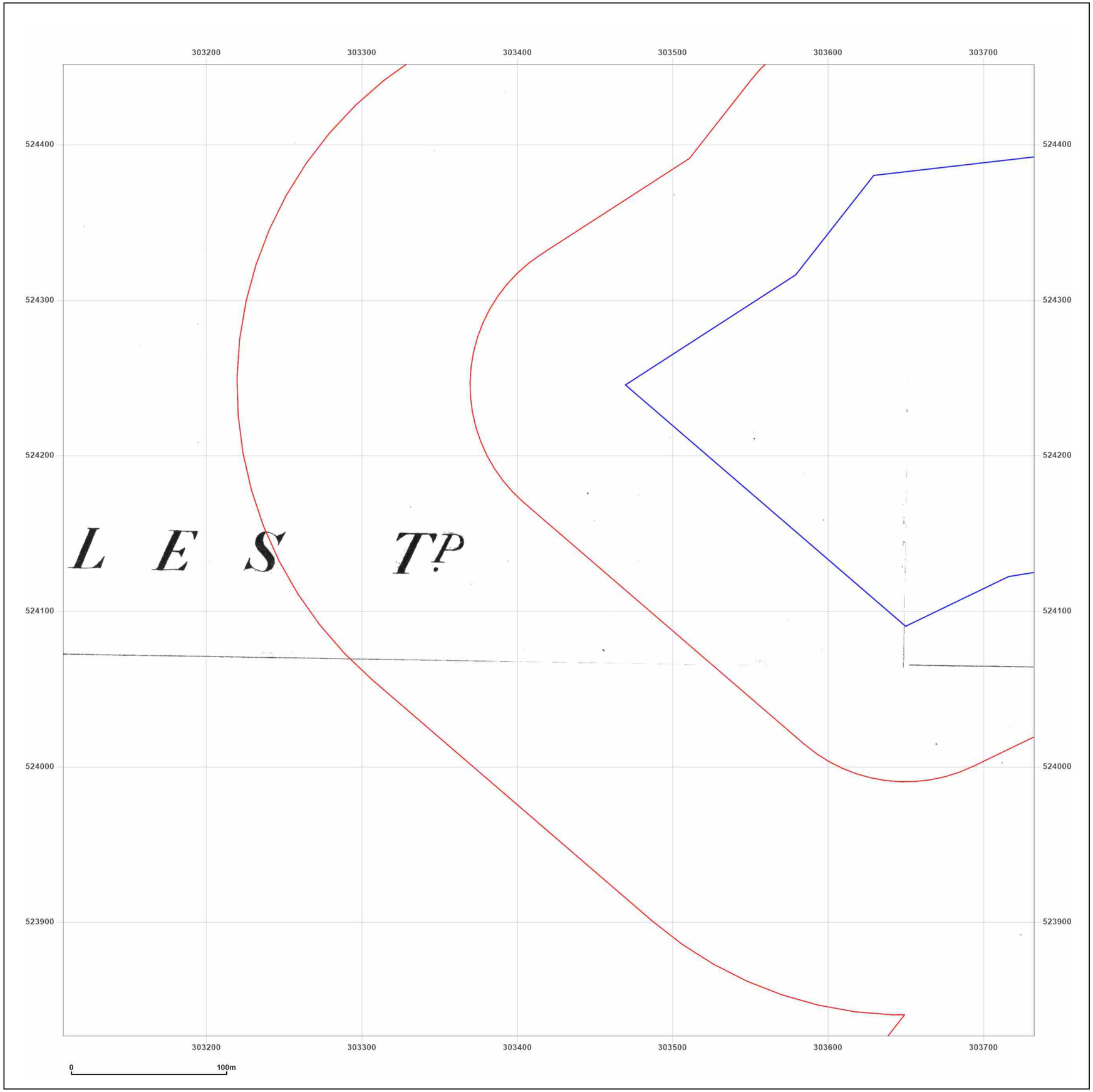
1:2,500 Scale Grid Index





Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: County Series

Map date: **1862**

Scale: 1:2,500

Printed at: 1:2,500

N
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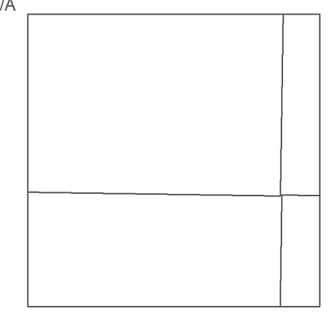
Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 12 April 2023

Map legend available at:
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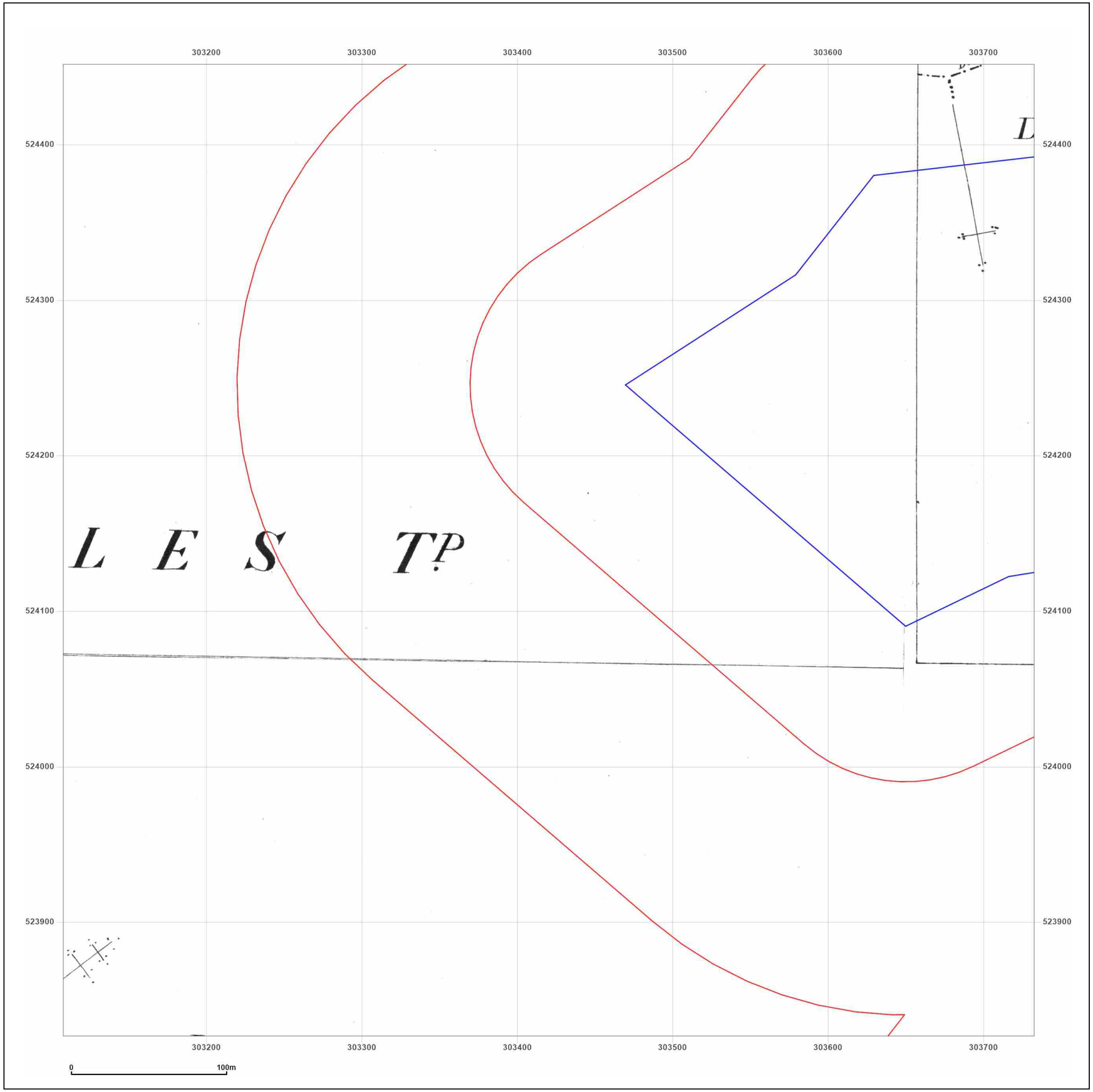

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: County Series

Map date: **1862-1864**

Scale: 1:2,500

Printed at: 1:2,500

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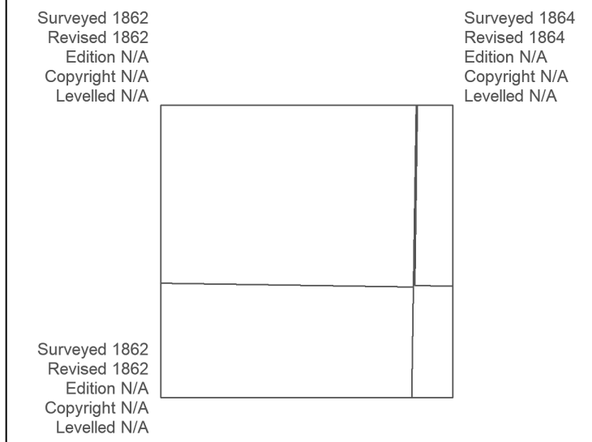

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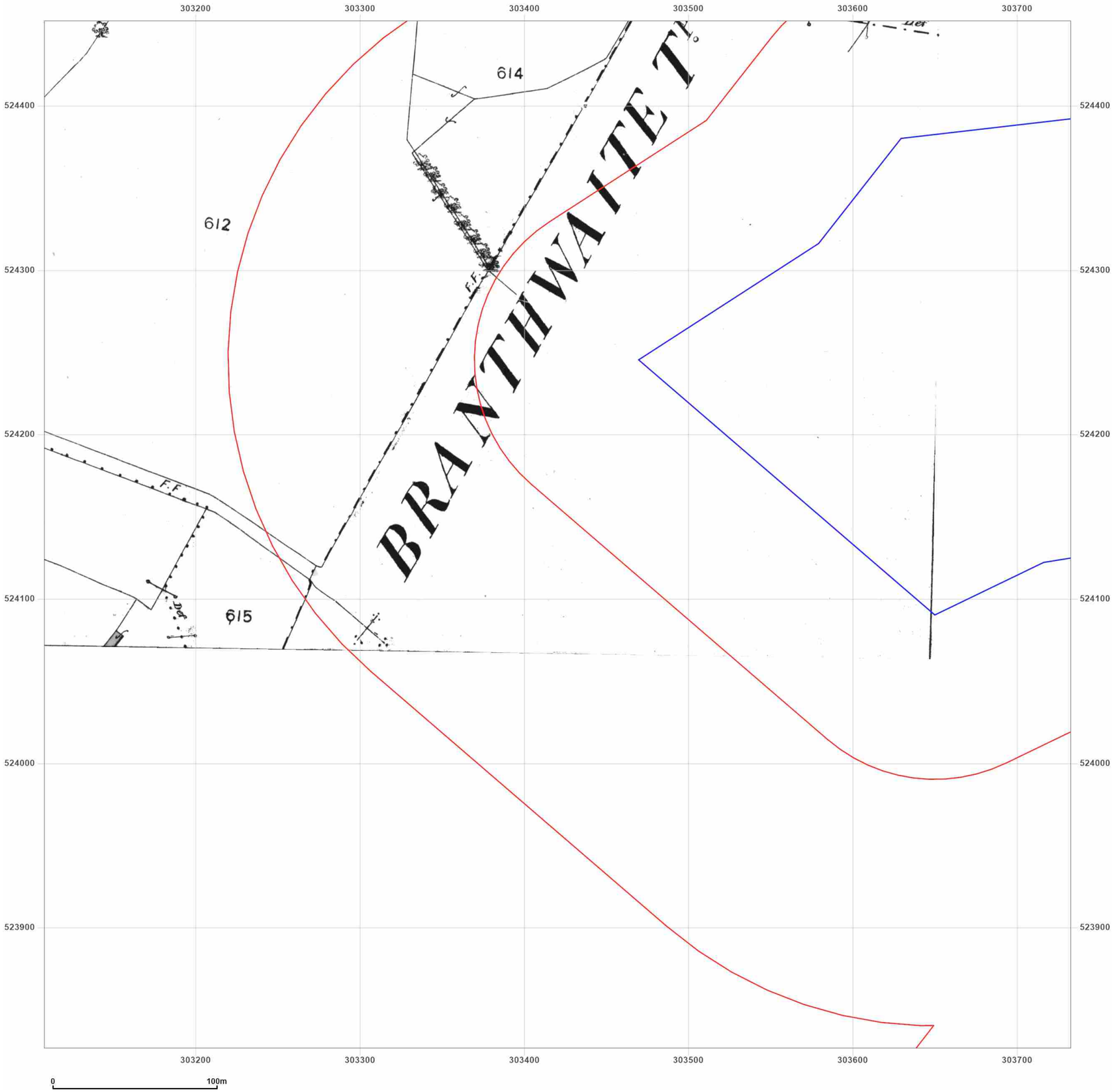

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: County Series

Map date: **1866**

Scale: 1:2,500

Printed at: 1:2,500

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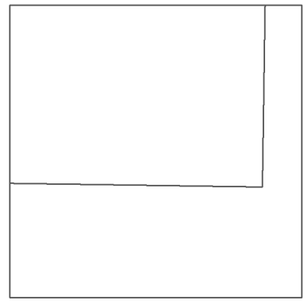
Surveyed 1866
Revised 1866
Edition N/A
Copyright N/A
Levelled N/A



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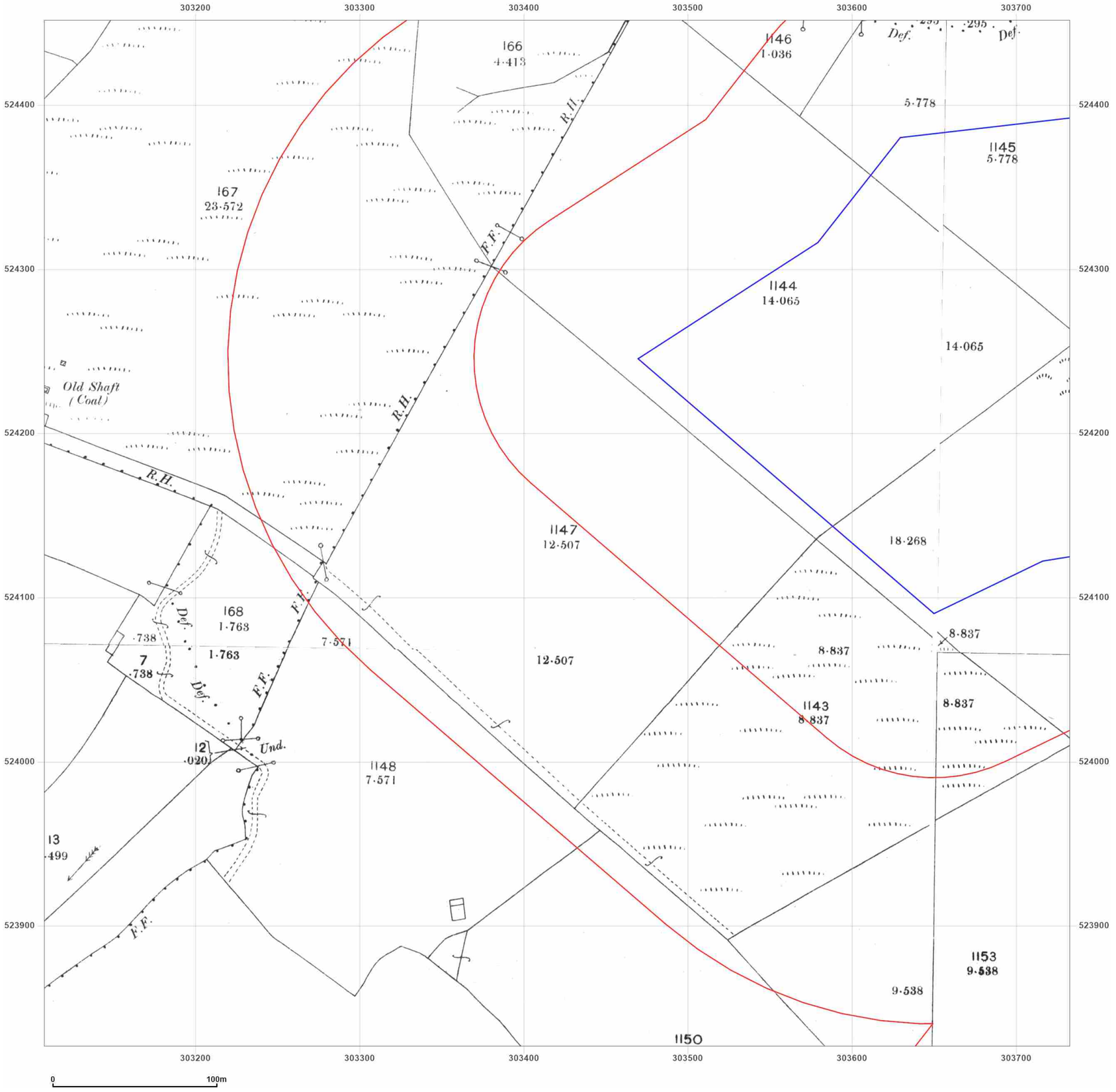

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

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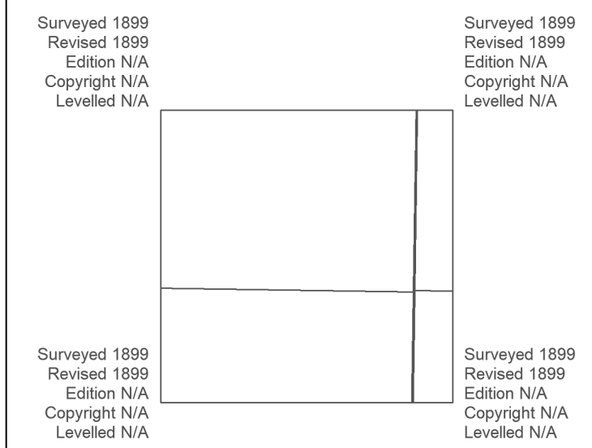

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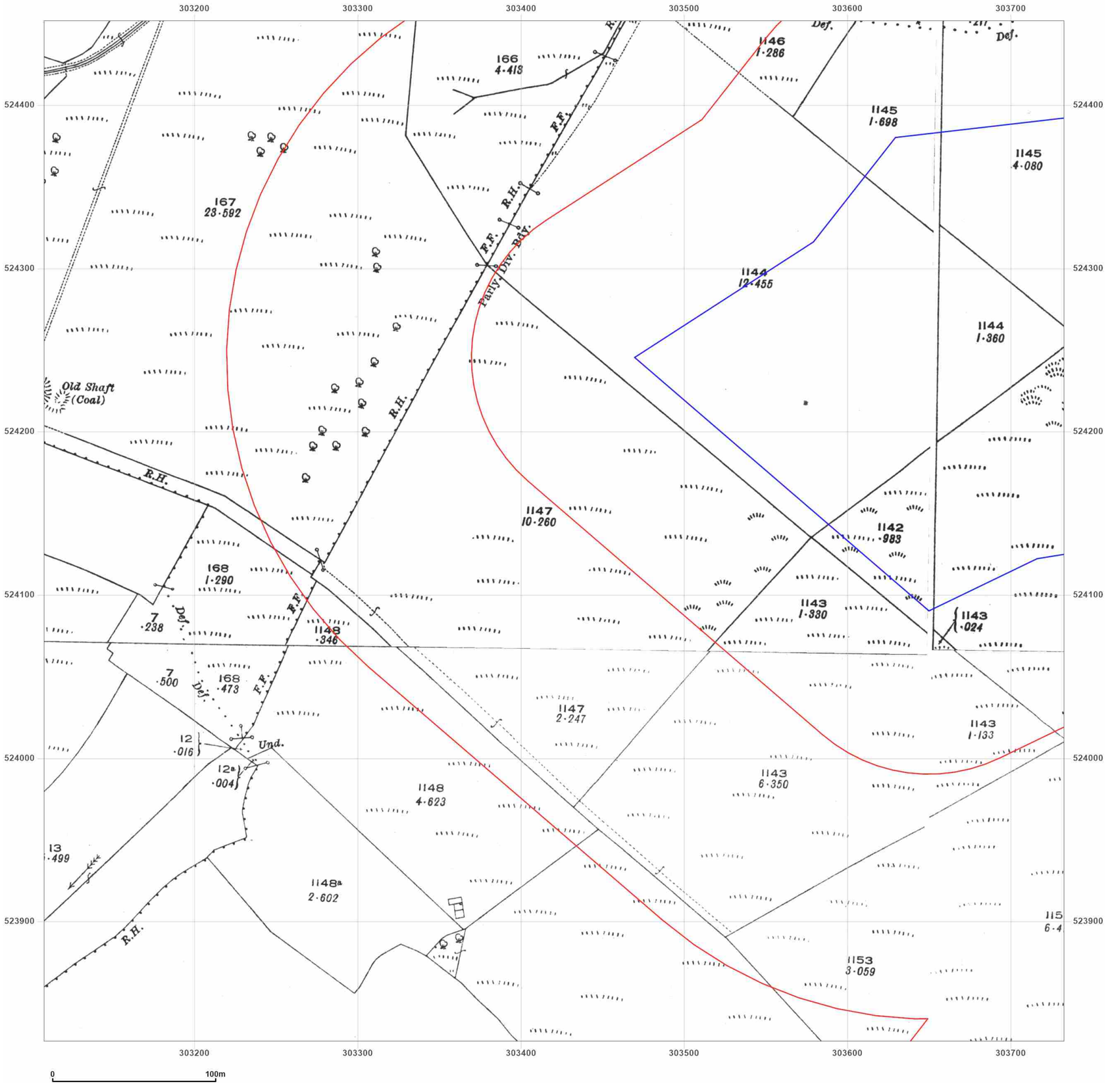

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

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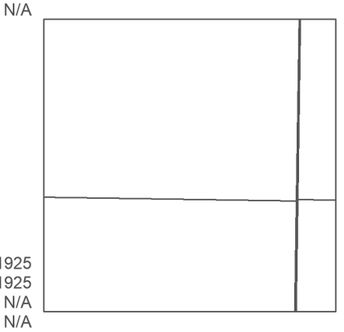
Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1925
Revised 1925
Edition N/A
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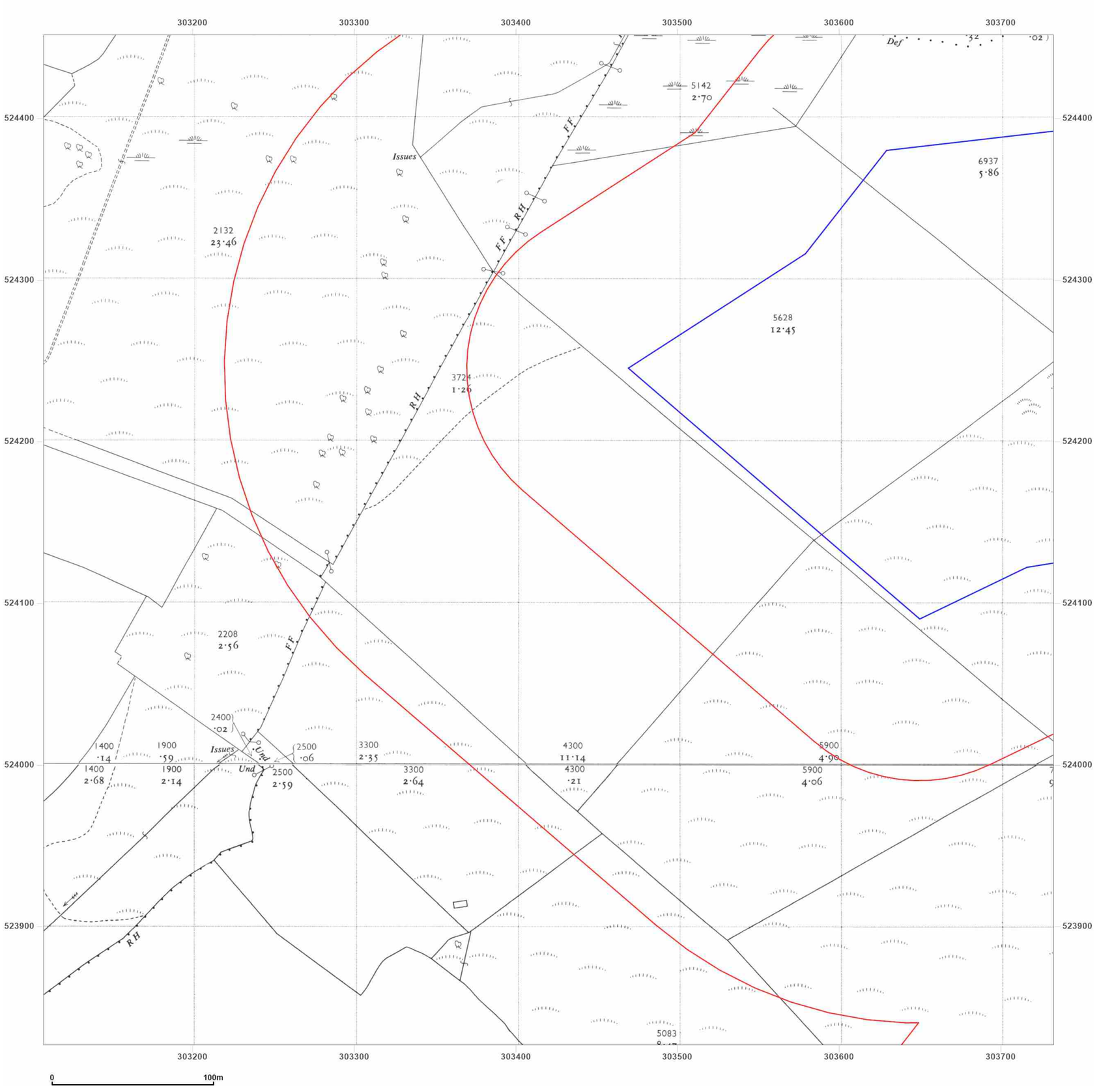

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
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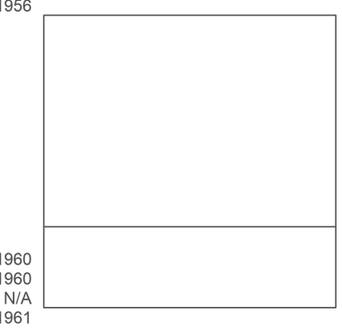
Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956



Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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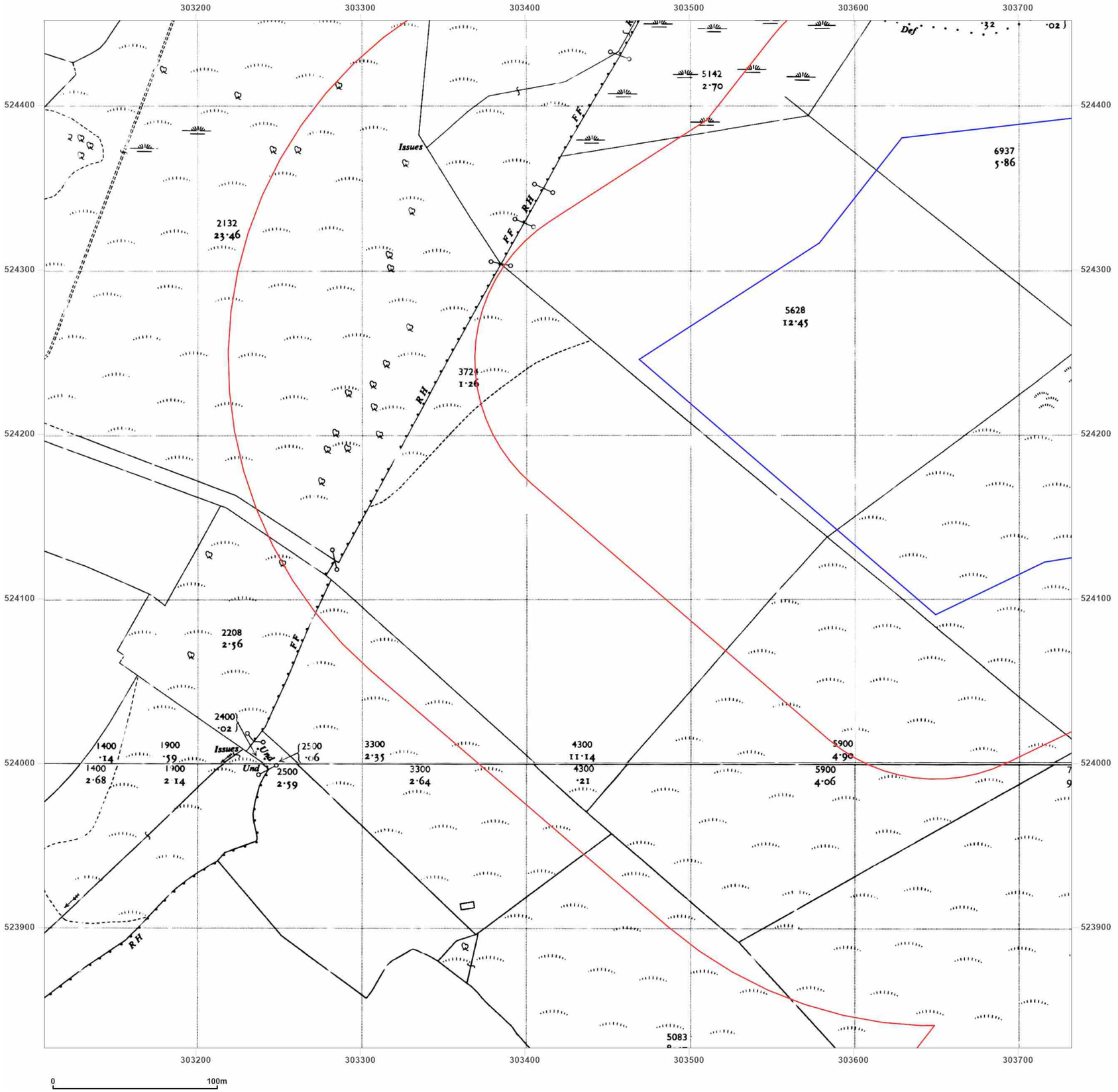

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
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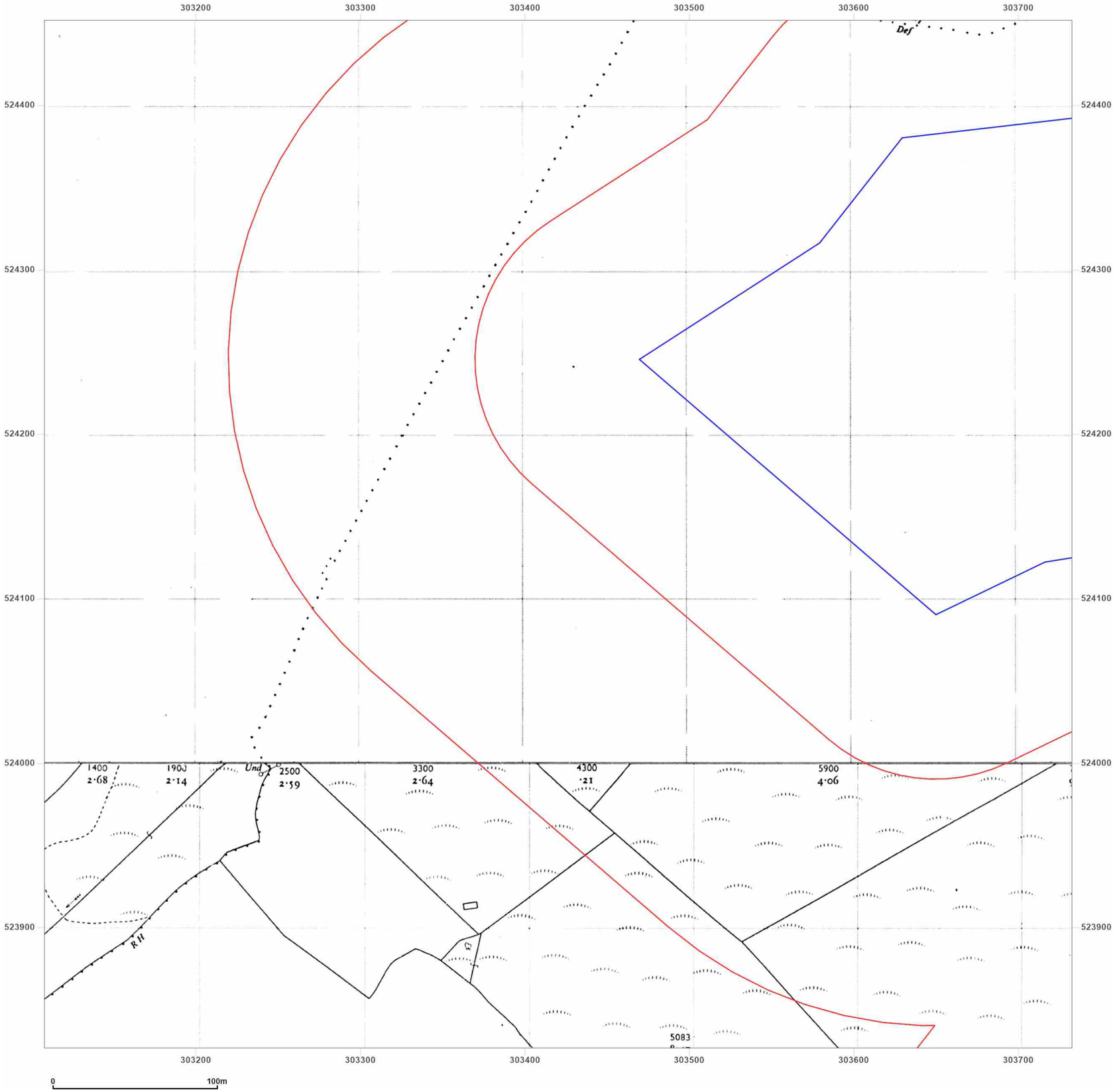

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: National Grid

Map date: **1985-1989**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1965
Revised 1989
Edition N/A
Copyright 1989
Levelled 1965

Surveyed 1965
Revised 1985
Edition N/A
Copyright 1985
Levelled 1965

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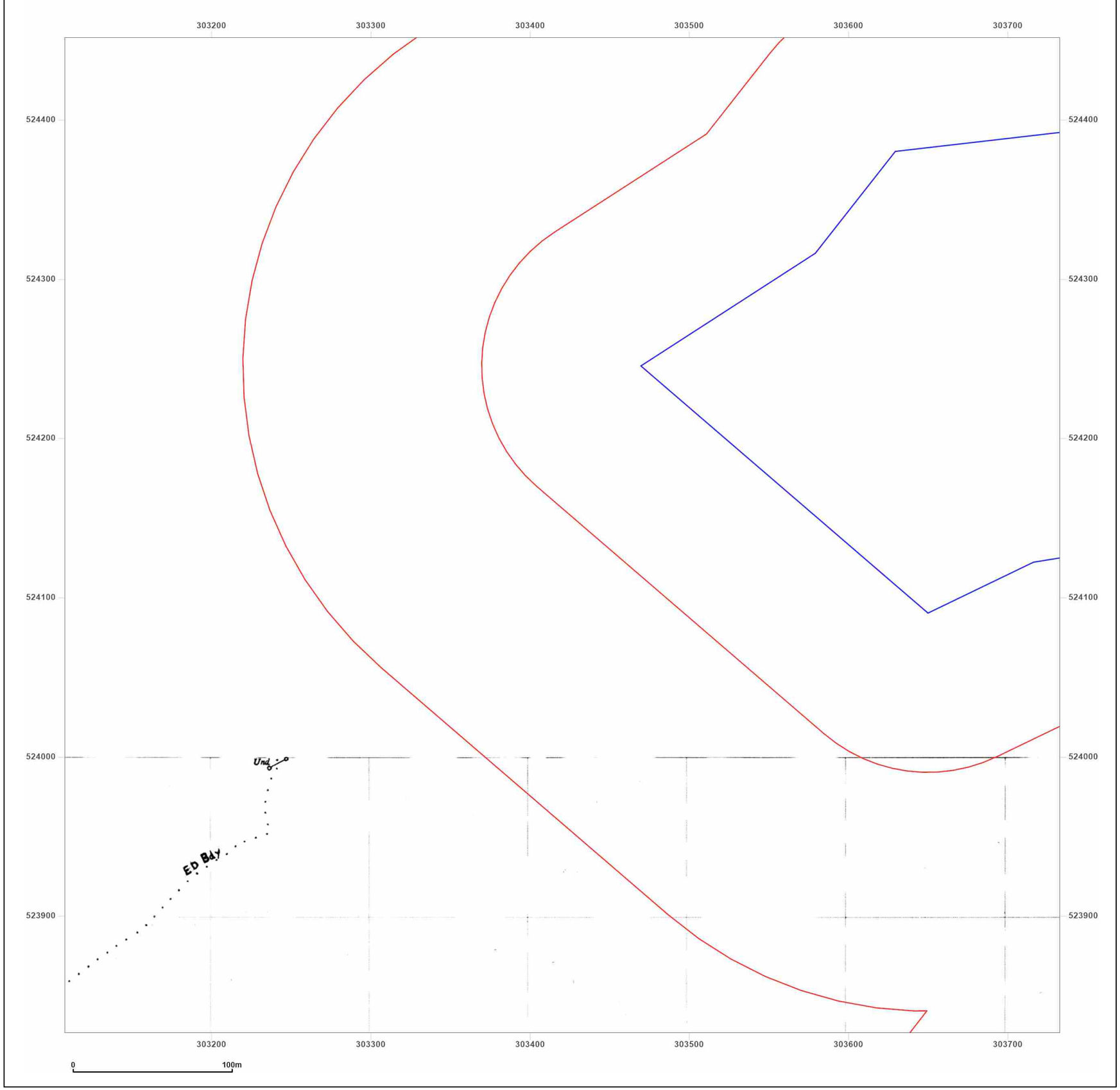

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: National Grid

Map date: **1990**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1965
Revised 1990
Edition N/A
Copyright 1990
Levelled 1965

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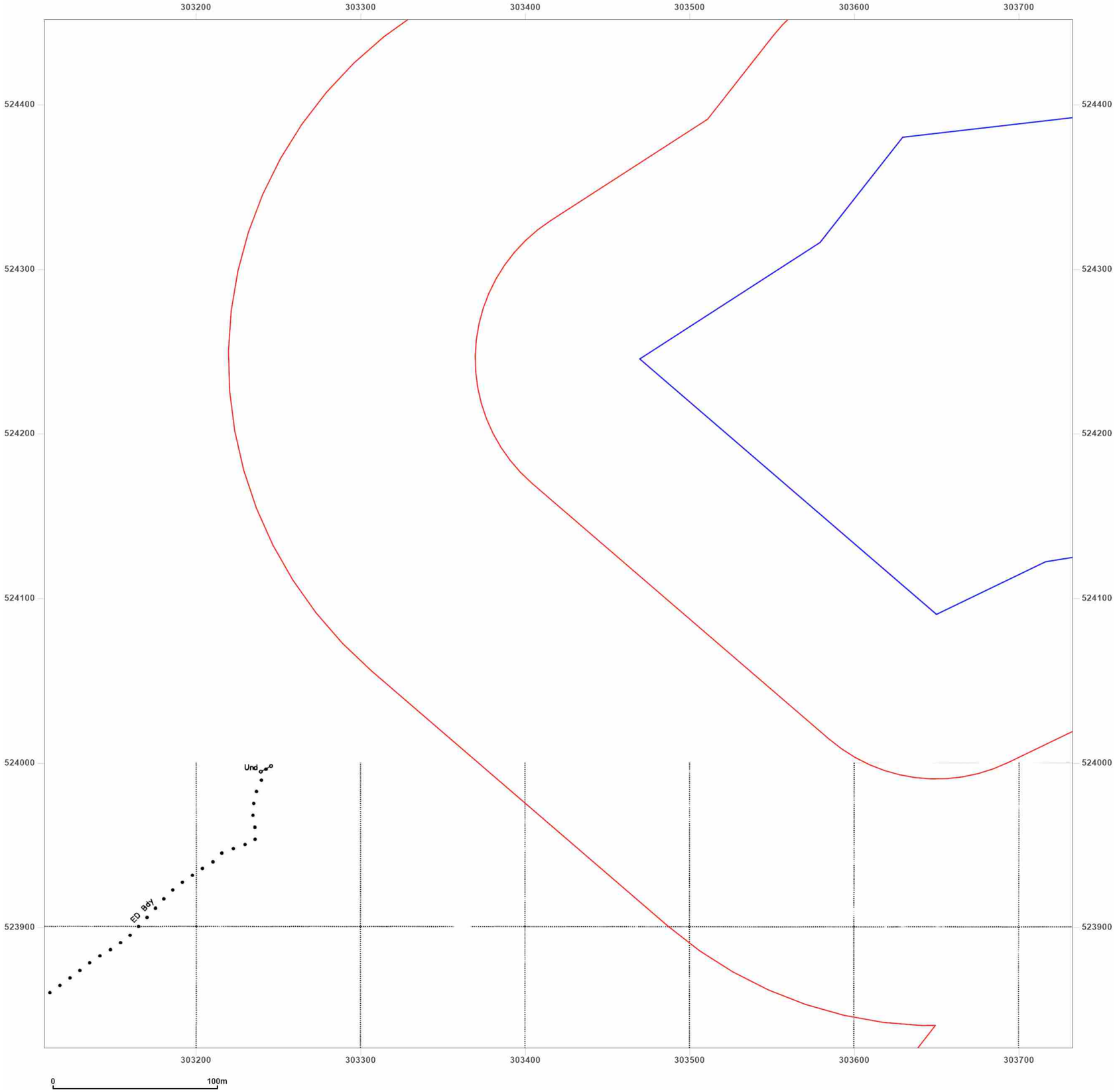

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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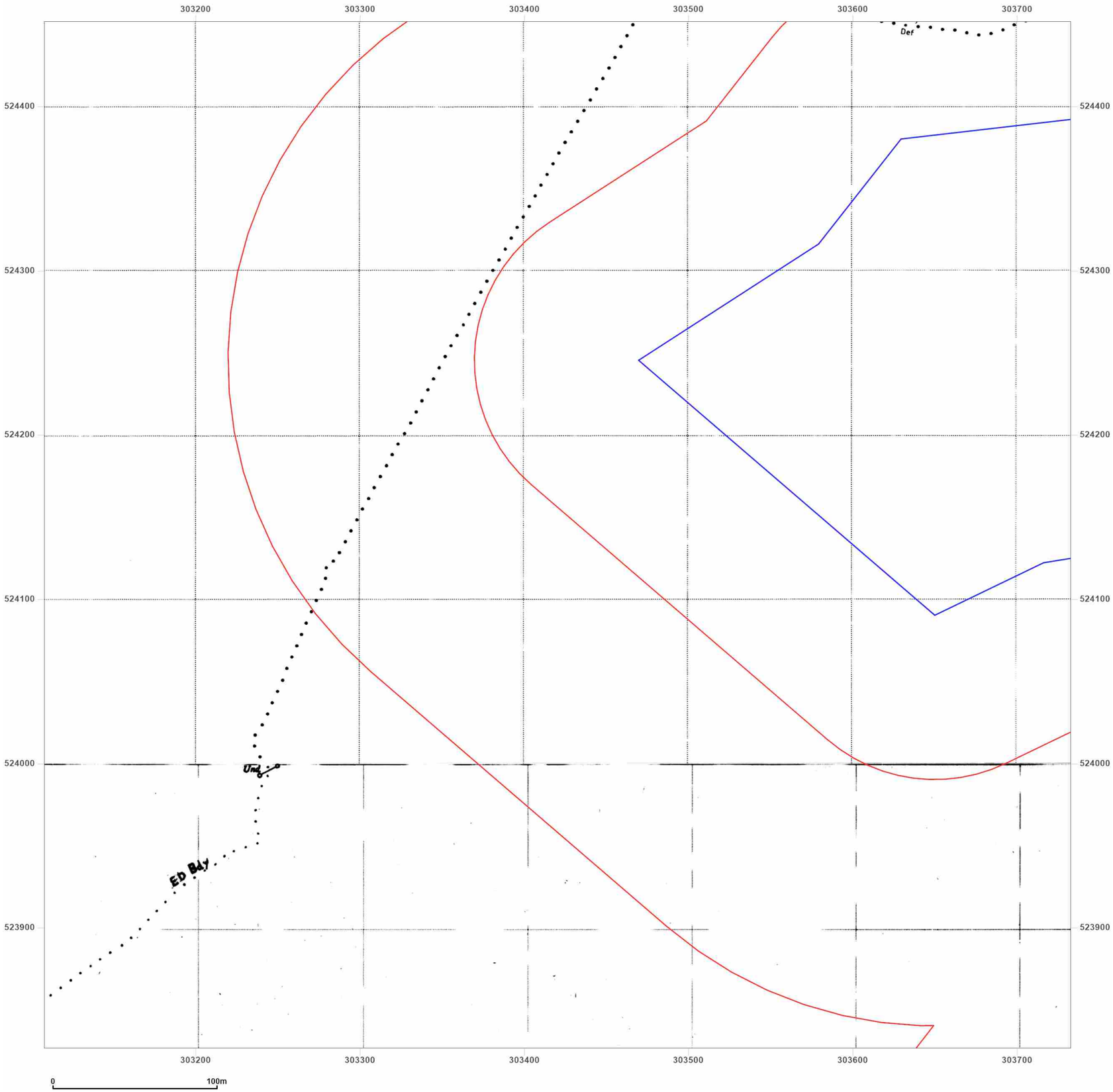

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_4
Grid Ref: 303420, 524139

Map Name: National Grid

Map date: **1990-1994**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1963
Revised 1990
Edition N/A
Copyright 1990
Levelled 1963

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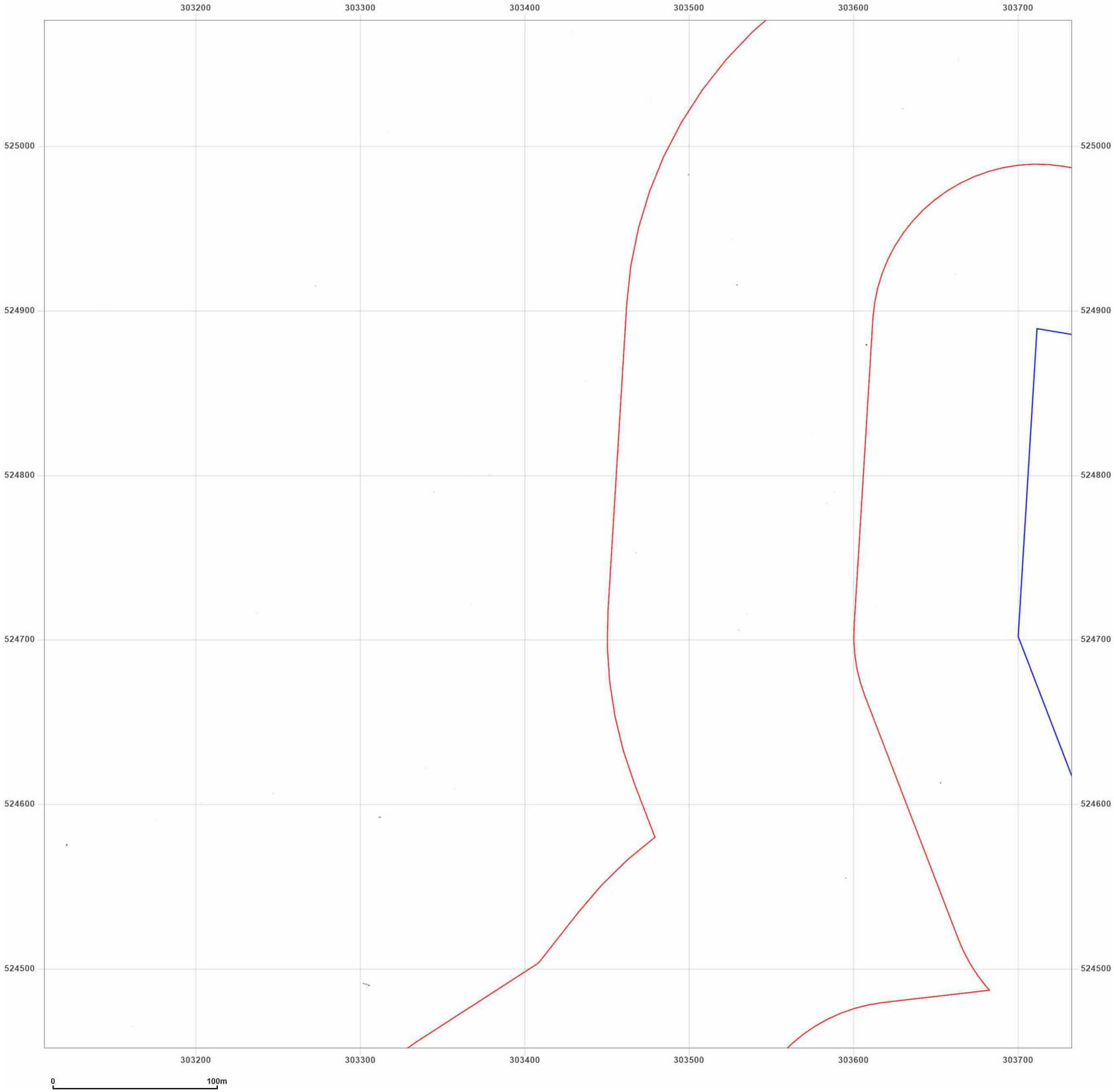


