Land North East of Junction 10 M42

EIA SCOPING REPORT

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Land North East of Junction 10 M42

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1

INTRODUCTION

1 INTRODUCTION

1.1.1. WSP has been instructed by Hodgetts Estates to prepare and submit a planning application pertaining to development of land at the north-eastern quadrant of junction 10 of the M42 motorway (J10 M42) near Dordon, North Warwickshire.

1.1.2. The planning application will be accompanied by a single Environmental Statement (ES) which will set out how the proposals can be accommodated in environmental terms and the benefits which are likely to arise as a consequence of the development.

1.1.3. The 'Area of Interest' for the purposes of this ES scoping request and EIA itself are the two areas identified in the plan contained at **Appendix A**, 'the development site' and 'off-site areas for potential landscape and visual mitigation'. Whilst both areas will form part of the scope of the ES, only the development site will be included within the eventual planning application red line boundary, with the off-site areas for potential landscape and visual mitigation, which fall within the same land ownership, to be secured via S106 Agreement. Furthermore, the development site and associated development parameters will be assessed by all environmental disciplines set out in this ES scoping request, however the off-site areas for potential mitigation will only be assessed from a landscape/visual impact perspective given that only planting is to be proposed in these areas, which does not constitute development.

1.1.4. This document presents an environmental scoping report which has been prepared in the context of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/571) and the Planning Practice Guidance (PPG) (last updated March 2019). Part 4 (15) of the Regulations enables anyone minded to make an EIA application to ask the relevant local planning authority to state in writing their opinion as to the information to be provided in the environmental statement (a "scoping opinion").

1.1.5. The following sections of this report identify the proposed development; the need for an EIA to be undertaken; and, the scope of the proposed ES including reference to specific subject areas to inform the council's scoping opinion.

2

SITE CONTEXT

2 SITE CONTEXT

SITE DESCRIPTION

2.1.1. The 'Area of Interest' comprises a total of circa 38.87ha of arable farmland at the north-eastern quadrant of junction 10 of the M42 motorway (J10 M42) near Dordon, North Warwickshire.

2.1.2. A plan showing the extent of the Area of Interest for the purposes of this ES scoping request and eventual EIA is contained at **Appendix A**. Two different 'areas' are indicated, as follows:

- The development site (circa 32.36ha); and
- Off-site areas for potential landscape and visual mitigation (circa 6.51ha).

2.1.3. Whilst two separate 'areas' make up the Area of Interest for the purposes of ES scoping and the ES itself, the characteristics of both are predominantly the same given they are linked to one another and form part of a much larger parcel of land. As such, the land within the Area of Interest can be described collectively as being bound that by the M42 to the west (beyond which lies the border between North Warwickshire Borough Council and Tamworth Borough Council), the A5 trunk road to the south, further arable farmland and the village of Dordon to the east and the village of Birchmoor to the north.

2.1.4. The land is owned entirely by Hodgetts Estates and is farmed each year. As such, the monocrop nature of the of arable farming is not conducive to extensive faunal and/or floral diversity, the majority of which is to be found around the periphery of the site.

2.1.5. There is a mature tree belt to the west and south-west of the site along the route of the M42 and junction 10. To the south of the site is a mature hedgerow along the A5 boundary which contains intermittent semi-mature trees. There are also some thickets of self-set juvenile trees and shrubs surrounding an existing car park and hardstanding in the south of the site.

2.1.6. The site is transected by a gas pipeline and oil pipeline. Development proposals will consider these pipelines, as well as their respective easements and consultations zones. Furthermore, two low voltage electricity lines also cross the site in an east-west / north-south axis respectively, with limited uncultivated vegetation around the base of each mast/pole.

2.1.7. A public bridleway (AE45) transects the site and a public footpath (AE46) borders the northern-eastern boundary of the site. These are essentially raised single lane farm tracks for the use of farm vehicles, which have grassed verges and banks down to the fields on each side.

2.1.8. The site has no relevant planning history owing to its longstanding use as farmland.

SURROUNDING AREA

2.1.9. The site is situated between Tamworth, Dordon and Birchmoor, strategically located immediately north east of Junction 10 of the M42.

2.1.10. The M42 provides direct links to the wider strategic motorway network including the M6, M40 and M5 as well as a series of key A roads in the West Midlands area. Figures 2.1 and 2.2 below show the site and its surrounding context and the relationship with the Greater Birmingham conurbation, respectively.

2.1.11. Land to the south of the A5 includes the recently developed St Modwens Business Park (south west of Junction 10) and the established Birch Coppice Business Park and Core 42 Business Park (south of A5).

Figure 2-1 - Site Surrounds

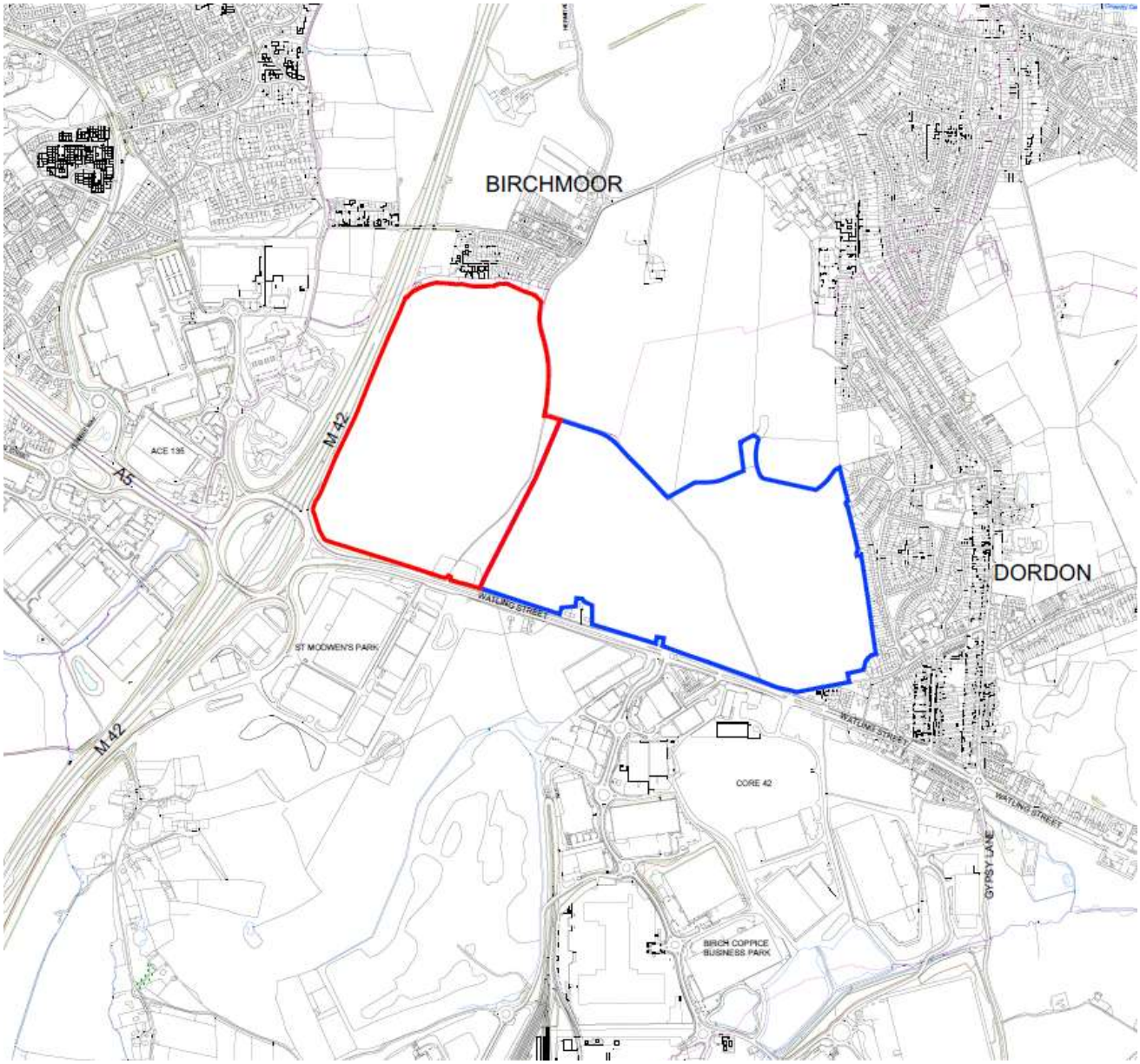
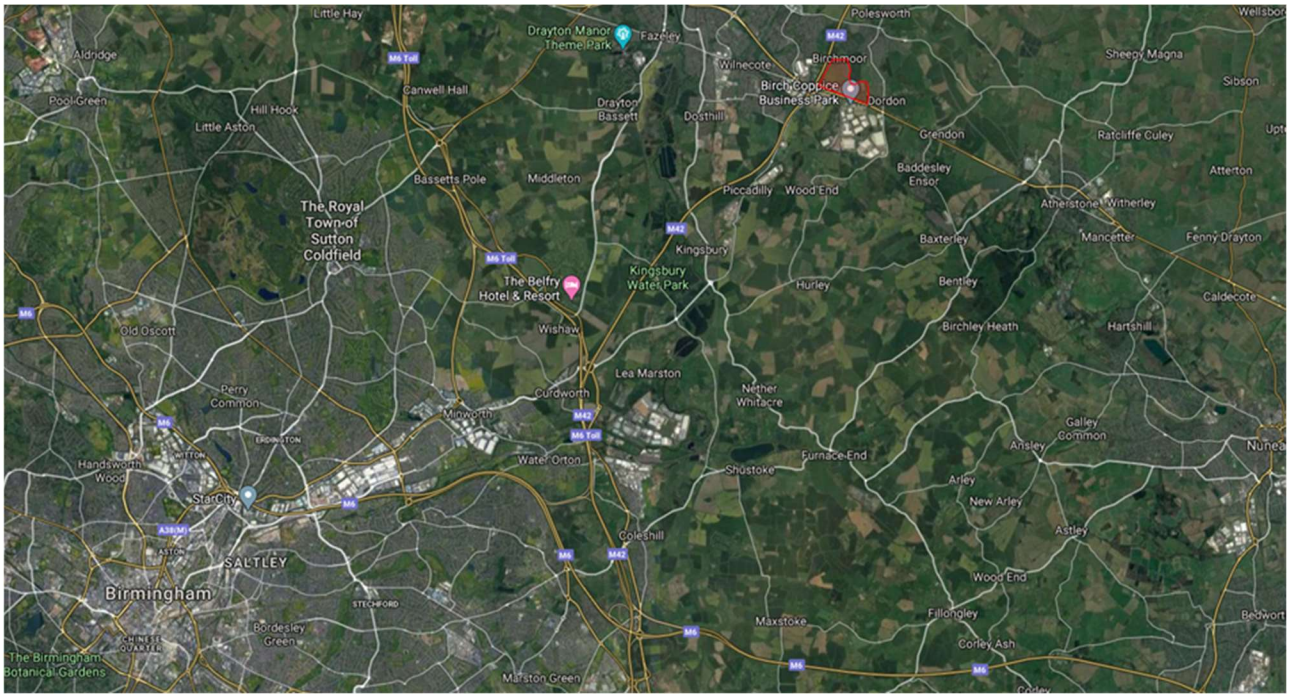


Figure 2-2 - Site relationship with Greater Birmingham Conurbation



3

DEVELOPMENT PARAMETERS

3 DEVELOPMENT PARAMETERS

OVERVIEW

3.1.1. A hybrid planning application (access in full; all other matters in outline) is sought and a draft description of development is expected to be:

'Hybrid planning application seeking: (i) Full planning permission for new access point off A5; and (ii) Outline planning permission for development of land within Use Class B2 (general industry), Use Class B8 (storage and distribution) and Use Class E (office, research and development and light industry) and ancillary infrastructure and associated works, development of overnight lorry parking facility and ancillary infrastructure and associated works. Details of access submitted for approval in full, all other matters reserved.'

3.1.2. The 'Area of Interest' comprises the development site and off-site areas within the same land ownership for potential landscape and visual mitigation purposes, as set out in the plan contained at **Appendix A**.

3.1.3. The approval of the development parameters in outline would allow for the scheme to be developed in a number of ways, within established parameters, through the reserved matters process. This will provide flexibility for the development of the site to ensure it meets the needs of its end-user(s).

THE DEVELOPMENT SITE

3.1.4. The following maximum and minimum parameters for the development to be contained within the development site (as indicated on the Parameters Plan contained at **Appendix B**) are as follows:

- New vehicular and pedestrian access from the A5 Trunk Road;
- Public Bridleway AE45 diverted within the development site, providing an enhanced route linking Birchmoor to the proposed open space, A5 Trunk Road and local services, such as bus stops located on the A5 Trunk Road and within St Modwens Park Tamworth;
- A substantial area of natural open space (over 9ha) principally to the north, south and east of the plots, incorporating open space, planting, landscaping, public rights of way, SuDS and a variety of wildlife habitats, provides a minimum development offset of 35m extending to 135m from the built development edge to the site boundary;
- Existing peripheral vegetation retained, enhanced and strengthened to provide a robust landscape buffer;
- Potential for naturalistic earth mounds, utilising surplus cut material from the development site, to create a transitional zone between the developable area and development site perimeter and to provide visual mitigation where necessary;
- Up to 100,000 sqm (1,076,391sqft) of mixed Class B2, Class B8 and Class E (office, research and development and industrial) floorspace;
- Up to a maximum of 10% Class B2 / Class E (office, research and development and industrial);
- Maximum development height of +117.8m AOD at the less sensitive westernmost Plot A1 adjacent to the M42 motorway;
- Maximum development height of +113m AOD at Plot A2, north of Plot A1 closer to Birchmoor;
- Maximum development height of +112m AOD at the easternmost Plot B, closer to Dordon;
- Up to 150 space overnight lorry parking facility;

- Up to 400 sqm amenity block for overnight lorry parking facility (toilets, changing facilities, showers, shop, restaurant/takeaway, etc);
- Creation of substantial landscaped buffer zones to the development site perimeter (in addition to the off-site areas for potential mitigation identified at Appendix A), as follows:
  - North - an extensive landscape buffer to the north of Plot A2 extending to 135m at its widest, reducing to 75m at the closest point to Birchmoor;
  - East - an extensive landscape buffer to the east of Plot A1 extending to 107m at its widest, reducing to 52m to the north-east of Plot A2 and a minimum 37m to the north-east of Plot B where proposed building heights are lowest;
  - South - a minimum 35m to the south of Plot A1, extending to 50m south of Plot B and over 58m in the south-west corner of the site close to J10 M42;
  - West - a minimum 10m landscape buffer to the west of Plot A1 and Plot A2, where existing screening vegetation for the M42 motorway is extensive and mature.

OFF-SITE AREAS FOR POTENTIAL LANDSCAPE AND VISUAL MITIGATION

3.1.5. As indicated on the plan at **Appendix A**, a number of additional areas of land within the applicant's control are included within the Area of Interest for the purposes of ES scoping and the eventual EIA itself.

3.1.6. These areas are to provide potential landscape and visual impact mitigation through planting and footpath enhancements.

3.1.7. Given that no development will take place in these areas, they will only be assessed in terms of landscape and visual impact from an EIA perspective.

4

REQURIEMENT FOR EIA

4 REQURIEMENT FOR EIA

4.1.1. The need for an Environmental Impact Assessment ("EIA") was considered in light of the requirements of the Town and Country Planning (England) (Environmental Impact Assessment) Regulations 2017 (as amended) (the "EIA Regulations").

4.1.2. The Environmental Impact Assessment Regulations outline thresholds for what are described as Schedule 1 and Schedule 2 Projects. EIA is mandatory for "Schedule 1" projects. EIA is required for "Schedule 2" projects if, in the opinion of the determining authority, they are likely to give rise to "significant effects" on the environment.

4.1.3. The proposed development is not of a type listed in Schedule 1.

4.1.4. The EIA Regulations state that the proposed development may be considered to be Schedule 2 development under Category 10, 'Infrastructure Projects', of the EIA Regulations. Sub-section (a) relates to 'Industrial estate development projects', where the area of development exceeds 0.5 hectares.

4.1.5. Schedule 2 development requires an EIA if it is likely to have significant environmental effects (positive or negative), taking into account the selection criteria in Schedule 3.

4.1.6. The applicant considers that an EIA is required to support the planning application and does not propose to submit a request for an EIA Screening Opinion.

4.1.7. The applicant requests the Local Planning Authority agrees that an EIA is required.

5

STRUCTURE OF THE ES

5 STRUCTURE OF THE ES

ES APPROACH

5.1.1. The overall proposed structure of the ES with regards the consideration of specific environmental impacts is set out below.

- Step 1: (Baseline assessment): Assessment of the baseline conditions of the site (including any associated zones of influence beyond the site boundaries);
- Step 2: (Impact assessment): Consideration of the impacts of the development proposals, against the baseline conditions identified. This assessment will take into account the potential cumulative effects with existing or approved developments within the local area.

5.1.2. The approach to each technical topic will involve:

- a description and analysis of the existing baseline conditions of the site, i.e. the environment as it is currently and could be expected to evolve if the proposed development were not to proceed, based on site surveys, desk studies etc.;
- an assessment of the predicted environmental effects on the environment likely to result from the proposed developments of the site against the baseline conditions. This includes an explanation of the assessment methodology of impacts in both the construction and operation phases. This assessment takes into account the potential cumulative effects with existing or approved developments within the local area;
- an assessment of the potential cumulative effects of the proposed development having regard to any existing or approved developments within the local area;
- identification of appropriate measures for the mitigation of predicted effects for both the construction and operation of the development, including amendments to the proposals assessed; and
- identification of any residual effects remaining after any mitigation measures have been implemented.

5.1.3. The ES assesses the worst-case scenario in all environmental disciplines.

5.1.4. One particular aspect of an EIA, which the 2017 Regulations specifically identify (at Regulation 4(e)), is the need to consider the interaction between the environmental factors likely to be significantly affected. The preparation of the ES has been undertaken through a process of regular reporting by, and meeting of, the team of consultants appointed to ensure these interrelationships are identified and taken into account in considering the impacts and mitigation proposals for each issue. The ES will consider the interactions between the environmental effects identified.

5.1.5. The format and structure of the ES will be in accordance with Schedule 4 of the 2017 Regulations and the Planning Practice Guidance.

5.1.6. The ES will comprise four volumes:

- Non-Technical Summary (Volume I);
- Main Text (Volume II);
- Illustrations (Volume III); and,
- Technical Appendices (Volume IV).

5.1.7. The Main Report (Volume II):

- introduces the development proposals, describes the approach to the assessment, provides details of the consultation undertaken and outlines the report structure of the statement;
- describes the scoping process and impact assessment methodology;
- describes the proposed development, considers the relevant planning and design context, construction phasing and benefits of the development;
- outlines alternatives to the proposed development and their respective environmental implications;
- addresses the key environmental issues individually and describes (for each issue) the existing environment (baseline); any difficulties encountered in compiling the required information; the likely positive and negative significant impacts of each proposed development both during construction and operation; any appropriate mitigation measures; and residual impacts of significance; and
- concludes on the mitigation and controls necessary relating to each environmental issue and assesses the significance of the issues identified during construction and operation of the developments.

5.1.8. In accordance with the requirements of the Regulations and best practice guidance, a Non-Technical Summary (NTS) of Volume 2 will be prepared and provided at Volume I.

5.1.9. Plans and illustrations for the ES will be presented in Volume III, whilst technical background information will be included at Volume IV.

6

ENVIRONMENTAL STATEMENT SUBJECT AREAS

6 ENVIRONMENTAL STATEMENT SUBJECT AREAS

6.1.1. The ES will detail the assessment of a number of key subject areas, identifying the existing baseline position for the site, the potential impacts of the proposed development against the baseline conditions alongside the cumulative effects of the development with any committed development in the area, and identify any mitigation measures which are required to overcome or reduce identified environmental impacts.

6.1.2. The subject areas to be addressed within the proposed ES are outlined below, with further information provided in respect of each discipline at Chapters 10-18 of this Report.

- Chapter 10 – Highways, traffic and transport
- Chapter 11 – Noise
- Chapter 12 – Air quality
- Chapter 13 – Land and soil
- Chapter 14 – Landscape and visual impact
- Chapter 15 – Nature conservation and biodiversity
- Chapter 16 – Flooding and drainage
- Chapter 17 – Socio-economics
- Chapter 18 – Cultural heritage and archaeology

6.1.3. Each chapter of the ES will follow a common structure relating to each of the subject areas as follows:

- Introduction and approach (which will include methodology)
- Baseline assessment
- Impacts (construction and operational)
- Mitigation (construction and operational)
- Residual impacts (construction and operational)
- Conclusions

6.1.4. Combining the assessment of baseline conditions with the proposed working method, an assessment of the effect of the proposed developments, the potential impacts of the developments and cumulative effects and mitigating measures to overcome or reduce any impact, will be made. If impacts are substantial and cannot be acceptably mitigated, amendments to the proposed schemes will be made.

6.1.5. As stated at the outset of this report, the 'Area of Interest' for the purposes of this ES scoping request and EIA itself are the two areas identified in the plan contained at **Appendix A**, 'the development site' and 'off-site areas for potential landscape and visual mitigation'. Whilst both areas will form part of the scope of the ES, only the development site will be included within the eventual planning application red line boundary, with the off-site areas for potential landscape and visual mitigation, which fall within the same land ownership, to be secured via S106 Agreement. These will not require planning consent. Furthermore, the development site and associated development parameters will be assessed by all environmental disciplines set out in this ES scoping request, however the off-site areas for potential mitigation will only be assessed from a landscape/visual impact perspective given that only planting is to be proposed in these areas which does not constitute development.

ENVIRONMENTAL DISCIPLINES TO BE SCOPED OUT

6.1.6. It is considered that the development proposals will not give rise to likely significant effects on the environment with respect to a number of environmental disciplines and will therefore not require assessment in the ES. Justification for each discipline being scoped out is provided in Table 6.1 below.

Table 6-1 – Summary of environmental disciplines to be scoped out and reasons why

Environmental discipline	Reasons to be scoped out
Ground conditions	A Phase 1 Ground Investigation has been carried out at the site (**Appendix C**). In terms of the anticipated geology, the underlying bedrock geology of the site located on BGS sheets 154 Lichfield (1:50,000) and 155 Coalville (1:50,000) indicate that the total spatial extent of the site is underlain by the Halesowen Formation, which is described as consisting of mudstone, siltstone and sandstone. The site is not Indicated to be underlain by superficial deposits, with the closest superficial deposits being Devensian Glacial Till located on the western side of the M42 adjacent to the site. The site is generally greenfield with barns and sheepwash facilities being indicated on the site historically. In terms of the anticipated hydrogeology, Aquifer designations based on the Environment Agency Groundwater Vulnerability mapping (1:50,000) indicate that the Halesowen Formation is designated as a Secondary an Aquifer. The ground investigation encountered Topsoil to depths of 0.4m bgl, overlying weathered Halesowen Formation, becoming rock strength from typically between 1.5m and 2.9m bgl. No evidence of Made Ground or Superficial natural deposits was found during the investigation. The Topsoil is present across the entire site, reaching depths of up to 0.40m bgl and typically comprising of an organic clayey gravelly sand. The weathered Halesowen Formation underlying the site typically consists of unlithified clayey sand to depths of between 1.0m and 2.9m bgl, with layers of sandy clay also present to depths of up to 1.0m and 2.7m bgl. Beneath these deposits is a layer of extremely weak sandstone of unknown depth. Groundwater was encountered at two exploratory hole locations towards the southern boundary of the site at 1.9m bgl. Contamination testing on soil samples from the Topsoil and shallow Halesowen Sand concluded that all concentrations levels of Polycyclic Aromatic Hydrocarbons (PAHs), Benzene, Toluene, Ethylbenzene and Xylene (BTEX) and Total Petroleum Hydrocarbons (TPHs) were all below the detectable limits. All concentrations of metals fall significantly below their relevant screening values.

Environmental discipline	Reasons to be scoped out
	Considering the findings of the Phase 1 Ground Investigation, therefore, no contamination is anticipated at the site that may pose a risk to human health or controlled water receptors. The Phase 1 Ground Investigation will be submitted with the planning application and appropriate planning conditions will be agreed with the LPA in respect of Phase 2 (Intrusive) Site Investigation and, dependent on the findings, the need for any remedial works to be undertaken in advance of development commencing. For the reasons set out above, ground conditions and contamination have been scoped out of the ES.
Material assets and waste	Whilst the development would require the use of natural resources, some of which are non-renewable, these will be common with most commercial developments. Furthermore, the proposed development would not involve any significant or unusual use of natural resources and would not result in the use of natural resources that are considered to be rare or of particular scarcity. Whilst waste arisings are inevitable, it will be subject to the waste hierarchy, including during construction and operation. It is proposed that the production of waste and excavation arisings from the construction works will remain on site as far as practical. Waste generated from the construction phase will not be significant or give rise to any harmful impact. Planning conditions can be secured to mitigate and control the management of waste exports from the site. For these reasons, a bespoke assessment on the implications of the development proposal on material assets and waste is not required and is therefore scoped out of the ES.
Population and human health	Given the type of development proposed which comprises predominantly commercial floorspace with ancillary uses, it is not likely to generate any significant adverse effects on population and human health. The development would provide substantial socio-economic benefits, some of which would also provide a positive impact in terms of population and human health, such as increased investment into the area, construction jobs and employment once operational, retention and enhancement of public footpaths and bridleways, which collectively would lead to positive impacts on the local population and the promotion of healthy and active lifestyles. Further details of such benefits will be addressed in the socio-economics benefits chapter of the ES such that a bespoke chapter on population and human health is not required.
Climate	A bespoke ES chapter is scoped out given that climate impact and climate change is a matter that will be dealt with across many disciplines, including air quality and flood risk and drainage.

Environmental discipline	Reasons to be scoped out
	Furthermore, a Design Code will be submitted with the planning application to establish the overarching design principles for the scheme, including minimum targets for EPC and BREEAM ratings. Subsequent reserved matters applications pursuant to any outline/hybrid permission granted will also then be supported by further technical assessments, including energy and sustainability statements demonstrating how any forthcoming buildings at the site would be designed in a policy compliant manner with the adoption of the necessary future-proofing and energy efficiency measures. As such, a bespoke ES chapter is not necessary given it will be covered throughout other chapters and in subsequent assessments relating to future planning applications.
Light	The external lighting requirements for a scheme within the proposed development parameters would not require an external lighting scheme materially different to any other similar scaled development – the details of which would be suitably provided and assessed through an External Lighting Assessment submitted at either reserved matters or condition discharge stage. Furthermore, external light impacts would be suitably controlled and mitigated through appropriately worded planning conditions. As such, there is no requirement for this to be assessed as part of the EIA.
Heat and radiation	The proposed development parameters will not result in development coming forward that is of a type or scale sufficient to result in any significant adverse environmental effects in terms of heat and radiation and therefore is it is not relevant to assessed in the EIA.
Daylight, sunlight and overshadowing	There are no residential buildings or other sensitive uses close enough to the area of the site identified as the development land such that built massing on the site could cause changes to daylight or sunlight availability or cause overshadowing of amenity space.
Solar glare	Whilst the exact design of the development is not yet fully understood, the nature of the use classes for which permission is sought are such that future development would not be constructed of highly reflective materials that would give raise to potential solar glare effects.
Wind and microclimate	The maximum building height set out in the list of development parameters is not of sufficient height to lead to likely significant effects in terms of wind and microclimate issues.

7

POLICY CONSIDERATIONS

7 POLICY CONSIDERATIONS

7.1.1. The ES will examine the proposals in relation to relevant policies in the development plan, taking account of emerging policy, guidance and proposals.

7.1.1. The development plan for North Warwickshire Borough Council is as follows:

- North Warwickshire Local Plan Core Strategy adopted in 2014; and
- The Saved Policies of the North Warwickshire Local Plan (2006).

7.1.2. Consideration is also given to the emerging North Warwickshire Local Plan Part 2 which is a material consideration and should be given due weight in accordance with the Framework considering it is in an advanced stage of preparation and signals the future growth strategy for the Borough. The examination of the plan is ongoing with hearings due to recommence in December 2020, following a recent public consultation on new and updated evidence base documents and suggested main modifications, which ended on Wednesday 7th October 2020.

7.1.3. The proposals will also be assessed against relevant national planning policy guidance.

7.1.4. Government policy guidance will include:

- National Planning Policy Framework (2019); and
- Planning Practice Guidance.

8

SCHEDULE OF CONSULTEES

8 SCHEDULE OF CONSULTEES

8.1.1. Consultees for the environmental assessment exercise will include, inter alia, the following:

- North Warwickshire Borough Council (Planning, Environmental Health, Economic Development, Landscaping, Nature Conservation);
- Warwickshire County Council (Highways Authority, Local Lead Flood Authority, Archaeology, Ecology);
- Highways England;
- Environment Agency;
- Natural England;
- Historic England;
- Council for the Protection of Rural England;
- Health and Safety Executive.

8.1.2. The comments of the above bodies will, where appropriate, be included in the baseline information of the ES.

9

ALTERNATIVES

9 ALTERNATIVES

9.1.1. Schedule 4(2) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 requires the developer to describe the reasonable alternatives (for example in terms of development design, technology, location, size and scale) considered by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

9.1.2. The ES will consider reasonable alternatives to the current proposals. It will include reference to the following:

- the 'do-nothing' scenario;
- alternative developments previously proposed on the site; and
- alternative approaches and mitigation to deliver the scheme objectives.

9.1.3. The ES will explain the background and merits of the proposed scheme and how reasonable alternative approaches to its development have been considered in working up the proposed scheme in the context of an overall framework for development in this area.

10

HIGHWAYS, TRAFFIC AND TRANSPORT

10 HIGHWAYS, TRAFFIC AND TRANSPORT

INTRODUCTION

10.1.1. Bancroft Consulting have been appointed by Hodgetts Estates to provide technical EIA advice in respect of a proposed employment development on land to the northeast of Junction 10 of the M42 motorway, as set out in Chapter 2 of this scoping report.

10.1.2. By way of background, Bancroft Consulting is also under instruction to prepare a detailed Transport Assessment in support of the proposals and this work is currently being progressed through discussions with Warwickshire County Council (WCC) and Highways England (HE) as the relevant highway authorities. As part of these discussions an agreement has been reached on the proposed development trip generation and these corresponding peak hour movements have been used within this scoping report.

10.1.3. The ensuing work within the Transport Assessment will comprise a modelling exercise that includes Local Plan development and identifies both baseline and predicted Future Year flow conditions throughout the highway network, on both local and strategic roads. In the absence of this detailed information, reference is made to historic traffic count data submitted in support of a planning application for the Core 42 development at the southern edge of the A5, immediately east of the Birch Coppice site. The May 2011 survey data was presented at Figure 7 of the Transport Assessment submitted in support of that application. A copy is contained at **Appendix D**. It is acknowledged that this information is outdated but given that both current and future flows will be significantly higher this should provide a robust base for any initial assessment of impact.

10.1.4. This ES scoping request takes into account "Guidelines for the Environmental Assessment of Road Traffic" (Institute of Environmental Assessment, 1993). It has also been prepared in accordance with LA103 of the Design Manual for Roads and Bridges (DMRB), which also covers 'Scoping projects for environmental assessment'. Paragraph 2.1 of LA103 advises:

> *"Scoping shall ensure that environmental assessment is proportionate, by identifying those environmental factors (or any elements):*
>
> *1) which are likely to result in significant environmental effects; and*
>
> *2) where sufficient uncertainty for significant environmental effects remains."*

DESCRIPTION OF SURROUNDING HIGHWAY CONDITIONS

10.1.5. The A5 is a dual carriageway Trunk Road that is subject to national speed limit restrictions passed the site, which then reduces to 50 mph at the eastern end of the frontage. Accordingly, the A5 is under the control of Highways England and its approval would be required on any proposed works. Based on OS Mapping, the A5 provides two 3.5 metres wide lanes in both the eastbound and westbound directions, which are separated by a central reserve. The carriageway is bound by continuous footways at both edges.

10.1.6. The A5 forms a signal-controlled junction with Danny Morson Way to the east of the site, which serves the Birch Coppice Business Park. Beyond this the A5 forms another signal-controlled junction with Meriden Drive. This junction was completed in February 2017 and serves the Core 42 development (approximately 678,000 square feet of industrial estate), which is partially built out and occupied.

10.1.7. Approximately 1.5 kilometres east of the site is the A5/Long Street/Gypsy Lane roundabout, which is otherwise known as 'Dordon Island'. The roundabout has an approximate Inscribed Circle Diameter of 40 metres and marks the point at which the A5 changes to a single carriageway highway (to the east). The route to the south via Gypsy Lane serves several small settlements and is largely rural in character, with no footways or streetlighting along much of its length. It follows a tortuous alignment and traffic is subject to a 50-mph speed limit. To the north, Long Street is an urban route with development fronting the carriageway edge on both sides as it extends through to Polesworth and then Warton. Traffic using this route is subject to a 30-mph speed limit and there are footways and streetlighting on both sides of the carriageway, which also includes traffic calming and formal on-street parking bays, combined with double yellow parking restrictions, along its length. Long Street is also signposted at the Dordon Island as being 'Unsuitable for HGVs'.

10.1.8. The Department for Transport's (DfT) website 'Traffic Counts' (https://www.dft.gov.uk/traffic-counts/cp.php?la=Warwickshire) contains traffic data along the A5, east of Junction 10 of the M42 and close to the site frontage (Site Reference 6142). The data demonstrates that the A5 had an Annual Average daily flow (AADT) of 25,073 vehicles (two-way) at 2019, of which 2,718 was HGVs (or 10.8%). Whilst 2019 data is the latest data available, the results also provide information for a 2012 Manual Count that confirmed an Annual Average daily flow of 24,683 vehicles (two-way).

10.1.9. Figure 7 from the Core 42 Transport Assessment (showing weekday morning and evening peak hour observed flows from May 2011) confirms that immediately to the west of the Birch Coppice Business Park the A5 had two-way peak hour traffic flows of 1480 in the eastbound direction (comprising 9.9% HGVs) and 1473 in the westbound direction (comprising 13.4% HGVs) during the morning peak hour. In the evening peak hour, the results showed 1540 movements in the eastbound direction (comprising 8.6% HGVs) and 1497 movements in the westbound direction (comprising 4.4% HGVs).

10.1.10. To provide an initial understanding of any ongoing highway safety issues within the local highway network the Crashmap website (www.crashmap.co.uk) has been examined. Whilst a full and detailed assessment will be undertaken within the subsequent Transport Assessment, the results of this initial review show a series of incidents along the A5 during the past five years, most notably at the M42 Junction 10 and access to the Birch Coppice Business Park. This pattern continues to the east along the A5 but not at the same level of intensity. Looking at Long Street as it extends north from Dordon Island, there were 16 recorded incidents during the past five years, up to and including the junction with High Street in Polesworth (approximately 2.5 kilometres in length). These incidents are spread throughout the link and do not indicate any specific highway safety problem.

10.1.11. Figure 7 of the Core 42 Transport Assessment also included the results of a turning count at the Dordon Island. This confirmed two-way flows on Long Street, immediately north of the junction, of 567 movements in the morning peak hour and 580 in the evening peak hour.

RELEVANT POLICY AND GUIDANCE

10.1.12. "Guidelines for the Environmental Assessment of Road Traffic" defines a list of potential environmental impacts within Part C. These include several items related to highways and transportation, as listed below. These issues will be addressed by the 'Highways, Traffic & Transport' chapter of the ES:

- Severance;
- Driver Delay;
- Pedestrian Delay;
- Pedestrian Amenity;
- Fear and Intimidation (in pedestrians, arising from vehicular traffic);
- Accidents and Safety; and,
- Hazardous Loads.

10.1.13. The 'Highways, Traffic and Transport' chapter will consider the entire study area detailed within this report. The study area requiring detailed assessment within the ES shall be determined in accordance with "Guidelines for the Environmental Assessment of Road Traffic", which recommends that the study area for environmental assessment be informed by the following two rules:

- Rule 1 include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles [HGVs] will increase by more than 30%
- Rule 2 include any other specifically sensitive areas where traffic flows have increased by 10% or more

10.1.14. Considering the strategic nature of the A5 and ongoing development activity taking place in the immediate vicinity of the site, Rule 1 will be the preferred approach for all highway links.

10.1.15. The detailed methods recommended for the assessment of each of the various potential impacts identified above vary, including a range of quantities, qualities and 'first-principles' methodologies. As such, it is proposed to utilise the methodologies detailed within "Guidelines for the Environmental Assessment of Road Traffic" to determine the magnitude of each impact, except where these are superseded by more recent guidance detailed within the DMRB.

10.1.16. Having established the magnitude of each impact, this will be correlated with the sensitivity of each link (or other receptor) examined. The sensitivity of each link will be determined with reference to relevant guidance, and in general will be as follows:

- Low: Rural routes without significant developed frontages or built-form;
- Medium: Rural routes with frequent developed frontages or built-form;
- High: Urban and suburban routes, which are likely to feature significant levels of pedestrian activity, as well as routes in close proximity to community facilities.

10.1.17. By correlating the magnitude and severity of each impact, the overall significance of the impact shall be determined. It will also be noted whether the impact would be beneficial or detrimental. For the purposes of this EIA, it should be noted that (unless stated otherwise) all highways and transportation related impacts and effects will be considered to be long-term:

- permanent (as the development will generate travel demands as long as it is occupied);
- reversible (in that the impacts and effects caused by vehicular traffic can be reversed by removing or re-routing said traffic); and,
- direct (as the impacts and effects of traffic are directly experience by all road users).

10.1.18. Any subsequent 'Highways, Traffic and Transport' chapter shall also focus on those environmental impacts which arise solely from traffic and alteration to the highway network. However, other potential impacts are included within the "Guidelines for the Environmental Assessment of Road Traffic". Where traffic only partially contributes towards overall impact, other such impacts will be considered in separate chapters within the ES.

ASSESSMENT

10.1.19. As outlined above, the study area for environmental assessment will assess 'Rule 1' within the "Guidelines for the Environmental Assessment of Road Traffic", which states that where traffic flows have increased by 30% the need for an EIA is required.

10.1.20. It has been agreed with WCC that the proposed development would generate the following peak hour traffic movements:

Morning peak	171 arrive	91 depart	262 total
Evening peak	89 arrive	178 depart	267 total

10.1.21. Details of the resulting assignment patterns within the surrounding highway network will be confirmed in due course following the modelling process. This will however be based on the available Mobile Network Data as provided by WCC for use in this assignment process. Interpretation of this bandwidth data suggests that development arriving and departing the site will be broadly split as 33% (west) and 67% (east) along the A5. It then appears to show how Long Street provides a key route for traffic with a large proportion of the eastern traffic using this option. To allow for this, 30% of traffic has been assumed to use Long Street with the remaining 37% using the A5 east of the Dordon Island.

10.1.22. Applying the above assignment model would result in the following increases.

	2011 two-way flow	Proposed traffic	%'age change
A5 (west of access			
morning peak hour	2953	86	2.9%
evening peak hour	3037	88	2.9%
A5 (east of access)			
morning peak hour	2953	176	6.0%
evening peak hour	3037	179	6.0%
Long Street (north of Dordon Island)			
morning peak hour	567	79	13.9%
evening peak hour	580	80	13.9%

10.1.23. Taking into account the fact that the baseline traffic flows will likely significantly increase from the 2011 surveys, it should be reasonable to conclude that there will be no material change in traffic conditions on the A5 and hence no requirement for any subsequent assessment of the environmental impact in terms of Highways, Traffic and Transport conditions.

10.1.24. The above calculations indicate that a 10% threshold could be exceeded at Long Street. However, taking into account the likelihood of significantly increased baseline flow conditions and also the HGV restrictions, it is considered that the proposed development would not generate any material change in environmental conditions along this link.

10.1.25. In lieu of the above it is considered reasonable to conclude that there should be no specific requirement to undertake any further assessment of the future Highway and Transport conditions within the subsequent EIA. It is, however, recommended that any subsequent EIA should revisit these calculations using updated baseline flows from the pending network modelling exercise seeking to demonstrate how a 30% increase in vehicle movements would not occur beyond the proposed site access junction. Hence, there should continue to be no requirement for any further detailed assessment. In the unlikely event that significant increases were shown to extend throughout the surrounding highway network, then the corresponding study area for EIA shall be defined by the 30% change in conditions as set out above (Rule 1).

11

NOISE

11 NOISE

INTRODUCTION

11.1.1. WSP has been appointed by Hodgetts Estates to provide environmental impact assessment (EIA) advice in respect of a proposed employment development on land to the northeast of Junction 10 of the M42 motorway, as set out in Chapter 3 of this scoping report.

11.1.2. A noise impact assessment will be undertaken to inform the ES and planning application.

STUDY AREA

Construction Phase

11.1.3. Construction noise arising from the proposed development will be assessed at a sample of the closest sensitive receptors within a study area of 300m of the development site.

11.1.4. Construction vibration arising from the proposed development will be assessed at suitable sensitive receptors within a study area of 100m of the site boundary.

Operational Phase

11.1.5. Operational noise from commercial activities and fixed plant will be assessed at selected sensitive receptors within a study area of approximately 300m of the development site boundary.

11.1.6. Development generated road traffic noise will be assessed of the existing road network. The adopted study area will be all routes within the traffic model subject to an increase in noise of at least +1 dB due to the proposed development.

PLANNING POLICY CONTEXT

11.1.7. The proposed development falls within the administrative boundary for North Warwickshire Borough Council (NWBC). Consultation will be undertaken with the local Environmental Health Officer to agree the baseline noise survey and to discuss the proposed scope following receipt of the scoping response.

11.1.8. The adopted local plan for NWBC has been reviewed and no specific guidance is present to derive criteria for the assessment of noise and vibration, therefore, relevant national guidance will be used for the assessment.

BASELINE CONDITIONS

11.1.9. A desktop review of the site has identified the existing key noise sources around the site and the closest sensitive receptors.

11.1.10. Existing noise sources include:

- Road traffic noise from the M42 to the west;
- Road traffic noise from the M42/A5 roundabout J10, to the south-west; and
- Road traffic noise from the A5, Watling Street, to the south including from an existing commercial development opposite the proposed development.

11.1.11. No clearly identifiable vibration sources have been identified by our desktop review.

11.1.12. Due to current COVID-19 restrictions advised by the Government regarding travel and social interaction, we cannot guarantee that we will be able to undertake site-based activities in a timely

manner and in accordance with any programme requirements. Furthermore, measurements of existing ambient and background noise, if undertaken under current conditions, may be atypical due to a lower level of car usage than normal.

11.1.13. Notwithstanding the above, we propose establishing baseline noise levels by measurement. An unattended noise survey will be undertaken at to two locations, representative of the dwellings on Birch Grove and Cockspur Street, Birchmoor, north of the site; and of dwellings on Watling Street, Dordon, south of the site for a duration of 7 days as agreed with the EHO at NWBC. The noise survey results will be compared against the noise model outputs, using the opening year do-minimum scenario traffic data.

11.1.14. In addition to unattended noise measurements, as agreed with the Environmental Health Officer at NWBC, attended measurements will be undertaken on three separate occasions (two daytime during setup and takedown of the unattended locations, and one night-time during the unattended logging period) at four locations around the site in order to understand how noise propagates across the site, set background noise level criteria for privately accessed dwellings and determine the prevailing soundscape at nearby receptors.

11.1.15. A noise survey to establish the existing noise climate is proposed. The survey locations, which will be selected to be representative of sensitive receptors near the proposed development, will be agreed through consultation with NWBC.

Sensitive Receptors

11.1.16. Sensitive receptor locations are places where the public may be exposed to noise and vibration from the proposed development, including residential buildings. Existing sensitive receptors include:

- Residential dwellings in Birchmoor village, 45m to the north, notably dwellings on Birch Grove and Cockspur Street;
- Birchmoor Farm, 260m to the north-east; and
- Residential dwellings, 250m to the south-east, on A5, Watling Street.

11.1.17. There are 2no. Noise Important Areas located within 300m of the proposed development for consideration. The nearest Noise Important Areas (NIAs) (Road) are located on Watling Street (ID 11748) and Green Lane (ID 7445).

ASSESSMENT METHODOLOGY

11.1.18. The assessment will consider the following legislative documents:

NOISE POLICY STATEMENT FOR ENGLAND 2010 (NPSE)

11.1.19. The NPSE was published in March 2010 by Defra and is the overarching statement of noise policy for England. It applies to all forms of noise other than occupational noise, with paragraph 1.6 setting out the long-term vision of Government noise policy which is to "promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development".

11.1.20. The Explanatory Note to the NPSE introduces three concepts for use in the assessment of noise in England:

- NOEL - No Observed Effect Level - This is the level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.

- LOAEL - Lowest Observable Adverse Effect Level - This is the level above which adverse effects on health and quality of life can be detected.
- SOAEL - Significant Observed Adverse Effect Level - This is the level above which significant adverse effects on health and quality of life occur.

11.1.21. None of these three levels are defined numerically in the NPSE and for the SOAEL the NPSE makes it clear that the noise effect level is likely to vary depending upon the noise source, the receptor and the time of day and day of the week. The need for more research to investigate what may represent a SOAEL for noise is acknowledged and the NPSE asserts that not stating specific SOAEL values provides policy flexibility in the period until further evidence and guidance is published.

NATIONAL PLANNING POLICY FRAMEWORK (NPPF)

11.1.22. The NPPF sets out the following generic guidance relating to noise, which supports the long-term vision of the NPSE.

11.1.23. Under section 15 'Conserving and enhancing the natural environment', paragraph 170, it is stated that:

> *"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"*

11.1.24. Under section 15, paragraph 180, it is stated that

> *"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:*
>
> *a) mitigate and reduce to a minimum, potential adverse impacts resulting from noise from new development and avoid noise giving rise to significant adverse impacts on health and the quality of life;*
>
> *b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason;"*

11.1.25. Notwithstanding the results of consultation, the proposed scope of works, including the assessment methodology is outlined below.

CONSTRUCTION PHASE

Construction Noise

11.1.26. Construction noise would be assessed using the guidance in BS 5228-1. The results of the baseline noise survey will be used to determine appropriate construction noise level thresholds, and predictions of noise from the construction of the proposed development will be calculated and

assessed against these thresholds. Appropriate mitigation measures will be presented, including BPM and the good practice recommendations presented in BS 5228-1.

Construction Vibration

11.1.27. Construction vibration would be assessed using the guidance in 5228:2009+A1:2014: Code of practice on noise and vibration control on construction and open sites: Part 2: Vibration (BS 5228-2). For a sample of potential vibration generating activities (e.g. piling and earth compaction), vibration impact (human exposure) at a series of set-back distances will be determined. Appropriate mitigation measures will be presented, including BPM and the good practice recommendations presented in BS 5228-1 and BS 5228-2.

OPERATIONAL PHASE

Development Generated Commercial / Fixed Plant Noise

11.1.28. Commercial and fixed plant noise would be assessed using the guidance in BS 4142:2014+A1:2019 “Methods for rating and assessing industrial and commercial sound” (BS 4142). It is assumed that precise details of fixed plant items and commercial operations will not have been confirmed by the time of submission of the ES and planning application. Predictions would include service yard operations based on WSP library data, and car parking operations based on the Bavarian State Agency for the Environment methodology. Noise level limits would be determined based on BS 4142 and the result of the baseline noise survey. Where these limits are predicted to be exceeded, appropriate mitigation measures will be presented, and residual effects determined.

Development Generated Road Traffic Noise

11.1.29. The changes in traffic noise levels as a result of development generated traffic will be assessed in general accordance with ‘Design Manual for Roads and Bridges, LA 111, Noise and Vibration’ (LA 111), and based on noise predictions carried out in accordance with the Calculation of Road Traffic Noise memorandum published by the Department of Transport and the Welsh Office in 1988.

Significant Criteria

11.1.30. Noise and vibration effects will be determined and ranked in significance using the guidance set out in the NPSE.

11.1.31. It is noted that there is a discrepancy between the guidance set out in the NPSE compared to guidance documents which form the basis of the proposed assessment. Specifically, the NPSE requires consideration of health effects based in part on absolute levels, but in contrast, the assessment methodology presented in the guidance document is more reliant upon the magnitude of the noise level changes.

11.1.32. The significance criteria adopted within each assessment will be aligned with the NPSE ‘effect levels’, NOEL, LOAEL and SOAEL.

CUMULATIVE EFFECTS

Construction Phase

11.1.33. The likely impacts associated with the construction phase that are proposed for assessment are as follows:

- Construction noise from the proposed development, e.g. site clearance, earthworks and building works; and
- Construction vibration from the proposed development, e.g. piling and earth compaction works.

Operational Phase

11.1.34. The likely significant impacts associated with the operational phase that are proposed for assessment are as follows:

- Development generated commercial noise, e.g. service yard operations, haulage operations.
- Development generated fixed plant noise; and
- Development generated road traffic noise associated with traffic movements to and from the development once operational.

11.1.35. At this stage, no details of any proposed building services plant associated with the proposed development are available. As no details of the location, number, or type of plant are currently known, these should be assessed when available. However, indicative limiting levels will be given based on assumed locations from masterplan drawings as they become available.

11.1.36. It is assumed that the operation of the proposed development will not give rise to any vibration or ground-borne noise at surrounding sensitive receptors and therefore it is not proposed to undertake an assessment of operational vibration effects.

MITIGATION

Construction Phase

11.1.37. Details of enabling and construction works are unlikely to be finalised until a contractor is appointed and therefore a quantitative assessment may not yield specific results.

11.1.38. The need for specific mitigation measures will be determined as part of the assessment work to be undertaken, in addition, noise and vibration will be minimised by the adoption of Best Practicable Means (BPM) (as outlined in Section 72 of the Control of Pollution Act 1974) and the recommendations of good practice presented in BS 5228:2009+A1:2014 Code of practice on noise and vibration control on construction and open sites: Part 1: Noise (BS 5228-1) and BS 5228:2009+A1:2014 Code of practice on noise and vibration control on construction and open sites: Part 2: Vibration (BS 5228-2).

11.1.39. A high-level construction noise assessment will be undertaken in line with BS 5228 and limiting noise levels and distances for specific vibratory works will be provided.

11.1.40. It is anticipated that mitigation measures will be implemented as part of a CEMP prepared by the Principal Contractor to address potential impacts during construction, subject to agreement with NWBC.

Operational Phase

11.1.41. Specific mitigation measures would be informed by the findings of the assessment. However, the following measures would be considered where required:

- Environmental barriers – In the form of earth mounding or acoustic fencing of various types, or a combination of the two. The use of noise reflective and absorptive barriers may be considered;
- Master Planning – the use of good practice design layout measures to control and limit noise breakout from the proposed buildings and site; and

- Traffic restrictions – Specific traffic routing for HDVs in and out of the development is already considered as part of the proposed development.

11.1.42. The following measures would not be considered:

- Speed restrictions – Reducing the speed of vehicles going to and from the proposed development, and when on site, would not be considered. It is assumed that the speed limits will be appropriate and because the reduction in noise impact is limited given the relatively low speeds that are expected in and around the site; and
- Low-noise road surfacing – The principal benefit of low-noise surfaces is the reduction of tyre noise at high speeds, above 75km / hr. They are less effective in reducing noise at lower speeds where engine noise, particularly from HDV, is dominant.

RESIDUAL EFFECTS

11.1.43. In the absence of a confirmed tenant it is not possible to determine any residual effects from a Noise and Vibration perspective from the proposed development once operational. However, with suitable mitigation measures it is unlikely that the proposed development will have any adverse impacts on nearby identified receptors.

REPORTING

11.1.44. The proposed scope for the Noise and Vibration Chapter is as follows:

Element	Phase	Scoped In	Scoped Out	Justification
Noise from proposed development	Construction	✓		Proximity of sensitive receptors which may experience temporary increases in noise during construction.
Vibration from proposed development	Construction	✓		Proximity of sensitive receptors which may experience temporary increases in vibration during construction.
Construction generated road traffic noise	Construction		✓	Construction traffic would use the M42 motorway and the A5, Watling Street, to access the site. It is anticipated that insignificant noise changes would occur adjacent to these routes (due to the change in flows arising as a result of construction traffic being small.)
Development generated commercial / fixed plant noise	Operation	✓		Proximity of sensitive receptors which may experience permanent noise impacts from the proposed development.

Element	Phase	Scoped In	Scoped Out	Justification
Development generated vibration	Operation		✓	The commercial activities associated with the operational scheme are not expected to generate significant vibration levels.
Development generated road traffic noise	Operation	✓		Proximity of sensitive receptors which may experience permanent noise impacts due to the proposed development.
Development generated road traffic ground-borne vibration	Operation		✓	Ground-borne road traffic vibration is normally caused by HGVs travelling on uneven surfaces. The proposed development will introduce new smooth road surfaces within the boundary.
Development generated noise on industrial / commercial units	Operation		✓	Industrial and commercial units, including the proposed development, are not considered sensitive receptors.

12

AIR QUALITY

12 AIR QUALITY

INTRODUCTION

12.1.1. This chapter considers the impacts of the proposed development on local air quality during construction and operation and any potential for significant effects to arise as a consequence. It sets out the proposed methodology for the air quality assessment to be contained within the Environmental Statement (ES) and identifies those impacts that are to be scoped out of the Environmental Impact Assessment (EIA).

12.1.2. The air quality assessment to be contained within the ES will be completed by WSP.

STUDY AREA

12.1.3. The air quality study area for this EIA Scoping Report is based around the confines of the development site boundary, as shown in Figure 2-1 – Site Surrounds.

12.1.4. As the design of the proposed development is yet to be finalised, for the purposes of the planning application, the defined study area will be kept under review as the consultation and design processes develops, and related assessment study areas are confirmed.

Construction Phase

Fugitive Dust and Particulate Matter (PM_{10}) Emissions

12.1.5. The study area relating to the assessment of fugitive dust and particulate matter (PM_{10}) emission during the construction phase will be defined using professional guidance provided by the Institute of Air Quality Management (IAQM)[1].

12.1.6. The IAQM construction dust guidance[1] document presents a specification for the study area in which an assessment should be carried out, as follows:

- Human receptors within 350m of any boundary of construction works and within 50m of routes used by construction vehicles, up to 500 m from the Application Site entrance(s); and
- Ecological receptors within 50m of any boundary of construction works and within 50m of routes used by construction vehicles, up to 500m from the Application Site entrance(s).

Operational Phase

Road Vehicle Exhaust Emissions

12.1.7. The study area relating to the assessment of operational phase road vehicle exhaust emission will be defined using guidance provided jointly by Environmental Protection UK (EPUK) and the IAQM[2].

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1 Institute of Air Quality Management (IAQM) (2016) *Guidance on the assessment of dust from demolition and construction* [online] https://iaqm.co.uk/text/guidance/construction-dust-2014.pdf version 1.1 Accessed 21/09/20

2 Environmental Protection UK (EPUK) and the IAQM (2017) *Land-Use Planning & Development Control: Planning for Air Quality* [online] https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

12.1.8. The following criteria will be used to specify an affected road link network, which will concentrate the study area within proportion:

- A change of Light-Duty Vehicle (LDV) flows of more than 500 Annual Average Daily Traffic (AADT); and/or;
- A change of Heavy-Duty Vehicles (HDV) flows of more than 100 AADT.

12.1.9. The study area will encompass sensitive receptors at conservative locations considered to represent relevant public exposure to changes in vehicle exhaust emissions adjacent to the affected road network, as identified from the criteria outlined above. Particular consideration will be given to those receptor locations that are situated within 10m of a particular affected road link.

PLANNING POLICY CONTEXT

12.1.10. The following legislation and planning policy are of relevance to air quality and will be considered in the EIA:

Legislative Documents

- The EU Directive on Ambient Air Quality (2008/50/EC)[3];
- Part IV of the Environment Act 1995[4];
- The Air Quality (England) (Amendment) Regulations 2002[5]; and
- The Air Quality Standards Regulations 2010[6], as amended in 2016[7].

Planning Policy

- National Planning Policy Framework (NPPF) 2019[8];
- Planning Practice Guidance on Air Quality 2019[9];
- NWBC Core Strategy[10] 2014, Policy ENV9 - Air Quality; and
- NWBC Local Plan Submissions Version 2018[11], LP31 - Development Considerations, Criterion 9.

3 The European Parliament and The Council of the European Union (2008) *Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe* [online] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0050&from=en

4 UK Public General Acts (1995) *Environment Act Part IV – Air Quality* [online] https://www.legislation.gov.uk/ukpga/1995/25/part/IV

5 UK Statutory Instruments (2002) *The Air Quality (England) (Amendment) Regulations 2002* SI 2002 / 3043 [online] https://www.legislation.gov.uk/uksi/2002/3043/contents/made

6 UK Statutory Instruments (2010) *The Air Quality Standards Regulations 2010* SI 2010 / 1001 [online] https://www.legislation.gov.uk/uksi/2010/1001/contents/made

7 UK Statutory Instruments (2016) *The Air Quality Standards (Amendment) Regulations 2016 SI 2016 / 1184* [online] https://www.legislation.gov.uk/uksi/2016/1184/contents/made

8 Ministry of Housing, Communities and Local Government (2019) *National Planning Policy Framework* [online] https://www.gov.uk/government/publications/national-planning-policy-framework--2

9 Ministry of Housing, Communities and Local Government (2019) *Planning practice guidance – Air Quality* [online] https://www.gov.uk/guidance/air-quality--3

10 North Warwickshire Borough Council (2014) *Core Strategy* [online] https://www.northwarks.gov.uk/downloads/file/7246/cd62b_core_strategy_2014

11 North Warwickshire Borough Council (2018) *New Local Plan – Local Plan Submission Version (March 2018)* [online] https://www.northwarks.gov.uk/downloads/file/7127/local_plan_submission_version_march_2018

Assessment Methodology Guidance

12.1.11. An air quality assessment will be carried out in accordance with best practice guidance made available by EPUK, the IAQM and the Department for Environment, Food and Rural Affairs (DEFRA). A summary of each publication referred to in this EIA Scoping Report and considered for inclusion in the Air Quality ES Chapter is provided below:

Local Air Quality Management Review and Assessment Technical Guidance

12.1.12. DEFRA has published technical guidance[12] for use by local authorities in their review and assessment work. This guidance, referred to in this document as LAQM.TG16[12], will be used where appropriate in the assessment.