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_5
Grid Ref: 303420, 524764

Map Name: County Series

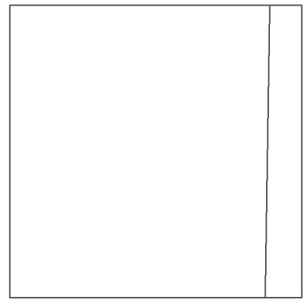
Map date: **1862**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A



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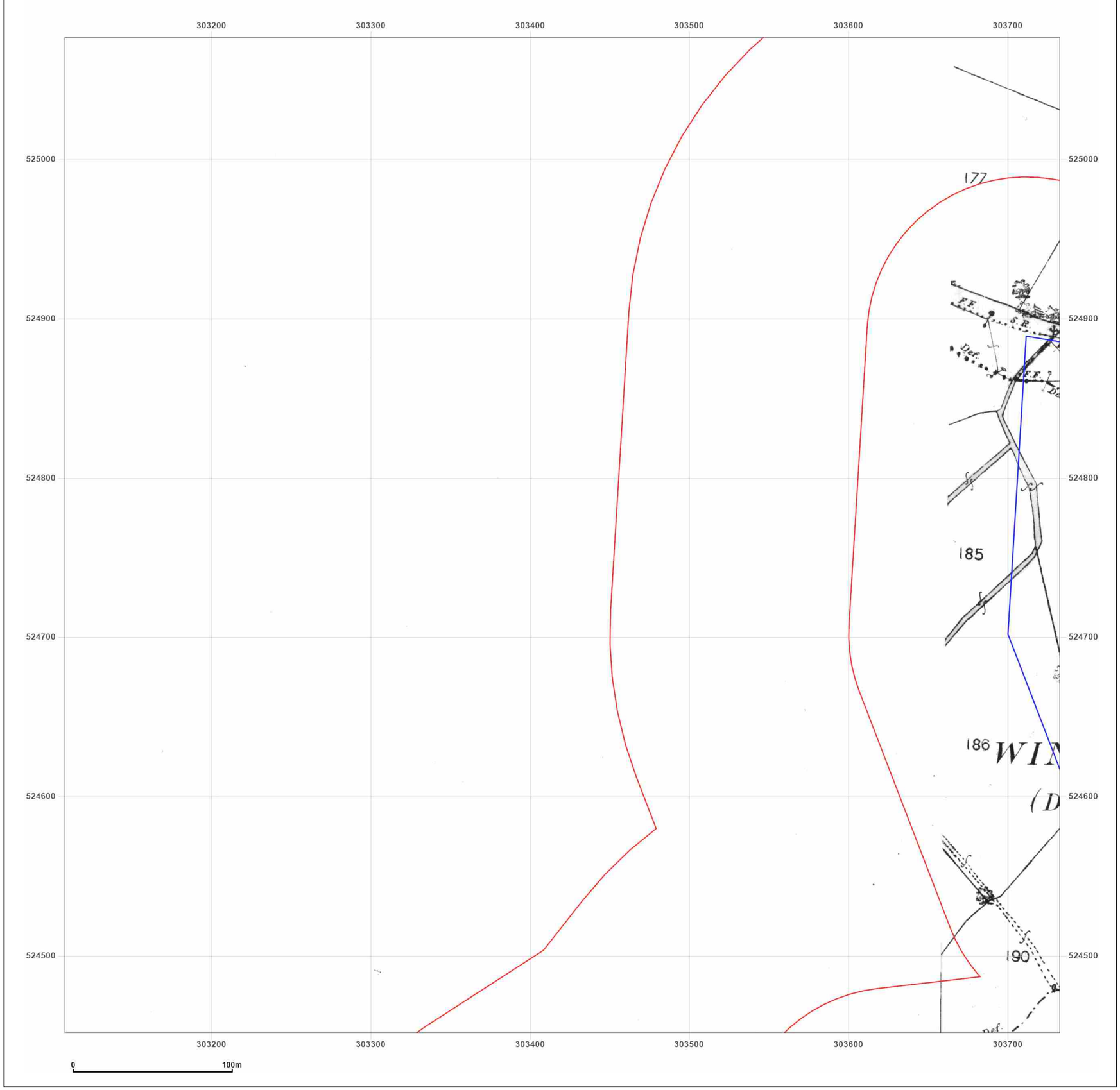

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_5
Grid Ref: 303420, 524764

Map Name: County Series

Map date: **1862-1864**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1864
Edition N/A
Copyright N/A
Levelled N/A

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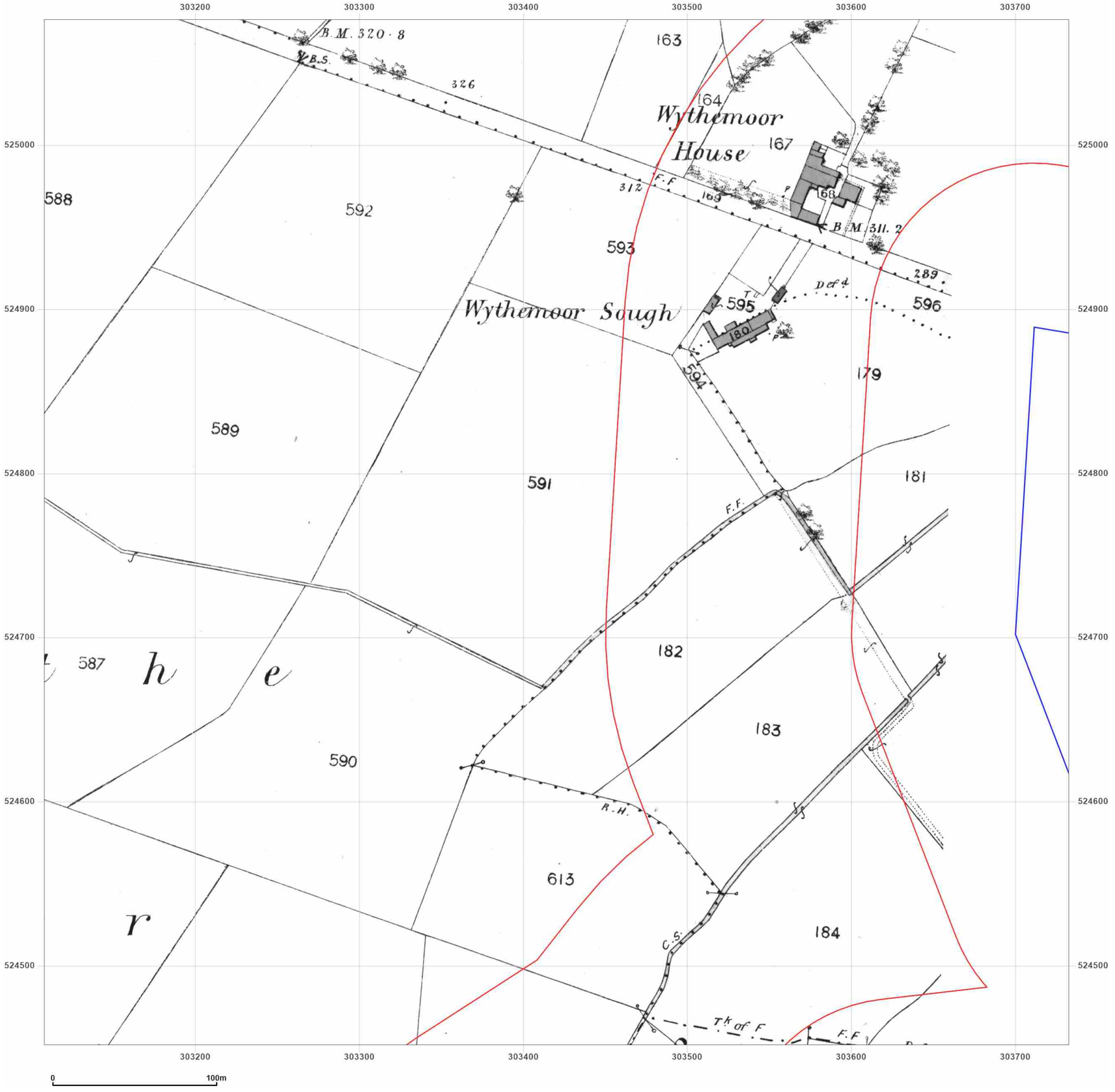


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_5
Grid Ref: 303420, 524764

Map Name: County Series

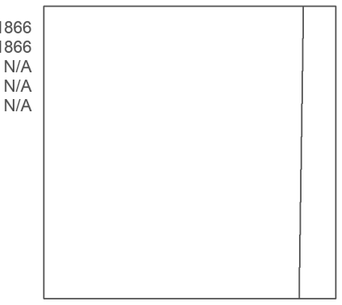
Map date: **1866**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1866
Revised 1866
Edition N/A
Copyright N/A
Levelled N/A



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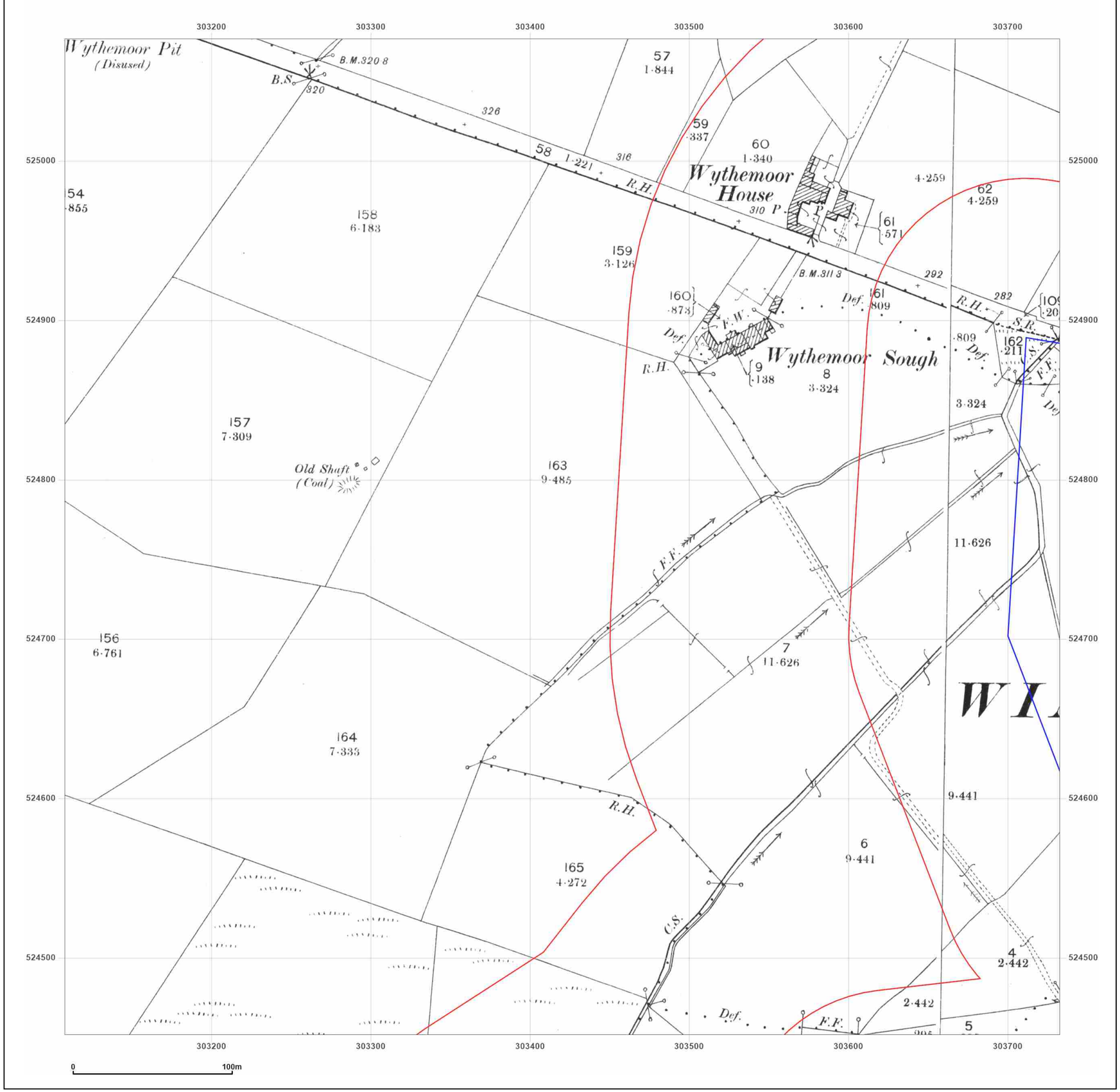


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_5
Grid Ref: 303420, 524764

Map Name: County Series

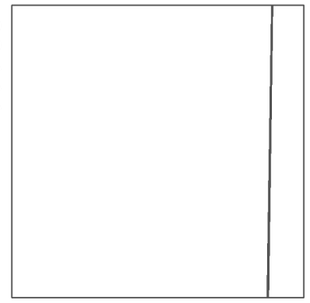
Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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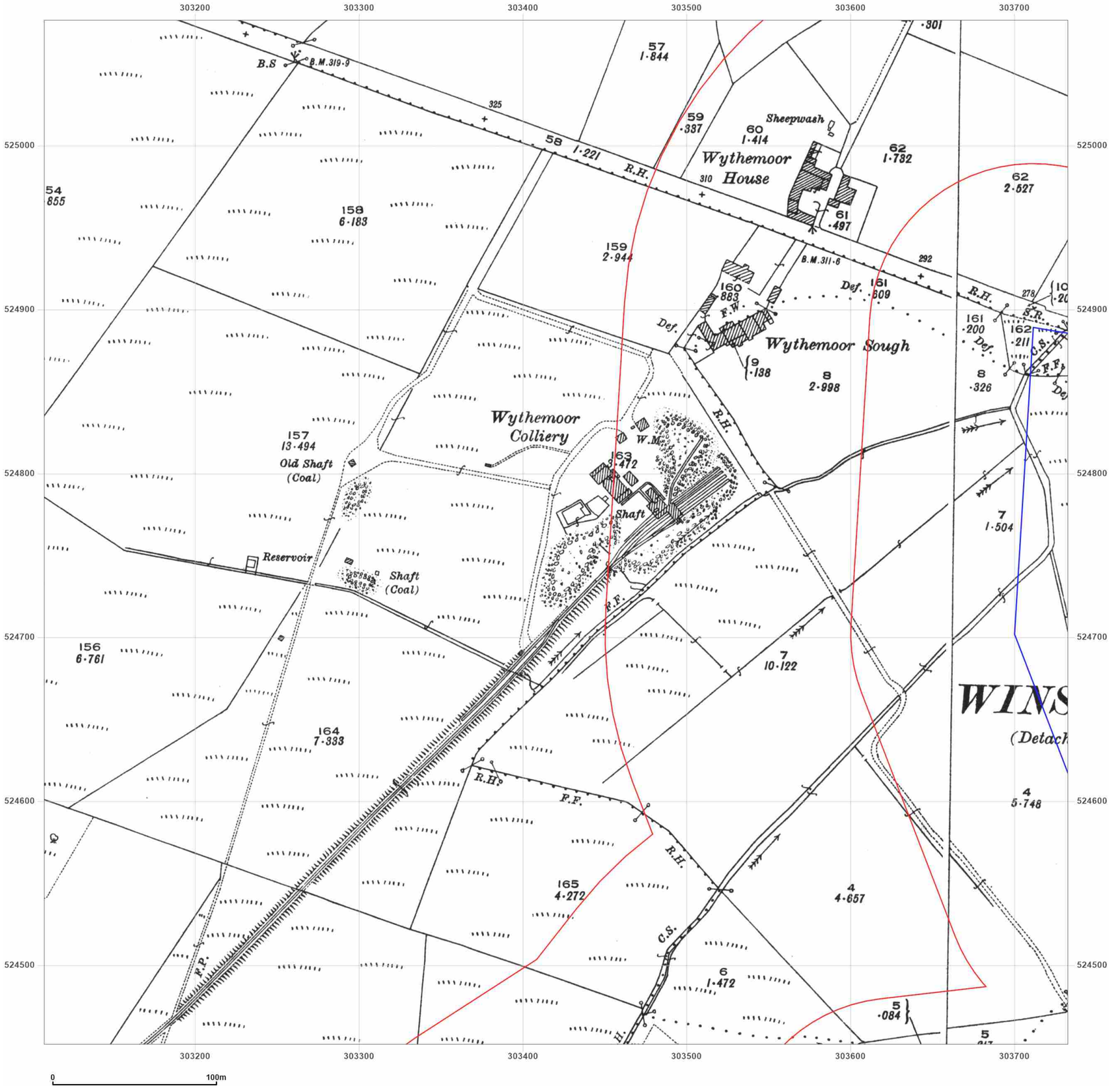

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_5
Grid Ref: 303420, 524764

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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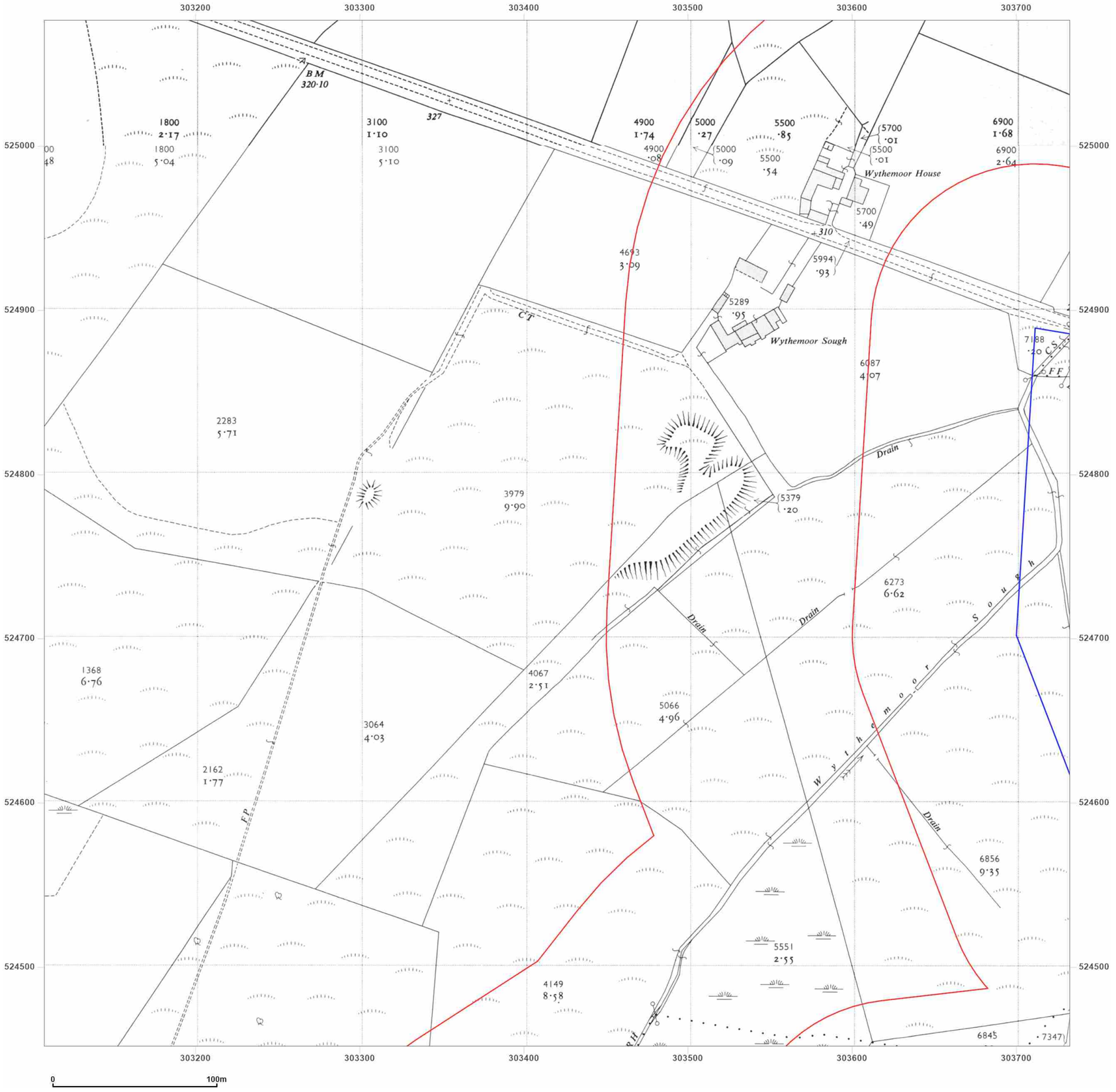

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_5
Grid Ref: 303420, 524764

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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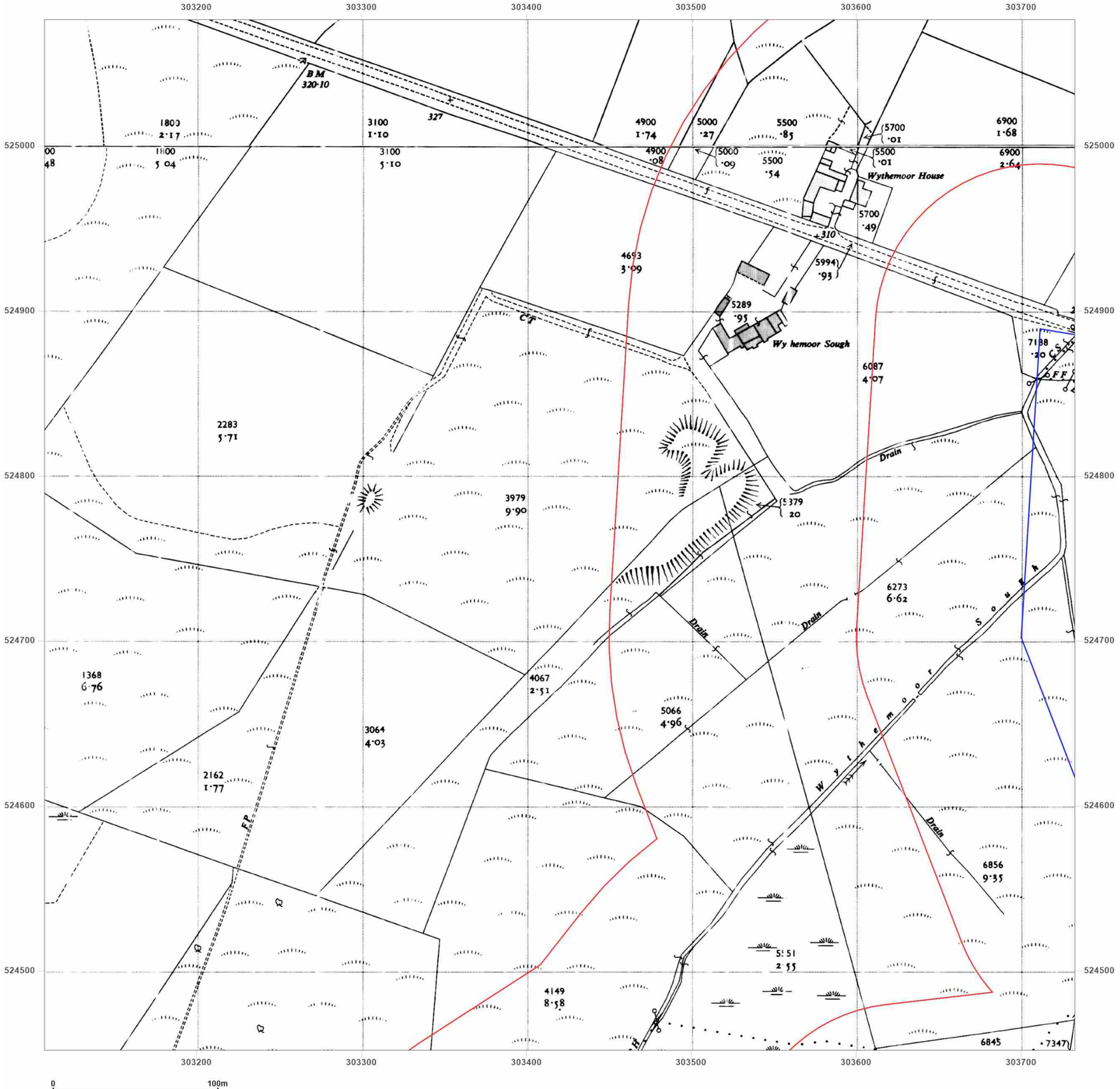

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_5
Grid Ref: 303420, 524764

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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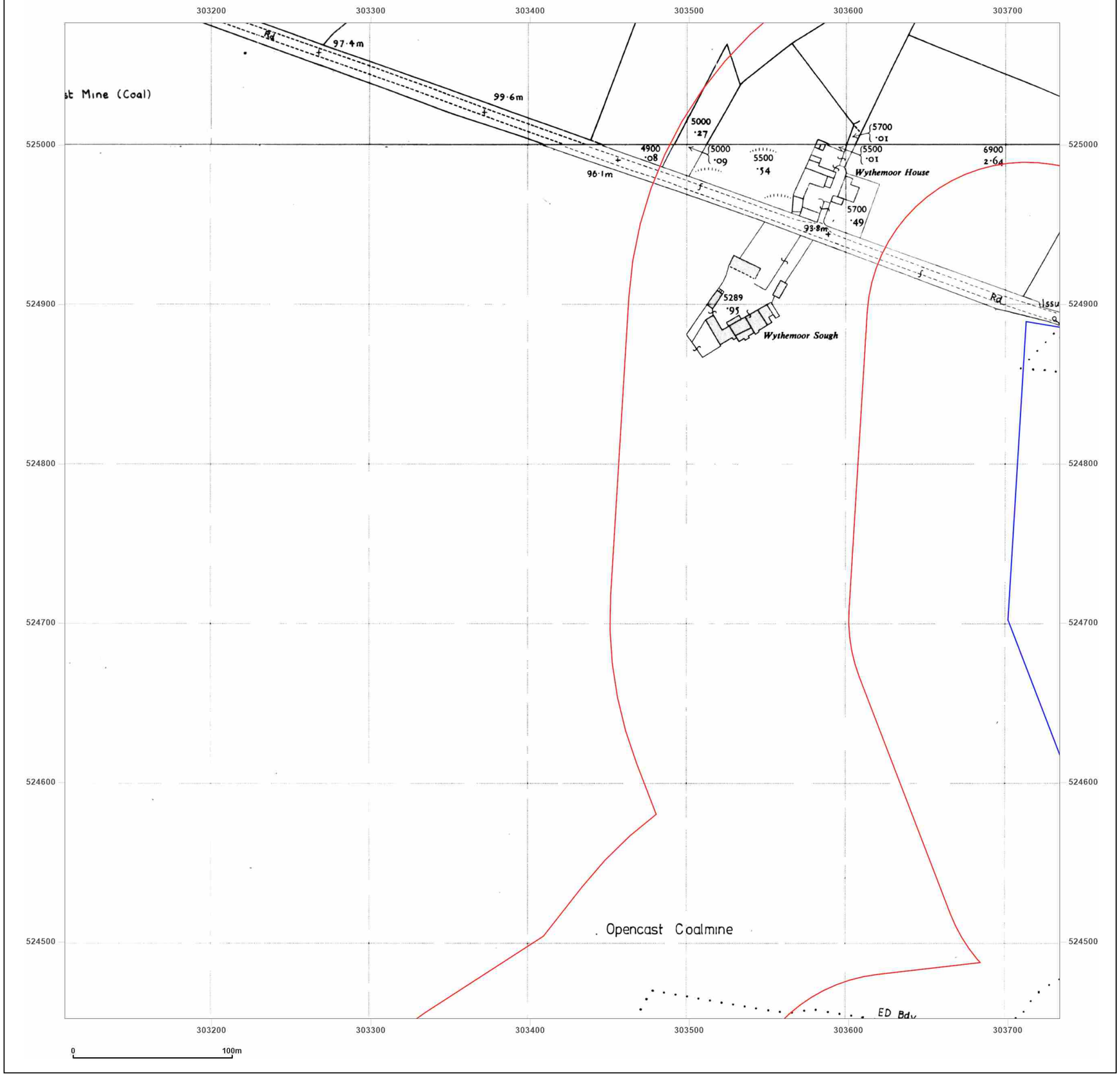

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_5
Grid Ref: 303420, 524764

Map Name: National Grid

Map date: **1989**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1965
Revised 1989
Edition N/A
Copyright 1989
Levelled 1965

Surveyed 1965
Revised 1989
Edition N/A
Copyright 1989
Levelled 1965

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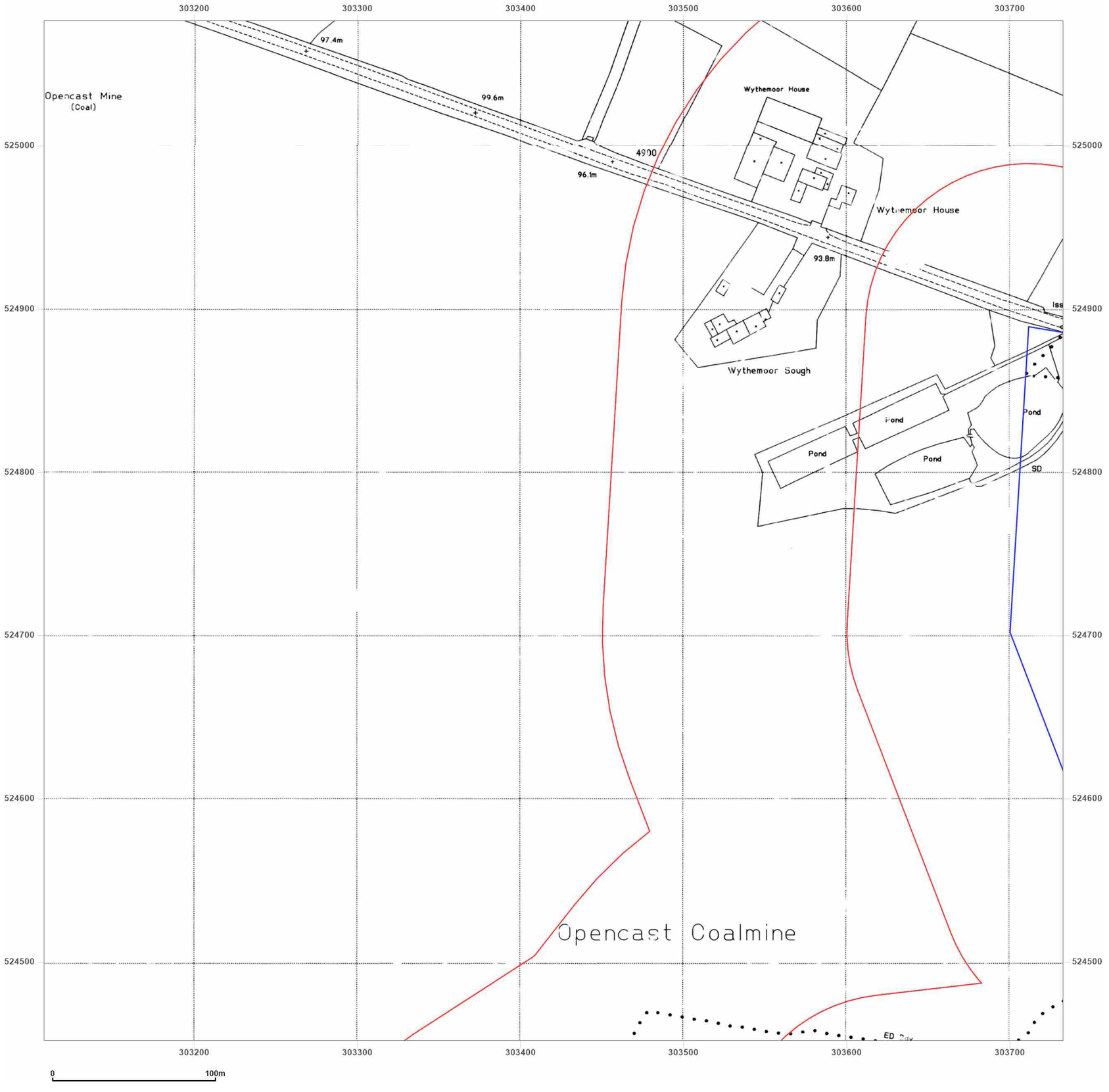

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_1_5
Grid Ref: 303420, 524764

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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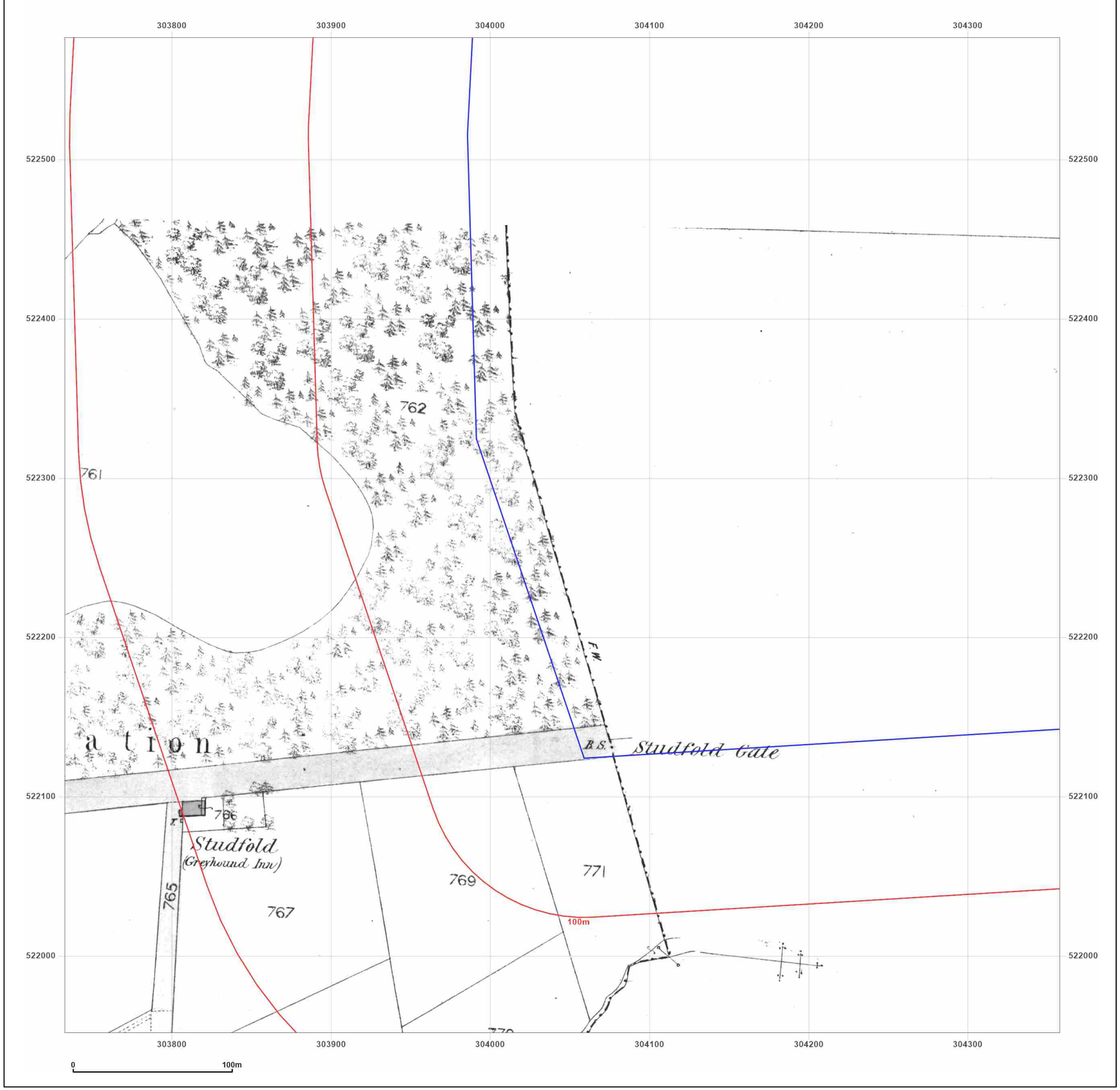

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_1
Grid Ref: 304045, 522264

Map Name: County Series

Map date: **1862**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 12 April 2023

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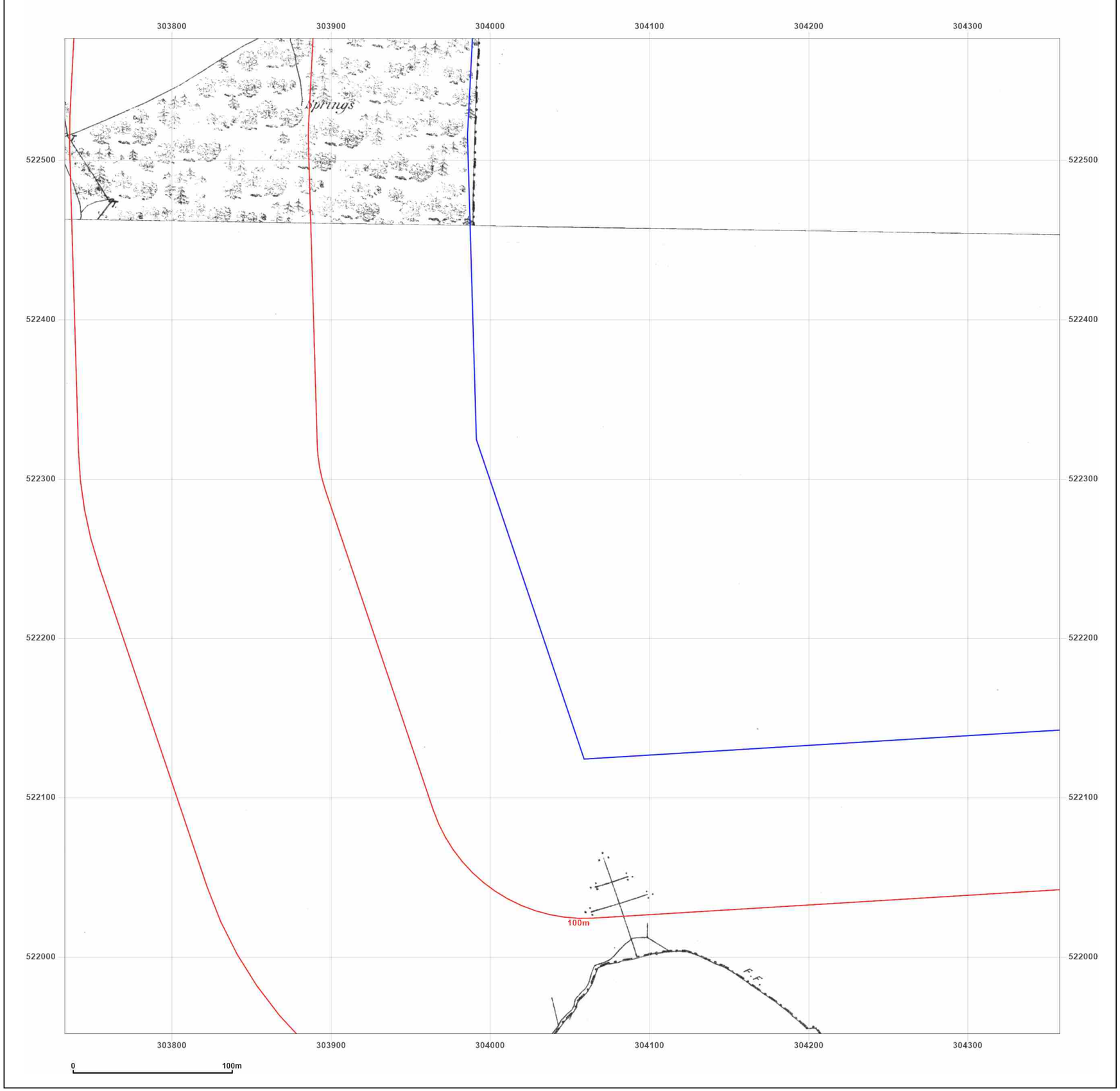


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_1
Grid Ref: 304045, 522264

Map Name: County Series

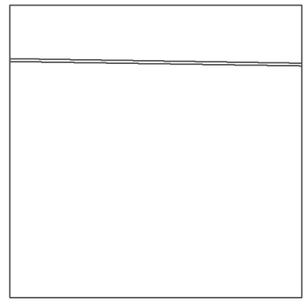
Map date: **1862-1864**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1864
Revised 1864
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 12 April 2023

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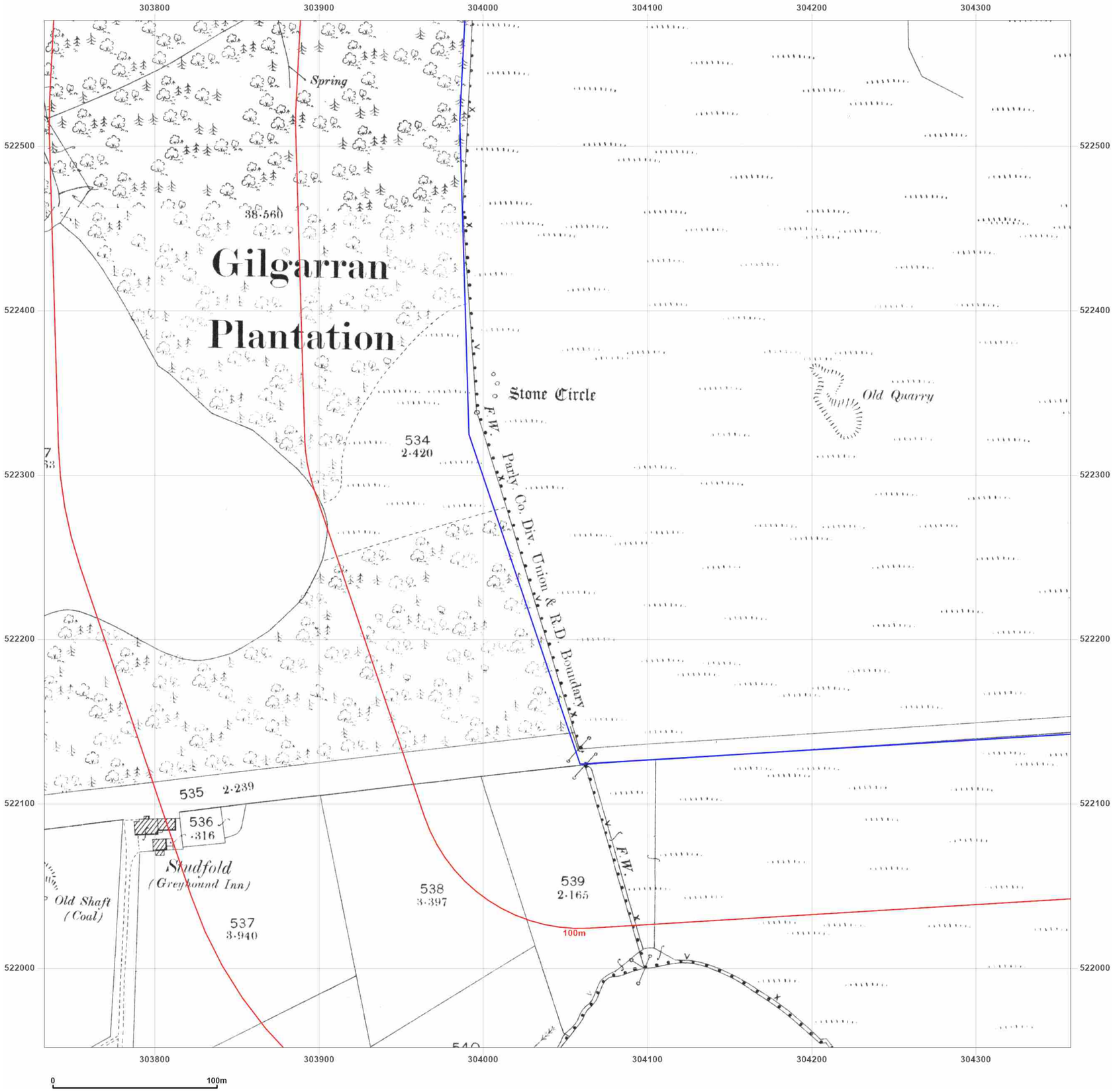


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_1
Grid Ref: 304045, 522264

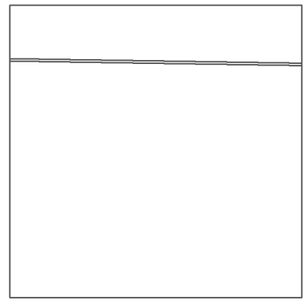
Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S



Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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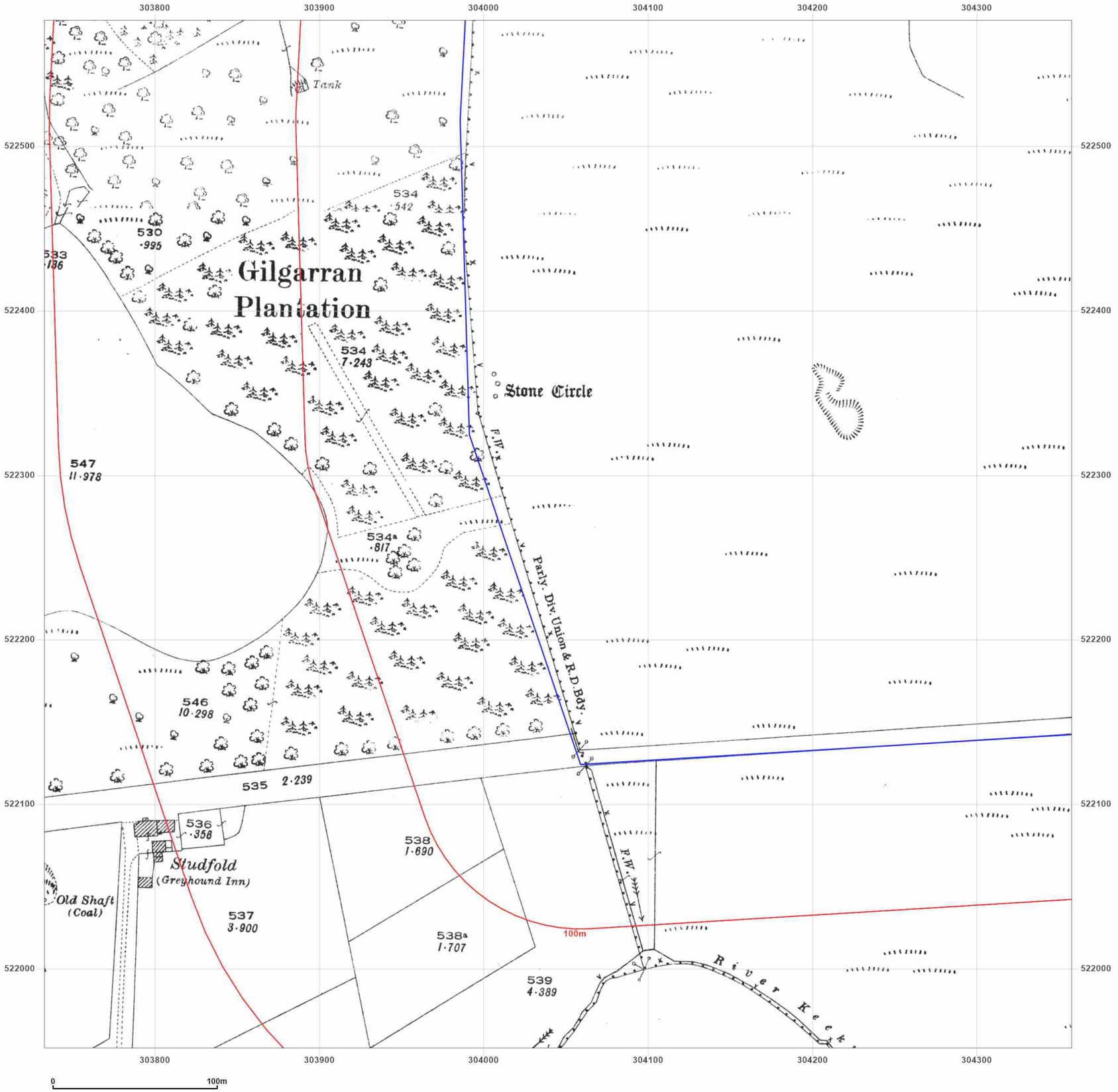


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_1
Grid Ref: 304045, 522264

Map Name: County Series

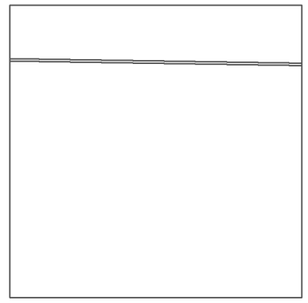
Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_1
Grid Ref: 304045, 522264

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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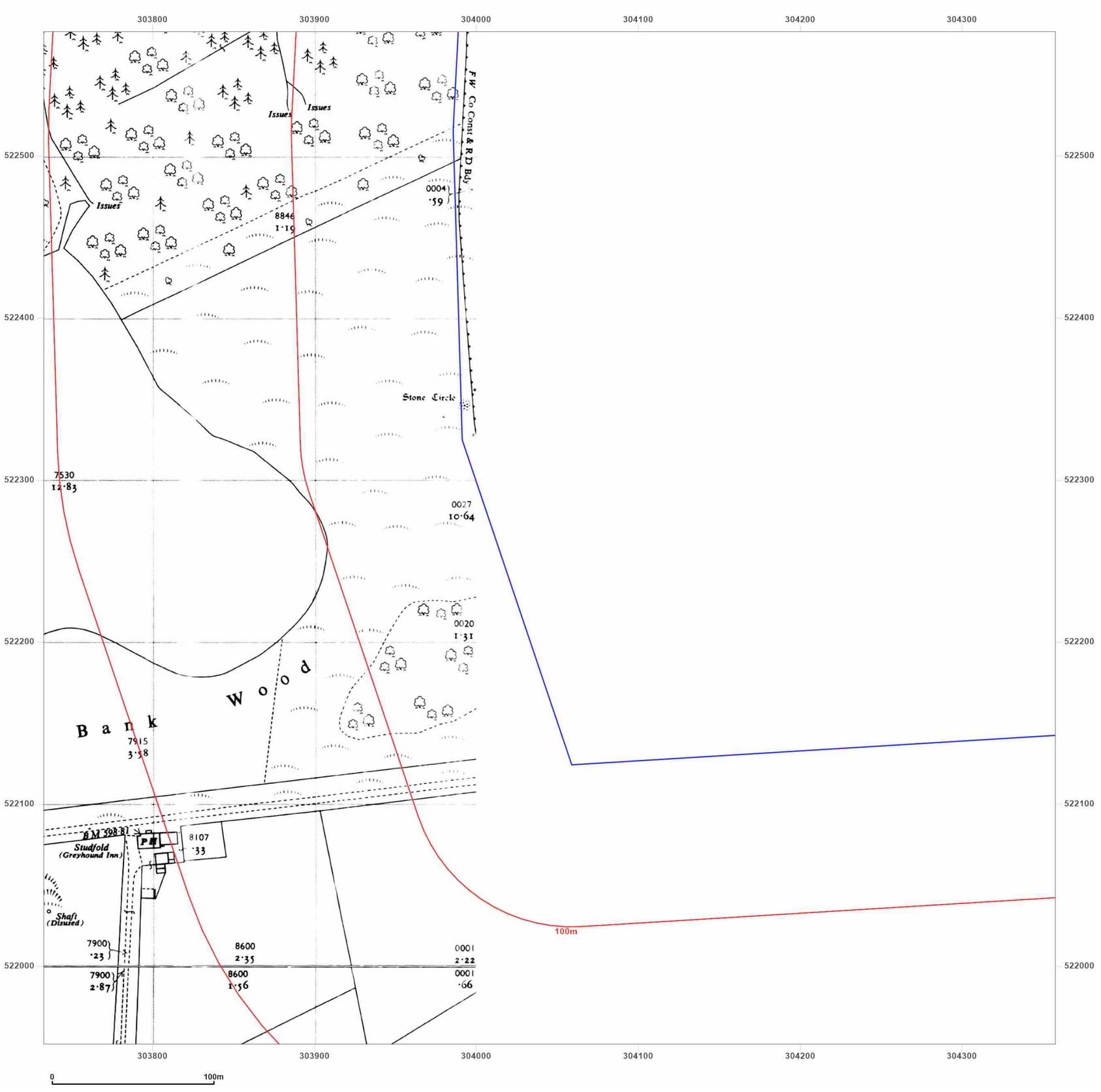


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_1
Grid Ref: 304045, 522264

Map Name: National Grid

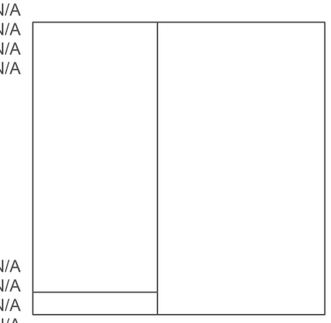
Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A



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Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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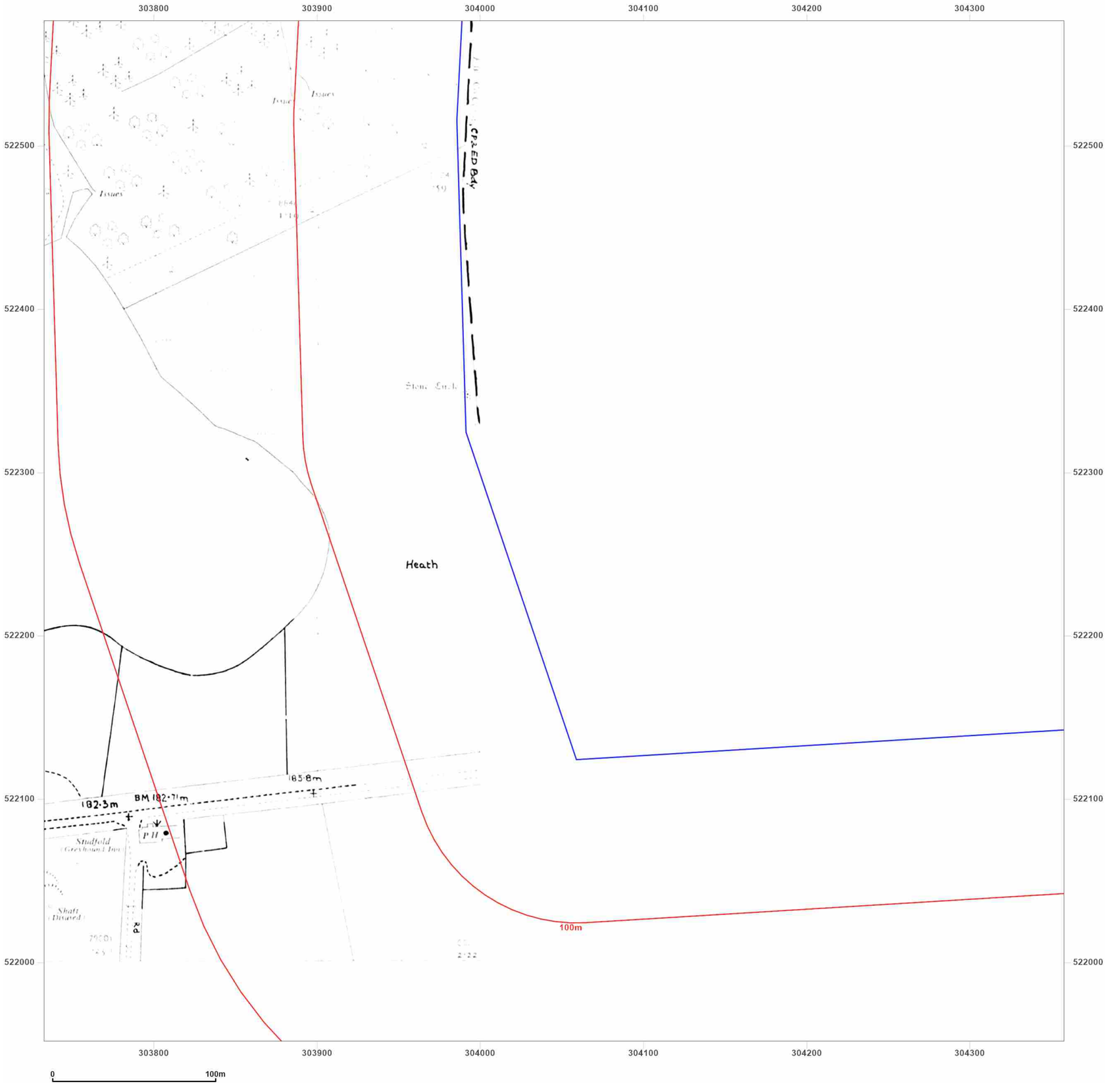


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_1
Grid Ref: 304045, 522264

Map Name: National Grid

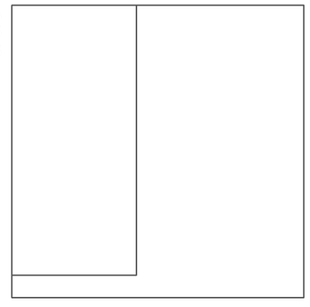
Map date: **1985**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1985
Levelled 1965



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Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_1
Grid Ref: 304045, 522264

Map Name: National Grid

Map date: **1993-1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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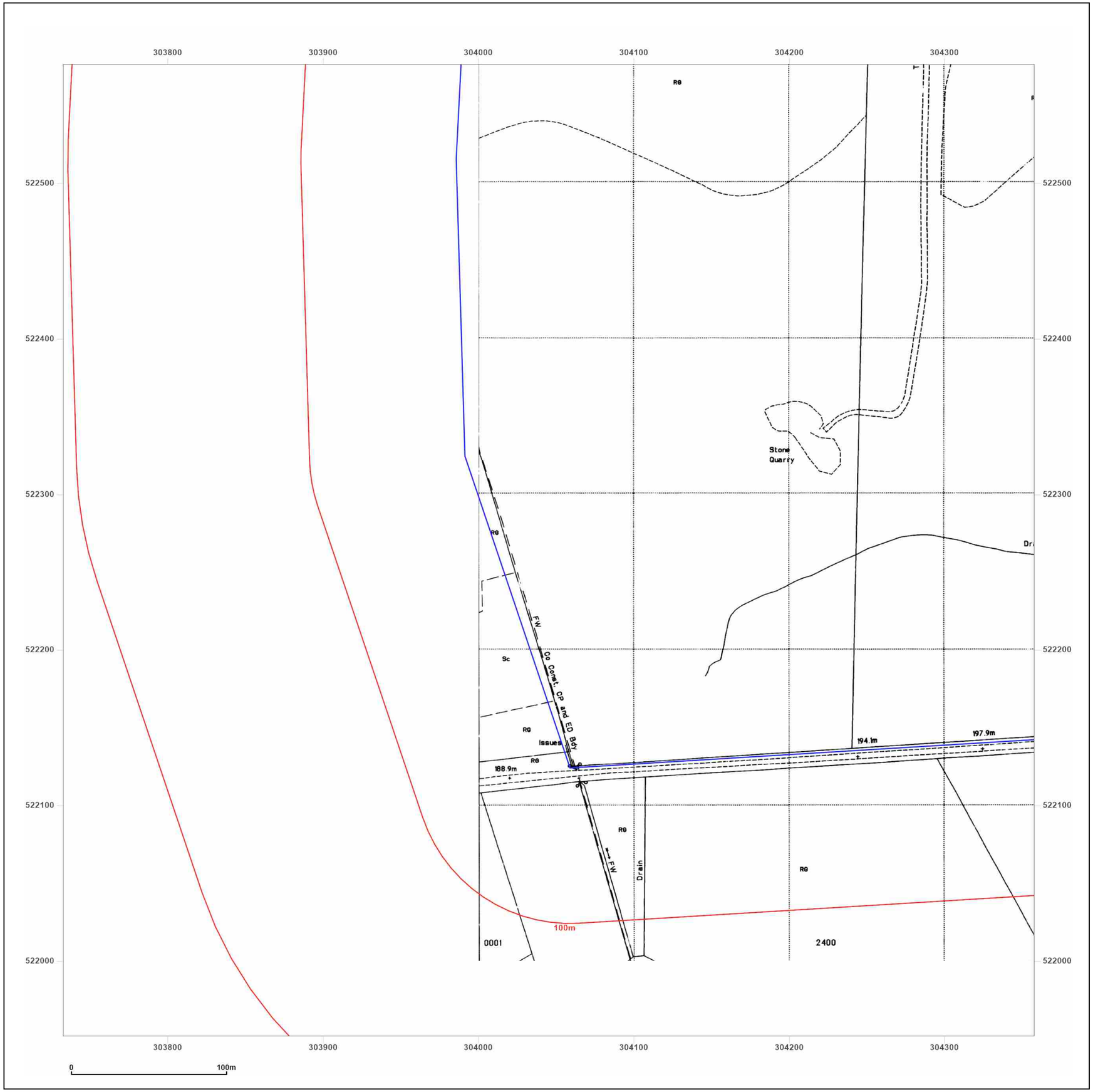


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_1
Grid Ref: 304045, 522264

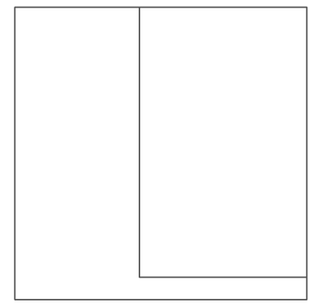
Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S



Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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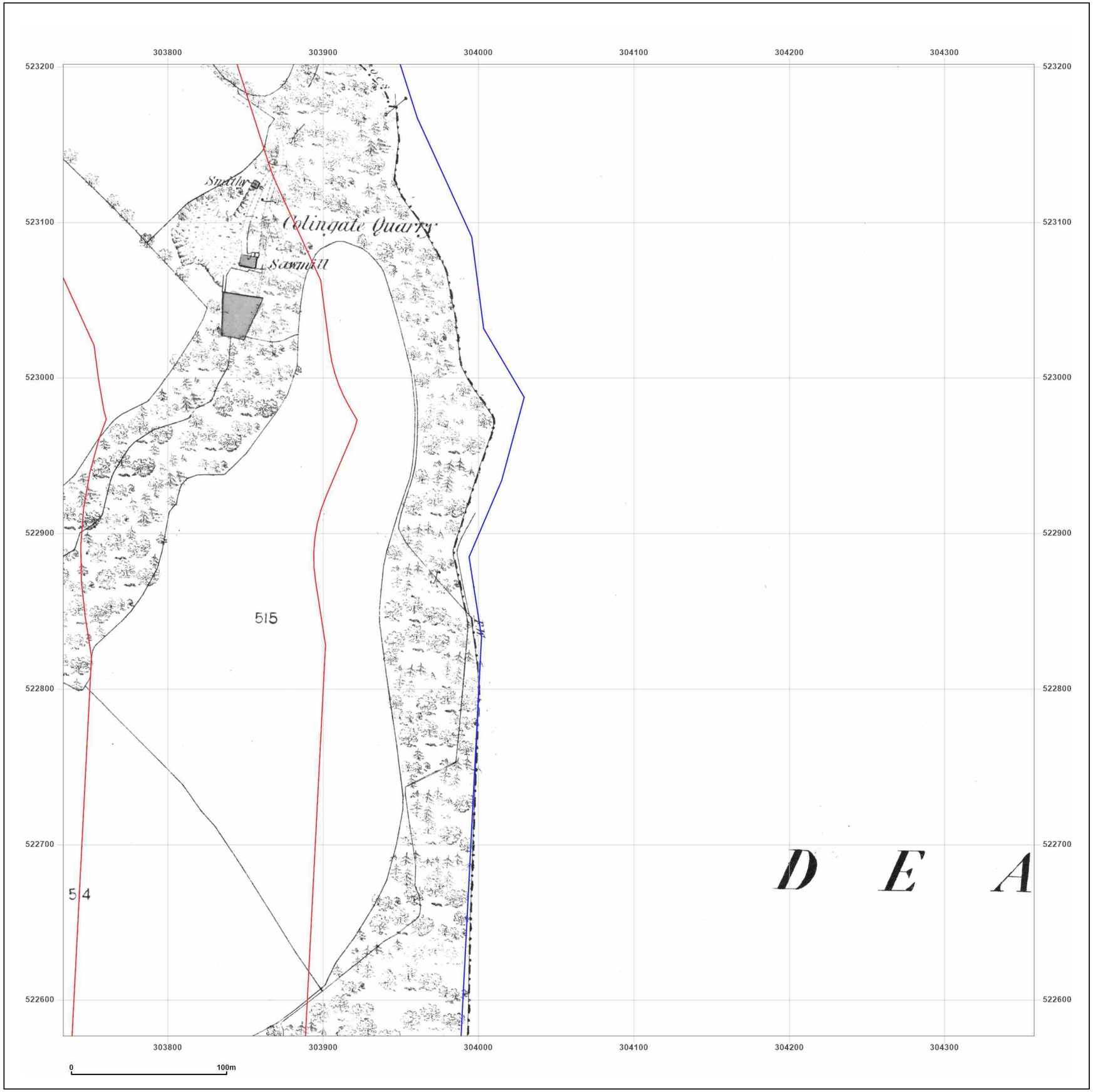

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_2
Grid Ref: 304045, 522889

Map Name: County Series

Map date: **1862**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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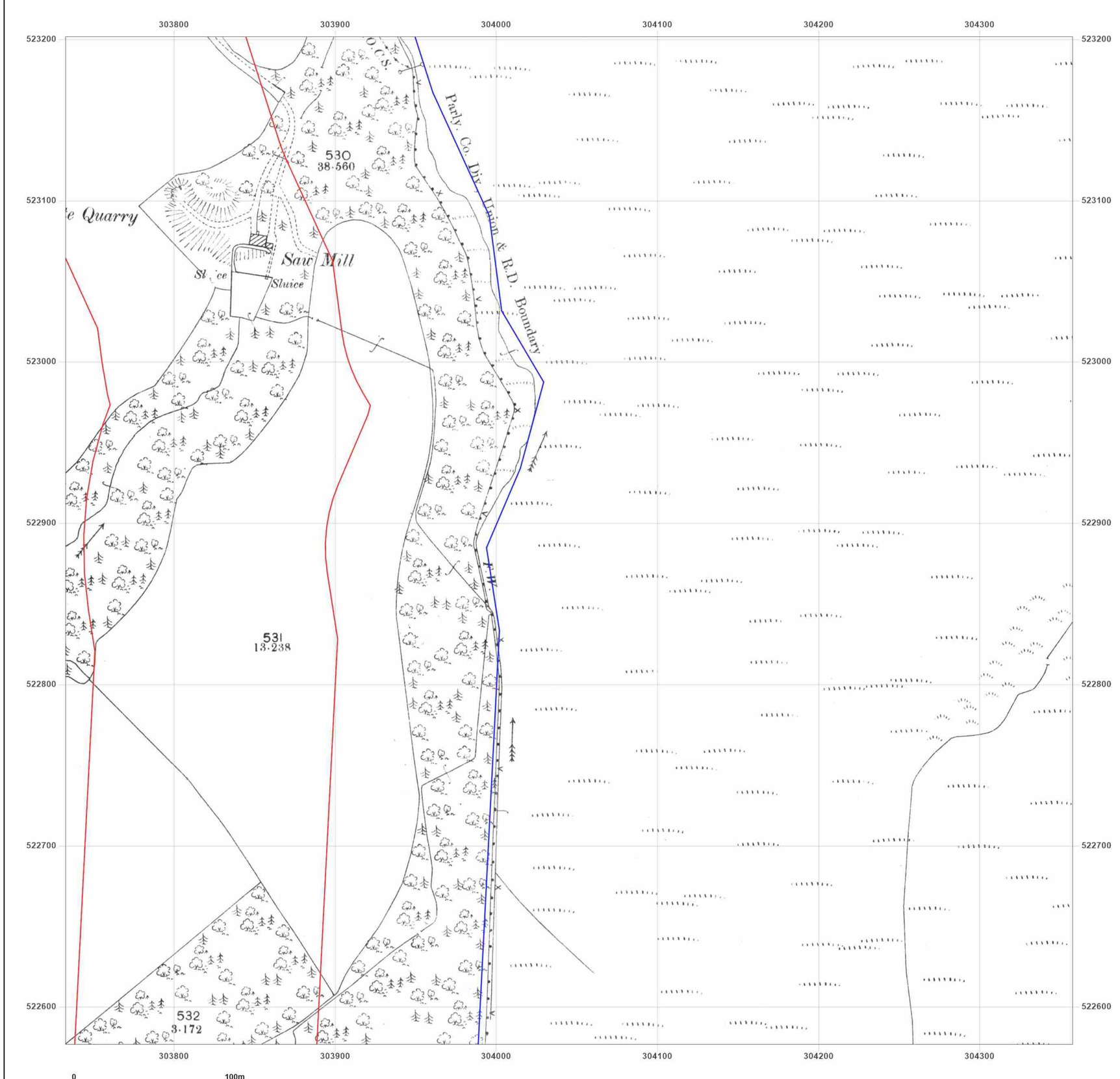

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_2
Grid Ref: 304045, 522889

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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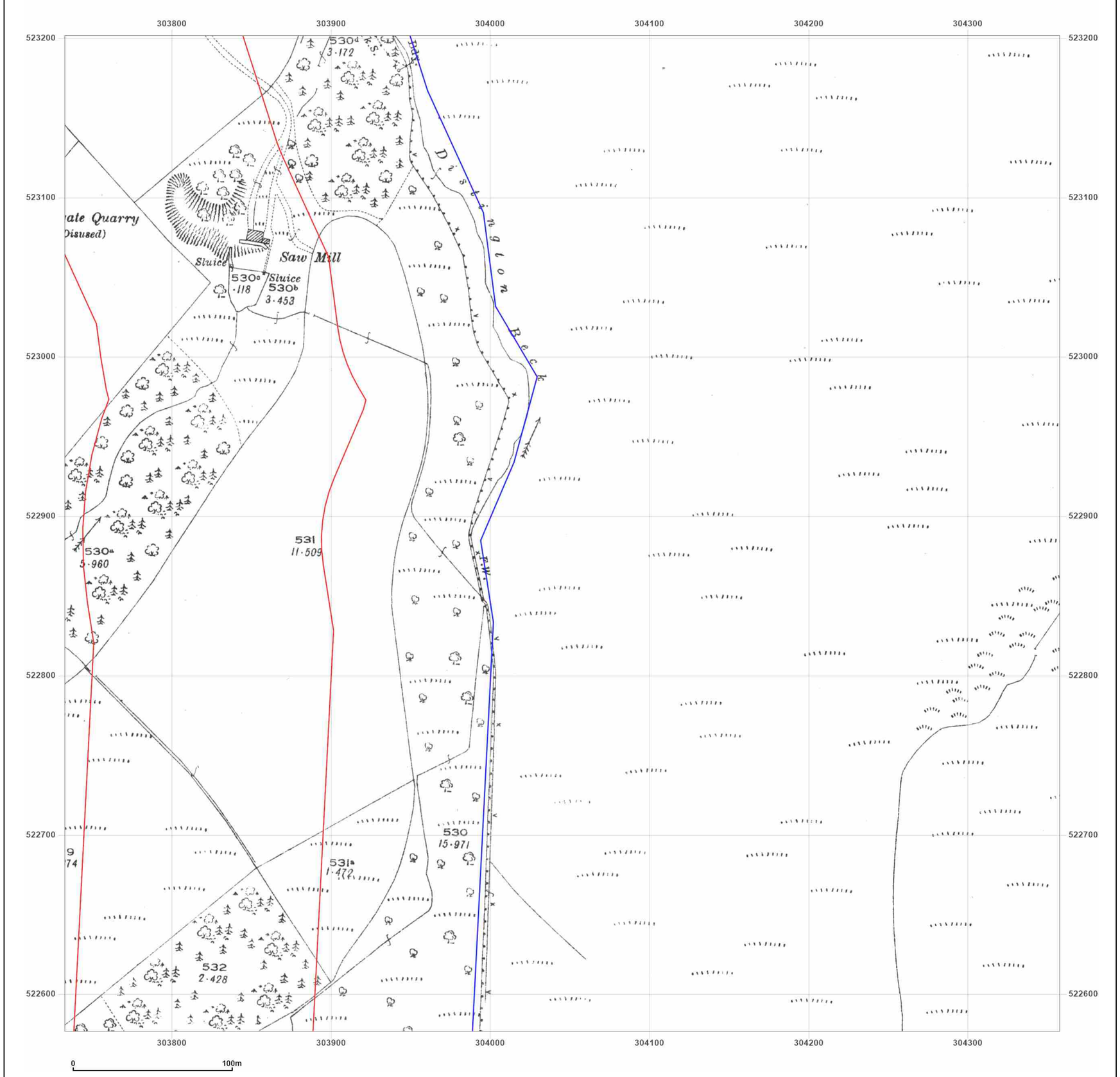

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_2
Grid Ref: 304045, 522889

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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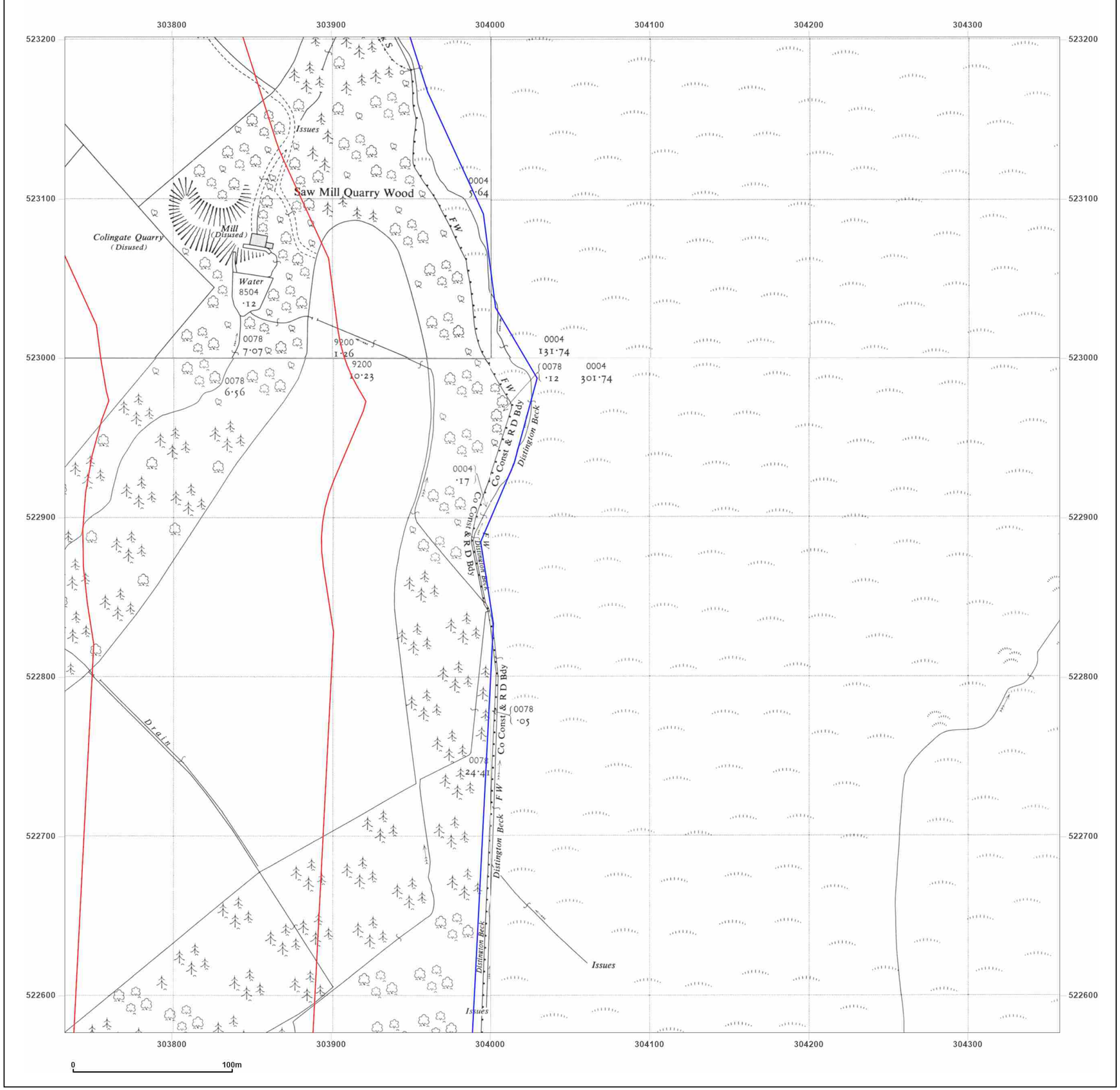

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_2
Grid Ref: 304045, 522889

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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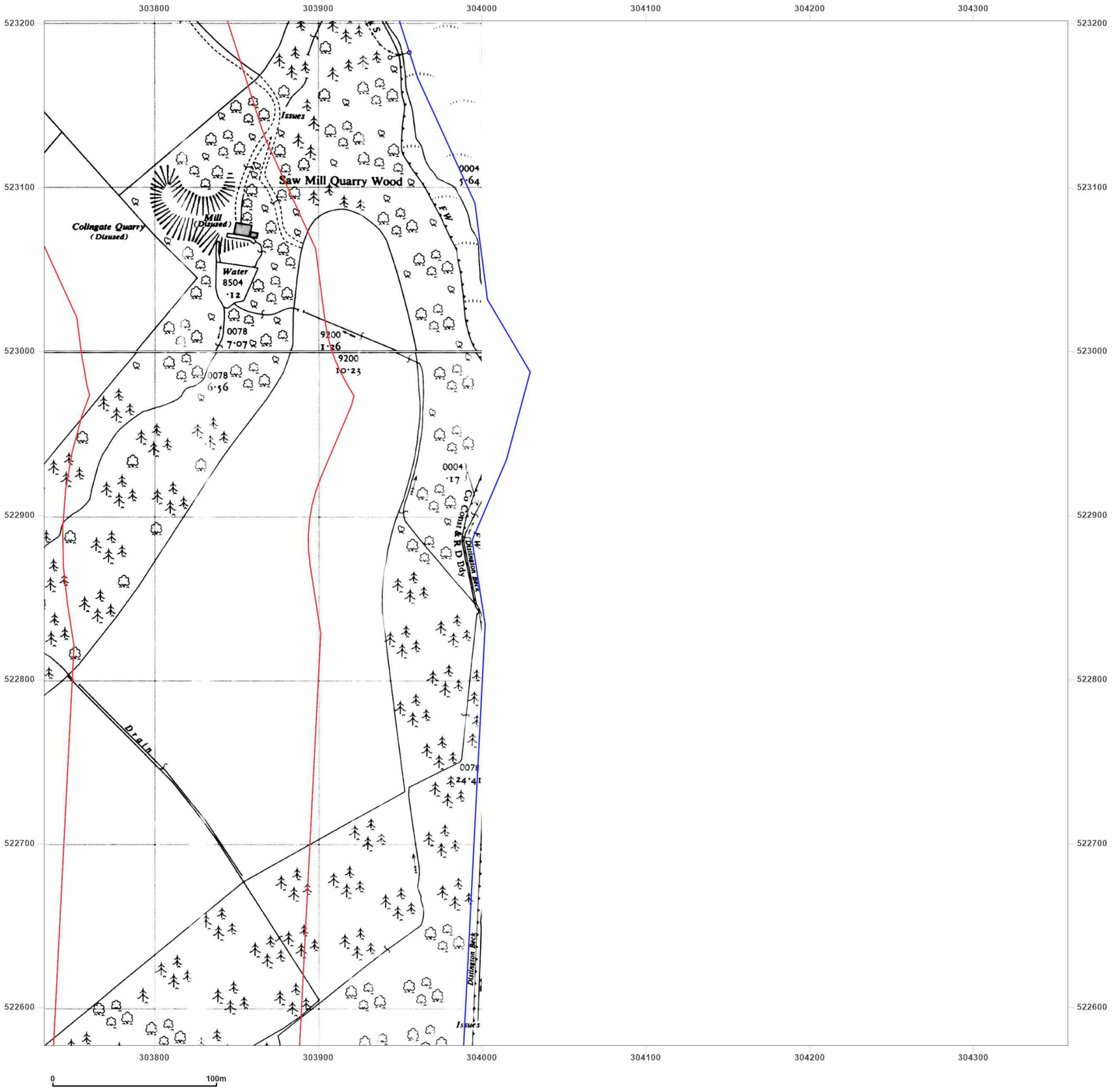


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_2
Grid Ref: 304045, 522889

Map Name: National Grid

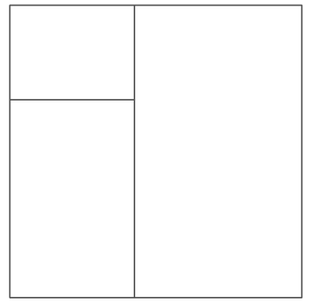
Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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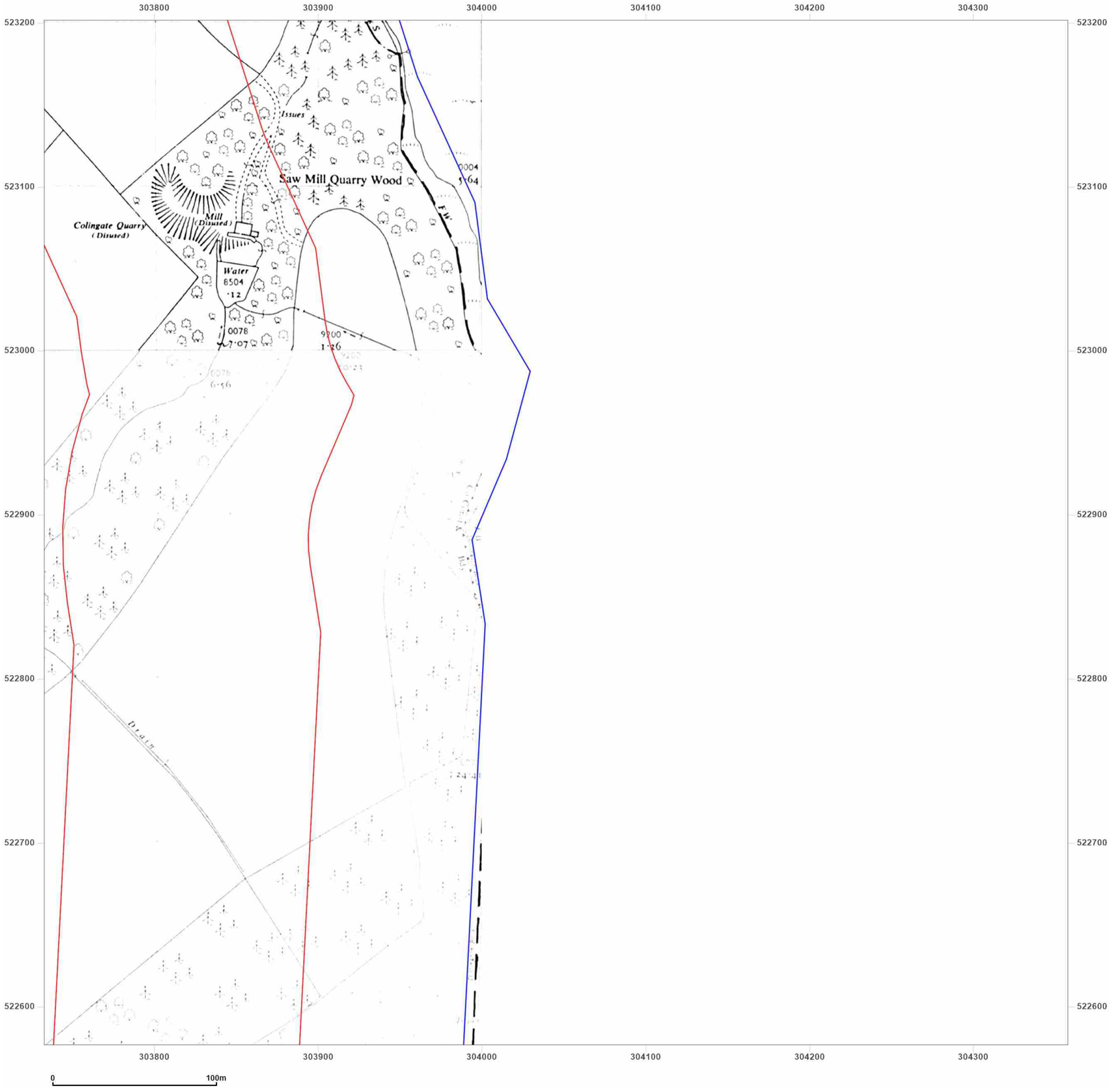

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_2
Grid Ref: 304045, 522889

Map Name: National Grid

Map date: **1985**

Scale: 1:2,500

Printed at: 1:2,500

N
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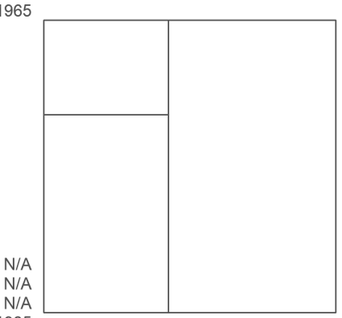
Surveyed 1965
Revised 1985
Edition N/A
Copyright 1985
Levelled 1965



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1985
Levelled 1965

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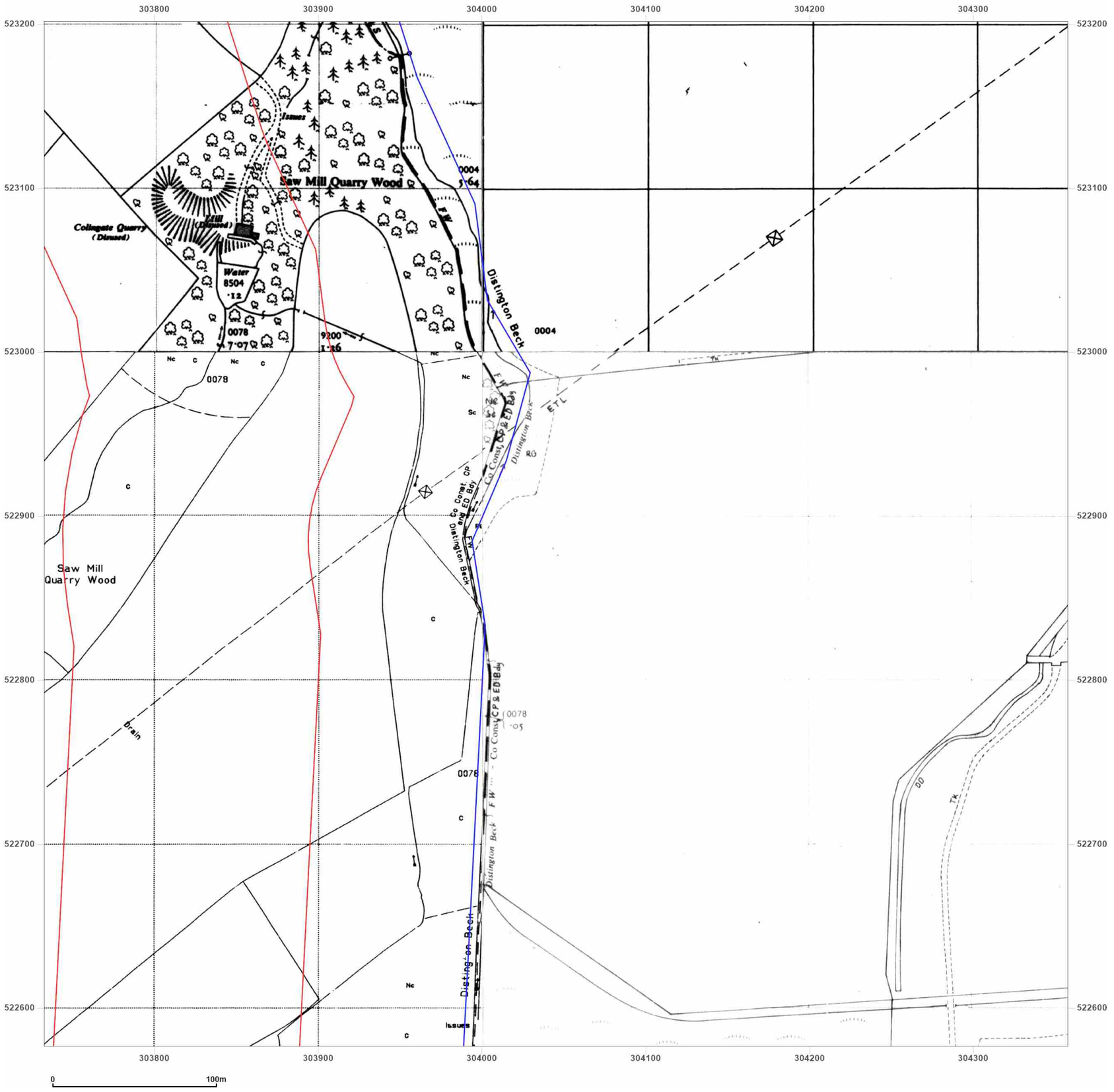

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_2
Grid Ref: 304045, 522889

Map Name: National Grid

Map date: **1990-1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1963 Revised 1990 Edition N/A Copyright 1990 Levelled 1963	Surveyed 1991 Revised 1991 Edition N/A Copyright 1991 Levelled N/A
Surveyed 1994 Revised N/A Edition N/A Copyright 1994 Levelled N/A	Surveyed 1993 Revised 1993 Edition N/A Copyright 1993 Levelled N/A

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Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_2
Grid Ref: 304045, 522889

Map Name: National Grid

Map date: **1990-1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1965
Revised 1990
Edition N/A
Copyright 1990
Levelled 1965

Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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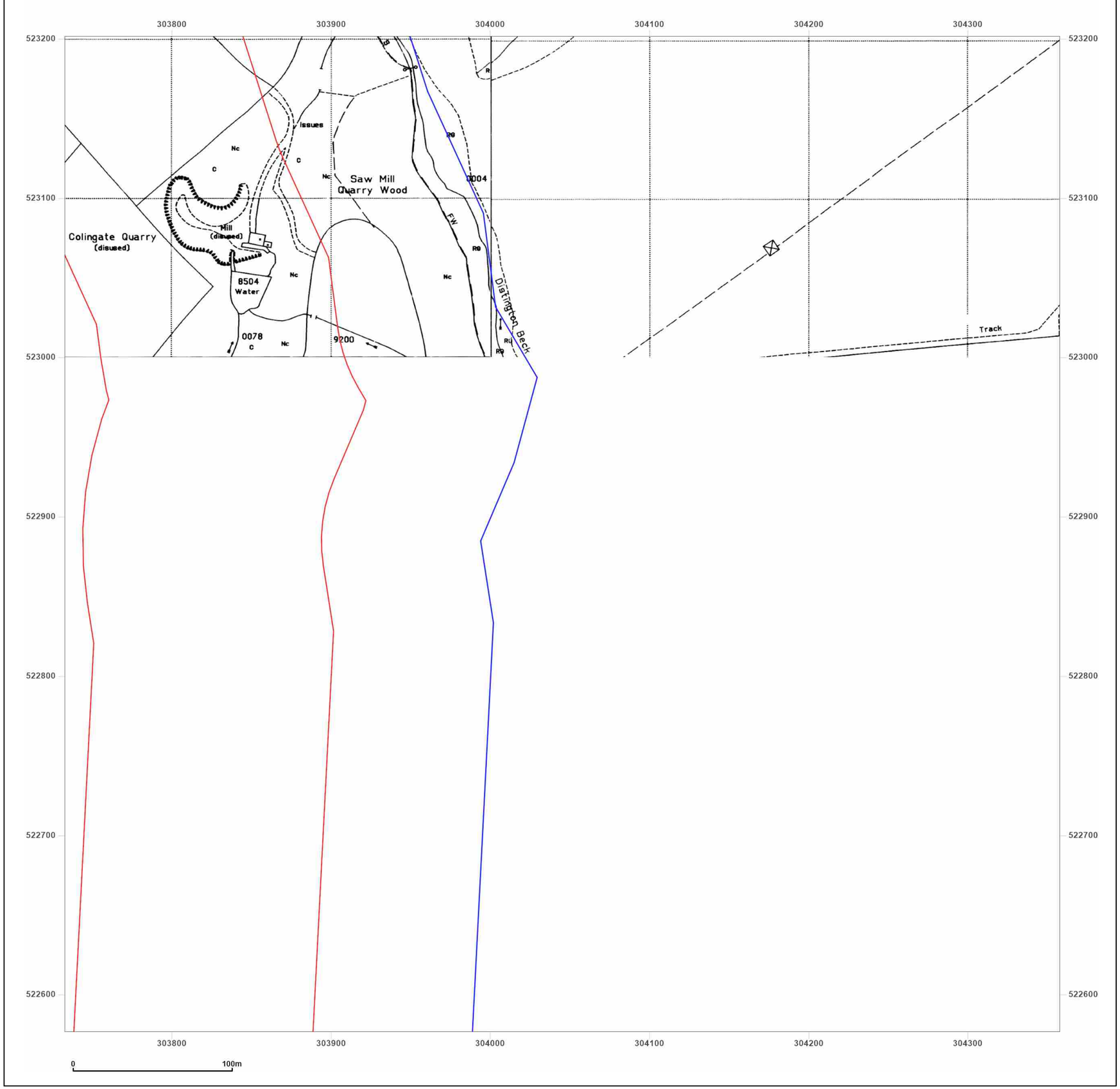


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_2
Grid Ref: 304045, 522889

Map Name: National Grid

Map date: **1994**

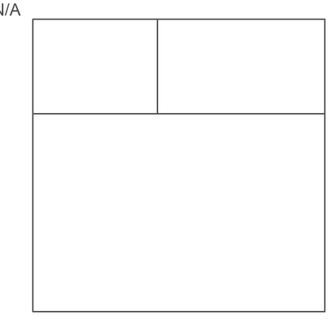
Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A