Guidance on the Assessment of Dust from Demolition and Construction

12.1.13. This document published by the IAQM[1] has been produced to provide guidance to developers, consultants and environmental health officers on how to assess the impacts arising from construction activities. The emphasis of the methodology is on classifying sites according to the risk of impacts (in terms of dust nuisance, PM_{10} impacts on public exposure and impact upon sensitive ecological receptors) and to identify mitigation measures appropriate to the level of risk identified.

Land-use Planning & Development Control: Planning for Air Quality

12.1.14. EPUK and the IAQM have published a joint guidance document[2] that offers comprehensive advice on: when an air quality assessment may be required; what should be included in an assessment; how to determine the significance of any air quality impacts associated with a development; and, the possible mitigation measures that may be implemented to minimise these impacts.

NWBC Air Quality & Planning SPD

12.1.15. Supplementary Planning Documents (SPDs) expand upon, and support, policies contained within Local Plans and Core Strategies.

12.1.16. In September 2019, NWBC released their SPD[13] on air quality and planning. Air quality is a material consideration that planners are required to take into account when making their plans and when taking planning decisions. The SPD guidance[13] aims to simplify the consideration of air quality impacts associated with development schemes and focus on incorporation of mitigation at design stage, countering the cumulative impacts of aggregated developments, providing clarity to developers and defining sustainability in air quality terms.

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12 Department for Environment, Food and Rural Affairs (DEFRA) (2016) *Part IV The Environment Act 1995 and Environment (Northern Ireland) Order 2002 Part III, Local Air Quality Management Technical Guidance LAQM.TG16* Updated in 2018 [online] https://laqm.defra.gov.uk/documents/LAQM-TG16-February-18-v1.pdf

13 North Warwickshire Borough Council (2019) *Air Quality & Planning Guidance* [online] https://www.northwarks.gov.uk/download/downloads/id/8247/air_quaility_sdp_september_2019_adopted.pdf Accessed 21/09/20

BASELINE CONDITIONS

12.1.17. Baseline air quality information has been gathered using the latest Local Air Quality Management (LAQM) information held by NWBC[14] and DEFRA's Air Quality Management Areas[15] (AQMAs) and background pollutant mapping[16] resources.

Local Air Quality Management Review

12.1.18. The site is situated within the jurisdiction of NWBC.

12.1.19. The latest iteration of the NWBC LAQM Annual Status Report[14] is currently in draft format and is awaiting formal approval from DEFRA.

12.1.20. The draft 2020 ASR from NWBC states the following narrative:

- *The monitoring over the past 12 months has highlighted a couple of hotspots and as such, further monitoring within the localities of these has begun for 2020. A detailed or further assessment has not been considered necessary for any pollutant at this time.*
- *There are a number of measures being undertaken to deal with air quality at a regional level. At a local level North Warwickshire Borough Council have increased the locations of monitoring for NO_2 from January 2020 based on the results obtained in 2019. The results of which will be submitted in next year's annual status report.*
- *An Air Quality Supplementary Planning Document[13] was also approved by the Council in September 2019 in a bid to help reduce air pollution issues at the planning stage.*

Air Quality Management Areas (AQMAs)

12.1.21. AQMAs are declared where the UK Government's air quality objectives[6,7] adopted for NO_2, PM_{10} and $PM_{2.5}$ are not being achieved or are in danger of being exceeded.

12.1.22. The draft 2020 ASR[14] confirms that NWBC does not have any AQMAs in their jurisdiction.

Local Air Quality Monitoring

12.1.23. No continuous monitoring is completed by NWBC within their area of administration. However, monitoring is carried out at 19no NO_2 passive diffusion tube sites across the borough.

12.1.24. Annual mean NO_2 monitoring results from those NWBC monitoring locations within 2 km of the site boundary between 2017 and 2019, as identified within the draft 2020 ASR[14] are provided in **Table 12-1**.

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14 North Warwickshire Borough Council (2020) 2020 *Air Quality Annual Status Report (Draft)*

15 DEFRA (2020) *Air Quality Management Areas* [online] https://uk-air.defra.gov.uk/aqma/ Accessed 21/09/20

16 DEFRA (2020) *Background Mapping data for local authorities – 2018* [online] https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018 Accessed 21/09/20

Table 12-1 - NWBC Annual NO_2 Monitoring Data – 2017 to 2019

Site ID	Location	Type	Distance from Site (km)	Annual Mean Concentration (µg/m³)		
				2017	2018	2019
4	Bridge Street, Polesworth	Roadside	1.7	-	-	28.1
5	Long Street, Dordon	Roadside	1.2	-	-	29.8
6	New Street, Dordon	Roadside	1.1	32.1	29.9	28.9
7	A5 Watling Street, Dordon	Roadside	1.1	-	-	**51.1**
Annual Mean Objective				**40 µg/m³**		

* Results rounded to 1 decimal place **Bold** – Exceedances of the annual mean objective

12.1.25. The data from **Table 12-1** shows than annual mean concentrations have been below the annual mean objective in 2019 for 3 of the identified passive diffusion tube locations within 2 km of the site. However, an exceedance is identified at the '7' diffusion tube site along A5 Watling Street, near Dordon. This diffusion tube is situated along a main arterial route and may experience a higher proportion of HDV along this route due to the operation of the several industrial and business parks in the locality.

12.1.26. It is important to note that the monitoring data contained within the 2020 ASR[14] is currently in draft format and is subject to change.

12.1.27. According to the 2019 Air Quality ASR[17], Tamworth Borough Council (TBC) operated a network of 14no NO_2 passive diffusion tube sites during 2017 and 2018. Annual mean NO_2 monitoring results from those TBC monitoring sites within 2 km of the site boundary between 2016 and 2018 are provided in **Table 12-2**.

Table 12-2 - TBC Annual NO_2 Monitoring Data – 2016 to 2018

Site ID	Location	Type	Distance from Site (km)	Annual Mean Concentration (µg/m³)		
				2017	2018	2019
Q2	50 Lakeland Drive	Roadside	1.1	25.0	24.2	23.8
Q5	2 Wessenden	Roadside	0.7	29.0	25.8	25.0
11N	12 Brookside Way	Urban Background	1.5	21.0	19.5	19.7
Annual Mean Objective				**40 µg/m³**		

* Results rounded to 1 decimal place **Bold** – Exceedances of the annual mean objective

12.1.28. The data from **Table 12-2** shows than annual mean concentrations have been below the annual mean objective since 2017 for all 3 identified TBC passive diffusion tube locations within 2 km of the site.

17 Tamworth Borough Council (2019) *2019 Air Quality Annual Status Report* [online] https://tamworth.gov.uk/sites/default/files/environment_docs/Tamworth-ASR2019.pdf Accessed on 21/09/20

Local Emission Sources

12.1.29. Within the local vicinity of the site, current emissions sources are from vehicular traffic from the A5 Fazeley – Two Gates – Wilnecote Bypass, A5 Watling Street and the M42 motorway.

12.1.30. Emission sources may also include other industrial, logistics and distribution-led developments to the south of the site, along Danny Morson Way to the south-east and B5090 Pennine Way to the north-west respectively.

Background Pollutant Mapping

12.1.31. DEFRA provides mapped estimates of background pollution concentrations[16] for oxides of nitrogen (NO_x), NO_2, PM_{10} and $PM_{2.5}$ across the UK at a grid resolution of 1 km x 1 km, covering each year from 2018 to 2030.

12.1.32. Future year projections have been developed on the base year for the background maps, which is currently 2018. The maps include a breakdown of background concentrations by emission source, including road and industrial sources which have been calibrated against 2018 UK monitoring and meteorological data.

12.1.33. The background NO_2, PM_{10} and $PM_{2.5}$ annual mean concentrations for the 1 km x 1 km grid squares encompassing the site and surrounding area between 2018 and 2020 are provided in **Table 12-3**.

Table 12-3 – Annual Mean Background Pollutant Concentrations (µg/m^3) – 2018 to 2020

Grid Square	NO_2			PM_{10}			$PM_{2.5}$		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
424500 301500	16.0	15.2	14.5	15.7	15.4	15.1	9.8	9.6	9.4
425500 301500	12.4	11.8	11.3	14.2	13.9	13.6	9.0	8.8	8.6
426500 301500	11.2	10.7	10.3	13.0	12.8	12.5	8.6	8.4	8.2
424500 300500	18.0	17.0	16.2	16.3	16.0	15.7	9.8	9.6	9.4
425500 300500	13.1	12.5	11.9	14.9	14.7	14.4	9.2	9.0	8.8
426500 300500	11.4	10.9	10.4	13.2	12.9	12.6	8.6	8.4	8.2
424500 299500	12.2	11.7	11.1	13.8	13.5	13.3	8.7	8.5	8.3
425500 299500	12.3	11.8	11.3	13.1	12.8	12.6	8.5	8.3	8.1
426500 299500	11.3	10.8	10.4	13.3	13.1	12.8	8.6	8.4	8.2

12.1.34. The annual mean background concentrations contained within **Table 12-3** are observed to be below the respective air quality objectives for NO_2, PM_{10} and $PM_{2.5}$.

Sensitive Receptors

12.1.35. Sensitive locations are places where the public or sensitive ecological habitats may be exposed to pollutants resulting from activities associated with the proposed development. These will include locations sensitive to an increase in dust deposition and PM_{10} exposure because of on-site construction activities, and locations sensitive to exposure to gaseous pollutants emitted from the exhausts of operational traffic associated with the proposed development.

12.1.36. There are a number of sensitive receptors in residential developments located within Birchmoor to the north and Dordon to the west of the site respectively.

12.1.37. There are no statutory designated ecological sites situated within 1 km of the site, however the Kettle Brook Local Nature Reserve (LNR) is located within 220 m from the M42 motorway and approximately 730 m to the south-west of the site.

ASSESSMENT METHODOLOGY

12.1.38. The proposed development can be classified as a 'Major' development in consideration of the NWBC Air Quality & Planning SPD[13] as the overall project is scheduled for EIA and air quality is presented as a material consideration. The level of assessment required for a 'Major' development is outlined in more detail in the NWBC Air Quality & Planning SPD[13].

12.1.39. The following methodology for the Air Quality ES Chapter is outlined below, to take into account the appropriate level of air quality assessment required:

Consultation

12.1.40. As the site lies within the administration boundary of NWBC, formal consultation with its Environmental Health Department – which this scoping request forms part of - will be completed to agree the scope of works for the assessment to be contained within the Air Quality ES chapter.

12.1.41. WSP have carried out an initial consultation exercise with NWBC in regard to the requirement for a project-specific air quality monitoring survey. Confirmation has been given by NWBC[18] that this element will not be required.

12.1.42. As part of the formal consultation process, in addition to this scoping request, liaison with the air quality officers at NWBC will be carried out to obtain the most recent LAQM documents, in addition to existing local air quality monitoring data for the pollutants of concern, namely nitrogen dioxide (NO_2) and particulate matter (PM_{10} and $PM_{2.5}$). These will be reviewed to establish baseline air quality conditions at, and in proximity to, the proposed development.

Assessment Method

12.1.43. The technical approach to the air quality assessment will be in accordance with the DEFRA publication LAQM Technical Guidance LAQM.TG16[12] and aforementioned IAQM guidance[1,2] and NWBC Air Quality & Planning SPD[13] documents.

Construction Phase

Fugitive Dust and PM_{10} Emissions

12.1.44. A qualitative assessment of the likely significant impacts on local air quality due to the generation and dispersion of dust and PM_{10} during the construction phase will be undertaken as part of the air quality ES Chapter, using the relevant assessment methodology published by the IAQM[1], the available information for the proposed development and professional judgement.

12.1.45. The IAQM methodology[1] assesses the risk of potential dust and PM_{10} impacts from the following four sources: demolition; earthworks; general construction activities and track-out i.e. the potential for dust on the road from construction vehicles. It considers the nature and scale of the activities

18 Email correspondence between WSP and NWBC on 28th September 2020.

undertaken for each source and the sensitivity of the area to an increase in dust and PM_{10} levels to assign a level of risk. Risks are described in terms of there being a low, medium or high risk of dust impacts.

12.1.46. Once the level of risk has been ascertained, then site specific mitigation proportionate to the level of risk is identified, and the significance of residual effects determined.

Significance

12.1.47. For the construction phase assessment, the IAQM[1] guidance outlines an area of up to 350m from the development site boundary and 50m from the site traffic route(s) up to 500m of the entrance, within which there is the potential for nuisance dust and PM_{10} effects on human receptors. Receptors within these distances will be identified and their sensitivity will be established with reference to the IAQM[1] guidance.

12.1.48. The IAQM[1] assessment methodology recommends that significance criteria are only assigned to the identified risk of dust impacts occurring from a construction activity with appropriate mitigation measures in place.

Construction Led Traffic and NRMM

12.1.49. The local highway network may experience changes in traffic flows and speeds during construction because of temporary traffic management measures and / or additional vehicles travelling to and from the construction site transporting plant, materials and labour.

12.1.50. At present, construction traffic volume and movements are not known. It is envisaged that the proposed development will generate significantly fewer than 100 HDV movements per day during the length of the construction period which may be screened out the requirement for an assessment, according to the joint EPUK and IAQM guidance[2].

12.1.51. As such, a qualitative assessment of construction traffic emissions will be completed with reference to IAQM guidance[1,2], subject to data availability, which will incorporate the potential influence of exhaust emissions from NRMM on local air quality.

Significance

12.1.52. For the assessment of the impact of NRMM used on-site and construction vehicles accessing and leaving the construction areas on local concentrations of NO_2, PM_{10} and $PM_{2.5}$, the significance of effect will be determined using professional judgement and the principles outlined in the joint EPUK and IAQM[2] guidance. It should be noted that any effect on local air quality from construction traffic will be temporary, limited to the construction period only.

Operational Phase

Road Vehicle Exhaust Emissions

12.1.53. The quantitative prediction of road vehicle exhaust emission impacts on local air quality will be carried out by using the atmospheric dispersion modelling program ADMS-Roads. The modelling assessment will assess the predicted changes in traffic related pollutant emissions associated with the operation of the proposed development, focussed on NO_2, PM_{10}, and $PM_{2.5}$, and the associated effects on local air quality conditions at identified sensitive receptors adjacent to the affected road network.

12.1.54. The atmospheric dispersion modelling assessment will be included for verification, which involves a review of modelled pollutant concentrations against corresponding monitoring data provided by NWBC, to determine the performance and adequacy of the dispersion model.

12.1.55. The scenarios expected to be modelled and to enable the assessment to be completed, comprise:

- Base year (likely to be 2019) (to be used to facilitate model verification versus local monitoring);
- Opening year (TBC) without the proposed development; and,
- Opening year (TBC) with the proposed development.

12.1.56. The air quality assessment will be completed with due consideration of the NWBC Air Quality & Planning SPD[13], whereby the assessment follows a three-stage process:

- Determination of the classification of the developmental proposals;
- Assessment and quantification of the impact on local air quality; and,
- Determination of the level of mitigation required by the proposal to make the scheme acceptable.

12.1.57. The joint guidance produced by EPUK and the IAQM[2] for assessing air quality impacts from the proposed development will also be referred to when carrying out the assessment of operational phase impacts.

12.1.58. Where changes in traffic flow, composition and volume due to the proposed development are found to meet the specified threshold criteria as specified in paragraphs 12.1.3 and 12.1.4, pollutant concentrations of NO_2, PM_{10} and $PM_{2.5}$ will be predicted at representative sensitive receptor locations within 200 m of those road links and compared with statutory national air quality objectives[5,6,7].

12.1.59. According to the NWBC Air Quality & Planning SPD[13], the proposed development can be classified as a 'Major' development as the overall project is scheduled for EIA and air quality is presented as a material consideration. As such, the calculation of pollutant emissions costs from the development will be contained within the air quality ES Chapter.

12.1.60. The pollutant emissions costs calculation will identify the damage costs associated with the proposal and will assist NWBC in assessing the overall impacts on air quality arising from major developments.

12.1.61. The damage cost calculation will employ the use of the most recent DEFRA Emissions Factor Toolkit[19] to estimate the additional pollutant emissions from the Proposed Development and the latest DEFRA Interdepartmental Group on Costs and Benefits (IGCB) Air Quality Damage Costs for the specific pollutant of interest, to calculate the resultant damage cost[20].

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19 DEFRA (2020) *Emissions Factor Toolkit (EFT) version 10.1* [online] https://laqm.defra.gov.uk/documents/EFT2020_v10.1.xlsb Accessed 22/09/20

20 DEFRA (2020) *Air Quality Appraisal – Damage Costs Toolkit* [online] https://www.gov.uk/government/publications/assess-the-impact-of-air-quality Accessed 22/09/20

Significance Criteria

12.1.62. The approach provided in the joint EPUK and IAQM guidance[2] will be incorporated within the assessment to assist in describing the air quality effects of emissions resulting from proposed development, once operational.

12.1.63. This guidance recommends that the degree of an impact is described by expressing the magnitude of incremental change in pollution concentration as a proportion of the relevant assessment level and examining this change in the context of the new total concentration and its relationship with the assessment criterion, as summarised in **Table 12-4**.

Table 12-4 – EPUK and IAQM[2]– Impact Descriptors for Individual Human Receptors

Long Term Average Concentration at Receptor in Assessment Year	Change in Concentration Relative to Air Quality Assessment Level			
	1%	2% - 5%	6% - 10%	More than 10%
75% or less of AQAL	Negligible	Negligible	Slight	Moderate
76% - 94% of AQAL	Negligible	Slight	Moderate	Moderate
95% - 102% of AQAL	Slight	Moderate	Moderate	Substantial
103% - 109% of AQAL	Moderate	Moderate	Substantial	Substantial
110% or more of AQAL	Moderate	Substantial	Substantial	Substantial

Notes
AQAL = Air Quality Assessment Level, which for this assessment related to the UK Air Quality Strategy objectives. Where the % change in concentrations is < 0.5%, the change is described as *'Negligible'* regardless of the concentration.
When defining the concentration as a percentage of the AQAL, 'without development' concentration should be used where there is a decrease in pollutant concentration and the 'with development;' concentration where there is an increase.
Where concentrations increase, the impact is described as adverse, and where it decreases as beneficial.

CUMULATIVE EFFECTS

12.1.64. Cumulative effects arise where the impacts of one development combine with the impacts of another, with the result that, usually, a larger (and possibly more significant) effect might arise. An assessment of cumulative effects is required under the EIA Regulations to identify the likely significant environmental effects of the proposed development.

12.1.65. As part of the Air Quality ES Chapter an assessment to consider the potential for cumulative or in-combination effects will be carried out. Cumulative effects will be considered in terms of:

- The interaction and combination of environmental effects, and indirect effects of the proposed development affecting the same receptor, either within the development site or in the locality; and,
- The interaction and combination of environmental effects of the proposed development with committed projects and activities affecting the same receptor.

12.1.66. Consideration of planned committed developments will be included where suitable information is available about how these proposals will affect traffic flows in the proposed development opening year.

MITIGATION

12.1.67. Recommendation of suitable mitigation measures to reduce local air quality impacts during the construction and operational phases will be contained within the air quality ES Chapter, where appropriate.

Construction Phase

Fugitive Dust and PM_{10} Emissions

12.1.68. It is anticipated that mitigation measures will be implemented as part of a Construction Environment Management Plan (CEMP) to address potential impacts during construction at the proposed development, subject to agreement with NWBC.

12.1.69. The level of air quality mitigation needed will depend on the outcome of the construction dust assessment, in accordance with IAQM guidance[1] and consideration of the NWBC Air Quality & Planning SPD[13]. A suite of best practice mitigation measures designed to minimise fugitive dust and PM_{10} emissions to prevent any impacts will be included in the air quality ES Chapter and for inclusion within an outline CEMP.

Operational Phase

Road Vehicle Exhaust Emissions

12.1.70. Although it is considered unlikely that there will be significant air quality effects associated with road vehicle exhaust emissions from the operational phase of the proposed development, mitigation measures may be specified to reduce any potential impact further.

12.1.71. It is possible that potential mitigation measures such as a workplace travel plan and the promotion of a cleaner fleet of delivery vehicles may need to be contained within the proposals as well as providing facilities such as increased electrical car charging points to make it easier for people to make the transition to cleaner and greener modes of transport.

12.1.72. Further consideration of the NWBC Air Quality & Planning SPD[13] will be made alongside joint EPUK and IAQM[2] guidance in consideration of applicable mitigation measures consummate to the proposed development.

RESIDUAL EFFECTS

12.1.73. The assessment process will conclude with an examination of residual effects after mitigation has been applied, i.e., the overall predicted (likely) effects of the proposed development.

Construction Phase

Fugitive Dust and PM_{10} Emissions

12.1.74. The IAQM[1] states “For almost all construction activity, the aim should be to prevent significant effects on receptors through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be ‘not significant”.

Operational Phase

Road Vehicle Exhaust Emissions

12.1.75. The impacts of changes to vehicle flows associated with the proposed development will be assessed, and the significance of effect will be identified.

12.1.76. Based on the impact descriptors presented in **Table 12-4**, the respective residual effect is considered to be non-significant when a predicted impact of *negligible* or *slight* is made. Conversely, a predicted impact of either *moderate* or *substantial* will constitute a significant effect on local air quality.

REPORTING

12.1.77. The Air Quality ES Chapter will include an outline of the legislative framework in respect of local air quality and include details of the assessment methodology, results and analysis of the air quality assessment, mitigation recommendations as appropriate, cumulative impacts of development and associated figures and appendices.

12.1.78. A separate Non-Technical Summary will also be provided in accordance with the EIA Regulations.

13

AGRICULTURAL LAND

13 AGRICULTURAL LAND

INTRODUCTION

13.1.1. This chapter considers the implications of the proposed development on agricultural soils during the construction and operational phases, as well as any potential residual effects.

13.1.2. It sets out the proposed methodology for agricultural soils and identifies those impacts, if any, that can be scoped out of the Environmental Impact Assessment (EIA).

13.1.3. For clarity, the implications of the proposed development on ground conditions (including geology) is presented in the Phase 1 Ground Investigation contained at **Appendix C** and therefore excluded from this chapter.

STUDY AREA

13.1.4. For the purpose of this chapter, the 'study area' is the maximum physical extent of the proposed development footprint at the site, i.e. the developable area shown on the Parameters Plan contained at **Appendix B**.

13.1.5. For the purposes of cumulative impact, the assessment of baseline conditions has also considered relevant land classifications within a 1km radius of the development site.

PLANNING POLICY CONTEXT

13.1.6. The National Planning Policy Framework (NPPF) promotes safeguarding of the long-term potential of agricultural land. Decisions rest with the relevant planning authorities, who should take into account the benefits of the best and most versatile (BMV) agricultural land. Significant development, where considered necessary, should aim to use areas of poorer quality land if possible.

13.1.7. At a local level, The North Warwickshire Local Plan Core Strategy, adopted in 2014, sets out the strategic planning policies that the Borough Council will pursue until 2029. Furthermore, saved polices in the North Warwickshire Local Plan (adopted July 2006) still form part of the development plan. The relevant policy with respect to agricultural land is:

- Policy ENV6 Land Resources: This policy seeks to safeguard and enhance land resources, including agricultural land.

13.1.8. The emerging North Warwickshire Local Plan is currently at Main Modifications stage. The Site is excluded from proposed development allocations.

BASELINE CONDITIONS

13.1.9. The following information sources have been consulted to inform the baseline conditions:

- Cranfield Soil and Agri-food Institute Soilscapes database [online] available at: http://www.landis.org.uk/soilscapes/
- Natural England Magic Database [online] available at: http://www.natureonthemap.naturalengland.org.uk/
- Natural England, 2010. Agricultural Land Classification map West Midlands (ALC004) [online] http://publications.naturalengland.org.uk/publication/130044?category=5954148537204736
- British Geological Society (BGS) Geoindex [online] available at: http://mapapps2.bgs.ac.uk/geoindex/home.html

Soil Quality

Agricultural Land Classification

13.1.10. The soils at the development site are classified as ALC Grade 3 (Good to Moderate). This is generally described as land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. The ALC map does not show subdivisions of Grade 3 i.e. sub-grade 3a good quality, classified as BMV, or subgrade 3b moderate quality (not BMV), the subdivisions of Grade 3 can be mapped only by more detailed survey work.

13.1.11. In the wider geographic area, the land within a kilometre radius of the site is either Grade 4 (low quality agricultural land) to the south and east, or Grade 3 to the north, south and west.

13.1.12. The site is not within a Natural England Countryside Stewardship Area.

SoilScape

13.1.13. With reference to the Cranfield Soil and Agrifood Institute Soilscapes database, the site soils are classified as Soilscape 6- Freely draining slightly acid loamy soils. A summary of the available soil quality information is presented in **Table 13-1** below.

Table 13-1 – Summary of Soilscape Information

Name	Freely draining slightly acid loamy soils
Main Surface Texture Class	Loamy
Natural Drainage Type	Freely draining
Natural Fertility	Low
Characteristic Semi-natural Habitats	Neutral and acid pastures and deciduous woodlands; acid communities such as bracken and gorse in the uplands
Main Land Cover	Arable and grassland
Carbon	Low
Water Protection	Groundwater contamination with nitrate; siltation and nutrient enrichment of streams from soil erosion on certain of these soils

Site History

13.1.14. It is understood that the site has largely been used for agricultural purposes only, with negligible historical development.

ASSESSMENT METHODOLOGY

Objective

13.1.15. The objective of the assessment will be to identify potential effects occurring as a consequence of the proposed development on agricultural soils, assess the significance of the effects and recommend embedded and additional mitigatory measures to inform the design and construction phases.

13.1.16. The significance of the effect on agricultural soils will be assessed as a function of the environmental value (sensitivity) of the attribute or receptor and the potential change (magnitude of impact).

Methodology

13.1.17. This assessment will be undertaken in accordance with the principles of:

- Natural England, Technical Information Note TIN049, Agricultural Land Classification: protecting the best and most versatile agricultural land, Second Edition, 19 December 2012
- Department for Environment, Food & Rural Affairs (DEFRA) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, September 2009
- Ministry and Agriculture, Fisheries and Food (MAFF) Good Practice for Handling Soils, 2000 (archived document, but referred to in the absence of relevant current best practice guidance).

13.1.18. The methodology will include:

- Completion of an ALC Survey;
- Review baseline information relating to the agricultural quality of land;
- List and assess the significance of potential effects;
- Assess the sensitivity of the soils;
- Assess the magnitude of the effect;
- Assess the likely significance of the effects.

POTENTIAL EFFECTS

13.1.19. The potential effects for the site are summarised below:

- Loss of soil, measured as a loss of (potential) best and most versatile agricultural land, during construction.
- Adverse physical effects to soil as a result of construction phase activity. This includes compaction and/or sealing, covering with hardstanding and excavation and stockpiling.

13.1.20. No further adverse effects are anticipated in the operational phase.

13.1.21. The loss of the development site will not affect the viability of the existing farming enterprise that farms this land.

POTENTIAL CUMULATIVE EFFECTS

13.1.22. An assessment of potential cumulative or in-combination effects will be carried out as part of the Agricultural Land ES Chapter. This will assess the effects of the development cumulatively with other committed developments within a 1km radius of the development site (i.e. those that have already commenced development, those that have not been commenced but have valid extant permission and those that are allocated within the emerging North Warwickshire Local Plan).

13.1.23. The ES Chapter will also consider the environmental effects on agricultural land in relation to wider geographical areas such as North Warwickshire, Warwickshire County and the West Midlands.

SCOPE OF ASSESSMENT

13.1.24. Items to scoped into the assessment are:

- Impacts on agricultural land.
- Impacts on soil quality.

13.1.25. The assessment will therefore include the completion of an ALC Survey, in conjunction with a review of available information associated with agricultural land quality.

MITIGATION

13.1.26. Possible mitigation measures for the potential effects of the proposed development on agricultural soils are, inter alia:

- Final development design to maximise the area of landscaping within the proposed development.
- Soil management operations to generally be in accordance with Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, and MAFF's Good Practice for Handling Soils.
- Implementation of a Construction Environmental Management Plan (CEMP) to mitigate risks associated with the construction phase, including actions to mitigate impacts to soil quality.

RESIDUAL EFFECTS

13.1.27. Following the implementation of the proposed mitigation, there is still potential for loss of soil as a result of land take, although the significance of effects will be dependent upon the assessment of magnitude of impact and sensitivity based on the results of the ALC Survey.

REPORTING

13.1.28. Assessment reporting will comprise a baseline scenario, informed by the ALC Survey and available agricultural land quality data. Design and mitigation measures will be developed, and residual effects will be discussed. Where significant effects are identified, appropriate monitoring (e.g. review of the CEMP to demonstrate effective implementation of the mitigation measures for soil resources) will be designed.

14

LANDSCAPE AND VISUAL IMPACT ASSESSMENT

14 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

INTRODUCTION

14.1.1. A Landscape and Visual Impact Assessment (LVIA) is being carried out by experienced Chartered Landscape Architects at SLR Consulting.

14.1.2. The LVIA will identify and assess the potential effects of the proposed development on the landscape and visual resource of the study area. It will focus on potentially significant effects, and accordingly the LVIA will also outline the approach taken to the design of the proposed development, as well as mitigation measures that would be implemented, to prevent, reduce or offset potential adverse landscape and visual effects.

14.1.3. An assessment of the potential effects of the proposed development on the Strategic Gap (emerging Policy LP5) would also be undertaken as part of the LVIA.

STUDY AREA

14.1.4. The study area is illustrated on drawings LAJ-1 to LAJ-3 contained as sub-appendices to **Appendix E.**

14.1.5. The study area has been identified through desk top analysis of topography, aerial and OS mapping, together with, computer modelling of theoretical visibility which was refined by field survey.

PLANNING POLICY CONTEXT

National Policy: National Planning Policy Framework (NPPF)

14.1.6. Paragraph 11 sets out the fundamental principle of this document: that there is a presumption in favour of sustainable development. All development that is in accordance with the development plan should be approved “without delay” and that “where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date” permission should be granted for development “unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in the Framework taken as a whole.”

14.1.7. In relation to landscape, the NPPF defines sustainability as including the protection and enhancement of the “natural, built and historic environment” (paragraph 8).

14.1.8. Paragraph 98 relates to rights of way and access, stating that these should be “protected and enhanced”. It is noted that better facilities should be provided for users of rights of way, for example by “adding links to existing rights of way”.

14.1.9. Paragraphs 124, 128 and 130 relate to the need for good design in new developments. Paragraph 124 states that “good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities”. Paragraph 128 states that applicants should work closely “with those directly affected by their proposals to evolve designs which take account of the views of the community”. Paragraph 130 states that “permission should be refused for development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions”.

14.1.10. Paragraph 170 of the NPPF states that the planning system, "should contribute to and enhance the natural and local environment by [inter alia] …protecting and enhancing valued landscapes" and by "recognising the intrinsic character and beauty of the countryside". Paragraph 171 states that the planning system should "distinguish between the hierarchy of international, national and locally designated sites".

14.1.11. In paragraph 172 it is stated that "great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty".

North Warwickshire Local Plan (2006) (saved policies)

14.1.12. The following policies have relevance to the site:

- **Policy ENV12 - Urban Design** states that: "*Development will only be permitted if;*
  - *All the elements of the proposal are well related to each other and harmonise with both the immediate setting and wider surroundings to present a visually attractive environment.*
  - *Existing natural features are treated as an integral part of the development".*
- **Policy ENV13 - Building Design** states that "*New buildings and extensions or alterations to existing buildings will only be permitted where;*
  - *The scale, massing, height and appearance of the proposal positively integrates into its surroundings and*
  - *The materials and detailing used respect and enhance local distinctiveness".*

North Warwickshire Core Strategy (2014)

14.1.13. The following policies have relevance to the site:

- **Policy NW13 – Natural Environment** states that *"The quality, character, diversity and local distinctiveness of the natural environment will be protected and enhanced. In particular within identified landscape character areas development will conserve, enhance and where appropriate, restore landscape character as well as promote a resilient, functional landscape able to adapt to climate change. Specific landscape, geo-diversity, wildlife and historic features which contribute to local character will be protected and enhanced."*.
- **Policy NW16 – Green Infrastructure** states that development proposals *"must where appropriate, demonstrate how they contribute to maintaining and enhancing a comprehensive and strategically planned Green Infrastructure network".*
- **Policy NW19 – Polesworth & Dordon** states that the "*broad location of growth will be to the south and east of the settlements"* and *"Any development to the west of Polesworth & Dordon must respect the separate identities of Polesworth and Dordon and Tamworth and maintain a meaningful gap between them"*.

Emerging North Warwickshire Local Plan (submitted for Examination March 2018)

14.1.14. The following emerging policies have relevance to the site:

- **Policy LP5 - Meaningful Gap** which states that:
  - *"1) The Meaningful Gap between Tamworth and Polesworth and Dordon is defined on the Proposals Map.*

- *2) Any development to the west of Polesworth & Dordon must respect the separate identities of Polesworth and Dordon and Tamworth and maintain a meaningful gap between them.*
- *3) All new development within this gap should be small in scale and not intrude visually into the gap or physically reduce the size of the gap".*

14.1.15. We note that this has been subsequently modified by the Local Plan Inspector who has advised that bullet point 3 be changed to:

> *"Development should not significantly reduce the visual separation between Polesworth and Dordon, and Tamworth."*

- **LP14 – Landscape** states that *"development will conserve, enhance and where appropriate, restore landscape character as well as promote a resilient, functional landscape able to adapt to climate change. Specific landscape, geo-diversity, wildlife and historic features which contribute to local character will be protected and enhanced"*.
- **LP32 - Built Form** provides a series of general principals which include *"All development in terms of its layout, form and density should respect and reflect the existing pattern, character and appearance of its setting".*

BASELINE CONDITIONS

Landscape Designations

14.1.16. The site is not within any national designations for valued landscapes, such as AONBs or National Parks.

14.1.17. Other landscape-related designations in the locality are summarised below and are illustrated on Drawing LAJ-1 contained at **Appendix E.1**.

- There are two areas of open space to the east of the site on the edge of Dordon. The first of these (Kitwood Avenue Recreation Ground) forms part of the Adopted Local Plan and Core Strategy. The second, which adjoins the A5 is proposed in the emerging Local Plan;
- A public bridleway (AE45) extends along part of the eastern boundary and within the eastern edge of the site. A public footpath (AE46) extends from public bridleway AE45 to the east and turns south connecting with the A5. It was noted on site that the public are using an existing track, which follows a similar route, as an alternative to the footpath. A permissive route connects the Kitwood Avenue Recreation Ground with public footpath AE46; Public footpath AE48 is located to the east of the site. Public footpaths AE52 and AE55 extend in a southerly direction from the A5 to the south of the site.
- A number of Grade II and II* Listed buildings are present to the north within the Polesworth Conservation area at a distance of approximately 1.2km from the edge of the Conservation Area to the site. Four Grade II Listed buildings are present within Freasley to the south at a distance of approximately 830m. The Grade II Listed Hall End Farm is present to the south-east of the site at a distance of approximately 780m; and
- The site is located within an area of Strategic Gap as defined within the emerging Local Plan (Policy LP5).

LANDSCAPE CHARACTER

14.1.18. Drawings LAJ-2A and LAJ-2B contained at **Appendix E.2 and E.3** respectively illustrate published sources of Landscape Character within the study area which are detailed as follows:

National Landscape Character

14.1.19. At a national scale the site is included within Natural England's National Character Area (NCA) 97: Arden. NCA97 is described as "*well-wooded farmland landscape with rolling landform*". It is noted that the NCA has a *"complex and contrasting settlement pattern with some densely populated where traditional settlements have amalgamated to form the major West Midlands conurbation while some settlements remain distinct and relatively well dispersed"*. The north-eastern part of the NCA is described as an "*industrial area based around former Warwickshire coalfield, with distinctive colliery settlements"*. The assessment notes transport infrastructure as a key characteristic *"the M42, M40, M6 and M5 are major transport corridors that sit within the landscape of this NCA"*. Landscape opportunities noted which are of relevance to the site include the following:

- *"Conserve, enhance and restore the area's ancient landscape pattern of field boundaries, historic (including farm) buildings, moated sites, parkland and pasture and reinforce its well wooded character.*
- *Protect and manage woodlands particularly ancient woodlands and wood pasture to maintain the character of Arden.*
- *Manage and restore hedgerows especially in the north-eastern part of the area (enclosure patterns) and restore parkland, ancient trees and stream side trees plus manage and replace in–field trees and hedgerow trees.*
- *Create new green infrastructure with associated habitat creation and new public access on former mining sites and close to urban populations in the West Midlands Green Belt.*"

Warwickshire Landscape Guidelines (November 1993)

14.1.20. At a county scale the Warwickshire Landscape Guidelines (November 1993) classifies the site as part of the Arden Landscape Character Area (LCA) within Landscape Character Type (LCT) Wooded Estatelands. LCT Wooded Estatelands is described as *"A well wooded estate landscape characterised by a large-scale rolling topography and prominent hilltop woodlands*" with the following key characteristics:

- *"A large rolling topography with occasional steep scarp slopes.*
- *Large woodlands often associated with rising ground.*
- *Mature hedgerow and roadside oaks.*
- *A semi-regular pattern of medium to large sized fields.*
- *A varied settlement pattern of small villages and scattered farmsteads".*

North Warwickshire Landscape Character Assessment (August 2010)

14.1.21. At a district level the North Warwickshire Landscape Character Assessment (August 2010) classifies the site as part of LCA 5 Tamworth Fringe Uplands. The following key characteristics have relevance to the site:

- *"Gently undulating indistinct landform.*
- *Predominantly open arable land with little tree cover.*
- *Fragmented landscape with a complex mix of agricultural, industrial and urban fringe land uses.*
- *Heavily influenced by adjacent settlement edges of Tamworth and Dordon and by large scale modern industry at Kingsbury, and in the vicinity of the M42 motorway junction.*
- *Unifying presence of the M42 motorway, which passes through within a planted cutting.*
- *Network of busy roads in and around Tamworth.*

- *Generally large, open arable fields between urban land uses with no or low trimmed hedges and few hedgerow trees.*
- *Former mining activity has created several large spoil tips, now reclaimed but remain sparsely vegetated, the large tip south of the M42 junction 10 is a significant visual detractor.*
- *Open internal views contained within wider landscape by peripheral settlement, woodland and landform, although there are longer views across the Tame Valley from the western edge of the area."*

Visual Baseline

14.1.22. Potential viewpoints are identified on drawing LAJ-3 contained at **Appendix E.4** and these views illustrate the visual baseline which will include consideration of the following receptors:

- Residential receptors: the views of residents on the edge of Birchmoor, Polesworth, Dordon and Freasley;
- Public Rights of Way: the views of walkers on public rights of way including AE45, AE46, AE48, AE52 and AE55;
- Vehicular Users: the views of vehicular users along Birchmoor Road, the M42 and the A5;
- Open Space: the view of recreational areas of open space including Kitwood Avenue Recreation Ground and the services.

ASSESSMENT METHODOLOGY

14.1.23. The assessment would be carried out by an experienced Chartered Landscape Architect in accordance with the Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013, also known as GLVIA3, produced by the Landscape Institute and Institute of Environmental Management and Assessment). The full methodology is provided in **Appendix E.5**.

14.1.24. The methodology used to assess the gap between settlements draws on the principles outlined in the Inspector's report for the Eastleigh Local Plan Inquiry in 1998, which were then reproduced within an ODPM report on Strategic Gaps and Green Wedges ("Strategic Gap and Green Wedge Policies in Structure Plans, Main Report", ODPM, 2003). These criteria (the "Eastleigh Criteria") have been applied on numerous applications and appeals to determine the effectiveness and extent of an existing strategic gap or wedge.

14.1.25. The assessment would be based upon a desk top assessment of relevant plans, guidance and character assessments, as well as site assessment.

14.1.26. Landscape, as defined in the European Landscape Convention, is *"an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors"*, (Council of Europe, 2000). Landscape does not apply only to special or designated places, nor is it limited to countryside. Visual effects are the effects of change and development on the views available to people and their visual amenity. Visual receptors are the people whose views may be affected by the proposed development.

14.1.27. All judgements would be discussed and agreed by two chartered landscape architects in line with guidance provided in GLVIA3.

CUMULATIVE EFFECTS

14.1.28. The LVIA would assess the effects of the development cumulatively with other committed developments (those that have already commenced development or those that have not been

commenced but have valid extant permission). Considerations would also be given to the interaction and effect of these developments as follows:

- Type 1 effects – the combination of individual effects regarded as interactive effects, for example, noise, dust and visual effects, from a development on a particular receptor; and
- Type 2 effects – effects from several developments, which individually might be insignificant, but when considered collectively, could create a significant cumulative effect.

14.1.29. Those developments to be considered within the content of the Cumulative Impact Assessment would be defined and pre-agreed between the consultant team and their counterparts at NWBC, WCC and any other relevant statutory authority.

MITIGATION

14.1.30. Measures to avoid or reduce potential landscape and visual effects would be inherent within the design. Aspects of the design which have been considered in relation to this include the following, which would be located both within the development site itself and the off-site areas for potential landscape and visual mitigation as set out in the plan contained at **Appendix A**:

- Location of the building moved to the southern end of the site to minimise potential visual effects on residents on the edge of the settlement of Birchmoor and to maintain a sense of separation between the settlement and the proposed development;
- Provision of a 'Local Park', at the northern end of the site adjacent to the settlement of Birchmoor, with localised earth mounds which would be planted with mixed native trees and shrubs to filter views from the settlement edge;
- Historic field boundaries would be reinstated in the area to the east of the site with provision of mixed, native hedgerow and tree planting to reinforce the rural character of the landscape;
- An area of publicly accessible landscape would be provided along the western edge of Dordon to screen existing housing, present along the ridgeline, and to create a soft green edge to the settlement. This would provide connection from the existing PRoW network to the proposed area of replacement green space identified within the emerging Local Plan and allow the provision of circular walking routes;
- Copses of mixed native trees would be provided where appropriate at the corners of existing fields to reinforce the local character and help to filter views from the settlement and PRoW towards the Proposal;
- Earth mounds would be created along the eastern edge of the Site which would be densely planted with mixed, native trees to help screen and filter views of the Proposal and to reinforce the sense of openness within the remaining arable landscape to the east. Earth mounds would be carefully modelled to fit with the existing landform and would take account of restrictions and easements such as the high-pressure gas pipeline;
- Existing native tree and shrub planting along the western boundary of the Site with the M42 would be reinforced with new mixed native planting where required to filter views from the M42;
- SuDS would be provided at southern end of the site which would be planted, and this zone would mirror the frontage of St Modwen's Park, Tamworth across the A5.

RESIDUAL EFFECTS

14.1.31. Measures to avoid or reduce potential landscape and visual effects would be inherent within the design.The scheme would not, therefore be assessed with and without landscape measures.

REPORTING

14.1.32. The Landscape and Visual chapter of the ES will follow a structure common to all subject areas as follows:

- Introduction and approach (which will include methodology)
- Baseline assessment
- Impacts (construction and operational)
- Mitigation (construction and operational)
- Residual impacts (construction and operational)
- Conclusions

14.1.33. Cumulative effects would be assessed as a separate section. A series of appendices would accompany the ES Chapter including the following:

- Full LVIA methodology
- Methodology for the Zone of Theoretical Visibility
- Landscape assessment tables
- Visual assessment tables

15

ECOLOGY

15 ECOLOGY

INTRODUCTION

15.1.1. This section outlines the approach to assessing the ecological features, habitats and faunal use of the site and in the surrounding area and associated anticipated effects under the proposals.

STUDY AREA

15.1.2. The study area for the purpose of the ecological consideration represents the development site, representing approximately 32ha land situated north east of Junction 10 of the M42 motorway with the A5 (Watling Street). In addition, background ecological records and associated information have been obtained from the wider surrounding area, including in particular records relating to land within a radius of 2km from the site.

PLANNING POLICY CONTEXT

15.1.3. The primary policy, legislative and guidance documents considered relevant in regard to ecological matters as part of the Environmental Impact Assessment are;

- The National Planning Policy Framework
- DEFRA/ODPM Circular 06/2005
- North Warwickshire Local Plan adopted 4th July 2006 (including in particular policies ENV1, ENV3, ENV4 and Core Policy 3)
- North Warwickshire Local Plan Core Strategy adopted 9th October 2014 (including in particular policies NW12, NW13, NW15)
- North Warwickshire Borough Council Draft Local Plan (submitted March 2018) (policies LP14, LP16 and LP19)
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services (DEFRA, 2011 – updated 2013)
- Biodiversity: Code of Practice for planning and development. (BS 42020: 2013)
- Guidelines for ecological impact assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. (CIEEM - September 2018)
- The Conservation of Habitats and Species Regulations 2017
- Wildlife and Countryside Act 1981 (as amended)
- Natural Environment and Rural Communities Act (2006)
- Countryside and Rights of Way Act (2000)
- The Hedgerows Regulations (1997)
- Protection of Badgers Act (1992)

BASELINE CONDITIONS

15.1.4. The site has been surveyed by Aspect Ecology Ltd during July to October 2020 including extended Phase 1 habitat and general faunal survey work, along with specific reptile survey work.

15.1.5. No ecological designations have been identified within or adjacent to the site.

15.1.6. The vast majority of the site is dominated by intensively managed arable habitats, which do not represent an ecological constraint on the proposed development.

15.1.7. Internal boundary features are limited to a small number of grassland corridors/paths, which support common species typical of arable boundaries, without mature structural or woody vegetation. Accordingly, these habitats are likely easily replaceable, and they are unlikely to represent a constraint in regard to Masterplanning of any proposed development in relation to habitat value.

15.1.8. Mature boundary hedgerows and planting are present at the site boundaries, including a small number of trees (the majority of which are removed from proposed development areas from which they are separated by buffers).

15.1.9. In terms of faunal considerations, these relate largely to potential for limited grassland corridors associated with the field margins to support common reptiles, along with minor opportunities for bird species.

SCOPING

15.1.10. Pre-application advice and consideration has been obtained from Warwickshire County Council (WCC) Ecological Services (dated September 2020) in order to scope the level of survey work required and inform the scheme, the results of which will be used to inform the survey work and assessment approach and will be incorporated into the consideration of the proposed development. Further advice will be given by WCC in response to this ES scoping request which will also be factored into the ES chapter and associated assessment work.

ASSESSMENT METHODOLOGY

15.1.11. A qualitative and quantitative ecological impact assessment will be undertaken of the proposals, following the principles set out in the CIEEM publication 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine' (September 2018), and will include consideration and assessment of potential for impacts arising from the proposed development on ecological receptors, including loss or damage to existing habitats (permanent or temporary); effects on protected, or other notable species of nature conservation value, potential for indirect impacts such as disturbance and any cumulative impacts and associated mitigation.

15.1.12. Based on the nature of any impacts/effects identified, an assessment will be made whether the effect on a habitat or species is likely to be ecologically 'significant'. CIEEM guidance defines a 'significant effect' as "an effect that either support or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general", going onto state that "significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution)."

15.1.13. Significance is also assessed at an appropriate geographic scale. For example, a significant effect on a Site of Special Scientific interest (SSSI) would be of national significance. Notwithstanding this however, consideration is also given to whether an effect is significant at a scale below the geographic context in which the feature is considered important.

15.1.14. For some ecological features (notably designations), there may be an existing statement of the conservation status of a feature and objectives and targets against which the effect can be judged. For example, Sites of Special Scientific Interest (SSSI) are assessed by Natural England under six condition categories, namely favourable, unfavourable recovering, unfavourable no change, unfavourable declining, part destroyed, and destroyed. An effect that exerts a change between these condition categories would be considered as significant.

15.1.15. Where no existing statement of conservation status is available, an assessment will be made against the existing status and condition of the habitat or species population, as recorded by survey data and background information, taking into account the level of ecological resilience or existing conditions that a habitat or species is currently subject to. An effect resulting in a long-term change to the existing background population trend or status at a given geographical level would be considered as significant. In this regard, a significant beneficial impact could be defined as one that prevents or slows an existing decline in the favourable conservation status of a habitat or population as much as one that permitted a population or habitat area to increase.

15.1.16. It is also anticipated that the proposals/application would be informed by BIA/net gain considerations including the use of the latest WCC BIA calculator tool, in line with the standard approach taken across the sub-region.

CUMULATIVE EFFECTS

15.1.17. The information to be prepared to inform the proposals will include consideration of potential for cumulative effects on ecological receptors in combination with any nearby identified permitted development of other identified relevant proposals.

MITIGATION

15.1.18. Where appropriate, suitable mitigation measures will be identified in order to address ecological concerns and avoid or minimise potential effects, whilst proposed compensation and enhancement measures will also be identified for incorporation into the scheme to contribute to biodiversity net gain.

RESIDUAL EFFECTS

15.1.19. Following the inclusion of mitigation measures and compensation, the information provided will include consideration of any likely residual effects in line with the above methodology and approach.

REPORTING

15.1.20. A baseline ecological report will be produced setting out the findings of the background data searches and survey work undertaken, including plans depicting the surrounding ecological designations and the ecological features, which will therefore provide the background information on which the Ecological Impact Assessment is based and will therefore form an appendix to the Ecology Chapter of the ES.

16

FLOODING AND DRAINAGE

16 FLOODING AND DRAINAGE

INTRODUCTION

16.1.1. This chapter has been prepared by Burrows Graham Ltd on behalf of Hodgetts Estates to set out the scope and methodology for the EIA in respect of flooding and drainage.

16.1.2. The assessment will deal with and discuss the following:

- Flood Risk – The effects of the development on the existing hydrological system on the site, including the impact of the site on the surrounding area.
- Surface Water Drainage – The effects of the development on the drainage of the surrounding area.
- Water Quality – The effects of the development on water quality of the downstream water catchment.
- Foul Water Drainage – The effects of the development on the existing foul water network.

STUDY AREA

16.1.3. The area of study will be primarily the development site for the purposes of the flood risk and drainage, however, by mitigating and reducing the environmental impact of the site this will be beneficial to the wider catchment area.

PLANNING POLICY CONTEXT

16.1.4. The assessment will be carried out in accordance with the following;

- National Planning Policy Framework (NPPF)
- Planning Practice Guidance (PPG)
- Non-statutory technical standards for sustainable drainage systems
- Warwickshire County Council Strategic Flood Risk Assessment and Drainage Guidance for Developers

BASELINE CONDITIONS

16.1.5. The site sits on greenfield land entirely within Flood Zone 1. This is land defined as having less than a 1 in 1000 annual probability of flooding from of river or sea water and is therefore defined as ‘less vulnerable’.

16.1.6. An assessment of other means of flooding have led to the conclusion the site has a low probability from surface, groundwater, sewer and artificial sources.

16.1.7. This will be discussed and outlined within the completed Flood Risk Assessment.

ASSESSMENT METHODOLOGY

16.1.8. As part of the ES Chapter a Flood Risk Assessment and Surface Water Drainage Strategy will be completed to establish the underlying flood risk to the development and surrounding area.

16.1.9. The Flood Risk Assessment will look at the impacts in relation to flood risk and drainage. These will be assessed to identify the potential risks and then reviewed with relation to their specific impact; short or long term, direct or indirect, permanent or temporary. The environmental significance of each risk will be reviewed and if required mitigation measures for each risk will be proposed.

16.1.10. The development's drainage strategy will be designed with sustainable drainage systems and controls on discharge rates in line with the current local and national guidance. This will aim to reduce and mitigate against any of the environmental risks associated with the site from a flood risk and drainage perspective.

16.1.11. In order to inform the sustainable drainage design, a site investigation will be undertaken to identify any contamination or infiltration suitability. However, a review of the local geology would suggest that the development neither has suitable soils for infiltration or contaminated land.

CUMULATIVE EFFECTS

16.1.12. Other development within the same catchment will also be designed in accordance with the guidance above, incorporating sustainable drainage features in order to reduce flood risk. By ensuring these developments are restricted to greenfield runoff there will be a betterment on the existing scenario and therefore a negligible impact due to cumulative effects.

MITIGATION

16.1.13. This chapter will identify the existing site drainage strategy and any existing issues associated with this. It will recommend any measures of mitigation required to minimise the impact of the proposed development through the drainage strategy.

16.1.14. As part of the development the short-term construction related environmental risks have been reviewed and are listed below;

- Contamination of surface water due to the construction activities within the site (movement of soils, spillages of oils from plant).
- Potential flooding induced by the construction activities on the site, such as alterations to existing flow rates or flow paths.

16.1.15. As a result of the proposed development the following operational environmental risks have been identified;

- Flooding of surrounding watercourse and the wider catchment due to the increases in surface water runoff from the impermeable areas on the proposed development.
- Flooding of the development due to insufficient management of residual flood risk.
- Reduction in water quality due to contamination from fuel, general spillages, contaminants and silt derived from the development's hardstanding areas.
- Contamination of the ground or surface water due to surcharging of the foul water networks leading to the discharge of foul flows into the surface water network.

16.1.16. These flood risk and drainage impacts could occur as part of the development if the correct mitigation methods are not used. The mitigation methods will aim to reduce the risk of all these to the development and the surrounding area.

16.1.17. These mitigation measures will be considered and presented within the Flood Risk and Drainage ES chapter.

RESIDUAL EFFECTS

16.1.18. Following the implementation of the mitigation measures the residual effects are likely to be low and result from either poorly managed construction or inadequate maintenance of SuDS systems.

16.1.19. As such, construction shall be carried out by a suitable contractor and all relevant risk assessments and pollution control measures will be put in place.

16.1.20. A maintenance and management regime shall be in place as part of the Operation Manual for the development, this will ensure that the residual risk associated with blockages and poorly maintained SuDS features is kept to a minimum.

REPORTING

16.1.21. The output from this exercise will be the following documents:

- Flood Risk Assessment Report
- Drainage Strategy Report (Surface Water and Foul Water)
- Flooding and Drainage ES Chapter

16.1.22. In order to produce the above, consultation required with the following organisations: Environment Agency, Warwickshire County Council acting as the Lead Local Flood Authority; and Severn Trent Water.

17

SOCIO-ECONOMIC

17 SOCIO-ECONOMIC

INTRODUCTION

17.1.1. This chapter has been prepared by WSP and outlines the proposed scope for the socio-economics EIA chapter.

STUDY AREA

17.1.2. The development site comprises approximately 32ha of arable farmland at the north-eastern quadrant of Junction 10 of the M42 motorway near Tamworth. The site is bound by the M42 to the west (beyond which lies the border between North Warwickshire and Tamworth Borough Council), the A5 trunk road to the south, further arable farmland to the east and the village of Birchmoor to the north.

17.1.3. A public bridleway (AE45) transects the site and a public footpath (AE46) borders the northern-eastern boundary of the site.

17.1.4. The site is located in Dordon ward and is within the North Warwickshire Borough Council administrative area.

PLANNING POLICY CONTEXT

17.1.5. The development plan for North Warwickshire Borough Council is as follows:

- North Warwickshire Local Plan Core Strategy adopted in 2014; and
- The Saved Policies of the North Warwickshire Local Plan (2006).

BASELINE CONDITIONS

17.1.6. The mid-2019 population estimate for Dordon ward is 3,416, compared to the NWBC population of 65,264[21]. It should be noted that these population estimates are ONS Experimental Statistics, which are in the testing phase and not yet fully developed.

17.1.7. Economic activity rates in Dordon ward were slightly lower in 2011 compared to NWBC, with 79.9% of the working age population economically active, compared to 81% across NWBC. However, both Dordon ward and NWBC performed above the England and Wales average of 76.8%.

17.1.8. The rate of higher qualifications locally in 2011 was poor when compared to the local authority and national levels, with 14.5% of Dordon ward residents having Level 4 qualification and above, compared to 22.3% in NWBC and 29.7% across England and Wales.

17.1.9. A more detailed assessment of baseline conditions will be included in the Socio-economic chapter.

[21] ONS. Ward-level population estimates (experimental statistics). 9 September 2020. https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/wardlevelmidyearpopulationestimatesexperimental

ASSESSMENT METHODOLOGY

17.1.10. The socio-economic assessment will comprise the following:

17.1.11. A high-level assessment of existing baseline socio-economic conditions at the site and across the Dordon ward and, where appropriate NWBC, including:

- Population;
- Economic activity;
- Education and skills; and
- Deprivation.

17.1.12. The high-level baseline assessment will be informed by established statistical sources such as the 2011 Census, the English Indices of Deprivation 2019[22], the National Online Manpower Information Service (NOMIS) and relevant information from the Applicant, together with a consideration of existing land-uses on the site.

17.1.13. Identification and assessment of likely significant effects of the completed and operational development, using appropriate modelling techniques where necessary. This will include:

- A numerical estimate of the Full Time Equivalent (FTE) jobs generated by the works, based on the anticipated build cost for the proposed development and data from the Annual Business Survey23.
- A numerical estimate of the GVA to the local economy by the workforce associated with the works, based on information from the Annual Business Survey.
- A numerical estimate of the additional expenditure from the workforce associated with the works.
- A numerical estimate of the net FTE jobs created by the completed and operational proposed development, based on the proposed floorspace schedule for the development, relevant information provided by the Applicant, the Employment Density Guide24 and the Additionality Guide25.
- A numerical estimate of the GVA to the local economy by the net additional long-term employment, using information from the ONS Sub-regional Productivity tables26.
- A numerical estimate of the additional expenditure from the completed and operational development workforce.

17.1.14. Identification of appropriate mitigation measures should any significant adverse effects be identified in connection with the proposed development in isolation.

17.1.15. The likely significant socio-economic effects of the proposed development, together with relevant cumulative development will be assessed insofar as relevant information exists in order to give consideration to both current and future sensitive receptors. Accordingly, the above methodologies

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[22] DCLG. English Indices of Deprivation (EID). 2019.
[23] ONS. Annual Business Survey 2018 Revised Results. May 2020.
[24] Homes and Communities Agency. Employment Density Guide. Third Edition. 2015.
[25] Homes and Communities Agency. Additionality Guide. Fourth Edition. 2014.
[26] ONS. Sub-regional Productivity: Labour Productivity (GVA per hour worked and GVA per filled job) indices by UK NUTS2 and NUTS3 sub-regions. 2020.

will be applied to the assessment of likely significant cumulative socio-economic effects, where possible. Where a potential lack of information in relation to specific cumulative development does not allow for this, the assessment (or components of the cumulative socio-economic assessment) will be based upon professional and expert judgement.