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Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_3
Grid Ref: 304045, 523514

Map Name: County Series

Map date: **1862**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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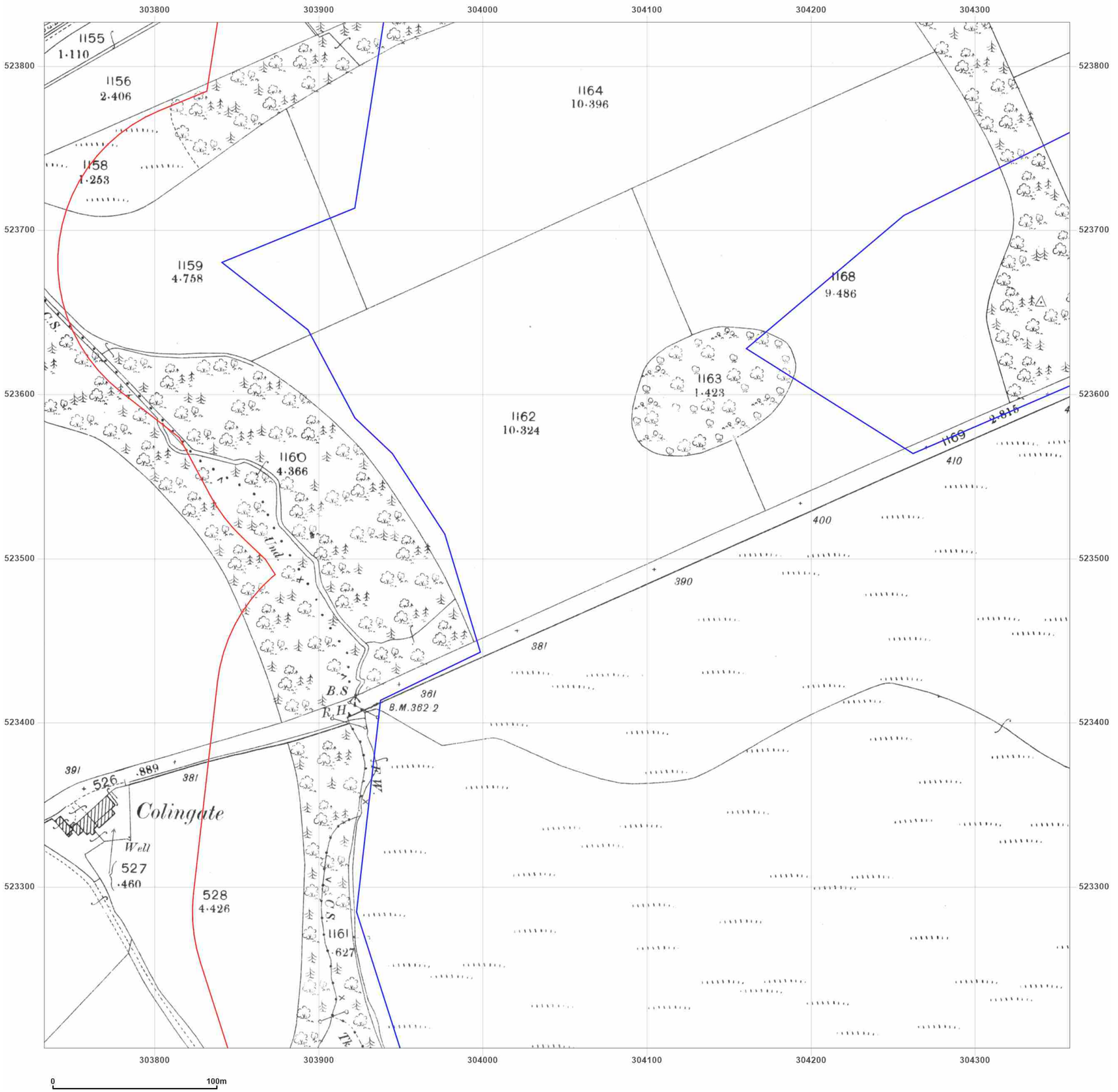

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_3
Grid Ref: 304045, 523514

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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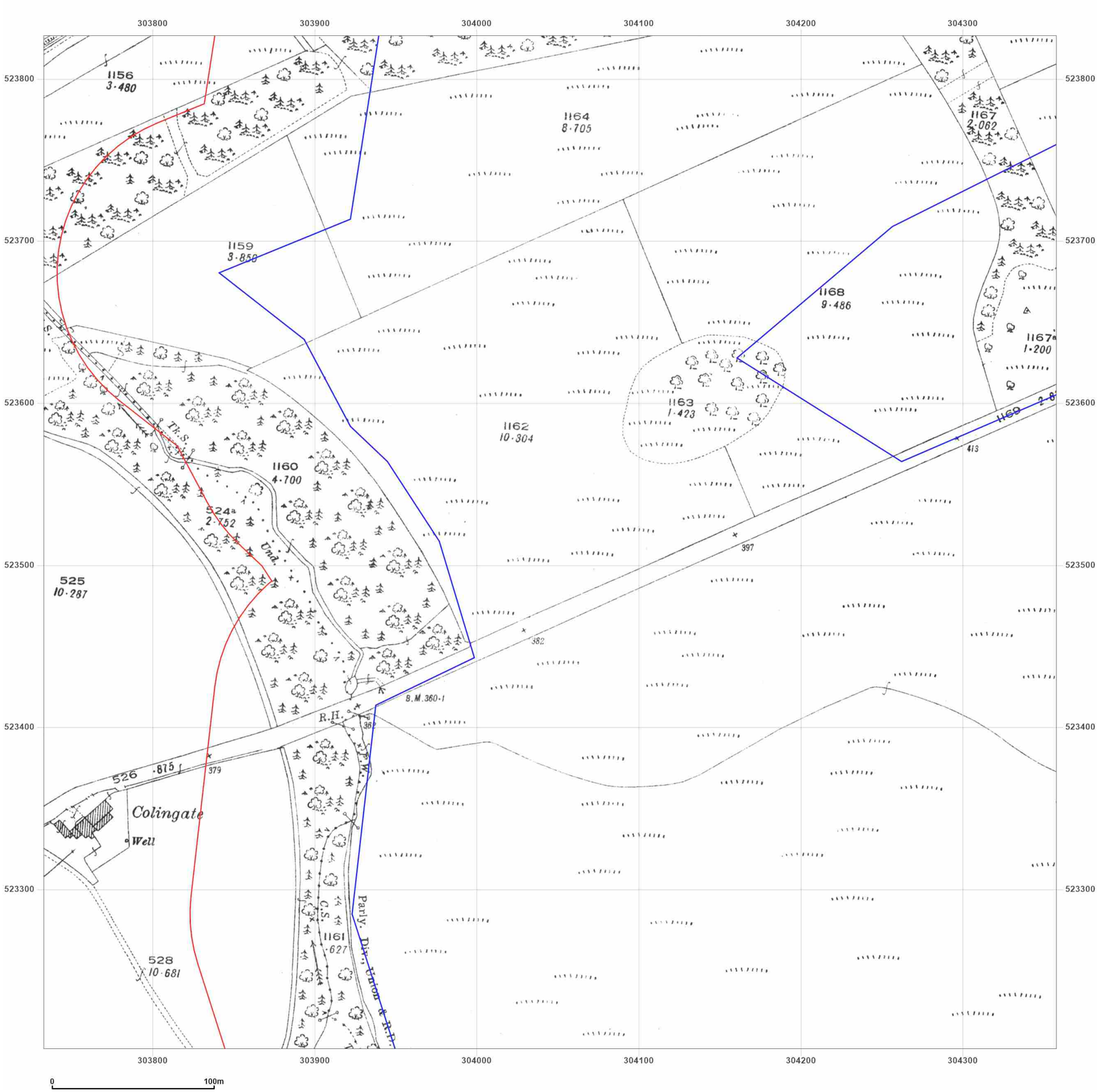

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_3
Grid Ref: 304045, 523514

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 12 April 2023

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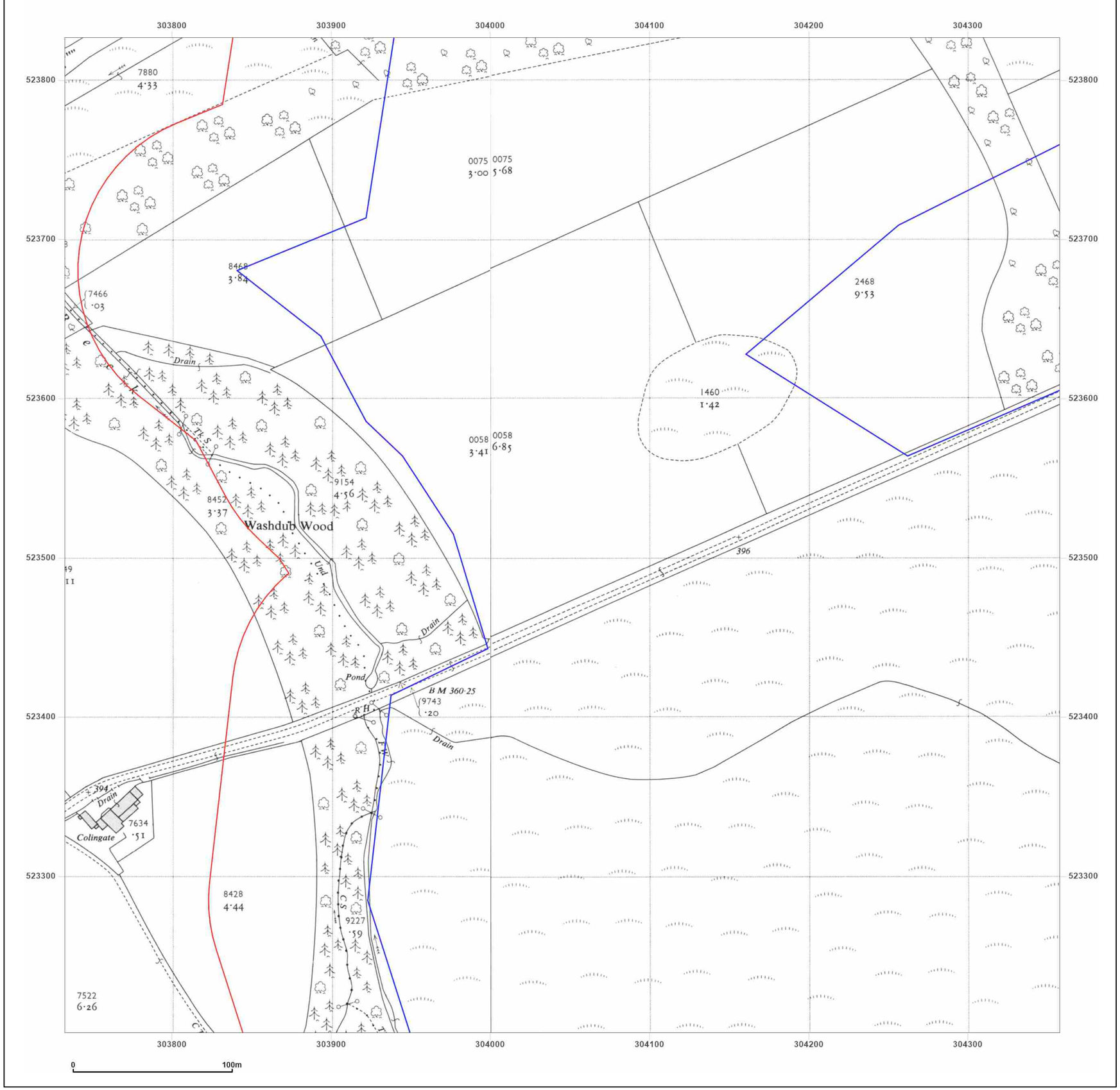

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_3
Grid Ref: 304045, 523514

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1960 Revised 1960 Edition N/A Copyright 1961 Levelled 1956	Surveyed 1960 Revised 1960 Edition N/A Copyright 1961 Levelled 1956

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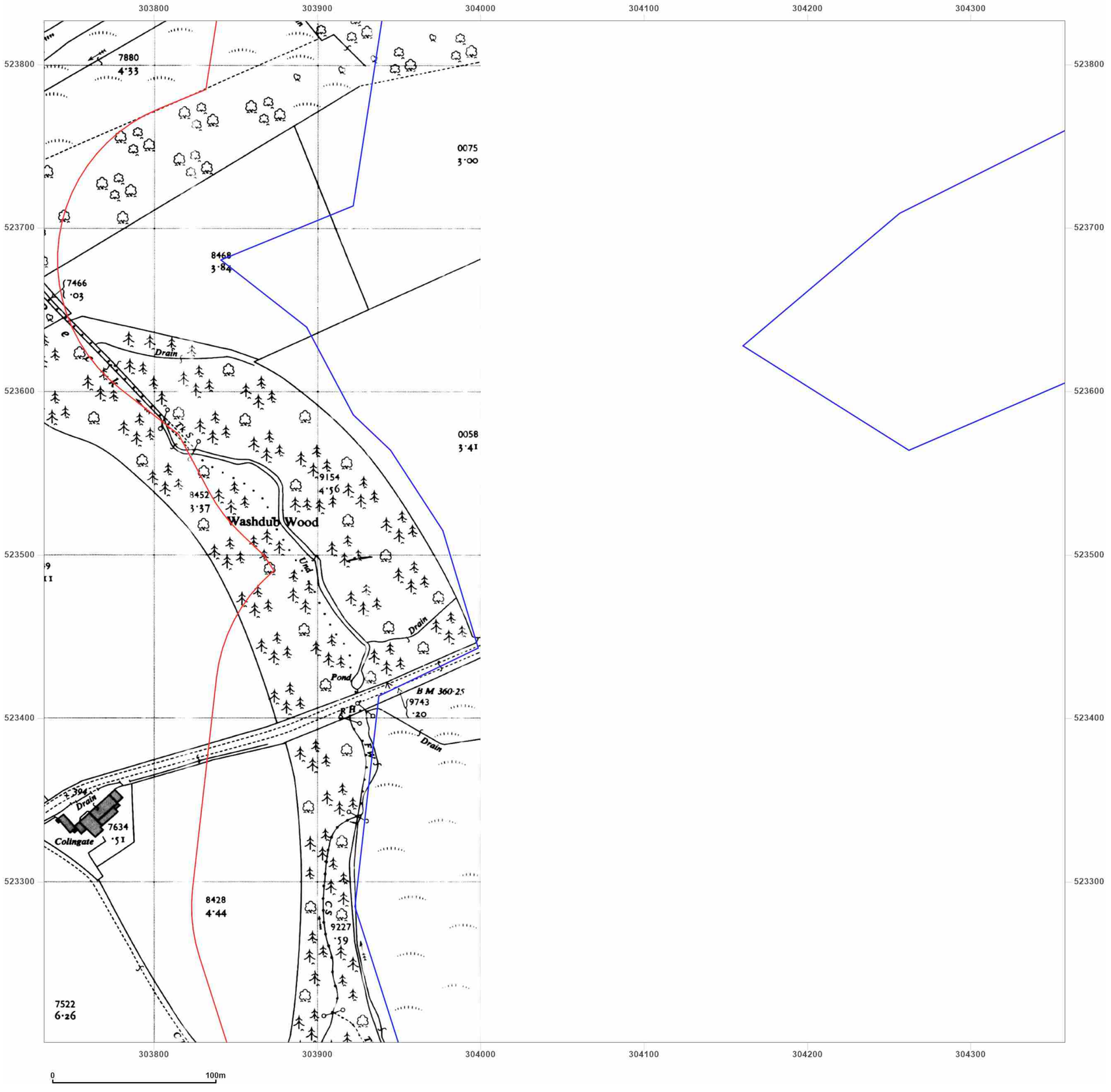

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_3
Grid Ref: 304045, 523514

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_3
Grid Ref: 304045, 523514

Map Name: National Grid

Map date: **1985**

Scale: 1:2,500

Printed at: 1:2,500

N
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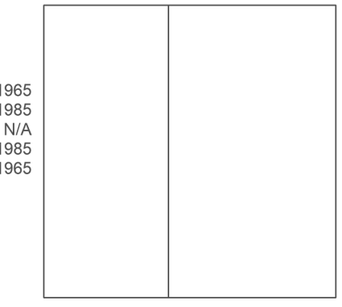
Surveyed 1965
Revised 1985
Edition N/A
Copyright 1985
Levelled 1965



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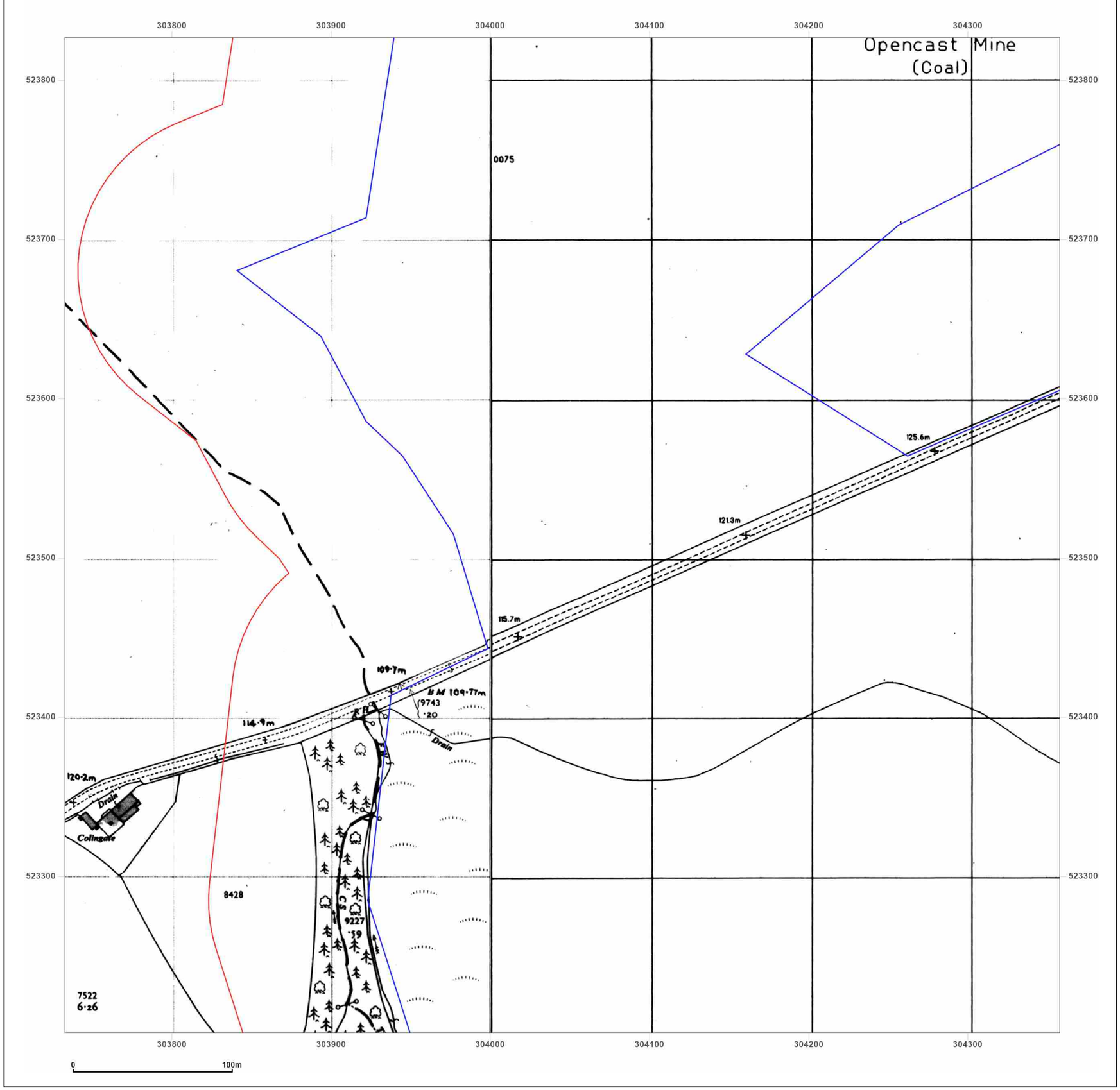

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_3
Grid Ref: 304045, 523514

Map Name: National Grid

Map date: **1990-1991**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1963	Surveyed 1991
Revised 1990	Revised 1991
Edition N/A	Edition N/A
Copyright 1990	Copyright 1991
Levelled 1963	Levelled N/A

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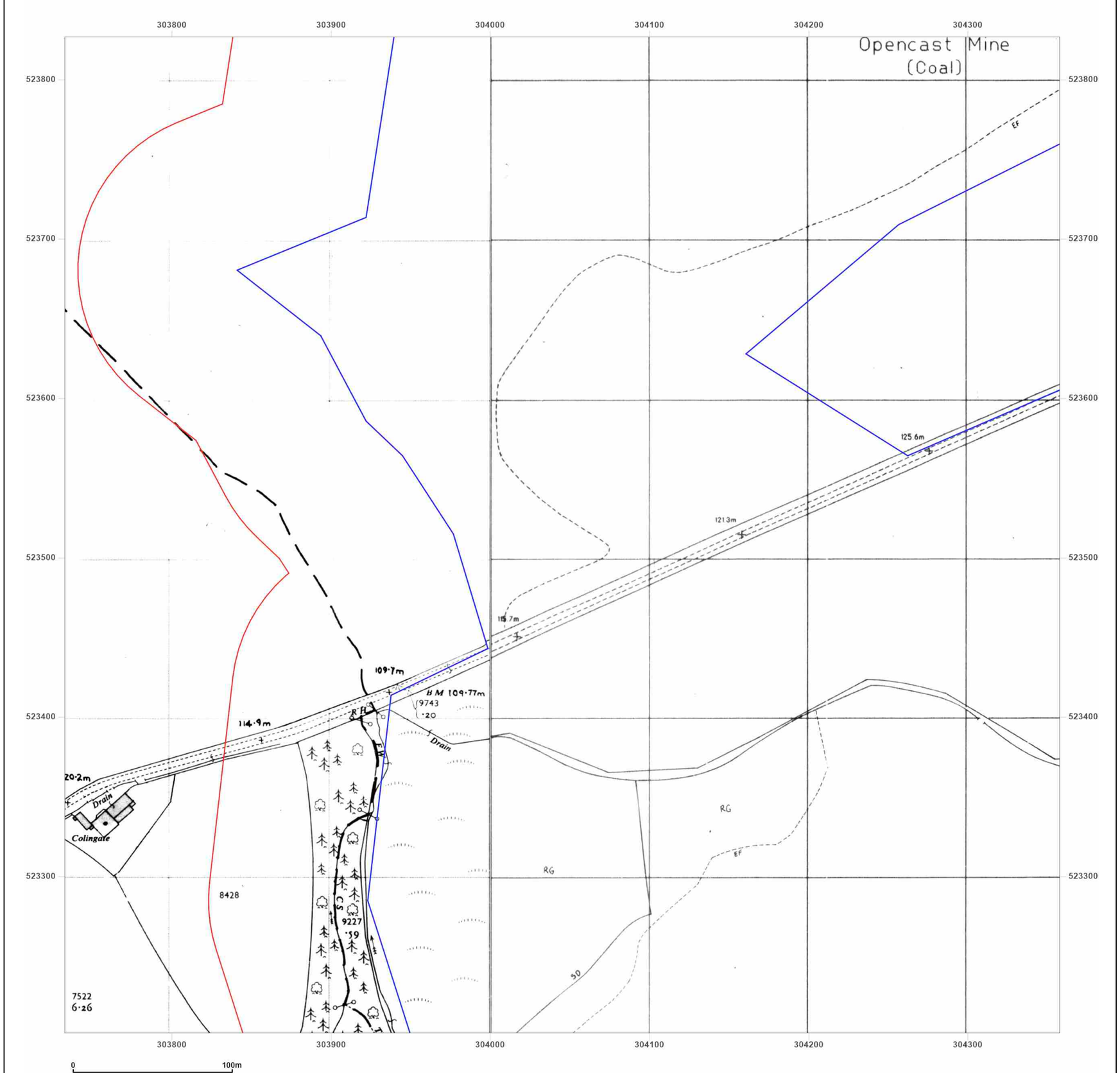

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_3
Grid Ref: 304045, 523514

Map Name: National Grid

Map date: **1990-1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1965
Revised 1990
Edition N/A
Copyright 1990
Levelled 1965

Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

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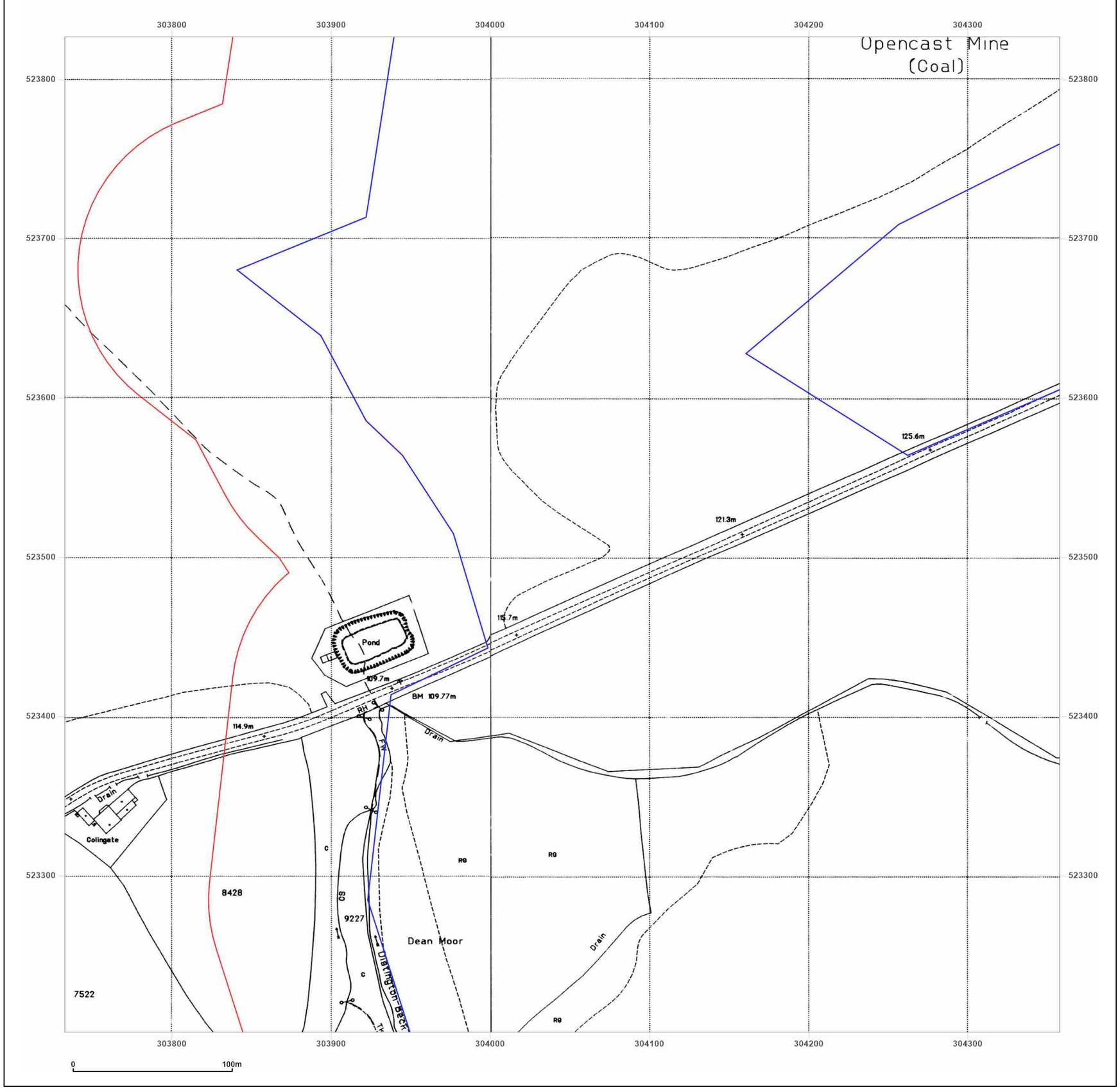

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_3
Grid Ref: 304045, 523514

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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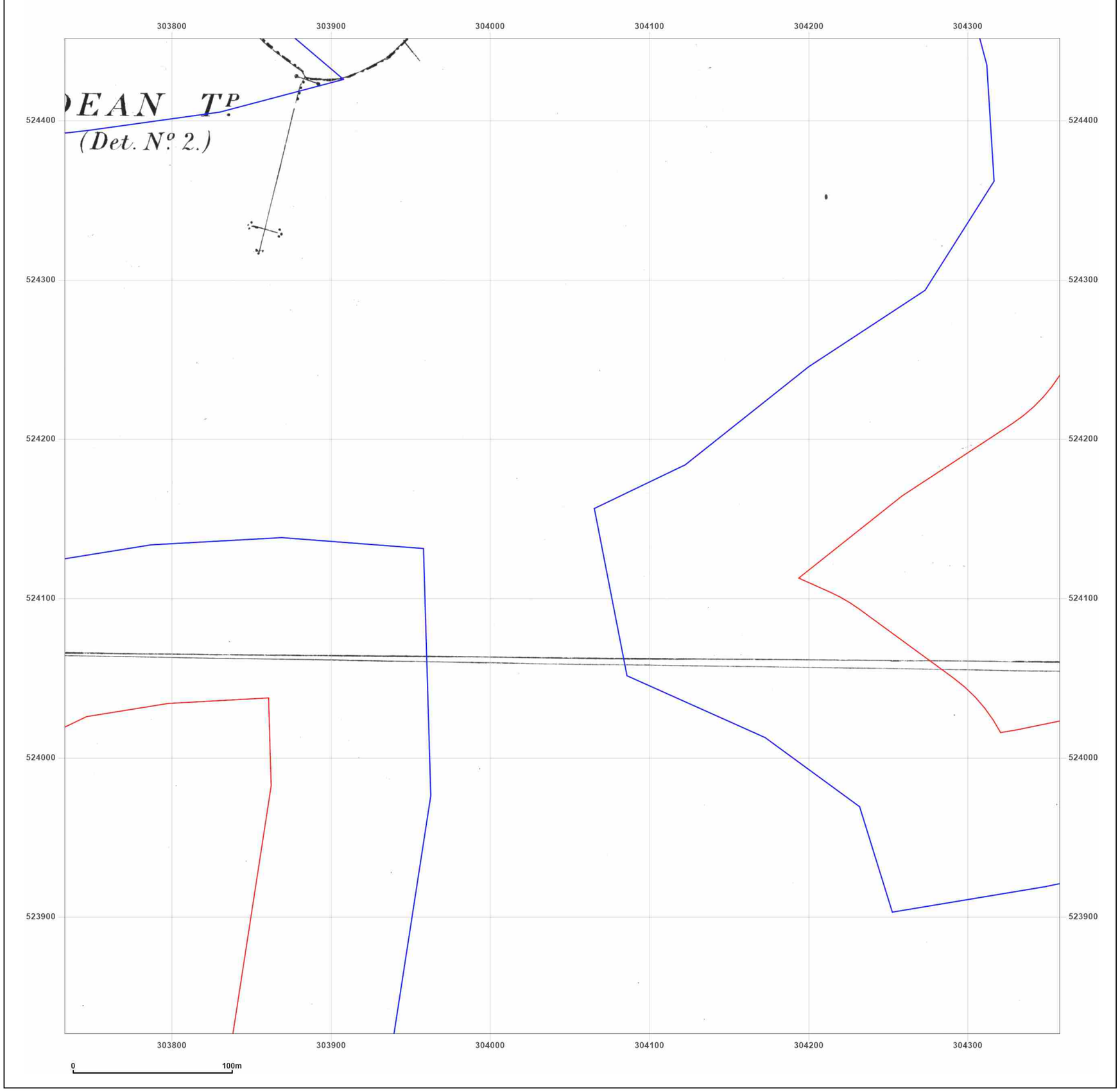

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_4
Grid Ref: 304045, 524139

Map Name: County Series

Map date: **1862-1864**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1864
Revised 1864
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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Map legend available at:
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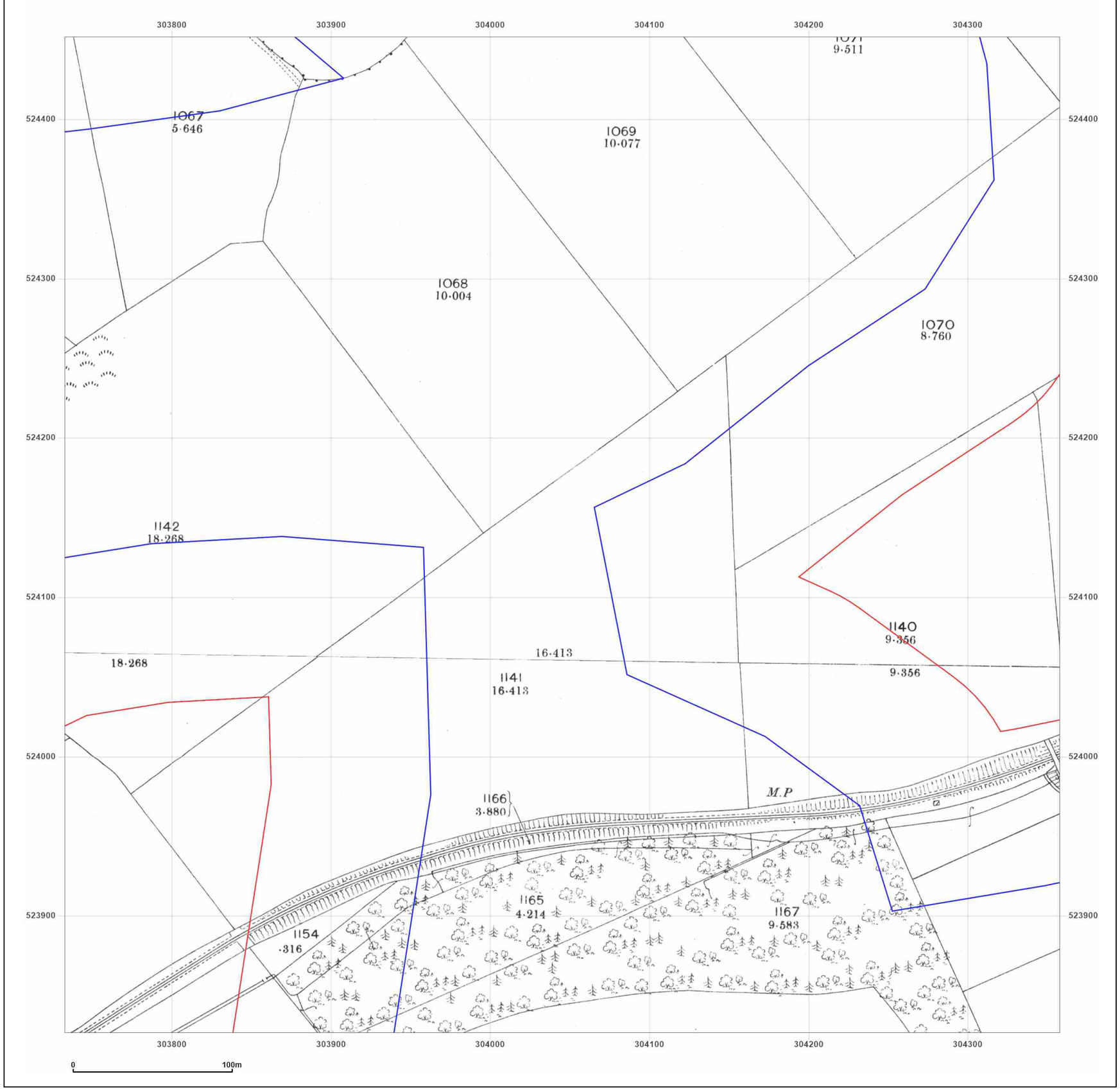


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_4
Grid Ref: 304045, 524139

Map Name: County Series

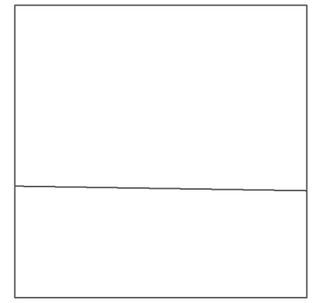
Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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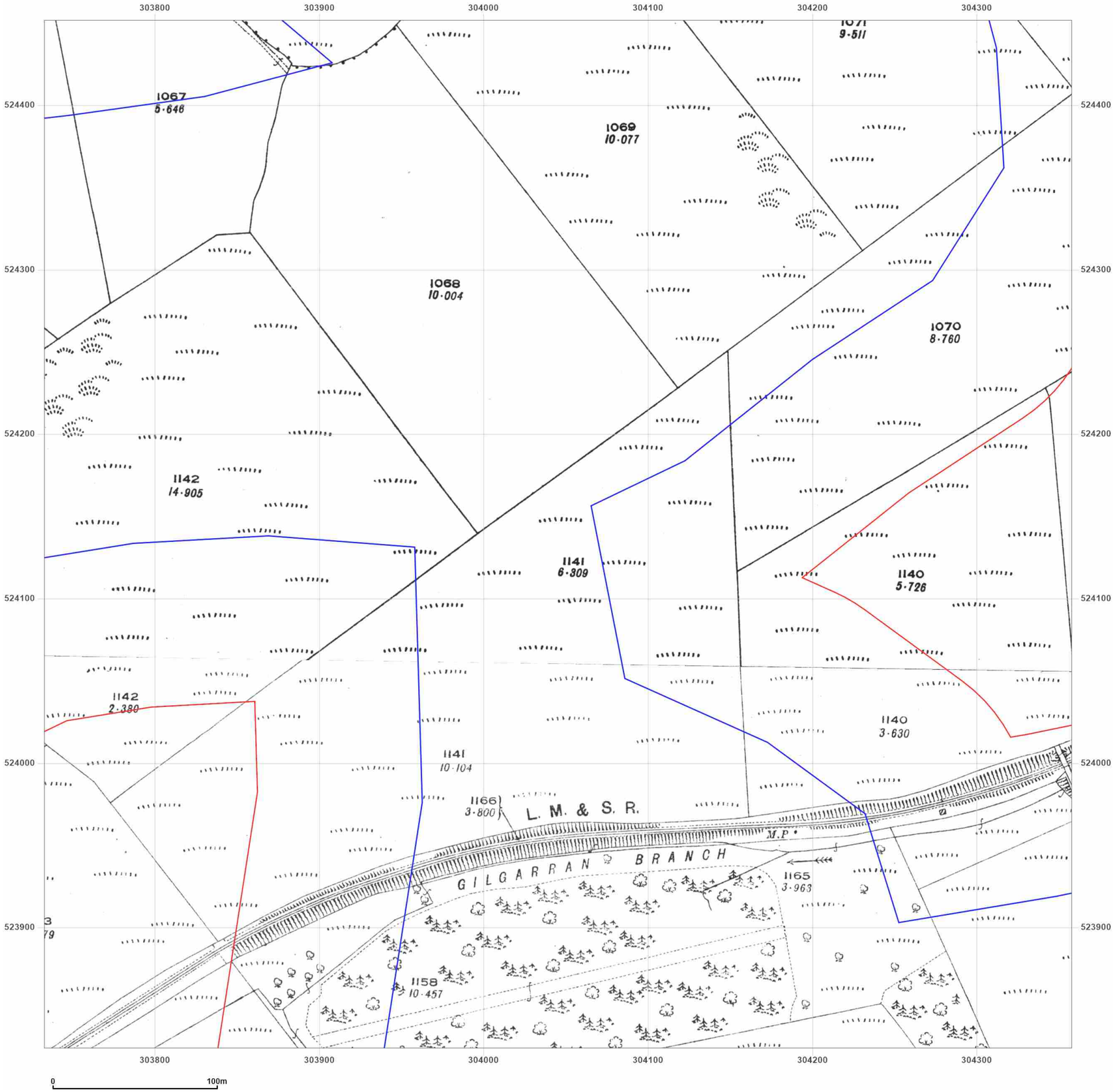

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_4
Grid Ref: 304045, 524139

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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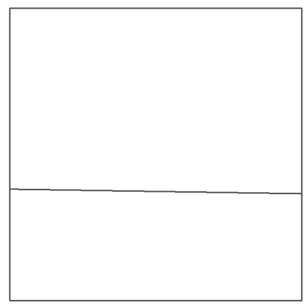

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_4
Grid Ref: 304045, 524139

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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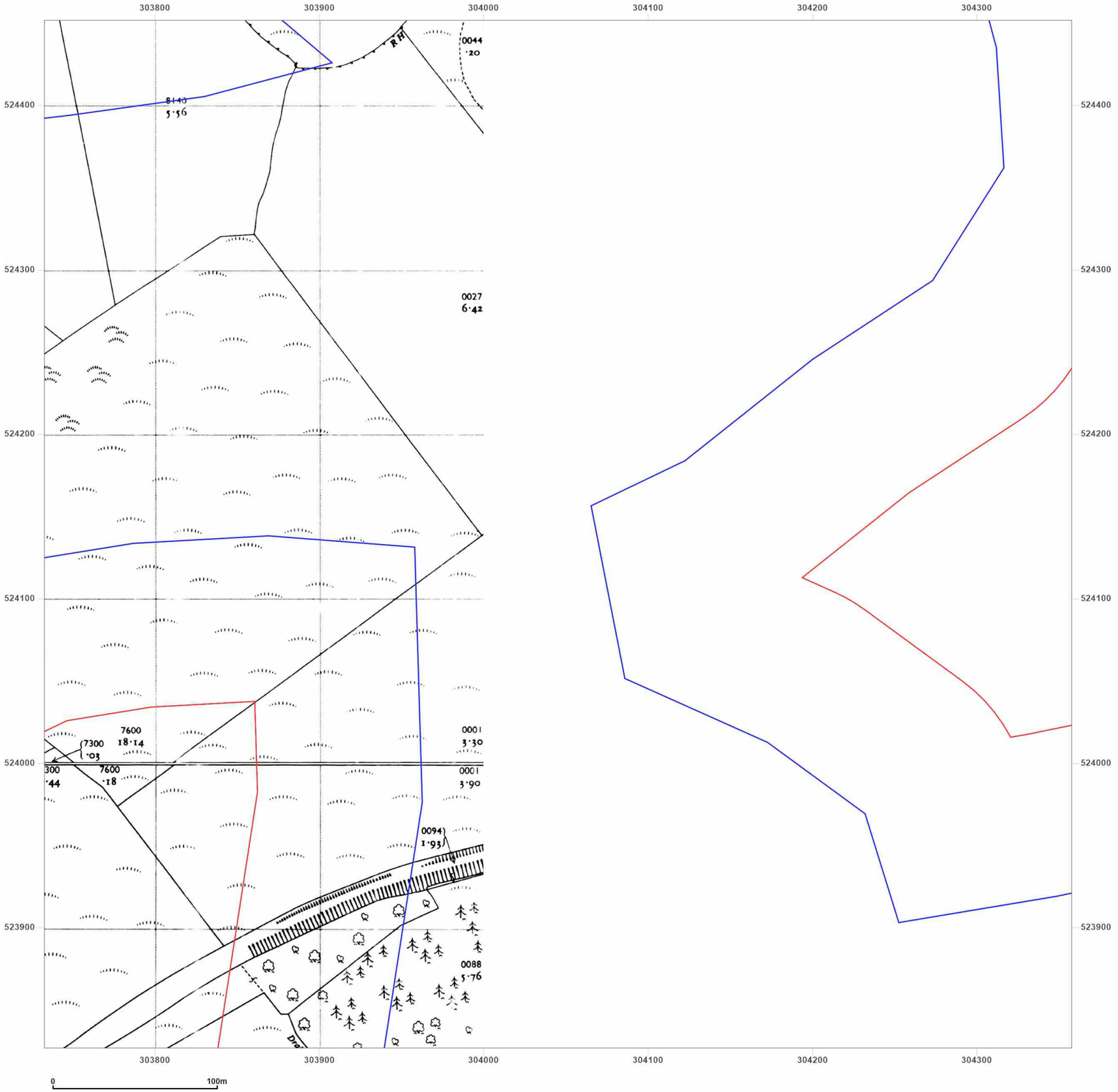

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_4
Grid Ref: 304045, 524139

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
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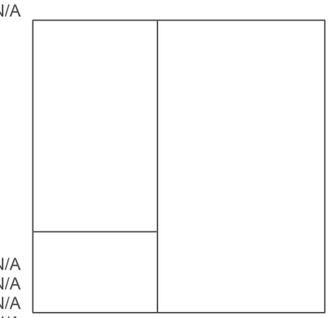
Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A



Surveyed N/A
Revised N/A
Edition N/A
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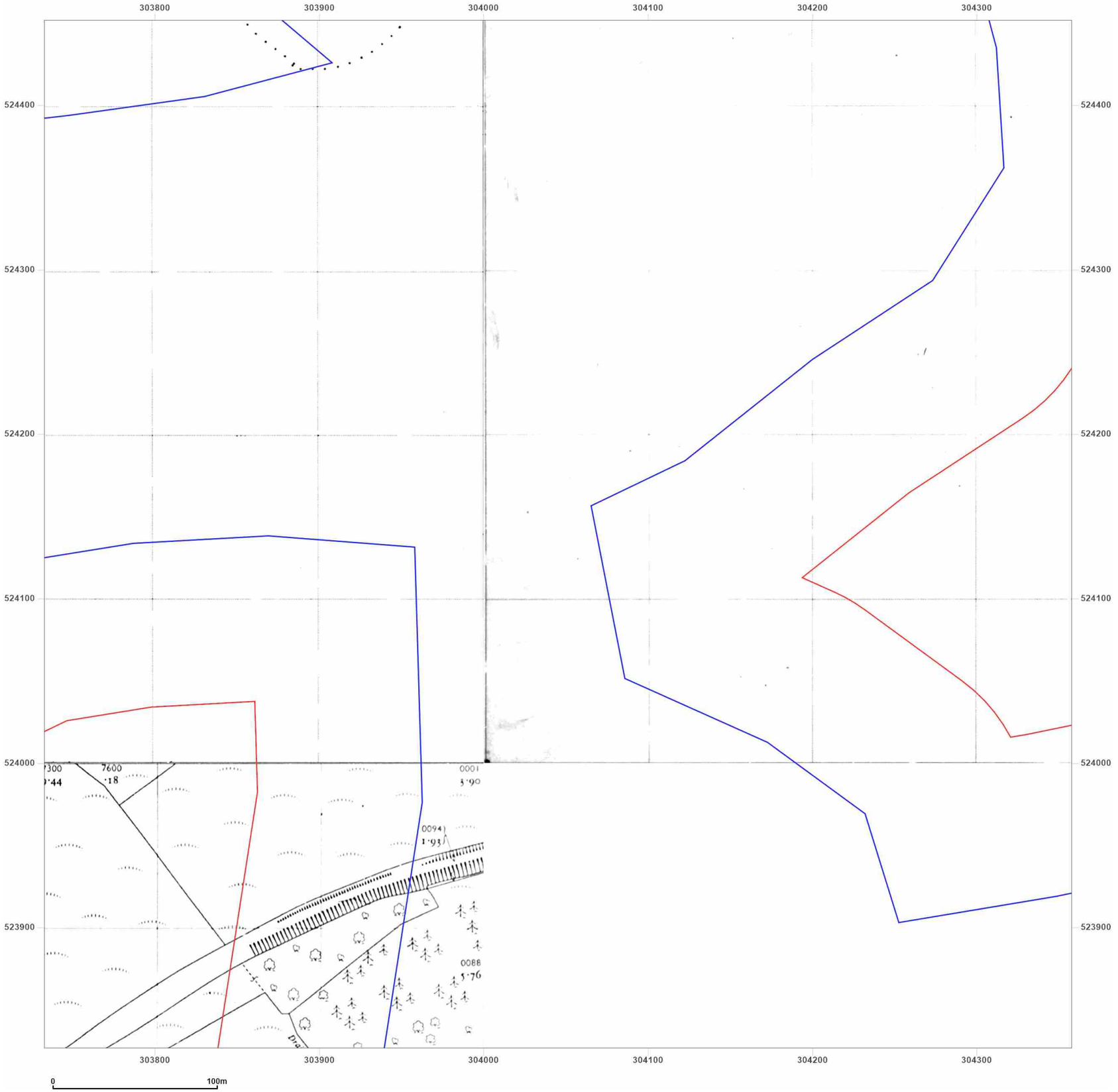