CUMULATIVE EFFECTS

17.1.16. An assessment of the cumulative effects of the identified cumulative development will be undertaken, including both Type 1 and Type 2 effects.

- Type 1 effects – the combination of individual effects regarded as interactive effects; and
- Type 2 effects – effects from several developments, which individually might be insignificant, but when considered collectively, could create a significant cumulative effect.

MITIGATION

17.1.17. Any adverse effects will be considered for mitigation where practical. At this stage we do not anticipate any adverse socio-economic effects arising.

RESIDUAL EFFECTS

17.1.18. Residual effects will be identified relating to both the construction and operational effects.

18

CULTURE, HERITAGE AND ARCHAEOLOGY

18 CULTURE, HERITAGE AND ARCHAEOLOGY

INTRODUCTION

18.1.1. This chapter of the ES sets out the planning framework in respect of the historic environment.

18.1.2. The assessment will cover known or potential buried heritage assets (archaeological remains) and above ground heritage assets (structures and landscapes of heritage interest) within or immediately around the site and also the historic character and setting of designated heritage assets within and beyond the site.

18.1.3. It will draw on a broad range of standard sources and will use professional expert opinion to assess heritage significance, taking into account past ground disturbance which may have compromised survival. It will assess the likely cultural heritage impact of the proposals. The ES chapter will also include recommendations to mitigate any adverse effects, where appropriate.

STUDY AREA

18.1.4. An 'outer' study area of approximately 1km from the development site boundary has been applied using professional judgement for the identification of designated heritage assets (scheduled monuments, listed buildings, world heritage sites, conservation areas, registered parks and gardens, and registered battlefields) and their settings. A second 'inner' study area of approximately 500m from the development site has been applied using professional judgement for the identification of non-designated heritage assets and to assess the site's archaeological potential.

PLANNING AND POLICY CONTEXT

18.1.5. The planning policy relevant to the historic environment which will be used during the preparation of the ES Chapter comprises:

- National Planning Policy Framework Section 16 'Conserving and Enhancing the Historic Environment'
- North Warwickshire Local Plan Core Strategy (adopted 2014) Core Policy NW14 Historic Environment

The following guidance will also be used:

- Chartered Institute for Archaeologists (CIfA), 2014a*, Code of Conduct*;
- CIfA, 2014b, *Standards and Guidance for Consultancy Advice*
- CIfA, 2014c, *Standard and Guidance for Historic Environment Desk-based Assessment*;
- Historic England, 2008, *Conservation Principles, Policies and Guidance*;
- Historic England, 2017, *The Setting of Heritage Assets, Historic Environment Good Practice in Planning: Note 3*, Second Edition;

BASELINE CONDITIONS

18.1.6. The National Heritage List for England shows that there are no designated (protected) heritage assets within the site, such as scheduled monuments and listed buildings.

18.1.7. Within the 1km study area there are five Grade II listed buildings (detailed at Table 18-1). There are no further designated heritage assets located within the 1km study area.

Table 18-1 – Listed buildings located within the 1km study area

NHLE Number	Name	Description
1034714	Freasley Hall	Freasley Hall is Grade II listed with possible late 17th century origins but is dated 1723. It is constructed of brick with sandstone dressings.
1034715	Hall End Hall	Hall End Hall is a Grade II listed former farmhouse which dates to the late 17th/early 18th century with some later alterations. It is constructed of brick with an old plain-tile roof.
1186196	Garden walls and gatepiers approximately 1 metre south of Freasley Hall	Grade II listed 17th or 18th century gardens brick walls and gate piers associated with Freasley Hall.
1186208	Sycamore Cottage	Sycamore Cottage is a Grade II listed timber framed 17th century cottage which was largely re-faced in the 19th century.
1365190	Yew House	Yew House is a Grade II listed timber-framed late 16th/early 17th century house, partly re-faced in the late 18th/early 19th centuries and with later additions.

18.1.8. The site is located outside any known areas of historic settlement. The HER data records only one heritage asset within the site; the site of a probable 19th-century farmstead. In the wider area archaeological geophysical survey and trial trenching recorded two undated enclosures, one of which contained a ring ditch and gullies, indicative of late prehistoric activity, 750m to the south-west of the development site on the opposite side of the A5 road. In this part of Warwickshire, the modern A5 closely follows the alignment of the Watling Street, a major Roman road. Archaeological observation during the construction of the M42 in the 1980s, 75m west of the development site, encountered three post holes indicating the potential for Roman settlement of unknown form and extent.

18.1.9. In order to determine the full historic environment potential of the site, a range of standard documentary and cartographic sources, including results from any archaeological investigations of the development site and the study area will be examined in order to determine the likely nature, extent, preservation and significance of any known or possible buried heritage assets that may be present within or adjacent to the site. This would include a baseline compiled through consultation of the following data sources:

- Historic England National Heritage List for England (NHLE) – Statutory designations (scheduled monuments; statutorily listed buildings; registered parks and gardens; historic battlefields);
- Warwickshire Historic Environment Record (HER) and Staffordshire HER – Primary repositories of archaeological information. Includes information from past investigations, local knowledge, find spots, and documentary and cartographic sources;

- National Record of the Historic Environment (NRHE) – National database maintained by Historic England. Not as comprehensive as the HER but can occasionally contain additional information. Accessible via Pastscape website. This would be consulted for the site and its immediate vicinity only;
- Local Planning Authority conservation area – Conservation areas hold special architectural or historic interest;
- British Geological Survey (BGS) Solid and drift geology digital map; online BGS geological borehole record data – Subsurface deposition, including buried geology and topography, can provide an indication of potential for early human settlement, and potential depth of archaeological remains;
- Groundsure – historic Ordnance Survey maps from the 1st edition (1860s) onwards;
- Warwickshire Record Office, Warwick – Historic maps (e.g. Tithe, enclosure, estate), published journals and local history;
- Historic England Archive – Swindon Vertical and specialist (oblique) aerial photographs;
- Bluesky – 1m resolution Digital Terrain Model LiDAR data;
- WSP – Geotechnical site investigation data;
- Client – Topographical survey data (existing and proposed);
- Client – Proposed development drawings (architectural and engineering plans and sections).
- Internet – historical background and local planning policy information.

18.1.10. The assessment would also include a site walkover inspection to determine the topography of the site and existing land use, and to provide further information on areas of possible past ground disturbance and general historic environment potential.

18.1.11. The site inspection will also include designated assets located within 1km from the site boundary for the purposes of scoping designated heritage assets and their intervisibility with the proposed development, as required by Historic England settings guidance (GPA3, HE 2017), and for the settings assessment itself.

ASSESSMENT METHODOLOGY

18.1.12. In addition to standing remains, heritage assets of archaeological interest can comprise sub-surface remains and, therefore, assessments should be undertaken for a site with potential buried archaeological remains.

18.1.13. The assessment of potential effects on heritage assets in the ES will comprise:

- Identifying above ground and known and potential buried predicted heritage assets that may be affected by the proposed scheme;
- Identifying designated heritage assets that may be affected in terms of setting by the proposed scheme;
- Evaluating the significance of heritage assets, based on existing designations and professional judgement where such resources have no formal designation. This will consider factors which may have affected asset survival;

- Predicting the magnitude of change (impact) upon the known or potential heritage significance of heritage assets during the construction phase and operation/completed phase and the likely resulting significance of environmental effect;
- Considering the mitigation measures that have been included within the development proposals and any additional mitigation that might be required in the design and construction or operational lifetime of the scheme to reduce or offset likely adverse effects; and
- Quantifying any residual effects (those that might remain after mitigation – i.e. major, minor or negligible).

SIGNIFICANCE CRITERIA

The specific significance criteria that will be adopted for the assessment within the ES with reference to the significance of the heritage assets and the magnitude of impact are provided in **Table 18-2** and **Table 18-3**.

Table 18-2 Criteria to Determine value of Impact on Heritage Assets

Heritage Asset description	Value (Significance) of heritage resource
Structures inscribed as of universal importance as World Heritage Sites (including nominated sites) Other heritage assets of recognised international importance Undesignated heritage assets of international importance	Very High
Scheduled Monuments Grade I and Grade II* listed buildings Grade I and Grade II* registered parks and gardens Other listed buildings that can be shown to have exceptional qualities in their fabric or historical associations Conservation Areas containing very important buildings Undesignated structures of clear national importance Undesignated heritage assets of national importance	High
Grade II listed buildings Grade II registered parks and gardens Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical associations Conservation Areas containing buildings that contribute significantly to its historic character	Medium

Heritage Asset description	Value (Significance) of heritage resource
Historic Townscape or built-up areas with important historic integrity in their buildings, or built settings (e.g. including street furniture and other structures) Undesignated heritage assets with regional importance	
Locally listed buildings Historic (unlisted) buildings of modest quality in their fabric or historical association Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures) Undesignated heritage assets with a local importance	Low
Buildings of no architectural or historical note; buildings of an intrusive character Undesignated heritage assets with no significant value or interest	Negligible
The value of the resource has not been ascertained Buildings with some hidden (i.e. inaccessible potential for historical significance.	Unknown

Table 18-3 - Criteria to Determine Magnitude of Impact on Heritage Assets

Magnitude of Impact (Change)	Typical Descriptors
Major	Complete removal of asset. Change to asset significance resulting in a fundamental change in our ability to understand and appreciate the resource and its historical context, character and setting. The transformation of an asset's setting in a way that fundamentally compromises its ability to be understood or appreciated. The scale of change would be such that it could result in a designated asset being undesignated or having its level of designation lowered.
Moderate	Change to asset significance resulting in an appreciable change in our ability to understand and appreciate the asset and its historical context, character and setting. Notable alterations to the setting of an asset that affect our appreciation of it and its significance; or the unrecorded loss of archaeological interest.
Minor	Change to asset significance resulting in a small change in our ability to understand and appreciate the asset and its historical context, character and setting.
Negligible	Negligible change or no material change to asset significance. No real change in our ability to understand and appreciate the asset and its historical context, character and setting.

No Change	No change.

The significance of effect is determined by combining the assessed importance or sensitivity of the heritage asset with the magnitude of impact from the Proposed Development. A matrix showing how the significance of the effect is identified is show in Error! Reference source not found.. Where there are two effect ratings, the rating will be determined from professional judgement.

Table 18-4 - Significance of Effect Matrix - Cultural Heritage

		Magnitude of impact (degree of change)				
		No change	**Negligible**	**Minor**	**Moderate**	**Major**
Environmental value (sensitivity)	**Very High**	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

DESCRIPTION OF LIKELY SIGNIFICANT EFFECTS

18.1.14. The following effects will be considered during the construction and operational phase:

CONSTRUCTION PHASE

- Permanent loss, truncation and/or disturbance to known or possible buried archaeological remains due to construction activities, including preliminary site strip (including temporary access, construction compounds and topsoil storage areas), landscaping and planting.
- Permanent removal of above ground heritage assets, including upstanding earthworks.
- Temporary impacts to the setting of designated heritage assets during construction (e.g. from light and noise)

OPERATIONAL PHASE

- Permanent changes to the setting of designated above ground heritage assets.

ELEMENTS SCOPED IN OR OUT OF FURTHER ASSESSMENT

18.1.15. Table 18-4 outlines the various elements proposed to be scoped in and out of further assessment for the Cultural Heritage ES chapter.

Table 18-5 - Cultural Heritage Elements Scoped in or Out of Further Assessment

Element	Phase	Scoped In	Scoped Out	Justification
Known and unknown buried (archaeological) remains.	Construction	✔		Potential for direct physical impacts due to ground-breaking activities associated with the construction of the proposed development.
Known and unknown buried (archaeological) remains.	Operation		✔	Further assessment on the operational effects on buried archaeological remains has been scoped out on the basis that once the proposed development has been completed no further ground disturbance will occur as part of the proposed development.
Above ground heritage assets and setting of designated heritage assets within 100m of the development site.	Construction	✔		Further assessment in line with Historic England guidance will be required to determine the significance of effect of the construction phase upon these assets and the setting of designated heritage assets.
Above ground heritage assets and setting of designated heritage assets beyond 100m of the development site.	Construction		✔	Given the distance from the project no significant effects are likely to arise from construction phase activities.
Above ground heritage assets and setting of designated heritage assets	Operation	✔		Further assessment in line with Historic England guidance will be required to determine the significance of effect of the operational phase upon these assets and the setting of designated heritage assets.
Setting of non-designated heritage assets	Construction and Operation		✔	Further assessment of the effect upon the setting of these assets is scoped out on the basis that such assets are not significant enough to warrant it in line with proportionality set out in NPPF. The setting of specific identified non-designated heritage assets in close proximity of the site will be considered for assessment and may be scoped in.

Limitations and assumptions

18.1.16. To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- Best endeavours have been made to ensure that the baseline data is accurate and up to date. It is assumed that information on the HER database is accurate.

- The main limitation to assessment is the nature of the archaeological resource - buried and not visible. The principal source of information is the HER, which lists all known archaeological sites and finds. The information gives an indication of archaeological potential rather than a definitive list of all potential buried heritage assets.

18.1.17. Notwithstanding these limitations, the methodology proposed here is considered robust, utilising reasonably available information, and conforms to the requirements of local and national guidance and planning policy. A geophysical survey has been commissioned as an appropriate archaeological evaluation technique to reduce the uncertainties inherent in any desk-based assessment.

CUMULATIVE EFFECTS

18.1.18. Cumulative effects are 'elevated' effects which occur where the combined effect of the proposed development with other proposed schemes in the vicinity on buried and built heritage assets is more severe than that reported at the proposed development site.

18.1.19. Cumulative effects will be scoped out of the assessment for buried heritage assets. This is on the basis that for intangible and deeply buried heritage assets it is not feasible to quantify accurately the nature of the resource across the study area, which would enable the identification of a cumulative impact and potential elevated effect.

18.1.20. The cumulative effects upon the built heritage and their setting will be considered where the proposed development would significantly reduce the ability to appreciate the heritage significance of the affected assets when considered alongside the effects from other committed developments.

MITIGATION

18.1.21. An appropriate mitigation strategy would aim to reduce or offset any significant adverse effects identified in the ES chapter for cultural heritage and archaeology.

18.1.22. Measures to mitigate effects would normally consist of design adjustments, to allow significant resources to be protected and retained if present (preservation in situ) or, where this is not feasible, investigation and recording before and during development, with dissemination at an appropriate level (preservation by record).

18.1.23. The mitigation strategy identified for the scheme would be reported in the ES chapter. A geophysical survey has been commissioned to clarify the archaeological potential of the site. Dependent upon the results of the geophysical survey a condition requiring future trial evaluation trenches may be required to ensure the development site's archaeological potential is protected from possible harmful effects. This might be followed by subsequent mitigation in the form of trial trenching, targeted archaeological excavation and recording, and/or an archaeological watching brief for remains of lesser significance. However, if the geophysical survey or any further evaluation work that may be required reveals little or no potential, no further work should be required. This approach is adopted in relation to a similar planning application for a commercial scheme at the south-west quadrant of Junction 10 of the M42 (ref. PAP/2014/0648).

RESIDUAL IMPACTS

18.1.24. The assessment process will conclude with an examination of any residual effects once mitigation has been applied.

REPORTING

18.1.25. The ES will set out the planning framework in respect of the historic environment along with the methodology for assessing the environmental effects predicted during the construction and operation (completed development) phases. It will provide a summary overview of the baseline conditions, identify heritage assets that may be affected by the proposed scheme; assess factors which may have affected asset survival where relevant; provide an evaluation of asset significance; assess development impacts and hence the significance of environmental effects arising from the proposals during the construction phase and operation phase, including effects on the setting of designated heritage assets where relevant; and provide mitigation measures that would reduce or offset any adverse effects. The ES will quantify any residual effects (those that might remain after mitigation) and, where required, cumulative effects.

18.1.26. The chapter will be supported by two technical appendices, a fully illustrated historic environment desk-based assessment (HEDBA) and a geophysical survey report. The HEDBA will include a detailed baseline compiled through a broad and standard range of data sources, including the Historic Environment Record (HER), the Historic England National Heritage List and National Record for the Historic Environment (NRHE), local authority data sources along with published works and cartographic sources, and topographic, geology and geotechnical data, where available.

18.1.27. The assessment will also include a site walkover inspection to determine the topography of the site and existing land use, and to provide further information on areas of possible past ground disturbance and general historic environment potential.

Appendix A

EIA BOUNDARY PLAN

NOTES:

Please note Title Plans have been scaled using Ordinace Survey features which may have altered over time. Complete accuracy cannot be guaranteed without further on-site survey.
Any dimensions given are to be confirmed with site measure.

Subject to Surveys, constraints & planning.

Red Line indicative only.

Contractors must verify all dimensions on site before commencing any work or shop drawings. This drawing is not to be scaled. Use figured dimensions only.

Subject to statutory approvals and survey.

Building areas are liable to adjustment over the course of the design process due to the ongoing construction detailing developments.

Please note the information contained within this drawing is solely for the benefit of the employer and should not be relied upon by third parties.

The CDM hazard management procedures for the Chetwoods aspects of the design of this project are to be found on the "Chetwoods - Hazard Analysis and Design Risk Assessment" and/or drawings. The full project design teams comprehensive set of hazard management procedures are available from the Principle Designer appointed for the project.

Please note Title Plans have been scaled using Ordinace Survey features which may have altered over time. Complete accuracy cannot be guaranteed without further on-site survey.

0m 20m 40m 60m 80m 100m

North

DEVELOPMENT SITE BOUNDARY
80.63 acres / 32.36 Ha

OTHER LAND UNDER THE CONTROL OF THE APPLICANT
102.97 acres / 41.67 Ha

AREAS FOR POTENTIAL OFFSITE LANDSCAPE AND VISUAL MITIGATION
6.51 Ha / 16.09 acres

WATLING STREET

Rev	Revision Description	Date	Author/ Reviewer
P4	Updated comments	03.11.20	MB/NH
P3	Updated comments	02.11.20	MB/NH
P2	Offsite landscape area revised.	22.10.20	mb/NH
P1	First Issue	20.10.20	mb/NH

PLANNING EIA

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Project
LAND WEST OF J10, M42

Client
HODGETTS ESTATES

Drawing Title
EIA SITE LOCATION PLAN

Scale	Size	Drawn	Checked	Date
1:2000	A1	MB	NH	19/10/2020

Project	Originator	Zone	Level	Type	Role	Number	Rev.
4263	CA	00	00	DR	A	00074	P4

Appendix B

PARAMETERS PLAN

NOTES:

Please note Title Plans have been scaled using Ordinace Survey features which may have altered over time. Complete accuracy cannot be guaranteed without further on-site survey.
Any dimensions given are to be confirmed with site measure.

Subject to Surveys, constraints & planning.

Red Line indicative only.

Contractors must verify all dimensions on site before commencing any work or shop drawings. This drawing is not to be scaled. Use figured dimensions only.

Subject to statutory approvals and survey.

Building areas are liable to adjustment over the course of the design process due to the ongoing construction detailing developments.

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The CDM hazard management procedures for the Chetwoods aspects of the design of this project are to be found on the "Chetwoods - Hazard Analysis and Design Risk Assessment" and/or drawings. The full project design teams comprehensive set of hazard management procedures are available from the Principle Designer appointed for the project.

Please note Title Plans have been scaled using Ordinace Survey features which may have altered over time. Complete accuracy cannot be guaranteed without further on-site survey.

0m 20m 40m 60m 80m

North

- Development Site Boundary (80.3 acres / 32.36 Ha)
- Plot A1 - Employment (B2/B8/E) up to 21m in height/117.8m AOD
- Plot A2 - Employment (B2/B8/E) up to 11m in height/112m AOD
- Plot B - Lorry parking (Sui Generis) up to 10m in height/111.5m AOD
- Zone for strategic infrastructure to include open space, planting, landscaping, site road & SuDS
- Land required for access
- Public bridleway (to be diverted where necessary)

Rev	Revision Description	Date	Author/ Reviewer
P3	Updated comments	03/11/20	MB/NH
P2	Updated comments	02/11/20	MB/NH
P1	First Issue	30/10/20	MB/NH

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Project
LAND WEST OF J10, M42

Client
HODGETTS ESTATES

Drawing Title
PARAMETERS PLAN

Scale	Size	Drawn	Checked	Date
1:1500	A1	MB	NH	30/10/2020

Project	Originator	Zone	Level	Type	Role	Number	Rev.
4263	CA	00	00	DR	A	00075	P3

Appendix C

PHASE 1 GROUND INVESTIGATION

Land Northeast of Junction 10, M42 Motorway

Phase I Desk Study and Preliminary Risk Assessment Report

August 2020

Hodgetts Estates
CORE 42
Dordon
Tamworth
Staffordshire
B78 1SZ

Draft Report

Report No. 70530-1

Document Verification

Prepared for	Prepared by
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Signatures and Approvals				
Author	G Manning	[redacted]	Date	20/08/2020
Checker and Approver	J Smithson	[redacted]	Date	20/08/2020

Disclaimer

This report has been prepared by Ground and Project Consultants Ltd, with reasonable skill, care and diligence within the agreed scope and terms of contract and taking account of the manpower and resources devoted to it by agreement with its client, and is provided by Ground and Project Consultants Ltd solely for the use of its client, Hodgetts Estates.

The advice and opinions in this report should be read and relied on only in the context of the report as a whole, taking account of the terms of reference agreed with the client. The findings are based on the information made available to Ground and Project Consultants Ltd at the date of the report (and will have been assumed to be correct) and on current UK standards, codes, technology and practices as at that time. They do not purport to include any manner of legal advice or opinion. New information or changes in conditions and regulatory requirements may occur in future, which will change the conclusions presented here.

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Tables and Figures

Appendices

1 Introduction

Ground and Project Consultants Ltd (GPCL) have been instructed by Hodgetts Estates to carry out a Phase I Desk Study and Preliminary Risk Assessment for a plot of land to the northeast of Junction 10 on the M45 Motorway.

The objectives of this report are to ascertain the expected ground conditions at the site and to assess the implications on the proposed development.

The scope of this report and approach are as follows:

- A review of the existing data supplied by the Client:
    - Site Location Plan and Development Plan by Chetwoods, dated August 2020.
- Obtain and review relevant Groundsure Reports;
- Summarise the geology, hydrology, hydrogeology, site history and pertinent environmental data;
- Develop a Conceptual Site Model for the site to assess potential contamination risks;
- Brief summary of geotechnical considerations;
- Comment on the requirements for further work including site investigation, laboratory testing and associated assessments.

2 Site Information

The information on the site and surrounding area has been obtained from freely available sources included in the references in Section 5 and the purchased Groundsure reports (Ref GS-6973301, 2 and 3), which are included in the Appendices. Where appropriate, figures and tables have been provided throughout the report for ease of assessment.

2.1 Site Location

The site is located at Watling Street (A5), Dordon, B78 1TB. The National Grid Reference for the site is 424850 300921. The site is adjacent to J10 of the M42, approximately 5km to the southeast of Tamworth town centre. The location of the site is indicated on Figure 1 below.

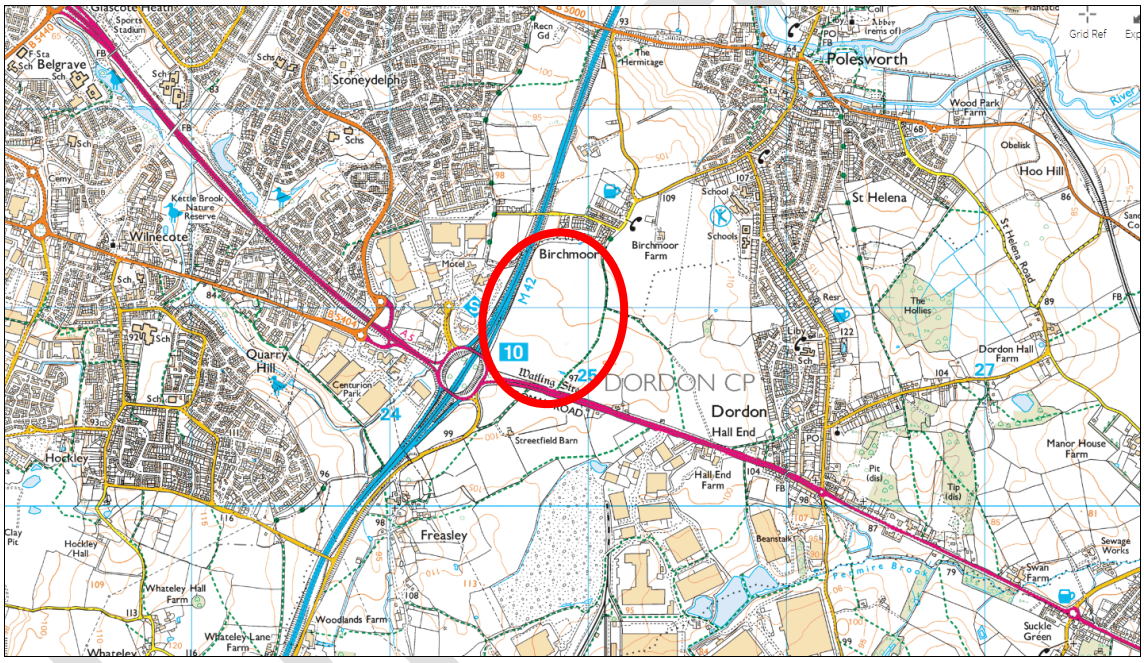

Figure 1: Site Location (Ordnance Survey Data © Crown copyright and database right 2020)

2.2 Proposals

The proposals for the site comprise development for a logistics market, however, no formal plans have been developed currently.

2.3 Site Description and Topography

The site has dimensions of approximately 750m by 450m (32.45ha) and comprises agricultural land with a small area of hardstanding to the southeast of the site off the A5 at the site entrance. From the Ordnance Survey plan the site is at 105m AOD in the northeast and 95m in the southwest, giving a slope angle of less than 1 degree.

The site is bounded by the A5 to the south, the M42 to the west, the village of Birchmoor to the north and agricultural land to the east. The A5 has a layby adjacent to the south of the site.

2.4 Site History

The site has been recorded as agricultural land since before 1883 (first edition Ordnance Survey). A series of buildings labelled as Leisure Barn were present towards the centre of the site between 1901 up until 1989. A pond was present on the western site boundary from before the first available map until the M42 was developed in 1989. A pond was shown to be present on the northern boundary that may still be present. A sheepwash was present in the south of the site until 1971. From the aerial photographs in the Groundsure report, the hardstanding in the south of the site was constructed between 1999 and 2010.

In the surrounding area the prevailing land use is agricultural. Collieries were present approximately 400m to the north and south of the site. Both have associated tips following the sites closure. A marl pit was present approximately 300m to the north of the site on the 1925 edition plan which was later shown as a pond by 1955. A garage was present 280m to the southwest from 1955. The M42 was constructed by 1989 and later an associated service station was developed by 1993.

Table 1: Historical Plan Summary

Date	On site	Off site
1883	The site is agricultural land with two barns to the centre of the site. A footpath crosses the site and a track is present to the eastern boundary. A pond is present on the north western site boundary and the northern boundary.	The surrounding area is predominantly agricultural with a road along the southern boundary (Watling Street) and Birchwood Village to the northeast. Birch Coppice Colliery is present from approximately 400m to the north of the site and 400m to the southeast of the site with associated shafts, reservoirs and tramways. Old Marl Pit is shown 280m to the north of the site.
1901	Another barn is present to the centre of the site which is now labelled as Leisure Barn.	Birch Coppice Colliery to the north is now marked as disused. The Birch Coppice Colliery to the southeast has been extended and is connected to a tramway to the north and south.
1925	A sheepwash is present in the south of the site	A cricket ground with pavilion is now to the southeast of the site. A sewage works is located 270m to the north of the site.
1955	A well is shown adjacent to the Leisure Barn to the centre of the site with two more outbuildings.	A slag heap/tip is shown associated with the Colliery to the southeast, extending up to 330m of the site. The Old Marl Pit is shown as a pond. A Garage is present 280m to the southwest.
1971	The sheepwash is no longer shown.	Residential properties as part of Birchmoor extend close to the northern site boundary with an electricity substation. The historic colliery to the north is now labelled as Tip (disused).

1989	The pond and barn are no longer shown. The site is shown as one field.	The M42 is now present adjacent to the west of the site. A layby is present to the south of the site off the A5.
1993	No significant changes.	A service station is present approximately 50m to the southwest of the site, beyond the M42.
2010	No significant changes.	The colliery is no longer shown and has been redeveloped into Birch Coppice Business Park. The tip is shown as vegetated.
2020	No significant changes.	No significant changes.

2.5 Geology

The site is on the boundary of BGS sheets 154 Lichfield and 155 Coalville. The available geological maps indicate the site is underlain by Halesowen Formation (mudstone, siltstone and sandstone) with no superficial deposits. The sandstone of the Halesowen Formation is shown to outcrop in the very southwest corner of the site. The Halesowen Formation is recorded to be 60m to 120m thick, overlying the Pennine Middle Coal Measures. The Pennine Middle Coal Measures Formation outcrops approximately 750m to the east of the site and is shown to dip 7 degrees to the southwest. The closest coal seam indicated on the map is the Two Yard Coal Seam. The shallowest seam is assessed to be around 100m depth. A fault is shown close to the southern boundary which is downthrown to the north. The geological map from the Groundsure report is included in Figure 2 below.

A BGS borehole 120m to the north of the site indicates Topsoil to 0.2m bgl, overlying soft clay with mudstone lithorelicts becoming mudstone from 2.3m bgl with refusal being achieved at 6.1m bgl. No groundwater was encountered. Test results were recorded which recorded liquid limits of between 42% and 74%, plastic limits of between 24% and 32% and plasticity index between 18% and 46% indicating the soils are clay of intermediate to very high plasticity and low to high volume change potential. Moisture contents were recorded at between 8% and 27%, generally reducing with depth. Compaction tests gave optimum moisture contents of 11% and 13%. Triaxial tests were given as 115kN/m^2 at 1.5m bgl and 131kN/m^2 at 5.4m bgl.

A BGS borehole approximately 60m to the west of the site indicates Topsoil to 0.5m bgl, overlying very dense silty sandy medium to coarse sandstone gravel to 2.13m bgl, overlying hard weathered sandstone to the base of the hole at 4.57m bgl. CPT refusals were recorded from 1.8m bgl.

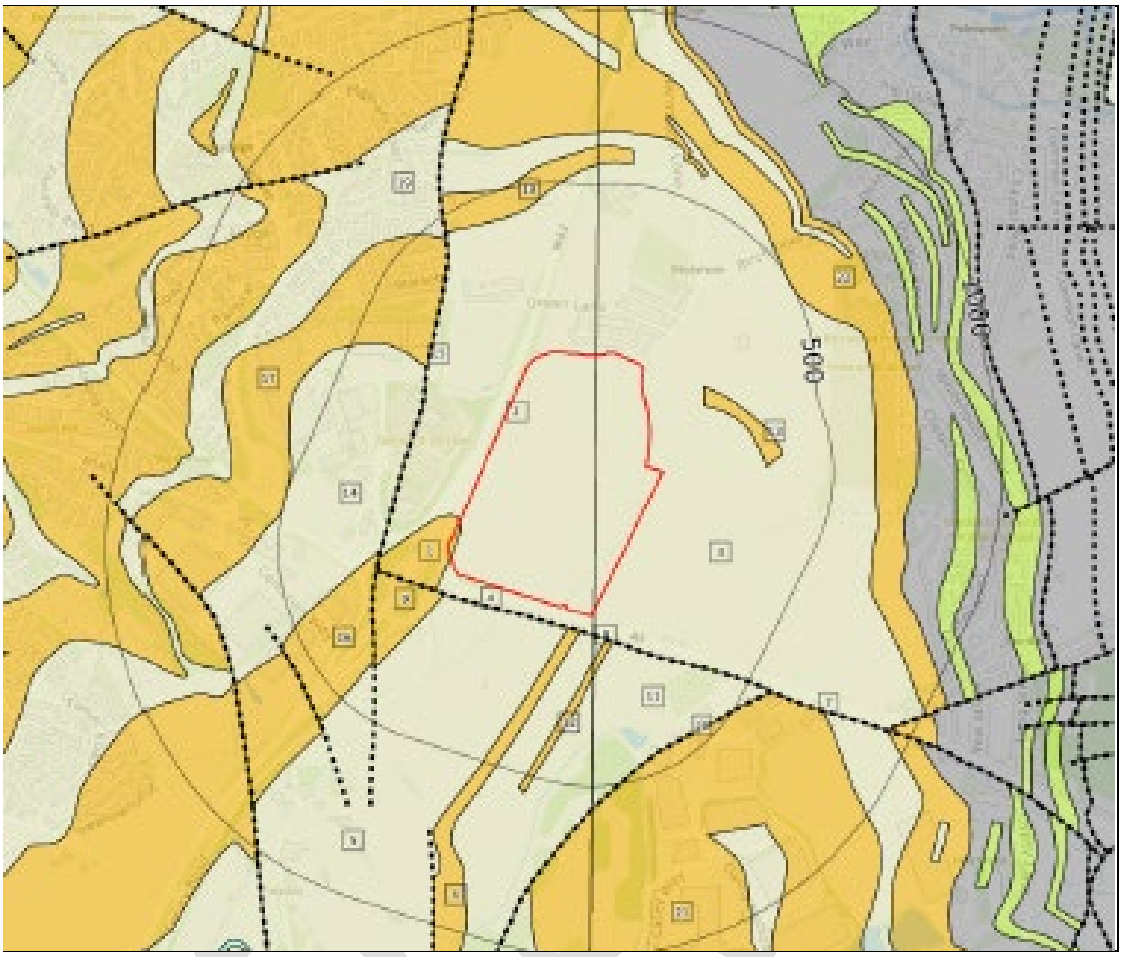

Figure 2: Solid Geology (BGS copyright and database rights 2020)

2.6 Coal Mining

A CON29M report was obtained for the site which is included in the Appendices. The Coal Authority Report for the site indicates that the site is within the potential zone of influence of seven recorded coal seams from 60m to 200m bgl. The seams were last worked in 1961 and any ground movement should have stopped. There are no coal mine entries or coal outcrops in proximity of the site. The report states that the site is free from coal mining related risk and no further action is required.

2.7 Hydrology and Hydrogeology

The closest waterbody is Kettle Brook located 325m to the southwest of the site which is a recorded Local Nature Reserve. The site is outside of a flood risk zone from rivers. A high surface water flooding risk is indicated in the south of the site. This is where one rainfall event is anticipated in 30-year period that results in surface water flooding with a depth greater than 1m.

The Halesowen Formation is designated as a Secondary A Aquifer. There are no groundwater abstraction licenses within proximity to the site. The closest is 1012m to the south at Birch Coppice Colliery used for top up water. The site is not in a Source Protection Zone.

2.8 UXO Risk

From the freely available Zetica UXO risk map, the site is in a low risk area from potential unexploded bombs. No further action is considered necessary.

2.9 Environmental Information

There are no historic or active landfill sites within 250m the site. The historical landfills relating the collieries are over 350m away and are therefore unlikely to impact the site. There are no waste treatment sites within proximity of the site.

There are four recent industrial land uses within 250m of the site. These include and electricity substation 125m to the north, a windscreen repair company 140m to the northeast, a petrol station and motorway service station 180m to the northwest.

There are no pollution incidents in proximity to the site.

Environmentally sensitive sites include deciduous woodland 44m to the west and 84m to the southwest.

The site is in a very low radon risk zone, with less than 1% of properties above the action level.

Table 2: Summary of Geo-Environmental Data within 250m

Historical potential contaminative land uses (on and off site)	• Sheep wash on site • Barns on site
Current potentially contaminative land uses (on and off site)	• Electricity substation 125m to the N • Window repair company 140m to the NE • Petrol station and service station 180m to the NW
Potentially infilled land	• M45 adjacent to the west of the site.
UXO	• Low risk based on Zetica risk maps.
Environmentally sensitive sites	• Deciduous woodland over 40m to the west of the site.

3 Preliminary Contamination Risk Assessment

This section comprises a preliminary risk assessment for the site. The aim is to establish whether there are potentially unacceptable contamination risks. The development of a conceptual model for the site is a key approach outlined in CLR11 and has become standard industry practice. An initial conceptual site model (CSM) has been developed, which identifies source-pathway-receptor 'pollutant linkages' potentially present at the site.

Potential sources of contamination or hazards include possible Made Ground associated with the barn to the centre of the site and the sheep wash which may have impacted the soil with insecticides including arsenic and organophosphorus.

Off-site, the electricity substation is considered to not be a risk to the site due to the low mobility of PCBs and the distance to the site, the window repair company is not likely to produce significant contaminants and the petrol station is downhill on the other side of the M42 and is therefore any contamination is unlikely to migrate uphill beneath the site.

Receptors include construction workers and future workers at the site (human health), the underlying Secondary Aquifer (controlled waters) and buried concrete and water supply pipes (building structures). The closest watercourse is Kettle Brook which is considered to be beyond the influencing range of the site, being approximately 325m to the southwest, beyond the M42.

Table 3: Conceptual Site Model

Source / Hazard	Pathway	Receptor	Risk Rating
Made Ground on site from the demolished barn	Inhalation, dermal contact, ingestion	Construction workers	Medium
	Inhalation (dust), dermal contact, ingestion from limited landscaping to the perimeter of the site.	Future workers	Low
	Migration / leaching	Secondary A Aquifer	Low
	Direct contact	Water Supply Pipes	Low
	Direct contact	Concrete	Medium
Chemicals from the historic sheep wash	Inhalation, dermal contact, ingestion	Construction workers	Medium
	Inhalation, dermal contact, ingestion from potential landscaping	Future workers	Low
	Migration / leaching	Secondary A Aquifer	Low
Ground gases from on and off site Made Ground sources, mine gas and radon.	Inhalation	Future workers	Low

Coal Mining	Ground movement	Settlement of building structures	Low
UXO	Direct contact	Construction workers	Low

Risk Rating (probability versus severity)

Negligible	Unlikely to be a source, pathway or receptor and insignificant consequence.
Low	Possible to likely source with insignificant consequence or unlikely to possible source with minor to moderate consequences.
Medium	Certain source with insignificant consequence to unlikely source with major consequence.
High	Likely to certain source and minor to moderate consequence or likely source with moderate to high consequence
Very High	Certain source with major consequence.

Potential hazards where the risk is rated negligible or low require no further action. However, where risks are rated as moderate or higher, further assessment is required. From the qualitative risk assessment above, overall contamination risks are considered to be low with a moderate risk identified to construction workers from possible Made Ground associated with the demolished barns to the centre of the site and persistent chemicals from the sheep wash. A ground investigation is recommended to quantify potential contamination risks in these locations.

4 Geotechnical Considerations

It is anticipated that the site in underlain by weathered mudstone of the Halesowen Formation, with sandstone outcropping in the very southwest of the site. Depending on the loads conventional foundations are considered feasible. A ground investigation should be carried out to confirm the bearing pressures.

The soils underlying the site may be aggressive to concrete and therefore sulphate tests should be carried out to similar depths of any proposed concrete.

The underlying soils are likely to be cohesive and therefore soakaways may not be viable at the site. There is also a high surface water flooding risk to the south of the site which should be accounted for in the development design.

Major utilities cross the site including an oil pipeline with a 3m easement zone required and a gas main with a 12.2m easement zone. A utility survey to record the exact location of services is recommended to mitigate any risks of striking services.

5 Conclusions and Recommendations

No significant contamination risks are anticipated, however, there is potential for Made Ground to be present associated with the historic barns to the centre of the site and potential contamination from the sheep wash towards the south of the site.

No significant geotechnical risks have been identified. The risk of settlement caused by coal mining is considered to be negligible. There are known utilities crossing the site and there is a surface water flood risk identified in the south of the site which should be taken into account in the design of any development on site. Flood risk assessment is not within the scope of this report.

A ground investigation is recommended to determine the ground conditions at the site. This will allow assessment of the risks to human health and controlled water receptors and geotechnical considerations.

6 References

- BGS Sheet 1:50000 scale Sheet 123 Stoke.
- Ordnance Survey mapping. https://www.bing.com/maps
- The Coal Authority interactive map. http://mapapps2.bgs.ac.uk/coalauthority/home.html
- Government flood risk map. https://flood-warning-information.service.gov.uk/long-term-flood-risk/map
- Public Health England radon risk map. https://www.ukradon.org/information/ukmaps
- DEFRA MAGIC map. https://magic.defra.gov.uk/
- Zetica UXO risk map. https://zeticauxo.com/downloads-and-resources/risk-maps/
- Contaminated Land Report 11 (CLR11). Model Procedures for the Management of Land Contamination. DEFRA/EA. September 2004.
- CIRIA, 2014. Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks. 2014
- BRE Special Digest 1 (SD1). Concrete in Aggressive Ground. Building Research Establishment 2005.
- BRE365: 1991 revised 2003. Soakaway Design. BRE Digest.
- BS 10175:2011. Investigation of Potentially Contaminated Sites – Code of Practice. British Standards Institution (BSI). 2011.
- C552. Contaminated Land Risk Assessment – A Guide to Good Practice. CIRIA, London. 2001.
- C665. Assessing risks posed by hazardous ground gases to buildings. CIRIA, London. 2007.
- Guidance within Waste Sampling and Testing for Disposal to Landfill. Environment Agency. 2013.
- The LQM/CIEH S4ULS for Human Health Risk Assessment. Land Quality Press. 2015.
- SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document. DEFRA. December 2014.
- United Kingdom Water Industry Research (UKWIR) Report 'Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites' 2011. Waste (England and Wales) Regulations. 2014.

Appendix A

Drawings

30m LANDSCAPE ZONE

10m LANDSCAPE ZONE

PLOT A
DEVELOPABLE AREA
49.49 acres / 20.03 Ha

PLOT B
DEVELOPABLE AREA
5.54 acres / 2.24 Ha

ATTENUATION POND

30m LANDSCAPE ZONE

30m LANDSCAPE ZONE

SITE ACCESS
TO S.E. DETAILS

12.2m Easement

Notes:

Please note Title Plans have been scaled using Ordnance Survey features which may have altered over time. Complete accuracy cannot be guaranteed without further on-site survey.

Any dimensions given are to be confirmed with site measure.

NB.
- **SUBJECT TO SURVEYS, CONSTRAINTS & PLANNING.**
- **RED LINE INDICATIVE ONLY.**

0m 20m 40m 60m 80m

North

RED LINE BOUNDARY
79.92 acres / 32.34 Ha

Rev	Revision Description	Date	Author/ Reviewer
P1	First Issue	11/08/20	MB/NH

PRELIMINARY

32 Frederick Street,
Birmingham, B1 3HH
+44 (0)121 234 7500
www.chetwoods.com

Project
LAND WEST OF J10, M42

Client
HODGETTS ESTATES

Drawing Title
DEVELOPMENT PLAN

Scale	Size	Drawn	Checked	Date
1:1500	A1	MB	NH	11/08/2020

Project	Originator	Zone	Level	Type	Role	Number	Rev.
4263	CA	00	00	DR	A	00067	P1

North

Legend

- Soft Landscaping / Planting zone
- Gas main with inner consultation zone to either side
- Gas main with 12.2m easement zone to either side
- Oil pipeline with 3m easement zone to either side

1 Site Location Plan

1 : 2500

0 20m 50m 100m
1:2500

Rev	Revision Description	Date	Author/ Reviewer
[redacted]			

32 Frederick Street,
Birmingham, B1 3HH

+44 (0)121 234 7500
www.chetwoods.com

Project
Land near Birch Coppice, Dordon

Client
Hodgetts Estates

Drawing Title
SITE LOCATION PLAN

Scale	Size	Drawn	Checked	Date
1 : 2500	A1	GP	NH	18 Oct 19

Project	Originator	Zone	Level	Type	Role	Number	Rev.
4695	CHT	00	00	DR	A	01050	

Groundsure
LOCATION INTELLIGENCE

CON29M OFFICIAL COAL MINING SEARCH

The Law Society

TRINITY ROAD, DORDON, B78 1TB

Professional opinion

Inc. Mine Entry Interpretive Report (MEIR)

PASS

Site plan

Search results

1. Past underground coal mining
Identified page 4

2. Present underground coal mining
Not identified

3. Future underground coal mining
Not identified

4. Shafts and adits (mine entries)
Not identified

5. Coal mining geology
Not identified

6. Past opencast coal mining
Not identified

7. Present opencast coal mining
Not identified

8. Future opencast coal mining
Not identified

9. Coal mining subsidence claims
Not identified

10. Mine gas emissions
Not identified

11. Emergency Call Out incidents
Not identified

12. Withdrawal of support
Identified page 7

13. Working facilities orders
Not identified

14. Payments to copyhold owners
Not identified

Cheshire Brine
Not identified

Coal mining (CON29M) assessment

We consider the property to be acceptably free from coal mining related risk. No further action is required with regards to past coal mining.

Coal mining

Coal Mining Subsidence Act 1991

If any coal mining subsidence damage has occurred, as determined by the appropriate persons/bodies, the property will benefit from the protection of the Coal Mining Subsidence Acts of 1991 and as amended 1994.

This Act, however, does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester. In this instance it would be prudent to have the property visually inspected for signs of mining related settlement or subsidence by a suitably qualified and experienced person, who could be sought through https://www.ricsfirms.com/.

The Coal Authority provide a call out service on 01623 646 333 to take remedial action concerning the movement or collapse of any coal entries or coal mining surface hazards. Further details can be found on www.groundstability.com.

CON29M reports are a requirement for conveyancing and are recommended throughout the official Coal Mining Reporting Area. This is the area within which it is deemed prudent to clarify the risk presented by coal mining, using the questions laid out in the Law Society's CON29M form. The need for a CON29M does not always translate to an identification of risk, and reports will often be assessed as free from risk or 'Passed' even though they are within the official Coal Mining Reporting Area.

This report provides an overall assessment on risk to property from coal mining hazards alongside responses to The Law Society CON29M Coal Mining search enquiries. The CON29M questions and format are used here with permission of The Law Society, and the report is prepared in accordance with The Law Society CON29M (2018) Guidance Notes. The overall assessment and individual question responses have been produced using official Coal Authority data and the expert interpretation of Groundsure and Mining Searches UK.

Coal mining (CON29M)

Site Outline

Search buffers in metres (m)

Mine entries

- Adits
- Shafts
- Calculated 'zone of influence'

Subsidence claims

- Awaiting decision
- Rejected
- Admitted
- Deferred
- Settled
- Withdrawn

- Probable shallow coal mine workings
- Coal outcrops
- Past shallow coal mine workings

The map above shows relevant, mappable hazards identified that could constitute a risk to the property. It does not necessarily show all features or potential issues identified in this report.

Please read this report carefully, and in particular any sections flagged with an amber 'i'.

Further details of any features shown indicating the location of Mine Entries or Subsidence Claims can be found in the relevant sections of this report (4 and 9 respectively).

The following are responses to The Law Society CON29M Coal Mining search enquiries, which are used here with their permission. All responses have been produced using official Coal Authority data and the expert interpretation of Groundsure and Mining Searches UK. This report is prepared in accordance with The Law Society CON29M (2018) Guidance Notes. Additional interpretation and calculation of mine entry zones of influence has been carried out by Groundsure and Mining Searches UK using Coal Authority and British Geological Survey data.

1. Past underground coal mining

Is the property within the zone of likely physical influence on the surface of past underground coal workings?

- **The property lies within the potential zone of influence of recorded workings in 7 seam(s) of coal. The most recent underground working in the area was in 1961. These workings lie between 60 metres and 200 metres. Any ground movement due to this coal mining activity should have stopped.**

2. Present underground coal mining

Is the property within the zone of likely physical influence on the surface of present underground coal workings?

- **The property does not lie within the boundary of an underground site from which coal is being removed by underground methods.**

3. Future underground coal mining

(a) Is the property within any geographical area for which the Coal Authority is determining whether to grant a licence to remove coal by underground methods?

- **The property does not lie within the boundary of an underground site for which the Coal Authority is determining whether to grant a licence to remove coal by underground methods.**

(b) Is the property within any geographical area for which a licence to remove coal by underground methods has been granted?

- **The property does not lie within the boundary of an underground site for which a licence to remove coal by underground methods has been granted.**

(c) Is the property within the zone of likely physical influence on the surface of planned future underground coal workings?

- **The property does not lie within the zone of likely physical influence on the surface of planned future underground workings.**

(d) Has any notice of proposals relating to underground coal mining operations been given under section 46 of the Coal Mining Subsidence Act 1991?

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

4. Shafts and adits (mine entries)

Are there any shafts and adits or other entries to underground coal mine workings within the property or within 20 metres of the boundary of the property?

- **No coal mine entries are recorded to lie within 20 metres of the property.**

5. Coal mining geology

Is there any record of any fault or other line of weakness due to coal mining at the surface within the boundary of the property that has made the property unstable?

- **No damage arising from geological faults or other lines of weakness activated by coal mining are recorded within the property.**

6. Past opencast coal mining

Is the property situated within the geographical boundary of an opencast site from which coal has been removed in the past by opencast methods?

- **The property does not lie within the boundary of an opencast site from which coal was removed by opencast methods.**

7. Present opencast coal mining

Is the property within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods?

- **The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.**

8. Future opencast coal mining

(a) Is the property within 800 metres of the boundary of an opencast site for which the Coal Authority are determining whether to grant a licence to remove coal by opencast methods?

- **The property does not lie within 800 metres of the boundary of an opencast site for which the Coal Authority are determining whether to grant a licence to remove coal by opencast methods.**

(b) Is the property within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted?

- **The property does not lie within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.**

9. Coal mining subsidence claims

(a) Has any damage notice or claim for alleged coal mining subsidence damage to the property been given, made or pursued since 31st October 1994?

- **We have no evidence of a damage notice or subsidence claim for the property or within 50m of the property since 31st October 1994.**

(b) In respect of any such notice or claim has the responsible person given notice agreeing that there is a remedial obligation or otherwise accepted that a claim would lie against them?

- **Not applicable.**

(c) In respect of any such notice or acceptance has the remedial obligation or claim been discharged?

- **Not applicable.**

(d) Does any current "Stop Notice" delaying the start of remedial works or repairs affect the property?

- **There are no current Stop Notices delaying the start of remedial works or repairs to the property.**

(e) Has any request been made under Section 33 of the 1991 Act to execute preventive works before coal is worked, which would prevent the occurrence or reduce the extent of subsidence damage to any buildings, structures or works and, if yes, has any person withheld consent or failed to comply with any such request to execute preventive works?

- **There is no record of a request that has been made to carry out preventive works before coal is worked under Section 33 of the Coal Mining Subsidence Act 1991.**

NB. Records of damage notices or subsidence claims before 31st October 1994 are excluded from The Coal Authority data from which this search is compiled.

10. Mine gas emissions

Does the Coal Authority have record of any mine gas emission within the boundary of the property being reported that subsequently required action by the Authority to mitigate the effects of the mine gas emission?

- **No mine gas emissions are recorded within the boundary of the property.**

11. Emergency Surface Hazard Call Out incidents

Have the Coal Authority carried out any work on or within the boundaries of the property following a report of an alleged hazard related to coal mining under the Authority's Emergency Surface Hazard Call Out procedures?

- **No Emergency Surface Hazard Call Out procedures are recorded against the property.**

12. Withdrawal of support

(a) Does the land lie within a geographical area in respect of which a notice of entitlement to withdraw support has been published?

- **The property lies within an area where a notice of entitlement to withdraw support has been published. This notice was issued in 1946.**

(b) Does the land lie within a geographical area in respect of which a revocation notice has been given under section 41 of the Coal Industry Act 1994?

- **The property does not lie within a geographical area in which a revocation notice has been given under section 41 of the Coal Industry Act 1994.**

13. Working facilities orders

Is the property within a geographical area subject to an order in respect of the working of coal under the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof?

- **The property is not in an area where a court order has been issued.**

14. Payments to owners of former copyhold land

(a) Has any relevant notice, which may affect the property, been given?

- **The property does not lie within former copyholder land.**

(b) If yes, has any notice of retained interests in coal and coal mines been given?

- **No notices of retained interests in coal and coal mines been given.**

(c) If yes, has any acceptance notice or rejection notice been served?

- **No acceptance or rejection notices have been served.**

(d) If any such acceptance notice has been served, has any compensation been paid to a claimant?

- **No compensation has been paid to a claimant.**

CON29M notes and guidance

These enquiries are The Law Society CON29M (2018) Coal Mining search enquiries and are used with permission of The Law Society. The Law Society CON29M Coal Mining search enquiries are protected by copyright owned by The Law Society of 113 Chancery Lane, London WC2A 1PL. The Law Society has no responsibility for information provided in response to CON29M (2018) Coal Mining search enquiries within this report or otherwise.

This report is prepared in accordance with The Law Society Guidance Notes 2018; under which all replies to these enquiries are made. Groundsure's Terms and Conditions are applicable at the time the report was produced.

Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by telephoning 0345 762 6848. Further information can be found on their website: www.groundstability.com.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries).

The Coal Authority emergency telephone number at all times is 01623 646333.

Responses to The Law Society CON29M (2018) Coal Mining Search enquiries and associated findings and recommendations relating to coal mining risk have been provided to Groundsure Ltd by Cornwall Mining Searches Limited T/A Mining Searches UK. Groundsure Ltd have additionally provided information relating to the Cheshire Brine Compensation Area, and have compiled all information into this report.

Queries should be made of Groundsure Ltd on 0844 415 9000, or via email: info@groundsure.com.

CON29M report limitations

This CON29M (2018) Coal Mining Report has been carried out with reference to all available official Coal Authority licensed data, an extensive collection of abandoned mine plans, maps and records. From this material, we have endeavoured to provide as accurate a report as possible. Any and all analysis and interpretation of licensed Coal Authority data in this report is made by Cornwall Mining Services Limited T/A Mining Searches UK.

The information provided in this report by Groundsure Ltd / Cornwall Mining Services Limited T/A Mining Searches UK has been compiled in response to The Law Society CON29M (2018) Coal Mining search enquiries. The scope of the assessment is limited to interpretation of past, present and future extraction of coal, and does not consider the impact from non-coal mining hazards and/or natural ground stability hazards. The Law Society's Guidance Notes 2018 recommends separate enquiries to the appropriate sources are made with regard to other minerals.

The Report is created by a remote investigation and reviews only information provided by the client (address and site location boundaries) and from the databases of publicly available and/or licensable information that

enable a desk-based assessment of the Site. The Report does not include a Site Investigation, nor does Groundsure Ltd / Cornwall Mining Services Limited T/A Mining Searches UK make additional specific information requests of the regulatory authorities for any relevant information they may hold.

This report is concerned solely with the Site searched and should not be used in connection with nearby properties, as only known coal mining features that could potentially have a direct influence upon the Site searched are considered relevant; other features present in the general area may have been omitted for ease of reference.

This report is confidential to the client, the client's legal advisor and the client's Mortgage lender, as defined in the Groundsure terms & conditions, and as such may be used by them for conveyancing or related purposes. Groundsure has no liability toward any person or organisation not party to commissioning this report. This report or any part of it is not permitted to be reproduced, copied, altered or in any other way distributed by any other person or organisation.

Additional mine entry assessment is based on and limited to the data supplied by the Coal Authority at the time of production. In order to determine whether a property is within the likely zone of influence of a disused coal mine entry the following is considered: the actual or plotted position of the mine entry, its known or assumed diameter and the thickness of superficial deposits above rockhead. Where these figures are not known, assumptions based on established estimations have been made.

CON29M report licensing

This report contains Data provided by the Coal Authority. Any and all analysis and interpretation of Coal Authority Data in this report is made by Cornwall Mining Services Limited T/A Mining Searches UK and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure Ltd / Cornwall Mining Services Limited T/A Mining Searches UK prior to any re-use.

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This report may contain plans and records held by the Coal Authority and made publicly available at the time of inspection which may include British Geological Survey and Ordnance Survey data.

Conveyancing Information Executive and our terms & conditions

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Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs.

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- acknowledge it within 5 working days of receipt
- normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:
Operations Director, Groundsure Ltd, Sovereign House, Church Street, Brighton, BN1 1UJ. Tel: 08444 159 000. Email: info@groundsure.com If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk We will co-operate fully with the Ombudsman during an investigation and comply with their final decision.

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Coal Mining Report Insurance Policy

ZURICH

Coal Mining Report Insurance Policy

The Schedule

Policy Number: The Reference contained in the **Coal Mining Search Report**

Premium: £1.40 inclusive of Insurance Premium Tax at 12%

Property: The property which is the subject of the **Coal Mining Search Report**

Limit of Indemnity: £100,000 increasing by 10% compound per annum on each anniversary of and for the first 10 years following the **Commencement Date**

Commencement Date: The date of the **Coal Mining Search Report**

You/Your:
1. A purchaser of the **Property**
2. A lender providing a **Mortgage** in connection with a purchase of the **Property**
3. A lender providing a **Mortgage** by way of a re-mortgage of the **Property**

Definitions

Where a word is defined below or in the schedule it shall carry the same meaning wherever it appears in bold text in this policy

Insured Use: The continued use of the **Property** as a single house or flat or a single commercial premises

Market Value: The value as determined by a surveyor appointed by agreement between **You** and **Us** or (in default of agreement) the President for the time being of the Royal Institution of Chartered Surveyors

Mortgage: A mortgage or charge secured on the **Property** by an institutional mortgage lender

Coal Mining Search Report: The coal mining search report attached to this policy

Search: An official search comprising a search in form CON29M (2018) being mining searches relating to coal and brine in the area in which the **Property** is situated

We/Our/Us:
Zurich Insurance plc. A public limited company incorporated in Ireland. Registration No. 13460. Registered Office: Zurich House, Ballsbridge Park, Dublin 4, Ireland. UK Branch registered in England and Wales Registration No. BR7985. UK Branch Head Office: The Zurich Centre, 3000 Parkway, Whiteley, Fareham, Hampshire PO15 7JZ.

Zurich Insurance plc is authorised by the Central Bank of Ireland and authorised and subject to limited regulation by the Financial Conduct Authority. Details about the extent of our authorisation by the Financial Conduct Authority are available from us on request. Our FCA Firm Reference Number is 203093.

Communications may be monitored or recorded to improve our service and for security and regulatory purposes.

Your Policy

This is a legal document and should be kept in a safe place.

This policy is an agreement between **You** and **Us** and cover is provided subject to the payment of the **Premium**.

You must read this policy and its conditions, exclusions, schedule and any endorsements as one contract. Please read all of them to make sure that they provide the cover **You** require. If they do not, please contact **Us** or **Your** insurance adviser who arranged the policy for **You**.

When **You** take out and make changes to the cover provided by this policy, **You** must take reasonable care to ensure that **You** accurately answer any questions which **We** ask of **You** and that any information **You** give **Us** is accurate. If **You** are taking out this policy for purposes which are mainly related to **Your** trade, business or profession, **You** must also let **Us** know about all facts which are material to **Our** decision to provide **You** with insurance. Failure to meet these obligations could result in this policy being invalidated, a claim not being paid, or an additional premium being charged.

Fair presentation of the risk

a) At inception of this policy and also whenever changes are made to it at **Your** request You must:

i) where **You** have taken out this policy for purposes which are wholly or mainly related to **Your** trade, business or profession, disclose to **Us** all material facts in a clear and accessible manner and not misrepresent any material facts, and
ii) where **You** have taken out this policy for purposes which are wholly or mainly unrelated to **Your** trade, business or profession, take reasonable care not to misrepresent any material facts.

b) If **You** do not comply with clause a) of this condition **We** may:

i) avoid this policy which means that **We** will treat it as if it had never existed and refuse all claims where any non-disclosure or misrepresentation by **You** is proven by **Us** to be deliberate or reckless in which case **We** will not return the premium paid by **You**; and
ii) recover from **You** any amount **We** have already paid for any claims including costs or expenses **We** have incurred.

c) If You do not comply with clause a) of this condition and the non-disclosure or misrepresentation is not deliberate or reckless this policy may be affected in one or more of the following ways depending on what **We** would have done if **We** had known about the facts which **You** failed to disclose or misrepresented:

i) if **We** would not have provided **You** with any cover **We** will have the option to:
1. avoid the policy which means that **We** will treat it as if it had never existed and repay the premium paid; and
2. recover from **You** any amount **We** have already paid for any claims including costs or expenses **We** have incurred
ii) if **We** would have applied different terms to the cover **We** will have the option to treat this policy as if those different terms apply. **We** may recover any payments made by **Us** on claims which have already been paid to the extent that such claims would not have been payable had such additional terms been applied
iii) if **We** would have charged **You** a higher premium for providing the cover **We** will charge **You** the additional premium which **You** must pay in full.

d) If any insured person, other than **You**, is responsible for a misrepresentation or failure to make a fair presentation of the risk, **We** will invoke the remedies available to **Us** under this condition as against that particular person as if a separate insurance contract had been issued to them leaving the remainder of the policy unaffected.

NB: For the purposes of the duty of disclosure stated in paragraphs a) i) and ii) above the content of the **Coal Mining Search Report** will be deemed to satisfy **Your** disclosure obligations.

Cover

1. **You** are in the process of purchasing the **Property** relying on the **Coal Mining Search Report** and/or
2. **You** (being a lender) have agreed to provide a **Mortgage** in connection with **Your** borrower's purchase or re-mortgage of the **Property** relying on the **Coal Mining Search Report**.

We will pay the following losses sustained by **You** arising out of the **Property** being affected by any matter which would have been revealed by a **Search** had one been carried out on the date of the **Coal Mining Search Report** but which was not revealed by the **Coal Mining Search Report**:

1. any reduction in **Market Value** of the **Property** calculated at the date **You** become aware of the matter(s) and/or loss in connection with a **Mortgage** as a result of such reduction.
2. all other costs and expenses including out of court settlement costs incurred by **Us** or by **You** with **Our** prior written agreement.

Waiver of Breach of Policy Condition

We will not exercise **Our** right to avoid **Our** liability to **You** in respect of loss where **You** have inadvertently breached any term or condition of the policy provided that such breach does not prejudice **Our** rights and remedies under the policy or otherwise directly or indirectly result in or increase the amount of any loss.

Protection for Mortgagees and Successors in Title

We will not avoid **Our** liability to make a payment to **You** solely because another person breaches the terms and conditions of this policy, provided such breach was not committed on **Your** behalf or with **Your** agreement, and **We** will invoke the remedies available to **Us** under the Policy as against that other person as if a separate insurance contract had been issued to them leaving the remainder of the policy unaffected.

Joint Insured

Any party insured under this policy standing in the relation of parent company, subsidiary company, associated company, branch office or joint venture partner to each other will be deemed to be joint insured for the purposes of this policy and jointly liable and responsible for any breach of any terms and conditions of this policy. If there is any inconsistency between this clause and any other term of this policy, this clause shall prevail.

Exclusions

We will not pay for any:

1. amount in excess of the **Limit of Indemnity**.
2. loss which would be recoverable under a household buildings insurance policy.
3. loss arising from any matter that **You** were aware of at the **Commencement Date**.
4. loss if the **Property** is used for any purpose other than the **Insured Use**.

Claims Conditions and How to Claim

1. **You** must:

i) give **Us** written notice as soon as possible of any potential or actual claim or any circumstances likely to result in a claim. Please provide the policy number, **Your** name, the full address of the **Property** and a brief description of the incident that has occurred. Notifications should be sent to: Speciality Lines Claims Team, Zurich Insurance, 8th Floor, 70 Mark Lane, London, EC3R 7NQ. Email: claims@uk.zurich.com, Enquiry line: telephone 0207 648 3523
ii) pass all court documents and/or other communications to **Us** as soon as possible after receipt
iii) not deal with, make any admission of liability or attempt to settle a claim without **Our** prior written agreement.
iv) agree to and carry out at **Our** expense all things necessary to minimise any loss.
v) provide all information and assistance that **We** may require to help defend and settle the claim.

2. **We** are entitled to:

i) decide how to settle or defend a claim and may carry out proceedings in the name of any person insured under this policy, including proceedings for recovering any claim.
ii) pay to **You** at any time, an amount equal to the **Limit of Indemnity** or any lower amount for which the claim can be settled, after deduction of any sum already paid. **We** may then give up control of and have no further liability in connection with the claim.

3. If **We** admit liability for a claim but there is a dispute as to the amount to be paid the dispute will be referred to an arbitrator. The arbitrator will be appointed jointly by **You** and **Us** in accordance with the law at the time. **You** may not take any legal action against **Us** over the dispute before the arbitrator has reached a decision.

4. If **You** or anyone acting on Your behalf:

a) makes a fraudulent or exaggerated claim under this policy; or
b) uses fraudulent means or devices including the submission of false or forged documents in support of a claim whether or not the claim is itself genuine; or
c) makes a false statement in support of a claim whether or not the claim is itself genuine; or
d) submits a claim under this policy for loss or damage which **You** or anyone acting on **Your** behalf or in connivance with **You** deliberately caused; or
e) realises after submitting what **You** reasonably believed was a genuine claim under this policy and then fails to tell **Us** that **You** have not suffered any loss or damage; or
f) suppresses information which **You** know would otherwise enable **Us** to refuse to pay a claim under this policy

We will be entitled to refuse to pay the whole of the claim and recover any sums that **We** have already paid in respect of the claim.

If any fraud is perpetrated by or on behalf of an insured person and not on behalf of **You** this condition should be read as if it applies only to that insured person's claim and references to this policy should be read as if they were references to the cover effected for that person alone and not to the policy as a whole.

5. If any claim is covered by any other insurance, **We** will not pay for more than **Our** share of that claim.

6. The most **We** will pay for any loss (or all losses in the aggregate), including costs and expenses agreed by **Us** is the **Limit of Indemnity**. Once **We** have paid a loss or losses equal to the amount of the **Limit of Indemnity, We** will have no further liability under this policy.

General Conditions

1. Neither **You** (nor anyone acting on **Your** behalf) must disclose the existence of this policy to any other party except **Your** legal and other professional advisers, prospective purchasers, lessees and tenants of the **Property**, their respective mortgagees, legal and other professional advisers.

2. In the UK the law allows both **You** and **Us** to choose the law applicable to the contract. This contract will be subject to the relevant law of England and Wales, Scotland, Northern Ireland, the Isle of Man or the Channel Islands depending upon the Property address stated in the Schedule. If there is any dispute as to which law applies it will be English law. The parties agree to submit to the exclusive jurisdiction of the English courts.

3. Notwithstanding any other terms of this policy **We** will be deemed not to provide cover nor will **We** make any payment or provide any service or benefit to **You** or any other party to the extent that such cover, payment, service, benefit and/or any business or activity of **Yours** would violate any applicable trade or economic sanctions law or regulation.

Cancellation Clause

If **You** have taken out this policy for purposes which are wholly or mainly unrelated to **Your** trade, business or profession, **You** may cancel this policy within 14 days of receiving the policy by writing to **Us** and in such event **We** may, at **Our** discretion, charge **You** for the time that **You** have been on cover. Any refund will be made to the party who paid the premium. If **You** do cancel, **You** may be in breach of the terms of **Your** mortgage or the terms of the contract for the sale of **Your** property. If **You** are in doubt, **You** may wish to seek legal advice prior to cancellation.

Fair Processing and Complaints Procedure
Our Complaints Procedure

Our commitment to customer service

We are committed to providing a high level of customer service. If you feel we have not delivered this, we would welcome the opportunity to put things right for you.

Who to contact in the first instance

Many concerns can be resolved straight away. Therefore in the first instance, please get in touch with your usual contact at Zurich or your broker or insurance intermediary, as they will generally be able to provide you with a prompt response to your satisfaction.

Contact details will be provided on correspondence that we or our representatives have sent you.

Many complaints can be resolved within a few days of receipt

If we can resolve your complaint to your satisfaction within the first few days of receipt, we will do so. Otherwise, we will keep you updated with progress and will provide you with our decision as quickly as possible.

Next steps if you are still unhappy

If you are not happy with the outcome of your complaint, you may be able to ask the Financial Ombudsman Service to review your case.

We will let you know if we believe the ombudsman service can consider your complaint when we provide you with our decision. The service they provide is free and impartial, but you would need to contact them within 6 months of the date of our decision.

More information about the ombudsman and the type of complaints they can review is available via their website www.financial-ombudsman.org.uk.

You can also contact them as follows:

Post: Financial Ombudsman Service, Exchange Tower, London, E14 9SR
Telephone: 08000 234567 (free on mobile phones and landlines)
Email: complaint.info@financial-ombudsman.org.uk

If the Financial Ombudsman Service is unable to consider your complaint, you may wish to obtain advice from the Citizens Advice Bureau or seek legal advice.

The Financial Services Compensation Scheme (FSCS)

We are covered by the Financial Services Compensation Scheme (FSCS) which means that you may be entitled to compensation if we are unable to meet our obligations to you. Further information is available on www.fscs.org.uk or by contacting the FSCS directly on 0800 678 1100.

How we use your information

Who controls your personal information

This notice tells you how Zurich Insurance plc ('Zurich'), as data controller, will deal with your personal information. Where Zurich introduces you to a company outside the group, that company will tell you how your personal information will be used.

You can ask for further information about our use of your personal information or complain about its use in the first instance, by contacting our Data Protection Officer at: Zurich Insurance Group, Tri-centre 1, Newbridge Square, Swindon, SN1 1HN or by emailing the Data Protection Officer at GBZ.General.Data.Protection@uk.zurich.com.

If you have any concerns regarding our processing of your personal information, or are not satisfied with our handling of any request by you in relation to your rights, you also have the right to make a complaint to the Information Commissioner's Office. Their address is: First Contact Team, Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, SK9 5AF.

What personal information we collect about you

We will collect and process the personal information that you give us by phone, e-mail, filling in forms, including on our website, and when you report a problem with our website. We also collect personal information from your appointed agent such as your trustee, broker, intermediary or financial adviser in order to provide you with the services you have requested and from other sources, such as credit reference agencies and other insurance companies, for verification purposes. We will also collect information you have volunteered to be in the public domain and other industry-wide sources. We will only collect personal information that we require to fulfil our contractual or legal requirements unless you consent to provide additional information. The type of personal information we will collect includes; basic personal information (i.e. name, address and date of birth), occupation and financial details, health and family information, claims and convictions information and where you have requested other individuals be included in the arrangement, personal information about those individuals.

If you give us personal information on other individuals, this will be used to provide you with a quotation and/or contract of insurance and/or provision of financial services. You agree you have their permission to do so. Except where you are managing the contract on another's behalf, please ensure that the individual knows how their personal information will be used by Zurich. More information about this can be found in the 'How we use your personal information' section.

How we use your personal information

We and our selected third parties will only collect and use your personal information (i) where the processing is necessary in connection with providing you with a quotation and/or contract of insurance and/or provision of financial services that you have requested; (ii) to meet our legal or regulatory obligations; or (iii) for our 'legitimate interests'. It is in our legitimate interests to collect your personal information as it provides us with the information that we need to provide our services to you more effectively

including providing you with information about our products and services. We will always ensure that we keep the amount of information collected and the extent of any processing to the absolute minimum to meet this legitimate interest. Examples of the purposes for which we will collect and use your personal information are:

1. to provide you with a quotation and/or contract of insurance;
2. to identify you when you contact us;
3. to deal with administration and assess claims;
4. to make and receive payments;
5. to obtain feedback on the service we provide to you;
6. to administer our site and for internal operations including troubleshooting, data analysis, testing, research, statistical and survey purposes;
7. for fraud prevention and detection purposes.

We will contact you to obtain consent prior to processing your personal information for any other purpose, including for the purposes of targeted marketing unless we already have consent to do so.

Who we share your personal information with

Where necessary, we will share the personal information you gave us for the purposes of providing you with the goods and services you requested with the types of organisations described below:

associated companies including reinsurers, suppliers and service providers;
introducers and professional advisers;
regulatory and legal bodies;
survey and research organisations;
credit reference agencies;
healthcare professionals, social and welfare organisations; and
other insurance companies

Or, in order to meet our legal or regulatory requirements, with the types of organisations described below:

regulatory and legal bodies;
central government or local councils;
law enforcement bodies, including investigators;
credit reference agencies; and
other insurance companies

How we use your personal information for websites and email communications

When you visit one of our websites we may collect information from you such as your email address or IP address. This helps us to track unique visits and monitor patterns of customer website traffic, such as who visits and why they visit.

We use cookies and/or pixel tags on some pages of our website. A cookie is a small text file sent to your computer. A pixel tag is an invisible tag placed on certain pages of our website but not on your computer. Pixel tags usually work together with cookies to assist us to provide you with a more tailored service. This allows us to monitor and improve our email communications and website. Useful information about cookies, including how to remove them, can be found on our websites.

How we transfer your personal information to other countries

Where we transfer your personal information to countries that are outside of the UK and the European Union (EU) we will ensure that it is protected and that the transfer is lawful. We will do this by ensuring that the personal information is given adequate safeguards by using 'standard contractual clauses' which have been adopted or approved by the UK and the EU, or other solutions that are in line with the requirements of European data protection laws.

A copy of our security measures for personal information transfers can be obtained from our Data Protection Officer at: Zurich Insurance Group, Tri-centre 1, Newbridge Square, Swindon, SN1 1HN, or by emailing the Data Protection Officer at GBZ.General.Data.Protection@uk.zurich.com.

How long we keep your personal information for

We will retain and process your personal information for as long as necessary to meet the purposes for which it was originally collected. These periods of time are subject to legal, tax and regulatory requirements or to enable us to manage our business.

Your data protection rights

You have a number of rights under the data protection laws, namely:

to access your data (by way of a subject access request);
to have your data rectified if it is inaccurate or incomplete;
in certain circumstances, to have your data deleted or removed;
in certain circumstances, to restrict the processing of your data;
a right of data portability, namely to obtain and reuse your data for your own purposes across different services;
to object to direct marketing;
not to be subject to automated decision making (including profiling), where it produces a legal effect or a similarly significant effect on you;
to claim compensation for damages caused by a breach of the data protection legislation.
if we are processing your personal information with your consent, you have the right to withdraw your consent at any time.

We will, for the purposes of providing you with a contract of insurance, processing claims, reinsurance and targeted marketing, process your personal information by means of automated decision making and profiling where we have a legitimate interest or you have consented to this.

What happens if you fail to provide your personal information to us

If you do not provide us with your personal information, we will not be able to provide you with a contract or assess future claims for the service you have requested.

Fraud prevention and detection

In order to prevent and detect fraud we may at any time:

check your personal data against counter fraud systems
use your information to search against various publicly available and third party resources
use industry fraud tools including undertaking credit searches and to review your claims history
share information about you with other organisations including but not limited to the police, the Insurance Fraud Bureau (IFB), other insurers and other interested parties.

If you provide false or inaccurate information and fraud is identified, the matter will be investigated and appropriate action taken. This may result in your case being referred to the Insurance Fraud Enforcement Department (IFED) or other police forces and fraud prevention agencies. You may face fines or criminal prosecution. In addition, Zurich may register your name on the Insurance Fraud Register, an industry-wide fraud database.

Claims history

We may pass information relating to claims or potential claims to any relevant database. We and other insurers may search these databases when you apply for insurance, when claims or potential claims are notified to us or at time of renewal to validate your claims history or that of any other person or property likely to be involved in the policy or claim.

This helps to check information provided and prevent fraudulent claims.

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

TRINITY ROAD, DORDON, B78 1TB

Order Details

Date: 17/08/2020

Your ref: Jn10_M42

Our Ref: GS-6973303

Client: Ground and Project Consultants Ltd

Site Details

Location: 424850 300921

Area: 32.45 ha

Authority: North Warwickshire Borough Council

Contact us with any questions at:
info@groundsure.com
08444 159 000

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	1	2	2	57	-
16	1.2	Historical tanks	0	0	0	2	-
16	1.3	Historical energy features	0	0	3	5	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	2	3	-
18	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
19	2.1	Historical industrial land uses	1	2	2	84	-
23	2.2	Historical tanks	0	0	0	2	-
23	2.3	Historical energy features	0	0	3	7	-
24	2.4	Historical petrol stations	0	0	0	0	-
24	2.5	Historical garages	0	0	4	4	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
25	3.1	Active or recent landfill	0	0	0	0	-
25	3.2	Historical landfill (BGS records)	0	0	0	0	-
26	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
26	3.4	Historical landfill (EA/NRW records)	0	0	0	1	-
26	3.5	Historical waste sites	0	0	0	0	-
26	3.6	Licensed waste sites	0	0	0	0	-
27	3.7	Waste exemptions	0	0	1	19	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
30	4.1	Recent industrial land uses	0	0	4	-	-
31	4.2	Current or recent petrol stations	0	0	1	1	-
31	4.3	Electricity cables	0	0	0	0	-
31	4.4	Gas pipelines	0	0	0	0	-
32	4.5	Sites determined as Contaminated Land	0	0	0	0	-

32	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
32	4.7	Regulated explosive sites	0	0	0	0	-
32	4.8	Hazardous substance storage/usage	0	0	0	0	-
32	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
33	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
33	**4.11**	**Licensed pollutant release (Part A(2)/B)**	0	0	1	1	-
33	4.12	Radioactive Substance Authorisations	0	0	0	0	-
34	**4.13**	**Licensed Discharges to controlled waters**	0	0	0	6	-
35	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
35	4.15	Pollutant release to public sewer	0	0	0	0	-
35	**4.16**	**List 1 Dangerous Substances**	0	0	0	1	-
35	4.17	List 2 Dangerous Substances	0	0	0	0	-
36	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	0	1	-
36	4.19	Pollution inventory substances	0	0	0	0	-
36	4.20	Pollution inventory waste transfers	0	0	0	0	-
36	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
38	5.1	Superficial aquifer	None (within 500m)				
39	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
41	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
42	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
42	5.5	Groundwater vulnerability- local information	None (within 0m)				
43	**5.6**	**Groundwater abstractions**	0	0	0	0	2
44	**5.7**	**Surface water abstractions**	0	0	0	0	1
45	5.8	Potable abstractions	0	0	0	0	0
45	5.9	Source Protection Zones	0	0	0	0	-
45	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
46	6.1	Water Network (OS MasterMap)	0	0	0	-	-

46	6.2	Surface water features	0	0	0	-	-
47	**6.3**	**WFD Surface water body catchments**	1	-	-	-	-
47	**6.4**	**WFD Surface water bodies**	0	0	0	-	-
48	**6.5**	**WFD Groundwater bodies**	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
49	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
49	7.2	Historical Flood Events	0	0	0	-	-
49	7.3	Flood Defences	0	0	0	-	-
49	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
50	7.5	Flood Storage Areas	0	0	0	-	-
51	7.6	Flood Zone 2	None (within 50m)				
51	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
52	**8.1**	**Surface water flooding**	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding					
54	**9.1**	**Groundwater flooding**	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
55	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
56	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
56	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
56	10.4	Special Protection Areas (SPA)	0	0	0	0	0
56	10.5	National Nature Reserves (NNR)	0	0	0	0	0
57	**10.6**	**Local Nature Reserves (LNR)**	0	0	0	0	6
57	**10.7**	**Designated Ancient Woodland**	0	0	0	0	3
58	10.8	Biosphere Reserves	0	0	0	0	0
58	10.9	Forest Parks	0	0	0	0	0
58	10.10	Marine Conservation Zones	0	0	0	0	0
58	**10.11**	**Green Belt**	0	0	0	0	2
59	10.12	Proposed Ramsar sites	0	0	0	0	0

59	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
59	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
59	10.15	Nitrate Sensitive Areas	0	0	0	0	0
60	**10.16**	**Nitrate Vulnerable Zones**	1	0	0	1	0
61	**10.17**	**SSSI Impact Risk Zones**	3	-	-	-	-
62	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
63	11.1	World Heritage Sites	0	0	0	-	-
63	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
63	11.3	National Parks	0	0	0	-	-
63	11.4	Listed Buildings	0	0	0	-	-
64	11.5	Conservation Areas	0	0	0	-	-
64	11.6	Scheduled Ancient Monuments	0	0	0	-	-
64	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
65	**12.1**	**Agricultural Land Classification**	Grade 3 (within 250m)				
66	12.2	Open Access Land	0	0	0	-	-
66	12.3	Tree Felling Licences	0	0	0	-	-
67	12.4	Environmental Stewardship Schemes	0	0	0	-	-
67	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
68	**13.1**	**Priority Habitat Inventory**	0	1	1	-	-
69	13.2	Habitat Networks	0	0	0	-	-
69	13.3	Open Mosaic Habitat	0	0	0	-	-
69	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
70	**14.1**	**10k Availability**	Identified (within 500m)				
71	**14.2**	**Artificial and made ground (10k)**	0	0	0	3	-
72	14.3	Superficial geology (10k)	0	0	0	0	-

72	14.4	Landslip (10k)	0	0	0	0	-
73	14.5	Bedrock geology (10k)	1	0	2	2	-
74	14.6	Bedrock faults and other linear features (10k)	0	0	1	1	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
75	15.1	50k Availability	Identified (within 500m)				
76	15.2	Artificial and made ground (50k)	2	0	1	7	-
77	15.3	Artificial ground permeability (50k)	0	0	-	-	-
78	15.4	Superficial geology (50k)	0	0	1	0	-
79	15.5	Superficial permeability (50k)	None (within 50m)				
79	15.6	Landslip (50k)	0	0	0	0	-
79	15.7	Landslip permeability (50k)	None (within 50m)				
80	15.8	Bedrock geology (50k)	3	0	10	5	-
81	15.9	Bedrock permeability (50k)	Identified (within 50m)				
82	15.10	Bedrock faults and other linear features (50k)	0	0	3	1	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
83	16.1	BGS Boreholes	0	3	13	-	-
Page	Section	Natural ground subsidence					
85	17.1	Shrink swell clays	Very low (within 50m)				
86	17.2	Running sands	Very low (within 50m)				
88	17.3	Compressible deposits	Very low (within 50m)				
90	17.4	Collapsible deposits	Very low (within 50m)				
91	17.5	Landslides	Low (within 50m)				
93	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
94	18.1	Natural cavities	0	0	0	0	-
95	18.2	BritPits	0	0	1	3	-
95	18.3	Surface ground workings	1	2	2	-	-
96	18.4	Underground workings	0	0	0	19	15
97	18.5	Historical Mineral Planning Areas	0	0	0	1	-

98	**18.6**	**Non-coal mining**	0	0	0	0	1
98	18.7	Mining cavities	0	0	0	0	0
98	**18.8**	**JPB mining areas**	Identified (within 0m)				
99	**18.9**	**Coal mining**	Identified (within 0m)				
99	18.10	Brine areas	None (within 0m)				
99	18.11	Gypsum areas	None (within 0m)				
100	18.12	Tin mining	None (within 0m)				
100	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
101	**19.1**	**Radon**	Less than 1% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
102	**20.1**	**BGS Estimated Background Soil Chemistry**	13	0	-	-	-
103	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
103	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
104	21.1	Underground railways (London)	0	0	0	-	-
104	21.2	Underground railways (Non-London)	0	0	0	-	-
105	21.3	Railway tunnels	0	0	0	-	-
105	21.4	Historical railway and tunnel features	0	0	0	-	-
105	21.5	Royal Mail tunnels	0	0	0	-	-
105	21.6	Historical railways	0	0	0	-	-
105	21.7	Railways	0	0	0	-	-
106	21.8	Crossrail 1	0	0	0	0	-
106	21.9	Crossrail 2	0	0	0	0	-
106	**21.10**	**HS2**	0	0	3	1	-

Recent aerial photograph

Capture Date: 13/09/2019

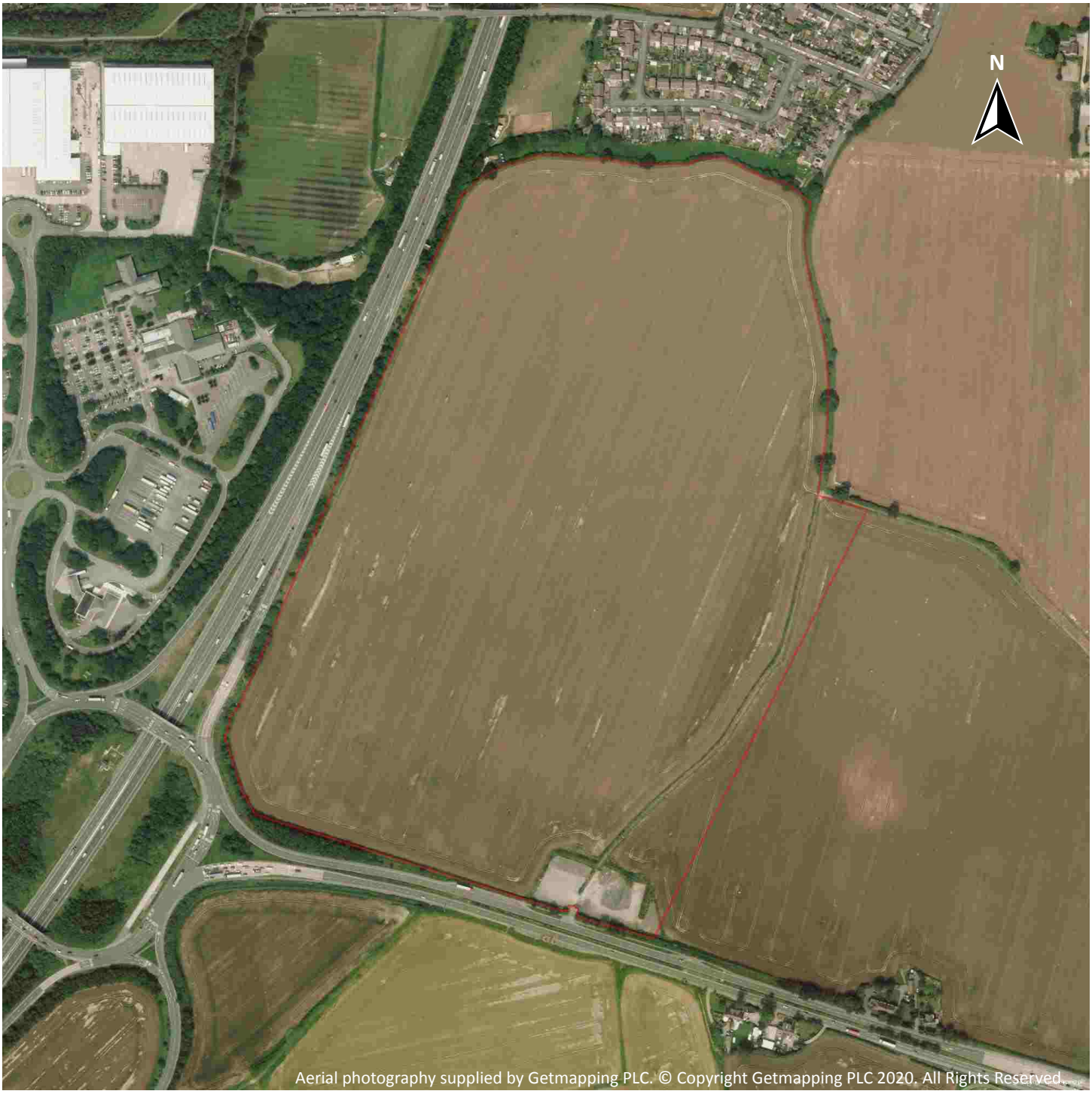
Site Area: 32.45ha

Recent site history - 2018 aerial photograph

Capture Date: 15/07/2018

Site Area: 32.45ha

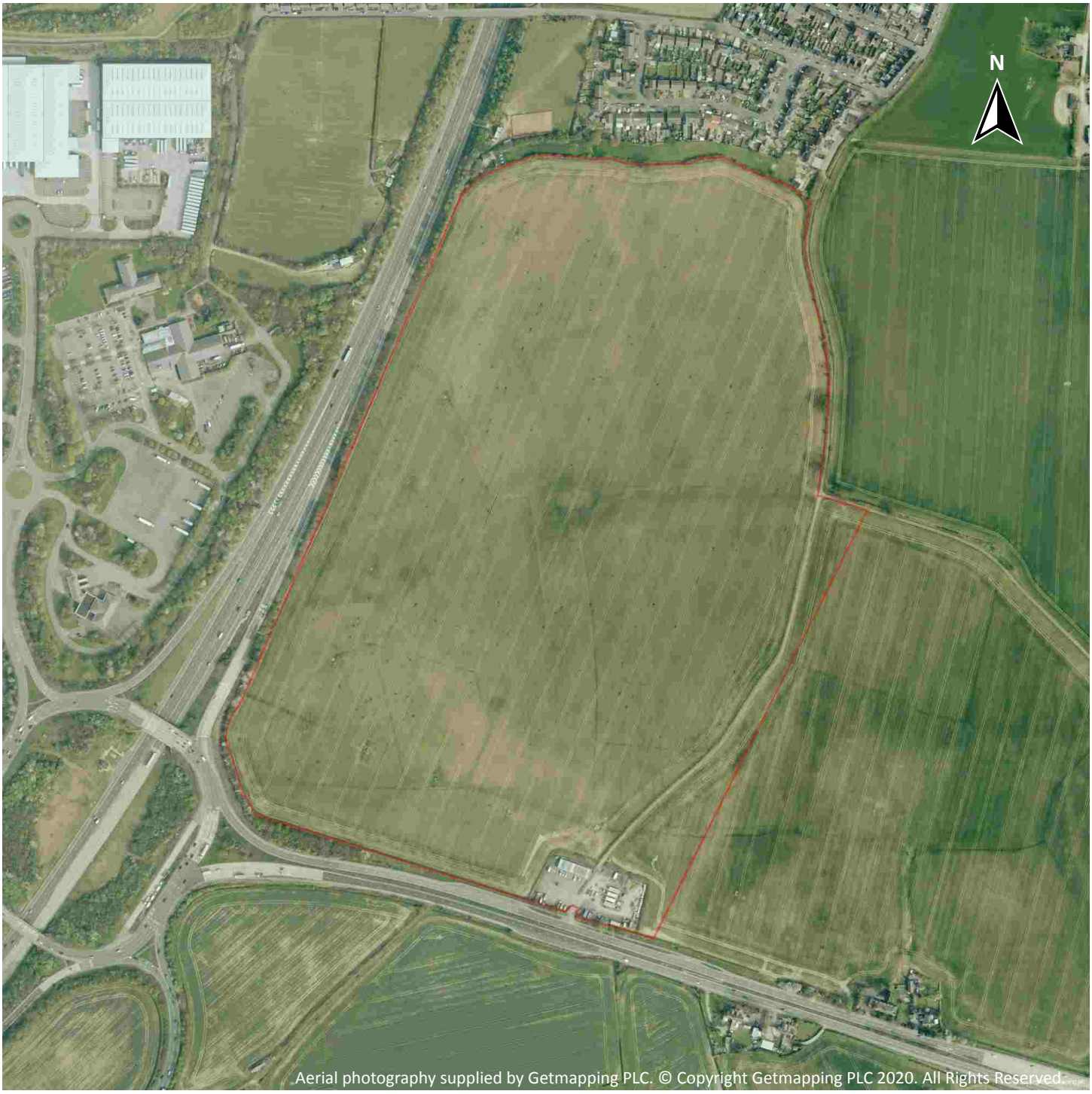
Recent site history - 2012 aerial photograph



Capture Date: 26/07/2012

Site Area: 32.45ha

Recent site history - 2010 aerial photograph



Capture Date: 24/04/2010

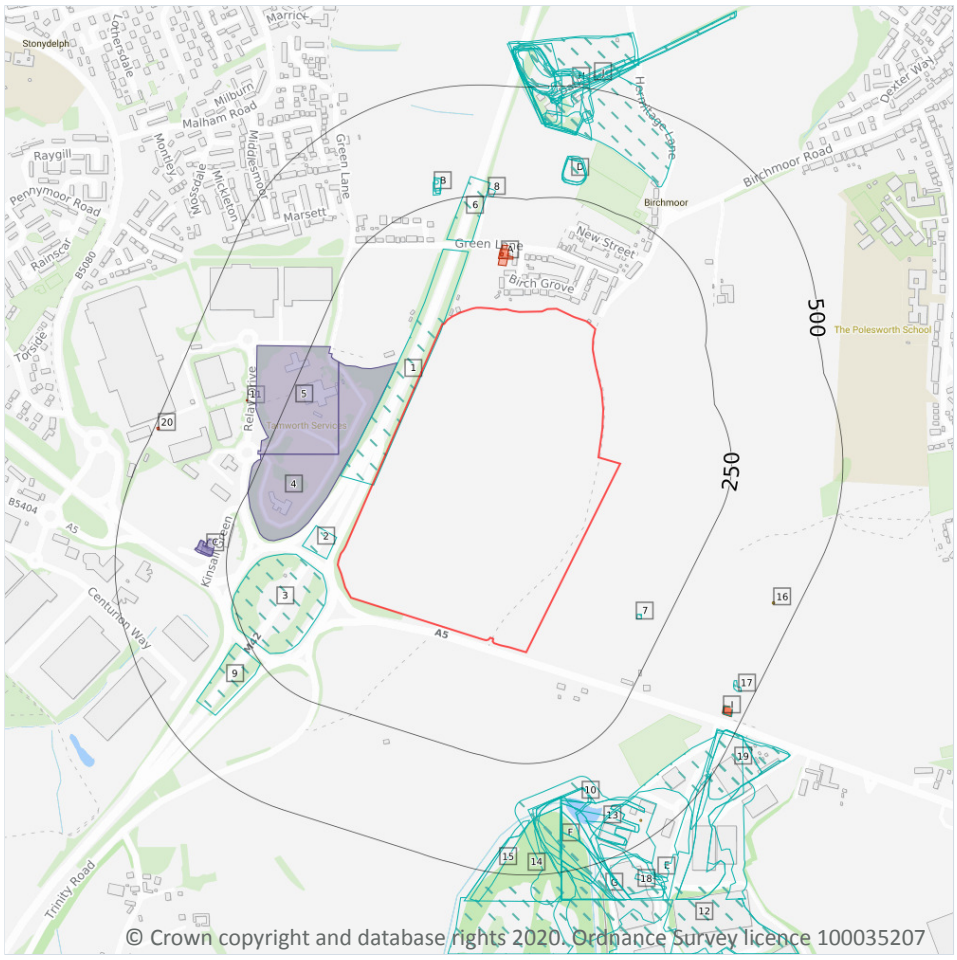
Site Area: 32.45ha

Recent site history - 1999 aerial photograph

Capture Date: 30/07/1999

Site Area: 32.45ha

1 Past land use



1.1 Historical industrial land uses

Records within 500m	62

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**	**Cuttings**	**1988**	**1561343**

ID	Location	Land use	Dates present	Group ID
2	24m NW	Cuttings	1988	1561344
3	40m W	Cuttings	1988	1561342
6	148m N	Cuttings	1988	1561345
7	185m SE	Filter Bed	1989	1563184
8	251m N	Pumping Station	1988	1589078
9	252m SW	Cuttings	1988	1561341
B	266m N	Sewage Works	1921 - 1949	1713758
B	269m N	Pump House	1988	1613190
B	274m N	Unspecified Works	1966 - 1976	1666206
D	281m N	Old Marl Pit	1921 - 1924	1667212
D	281m N	Old Marl Pit	1938	1730963
D	287m N	Unspecified Pit	1901	1617658
D	288m N	Unspecified Pit	1950	1698997
B	290m N	Unspecified Tank	1966 - 1976	1707544
E	303m S	Colliery	1883 - 1966	2366862
F	328m S	Refuse Heaps	1921 - 1924	1614629
G	331m SE	Refuse Heaps	1938	2367958
10	331m SE	Refuse Heap	1950	1596118
F	333m S	Unspecified Heap	1949	1568086
F	333m S	Railway Sidings	1949 - 1976	1744698
12	334m S	Railway Sidings	1883 - 1981	2367834
13	336m S	Railway Sidings	1966	1613783
F	337m S	Railway Sidings	1966	1624087
H	342m NE	Disused Colliery	1901 - 1924	1655370
14	355m S	Refuse Heap	1988	2368271
G	355m S	Refuse Heap	1901 - 1981	2366053
G	366m S	Refuse Heap	1989	2368661
15	377m S	Unspecified Heap	1966	2367622

ID	Location	Land use	Dates present	Group ID
H	386m N	Colliery	1883	1564283
H	392m N	Refuse Heap	1921 - 1924	1658042
H	393m N	Refuse Heap	1938	1661264
H	393m N	Disused Colliery	1938	1665924
H	397m N	Disused Colliery	1950	1662995
E	403m SE	Unspecified Depot	1989	1583275
E	403m SE	Coal Mine	1975	1589344
G	411m S	Railway Sidings	1966	1613782
H	412m N	Unspecified Heap	1949	1568085
H	412m N	Unspecified Ground Workings	1883	1564676
H	416m N	Refuse Heap	1901	1729171
H	422m N	Unspecified Pit	1901	1607985
17	446m SE	Unspecified Ground Workings	1924 - 1938	1631058
I	451m SE	Electric Substation	1989	1602989
H	456m N	Unspecified Shafts	1921	1682339
H	460m N	Unspecified Shafts	1938	1745645
J	461m N	Tramway Sidings	1938	1629658
H	461m N	Unspecified Shafts	1924	1635984
18	462m S	Unspecified Ground Workings	1966	1649731
19	464m SE	Unspecified Depot	1989	1583276
J	466m N	Tramway Sidings	1921 - 1924	1663404
H	468m N	Unspecified Shafts	1924	1707959
H	472m N	Unspecified Shafts	1924	1667214
G	472m S	Refuse Heap	1950	1613637
G	472m S	Refuse Heap	1966	1613654
H	474m N	Unspecified Shaft	1901	1578921
K	475m SE	Railway Sidings	1966 - 1975	1714101
K	475m SE	Railway Sidings	1950	1732088

ID	Location	Land use	Dates present	Group ID
H	478m N	Refuse Heap	1949	1743264
H	482m N	Unspecified Disused Tip	1976	1573633
H	483m N	Unspecified Heap	1966	1568080
H	486m N	Refuse Heap	1938	1614697
K	493m SE	Unspecified Heap	1883	1568084

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**2**

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
16	445m SE	Unspecified Tank	1885	251276
E	455m SE	Unspecified Tank	1955	251272

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**8**

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'.

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

ID	Location	Land use	Dates present	Group ID
A	98m N	Electricity Substation	1971	163790

ID	Location	Land use	Dates present	Group ID
A	113m N	Electricity Substation	1989	164254
A	120m N	Electricity Substation	1993	153581
11	332m NW	Electricity Substation	1995	147855
I	450m SE	Electricity Substation	1988 - 1989	166373
I	452m SE	Electricity Substation	1995	163539
I	453m SE	Electricity Substation	1971	163723
20	488m NW	Electricity Substation	1995	147860

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	**5**

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'.

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

ID	Location	Land use	Dates present	Group ID
4	58m NW	Service Area	1993 - 1995	53033
5	97m NW	Service Area	1993 - 1995	53958
C	279m W	Garage	1995	48248
C	281m W	Garage	1955 - 1989	53534

ID	Location	Land use	Dates present	Group ID
C	281m W	Garage	1971	49444

This data is sourced from Ordnance Survey / Groundsure.

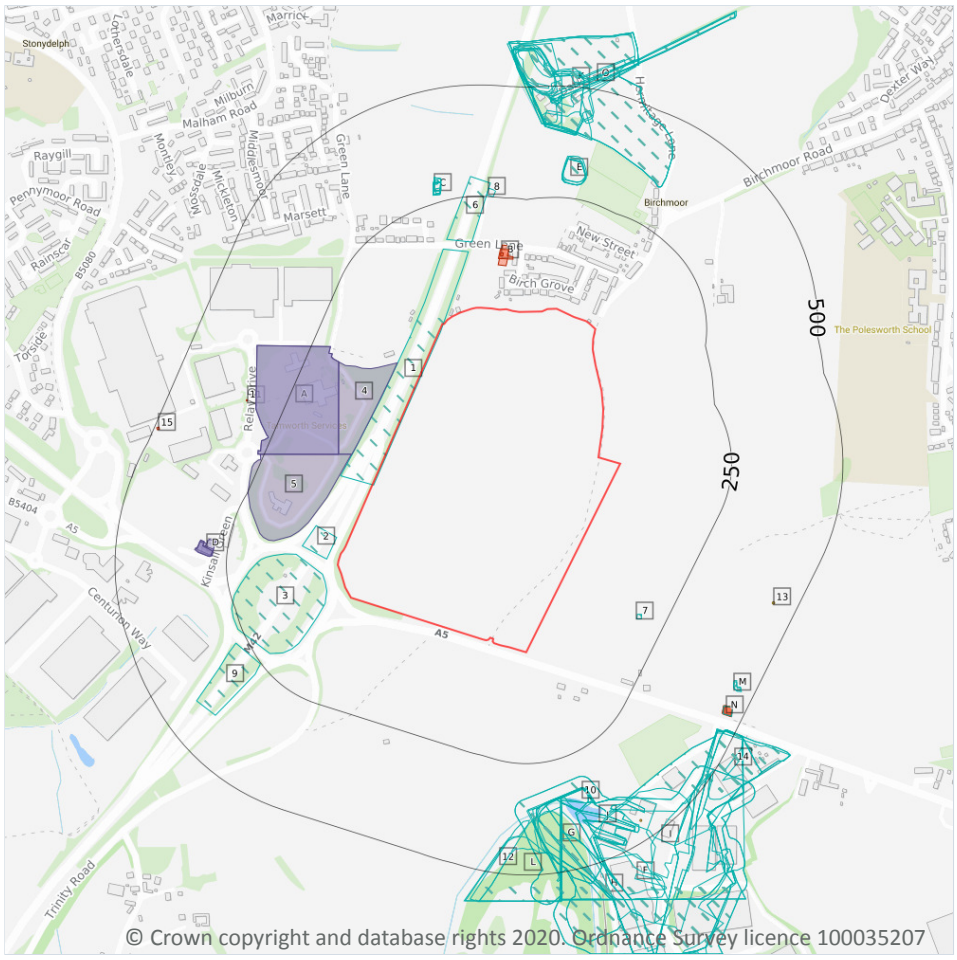
1.6 Historical military land

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



2.1 Historical industrial land uses

Records within 500m	89

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 19**

ID	Location	Land Use	Date	Group ID
1	**On site**	**Cuttings**	**1988**	**1561343**
2	24m NW	Cuttings	1988	1561344
3	40m W	Cuttings	1988	1561342

ID	Location	Land Use	Date	Group ID
6	148m N	Cuttings	1988	1561345
7	185m SE	Filter Bed	1989	1563184
8	251m N	Pumping Station	1988	1589078
9	252m SW	Cuttings	1988	1561341
C	266m N	Sewage Works	1921	1713758
C	266m N	Sewage Works	1924	1713758
C	268m N	Sewage Works	1938	1713758
C	269m N	Pump House	1988	1613190
C	274m N	Unspecified Works	1976	1666206
C	274m N	Unspecified Works	1966	1666206
C	274m N	Sewage Works	1949	1713758
E	281m N	Old Marl Pit	1924	1667212
E	281m N	Old Marl Pit	1921	1667212
E	281m N	Old Marl Pit	1938	1730963
E	287m N	Unspecified Pit	1901	1617658
E	288m N	Unspecified Pit	1950	1698997
C	290m N	Unspecified Tank	1976	1707544
C	290m N	Unspecified Tank	1966	1707544
F	303m S	Colliery	1924	2366862
F	303m S	Colliery	1921	2366862
G	328m S	Refuse Heaps	1921	1614629
G	328m S	Refuse Heaps	1924	1614629
F	329m S	Colliery	1901	2366862
F	331m SE	Colliery	1938	2366862
H	331m SE	Refuse Heaps	1938	2367958
10	331m SE	Refuse Heap	1950	1596118
I	331m SE	Colliery	1950	2366862
I	333m S	Colliery	1966	2366862

ID	Location	Land Use	Date	Group ID
G	333m S	Railway Sidings	1949	1744698
G	333m S	Unspecified Heap	1949	1568086
F	334m S	Railway Sidings	1938	2367834
F	335m S	Railway Sidings	1921	2367834
F	335m S	Railway Sidings	1901	2367834
F	335m S	Railway Sidings	1924	2367834
J	336m S	Railway Sidings	1966	1613783
G	337m S	Railway Sidings	1966	1624087
J	341m S	Railway Sidings	1950	1744698
K	342m NE	Disused Colliery	1921	1655370
K	342m NE	Disused Colliery	1901	1655370
K	342m NE	Disused Colliery	1924	1655370
L	355m S	Refuse Heap	1988	2368271
G	360m S	Railway Sidings	1976	1744698
H	366m S	Refuse Heap	1989	2368661
12	377m S	Unspecified Heap	1966	2367622
K	386m N	Colliery	1883	1564283
K	392m N	Refuse Heap	1921	1658042
K	392m N	Refuse Heap	1924	1658042
K	393m N	Disused Colliery	1938	1665924
K	393m N	Refuse Heap	1938	1661264
K	397m N	Disused Colliery	1950	1662995
I	403m SE	Unspecified Depot	1989	1583275
I	403m SE	Coal Mine	1975	1589344
H	411m S	Railway Sidings	1975	1744698
H	411m S	Railway Sidings	1966	1613782
K	412m N	Unspecified Heap	1949	1568085
K	412m N	Unspecified Ground Workings	1883	1564676

ID	Location	Land Use	Date	Group ID
L	414m S	Refuse Heap	1976	2366053
K	416m N	Refuse Heap	1901	1729171
K	422m N	Unspecified Pit	1901	1607985
H	426m S	Railway Sidings	1950	1744698
L	440m S	Refuse Heap	1966	2366053
M	446m SE	Unspecified Ground Workings	1938	1631058
M	447m SE	Unspecified Ground Workings	1924	1631058
N	451m SE	Electric Substation	1989	1602989
K	456m N	Unspecified Shafts	1921	1682339
K	460m N	Unspecified Shafts	1938	1745645
O	461m N	Tramway Sidings	1938	1629658
K	461m N	Unspecified Shafts	1924	1635984
F	462m S	Unspecified Ground Workings	1966	1649731
14	464m SE	Unspecified Depot	1989	1583276
O	466m N	Tramway Sidings	1921	1663404
O	466m N	Tramway Sidings	1924	1663404
K	468m N	Unspecified Shafts	1924	1707959
K	472m N	Unspecified Shafts	1924	1667214
H	472m S	Refuse Heap	1966	1613654
H	472m S	Refuse Heap	1950	1613637
K	474m N	Unspecified Shaft	1901	1578921
P	475m SE	Railway Sidings	1975	1714101
P	475m SE	Railway Sidings	1966	1714101
P	475m SE	Railway Sidings	1950	1732088
K	478m N	Refuse Heap	1949	1743264
K	482m N	Unspecified Disused Tip	1976	1573633
K	483m N	Unspecified Heap	1966	1568080
K	486m N	Refuse Heap	1938	1614697

ID	Location	Land Use	Date	Group ID
F	489m SE	Colliery	1883	2366862
P	493m SE	Unspecified Heap	1883	1568084

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**2**

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 19**

ID	Location	Land Use	Date	Group ID
13	445m SE	Unspecified Tank	1885	251276
I	455m SE	Unspecified Tank	1955	251272

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**10**

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'.

Features are displayed on the Past land use - un-grouped map on **page 19**

ID	Location	Land Use	Date	Group ID
B	98m N	Electricity Substation	1971	163790
B	113m N	Electricity Substation	1989	164254
B	120m N	Electricity Substation	1993	153581
11	332m NW	Electricity Substation	1995	147855
N	450m SE	Electricity Substation	1988	166373
N	450m SE	Electricity Substation	1989	166373
N	452m SE	Electricity Substation	1995	163539

ID	Location	Land Use	Date	Group ID
N	452m SE	Electricity Substation	1995	163539
N	453m SE	Electricity Substation	1971	163723
15	488m NW	Electricity Substation	1995	147860

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	**8**

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'.

Features are displayed on the Past land use - un-grouped map on **page 19**

ID	Location	Land Use	Date	Group ID
4	58m NW	Service Area	1993	53033
5	71m NW	Service Area	1995	53033
A	97m NW	Service Area	1995	53958
A	97m NW	Service Area	1993	53958
D	279m W	Garage	1995	48248
D	281m W	Garage	1955	53534
D	281m W	Garage	1971	49444
D	283m W	Garage	1989	53534

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill

3.1 Active or recent landfill

Records within 500m	0

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

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	1

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.

Features are displayed on the Waste and landfill map on **page 25**

ID	Location	Details		
2	347m S	Site Address: Birch Coppice Colliery, South Of A5, Dordon, Warwickshire Licence Holder Address: -	Waste Licence: Yes Site Reference: WDL/477, 644/2107 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 10/03/1994 Licence Surrender: 25/04/1994	Operator: - Licence Holder: British Coal First Recorded 31/12/1993 Last Recorded: 25/04/1994

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	20

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 25**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	233m NW	green lane farm, green lane, birchmoor, tamworth, b781an	WEX056270	Using waste exemption	On a farm	Use of waste in construction
A	299m NE	BIRCHMOOR FARM, BIRCHMOOR ROAD, BIRCHMOOR, TAMWORTH, B78 1AD	WEX189137	Disposing of waste exemption	On a Farm	Burning waste in the open
A	299m NE	BIRCHMOOR FARM, BIRCHMOOR ROAD, BIRCHMOOR, TAMWORTH, B78 1AD	WEX189137	Storing waste exemption	On a Farm	Storage of sludge
A	299m NE	BIRCHMOOR FARM, BIRCHMOOR ROAD, BIRCHMOOR, TAMWORTH, B78 1AD	WEX189137	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
A	299m NE	BIRCHMOOR FARM, BIRCHMOOR ROAD, BIRCHMOOR, TAMWORTH, B78 1AD	WEX189137	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters
A	299m NE	BIRCHMOOR FARM, BIRCHMOOR ROAD, BIRCHMOOR, TAMWORTH, B78 1AD	WEX030847	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
A	299m NE	BIRCHMOOR FARM, BIRCHMOOR ROAD, BIRCHMOOR, TAMWORTH, B78 1AD	WEX030847	Disposing of waste exemption	On a farm	Burning waste in the open
A	299m NE	BIRCHMOOR FARM, BIRCHMOOR ROAD, BIRCHMOOR, TAMWORTH, B78 1AD	WEX030847	Storing waste exemption	On a farm	Storage of sludge
A	299m NE	BIRCHMOOR FARM, BIRCHMOOR ROAD, BIRCHMOOR, TAMWORTH, B78 1AD	WEX030847	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit

ID	Location	Site	Reference	Category	Sub-Category	Description
B	435m NW	J Sainsbury Relay Park Tamworth B77 5BP	EPR/NF0401PD/A001	Treating waste exemption	Non-Agricultural Waste Only	Crushing waste fluorescent tubes
B	445m NW	XPO Logistics Sainsbury's DC, Relay Park, Relay Drive, Tamworth, B775PR	WEX143775	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	445m NW	Unipart Logistics Sainsburys , Relay Park , Relay Drive , Tamworth , B77 5PR	WEX115414	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	445m NW	XPO Logistics Sainsbury's DC, Relay Park, Relay Drive, Tamworth, B775PR	WEX143775	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	445m NW	Unipart Logistics Sainsburys , Relay Park , Relay Drive , Tamworth , B77 5PR	WEX115414	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	446m NW	Unipart Sainsbury's Relay Drive TAMWORTH Staffordshire B77 5PR	EPR/SF0007SK/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
B	446m NW	Unipart Sainsbury's Relay Drive TAMWORTH Staffordshire B77 5PR	EPR/SF0007SK/A001	Treating waste exemption	Non-Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
C	449m SE	Birch Coppice Industrial Estate Smurfit Kappa Recycling Watling Street Tamworth Staffordshire B78 1SZ	EPR/FF0403XP/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
C	449m SE	Birch Coppice Industrial Estate Smurfit Kappa Recycling Watling Street Tamworth Staffordshire B78 1SZ	EPR/FF0403XP/A001	Treating waste exemption	Non-Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
C	456m SE	BIRCH COPPICE INDUSTRIAL ESTATE, WATLING STREET, DORDON, TAMWORTH, B78 1SZ	WEX124412	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	456m SE	BIRCH COPPICE INDUSTRIAL ESTATE, WATLING STREET, DORDON, TAMWORTH, B78 1SZ	WEX124412	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)

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

4 Current industrial land use

4.1 Recent industrial land uses

Records within 250m	4

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 30**

ID	Location	Company	Address	Activity	Category
1	125m N	Electricity Sub Station	Warwickshire, B78	Electrical Features	Infrastructure and Facilities
2	143m NE	Impact Windscreens Ltd	25, Cockspur Street, Birchmoor, Tamworth, Warwickshire, B78 1AJ	Vehicle Repair, Testing and Servicing	Repair and Servicing

ID	Location	Company	Address	Activity	Category
A	179m NW	Esso	Jct M42a5 Green Lane, Wilnecote, Tamworth, Warwickshire, B77 5PS	Petrol and Fuel Stations	Road and Rail
3	181m NW	Tamworth Motorway Service Area	Granada Service Station Tamworth Motorway Services Area, Green Lane, Wilnecote, Tamworth, Warwickshire, B77 5PS	Motorway Service Stations	Road and Rail

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	**2**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 30**

ID	Location	Company	Address	LPG	Status
A	163m NW	ESSO	M42 J10, Watling Street, Wilnecote, Tamworth, Warwickshire, B77 5PS	No	Open
D	327m W	TOTAL	Watling Street, Wilnecote, Tamworth, Staffordshire, B77 5PB	Not Applicable	Obsolete

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	2

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 30**

ID	Location	Address	Details	
A	159m NW	Euro Garages Ltd (Moto Hospitality Tamworth), Green Lane, Wilnecote, Tamworth, B77 5PS	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
D	288m W	R Holdham-Kinsall Green Garage, Kinsall Green Lane, Tamworth, B77 5BP	Process: Petrol Vapour Recovery 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	**6**

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 30**

ID	Location	Address	Details	
B	267m N	BIRCHMOOR - GREEN LANE EAST SPS, OFF M42, GREEN LANE, BIRCHMOOR, TAMWORTH, WARWICKSHIRE, B78 1AL	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TSC3426 Permit Version: 2 Receiving Water: FIELD DRAIN TRIB OF KETTLE BRK	Status: VARIED UNDER EPR 2010 Issue date: 28/07/2016 Effective Date: 28/07/2016 Revocation Date: -
C	277m N	GREEN LANE PUMPING STATION, BIRCHMOOR OLD (WEST), POLESWORTH, TAMWORTH, STAFFORDSHIRE	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: T/18/21734/O Permit Version: 1 Receiving Water: TRIB OF RIVER TAME	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 27/07/1992 Effective Date: 27/07/1992 Revocation Date: -
C	278m N	GREEN LANE CSO, B78 1AL	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: TSC3424 Permit Version: 1 Receiving Water: TRIBUTARY RIVER TAME	Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: 12/08/2011
4	287m W	GREEN LANE PUMPING STATION, BIRCHMOOR NEW (EAST), POLESWORTH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: T/21/30270/O Permit Version: 1 Receiving Water: RIVER ANKER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 30/01/1996 Effective Date: 30/01/1996 Revocation Date: -
B	301m N	BIRCHMOOR - GREEN LANE EAST SPS, OFF M42, GREEN LANE, BIRCHMOOR, TAMWORTH, WARWICKSHIRE, B78 1AL	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: TSC3426 Permit Version: 1 Receiving Water: RIVER ANKER	Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: 27/07/2016
C	315m N	GREEN LANE, BIRCHMOOR OLD, GREEN LANE	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: TSC3427 Permit Version: 1 Receiving Water: TRB RIVER TAME	Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: 12/08/2011

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	1

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.