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_4
Grid Ref: 304045, 524139

Map Name: National Grid

Map date: **1985-1989**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1965
Revised 1989
Edition N/A
Copyright 1989
Levelled 1965

Surveyed 1989
Revised 1989
Edition N/A
Copyright 1989
Levelled N/A

Surveyed 1965
Revised 1985
Edition N/A
Copyright 1985
Levelled 1965

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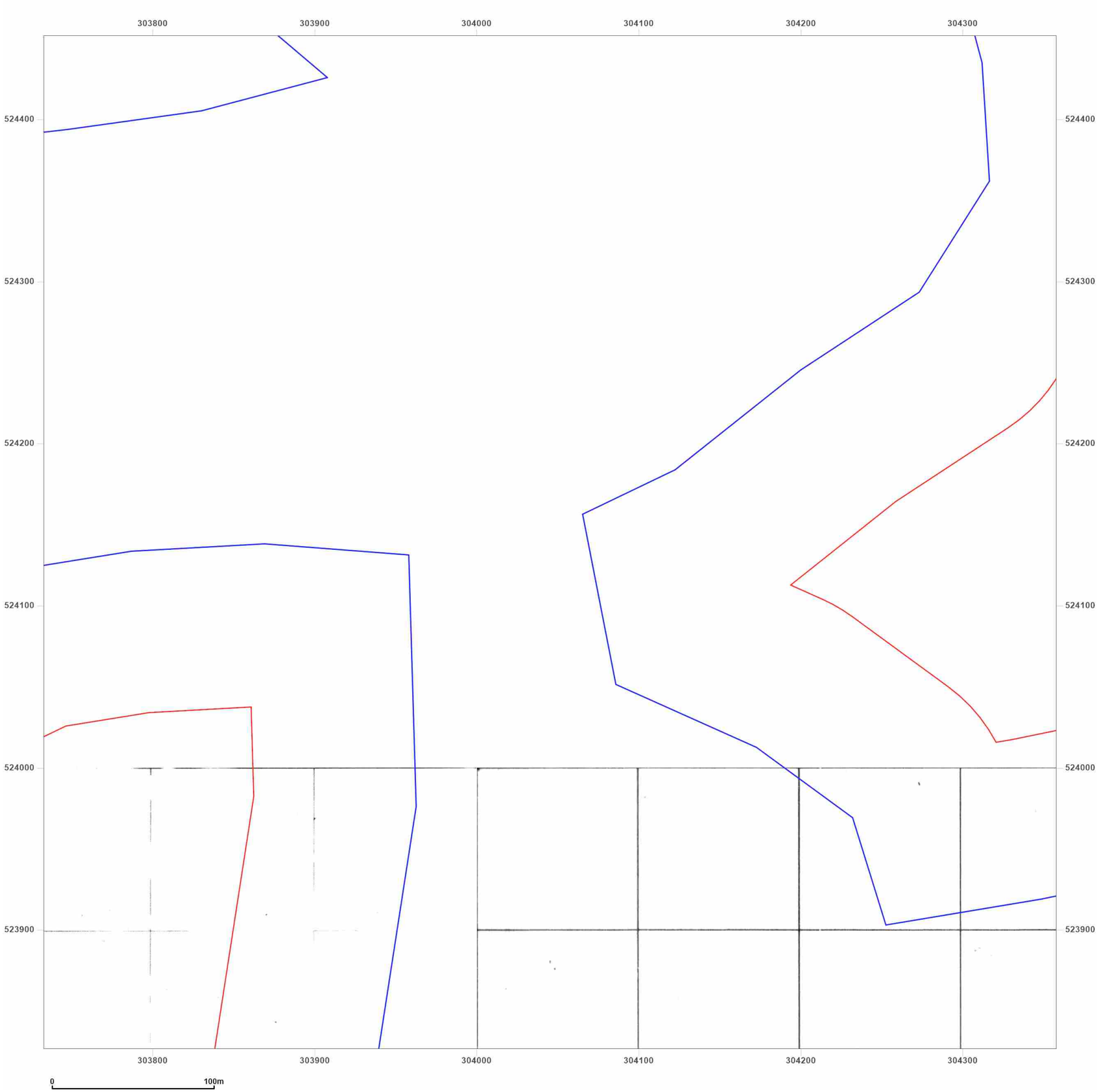

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_4
Grid Ref: 304045, 524139

Map Name: National Grid

Map date: **1990-1993**

Scale: 1:2,500

Printed at: 1:2,500

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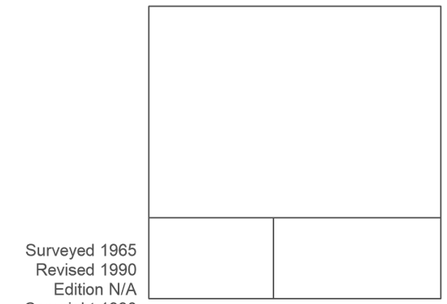

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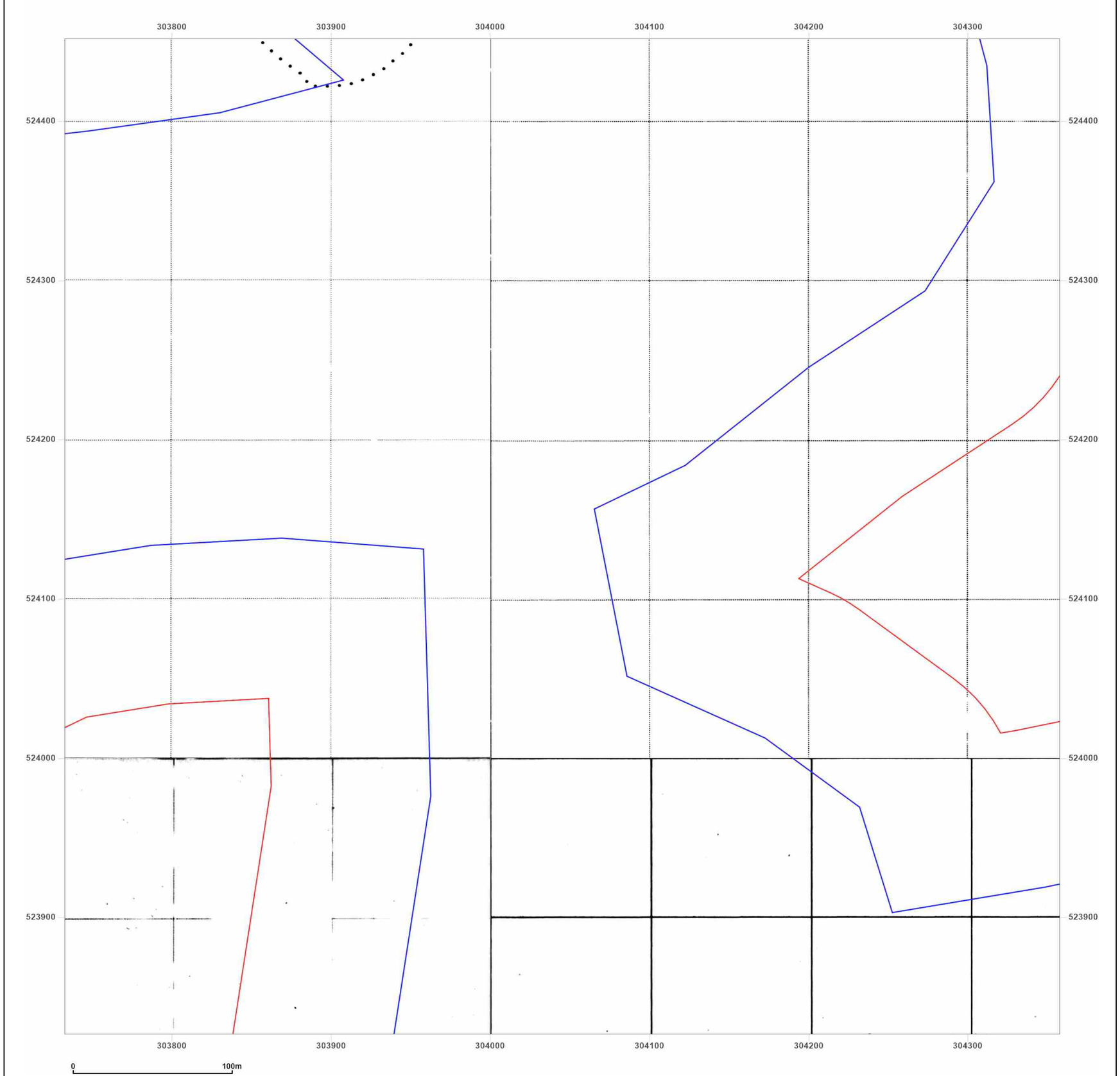

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_4
Grid Ref: 304045, 524139

Map Name: National Grid

Map date: **1990-1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1963
Revised 1990
Edition N/A
Copyright 1990
Levelled 1963

Surveyed 1991
Revised 1991
Edition N/A
Copyright 1991
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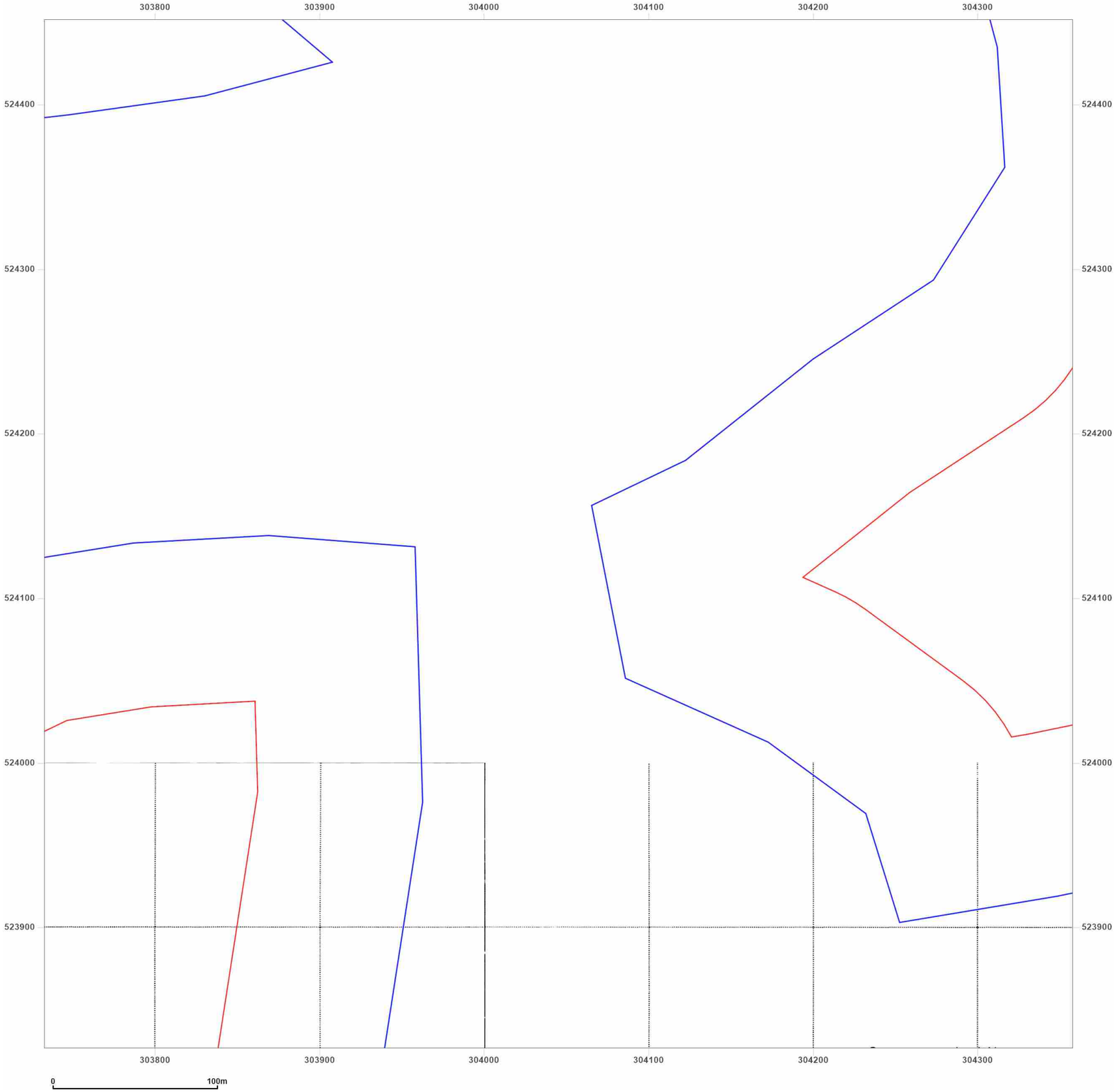

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_4
Grid Ref: 304045, 524139

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
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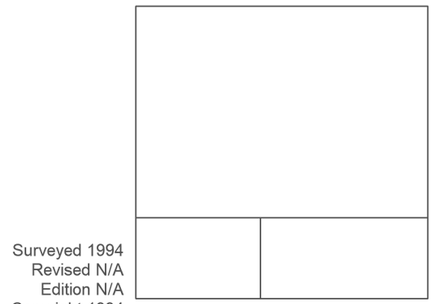

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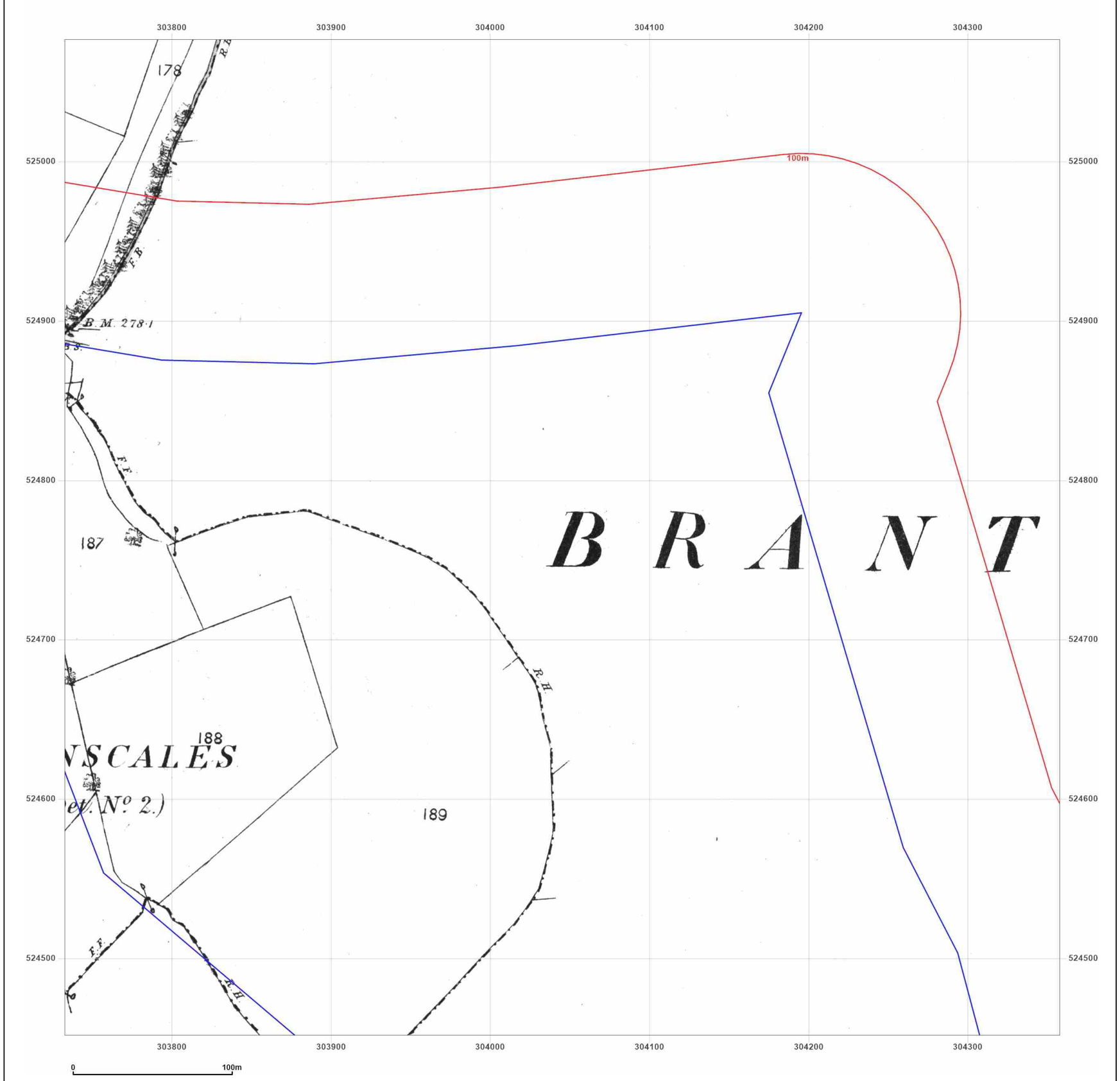

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_5
Grid Ref: 304045, 524764

Map Name: County Series

Map date: **1864**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1864
Revised 1864
Edition N/A
Copyright N/A
Levelled N/A

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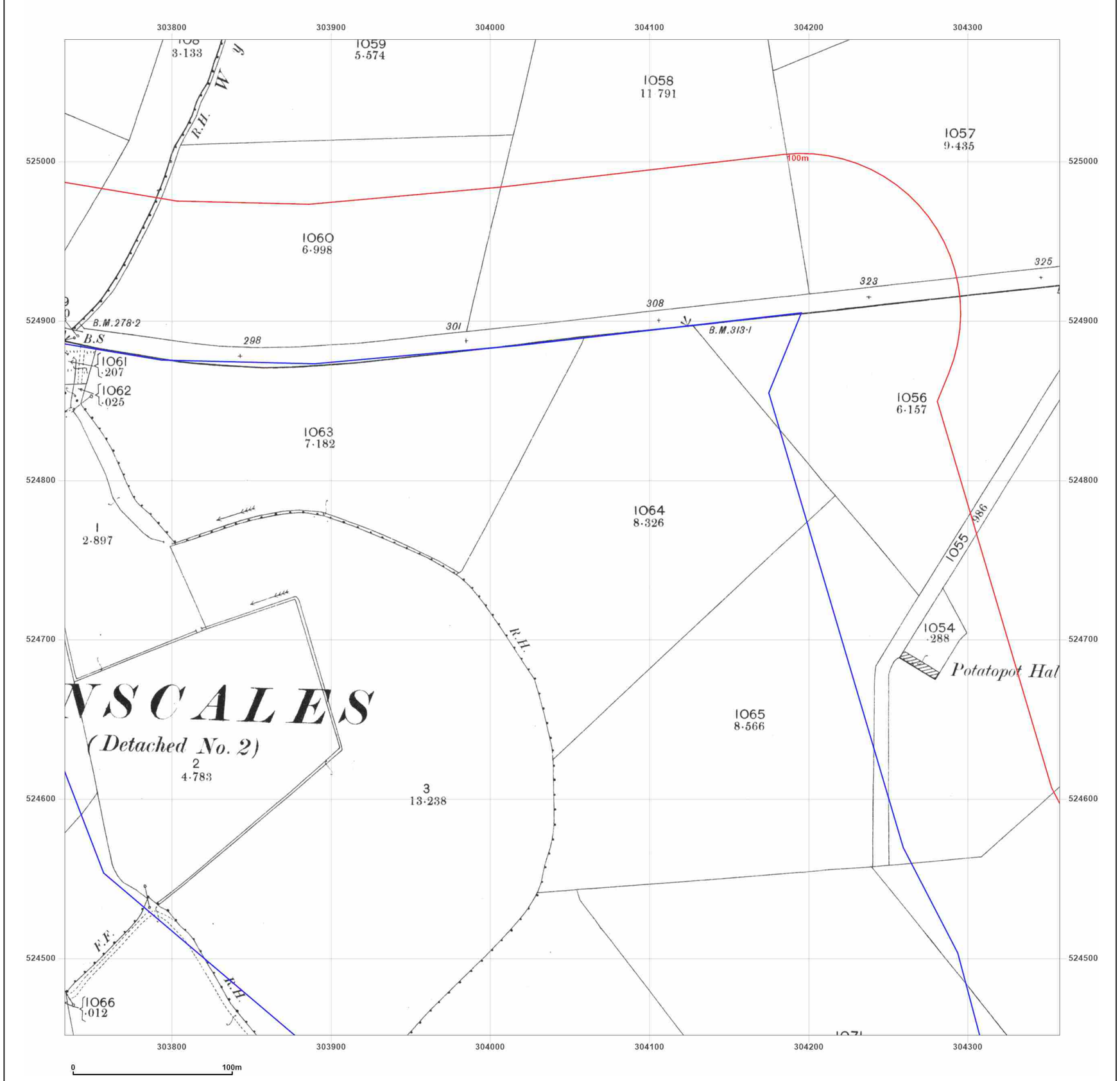

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_5
Grid Ref: 304045, 524764

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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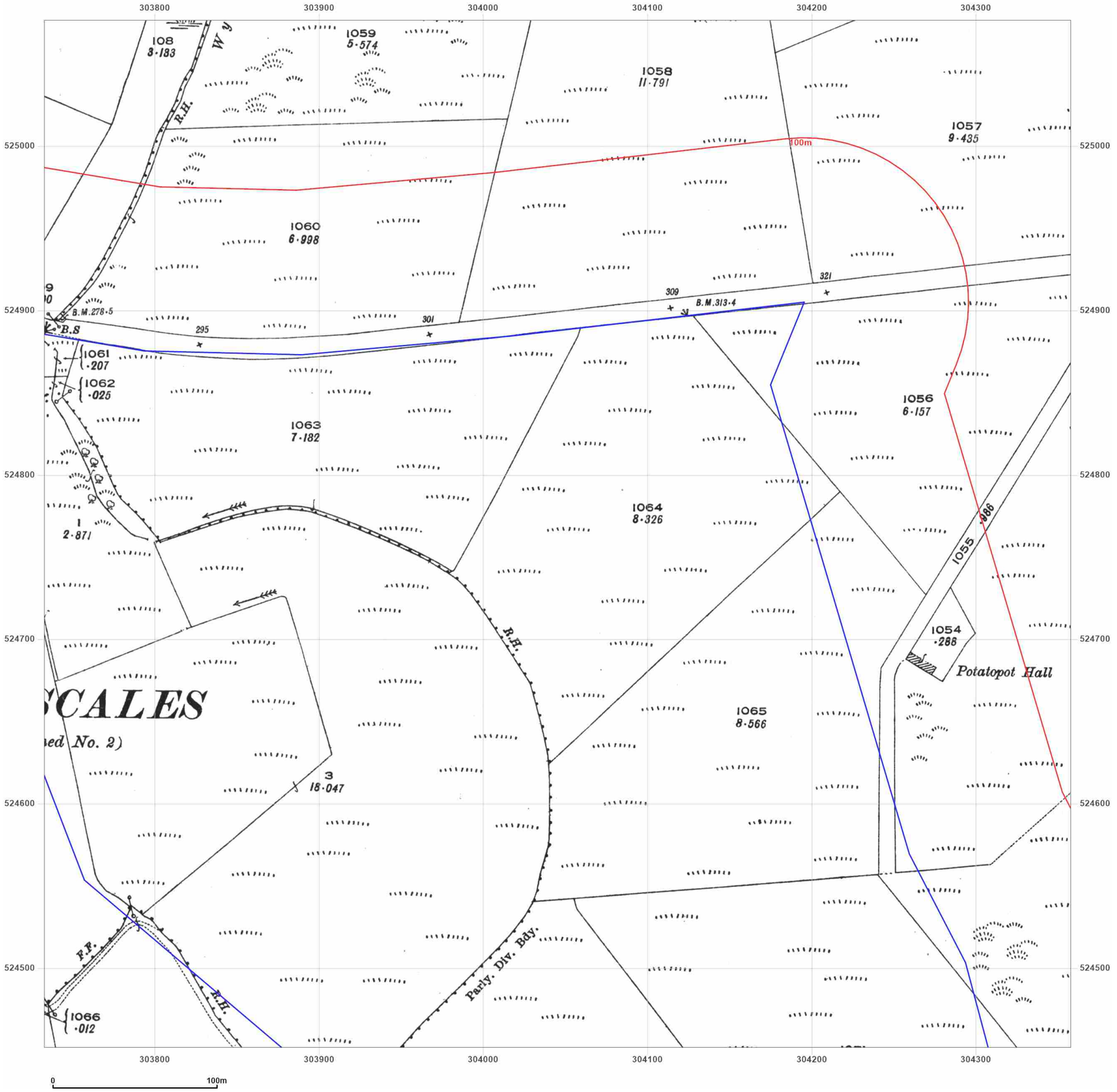

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_5
Grid Ref: 304045, 524764

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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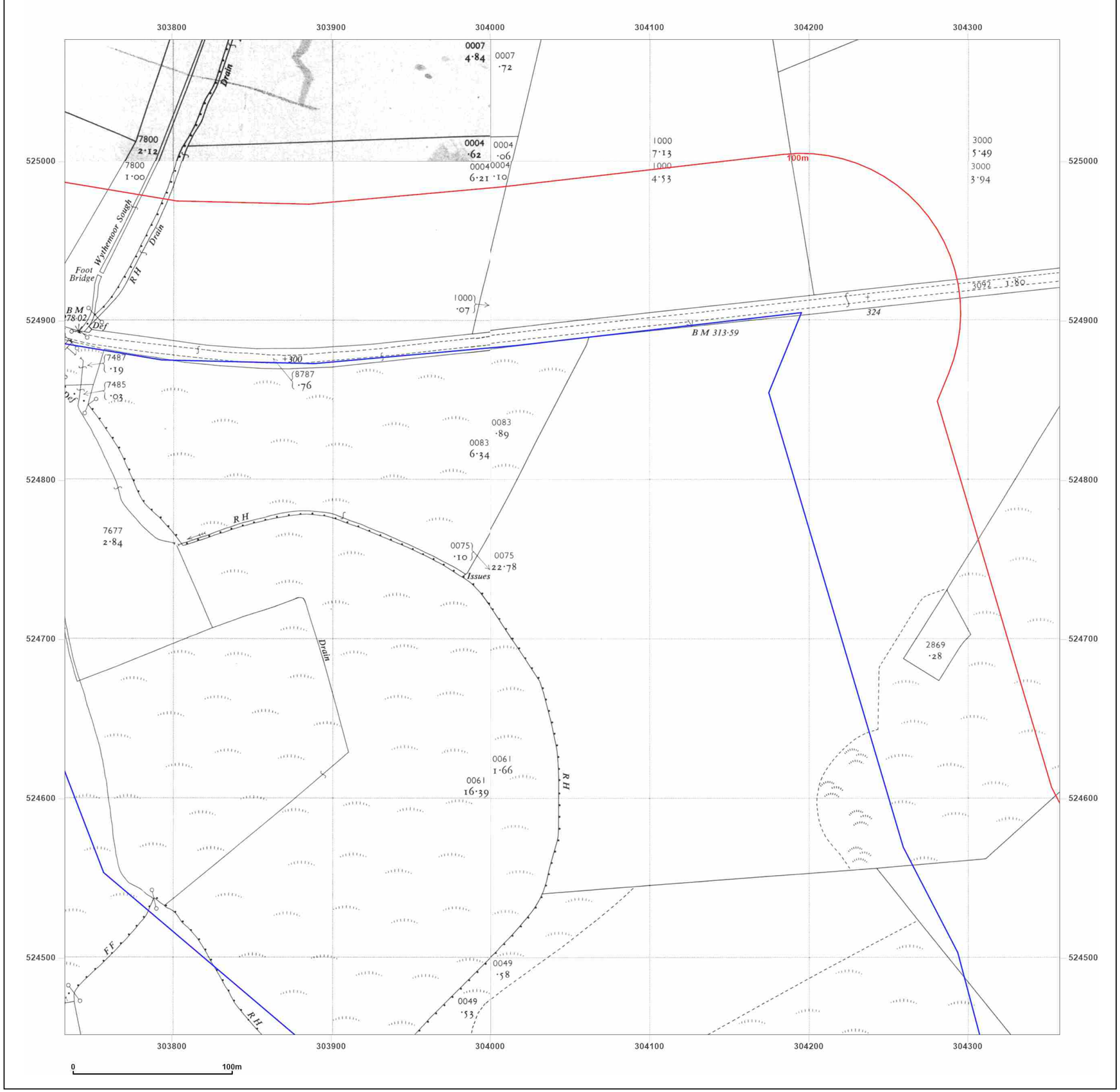

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_5
Grid Ref: 304045, 524764

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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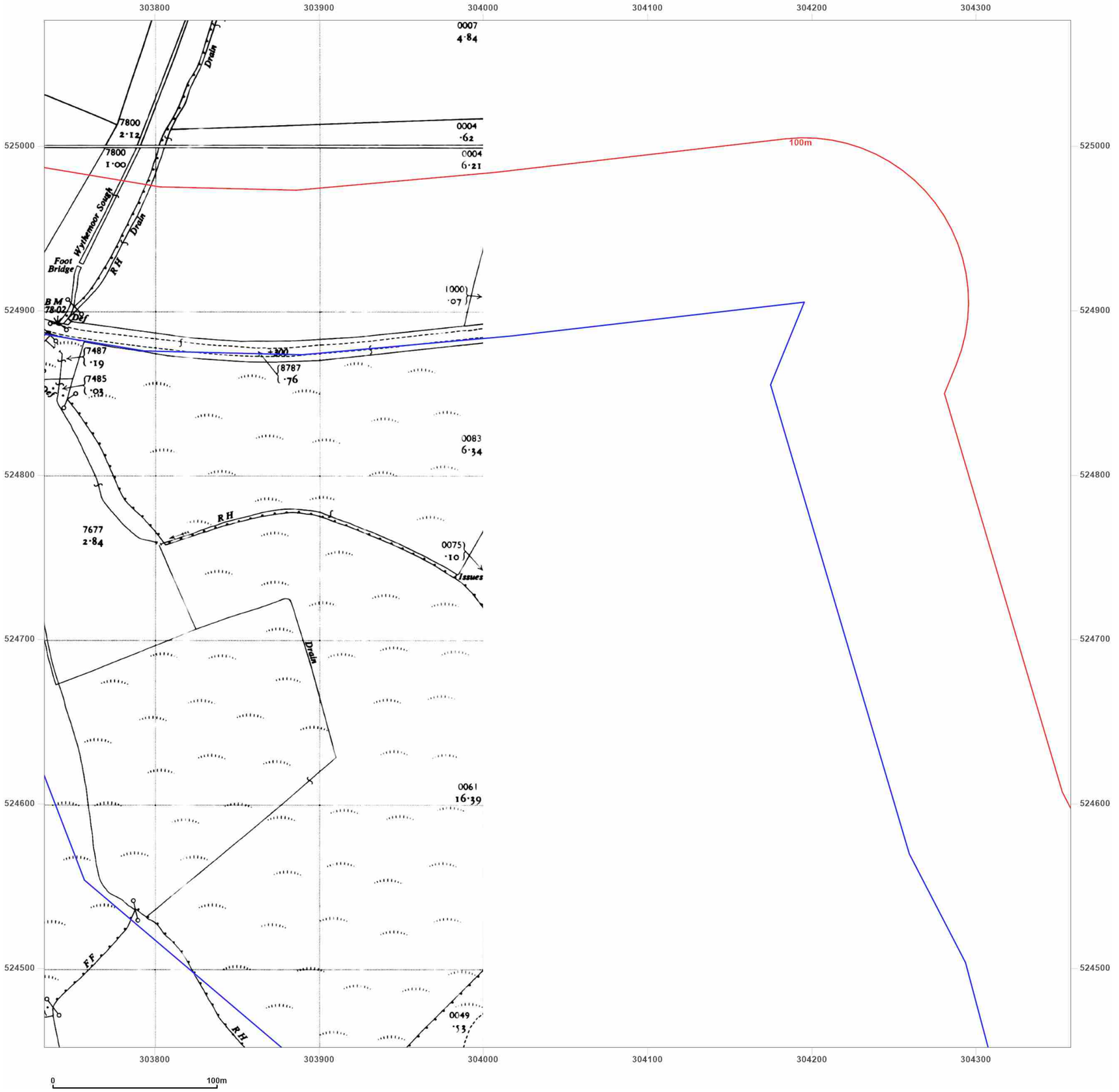

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_5
Grid Ref: 304045, 524764

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
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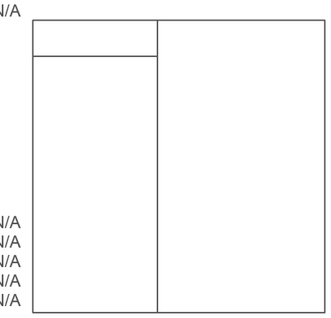
Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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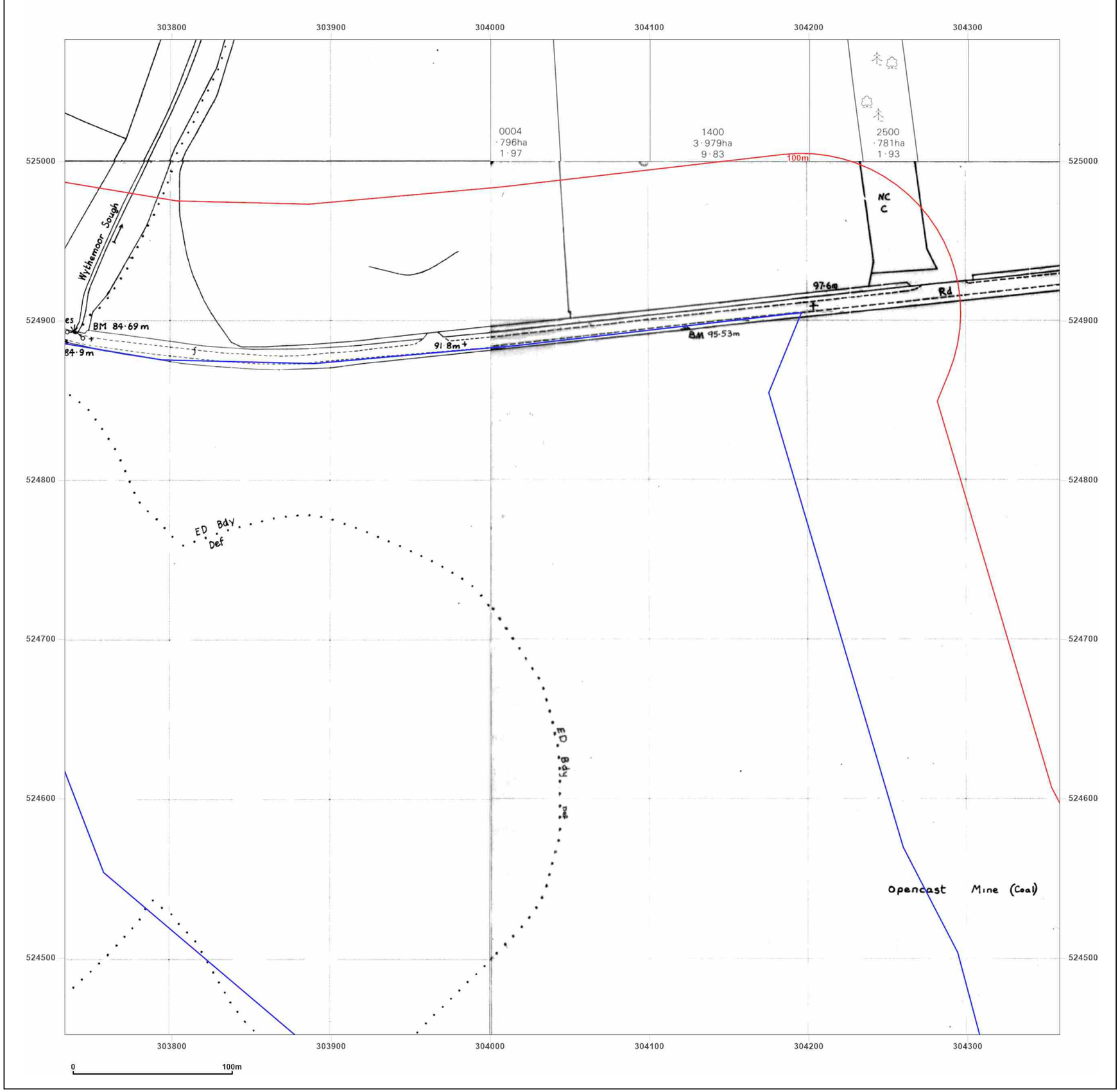

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_5
Grid Ref: 304045, 524764

Map Name: National Grid

Map date: **1989**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1965 Revised 1989 Edition N/A Copyright 1989 Levelled 1965	Surveyed 1988 Revised 1988 Edition N/A Copyright 1989 Levelled 1965
Surveyed 1965 Revised 1989 Edition N/A Copyright 1989 Levelled 1965	Surveyed 1989 Revised 1989 Edition N/A Copyright 1989 Levelled N/A

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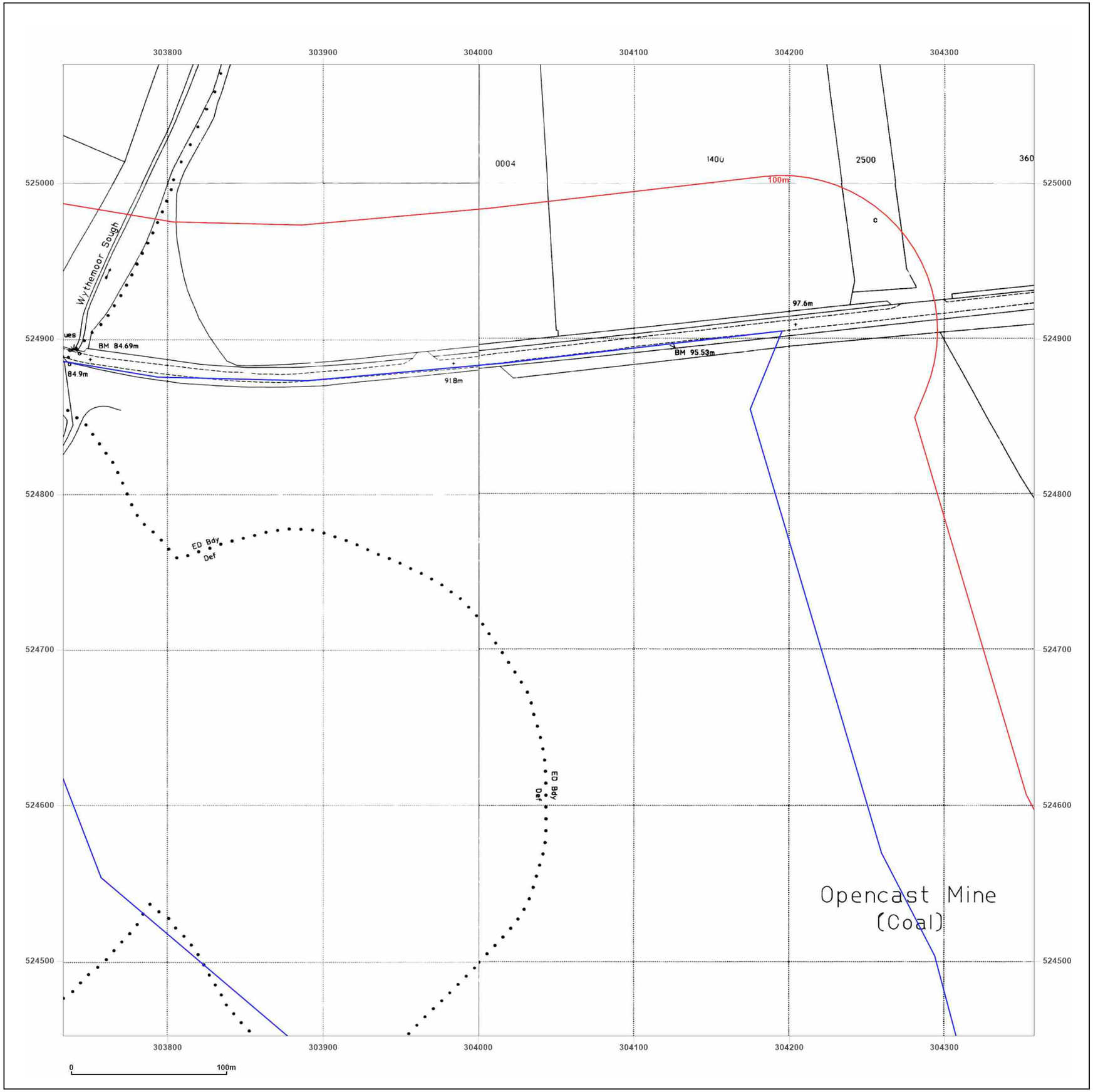

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_2_5
Grid Ref: 304045, 524764

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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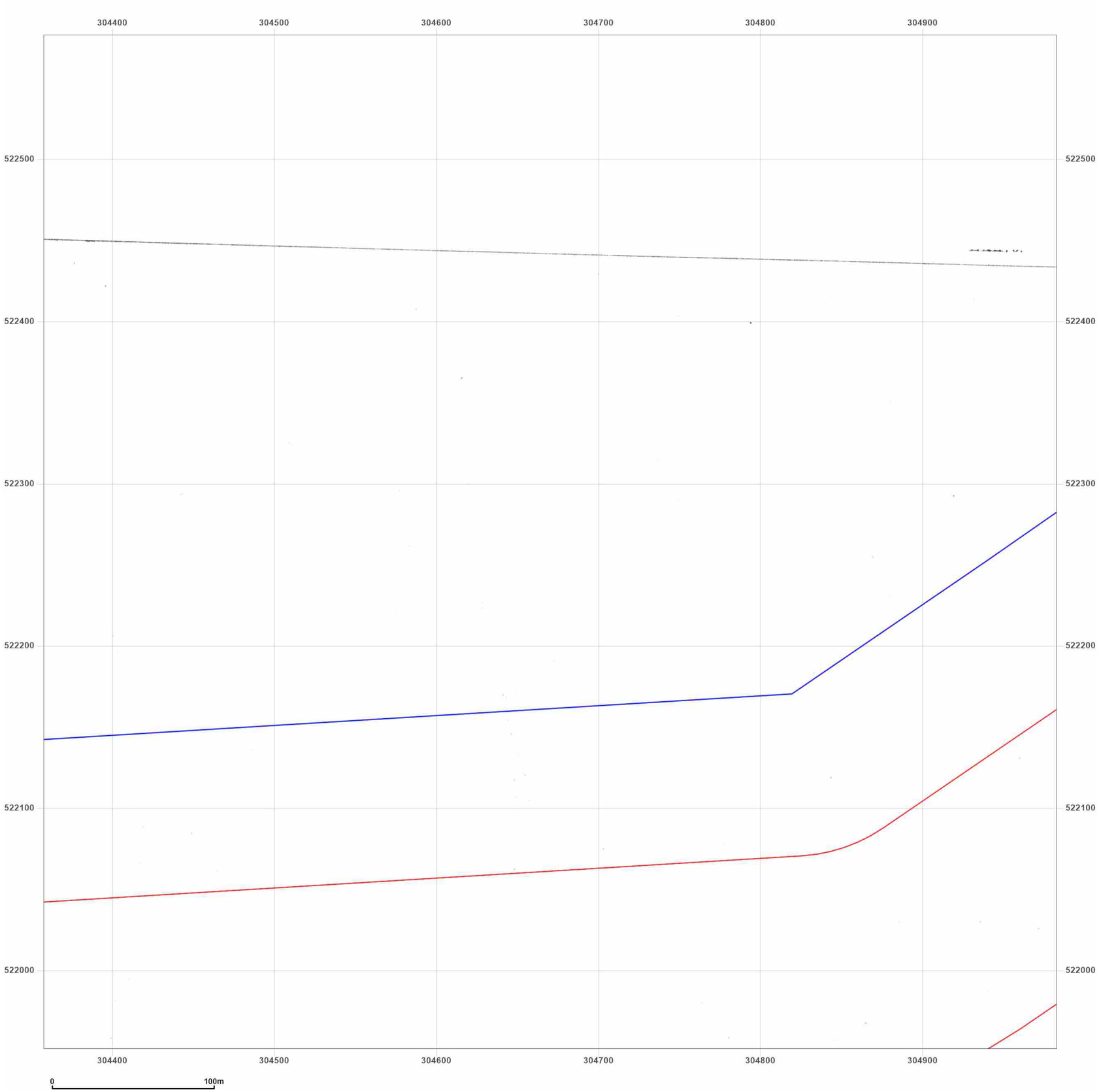

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_1
Grid Ref: 304670, 522264

Map Name: County Series

Map date: **1862**

Scale: 1:2,500

Printed at: 1:2,500

N
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S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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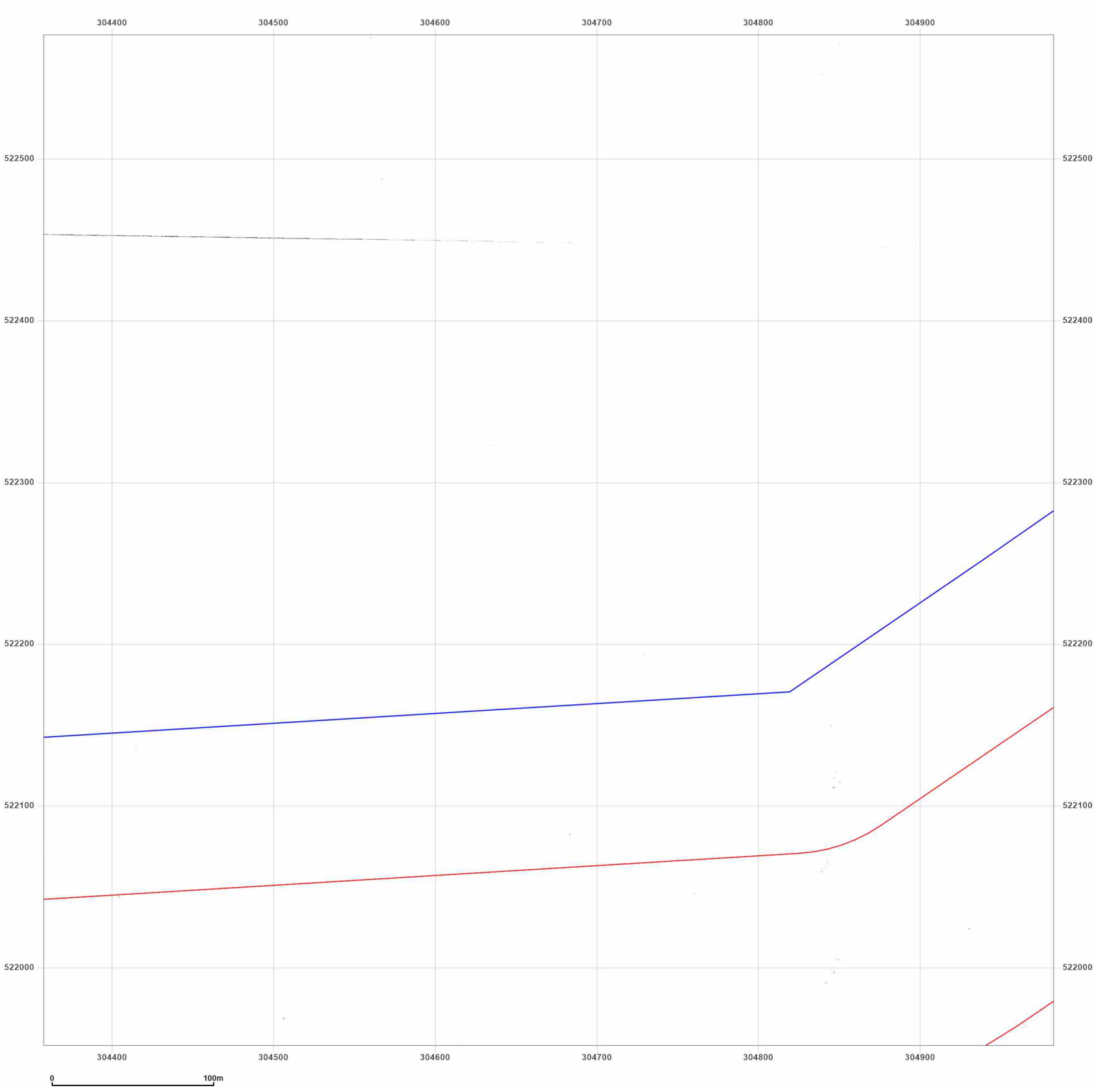