Features are displayed on the Current industrial land use map on **page 30**

ID	Location	Name	Status	Receiving Water	Authorised Substances
6	408m SE	Thomas Black Ltd., Outlet 2	Not Active	River Tame	Cadmium

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	1

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 30**

ID	Location	Details	
5	337m NE	Incident Date: 16/11/2001 Incident Identification: 43748 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

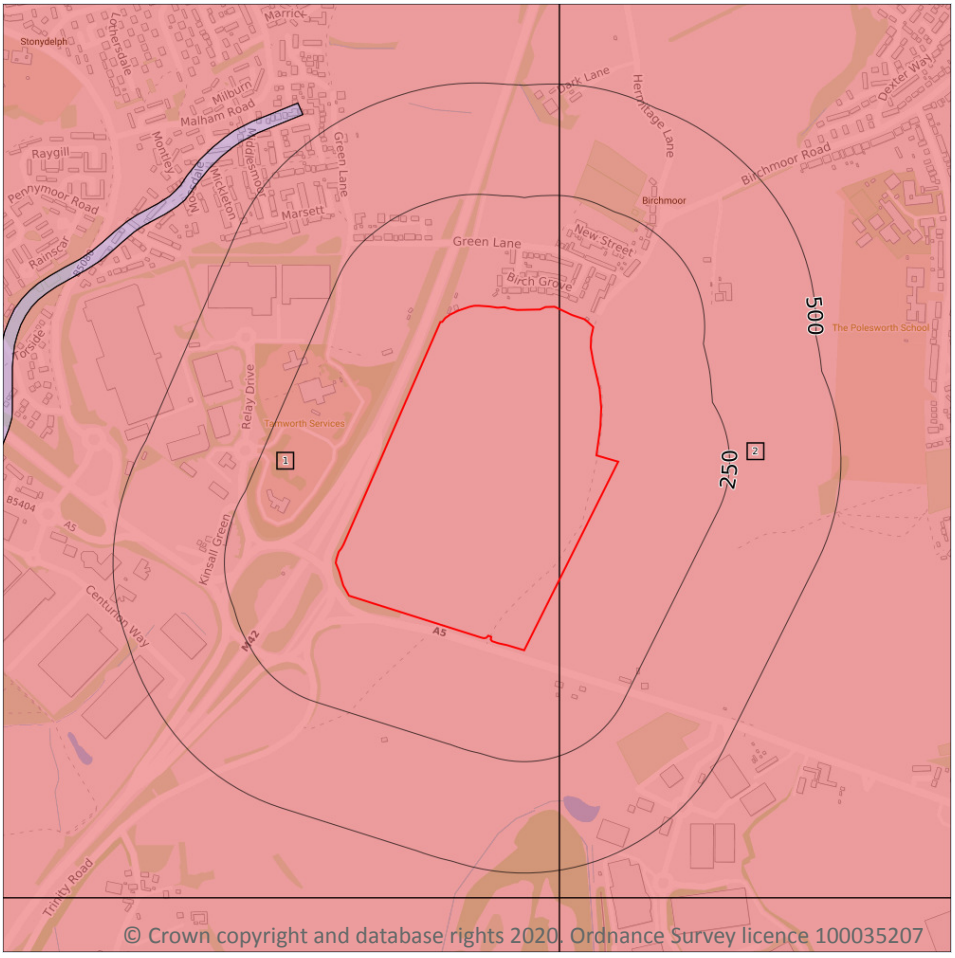
5.1 Superficial aquifer

Records within 500m	0

Aquifer status of groundwater held within superficial geology.

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	2

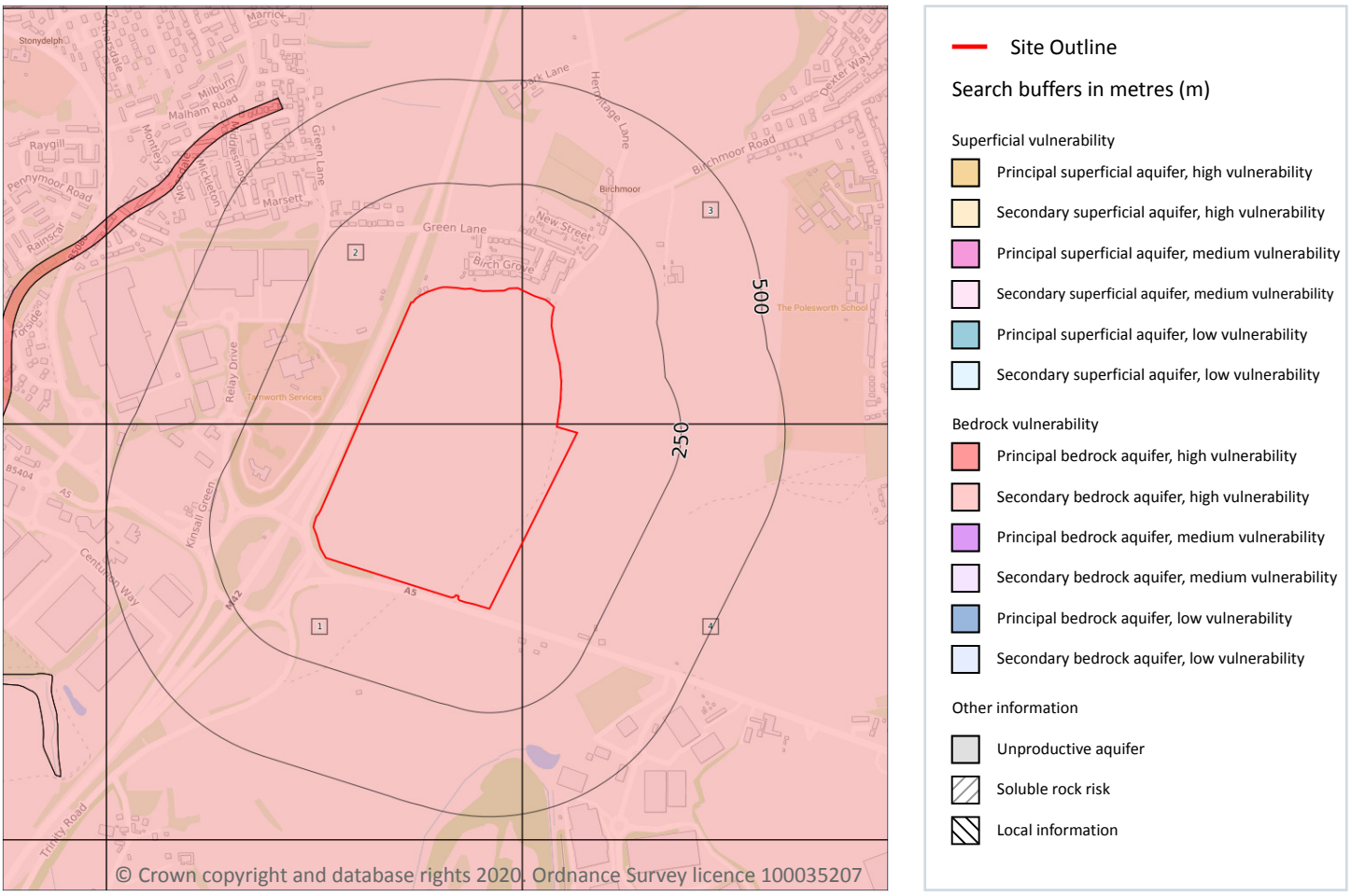
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 39**

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

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

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m	4

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 41**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	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: <300mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
3	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: <300mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
4	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: <300mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data	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	2

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 43**

ID	Location	Details	
-	1012m S	Status: Active Licence No: 03/28/21/0039 Details: Make-Up Or Top Up Water Direct Source: Groundwater Midlands Region Point: BIRCH COPPICE COLLIERY - BOREHOLE Data Type: Point Name: I M PROPERTIES PLC Easting: 425040 Northing: 299550	Annual Volume (m^3): 96,350 Max Daily Volume (m^3): 410 Original Application No: - Original Start Date: 10/08/1987 Expiry Date: - Issue No: 100 Version Start Date: 19/05/1997 Version End Date: -
-	1653m SW	Status: Historical Licence No: 03/28/18/0018 Details: Spray Irrigation - Direct Direct Source: Groundwater Midlands Region Point: WOODLANDS FARM - BOREHOLE Data Type: Point Name: PLANTERS GC LTD Easting: 423630 Northing: 299290	Annual Volume (m^3): 4173 Max Daily Volume (m^3): 19.5 Original Application No: - Original Start Date: 30/06/1999 Expiry Date: - Issue No: 1 Version Start Date: 30/06/1999 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**1**

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 43**

ID	Location	Details	
-	1922m NW	Status: Active Licence No: 03/28/18/0007 Details: General Washing/Process Washing Direct Source: Surface Water Midlands Region Point: GLASCOTE ROAD, TAMWORTH - KETTLE BROOK Data Type: Point Name: TAMWORTH BOROUGH COUNCIL Easting: 422870 Northing: 301830	Annual Volume (m^3): 272.70 Max Daily Volume (m^3): 27.30 Original Application No: - Original Start Date: 27/01/1977 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2007 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

6.1 Water Network (OS MasterMap)

Records within 250m	0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	0

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.

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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 46**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	**On site**	**River WB catchment**	**Tame from R Blythe to River Anker**	**GB104028046440**	**Tame Lower Rivers and Lakes**	**Tame Anker and Mease**

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

6.4 WFD Surface water bodies

Records identified	1

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 46**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	3333m W	River	Tame from R Blythe to River Anker	GB104028046440	Poor	Good	Poor	2016

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 46**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	**On site**	**Tame Anker Mease - Secondary Combined**	**GB40402G990800**	**Good**	**Good**	**Good**	**2015**

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 Sea (RoFRaS)

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; 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).

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.

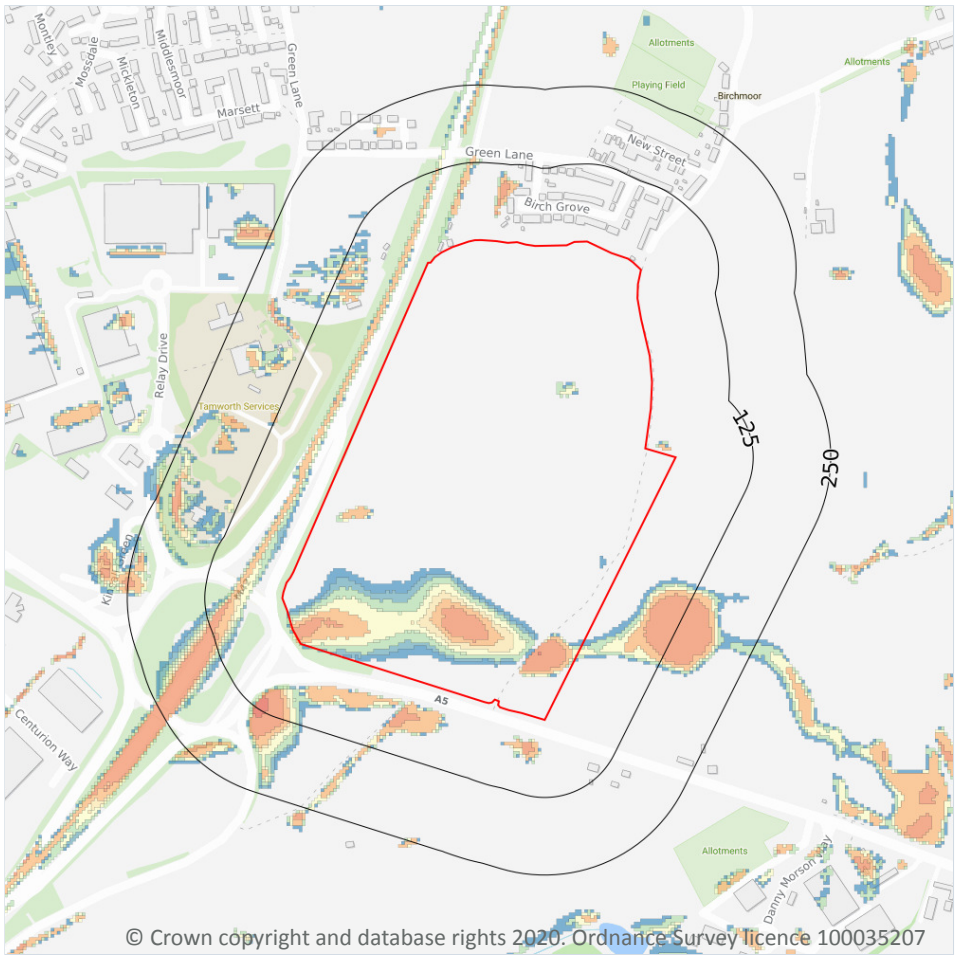
7.7 Flood Zone 3

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 52**

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

9.1 Groundwater flooding

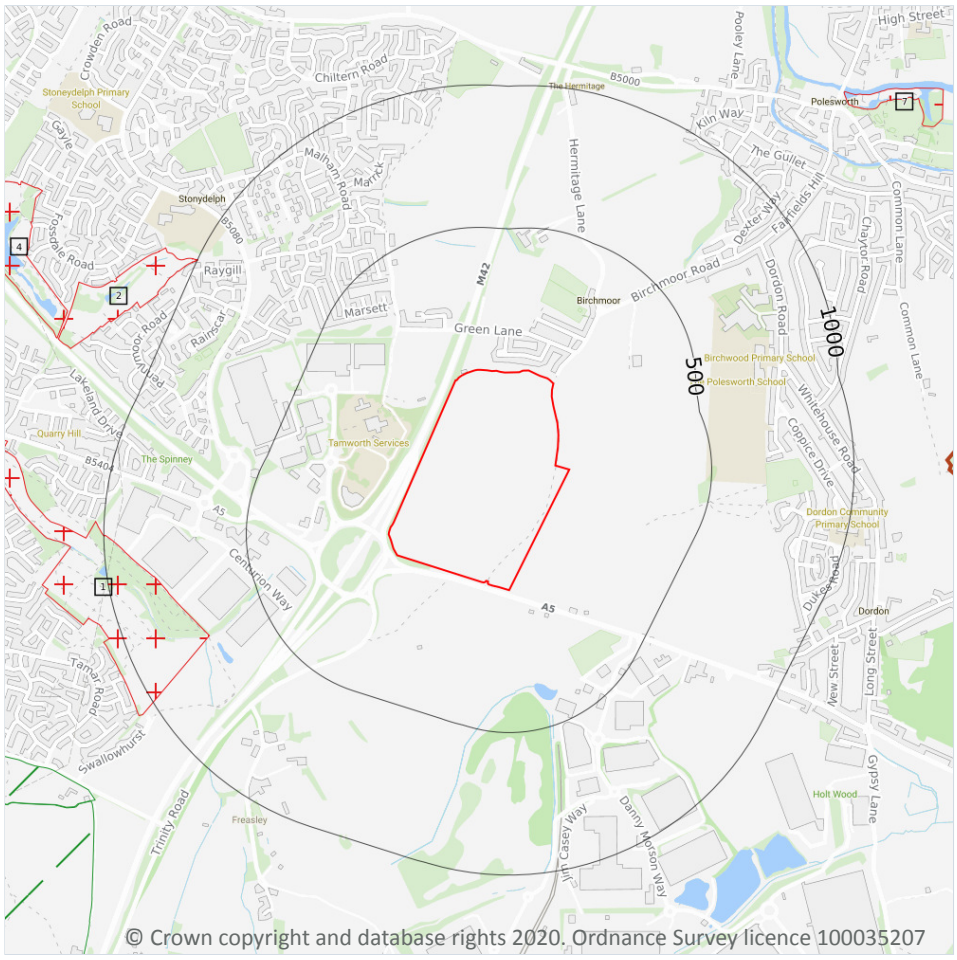
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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 54**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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.

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	0

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.

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	6

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.

Features are displayed on the Environmental designations map on **page 55**

ID	Location	Name	Data source
1	715m SW	Kettle Brook	Natural England
2	998m NW	Kettle Brook	Natural England
4	1342m NW	Kettle Brook	Natural England
7	1427m NE	Abbey Green	Natural England
-	1640m W	Kettle Brook	Natural England
-	1915m NW	Kettle Brook	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	3

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 55**

ID	Location	Name	Woodland Type
3	1327m E	Unknown	Ancient & Semi-Natural Woodland
-	1767m S	BIDDLES AND LONG WOODS	Ancient & Semi-Natural Woodland
-	1997m N	ALVECOTE WOOD	Ancient & Semi-Natural 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	2

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

Features are displayed on the Environmental designations map on **page 55**

ID	Location	Name	Local Authority name
5	1361m SW	Birmingham	Tamworth
6	1378m SW	Birmingham	North Warwickshire

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

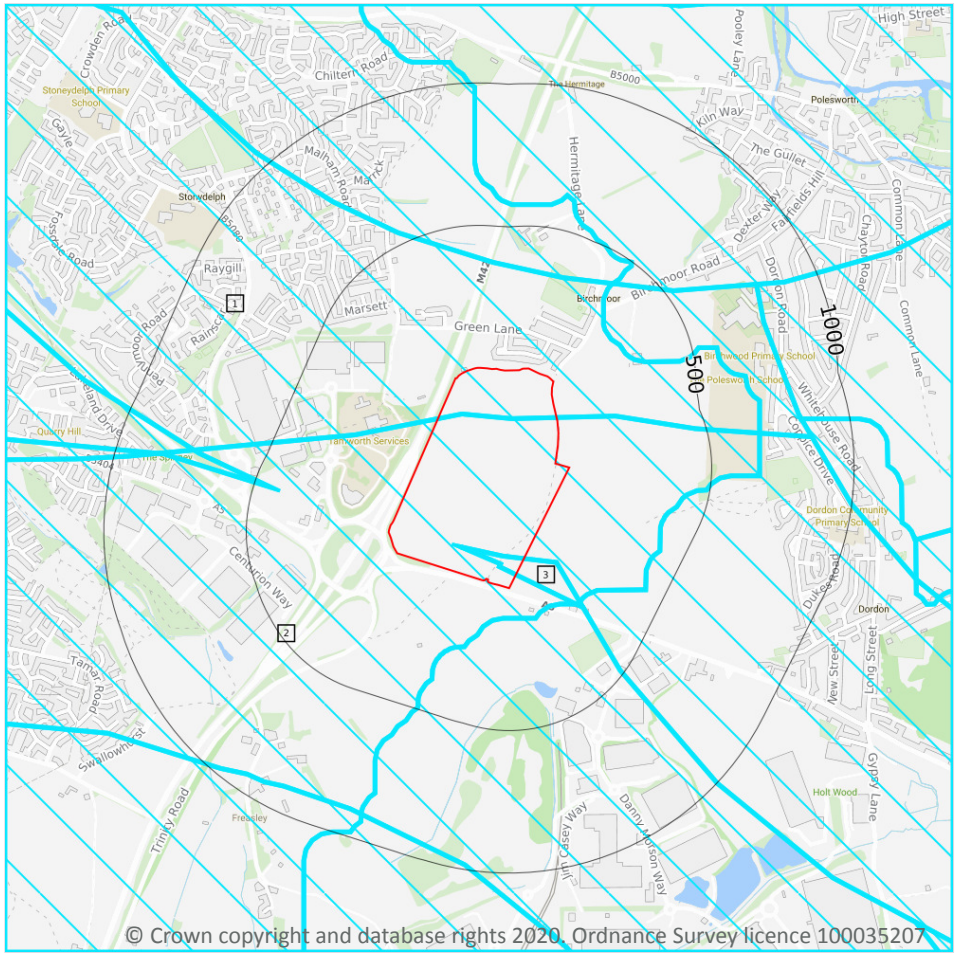
Records within 2000m	2

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.

Location	Name	Type	NVZ ID	Status
On site	**River Trent (source to confluence with Derwent)**	**Surface Water**	**S308**	**Changed**
406m W	River Trent (source to confluence with Derwent)	Surface Water	S308	Changed

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

SSSI Impact Zones and Units



10.17 SSSI Impact Risk Zones

Records on site	3

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 61**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Airports, helipads and other aviation proposals. 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 - Livestock & poultry units with floorspace > 500m², slurry lagoons > 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.**
2	On site	**Infrastructure - Airports, helipads and other aviation proposals. 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 - Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.**
3	On site	**Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0

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.

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

11 Visual and cultural designations

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	0

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.

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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.

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

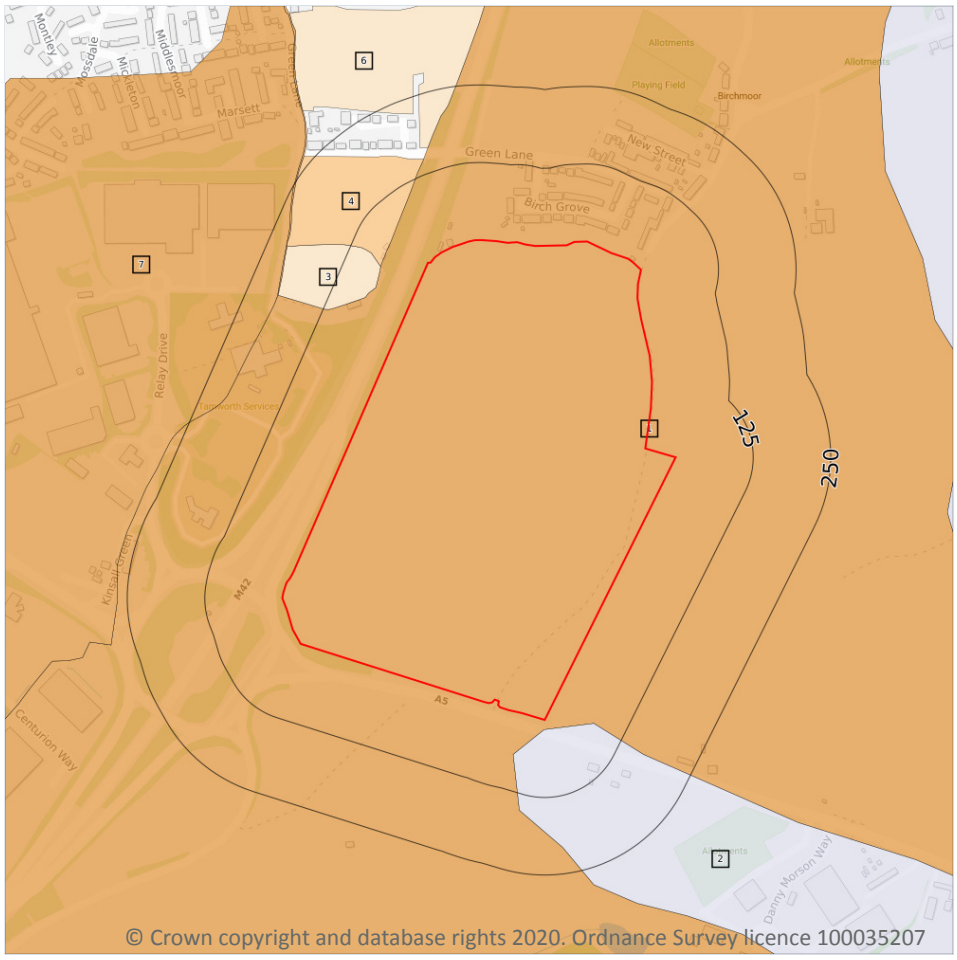
11.7 Registered Parks and Gardens

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 English Heritage, 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	6

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 65**

ID	Location	Classification	Description
1	On site	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.

ID	Location	Classification	Description
2	15m S	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.
3	61m NW	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.
4	68m NW	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
6	164m N	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.
7	200m NW	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	0

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.

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

12.3 Tree Felling Licences

Records within 250m	0

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.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	0

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.

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	2

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 68**

ID	Location	Main Habitat	Other habitats
1	44m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	84m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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.

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.

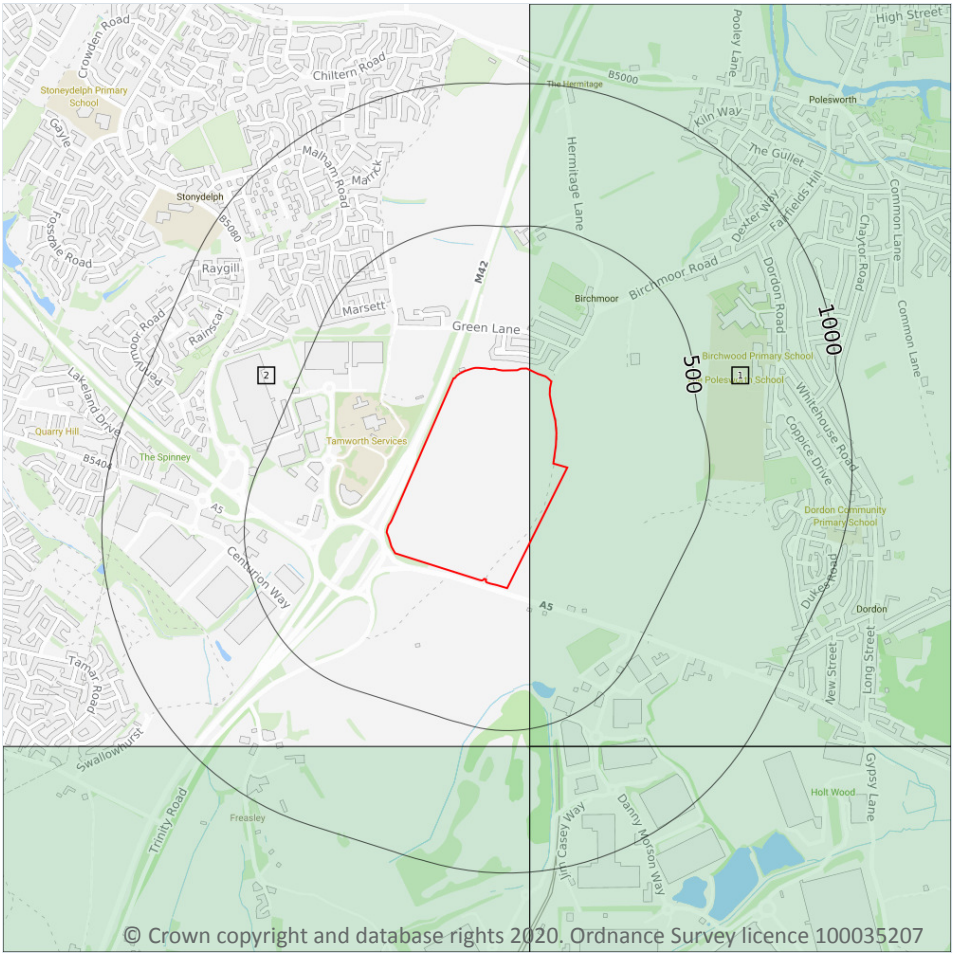
13.4 Limestone Pavement Orders

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	2

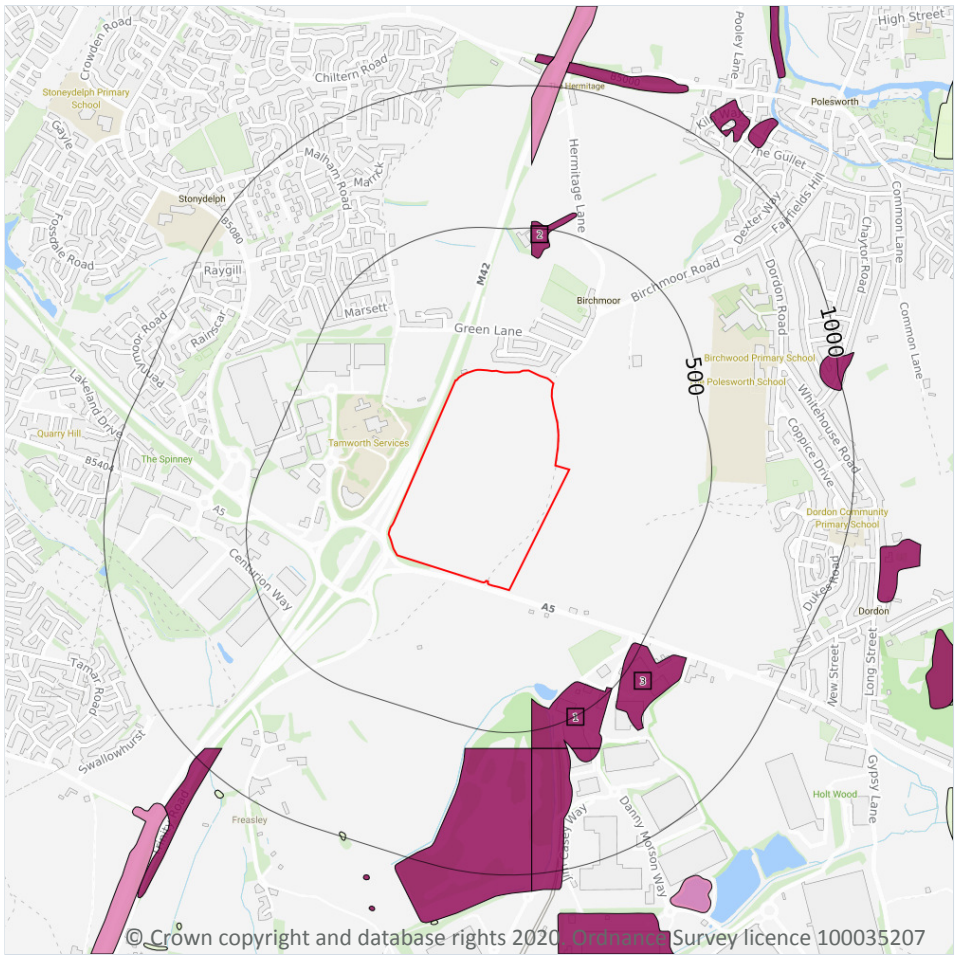
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 70**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**SK20SE**
2	**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	3

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.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 71**

ID	Location	LEX Code	Description	Rock description
1	390m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	395m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	471m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

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.

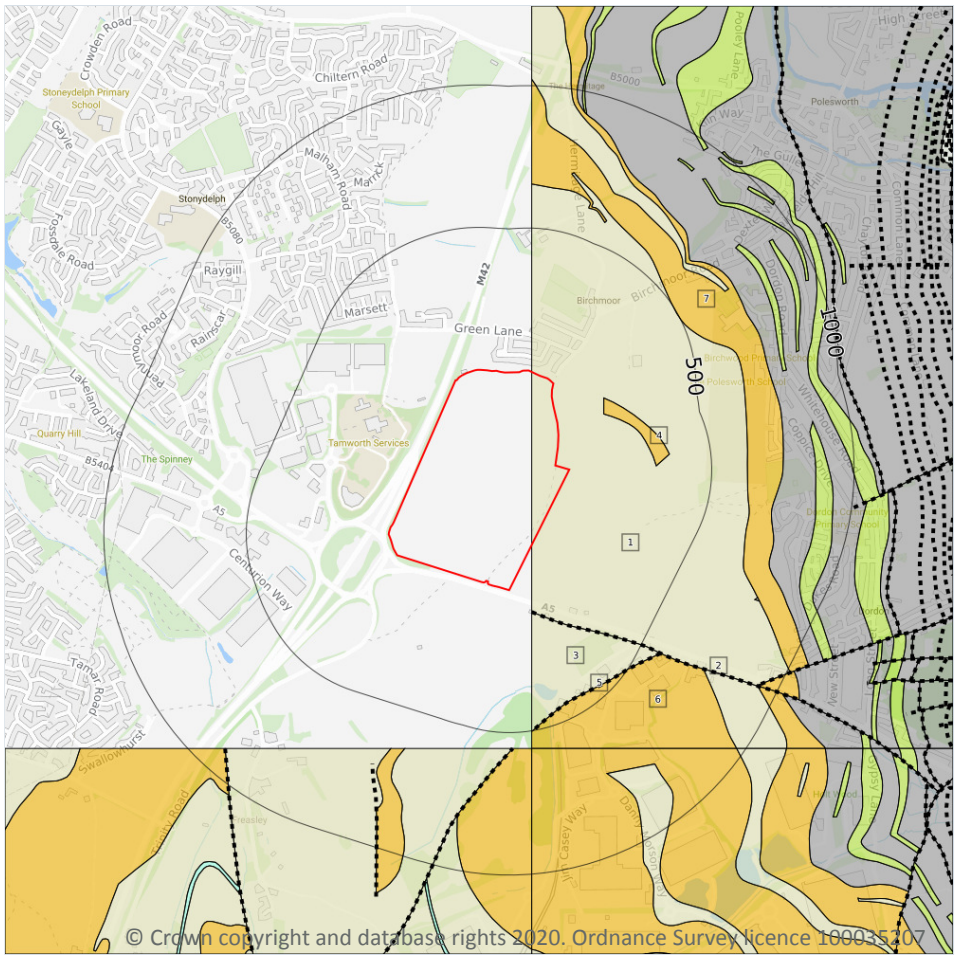
14.4 Landslip (10k)

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



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m	5

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.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 73**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**HA-MDSS**	**Halesowen Formation - Mudstone, Siltstone And Sandstone**	**Westphalian D Sub-age**
3	110m SE	HA-MDSS	Halesowen Formation - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age
4	166m E	HA-SDST	Halesowen Formation - Sandstone	Westphalian D Sub-age

ID	Location	LEX Code	Description	Rock age
6	443m SE	HA-SDST	Halesowen Formation - Sandstone	Westphalian D Sub-age
7	498m NE	HA-SDST	Halesowen Formation - Sandstone	Westphalian D Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	**2**

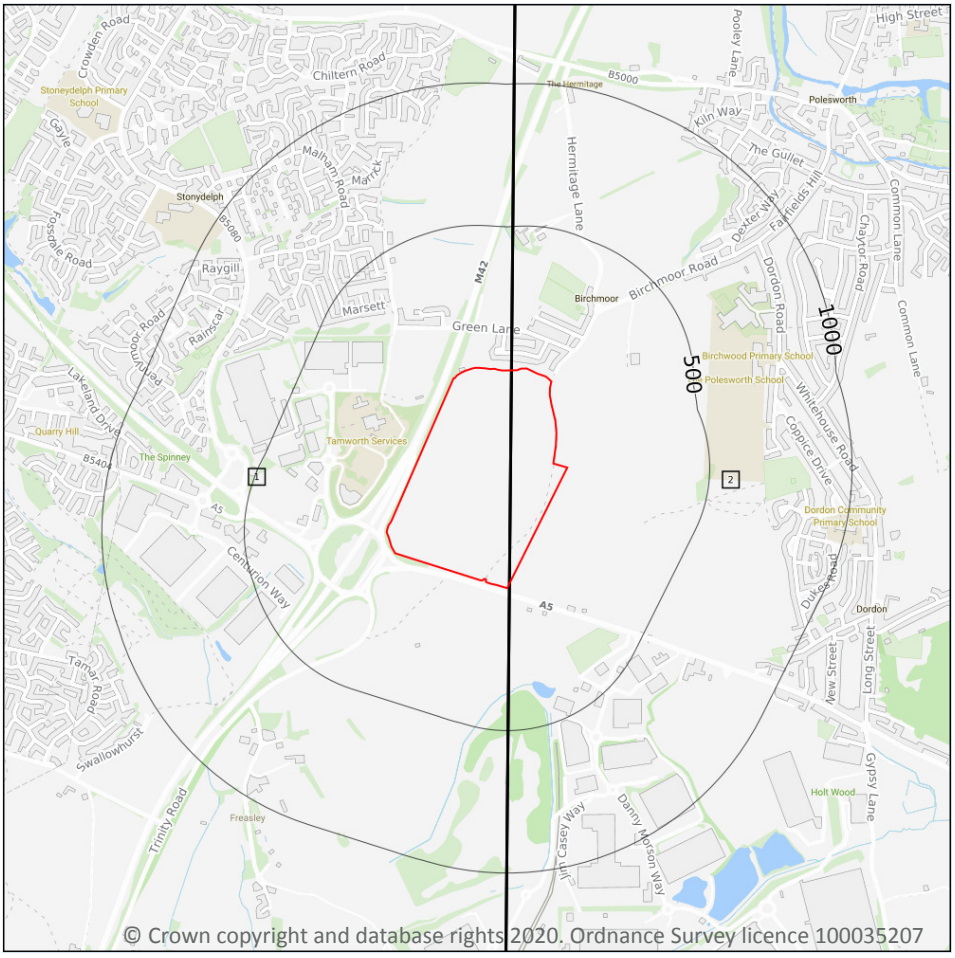
Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 73**

ID	Location	Category	Description
2	110m SE	FAULT	Normal fault, inferred; crossmarks on downthrow side
5	443m SE	FAULT	Normal fault, inferred; crossmarks on downthrow side

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



15.1 50k Availability

Records within 500m	2

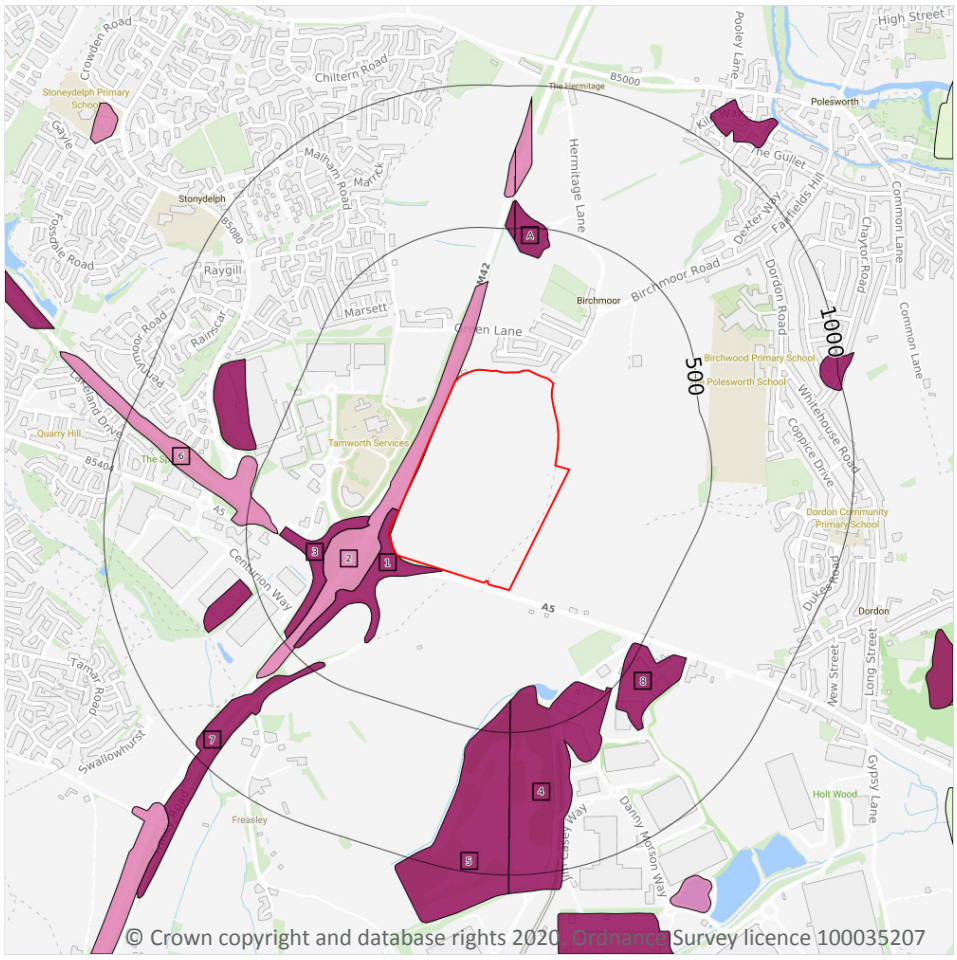
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 75**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**EW154_lichfield_v4**
2	**On site**	**Full**	**Full**	**Full**	**Full**	**EW155_coalville_v4**

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made 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 76**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**MGR-ARTDP**	**MADE GROUND (UNDIVIDED)**	**ARTIFICIAL DEPOSIT**
2	**On site**	**WGR-VOID**	**WORKED GROUND (UNDIVIDED)**	**VOID**
3	73m W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	344m S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

ID	Location	LEX Code	Description	Rock description
5	388m S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
6	389m W	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
A	396m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
7	456m SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
A	459m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
8	471m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

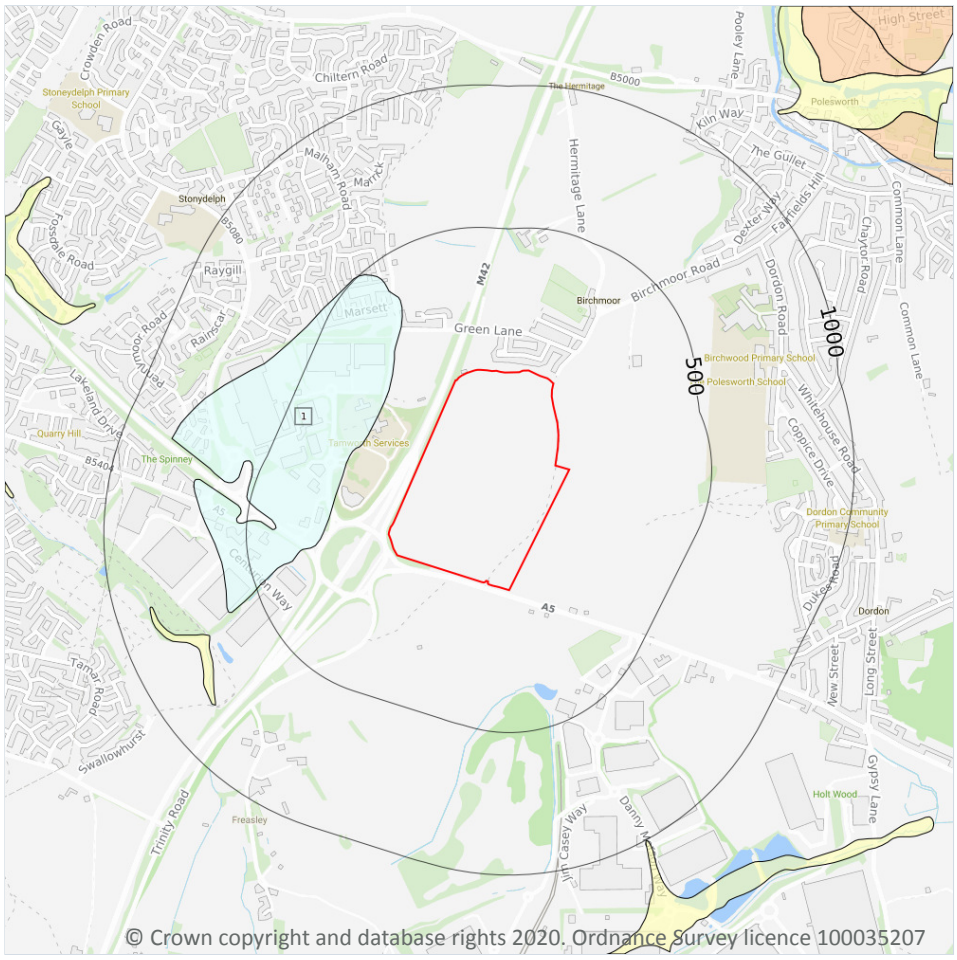
15.3 Artificial ground permeability (50k)

Records within 50m	0

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).

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	1

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 78**

ID	Location	LEX Code	Description	Rock description
1	198m NW	TILDI-DMTN	TILL, DEVENSIAN (IRISH SEA ICE)	DIAMICTON

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	0

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).

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

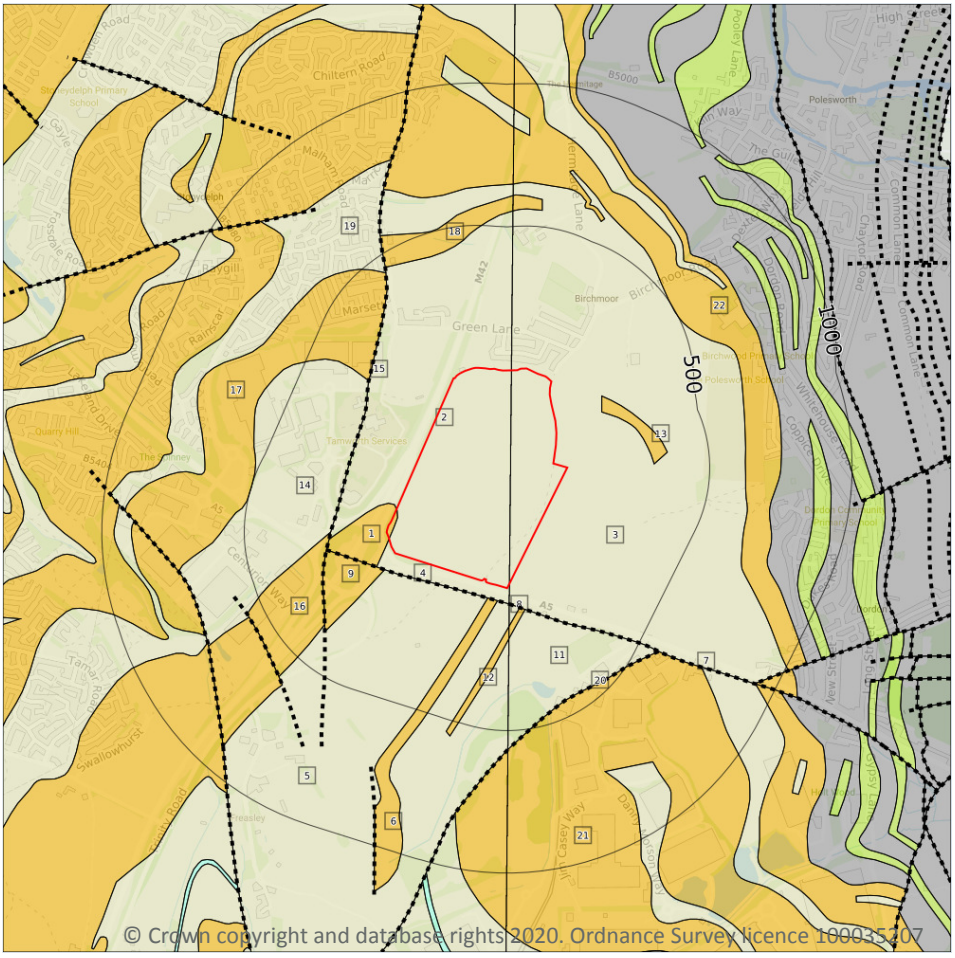
15.7 Landslip permeability (50k)

Records within 50m	0

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).

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 **18**

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 80**

ID	Location	LEX Code	Description	Rock age
1	On site	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
2	On site	HA-MDSS	HALESOWEN FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	On site	HA-MDSS	HALESOWEN FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
5	51m S	HA-MDSS	HALESOWEN FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	51m S	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
8	56m S	HA-MDSS	HALESOWEN FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
9	69m SW	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
10	82m SE	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
11	98m SE	HA-MDSS	HALESOWEN FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
12	135m S	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
13	166m E	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
14	187m W	HA-MDSS	HALESOWEN FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
16	197m W	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
17	270m NW	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
18	418m N	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
19	438m NW	HA-MDSS	HALESOWEN FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
21	443m SE	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN
22	498m NE	HA-SDST	HALESOWEN FORMATION - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m **3**

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**	**High**	**Moderate**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**4**

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 80**

ID	Location	Category	Description
4	51m S	FAULT	Fault, observed
7	56m S	FAULT	Fault, inferred
15	187m W	FAULT	Fault, inferred
20	443m SE	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.

16 Boreholes

16.1 BGS Boreholes

Records within 250m	16

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.

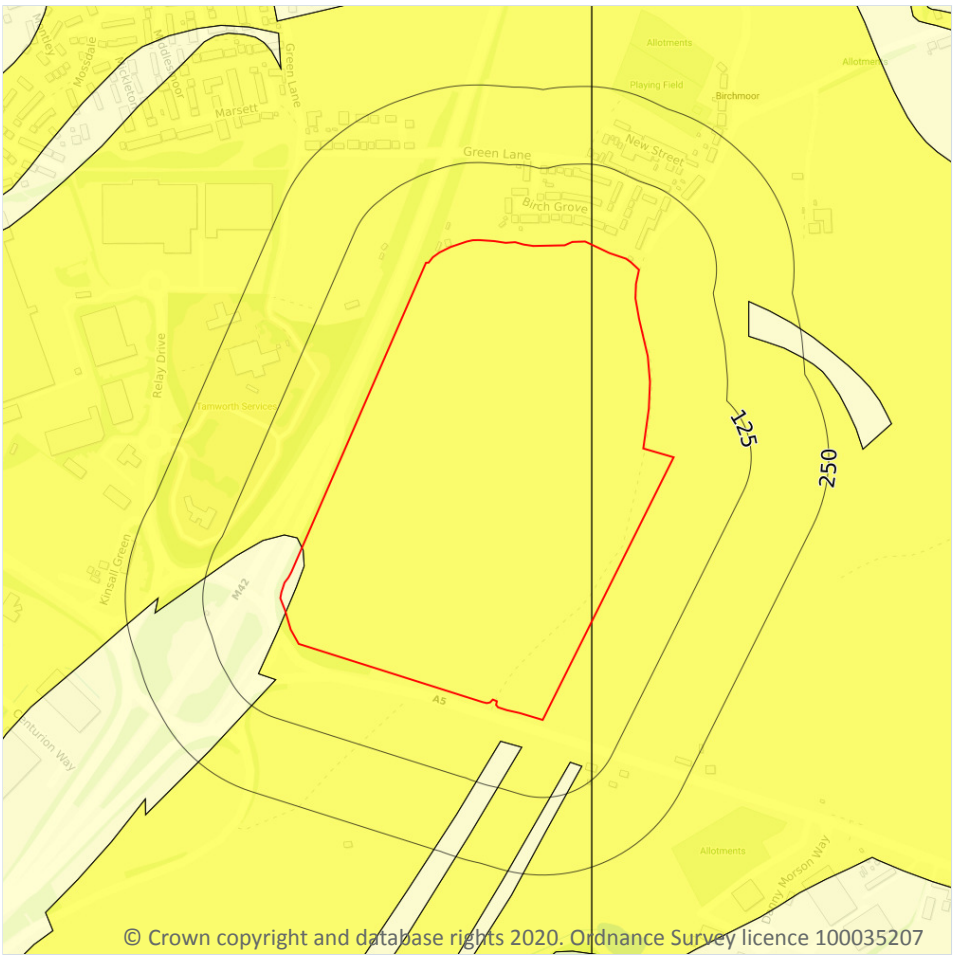
Features are displayed on the Boreholes map on **page 83**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	23m NW	424547 300922	M42 TECHMAC TP IP19-1	-	Y	N/A
2	41m N	424962 301366	33 BIRCH GROVE, BIRCHMOOR	-2.0	N	17618016
A	49m W	424450 300760	M42 TAMWORTH SECTION S197	15.24	N	196812

ID	Location	Grid reference	Name	Length	Confidential	Web link
3	56m NW	424470 300830	M42 TAMWORTH SECTION 198	4.57	N	196813
A	58m W	424440 300750	M42 KINGSBURY 351	13.5	N	196479
A	59m W	424440 300740	M42 TAMWORTH SECTION S195	5.62	N	196810
A	68m W	424430 300760	M42 KINGSBURY 350	14.0	N	196478
4	74m SW	424451 300663	M42 JUNCTION 10 IMPROVEMENTS TAMWORTH 2	7.5	N	15932949
A	82m W	424420 300780	M42 KINGSBURY 349	14.5	N	196477
A	82m W	424420 300780	M42 TAMWORTH SECTION S196	5.57	N	196811
A	88m W	424410 300760	M42 TAMWORTH SECTION 194	15.24	N	196809
5	121m N	424800 301450	TAMWORTH BY PASS 11	8.38	N	196227
6	157m SW	424400 300587	M42 JUNCTION 10 IMPROVEMENTS TAMWORTH 1	6.85	N	15932944
7	163m W	424360 300650	M42 TAMWORTH SECTION 193	5.9	N	196808
8	176m W	424340 300670	TAMWORTH BY PASS 9	7.62	N	196228
9	244m SW	424320 300550	M42 KINGSBURY 348	14.5	N	196476

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	2

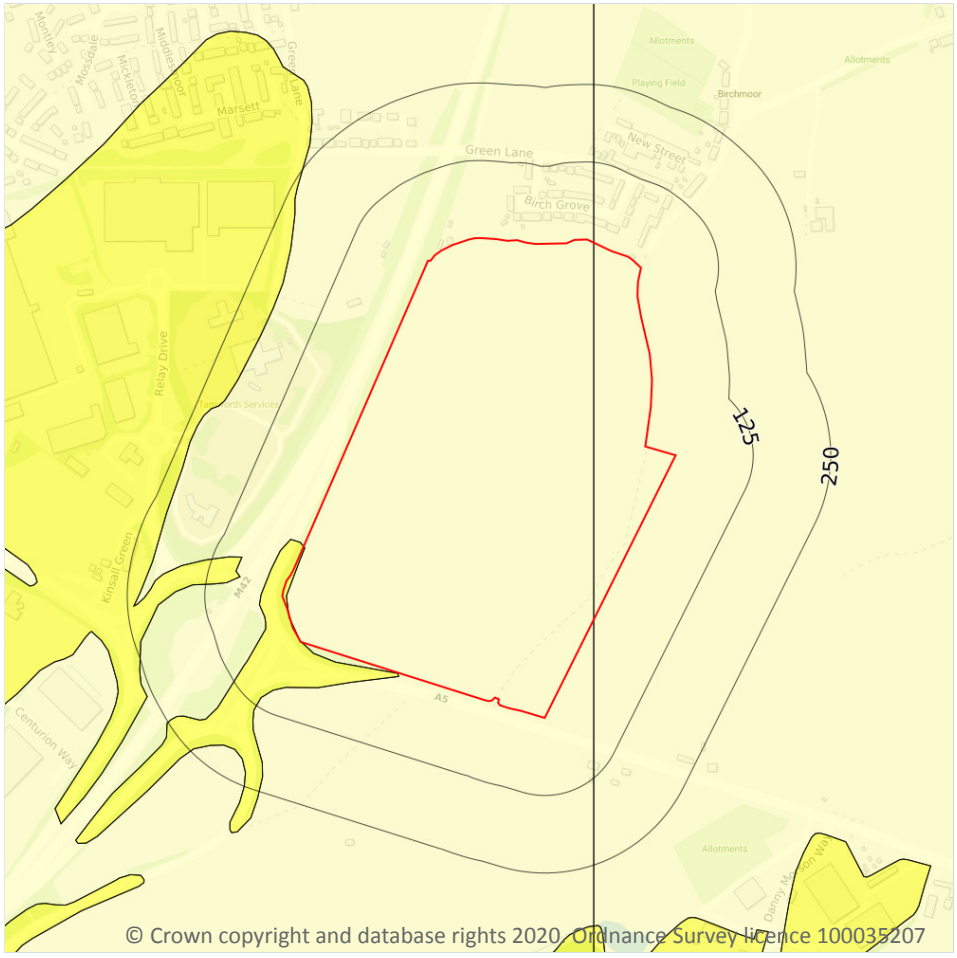
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 85**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
On site	**Very low**	**Ground conditions predominantly low plasticity.**

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	2

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 86**

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.**

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	2

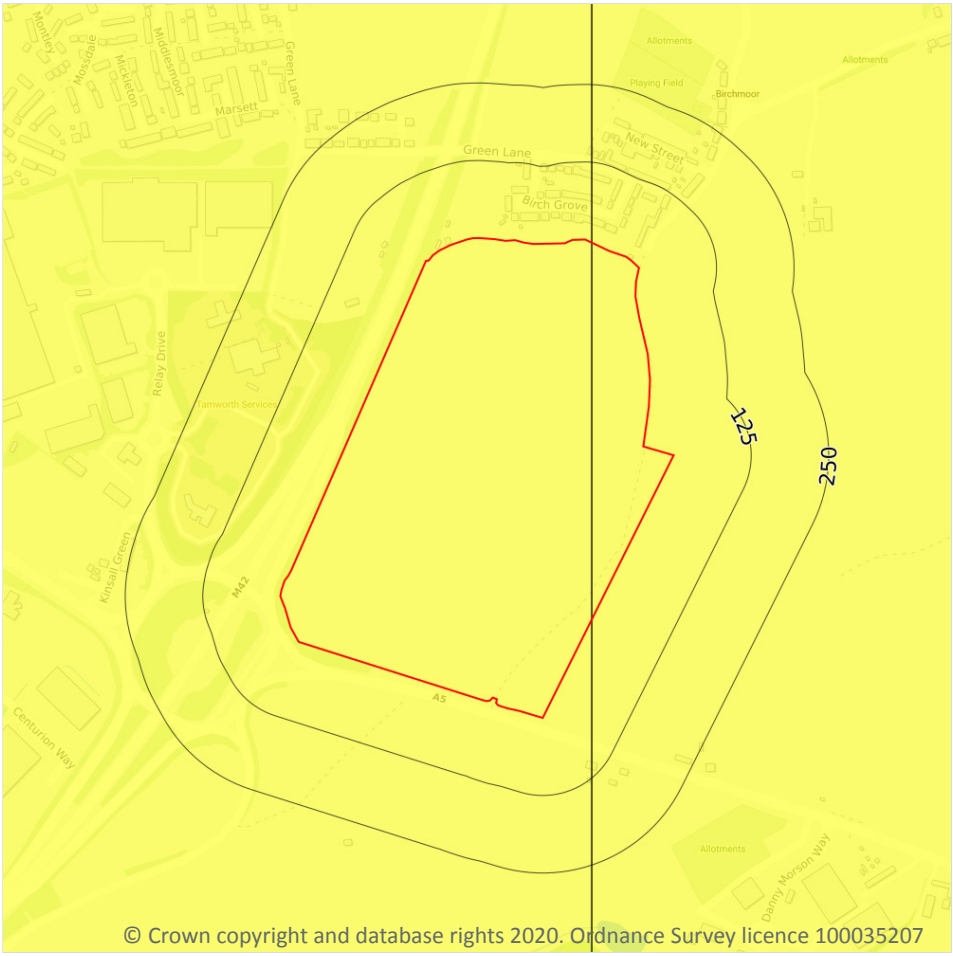
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 88**

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.**

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	1

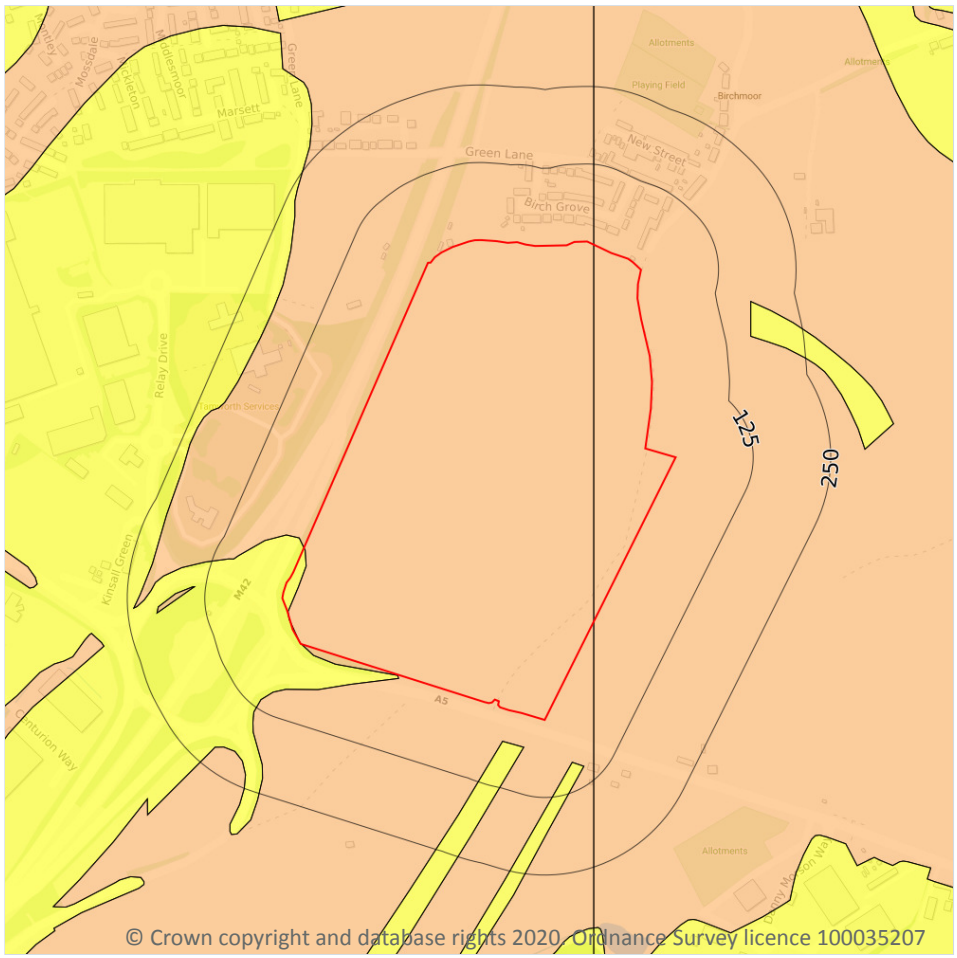
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 90**

Location	Hazard rating	Details
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	2

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 91**

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.**

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

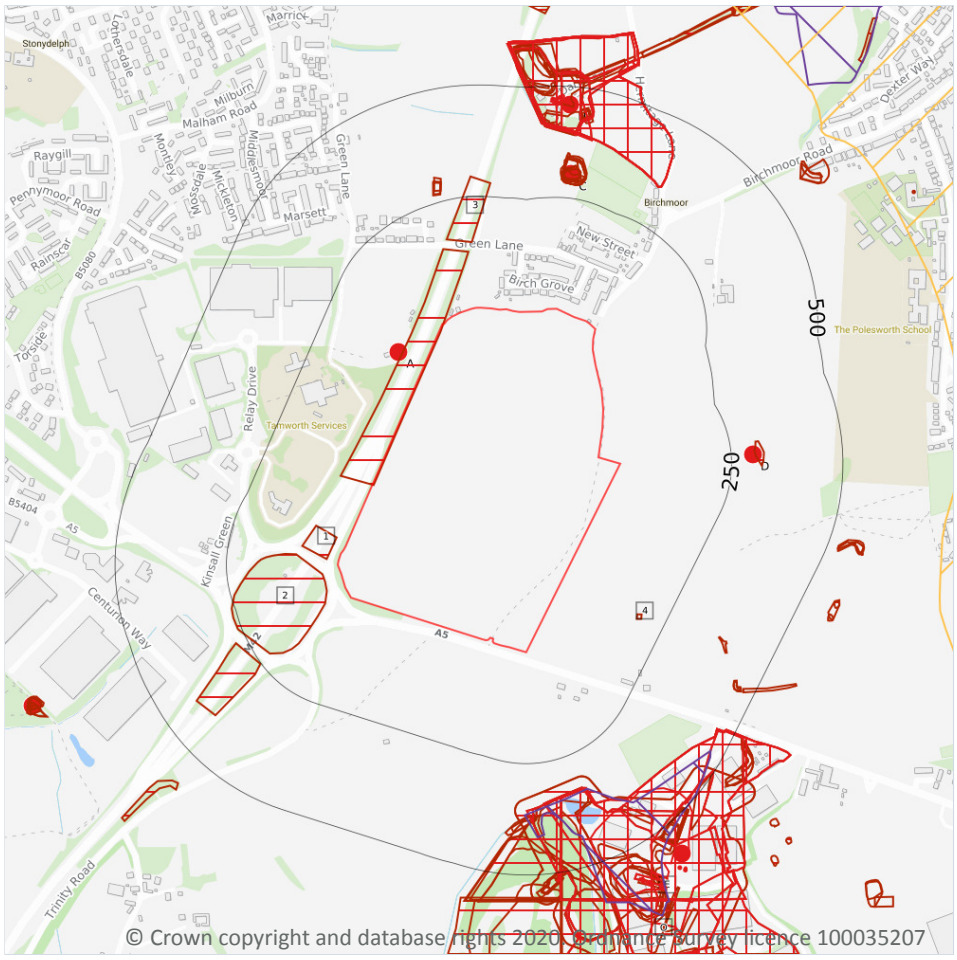
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 93**

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 Peter Brett Associates (PBA).

18.2 BritPits

Records within 500m	**4**

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 94**

ID	Location	Details	Description
A	64m NW	Name: Birch Moor Quarries Address: Birch Moor, POLESWORTH, Warwickshire Commodity: Limestone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
D	298m E	Name: Hall End Address: Dordon, POLESWORTH, Warwickshire Commodity: Limestone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
C	304m N	Name: Birchmoor Address: Birchmoor, Polesworth, TAMWORTH, Warwickshire Commodity: Clay & Shale Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
H	459m N	Name: Birchmoor Colliery Address: POLESWORTH, Warwickshire Commodity: Coal, Deep Status: 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)	Type: Ceased 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	**5**

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 94**

ID	Location	Land Use	Year of mapping	Mapping scale
A	**On site**	**Cuttings**	**1988**	**1:10000**
1	24m NW	Cuttings	1988	1:10000
2	40m W	Cuttings	1988	1:10000
3	148m N	Cuttings	1988	1:10000
4	185m SE	Filter Bed	1989	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	**34**

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 94**

ID	Location	Land Use	Year of mapping	Mapping scale
E	329m S	Colliery	1901	1:10560
E	331m SE	Colliery	1938	1:10560
E	331m SE	Colliery	1950	1:10560
E	333m S	Colliery	1966	1:10560
H	342m NE	Disused Colliery	1921	1:10560
H	342m NE	Disused Colliery	1901	1:10560
H	342m NE	Disused Colliery	1924	1:10560
H	386m N	Colliery	1883	1:10560
H	393m N	Disused Colliery	1938	1:10560
H	397m N	Disused Colliery	1950	1:10560
E	403m SE	Coal Mine	1975	1:10000
H	456m N	Unspecified Shafts	1921	1:10560
H	460m N	Unspecified Shafts	1938	1:10560
H	461m N	Unspecified Shafts	1924	1:10560
H	462m N	Air Shaft	1966	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
H	468m N	Unspecified Shafts	1924	1:10560
H	472m N	Unspecified Shafts	1924	1:10560
H	474m N	Unspecified Shaft	1901	1:10560
E	489m SE	Colliery	1883	1:10560
O	565m S	Colliery	1950	1:10560
E	570m SE	Unspecified Shafts	1921	1:10560
E	570m SE	Unspecified Shafts	1924	1:10560
E	572m SE	Unspecified Shafts	1938	1:10560
E	582m SE	Unspecified Shafts	1921	1:10560
E	582m SE	Unspecified Shafts	1924	1:10560
E	591m SE	Unspecified Shafts	1938	1:10560
E	601m SE	Unspecified Shafts	1921	1:10560
E	601m SE	Unspecified Shafts	1924	1:10560
E	601m SE	Unspecified Shafts	1938	1:10560
E	603m SE	Unspecified Shafts	1924	1:10560
E	604m SE	Unspecified Shafts	1938	1:10560
-	972m E	Unspecified Old Shaft	1901	1:10560
-	980m E	Unspecified Old Shaft	1885	1:10560
-	980m E	Unspecified Old Shaft	1885	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	**1**

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
E	336m SE	Birch Coppice Colliery Brickworks	Clay	Surface mineral working	Application	Not available

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	**1**

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 94**

ID	Location	Name	Commodity	Class	Likelihood
15	675m NE	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 Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site	**1**

Areas which could be affected by former coal mining. This data includes some mine plans unavailable to the Coal Authority.

Location	Details
On site	**In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.**

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 Mining Searches UK.

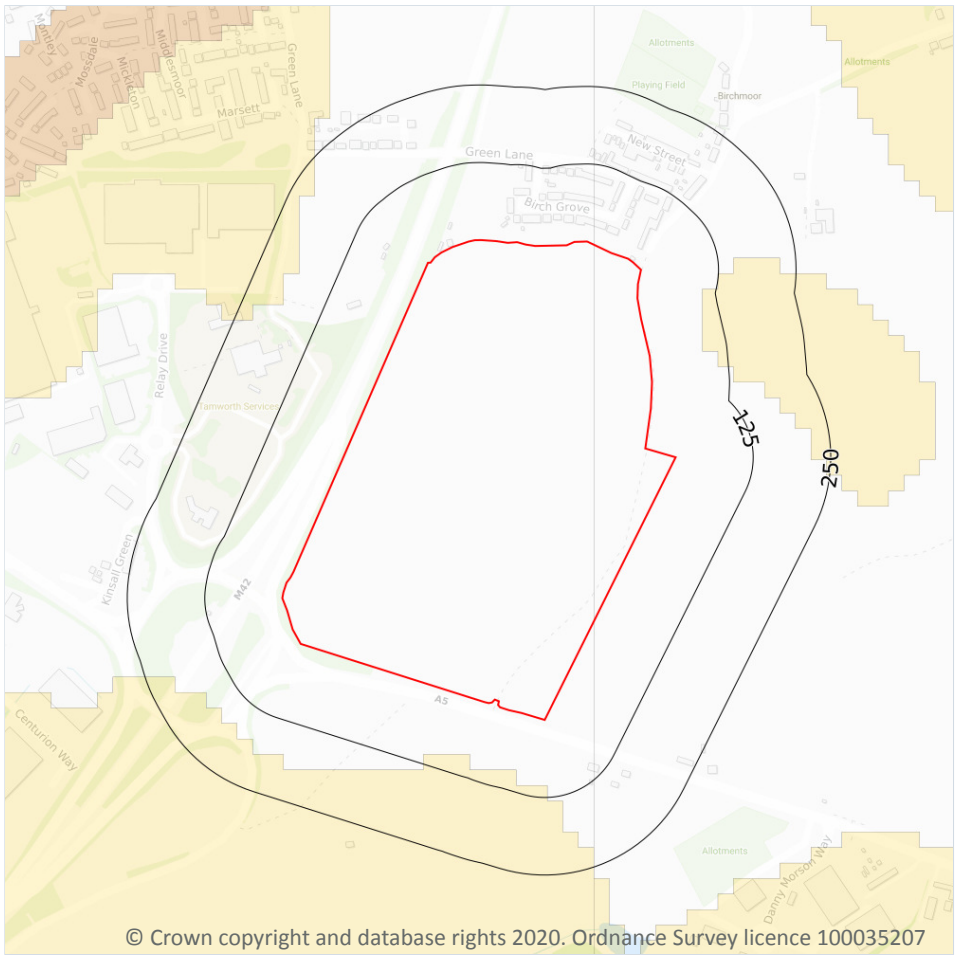
18.13 Clay mining

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



Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

19.1 Radon

Records on site	1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 101**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Less than 1%**	**None****

This data is sourced from the British Geological Survey and Public Health England.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m **13**

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**	**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**

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 1 Worksites
- 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	0

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.

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	4

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.

Features are displayed on the Railway infrastructure and projects map on **page 104**

Location	Track Type	Speed (mph)	Speed (km/h)	Status
101m NW	Tunnel	249mph	400kph	Current preferred consultation route
107m NW	Surface Running Track	249mph	400kph	Current preferred consultation route
169m NW	Tunnel	249mph	400kph	Current preferred consultation route
439m SW	Surface Running Track	249mph	400kph	Current preferred consultation route

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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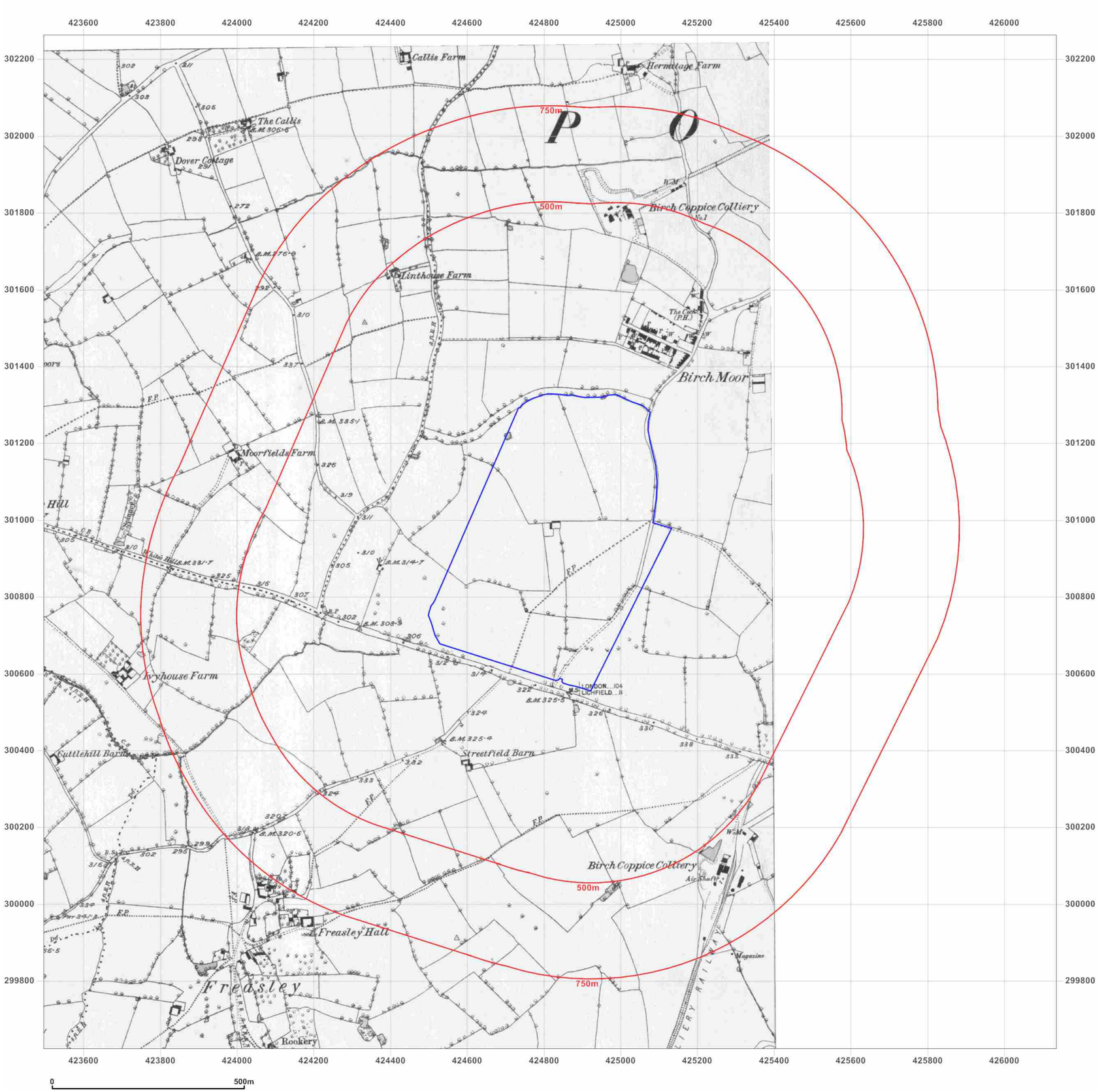

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Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: County Series

Map date: **1883**

Scale: 1:10,560

Printed at: 1:10,560

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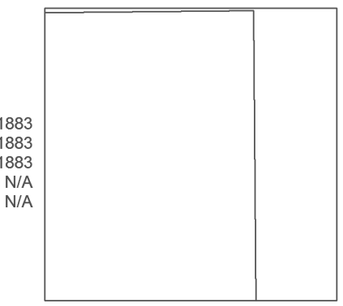
Revised 1883
Edition 1883
Copyright N/A
Levelled N/A



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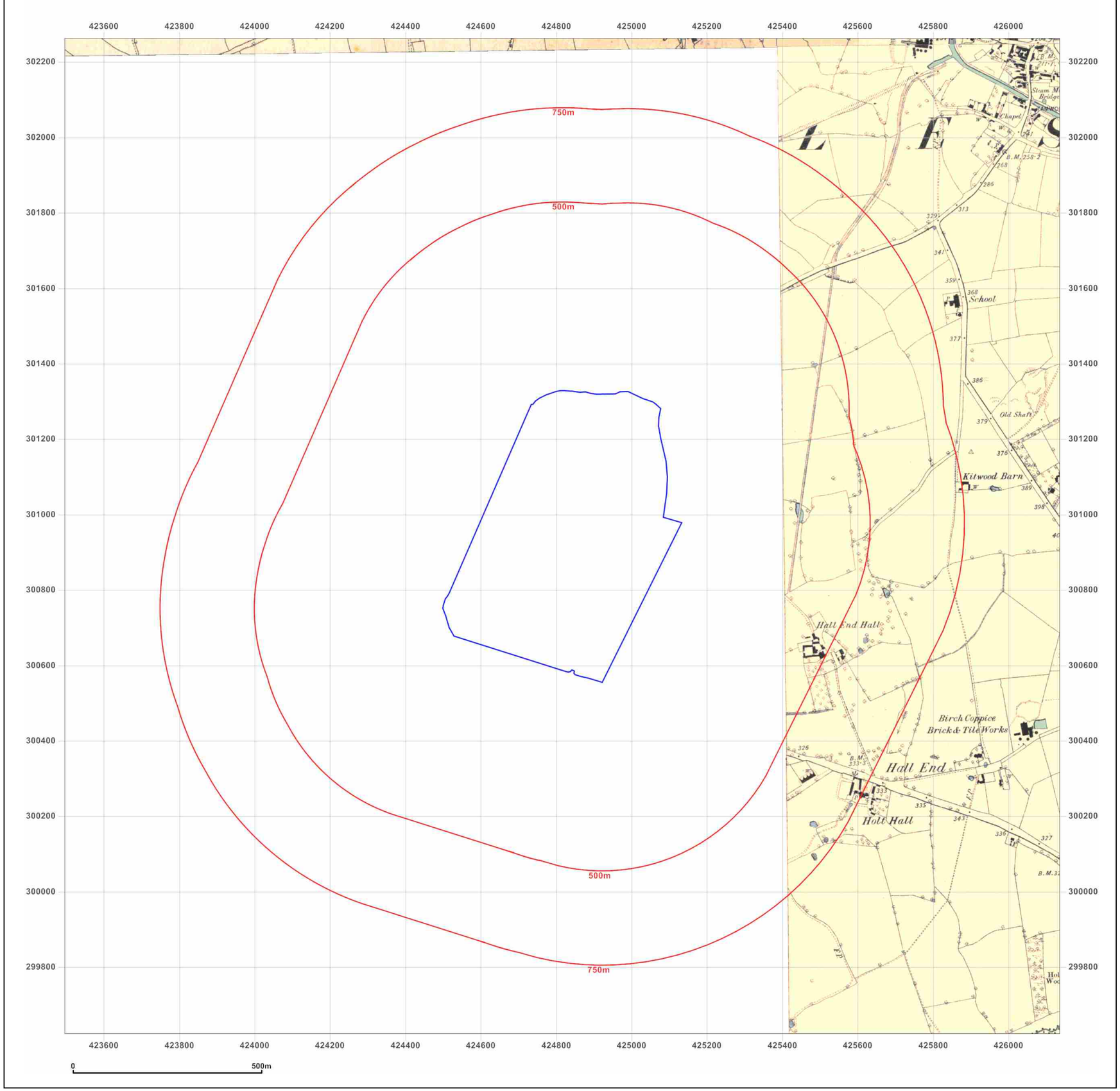

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Site Details:

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Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: County Series

Map date: **1883-1885**

Scale: 1:10,560

Printed at: 1:10,560

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Edition 1883
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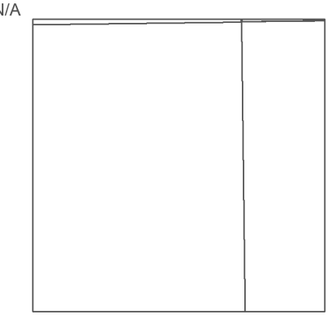
Revised 1885
Edition 1885
Copyright N/A
Levelled N/A



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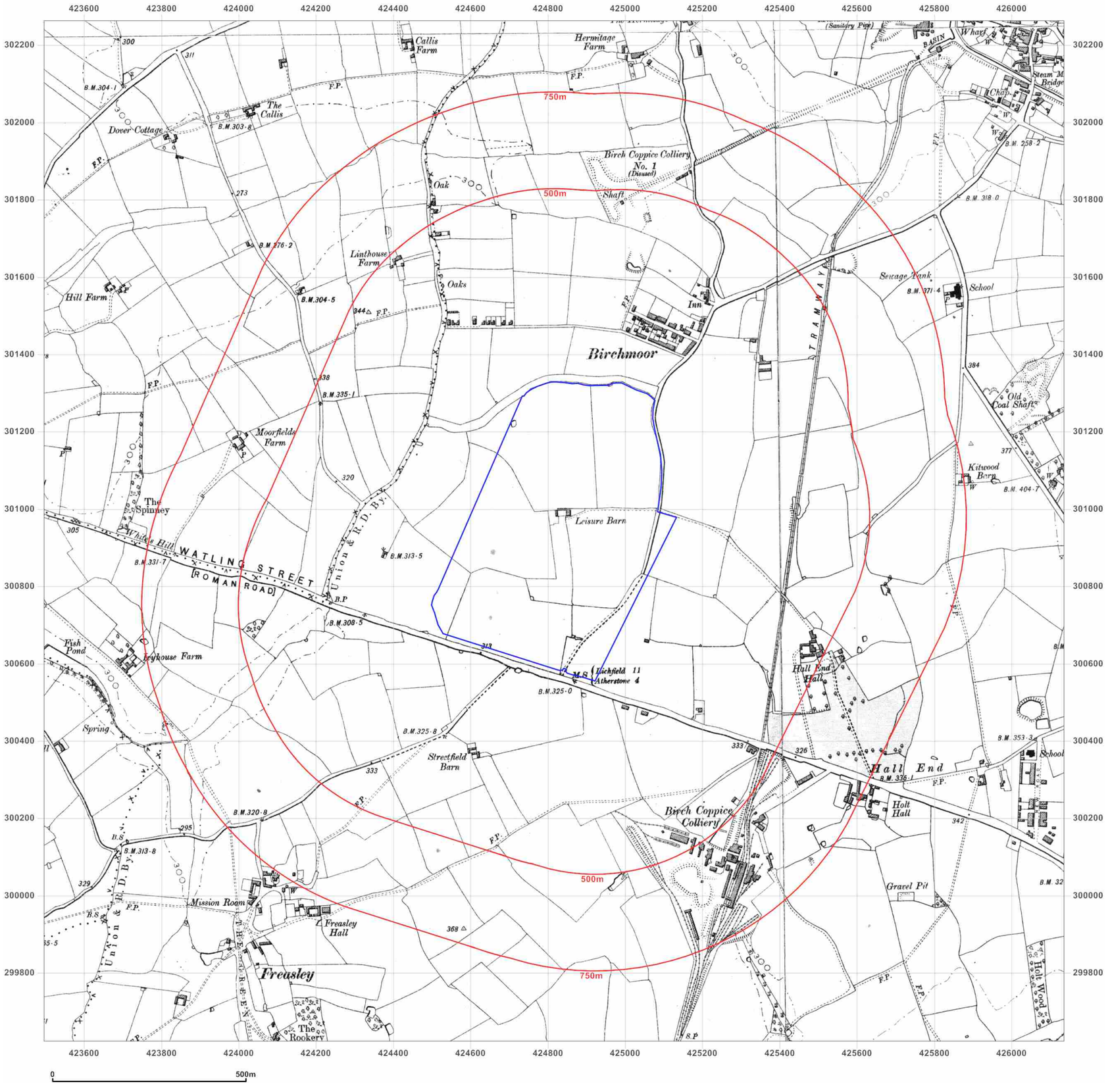

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Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: County Series

Map date: **1901**

Scale: 1:10,560

Printed at: 1:10,560

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Edition 1901
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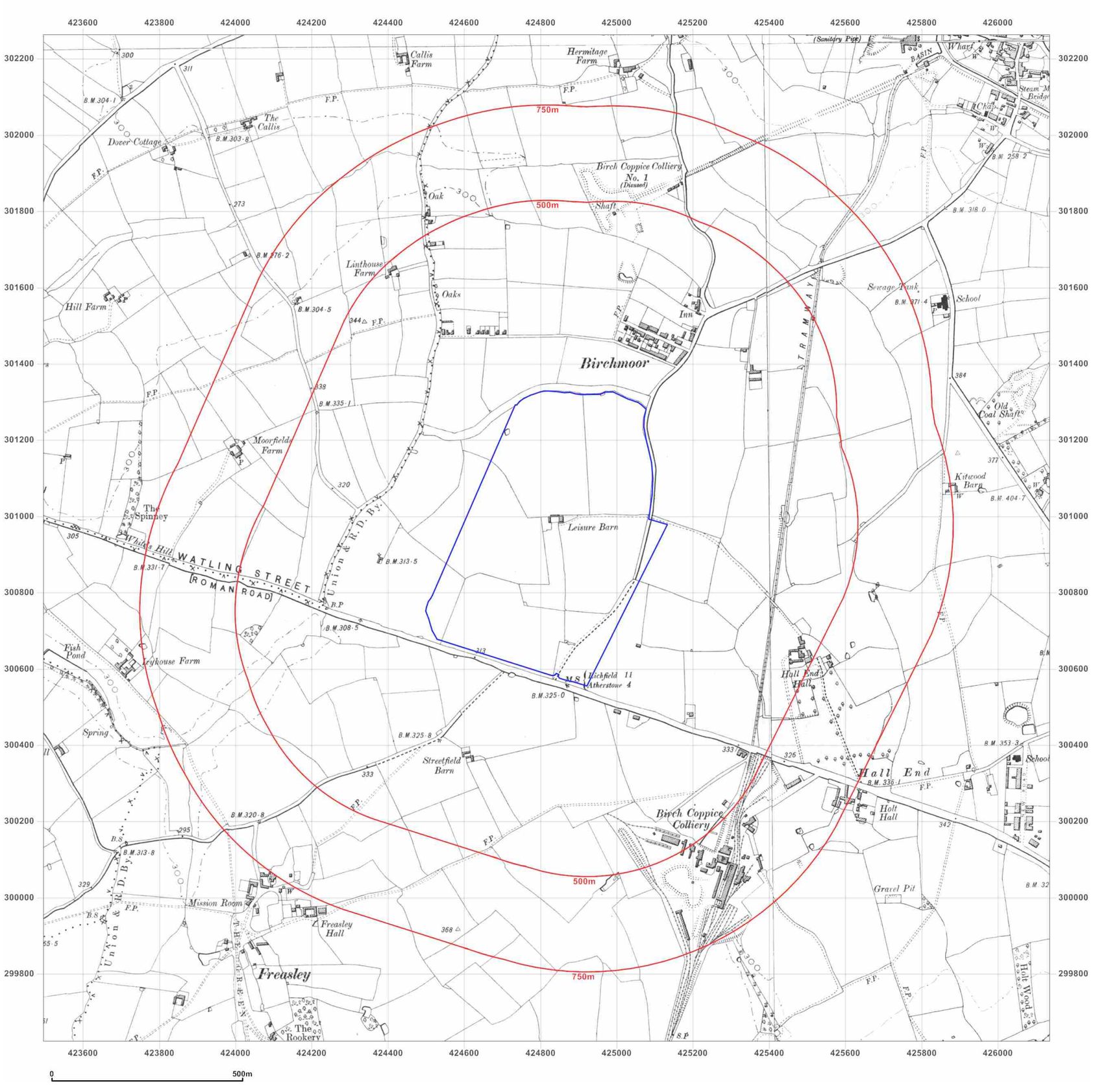

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Site Details:

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Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: County Series

Map date: **1901**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1901
Edition 1901
Copyright N/A
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Surveyed 1885
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Edition 1901
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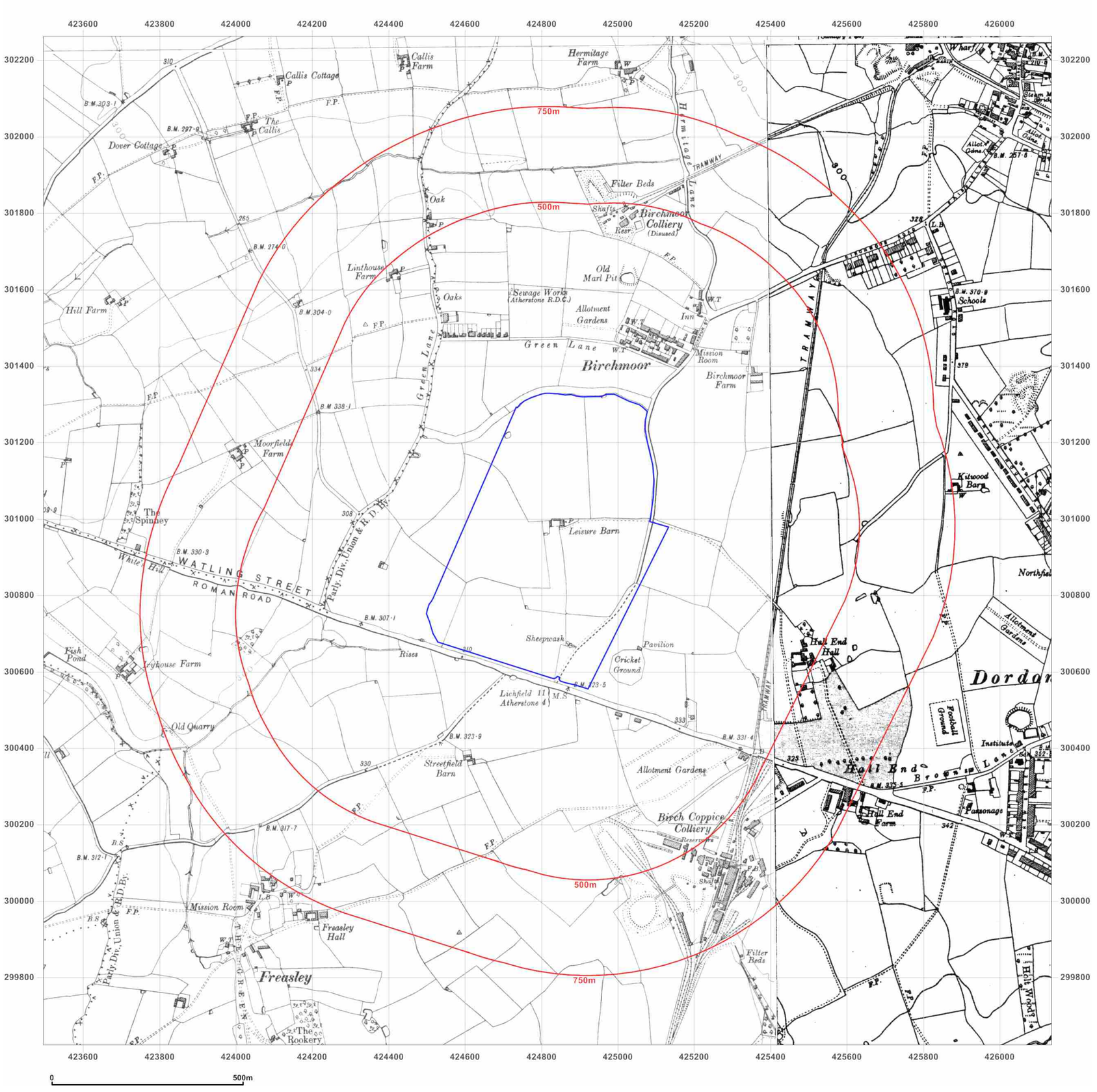

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Site Details:

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Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: County Series

Map date: **1921-1925**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1882
Revised 1921
Edition 1921
Copyright N/A
Levelled 1922

Surveyed 1886
Revised 1922
Edition 1924
Copyright N/A
Levelled 1923

Surveyed 1882
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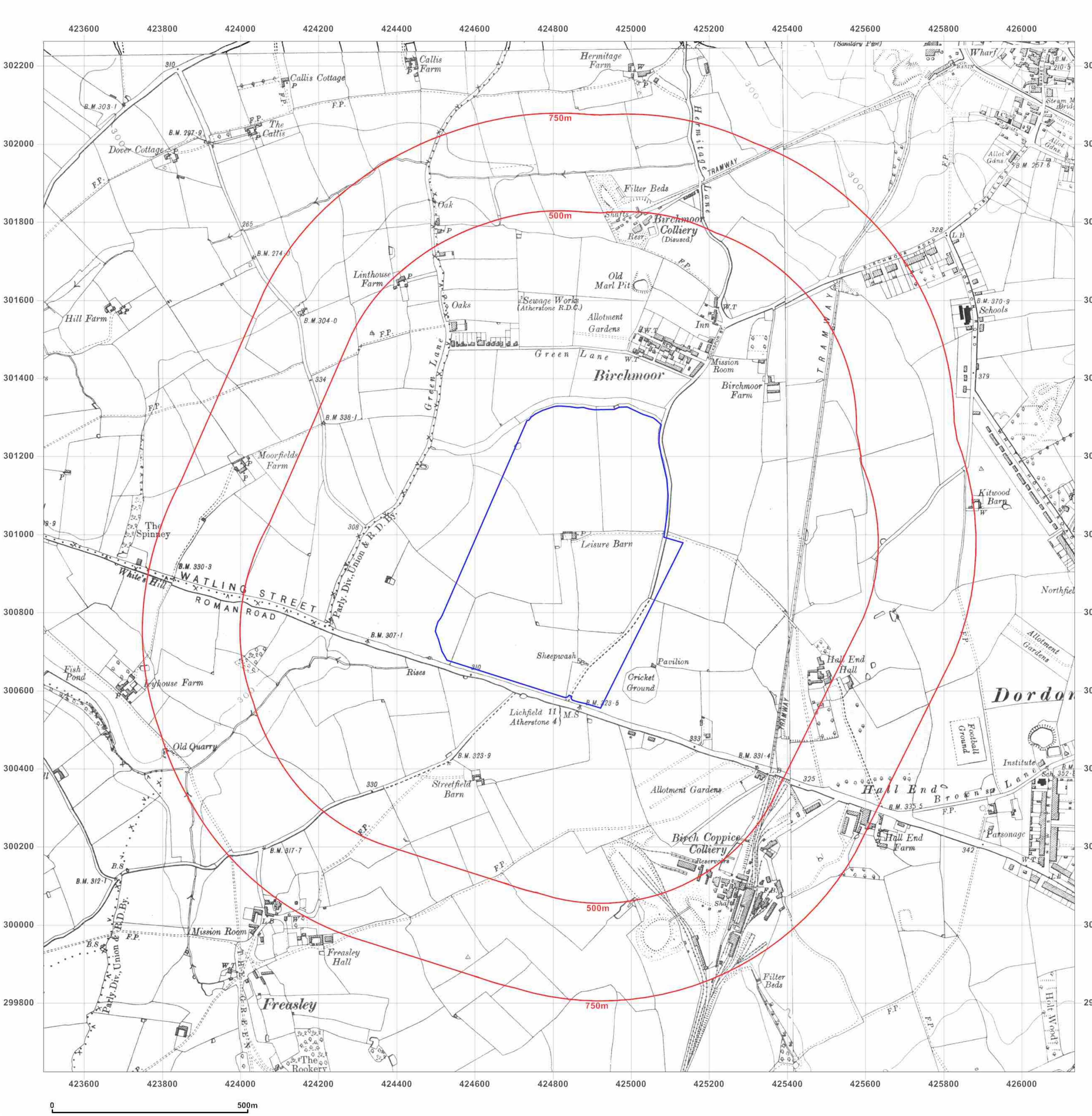

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: County Series

Map date: **1924-1925**

Scale: 1:10,560

Printed at: 1:10,560

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Edition 1924
Copyright N/A
Levelled 1923

Surveyed 1884
Revised 1924
Edition 1924
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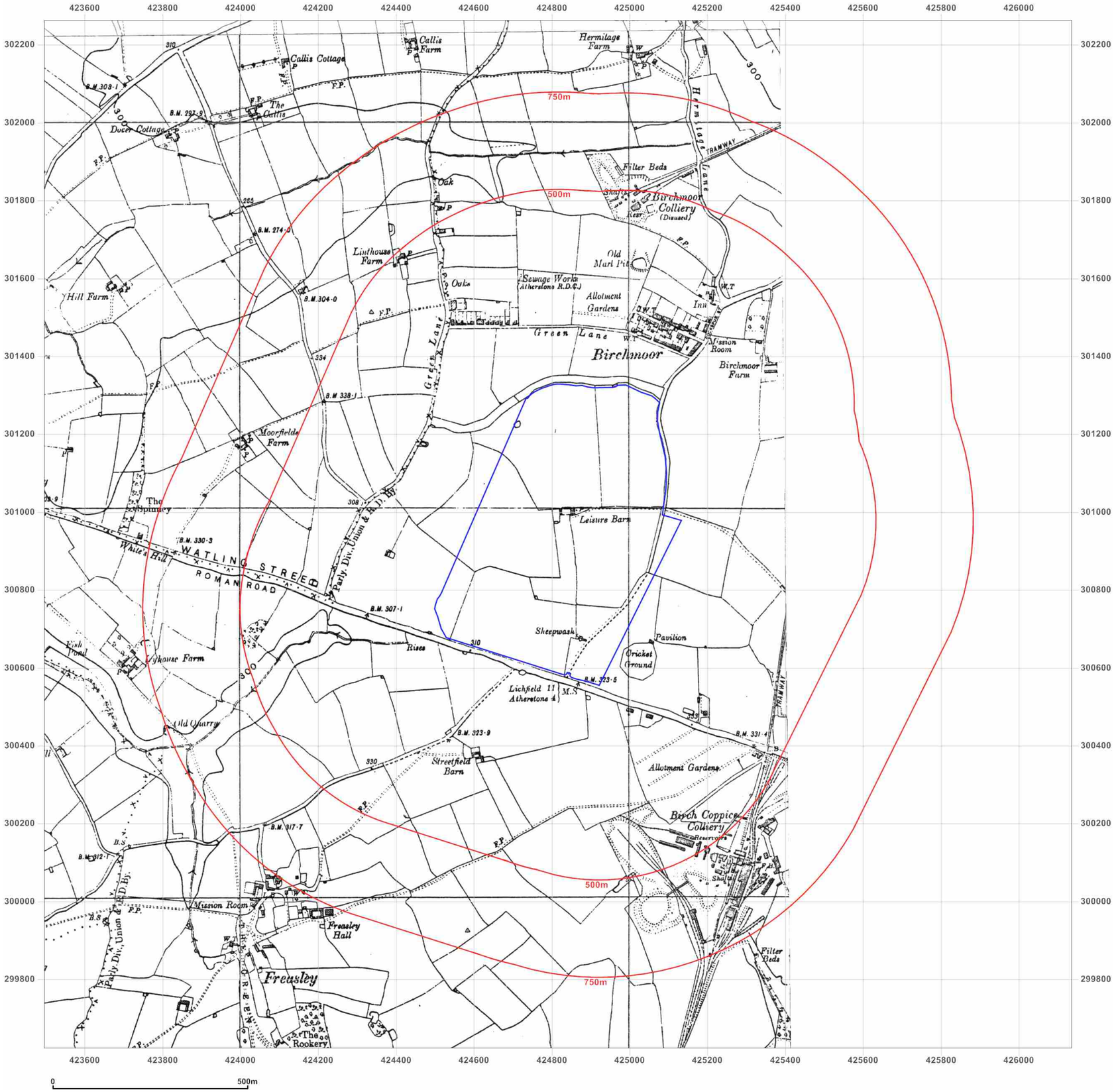

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Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1882
Revised 1938
Edition 1938
Copyright N/A
Levelled 1922

Surveyed 1884
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Edition 1938
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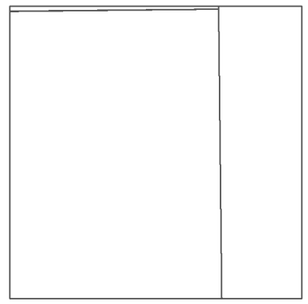

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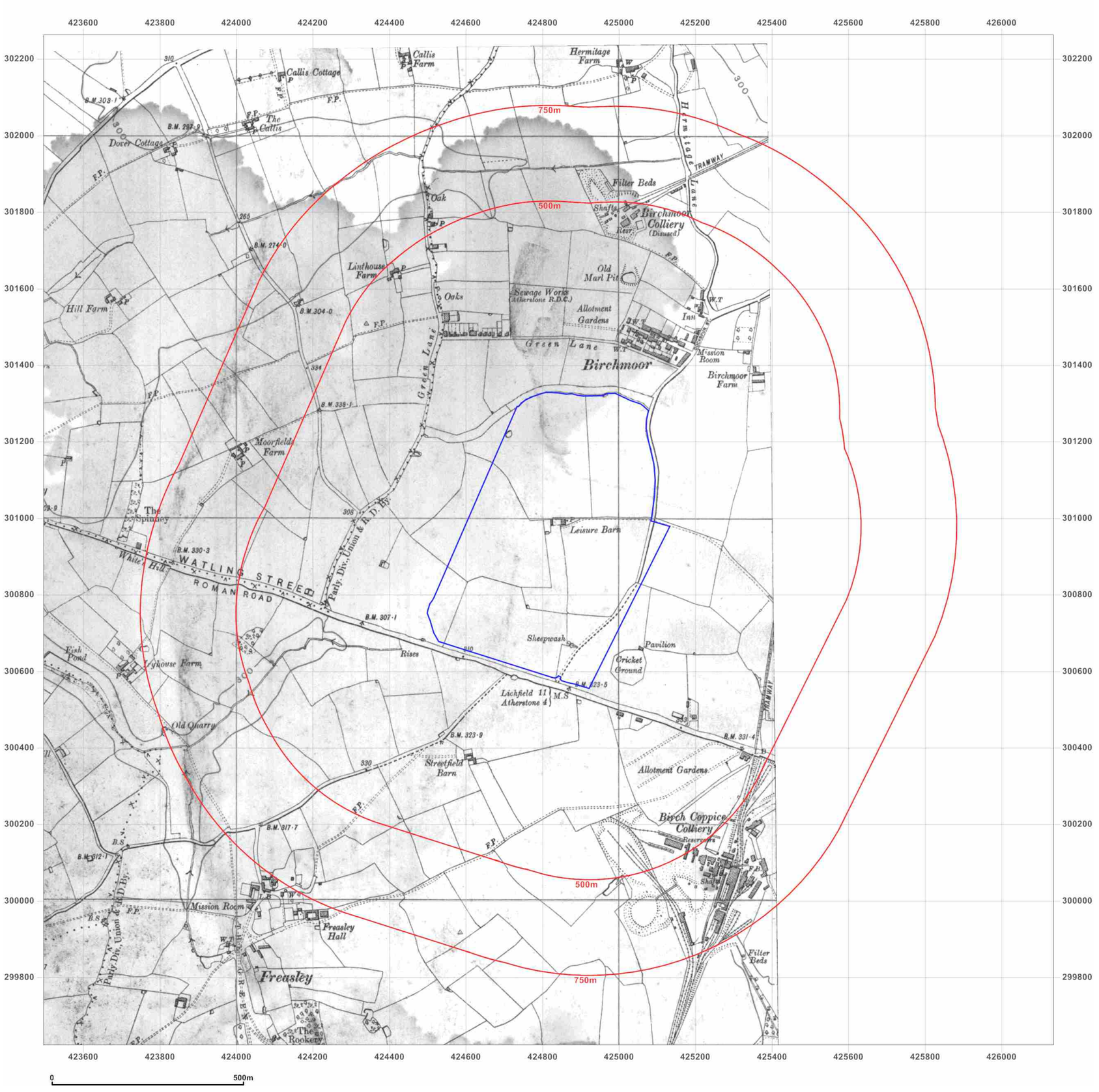

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Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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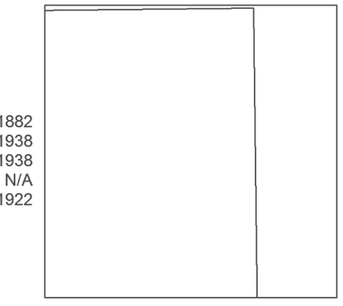
Surveyed 1882
Revised 1938
Edition 1938
Copyright N/A
Levelled 1922



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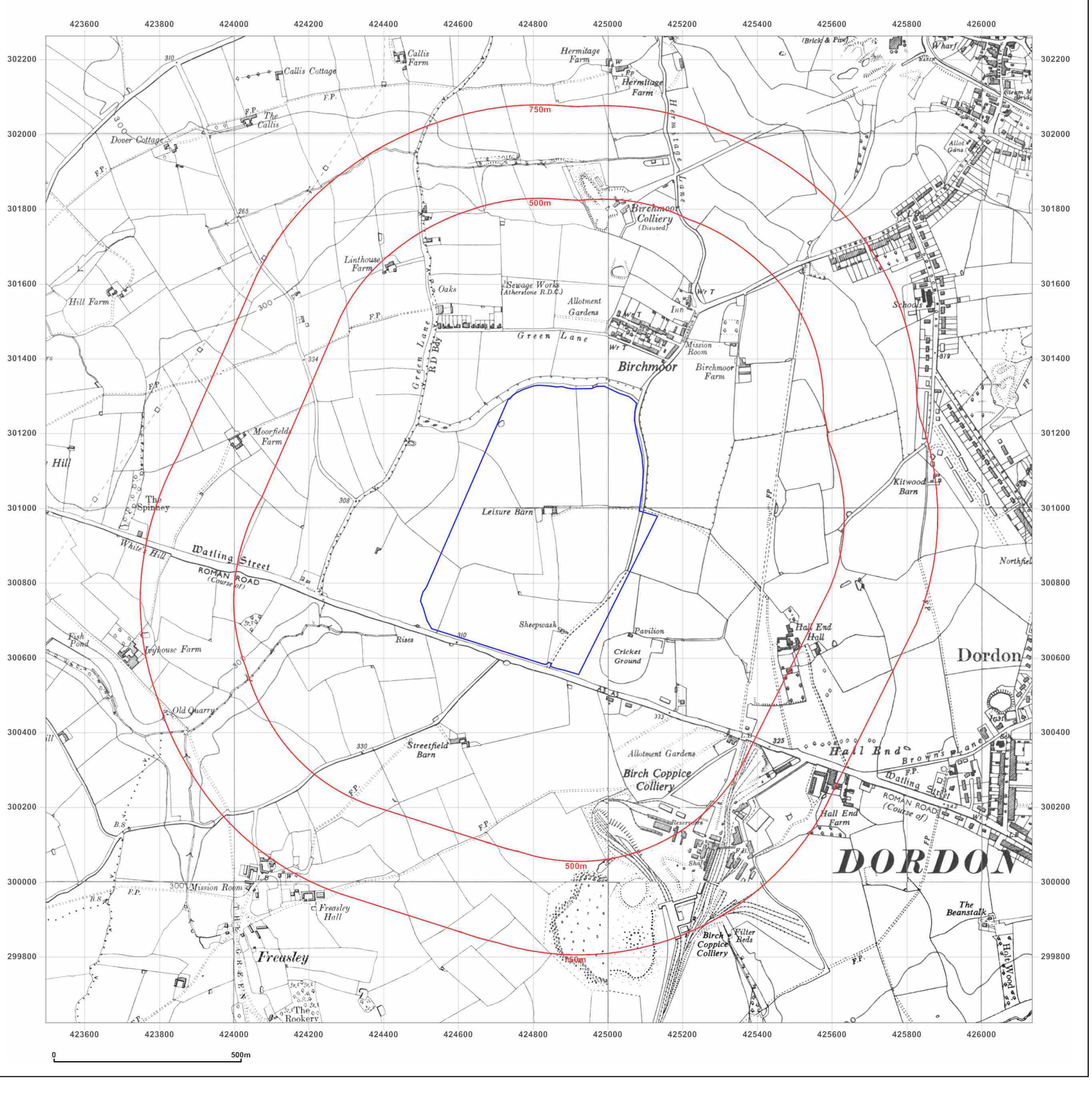

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TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: Provisional
Map date: **1950-1955**
Scale: 1:10,560
Printed at: 1:10,560

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Surveyed N/A
Revised 1955
Edition N/A
Copyright 1955
Levelled N/A

Surveyed 1950
Revised 1950
Edition N/A
Copyright 1950
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Surveyed 1950
Revised 1950
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Copyright 1954
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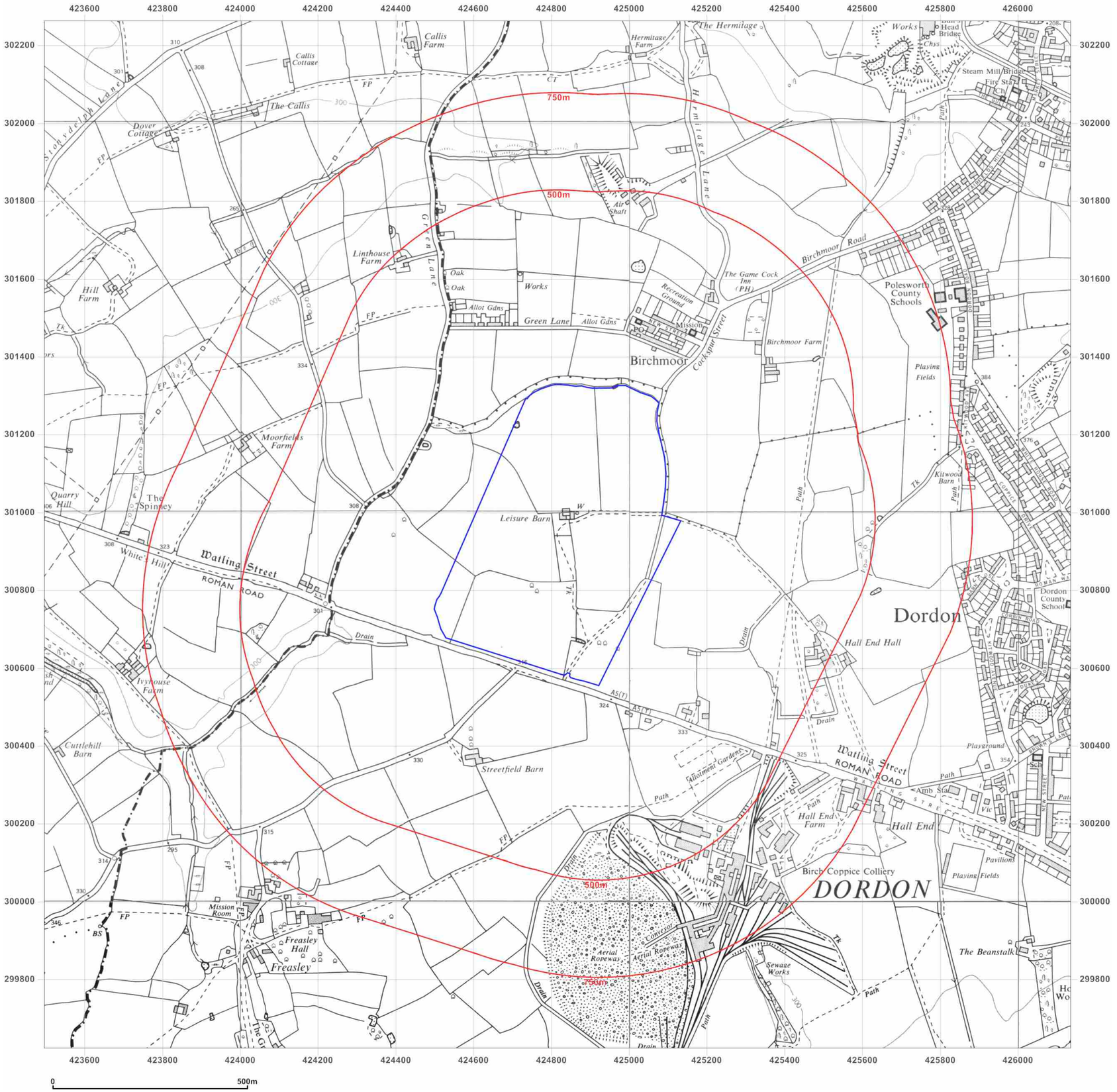

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: Provisional
Map date: **1965-1967**
Scale: 1:10,560
Printed at: 1:10,560

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Revised 1966
Edition N/A
Copyright 1966
Levelled N/A

Surveyed 1966
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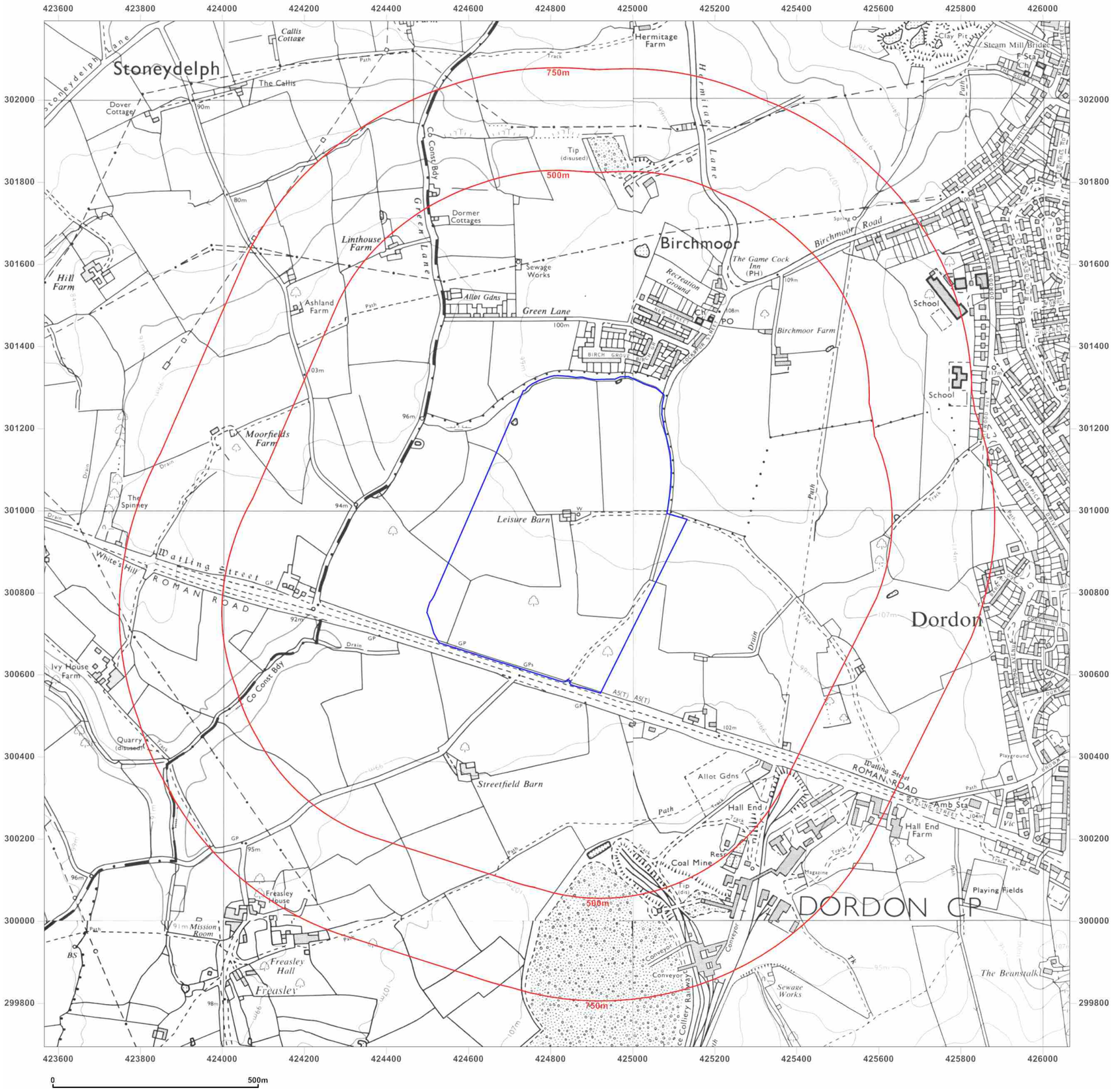

Groundsure INSIGHTS

Site Details:

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Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: National Grid

Map date: **1976-1981**

Scale: 1:10,000

Printed at: 1:10,000

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Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: National Grid