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_1
Grid Ref: 304670, 522264

Map Name: County Series

Map date: **1862-1864**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1864
Edition N/A
Copyright N/A
Levelled N/A

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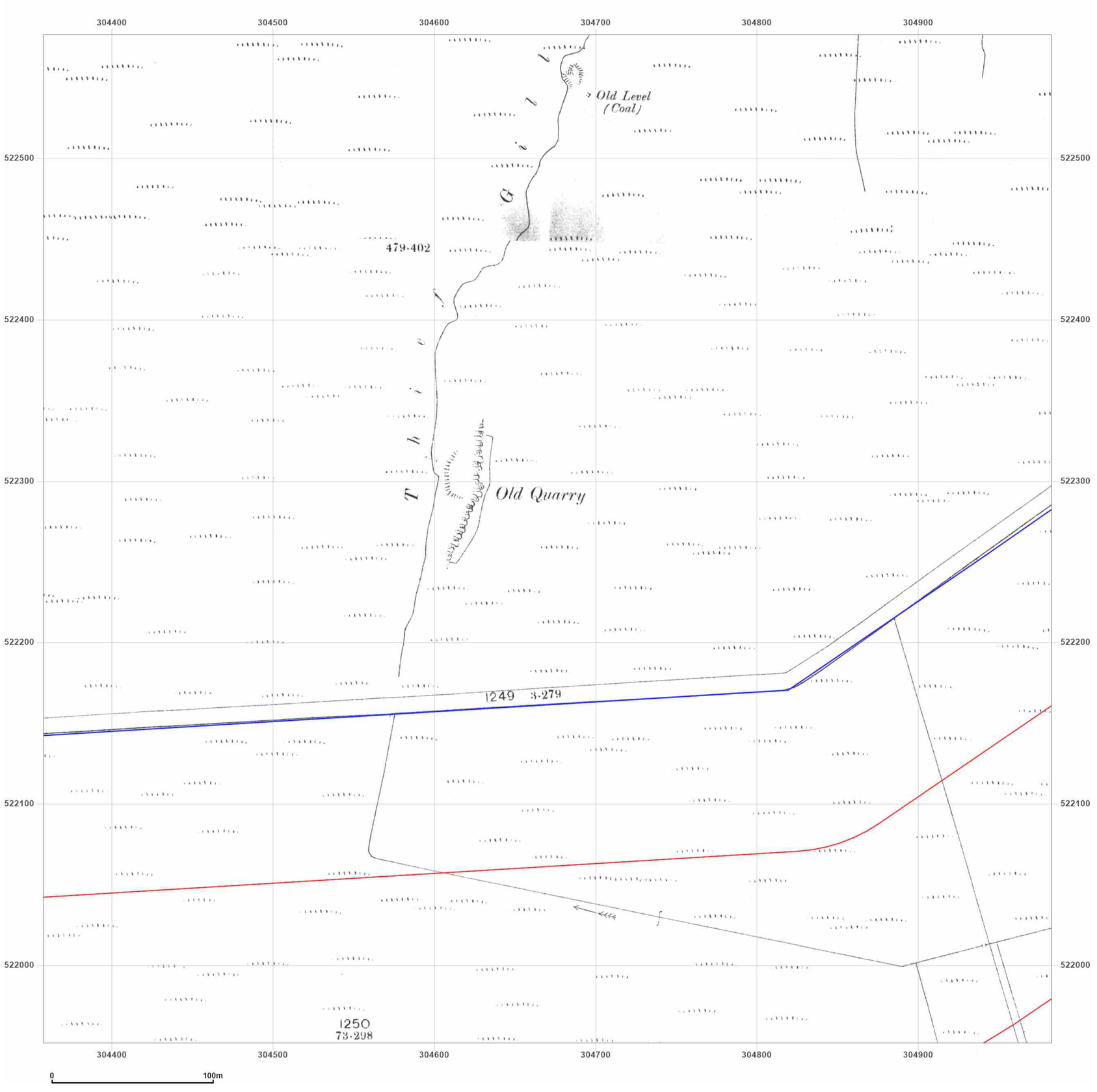

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_1
Grid Ref: 304670, 522264

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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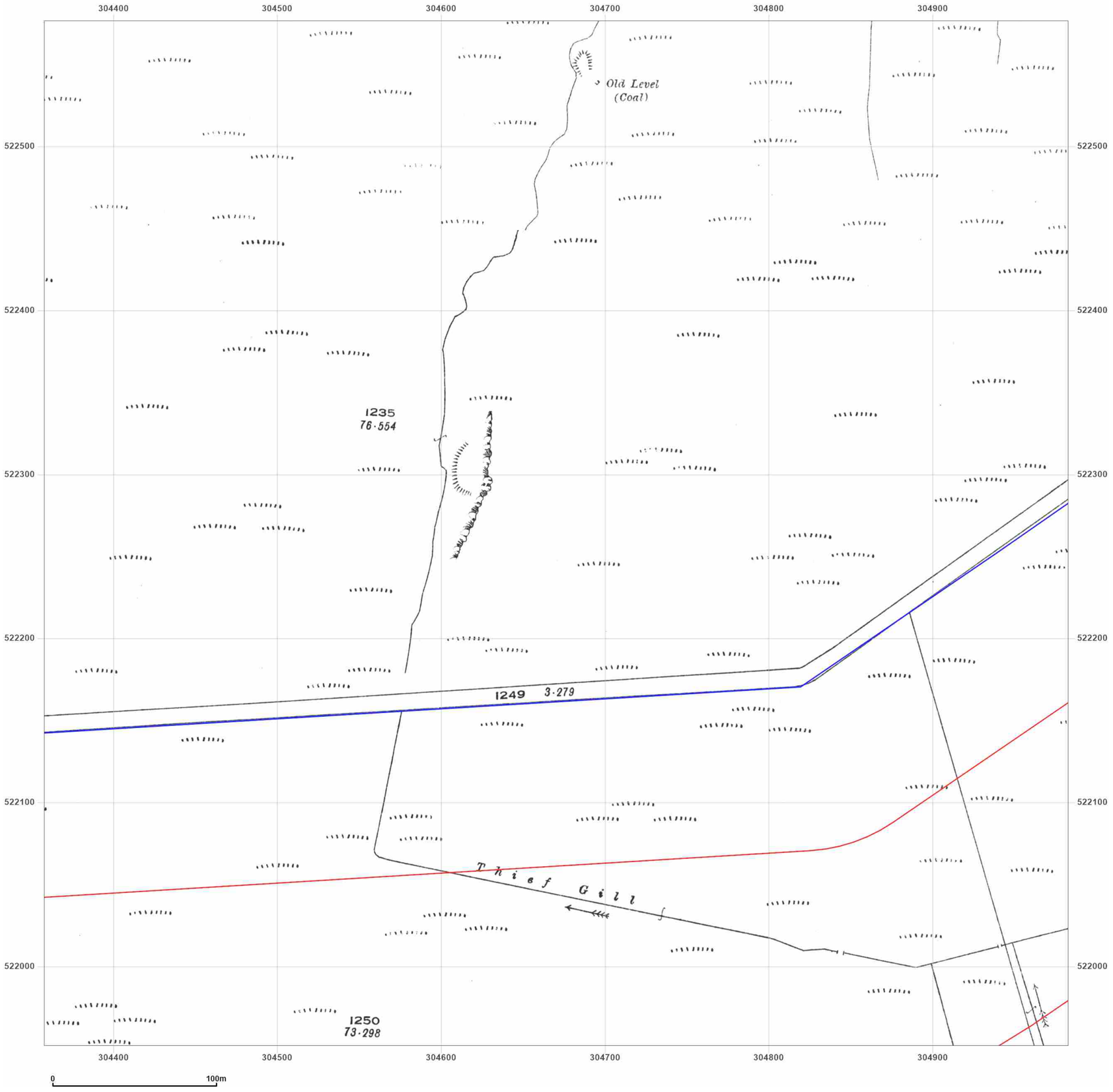

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_1
Grid Ref: 304670, 522264

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
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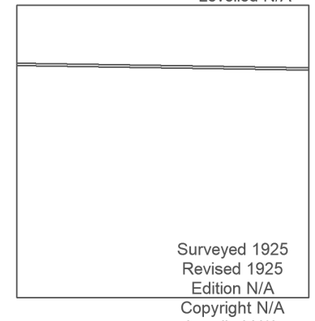
Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A



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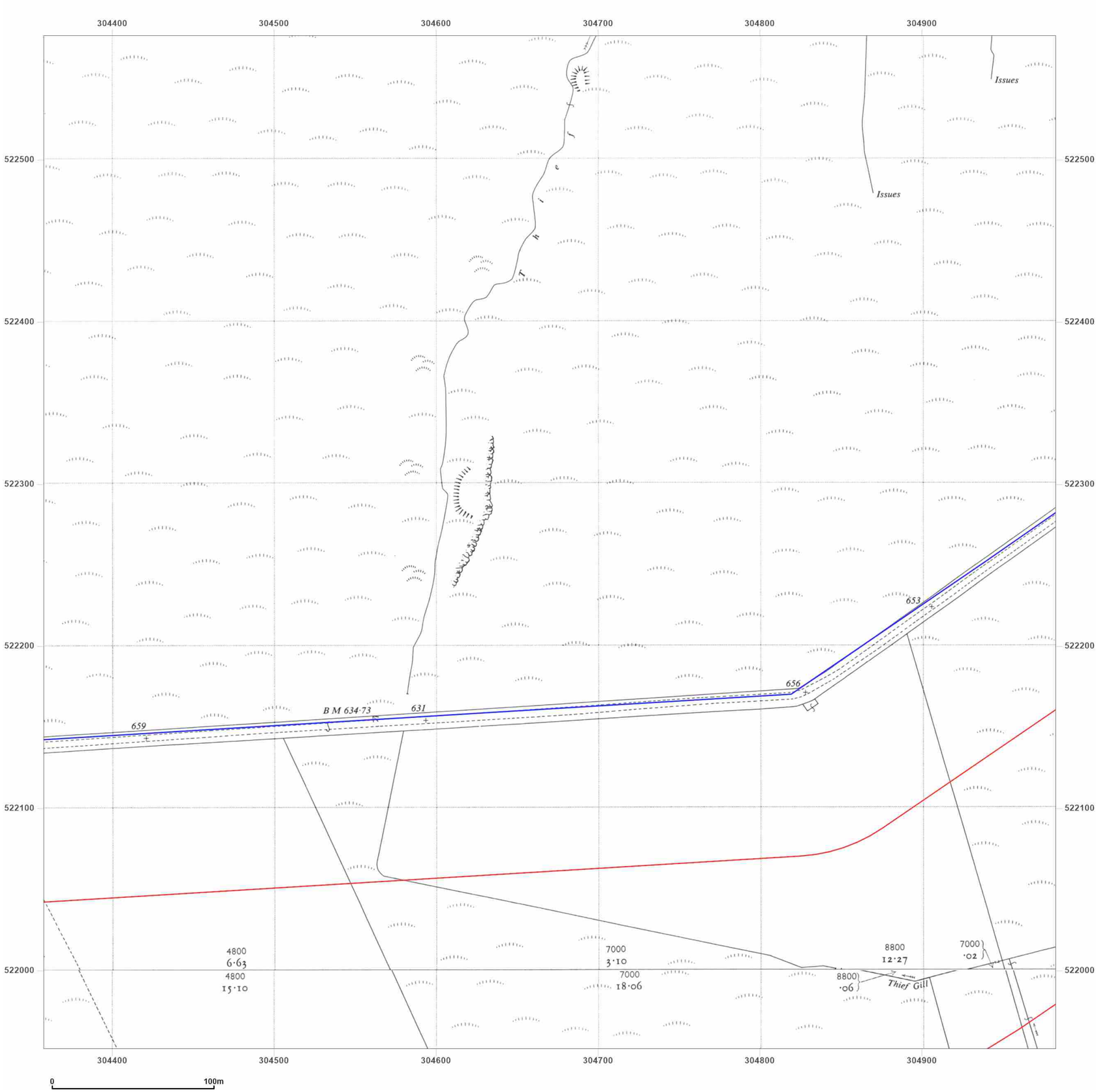

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_1
Grid Ref: 304670, 522264

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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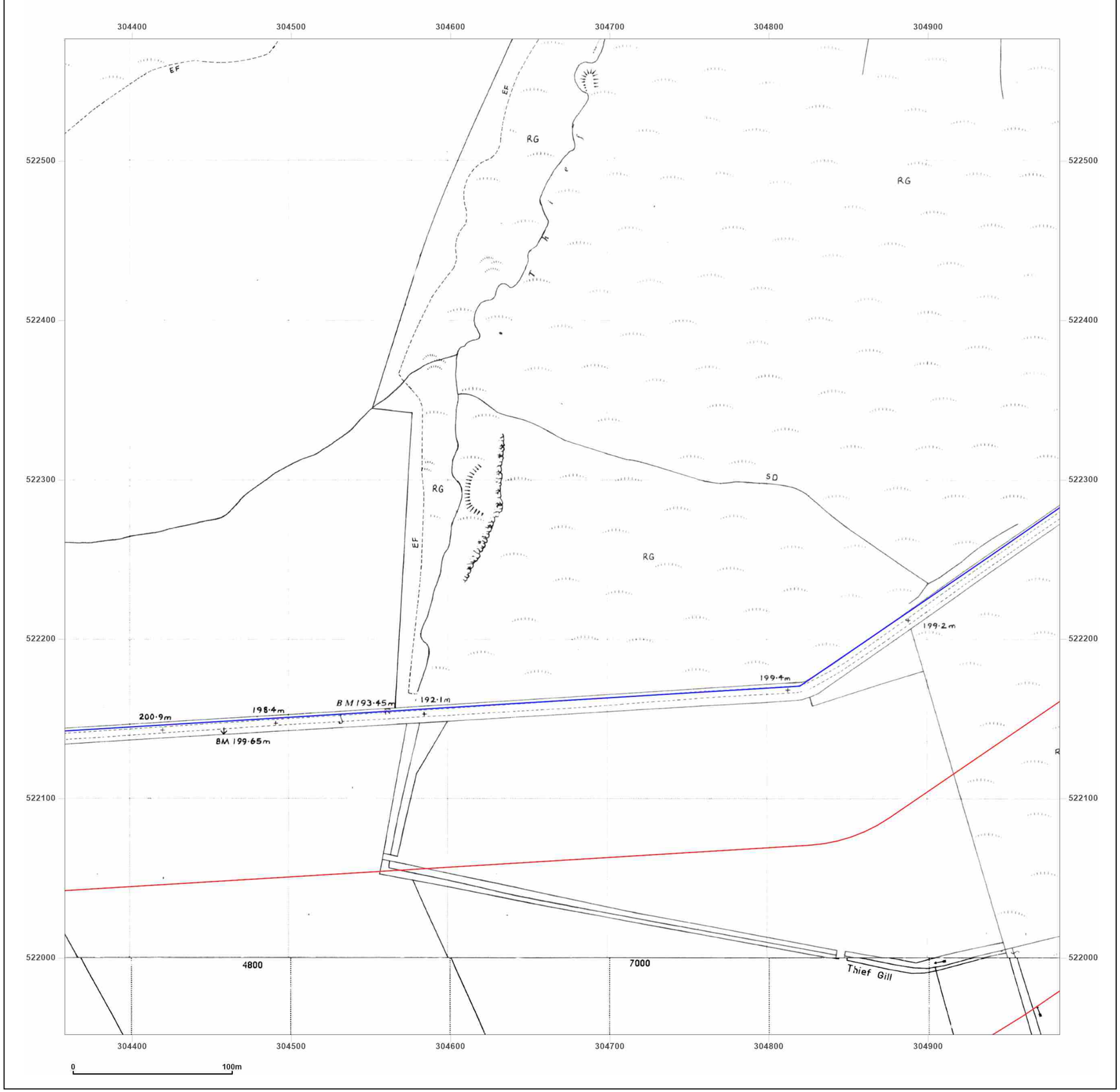

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_1
Grid Ref: 304670, 522264

Map Name: National Grid

Map date: **1993-1994**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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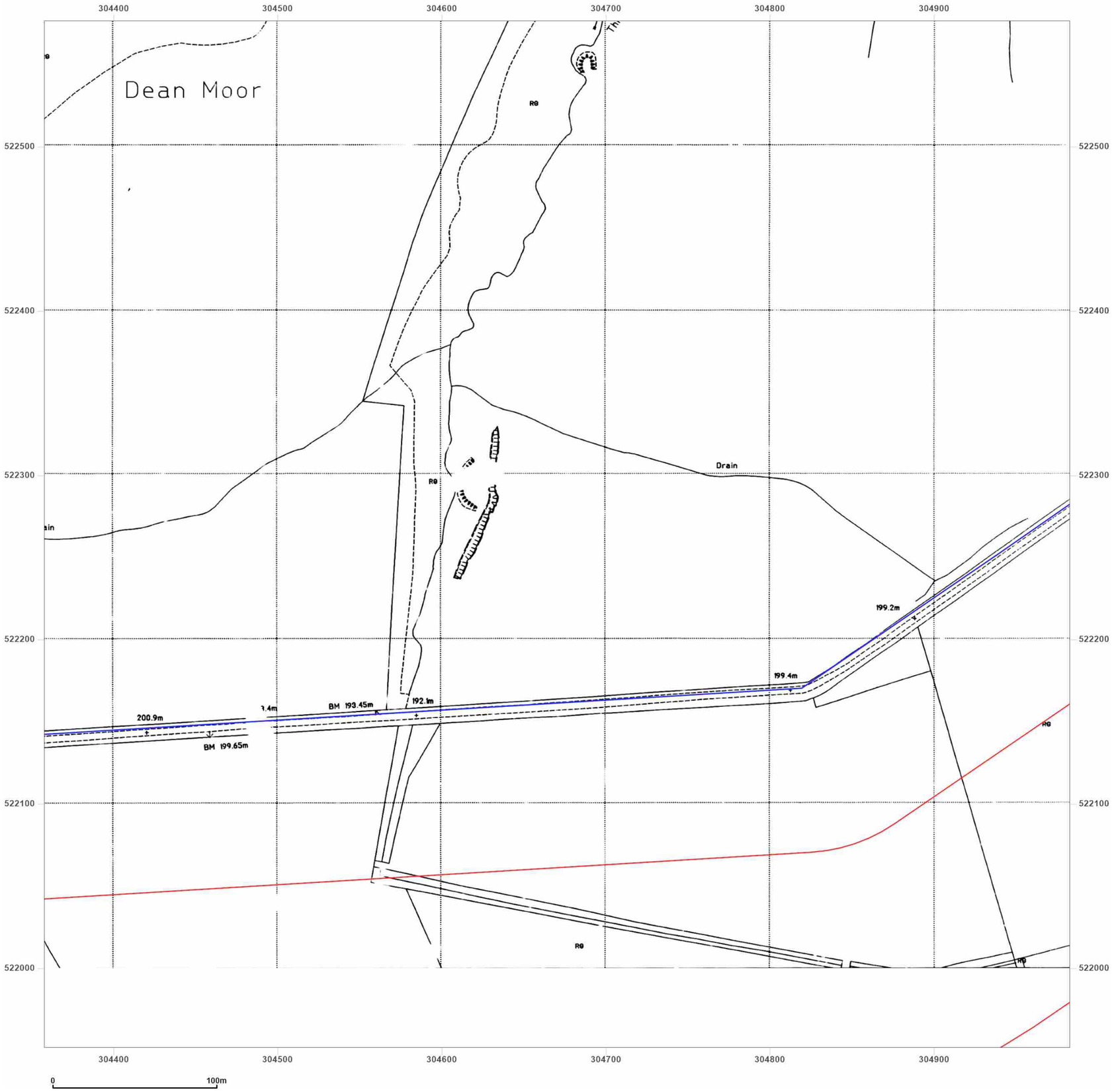

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_1
Grid Ref: 304670, 522264

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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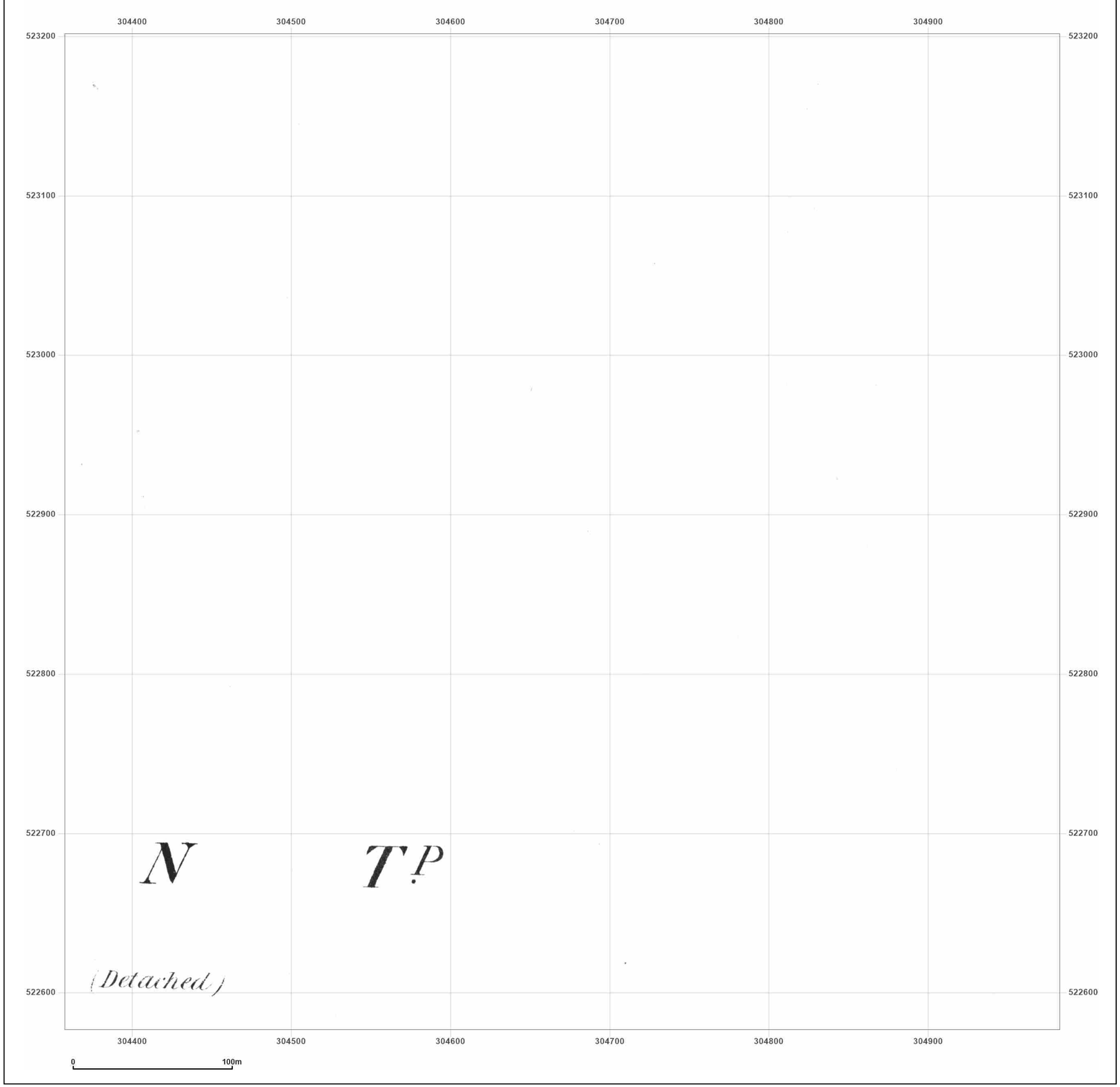

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_2
Grid Ref: 304670, 522889

Map Name: County Series

Map date: **1862**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 12 April 2023

Map legend available at:
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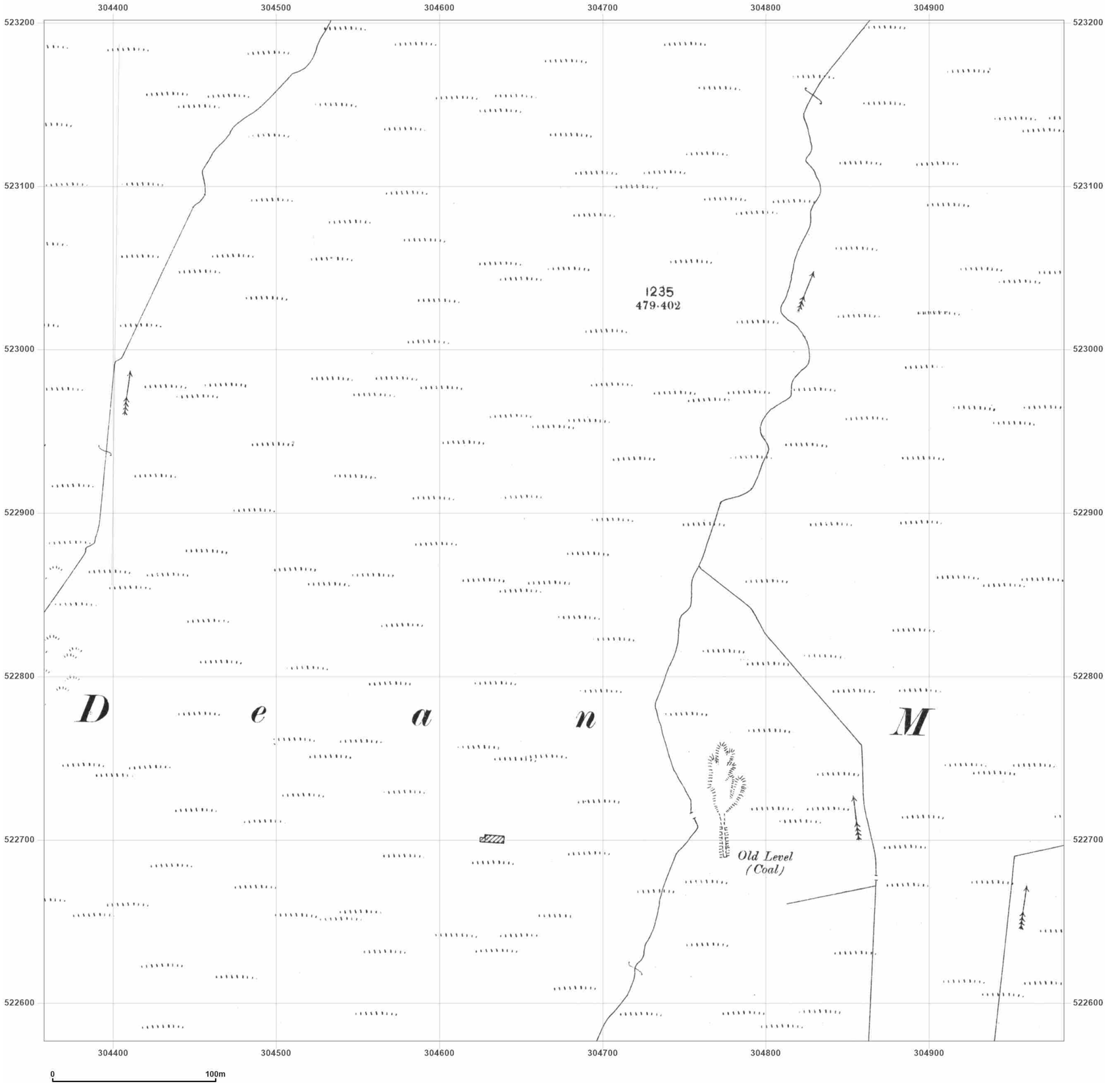

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_2
Grid Ref: 304670, 522889

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 12 April 2023

Map legend available at:
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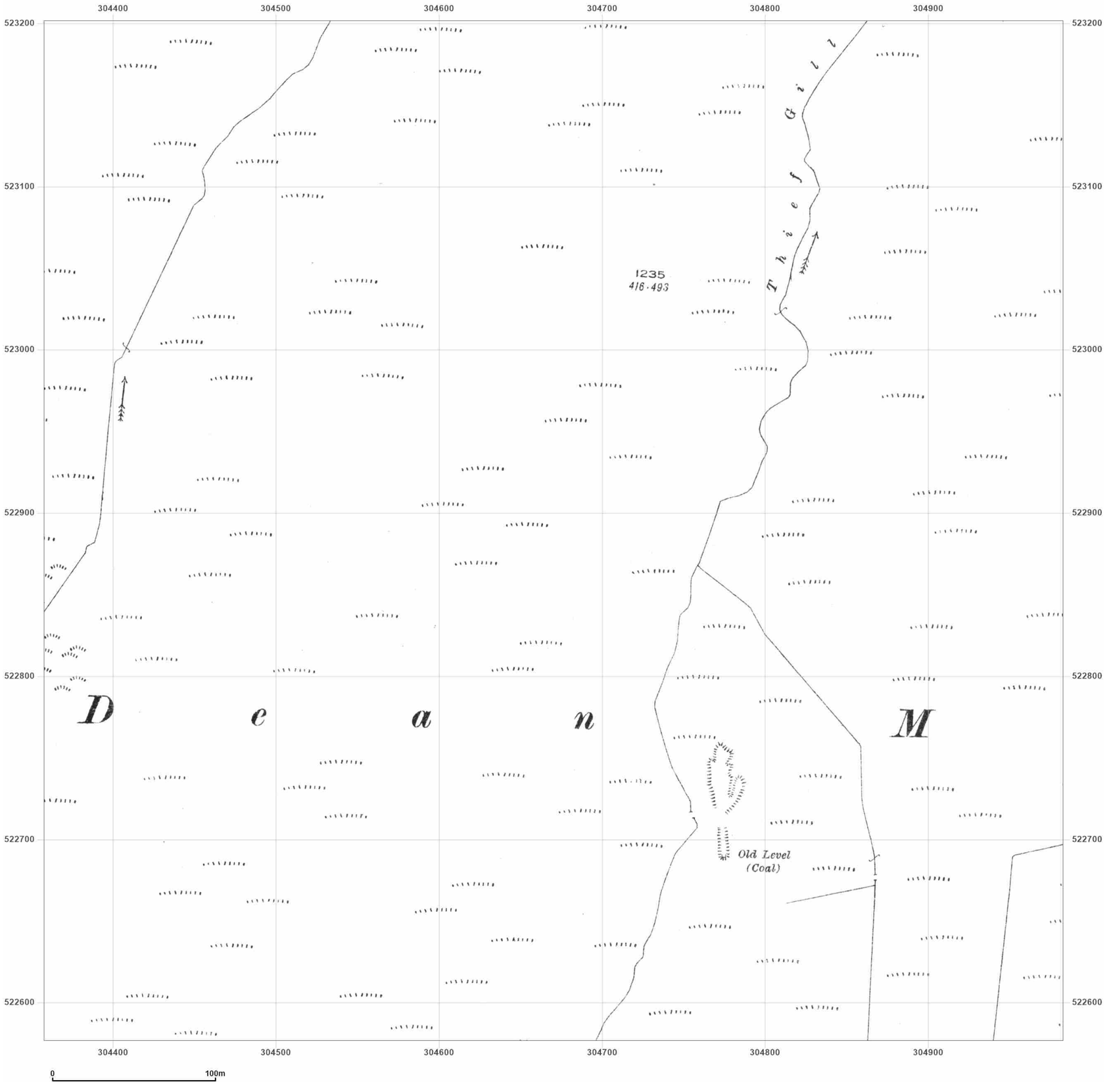

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_2
Grid Ref: 304670, 522889

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 12 April 2023

Map legend available at:
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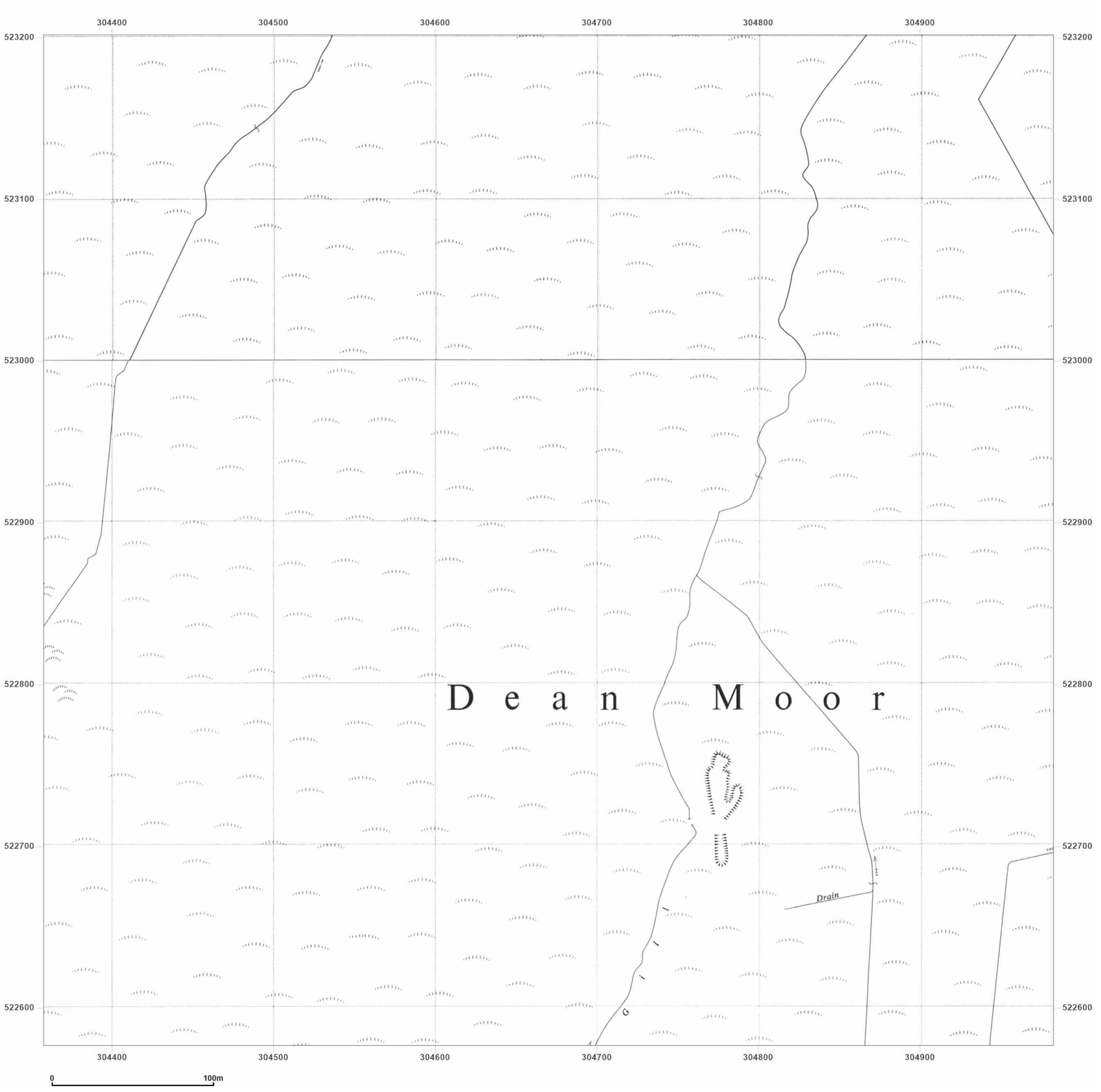


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_2
Grid Ref: 304670, 522889

Map Name: National Grid

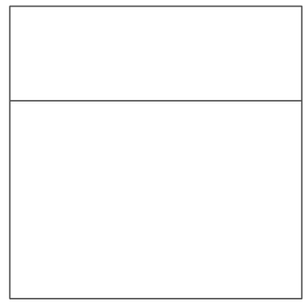
Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956



Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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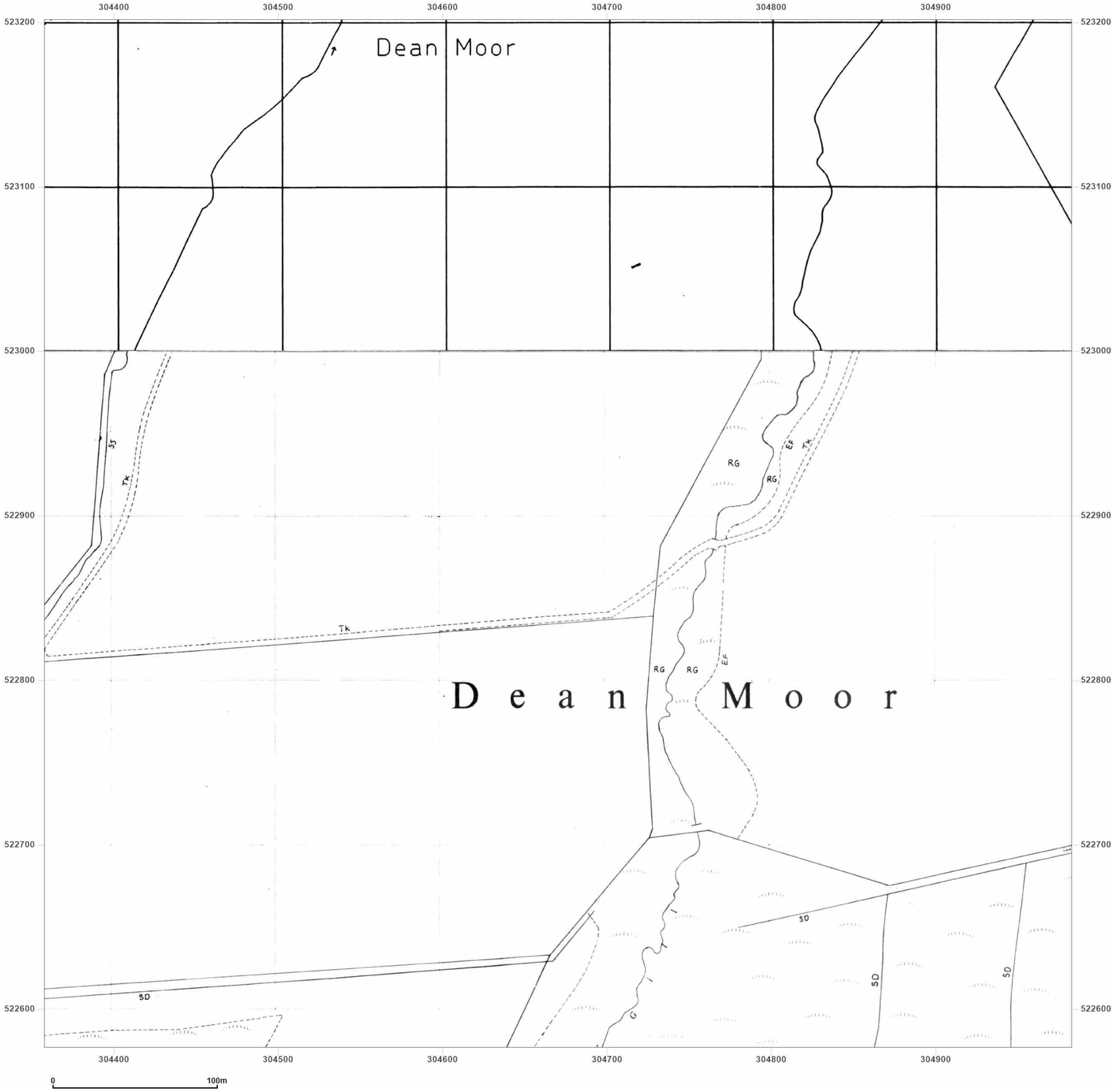

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_2
Grid Ref: 304670, 522889

Map Name: National Grid

Map date: **1991-1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1991
Revised 1991
Edition N/A
Copyright 1991
Levelled N/A

Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

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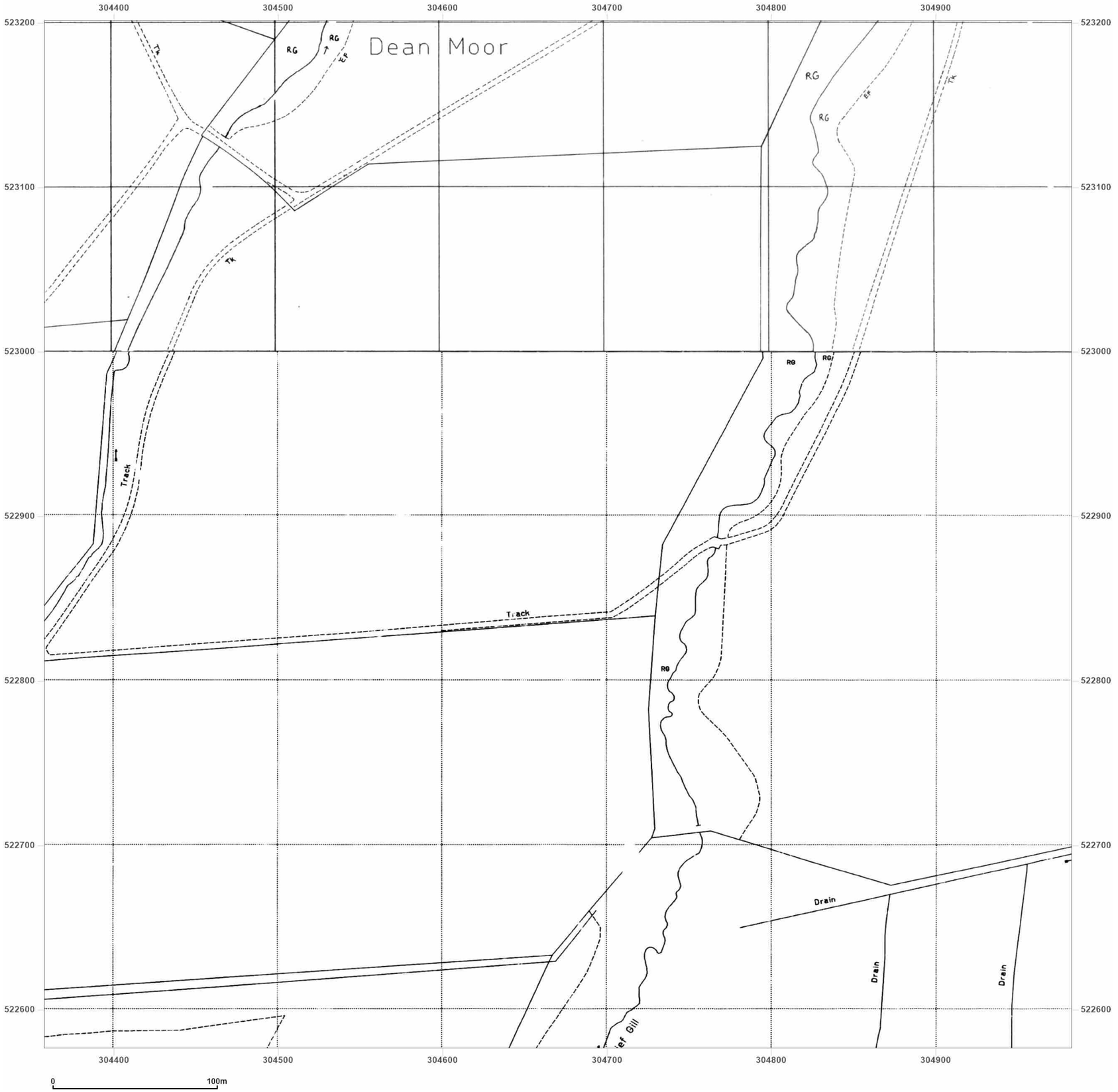

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_2
Grid Ref: 304670, 522889

Map Name: National Grid

Map date: **1993-1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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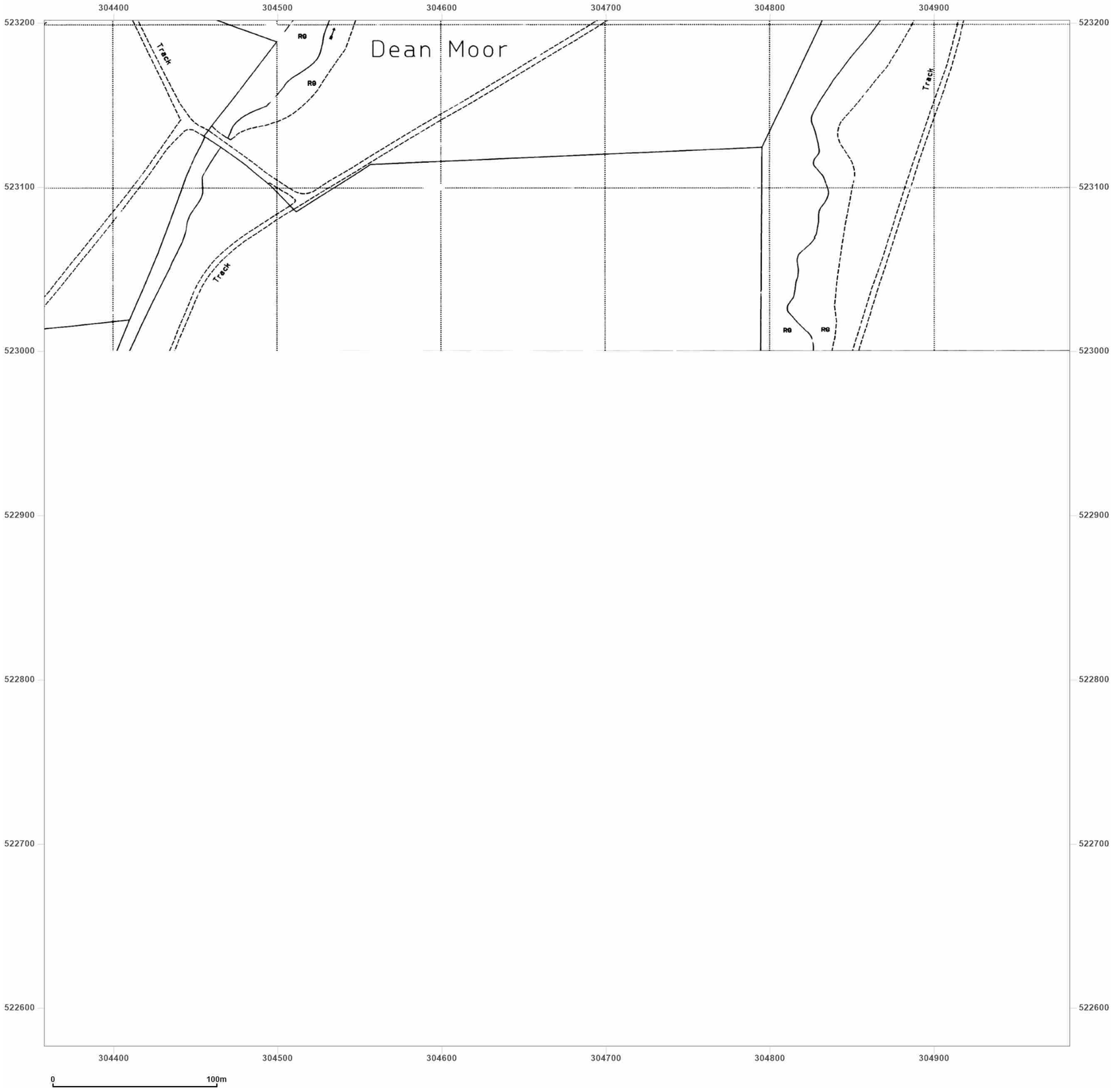

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_2
Grid Ref: 304670, 522889

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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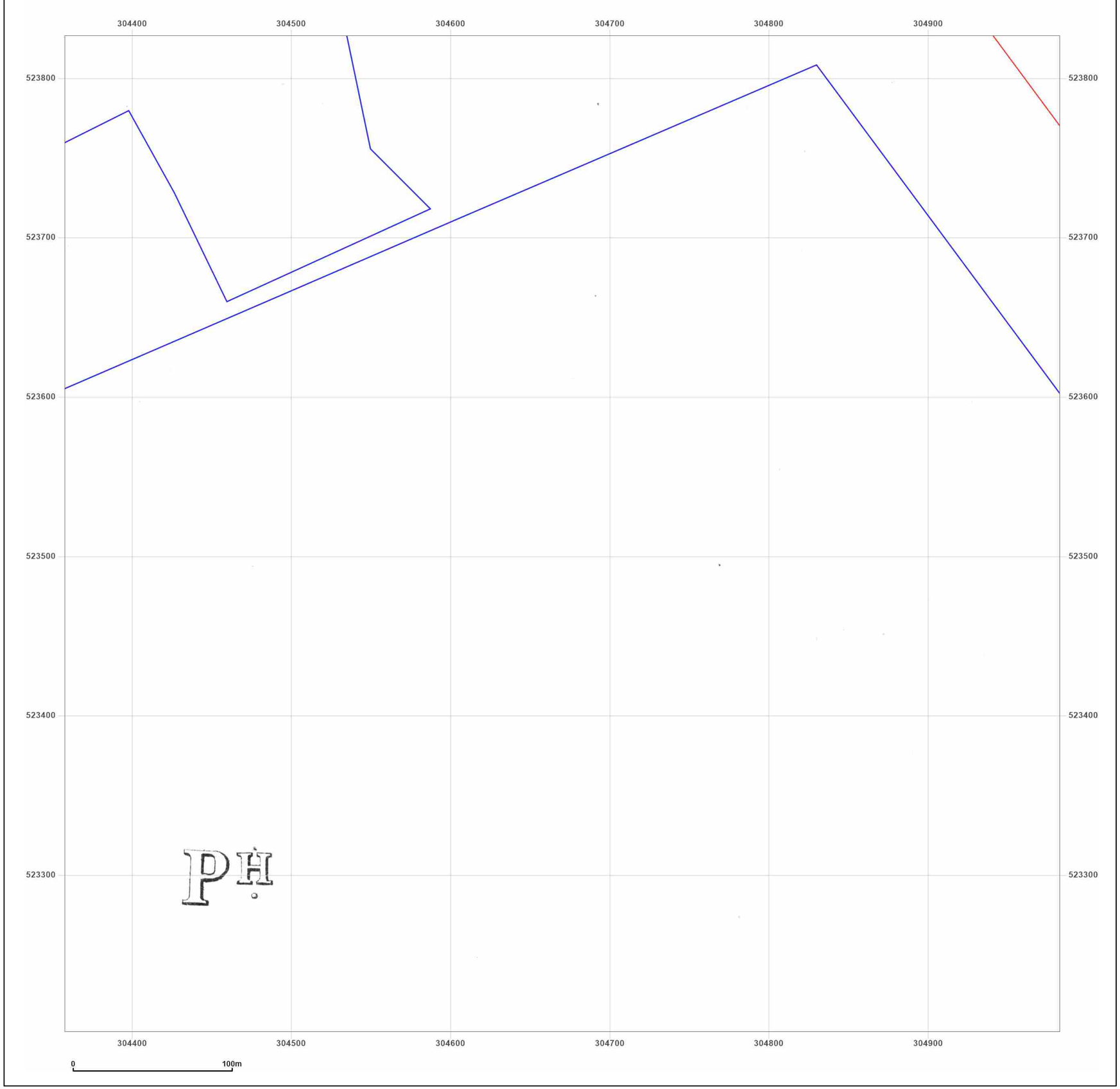

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_3
Grid Ref: 304670, 523514

Map Name: County Series

Map date: **1862**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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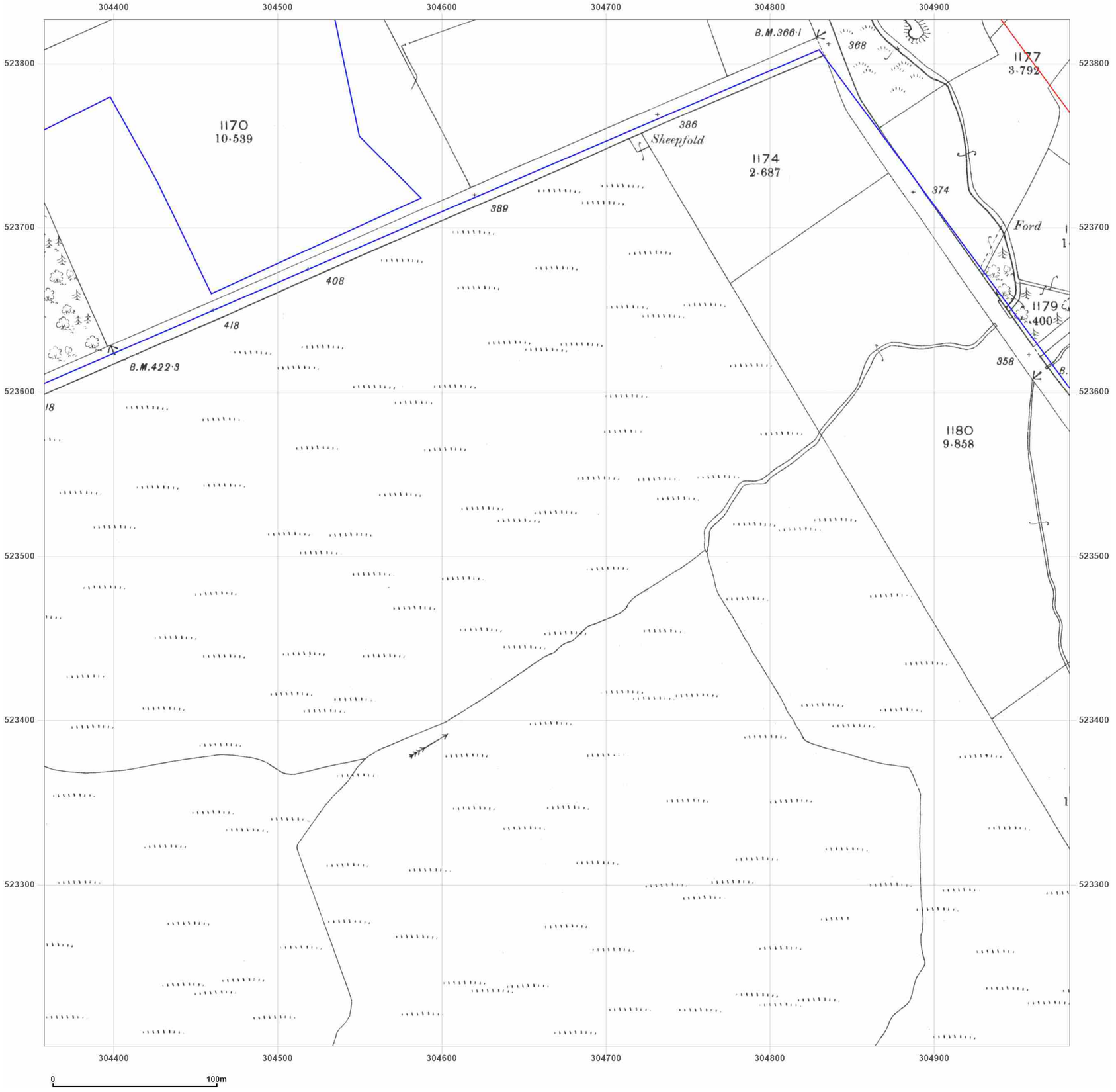

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_3
Grid Ref: 304670, 523514

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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Map legend available at:
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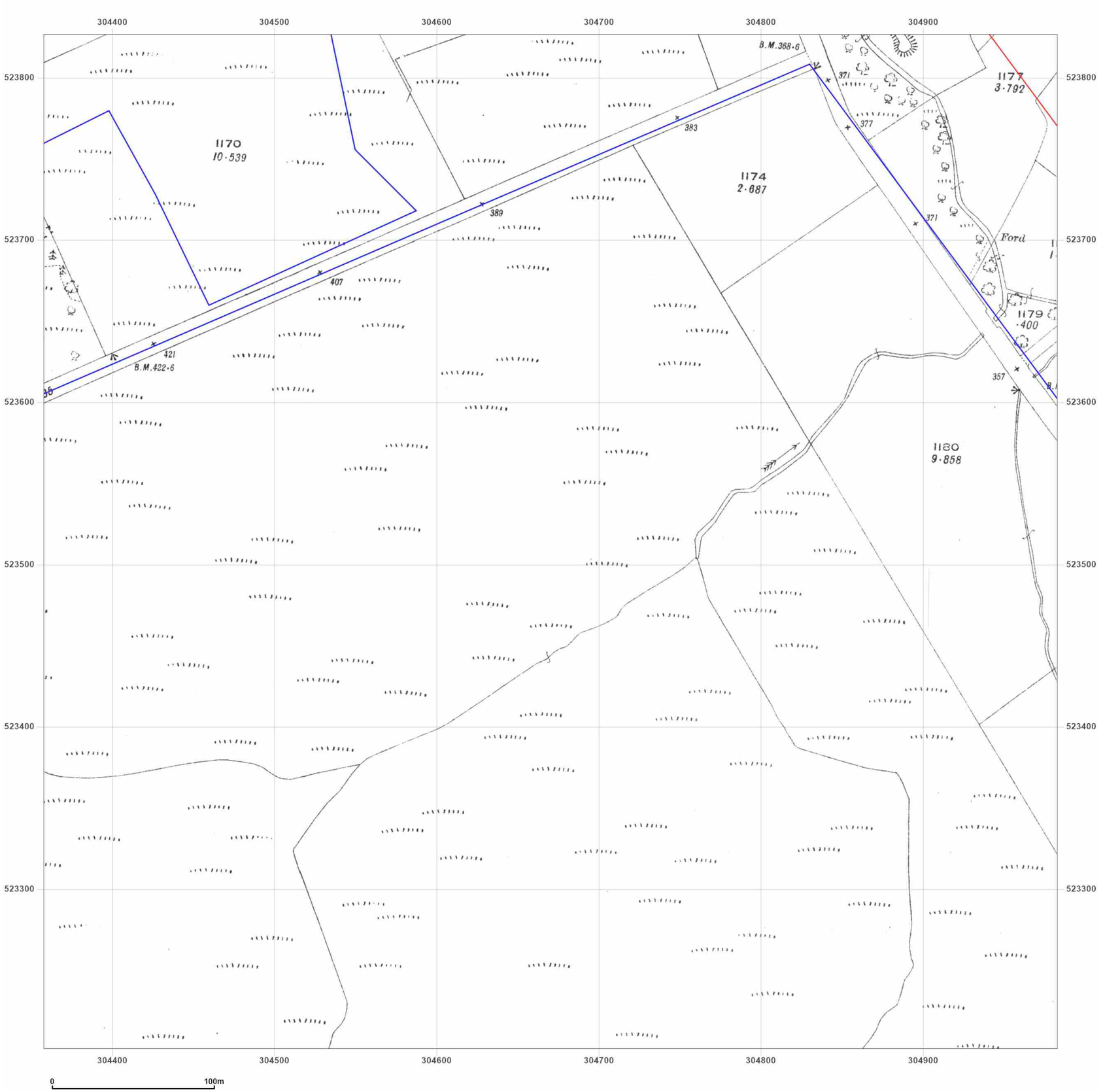

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_3
Grid Ref: 304670, 523514

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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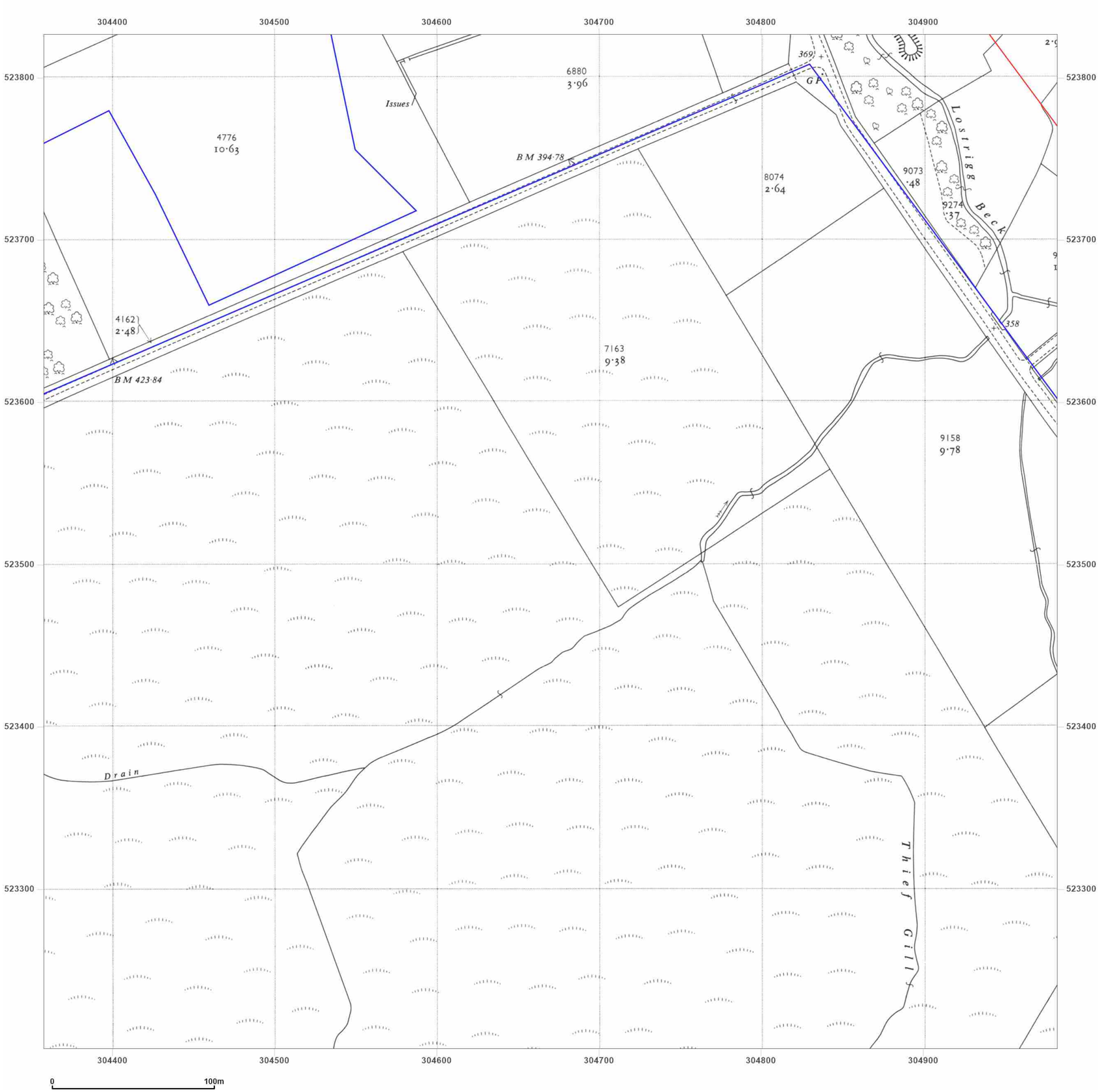

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_3
Grid Ref: 304670, 523514

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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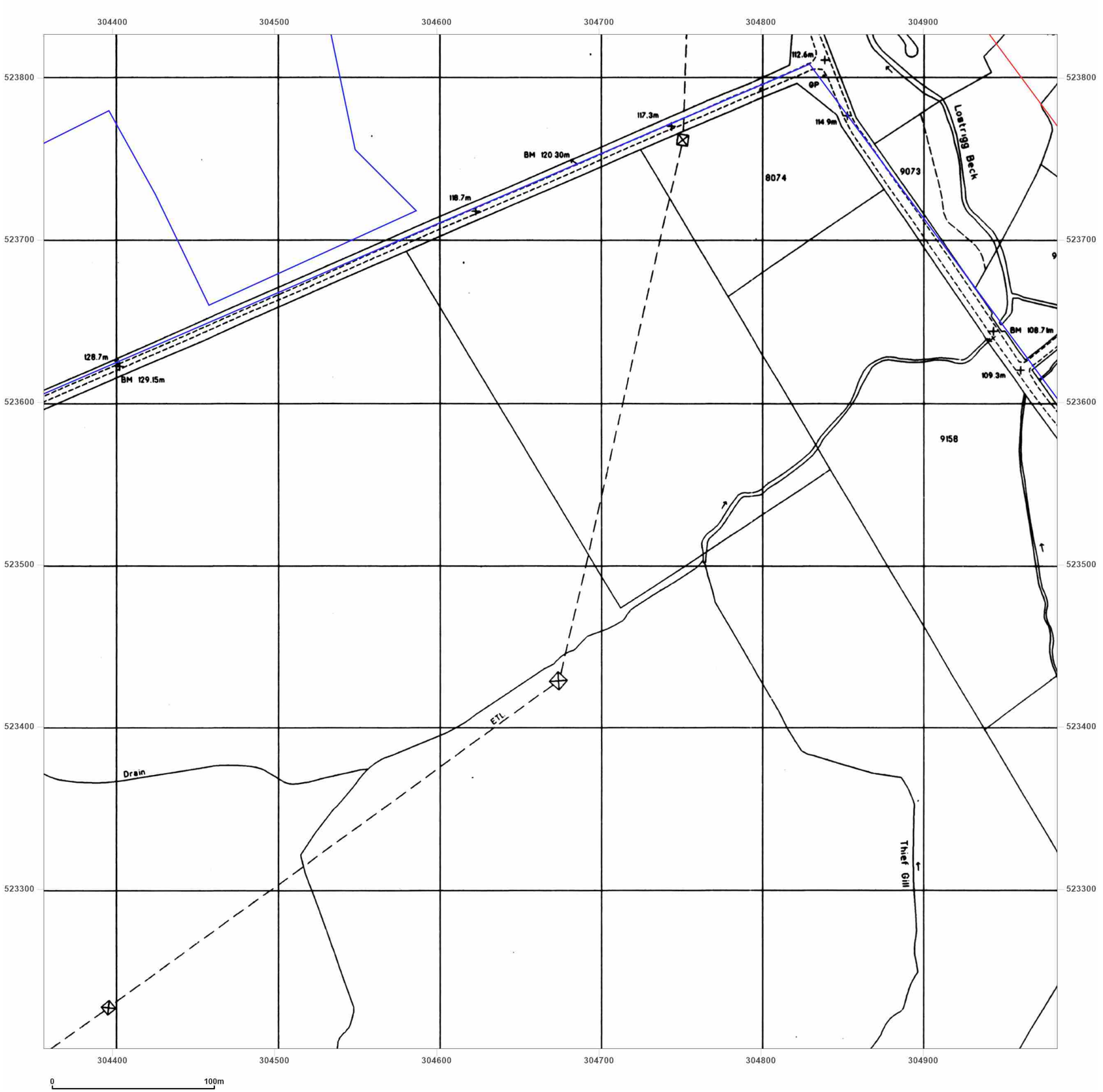

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_3
Grid Ref: 304670, 523514

Map Name: National Grid

Map date: **1991**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1991
Revised 1991
Edition N/A
Copyright 1991
Levelled N/A

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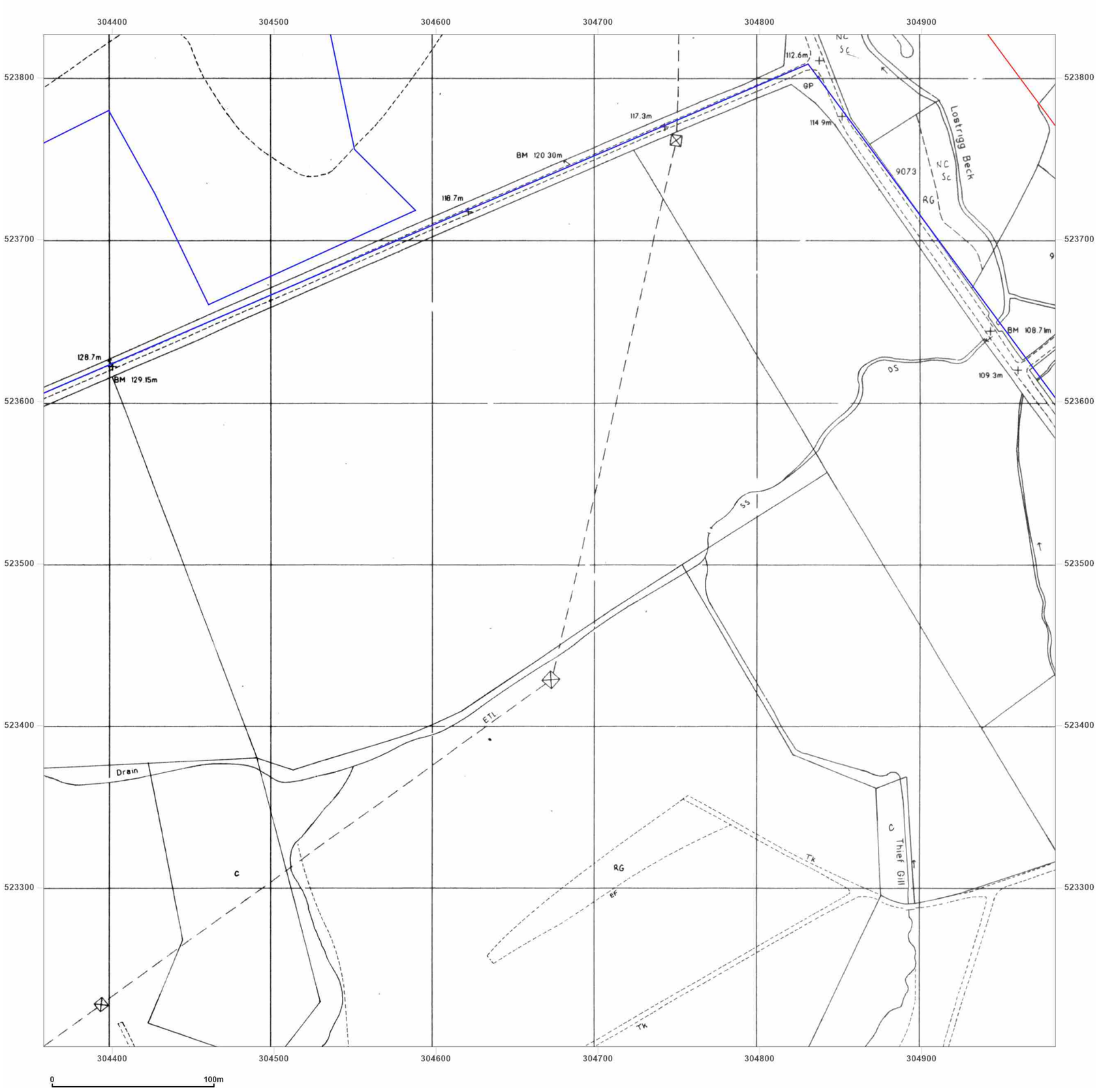

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_3
Grid Ref: 304670, 523514

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

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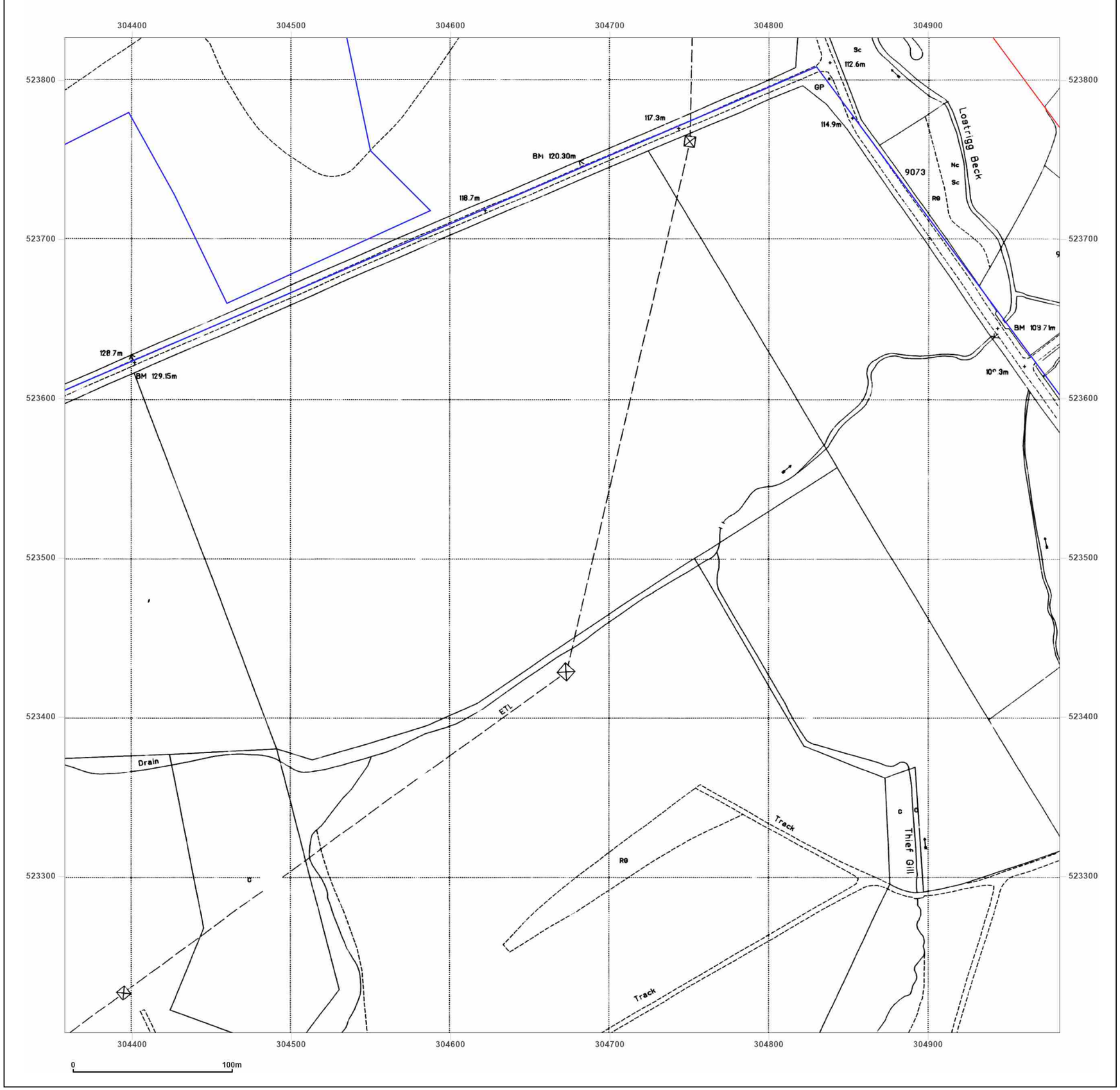

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_3
Grid Ref: 304670, 523514

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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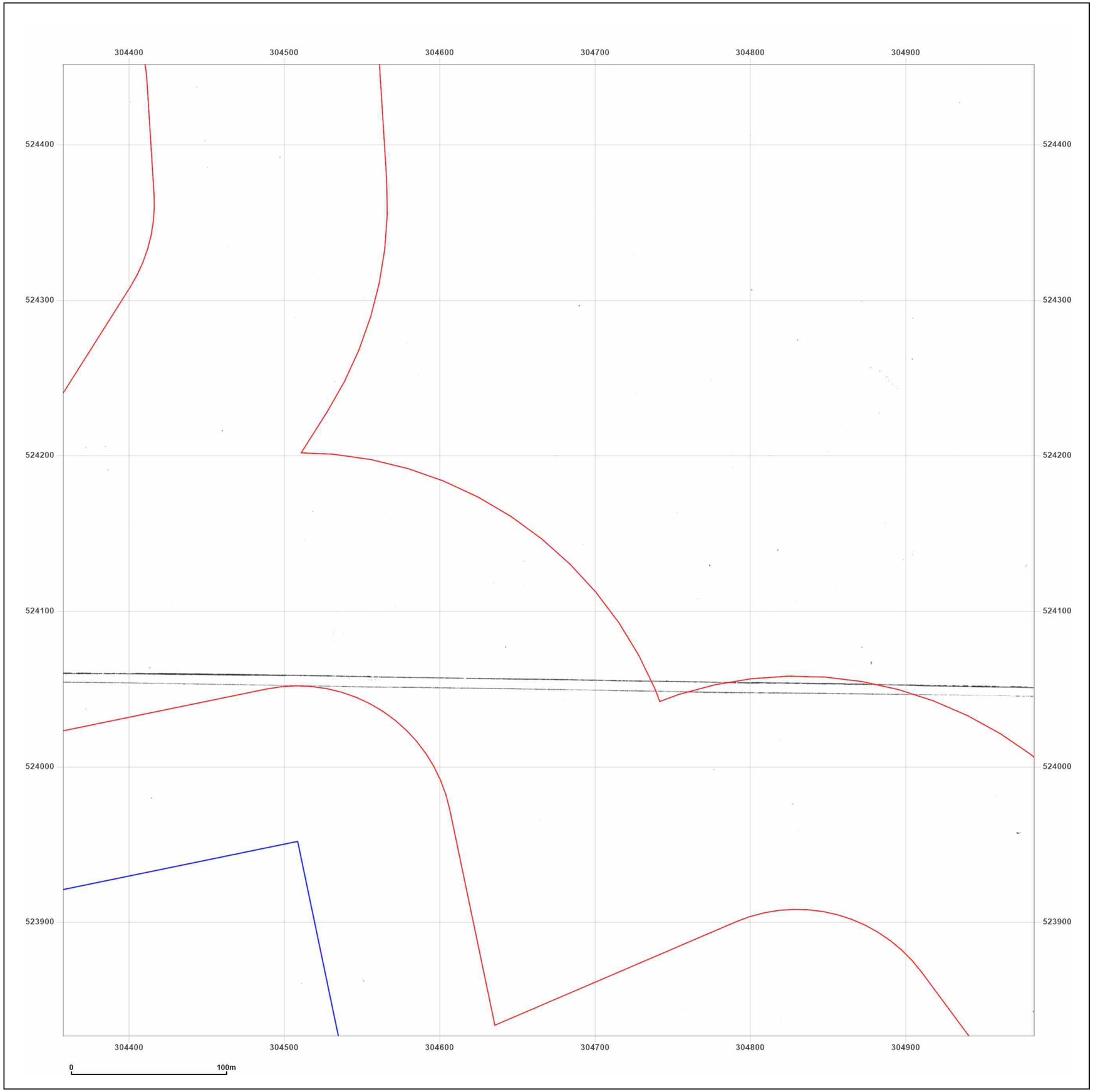

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_4
Grid Ref: 304670, 524139

Map Name: County Series

Map date: **1862-1864**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1864
Revised 1864
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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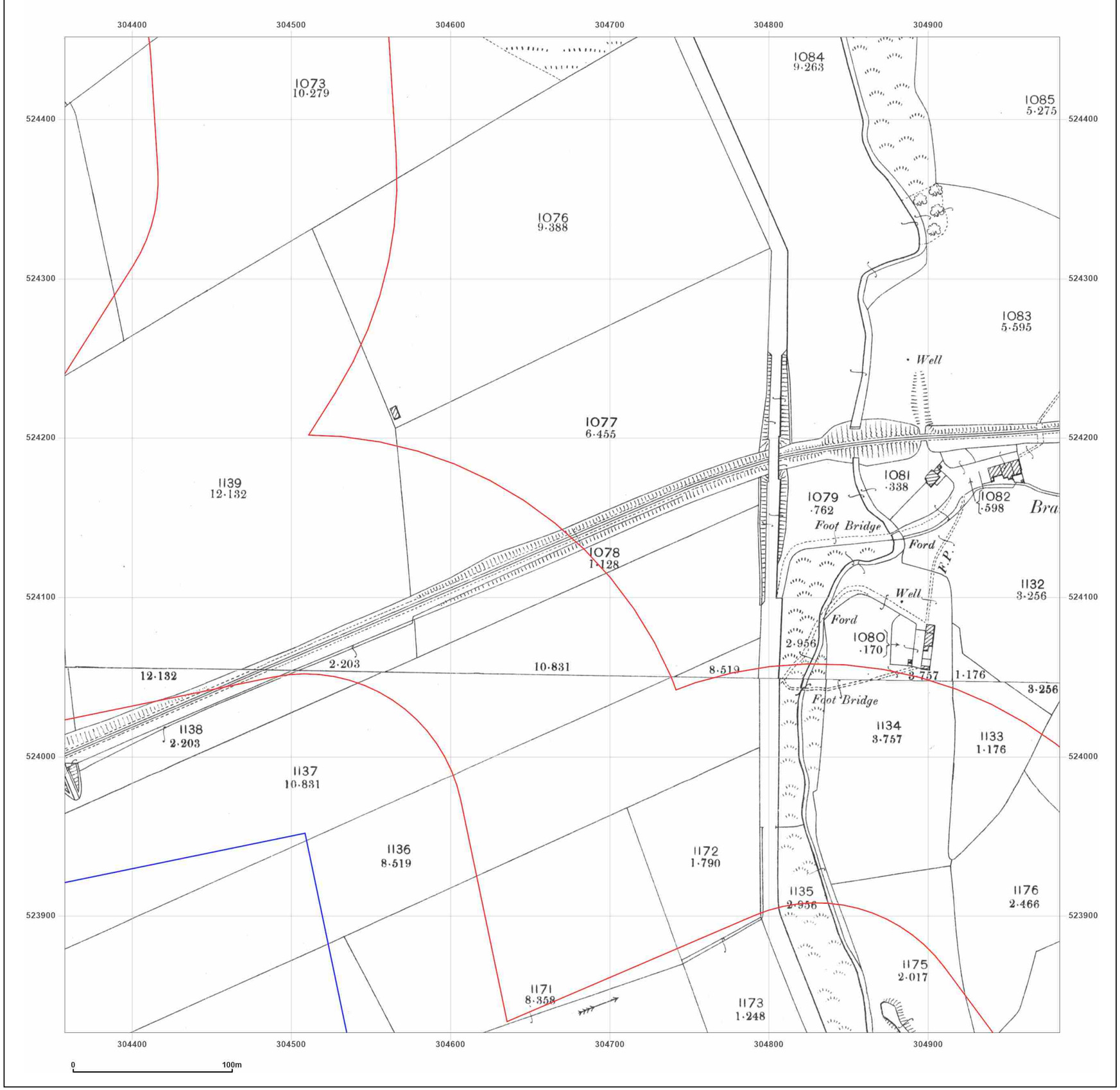

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_4
Grid Ref: 304670, 524139

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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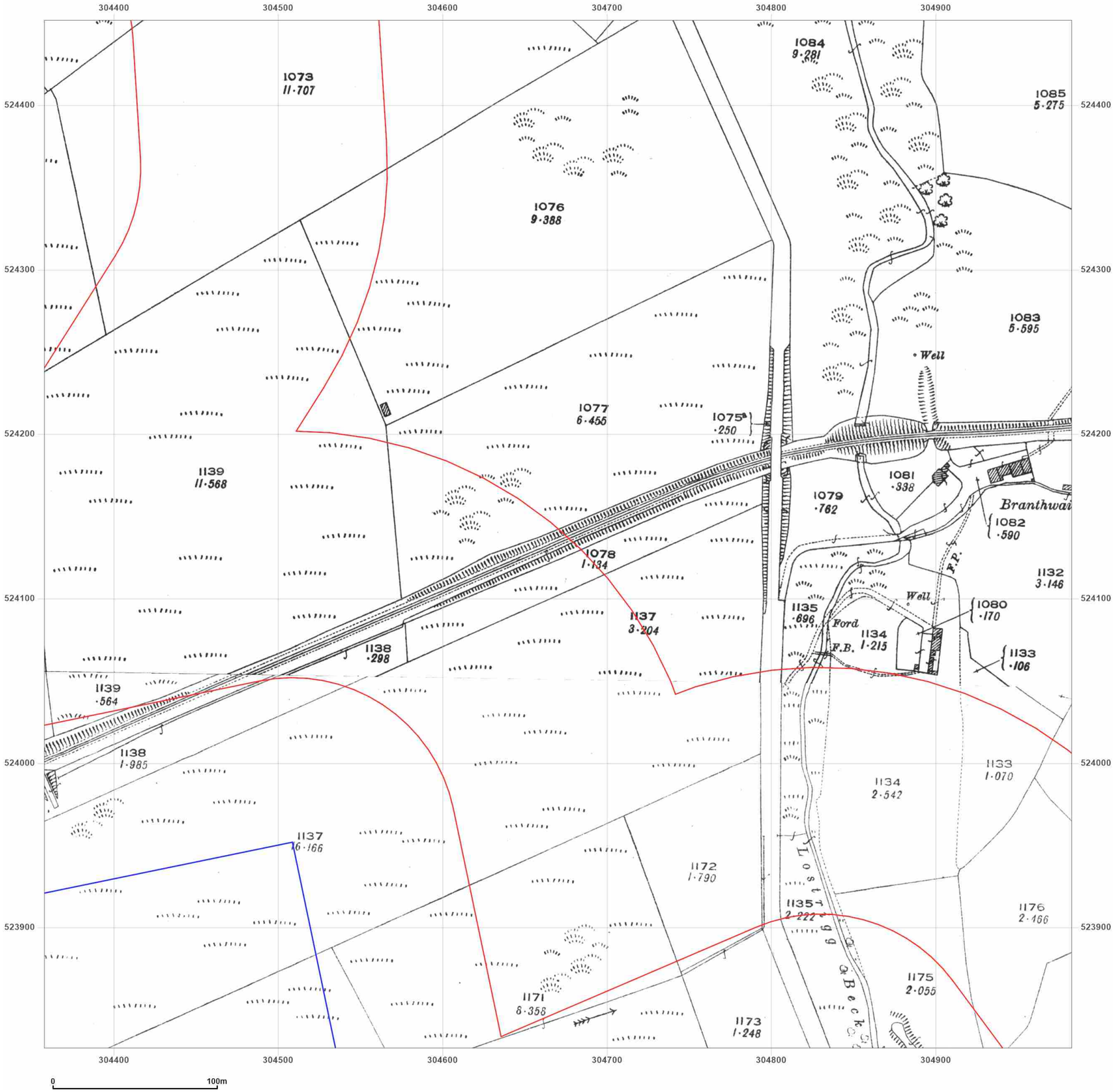


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_4
Grid Ref: 304670, 524139

Map Name: County Series

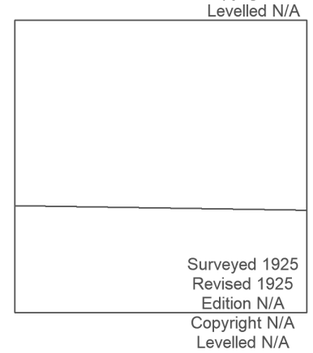
Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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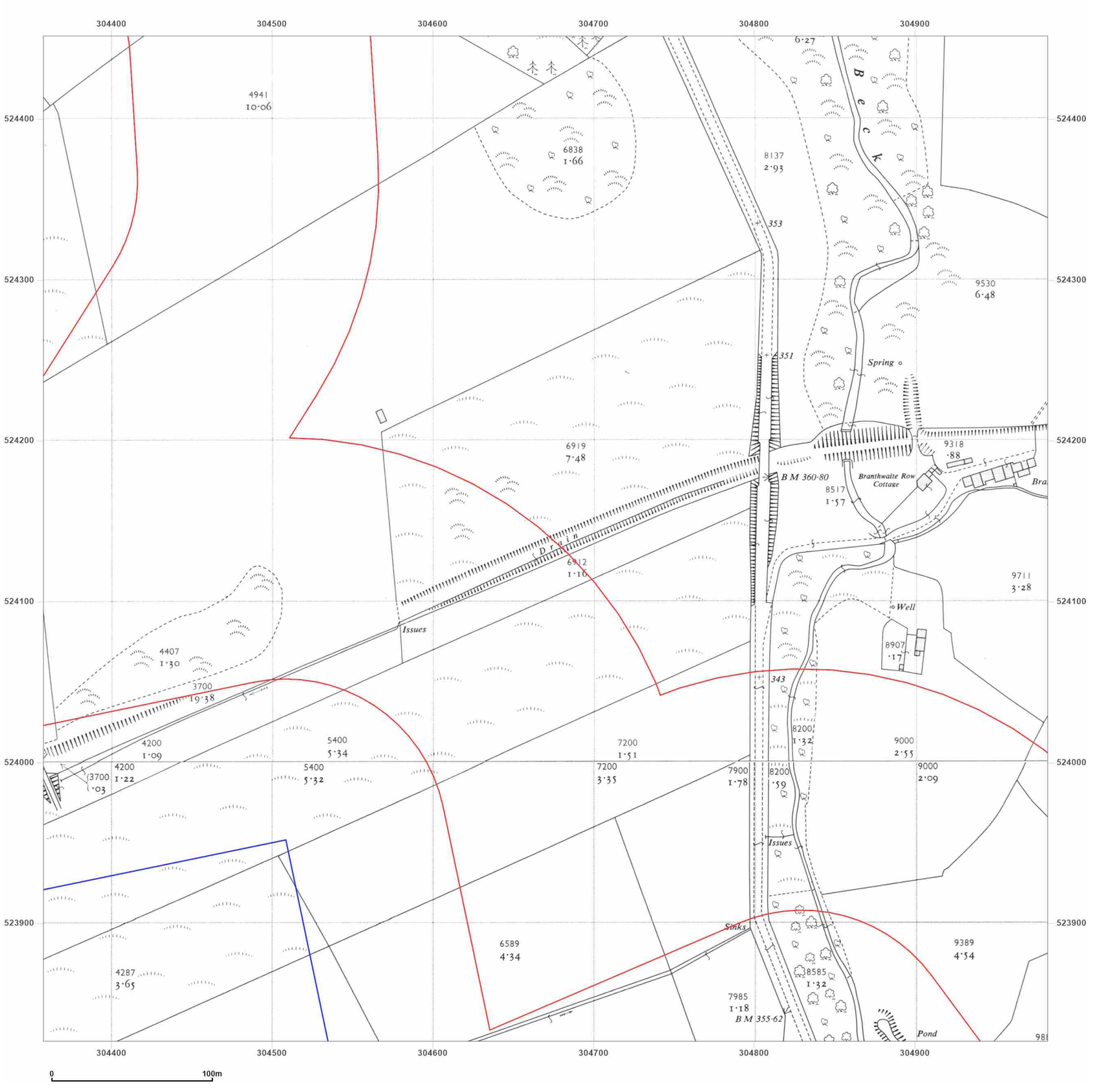

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_4
Grid Ref: 304670, 524139

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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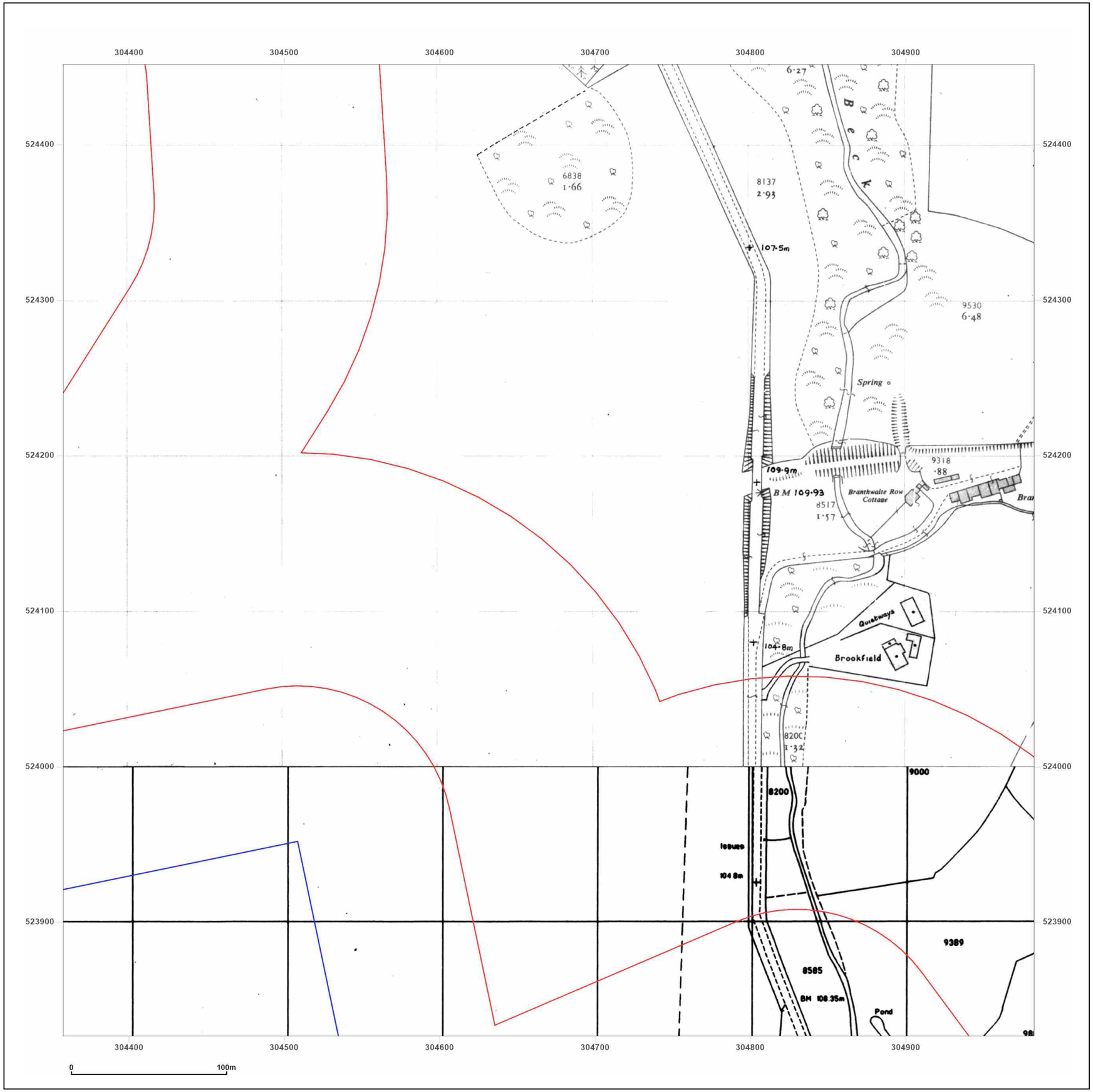

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_4
Grid Ref: 304670, 524139

Map Name: National Grid

Map date: **1989-1991**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1989
Revised 1989
Edition N/A
Copyright 1989
Levelled N/A