Map date: **1988-1989**

Scale: 1:10,000

Printed at: 1:10,000

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Edition N/A
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Surveyed 1973
Revised 1989
Edition N/A
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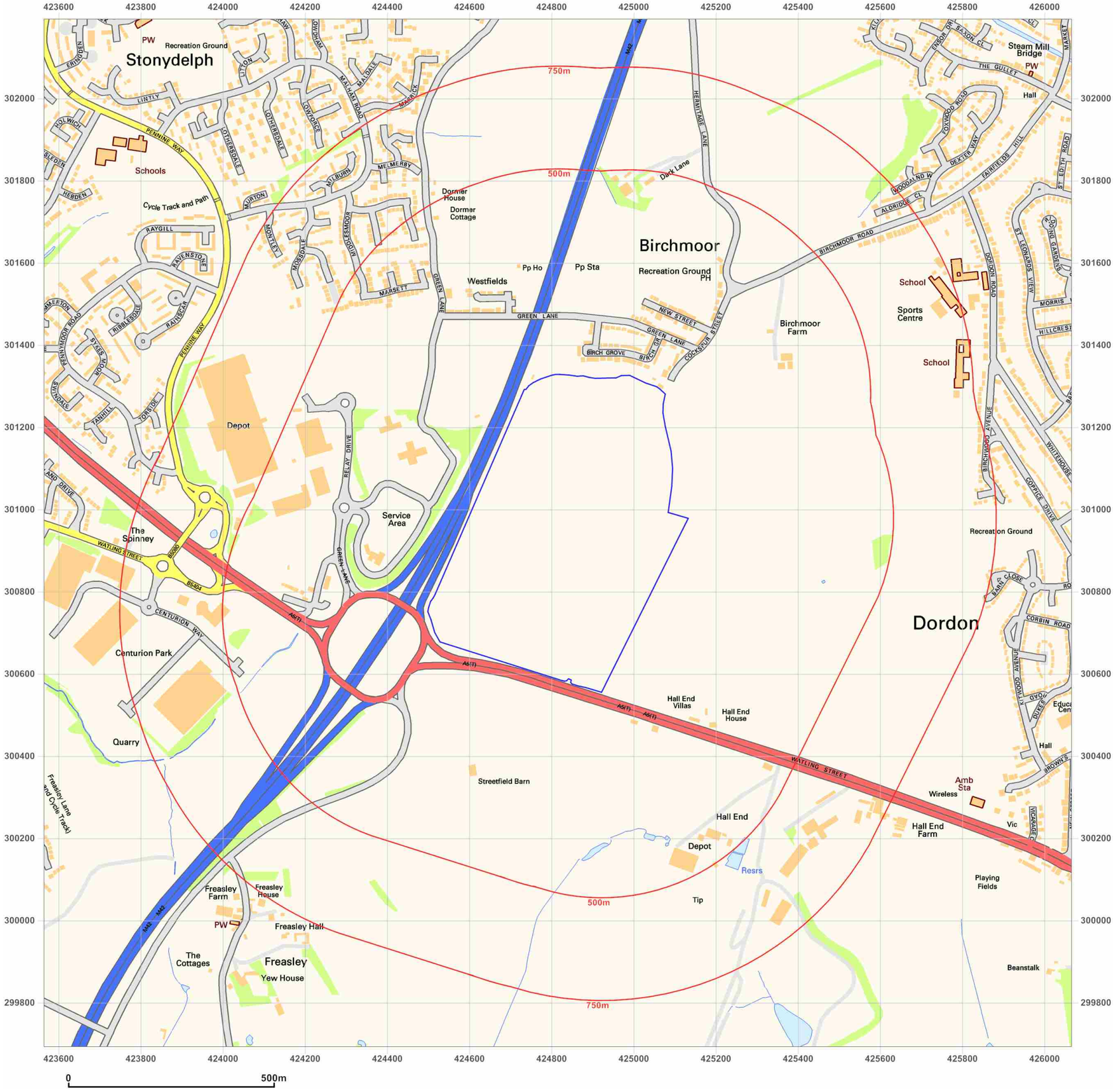

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: National Grid
Map date: **2001**
Scale: 1:10,000
Printed at: 1:10,000

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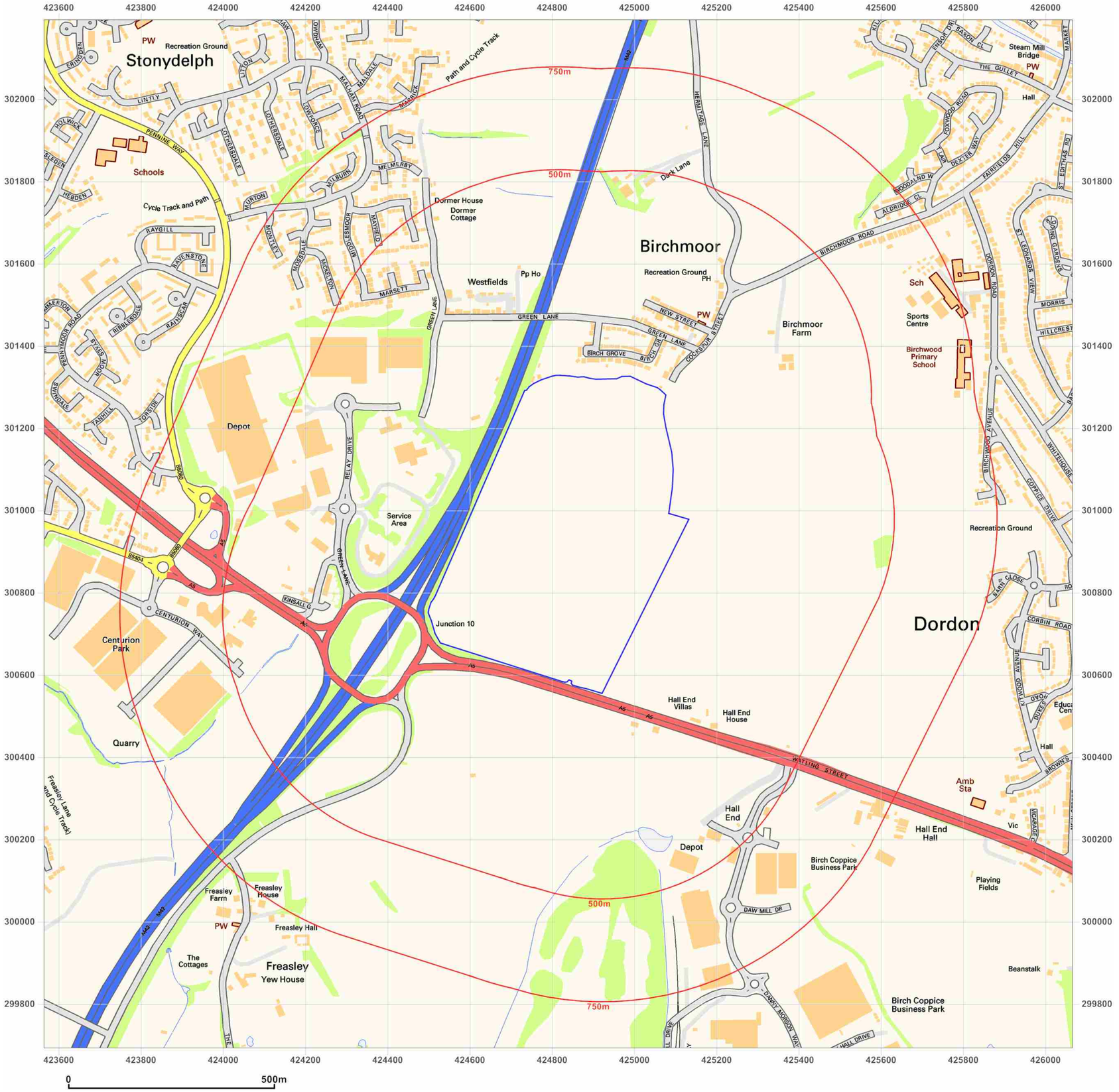

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: National Grid
Map date: **2010**
Scale: 1:10,000
Printed at: 1:10,000

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2010

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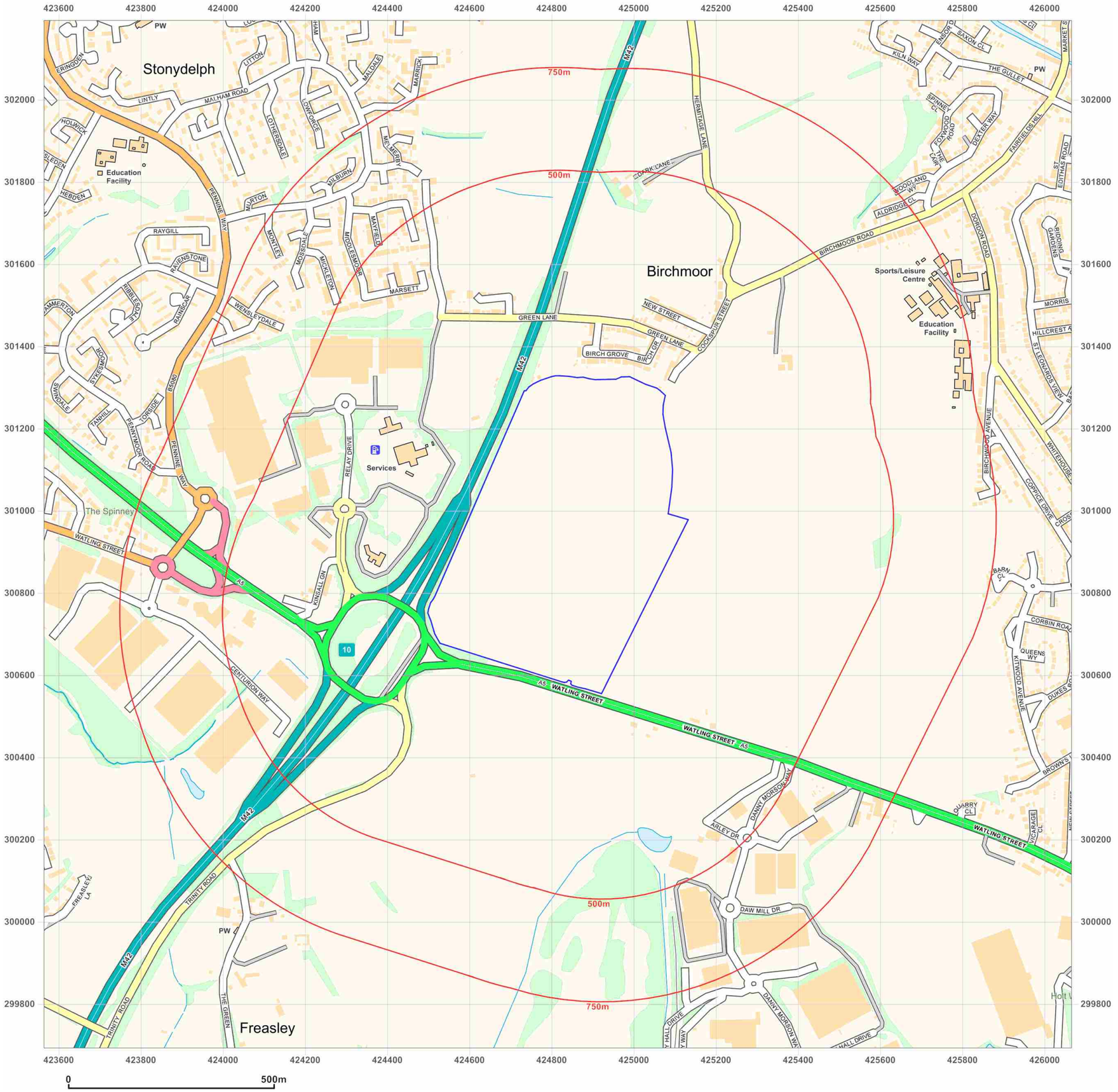

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301
Grid Ref: 424815, 300942

Map Name: National Grid

Map date: **2020**

Scale: 1:10,000

Printed at: 1:10,000

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2020

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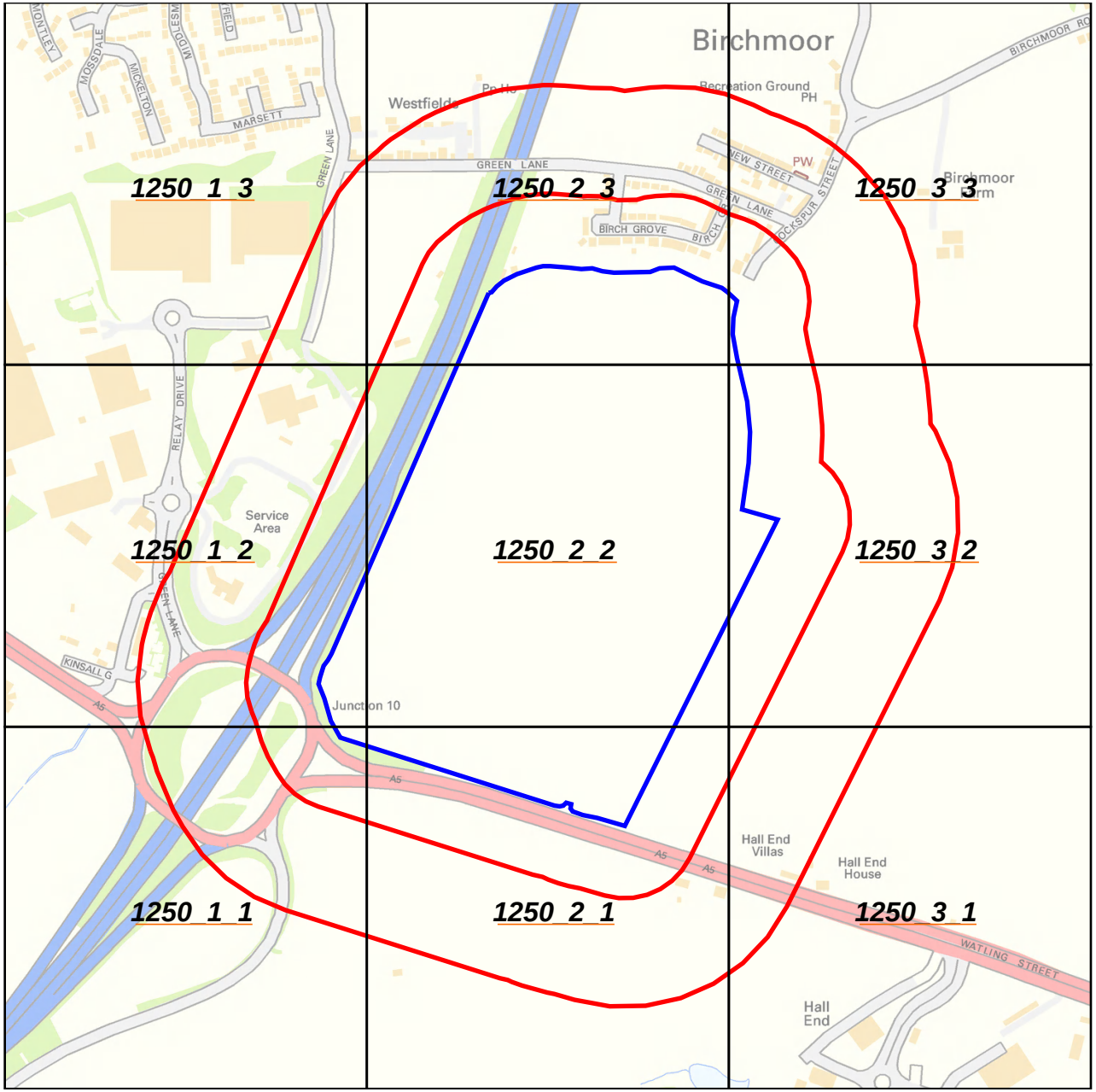

Groundsure INSIGHTS

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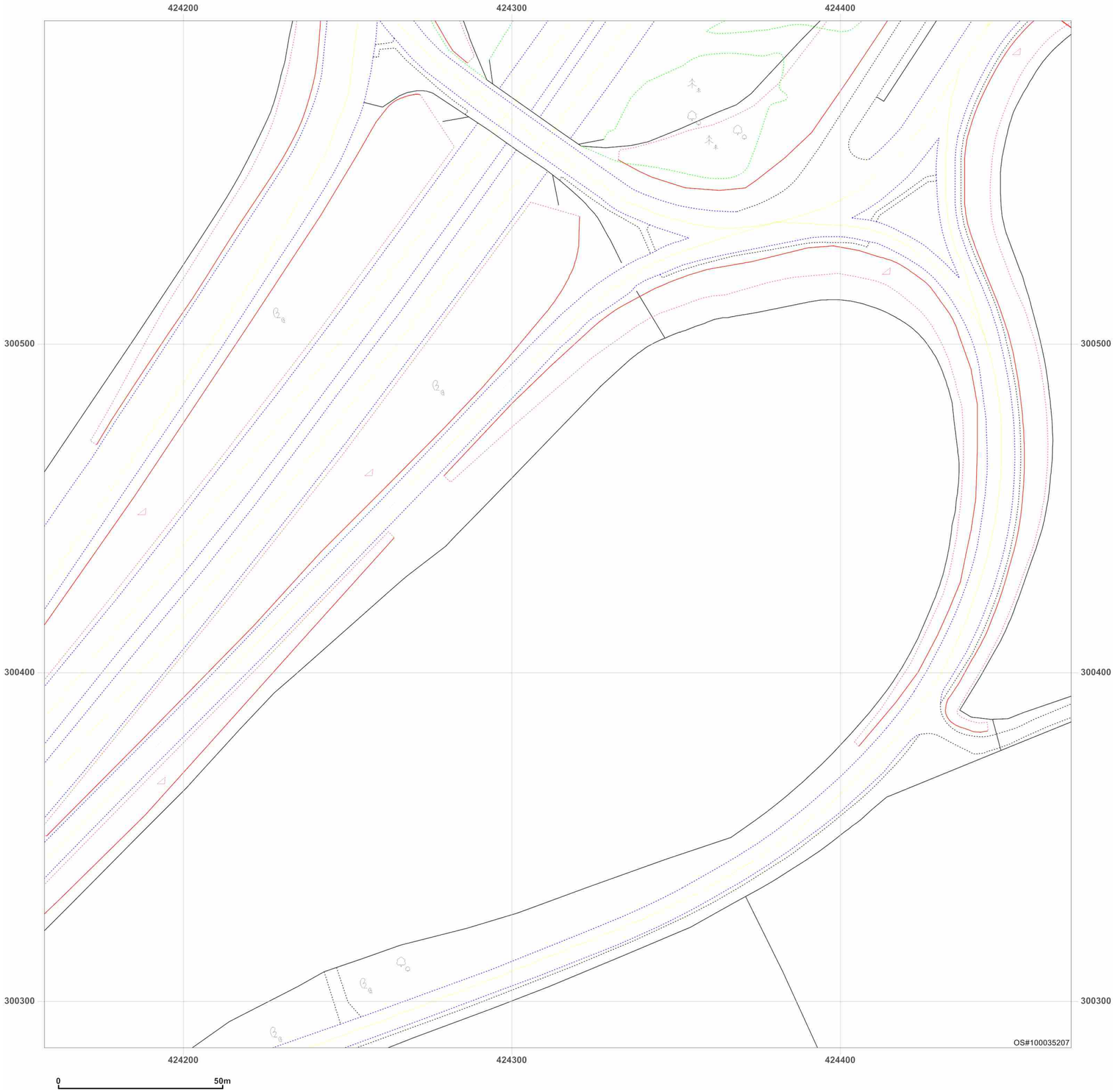
1:1250 Scale Grid Index



Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_1
Grid Ref: 424314, 300442

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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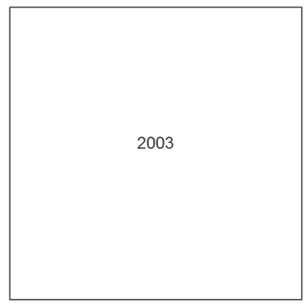

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Production date: 17 August 2020

Map legend available at:
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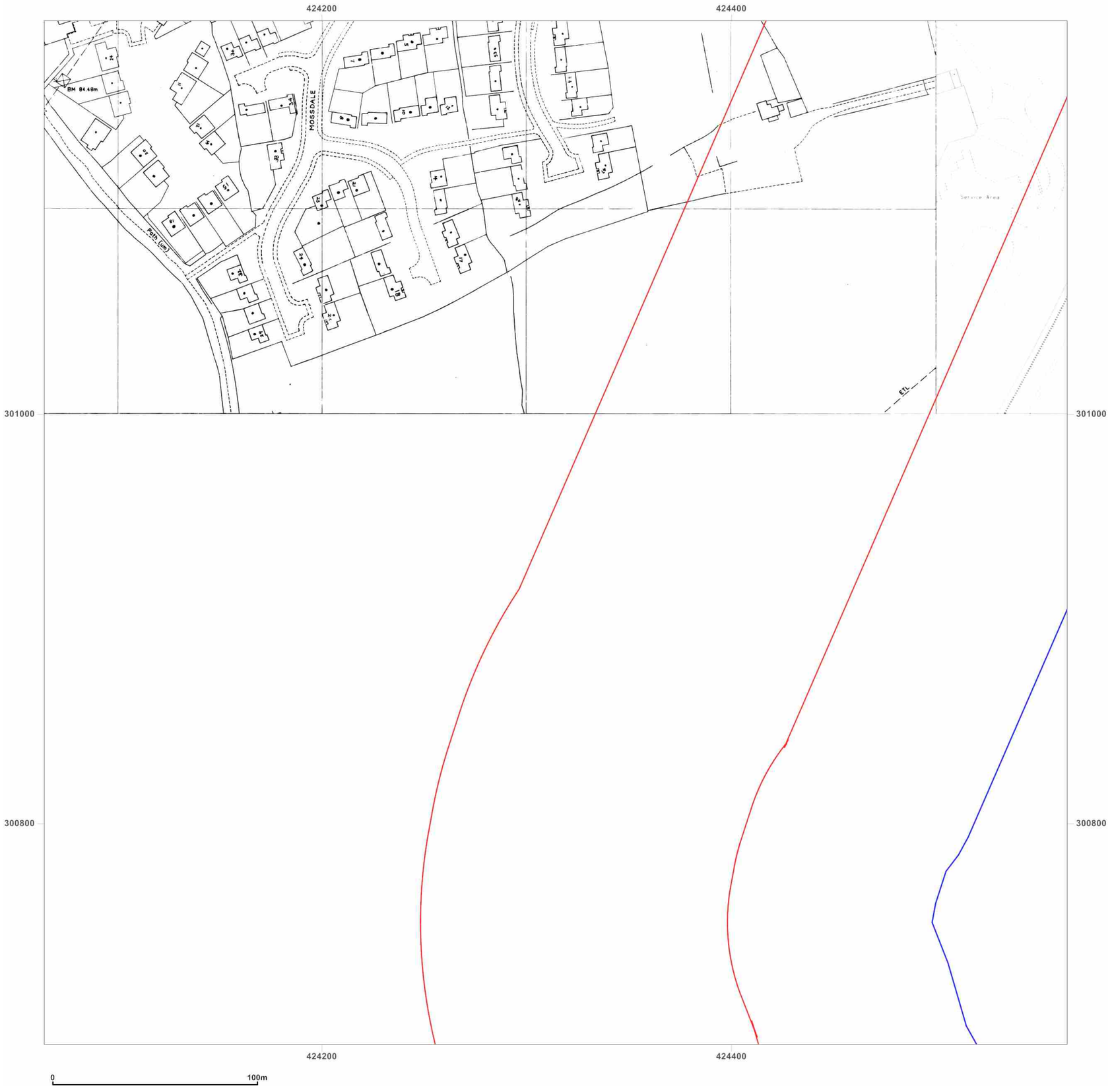

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_2
Grid Ref: 424314, 300942

Map Name: National Grid

Map date: **1988-1993**

Scale: 1:1,250

Printed at: 1:2,000

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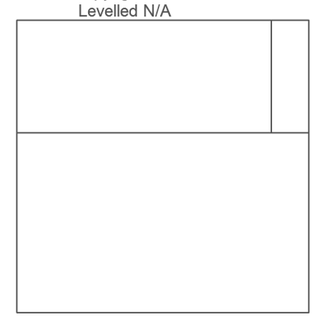
Surveyed N/A	Surveyed 1993
Revised N/A	Revised 1993
Edition N/A	Edition N/A
Copyright N/A	Copyright 1993
Levelled N/A	Levelled N/A



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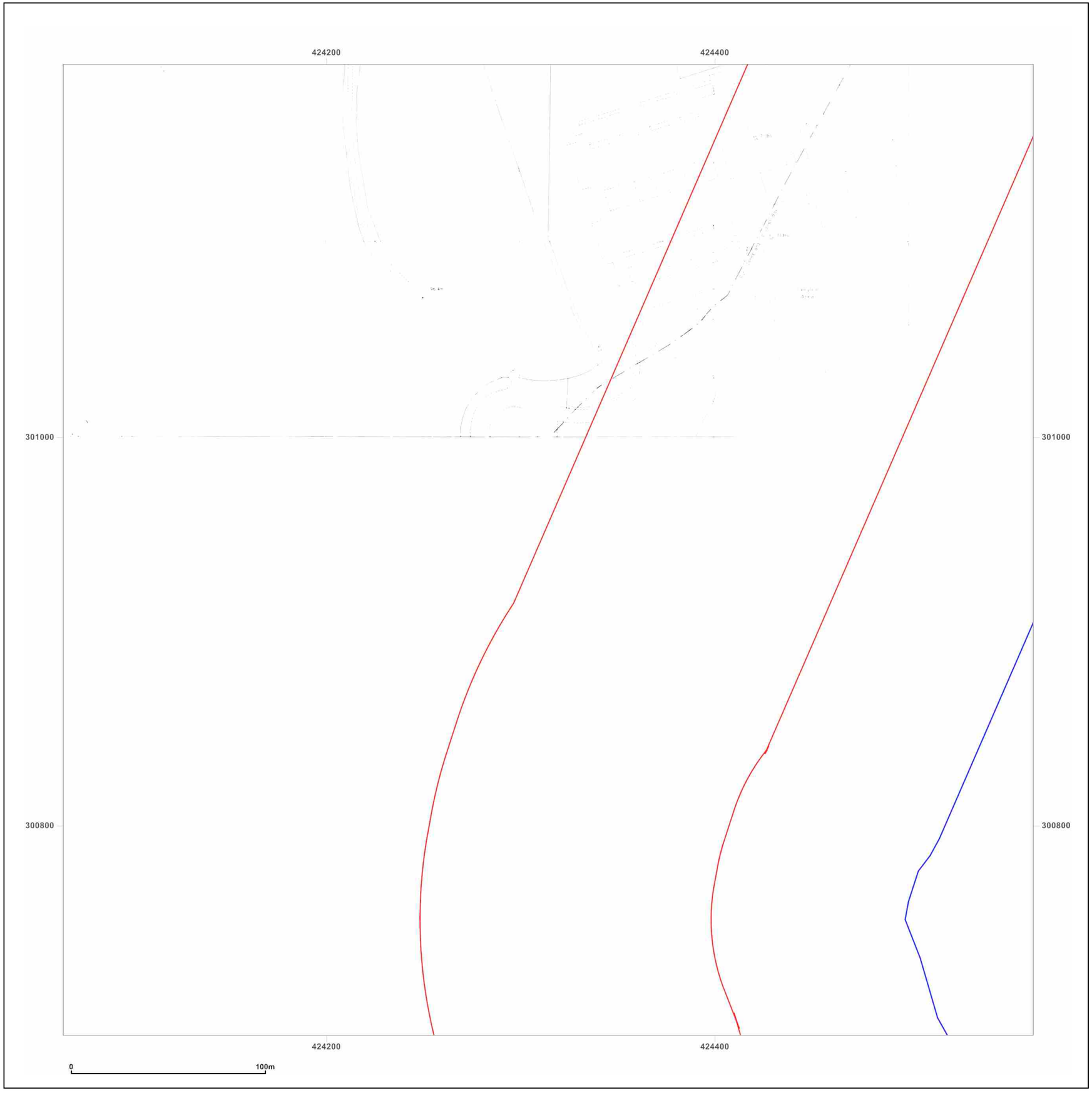

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_2
Grid Ref: 424314, 300942

Map Name: National Grid

Map date: **1993**

Scale: 1:1,250

Printed at: 1:2,000

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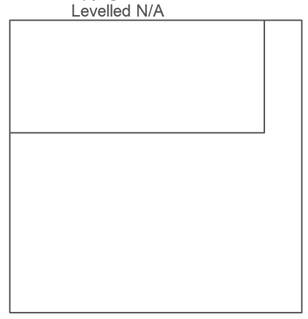
Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A



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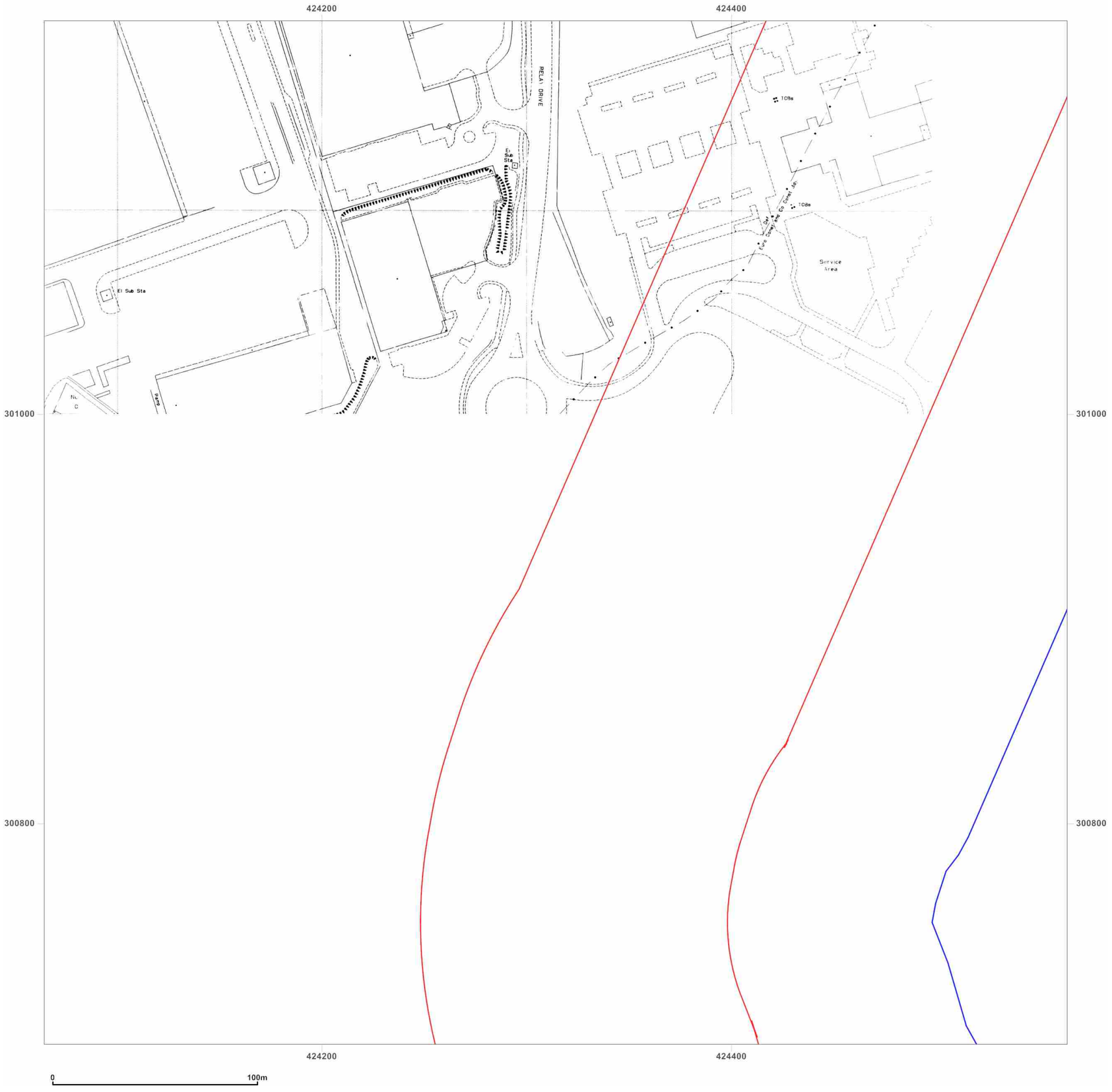

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_2
Grid Ref: 424314, 300942

Map Name: National Grid

Map date: **1995**

Scale: 1:1,250

Printed at: 1:2,000

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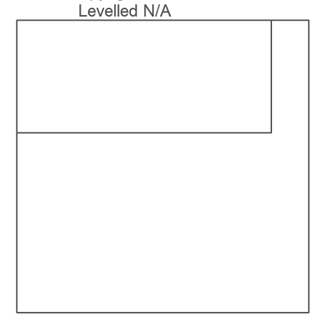
Surveyed 1995
Revised 1995
Edition N/A
Copyright 1995
Levelled N/A



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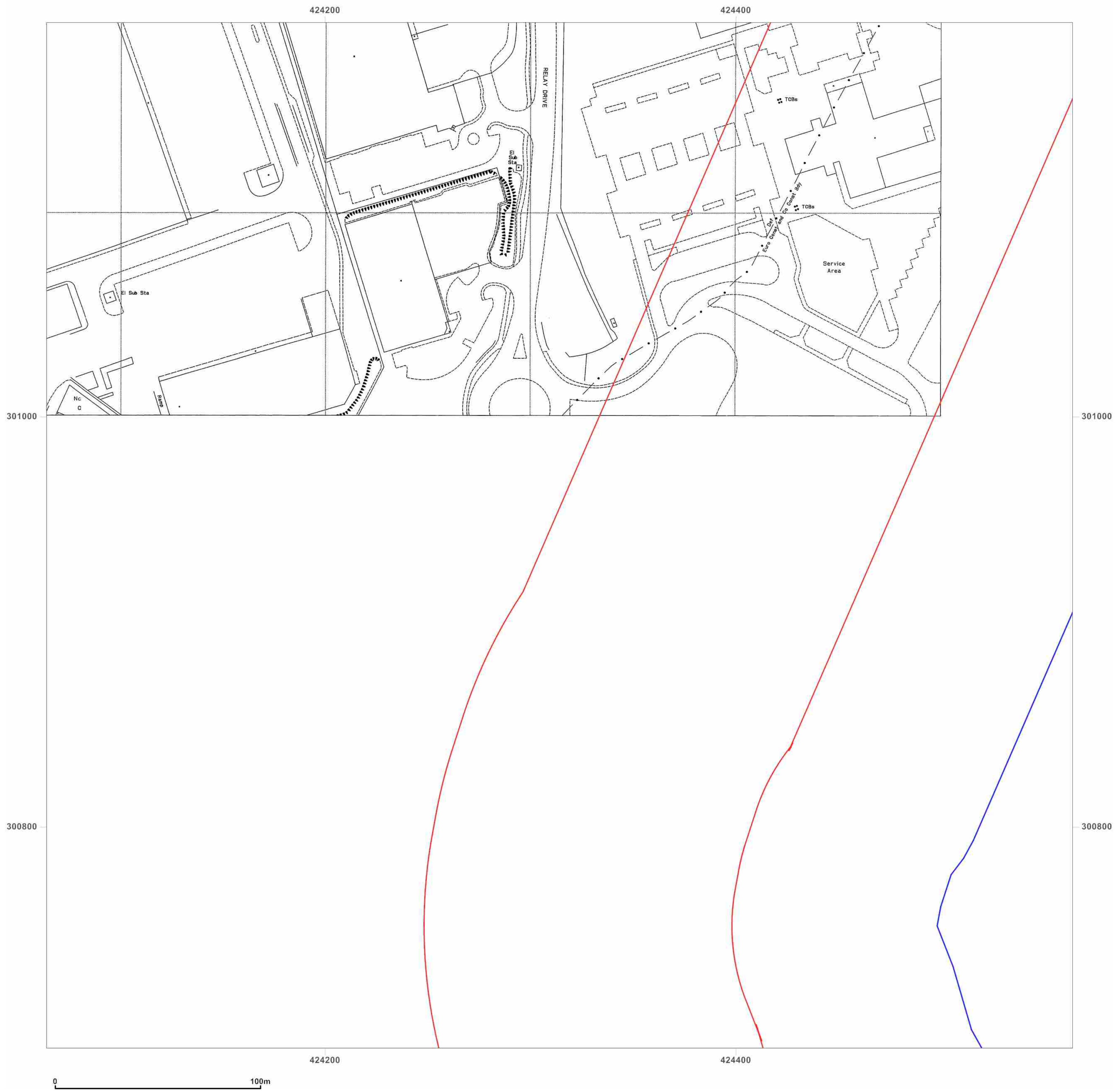

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_2
Grid Ref: 424314, 300942

Map Name: National Grid

Map date: **1995**

Scale: 1:1,250

Printed at: 1:2,000

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Revised 1995
Edition N/A
Copyright 1995
Levelled N/A

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Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_2
Grid Ref: 424314, 300942

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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2003

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Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_3
Grid Ref: 424314, 301442

Map Name: National Grid

Map date: **1987-1988**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1986
Revised 1986
Edition N/A
Copyright 1987
Levelled 1964

Surveyed N/A
Revised N/A
Edition N/A
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Levelled N/A

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Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_3
Grid Ref: 424314, 301442

Map Name: National Grid

Map date: **1988-1993**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1966 Revised 1966 Edition N/A Copyright 1988 Levelled 1964	Surveyed 1993 Revised 1993 Edition N/A Copyright 1993 Levelled N/A
Surveyed 1993 Revised 1993 Edition N/A Copyright 1993 Levelled N/A	Surveyed 1993 Revised 1993 Edition N/A Copyright 1993 Levelled N/A

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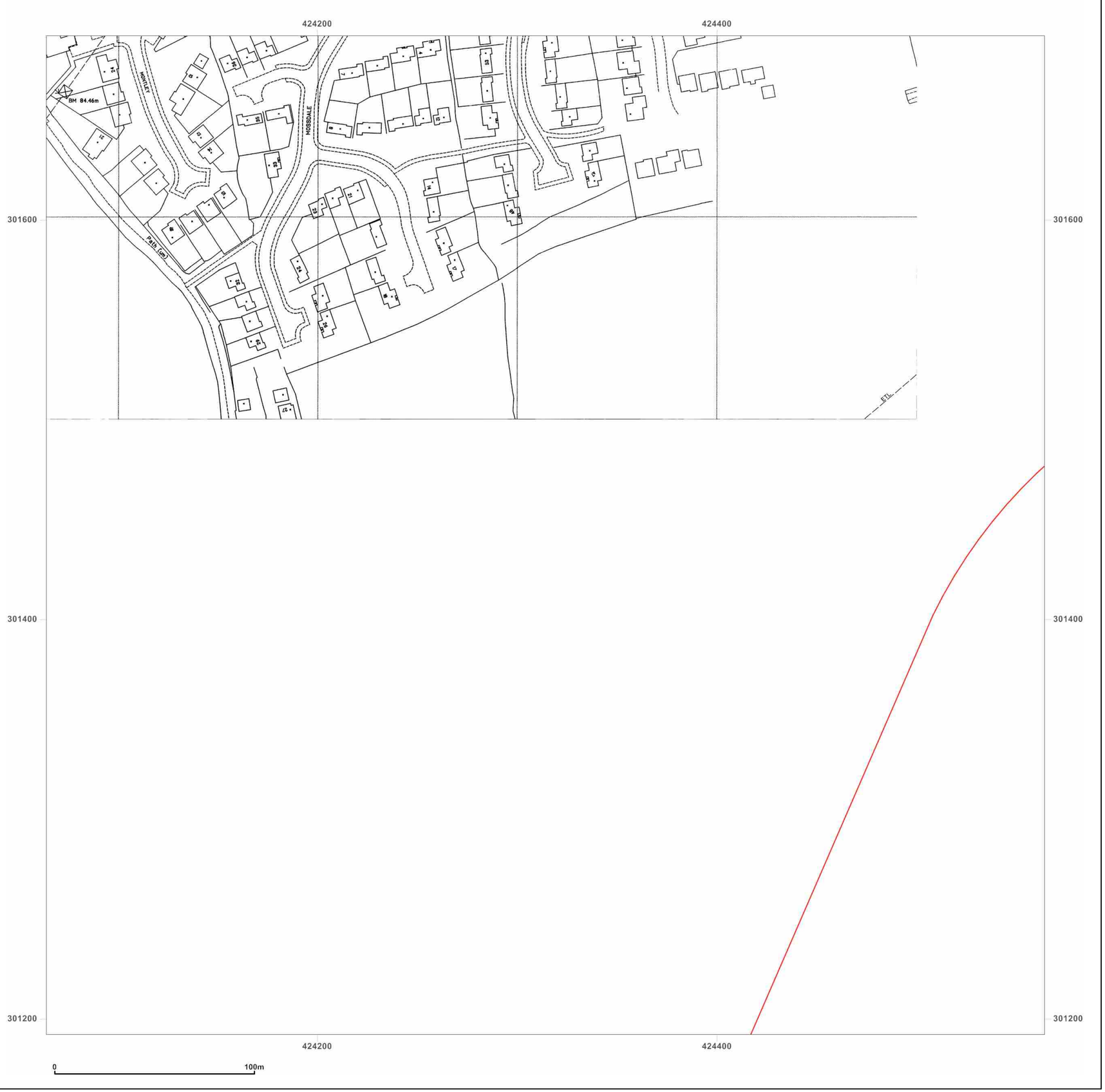

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_3
Grid Ref: 424314, 301442

Map Name: National Grid
Map date: **1994**
Scale: 1:1,250
Printed at: 1:2,000

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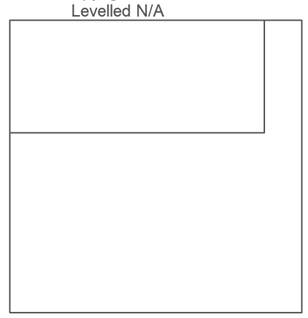
Surveyed 1994
Revised 1994
Edition N/A
Copyright 1994
Levelled N/A



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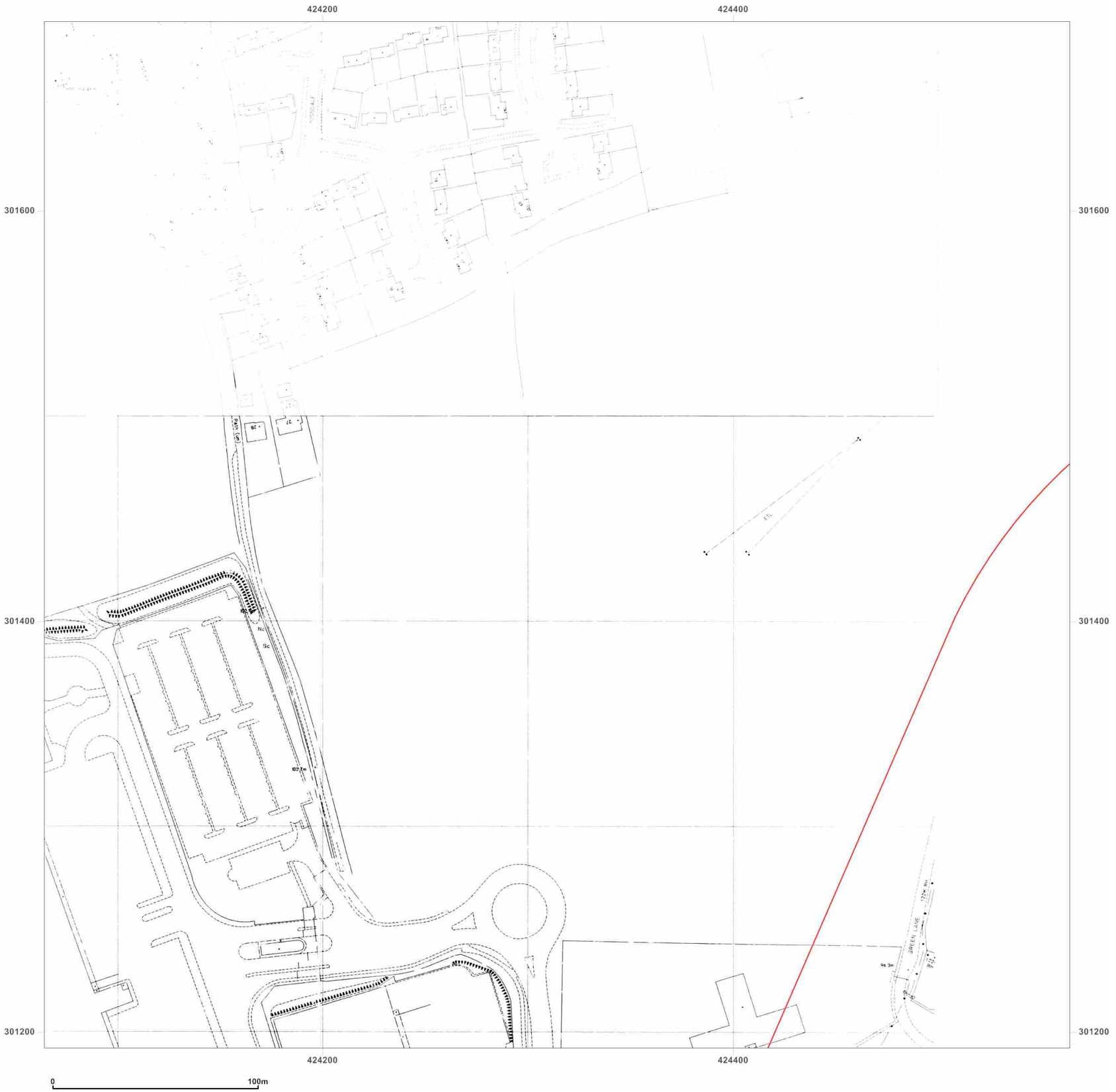

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_3
Grid Ref: 424314, 301442

Map Name: National Grid

Map date: **1993-1995**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1993
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Edition N/A
Copyright 1993
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Surveyed 1995
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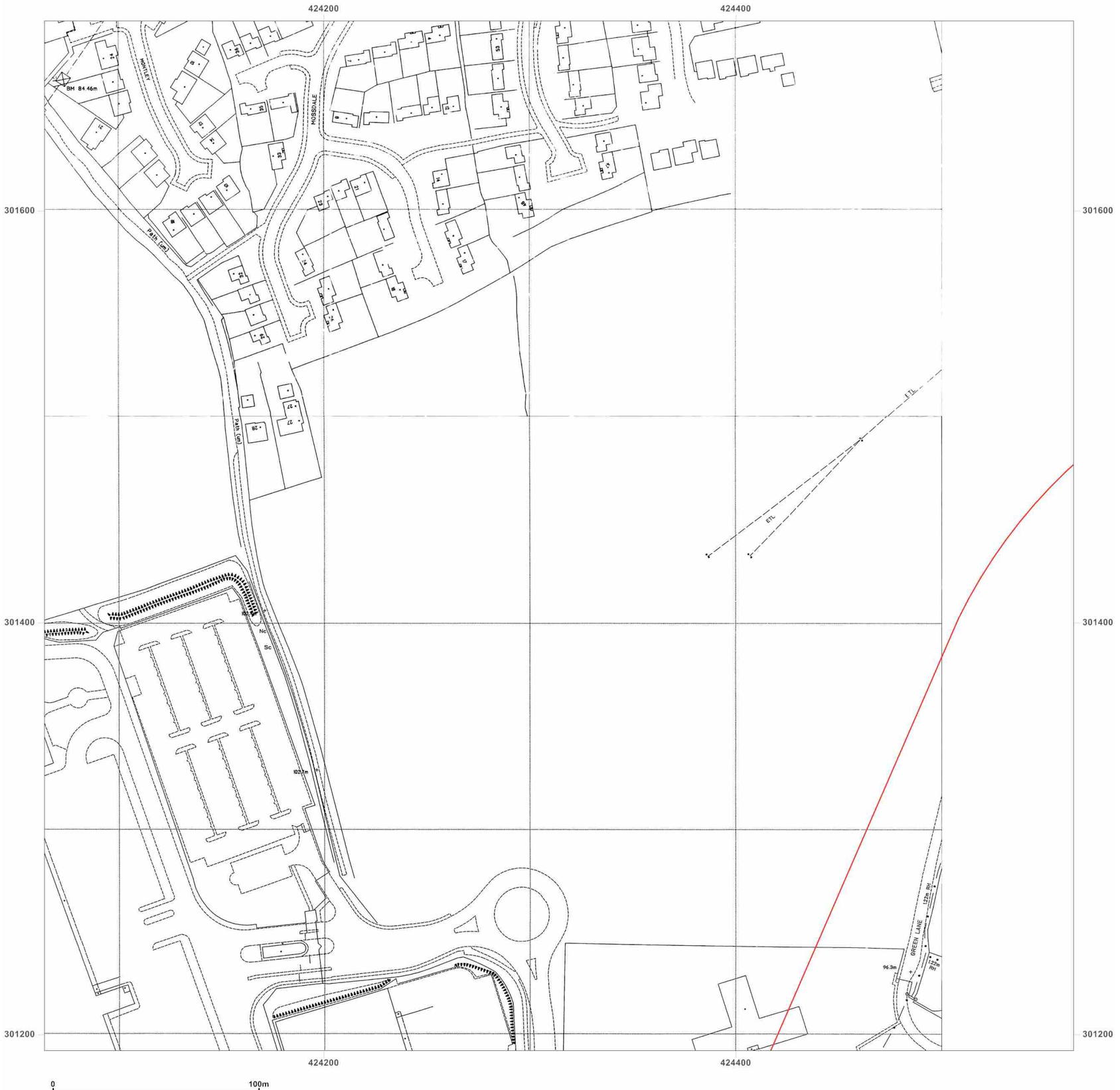

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_3
Grid Ref: 424314, 301442

Map Name: National Grid

Map date: **1994-1995**

Scale: 1:1,250

Printed at: 1:2,000

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Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_1_3
Grid Ref: 424314, 301442

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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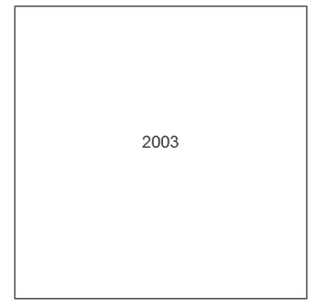

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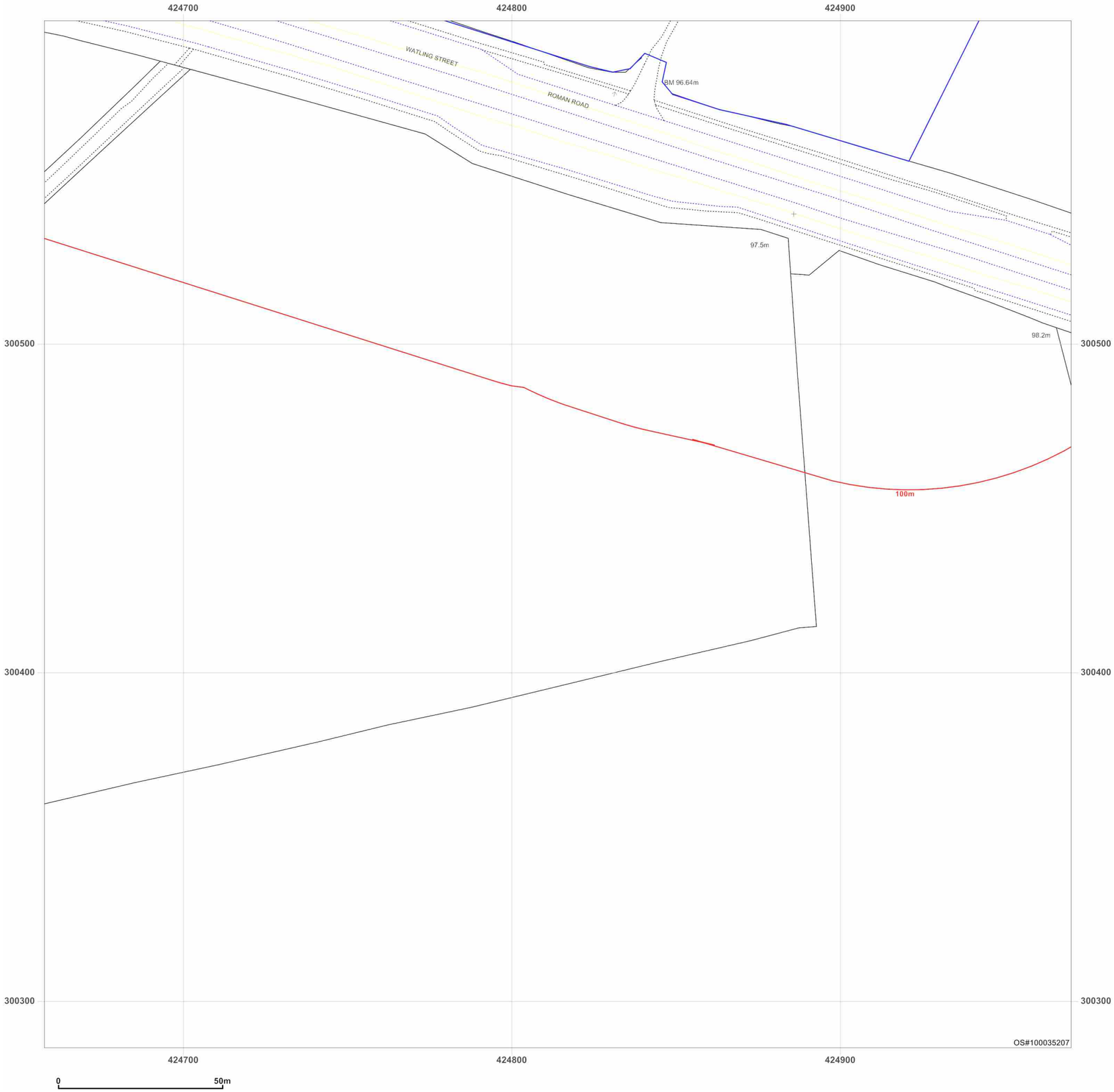

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_2_1
Grid Ref: 424814, 300442

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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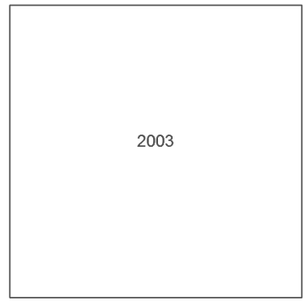

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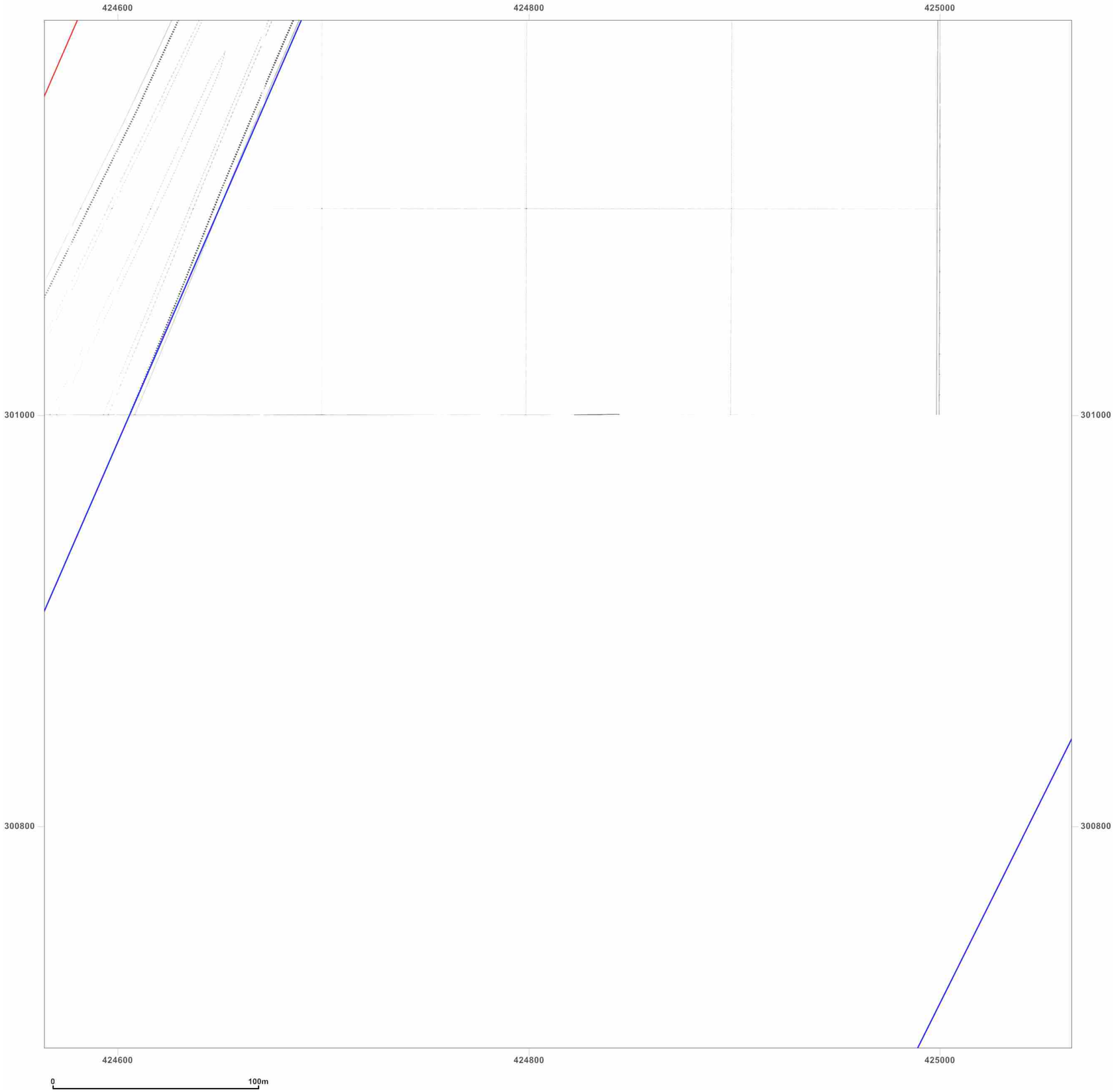

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_2_2
Grid Ref: 424814, 300942