Surveyed 1991
Revised 1991
Edition N/A
Copyright 1991
Levelled N/A

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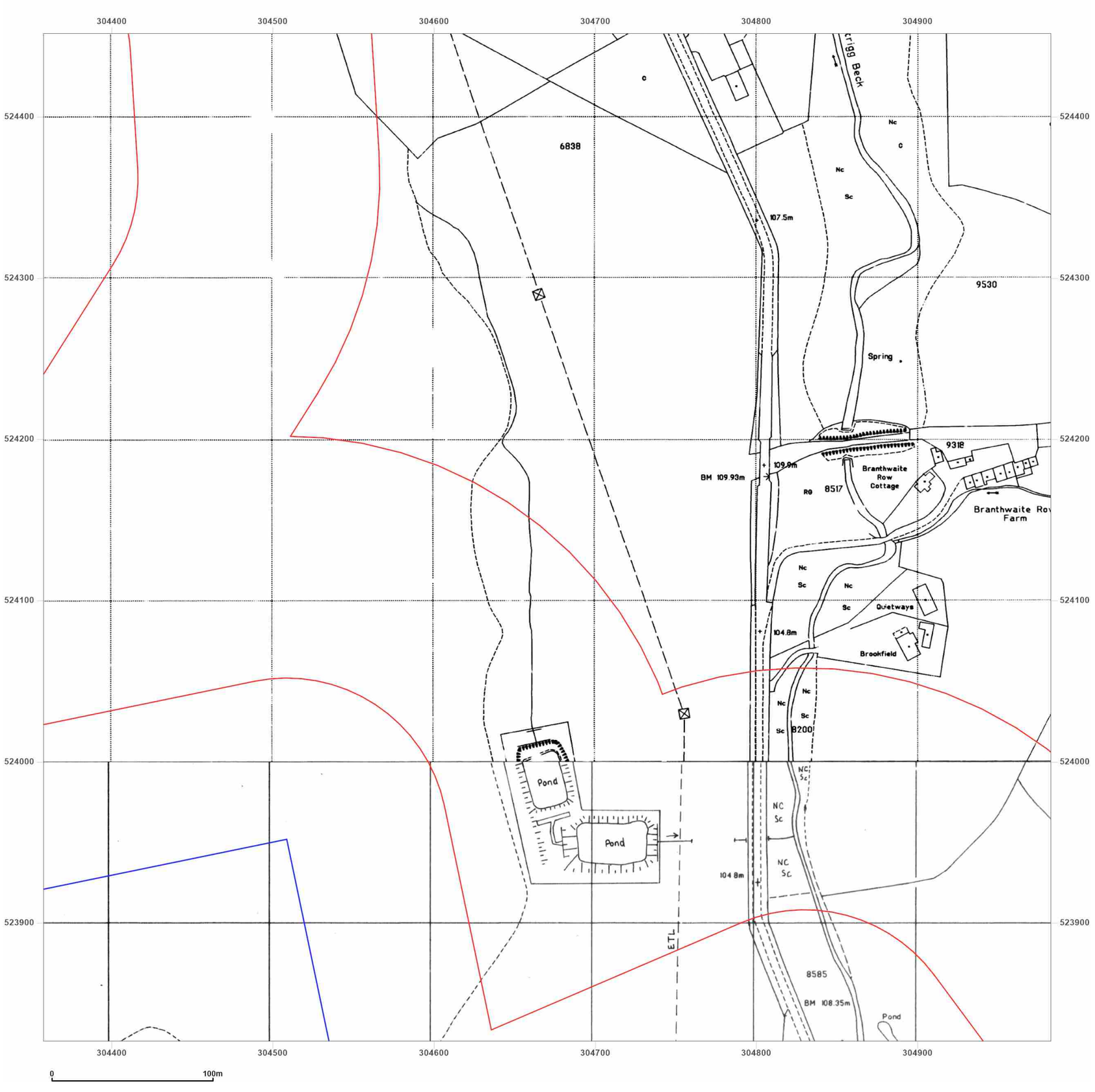

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_4
Grid Ref: 304670, 524139

Map Name: National Grid

Map date: **1993-1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

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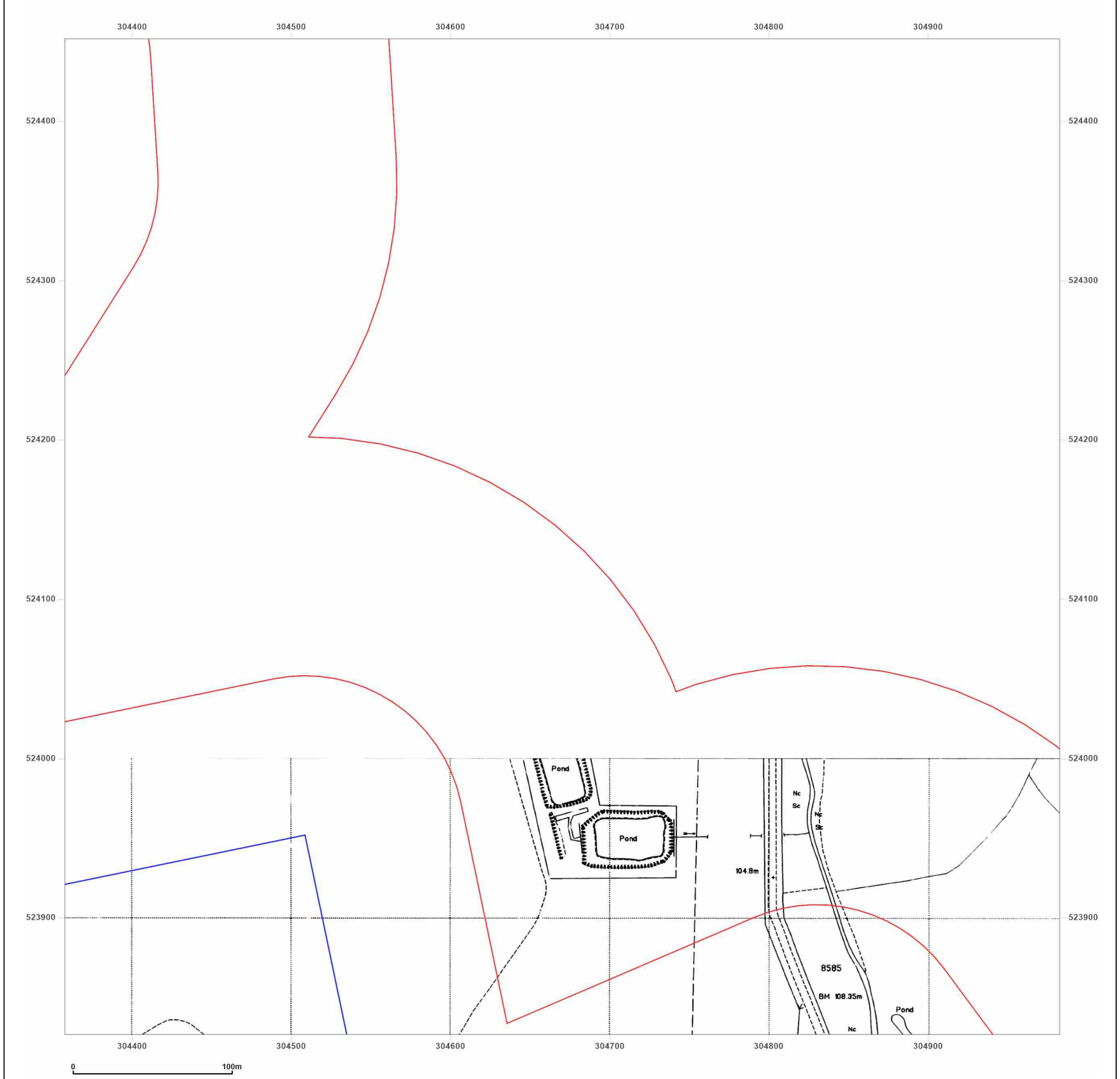

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_4
Grid Ref: 304670, 524139

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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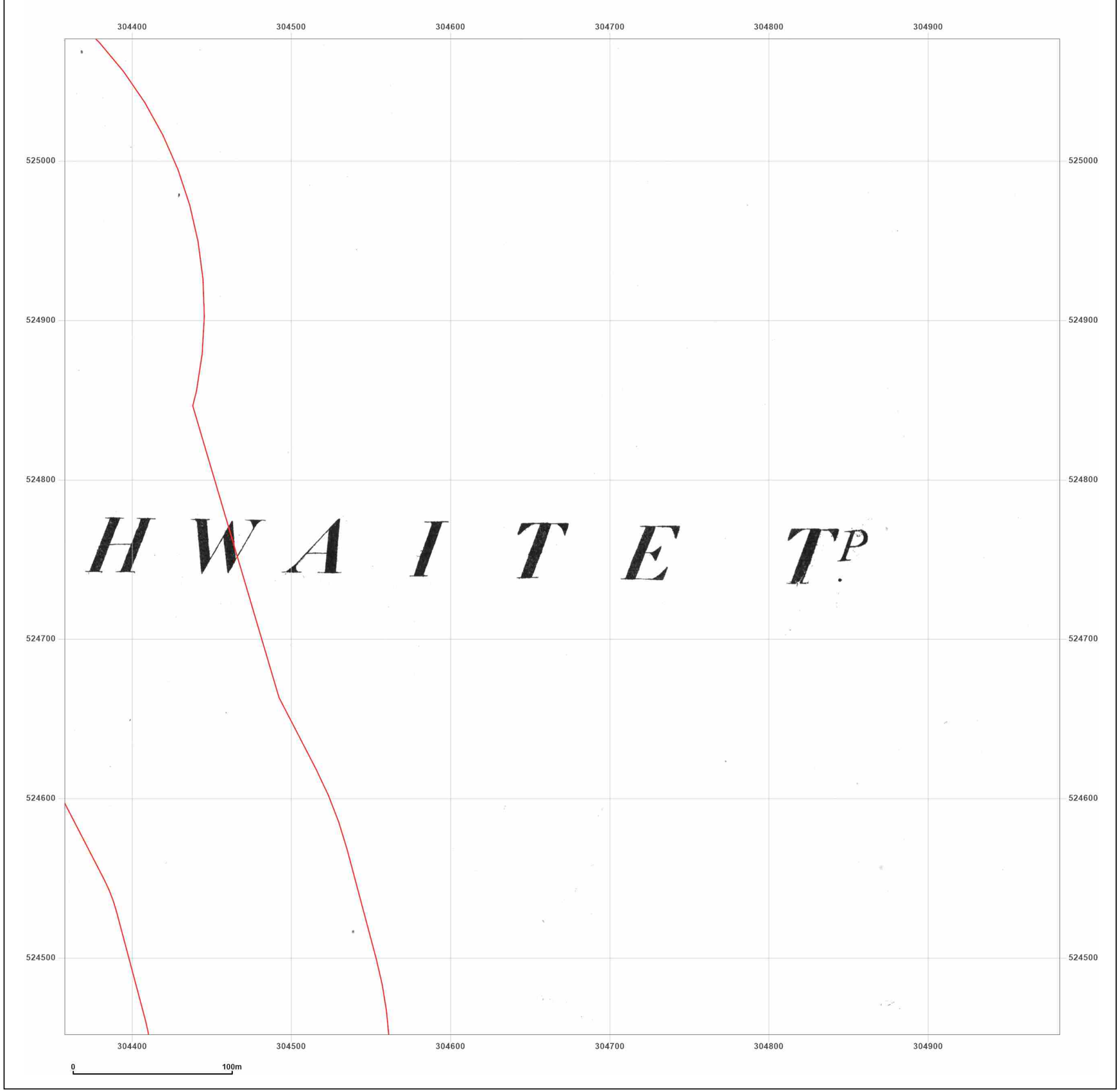

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_5
Grid Ref: 304670, 524764

Map Name: County Series

Map date: **1864**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1864
Revised 1864
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 12 April 2023

Map legend available at:
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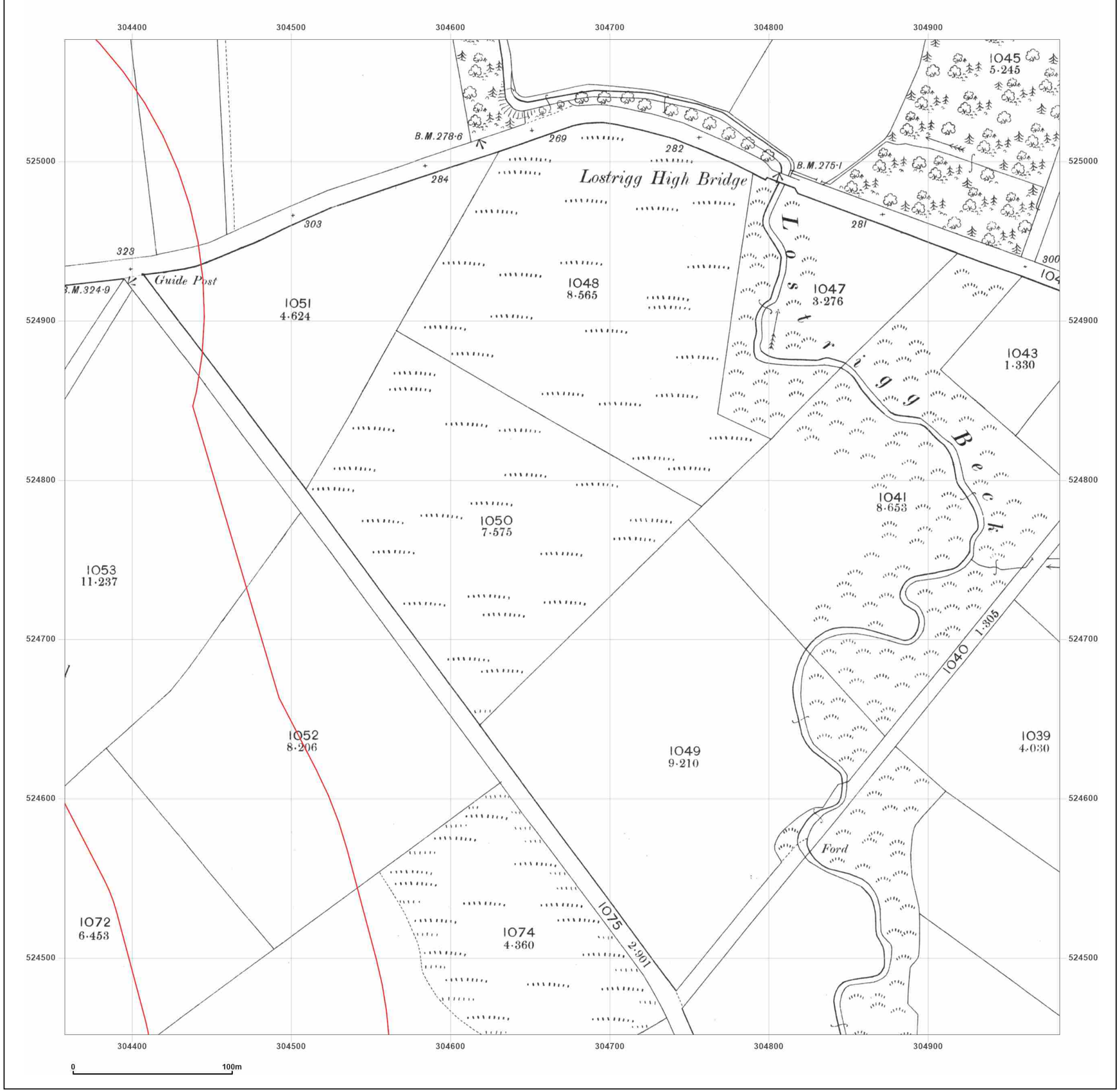

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_5
Grid Ref: 304670, 524764

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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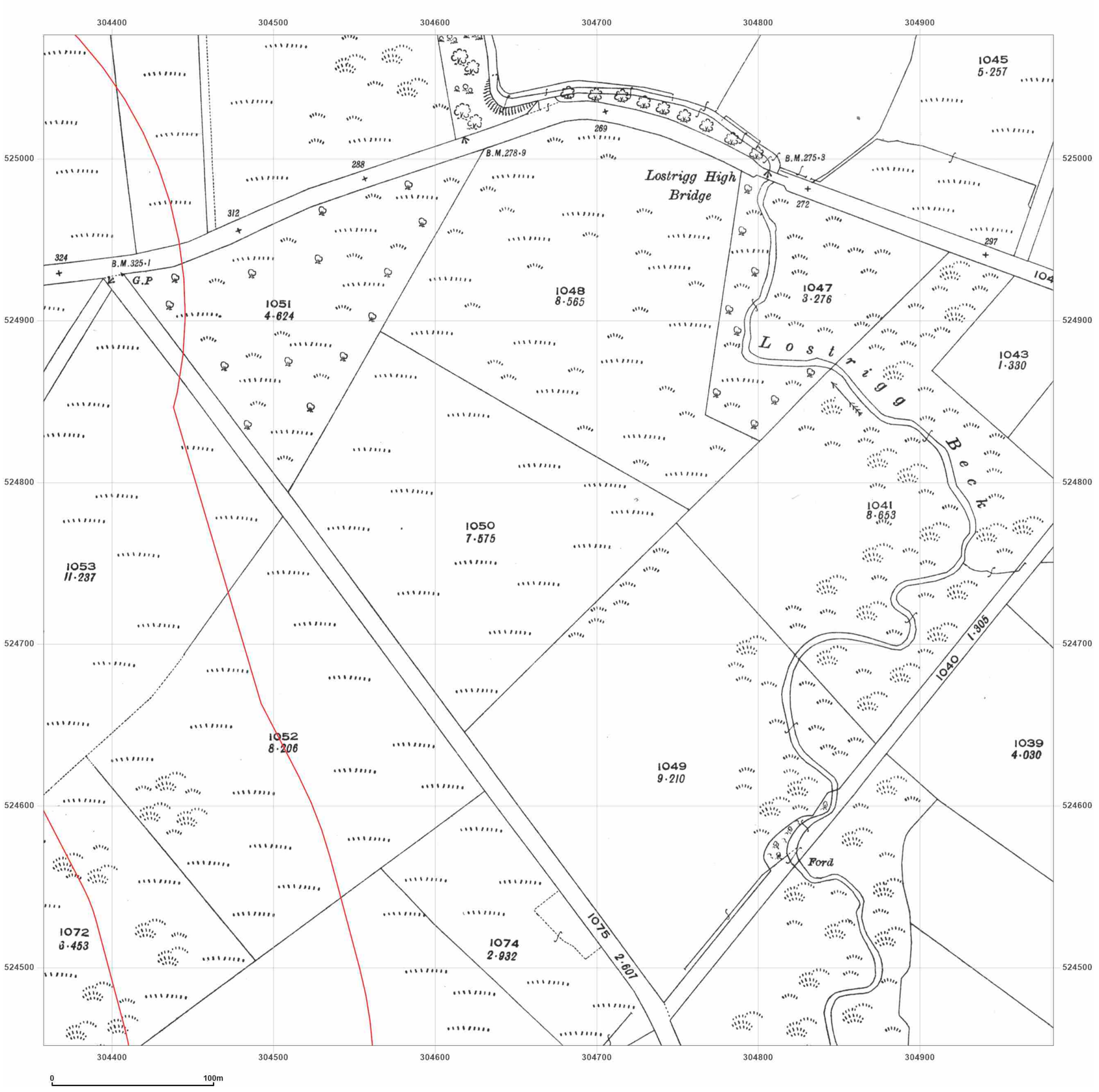

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_5
Grid Ref: 304670, 524764

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_5
Grid Ref: 304670, 524764

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_5
Grid Ref: 304670, 524764

Map Name: National Grid

Map date: **1989**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1988
Revised 1988
Edition N/A
Copyright 1989
Levelled 1965

Surveyed 1989
Revised 1989
Edition N/A
Copyright 1989
Levelled N/A

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Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_3_5
Grid Ref: 304670, 524764

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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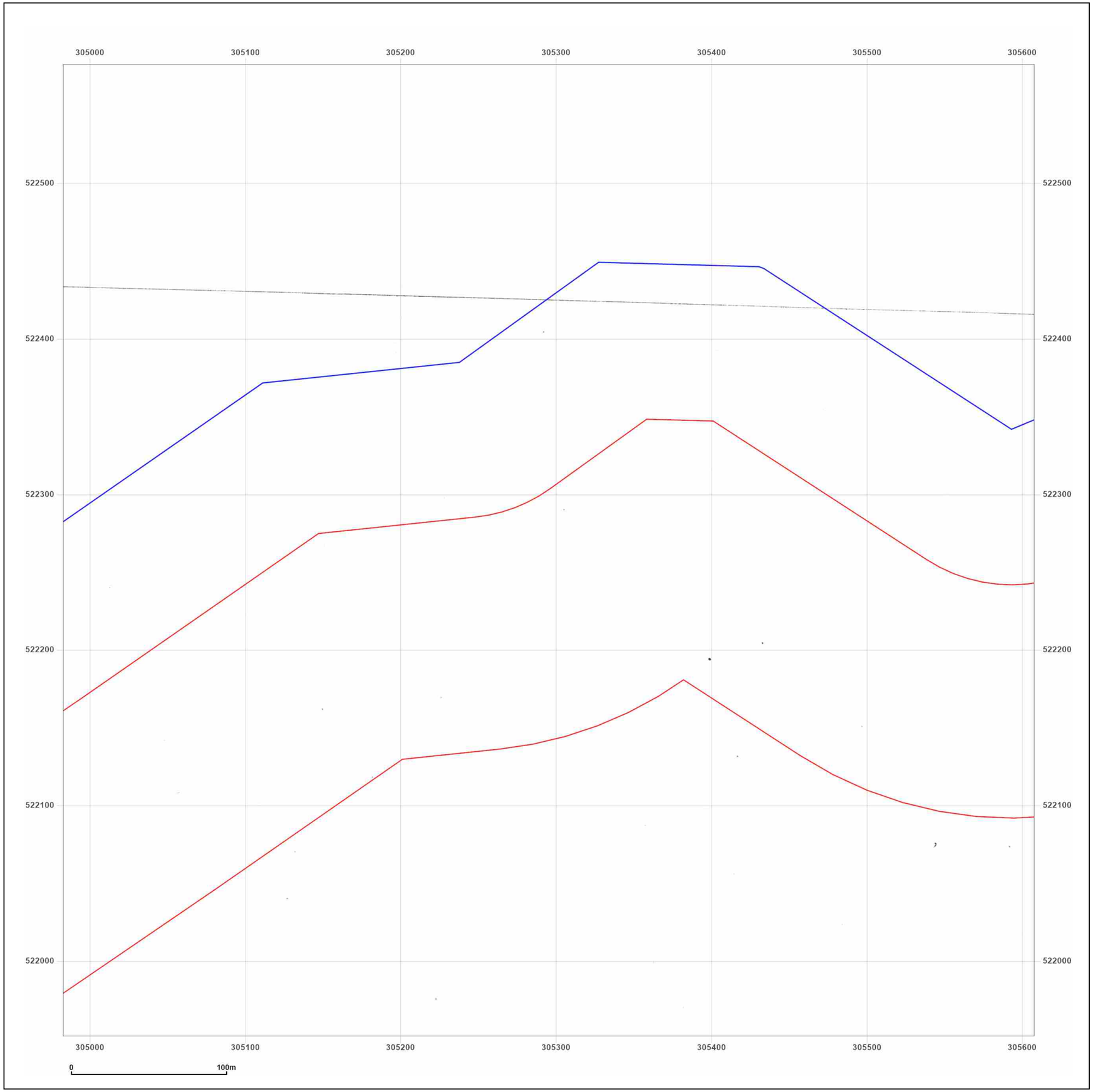

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_4_1
Grid Ref: 305295, 522264

Map Name: County Series

Map date: **1862**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 12 April 2023

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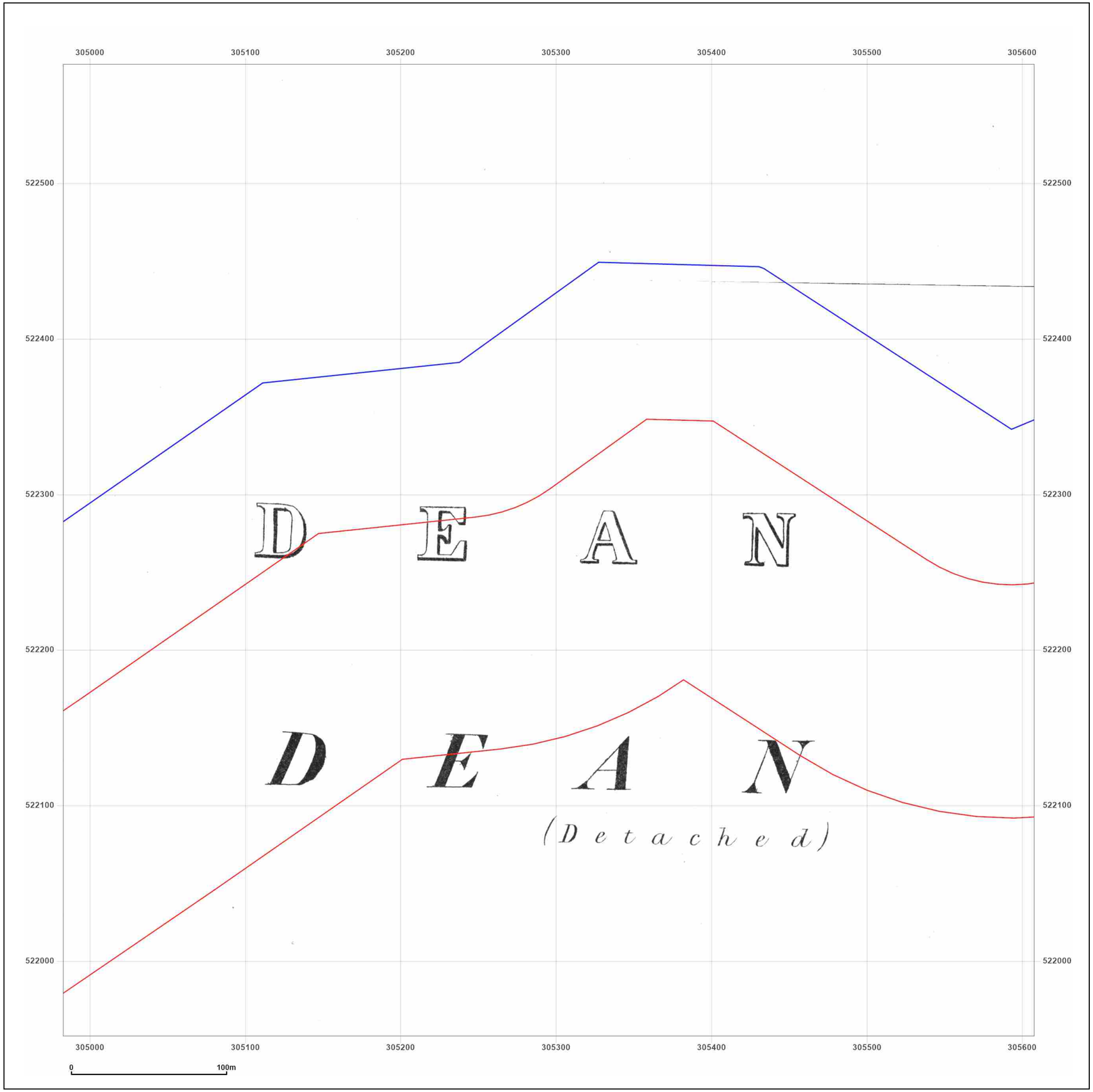


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_4_1
Grid Ref: 305295, 522264

Map Name: County Series

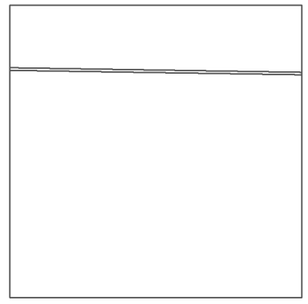
Map date: **1862-1864**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1864
Revised 1864
Edition N/A
Copyright N/A
Levelled N/A

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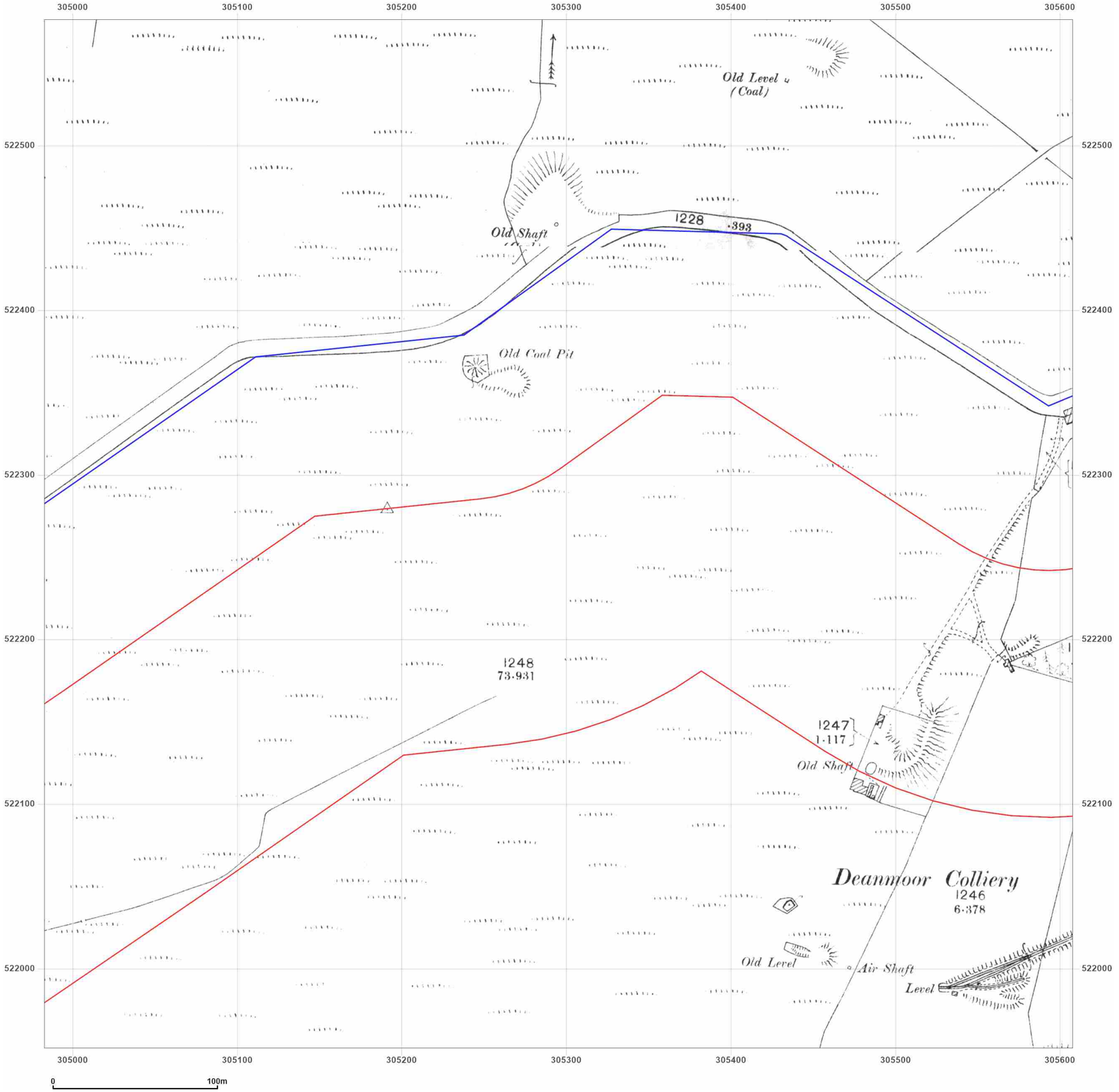


Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_4_1
Grid Ref: 305295, 522264

Map Name: County Series

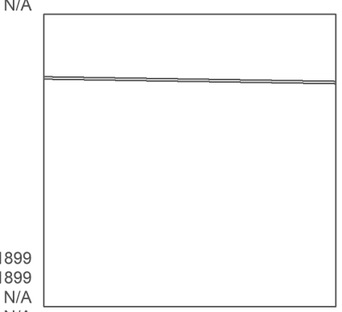
Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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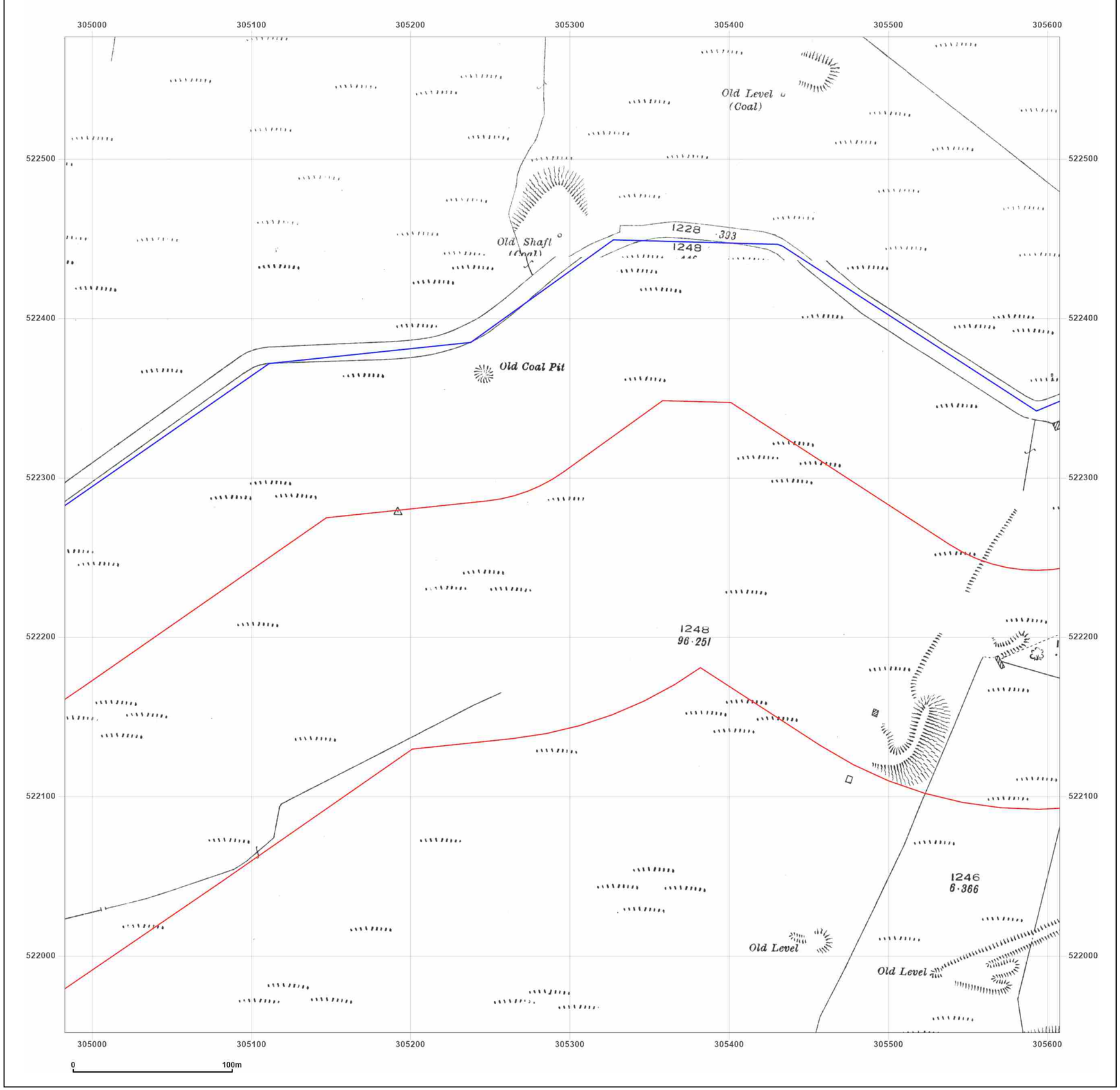

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_4_1
Grid Ref: 305295, 522264

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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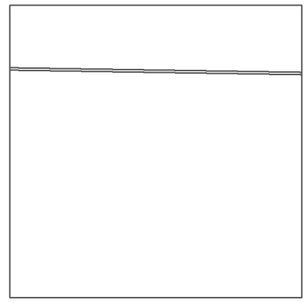
Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1925
Revised 1925
Edition N/A
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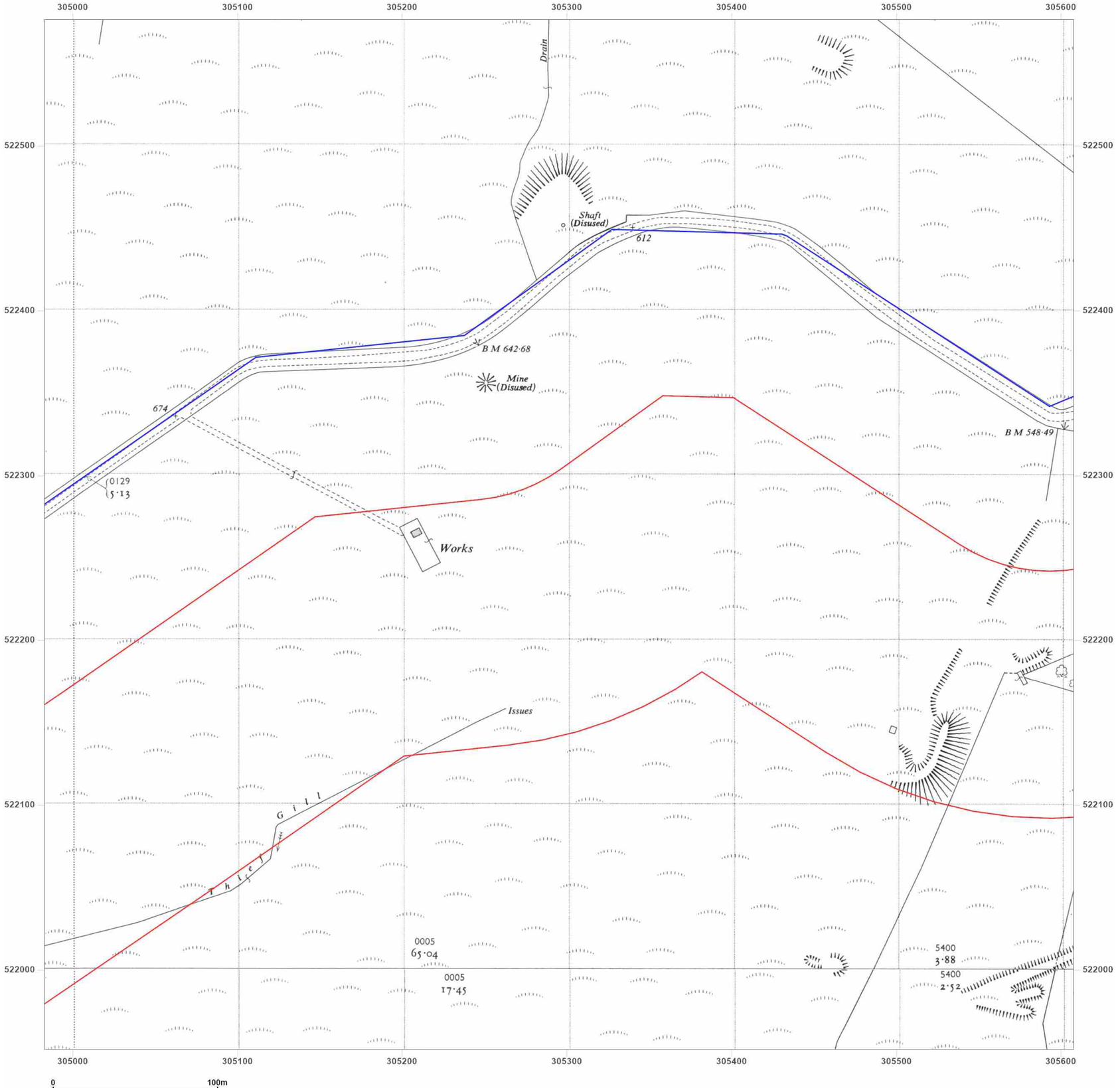

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_4_1
Grid Ref: 305295, 522264

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

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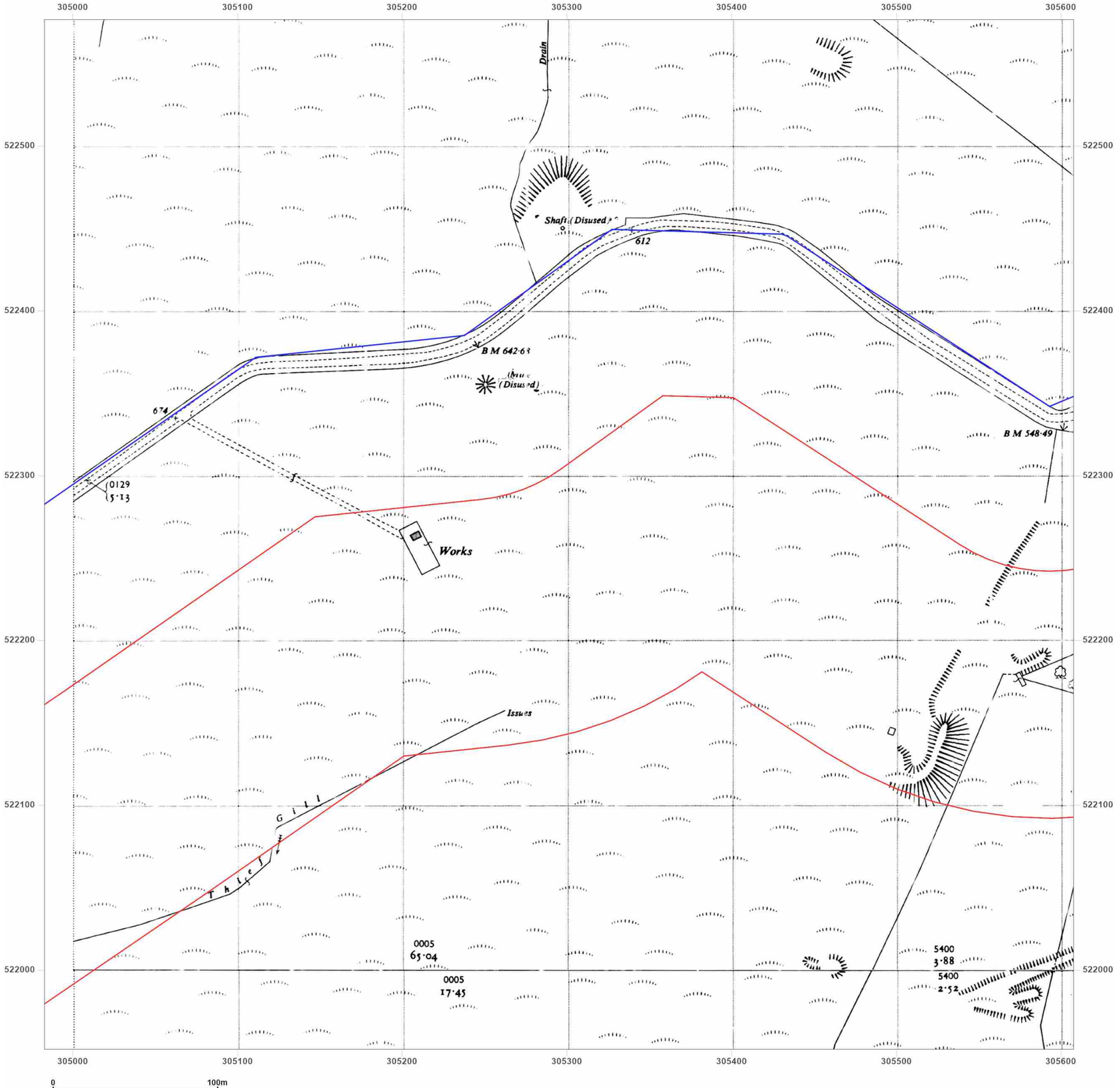

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_4_1
Grid Ref: 305295, 522264

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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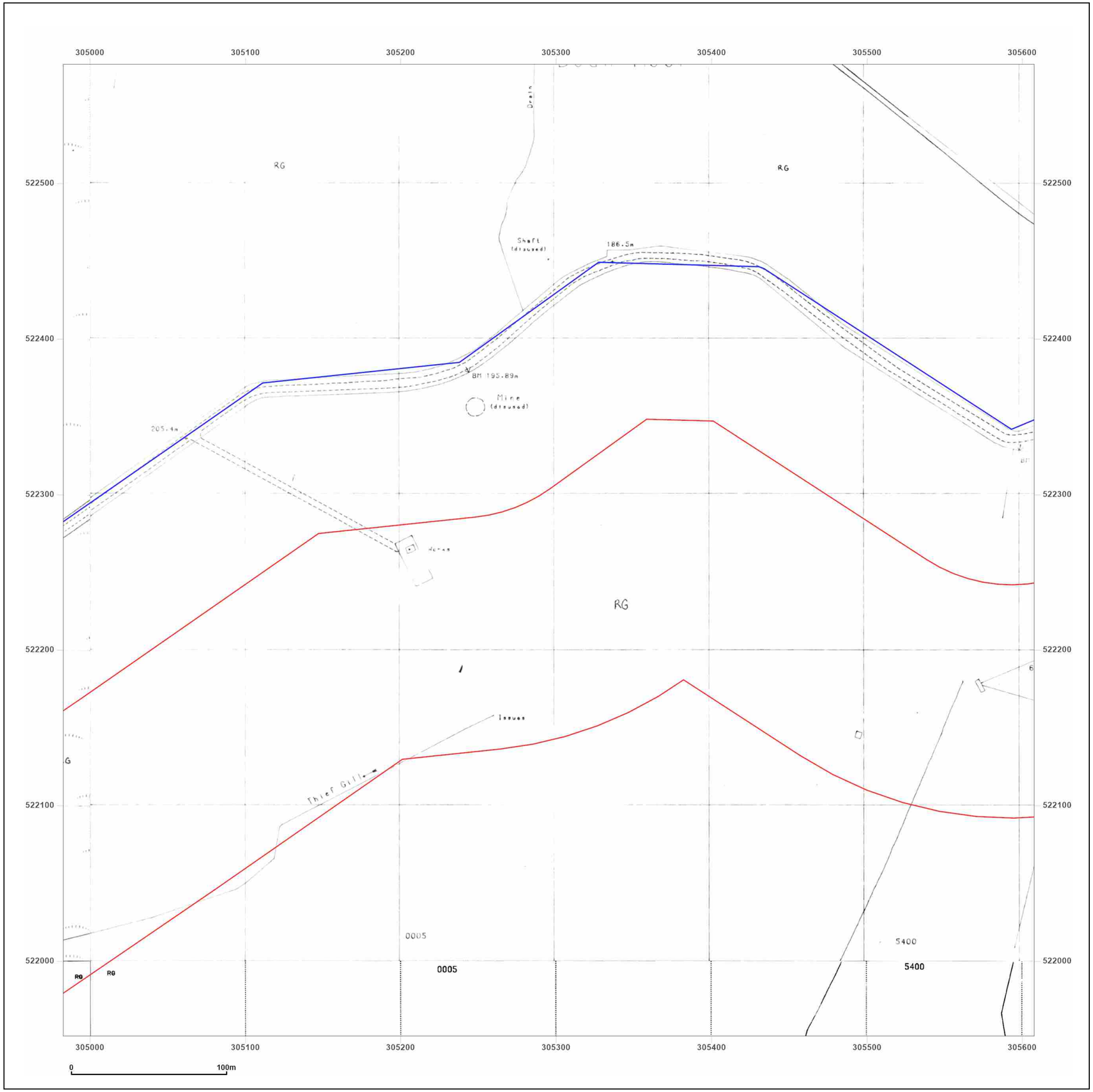

Groundsure INSIGHTS

Site Details:

CA14 Rigg House

Client Ref: CA14 Rigg House
Report Ref: GSIP-2023-13300-12630_LS_4_1
Grid Ref: 305295, 522264

Map Name: National Grid

Map date: **1993-1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1993	Surveyed 1993
Revised 1993	Revised 1993
Edition N/A	Edition N/A
Copyright 1993	Copyright 1993
Levelled N/A	Levelled N/A
Surveyed 1994	Surveyed 1994
Revised N/A	Revised N/A
Edition N/A	Edition N/A
Copyright 1994	Copyright 1994
Levelled N/A	Levelled N/A

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