Map Name: National Grid

Map date: **1993**

Scale: 1:1,250

Printed at: 1:2,000

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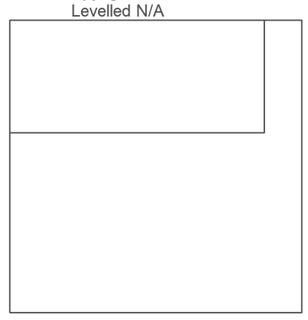
Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A



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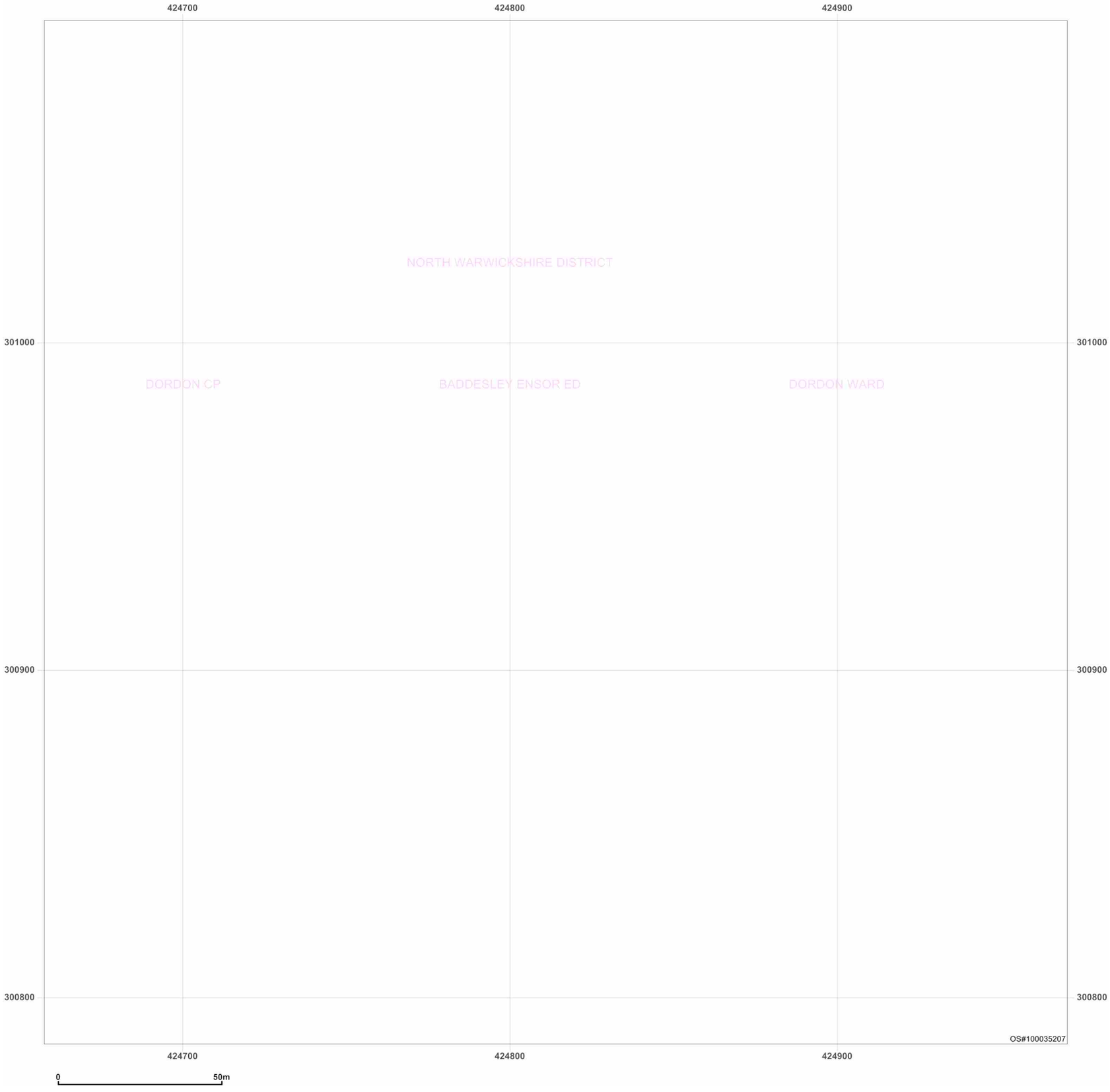

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_2_2
Grid Ref: 424814, 300942

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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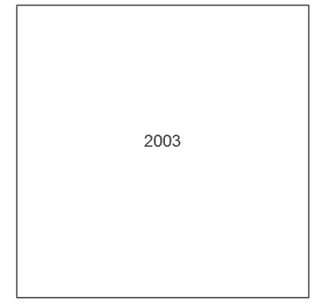

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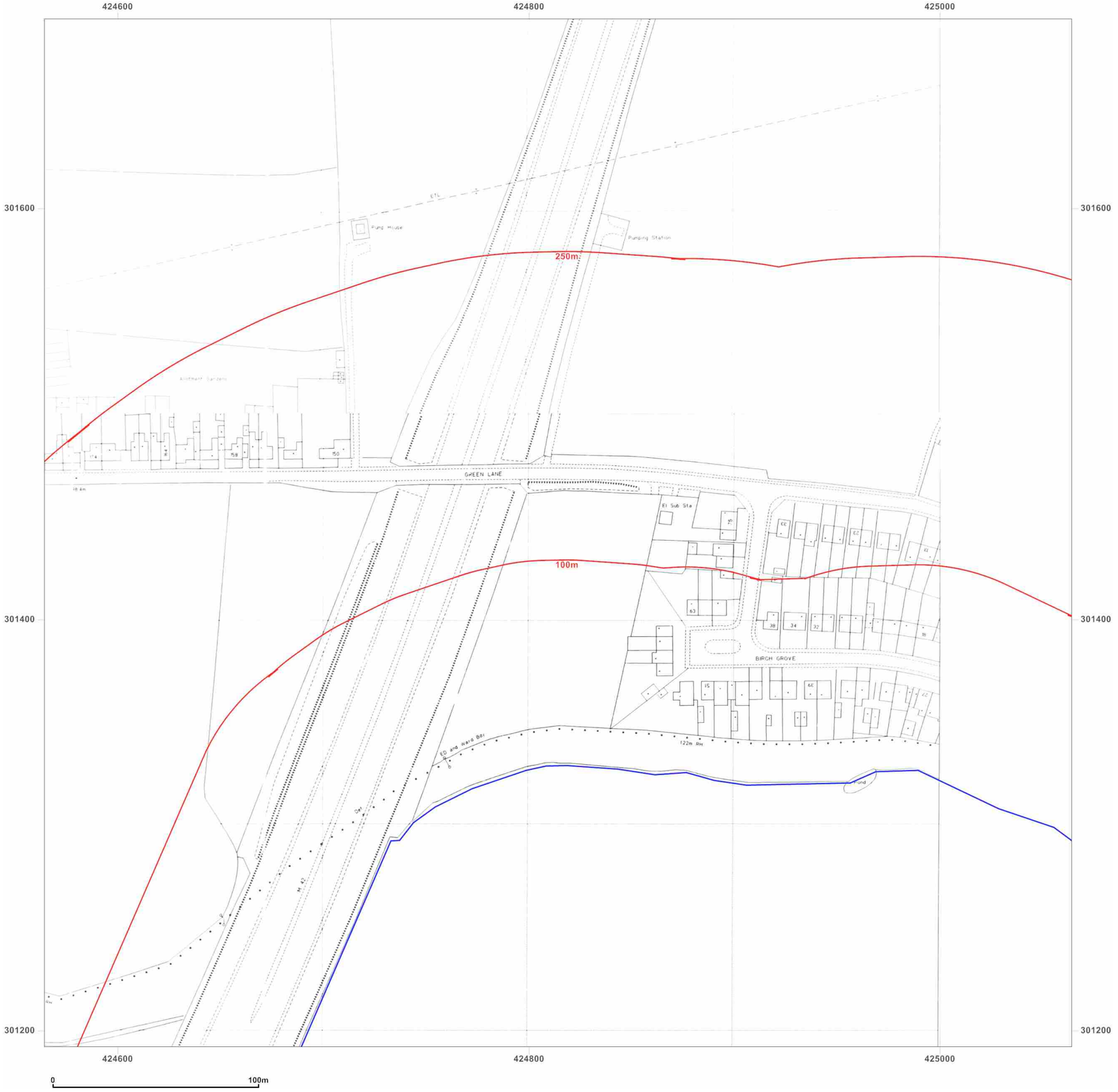

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_2_3
Grid Ref: 424814, 301442

Map Name: National Grid

Map date: **1993**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

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Production date: 17 August 2020

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Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_2_3
Grid Ref: 424814, 301442

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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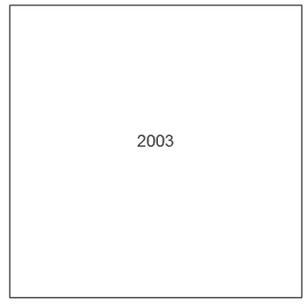

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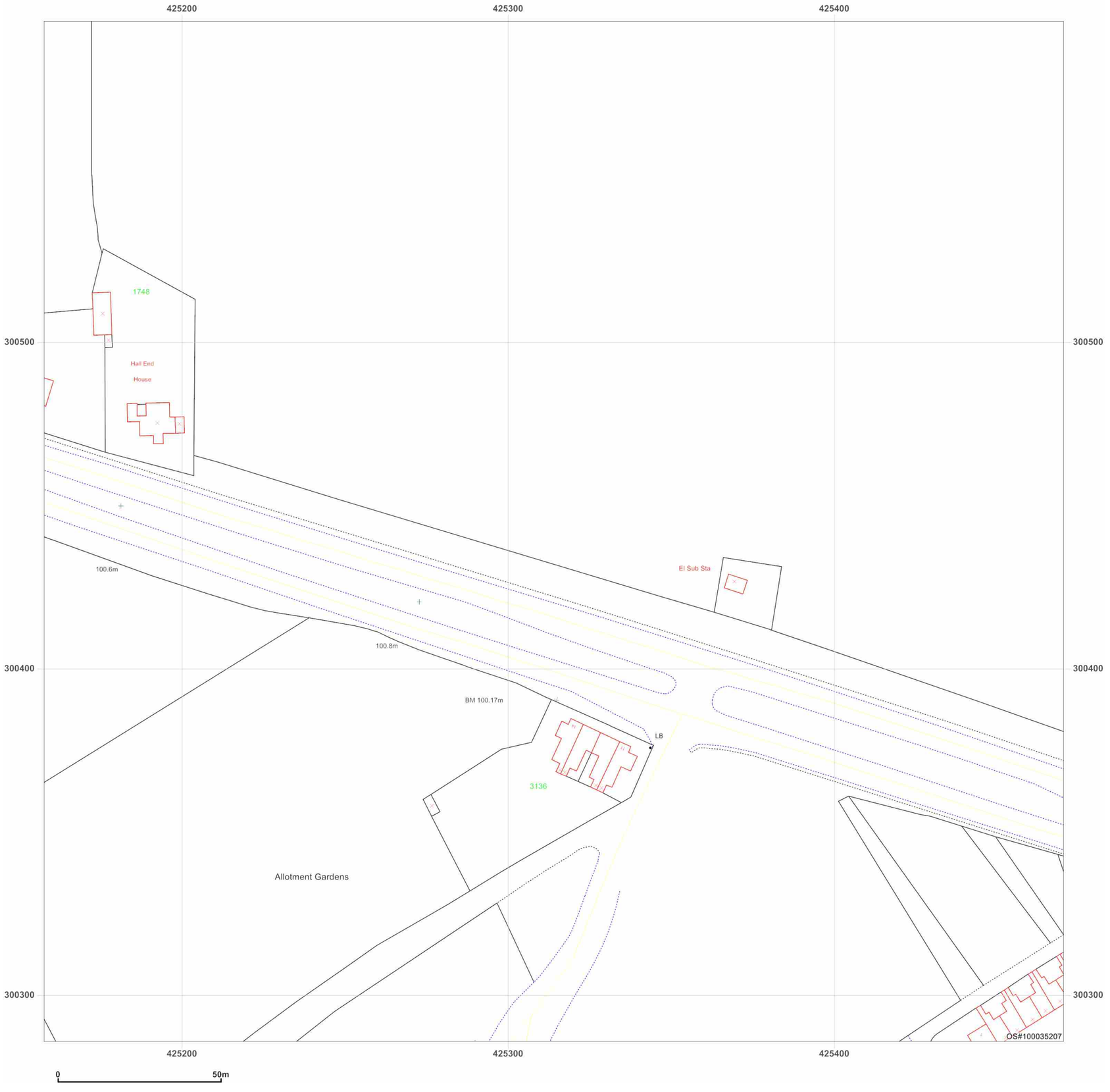

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_3_1
Grid Ref: 425314, 300442

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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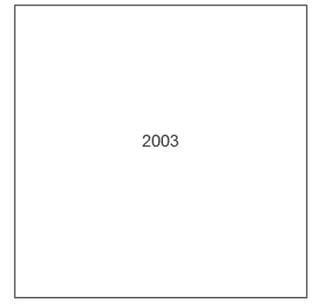

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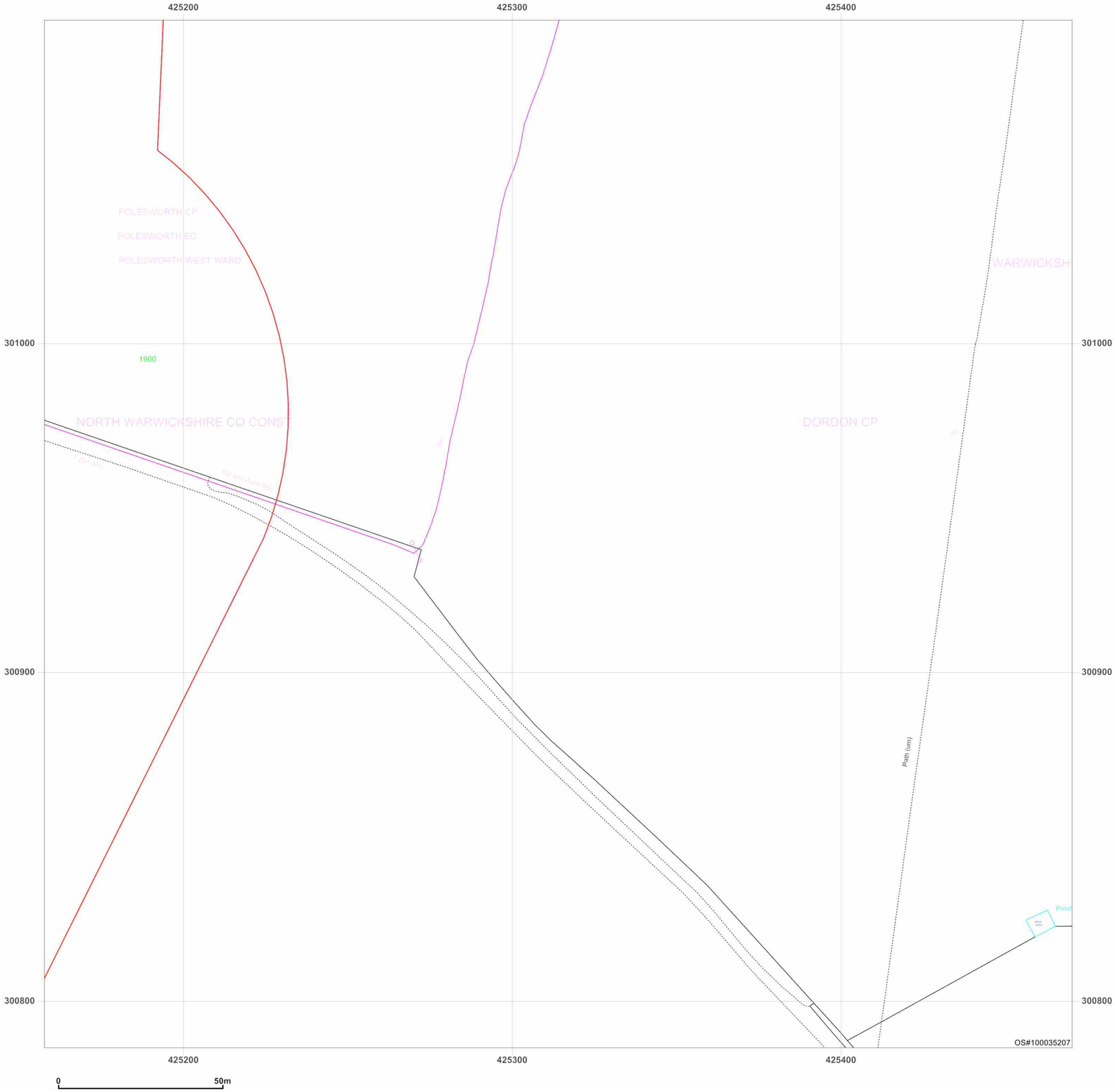

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_3_2
Grid Ref: 425314, 300942

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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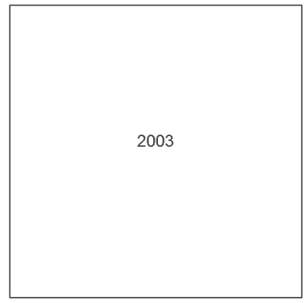

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Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_1250scale_3_3
Grid Ref: 425314, 301442

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

N
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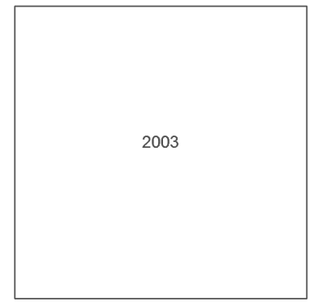

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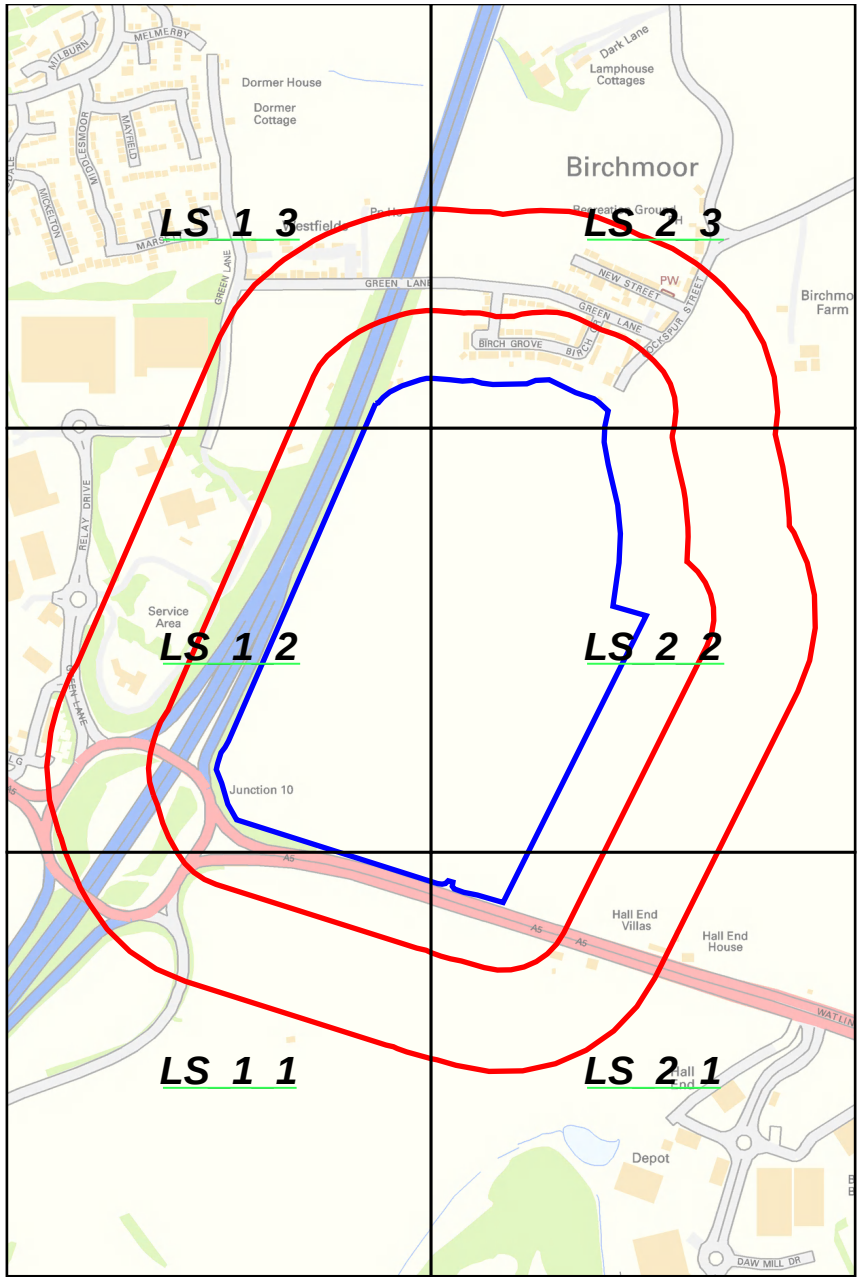

Groundsure
INSIGHTS

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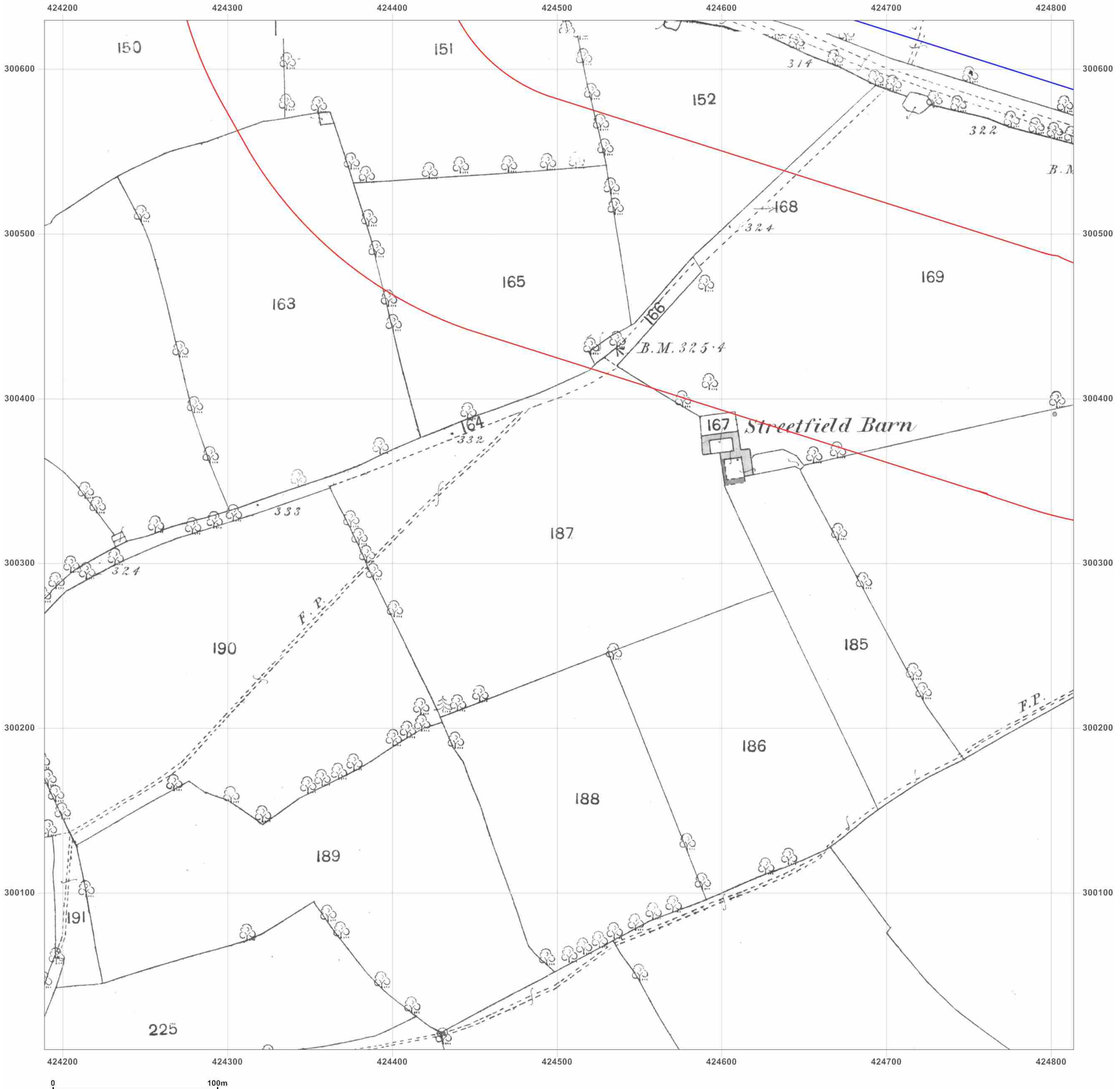
1:2500 Scale Grid Index



Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_LS_1_1
Grid Ref: 424501, 300317

Map Name: County Series
Map date: **1884**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
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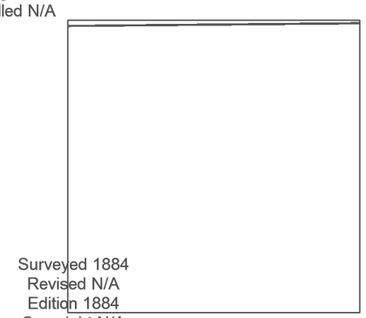
Surveyed 1884
Revised N/A
Edition 1884
Copyright N/A
Levelled N/A



Surveyed 1884
Revised N/A
Edition 1884
Copyright N/A
Levelled N/A

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Production date: 17 August 2020

Map legend available at:
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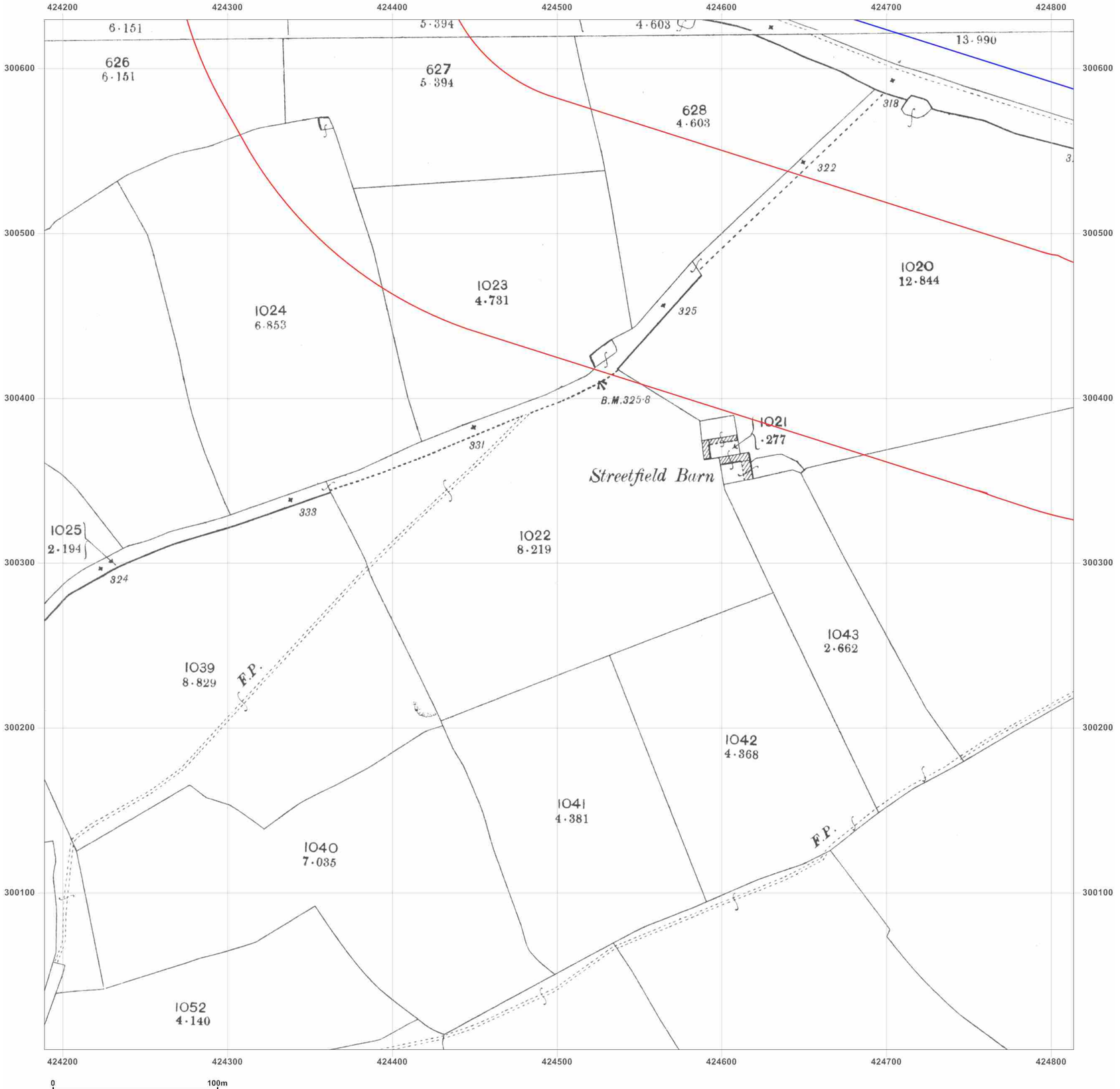

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_LS_1_1
Grid Ref: 424501, 300317

Map Name: County Series

Map date: **1903**

Scale: 1:2,500

Printed at: 1:2,500

N
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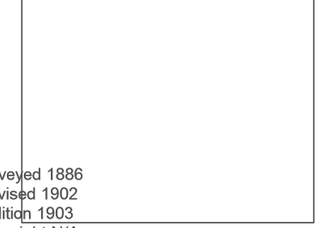
Surveyed 1886
Revised 1902
Edition 1903
Copyright N/A
Levelled N/A



Surveyed 1886
Revised 1902
Edition 1903
Copyright N/A
Levelled N/A

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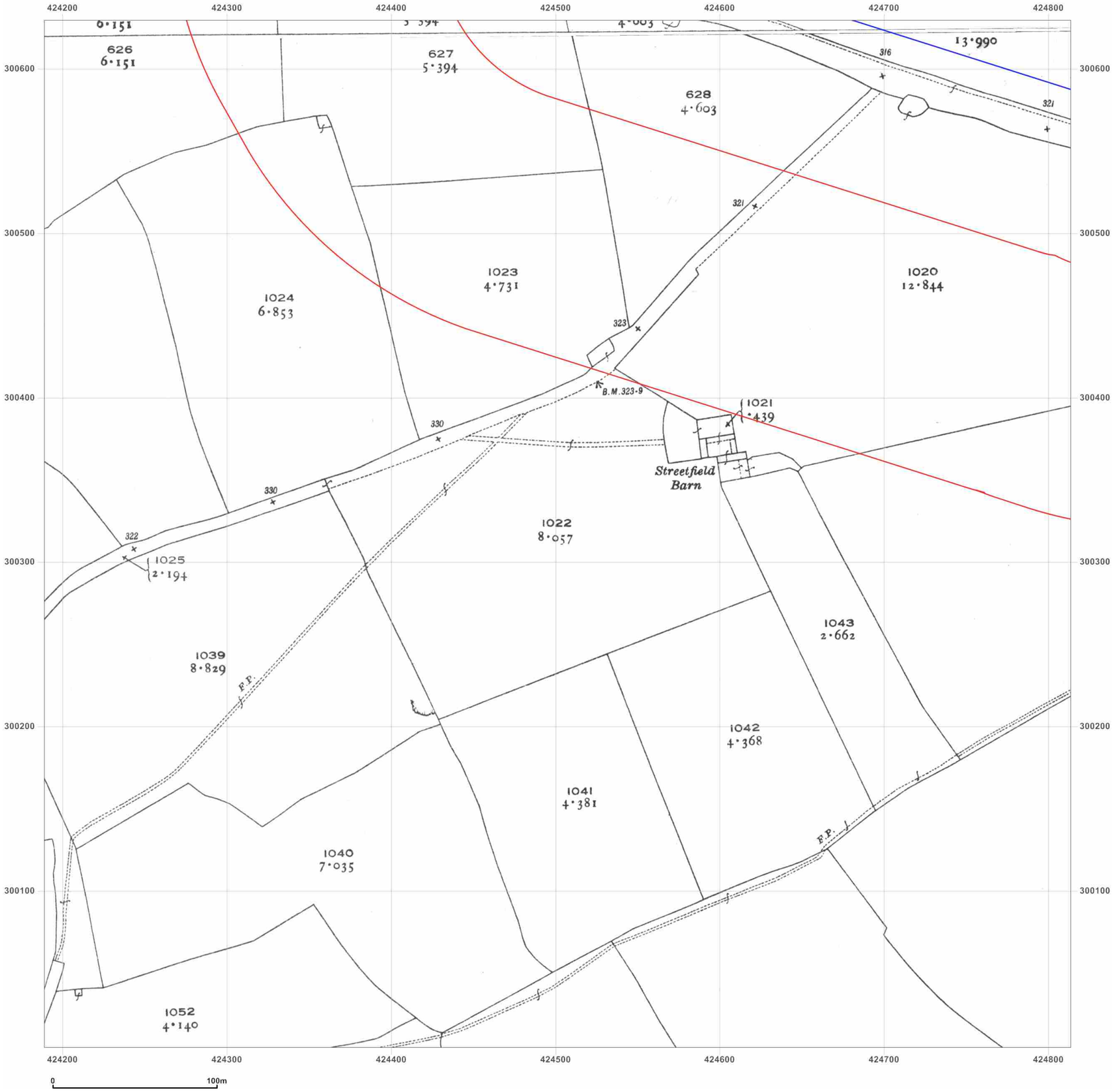

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_LS_1_1
Grid Ref: 424501, 300317

Map Name: County Series

Map date: **1923-1924**

Scale: 1:2,500

Printed at: 1:2,500

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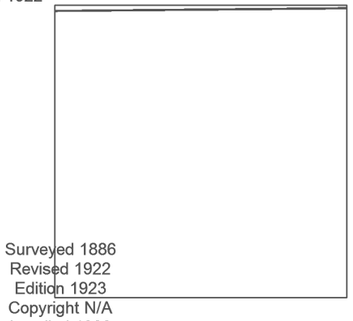
Surveyed 1886
Revised 1922
Edition 1924
Copyright N/A
Levelled 1922



Surveyed 1886
Revised 1922
Edition 1923
Copyright N/A
Levelled 1922

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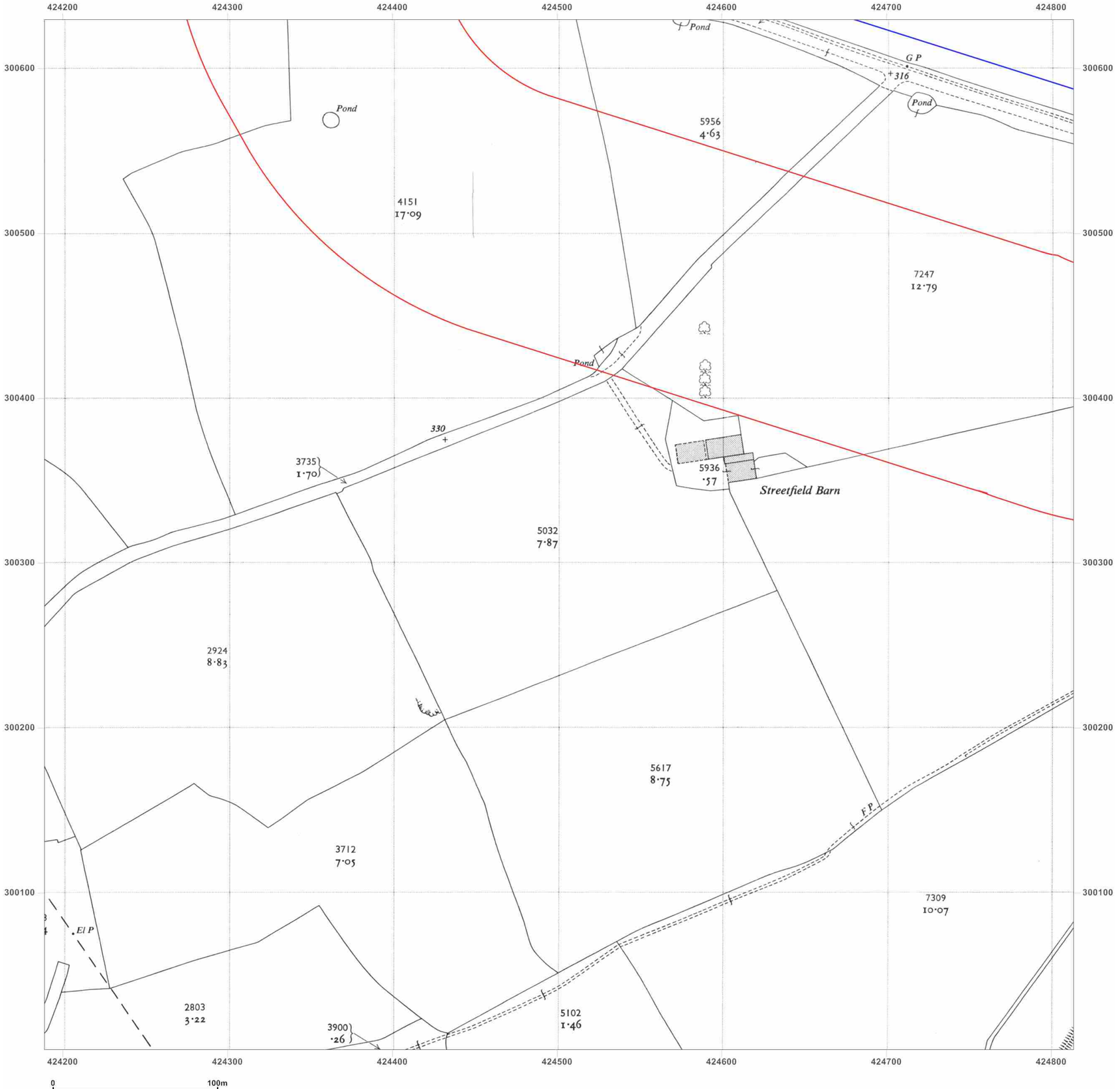

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_LS_1_1
Grid Ref: 424501, 300317

Map Name: National Grid

Map date: **1955**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1955
Revised 1955
Edition N/A
Copyright 1956
Levelled 1922

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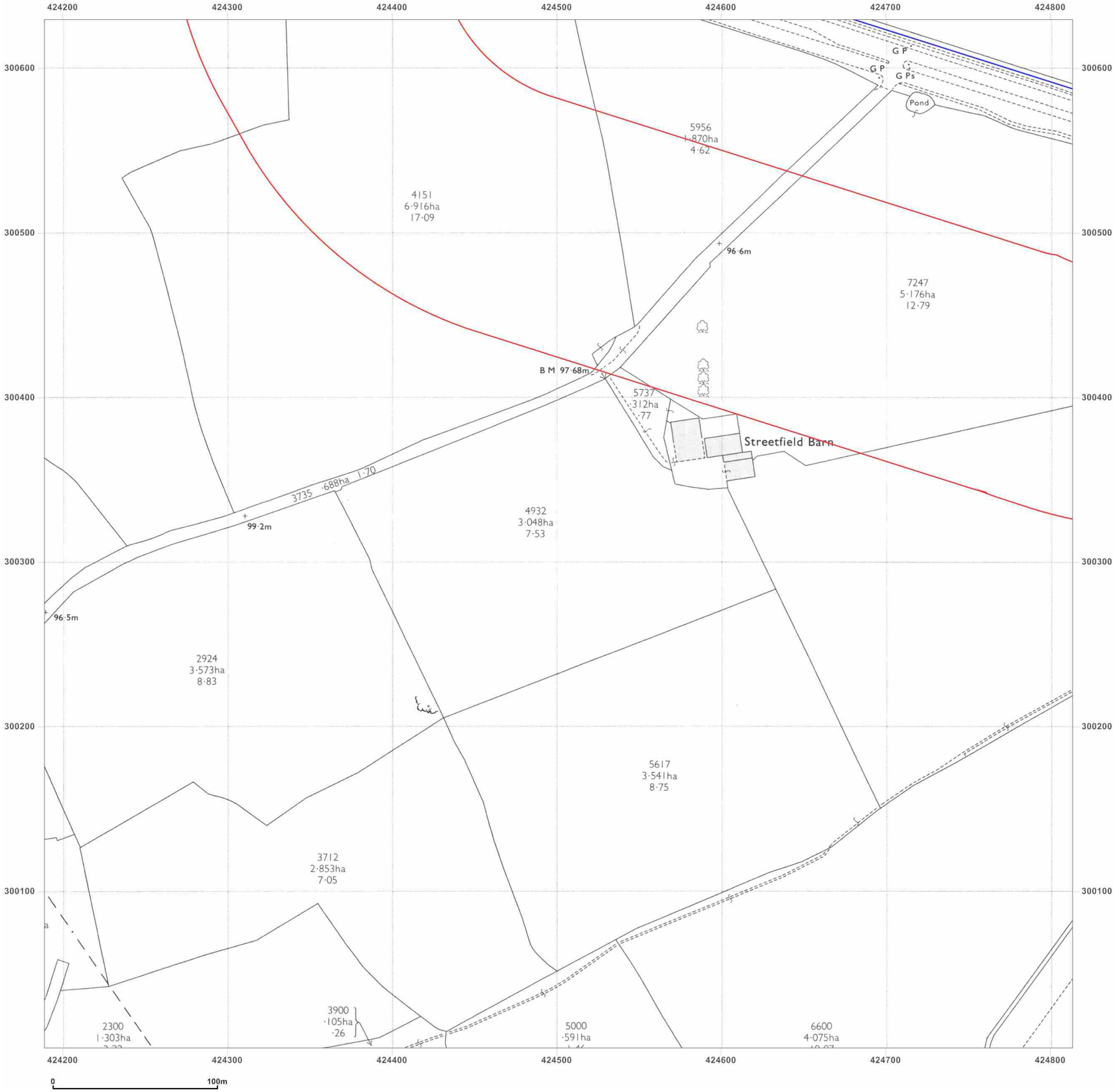

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_LS_1_1
Grid Ref: 424501, 300317

Map Name: National Grid

Map date: **1971**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1971
Revised 1971
Edition N/A
Copyright 1972
Levelled 1964

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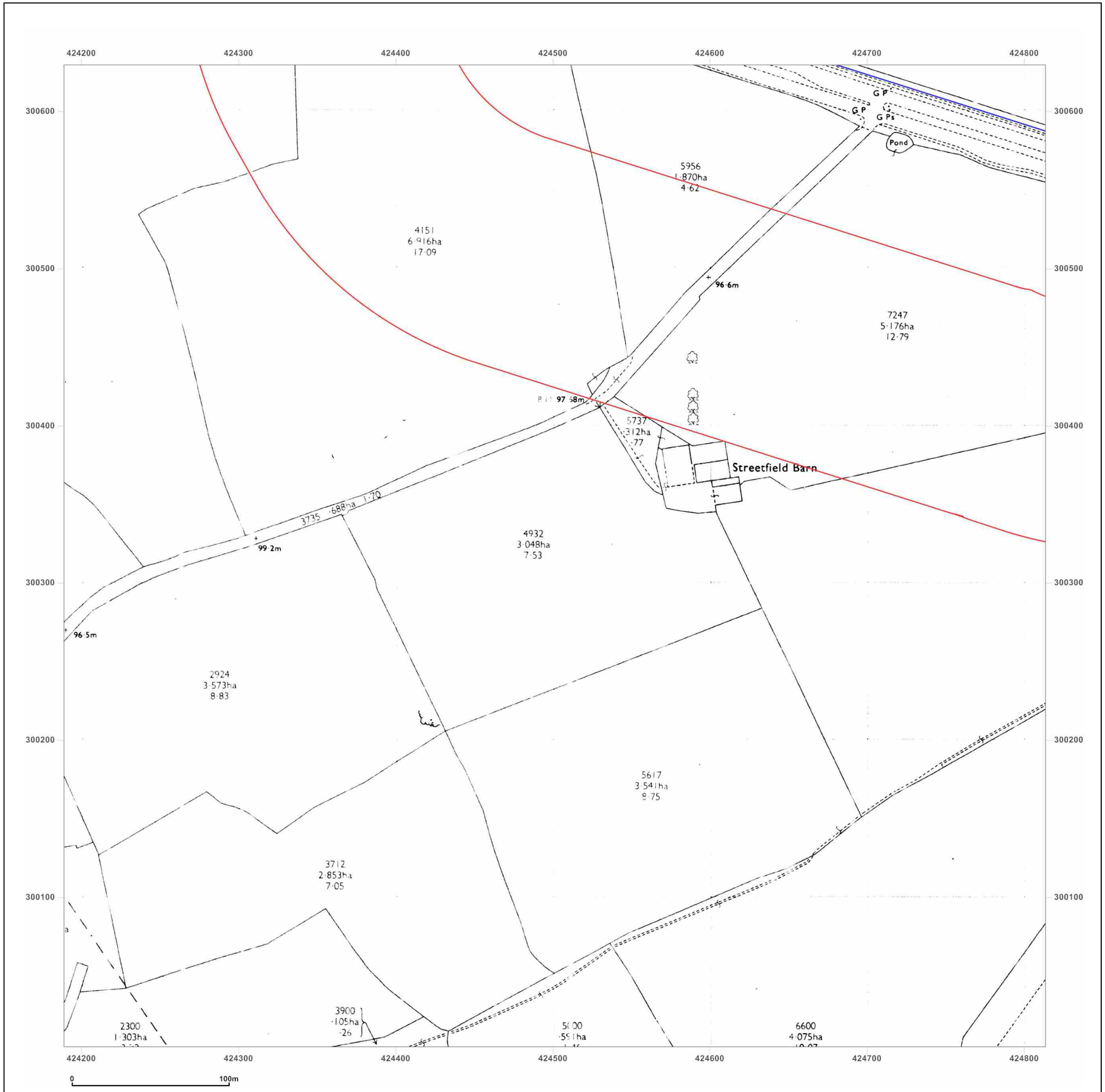

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_LS_1_1
Grid Ref: 424501, 300317

Map Name: National Grid

Map date: **1976**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1976
Levelled N/A

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Production date: 17 August 2020

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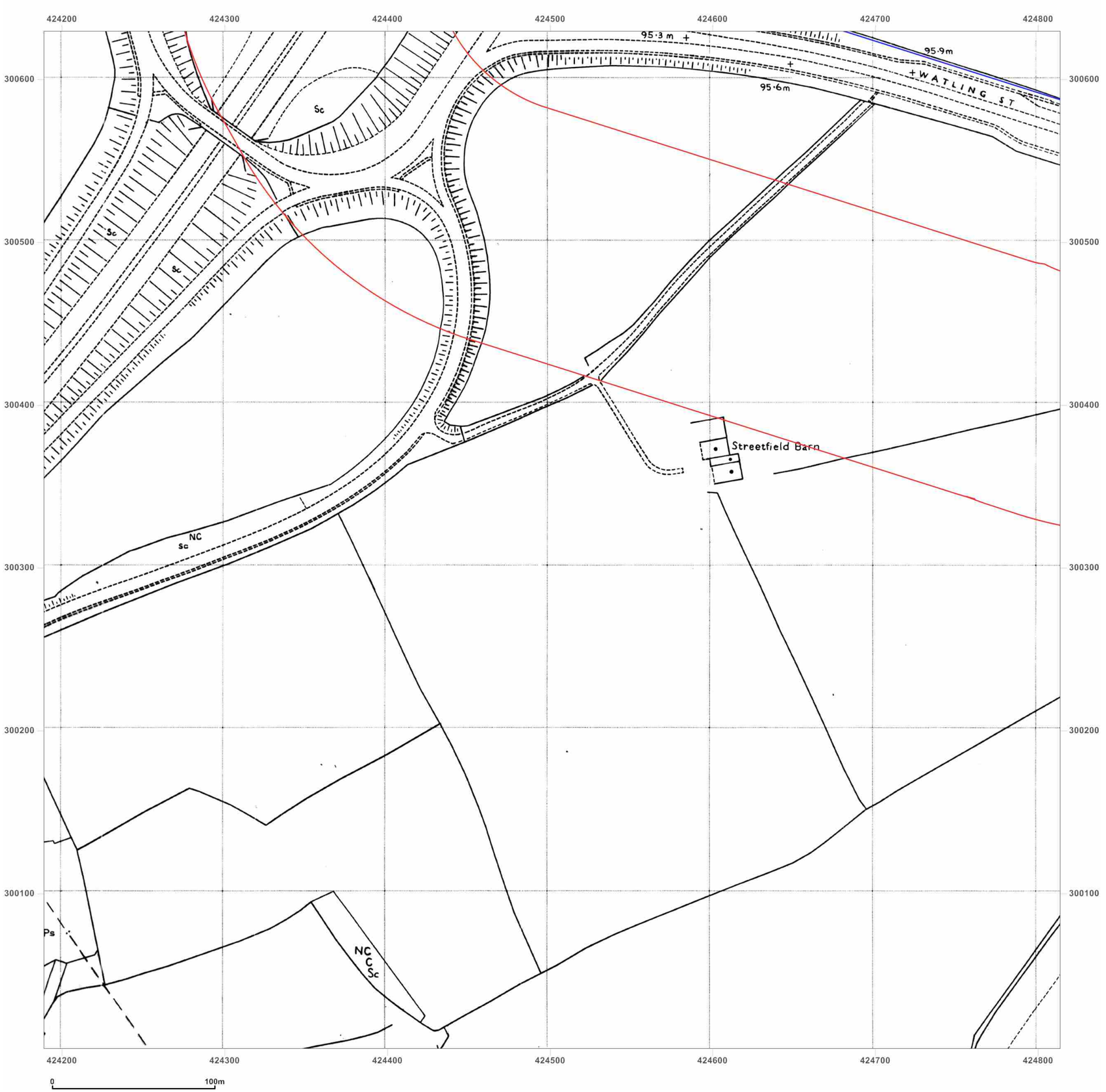

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_LS_1_1
Grid Ref: 424501, 300317

Map Name: National Grid

Map date: **1989**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1964
Revised 1989
Edition N/A
Copyright 1989
Levelled 1964

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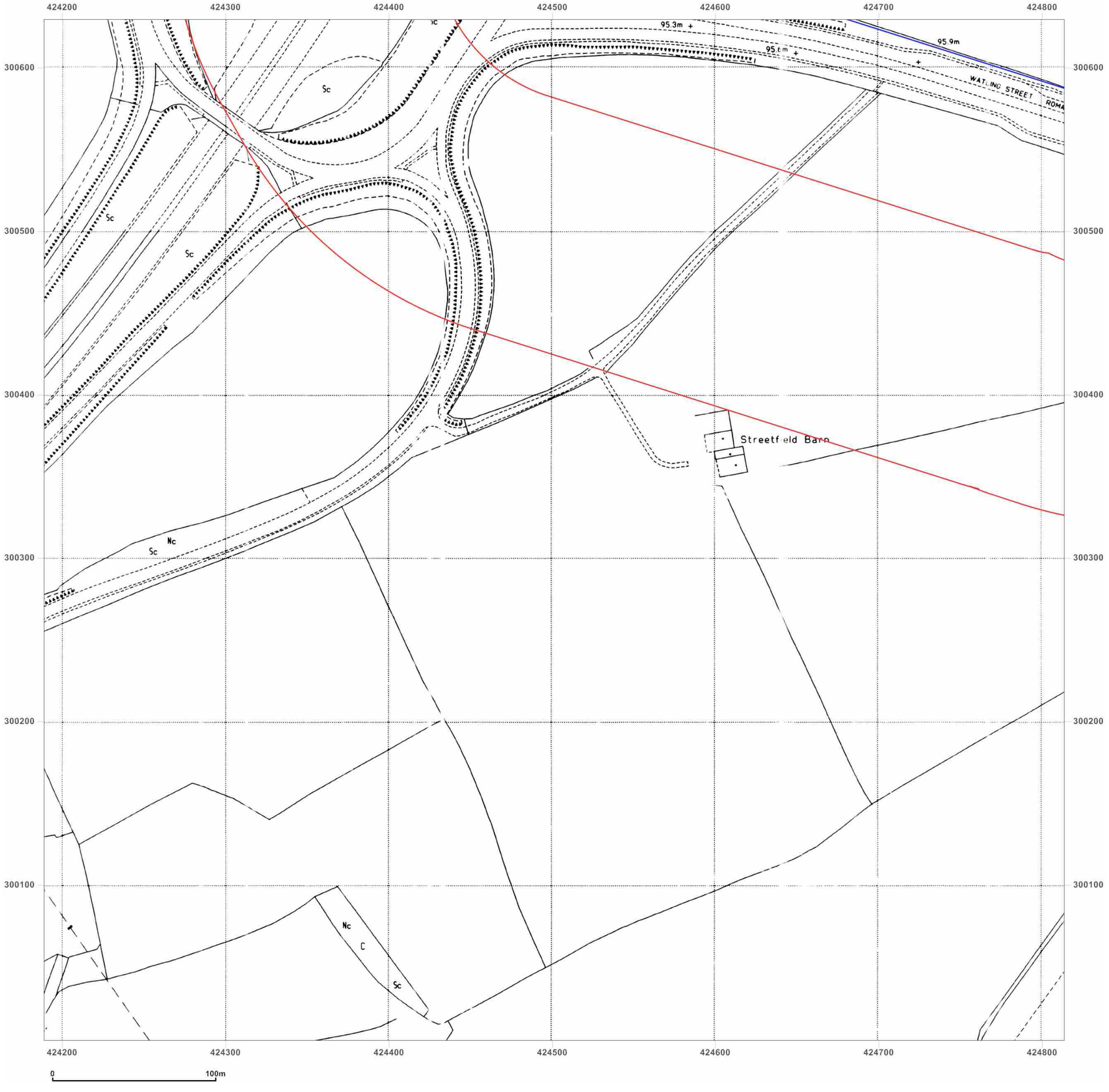

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_LS_1_1
Grid Ref: 424501, 300317

Map Name: National Grid

Map date: **1993**

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

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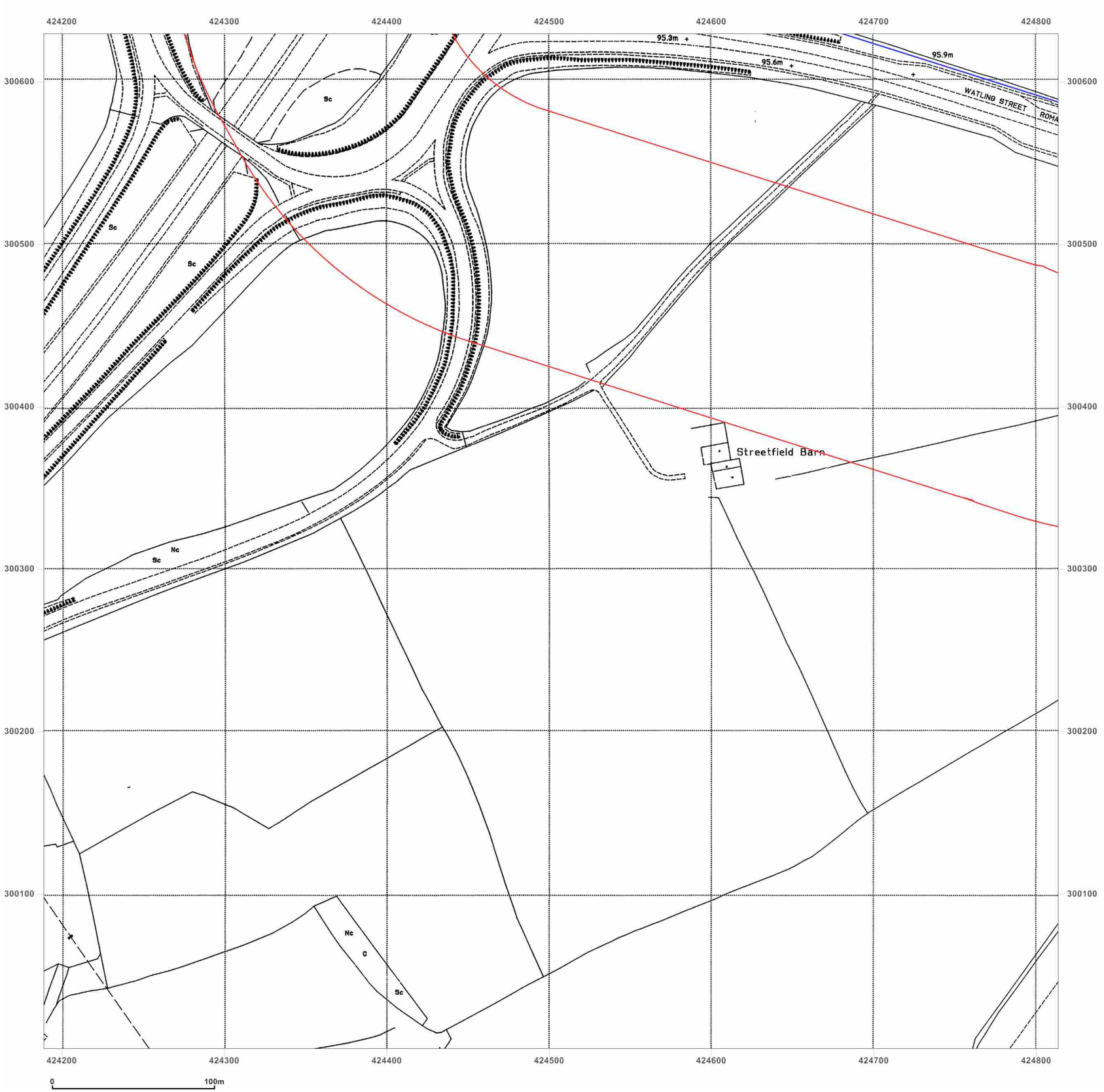

Groundsure INSIGHTS

Site Details:

TRINITY ROAD, DORDON, B78 1TB

Client Ref: Jn10_M42
Report Ref: GS-6973301_LS_1_1
Grid Ref: 424501, 300317

Map Name: National Grid

Map date: **1995**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1995
Revised 1995
Edition N/A
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Levelled N/A

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