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83 Teewell Avenue, Staple Hill, Bristol
Proposed Residential Development
Phase One Coal Mining Risk Assessment

Report Reference: ESP.8839.4055

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33 Cardiff Road, Taff's Well, CARDIFF, CF15 7RB ☎ 029 2081 3385
enquiries@earthsciencepartnership.com www.earthsciencepartnership.com

83 Teewell Avenue, Staple Hill, Bristol Proposed Residential Development
Phase One Coal Mining Risk Assessment

Prepared for:
Imperial Developments (Bristol) Ltd
Rose Cottage
Church Lane
Hambrook
Bristol BS16 1ST

Report Reference: **ESP.88839.4055**

Revision	Status	Date	Written by:	Checked and Approved by:
0	Draft	February 2024	Jeremy Hucker BSc (Hons) CGeol EurGeol CSci FGS RoGEP Adviser	Giles Sommerwill BSc (Hons) MSc CGeol SiLC FGS RoGEP Specialist
		Signature:		
Notes:	1. The status of this report is not final and is issued for comment only; as such, it is subject to change therefore it should not be relied up on. For a checked and authorised version please contact the Earth Science Partnership. 2. Once issued this document is Uncontrolled, for the latest version and/or to confirm you have authorisation to use it please contact the Earth Science Partnership at enquiries@earthsciencepartnership.com or by telephone at 029 2081 3385. 3. This document has been optimised for double sided printing and therefore may produce some blank pages when printed single sided.			

Contents

Executive Summary

Imperial Developments (Bristol) Ltd (hereafter known as the Client) are proposing to develop an existing property on Teewell Avenue in Staple Hill, Bristol as four two-bedroom dwellings with gardens. The site lies within an area of past coal mining, and there is the potential for shallow mine workings beneath the site. The Earth Science Partnership have been instructed by the Client to prepare a Phase One (desk study based) Coal Mining Risk Assessment (CMRA) for the proposed development.

The site lies above the Coal Measures bedrock (Downend Member) with the Hen/Parrot coal seam shown to crop out conjecturally (east-west) across the northern part of the site. Although no mine workings are recorded in this seam, the Coal Authority identify the potential for unrecorded shallow mine workings and, given that the seam is worked elsewhere in the area, we cannot discount that it has been worked beneath the site at some time in the past (likely to be prior to the 1870s). The Coal Authority also identify that the site lies within a Development High Risk Area in terms of subsidence risk. Given the above and the dip of the strata to the north, the subsidence risk beneath the northern margins of the site is considered to be potentially ***High****.*

The Doxall coal seam is shown to crop out some 25m to the south of the site and, given the dip on the bedrock strata, is anticipated to underlie the whole of the site. This seam may also have been worked in the past. However, given the steep dip on the bedrock strata, the seam would be expected at a depth of around 30m beneath the southern boundary of the site and at greater depths beneath the remainder of the site. Given the site geological setting, at such a depth, subsidence risks above any past mine workings are likely to be Low.

The precise position of the Hen/Parrot coal seam on the site (see Figure 2) will control the degree of subsidence risk to the proposed development - subsidence risks could be high to the north of the seam outcrop, but low to the south. Therefore, further intrusive investigation in the form of rotary drilling and probably trial trenching would be required to confirm the location of the seam outcrop and the depth to the various coal seams beneath the site. A detailed UXO desk study is required prior to any future investigation or ground works.

If the seam outcrop lies within the site (as anticipated), there are also potential risks from old mine entries, mine gas and combustible soils which would need to be considered further.

1 Introduction

1.1 Background

Imperial Development (Bristol) Ltd (hereafter known as the Client) are proposing to redevelop a property on the southern side of Teewell Avenue in the Staple Hill area of Bristol as four two bed dwellings, with gardens. The site lies within an area of past coal mining. Therefore, the Earth Science Partnership Ltd (ESP), Consulting Engineers, Geologists and Environmental Scientists, have been instructed by the Client to prepare a Phase One (desk study based) coal mining risk assessment (CMRA) to evaluate potential risks posed by past mine workings on the proposed development.

The proposed development is to comprise four, two storey, link dwellings with vehicle parking fronting onto Teewell Avenue and gardens to the rear. The proposed layout is presented as Figure 1.

We are not aware of any mining related planning conditions applicable to the site.

1.2 Objective and Scope of Works

The scope of works of this preliminary risk assessment is in general accordance with the published Coal Authority guidance on a risk based approach to development (Coal Authority, 2014). Specifically:

- to obtain and review relevant desk study data on the site relating to past coal mining; and
- to identify and evaluate the risks (individually and cumulatively) to the proposed development (based on desk study data on at this stage).

The precise scope of works was mutually developed and agreed with the Client by ESP within an agreed budget and comprised a desk study review of available historical Ordnance Survey maps, geological maps, memoirs, and a Coal Authority mining report obtained for the site by ESP, assessment, and reporting. No site reconnaissance visit or intrusive investigation has been undertaken at this stage.

The contract was awarded based on a competitive tender quotation. The terms of reference for the assessment are as laid down in the Earth Science Partnership email proposal of 1st February 2024. The assessment was undertaken in February 2024.

1.3 Report Format

This report includes a summary of the desk study information reviewed (Section 2), followed by a preliminary assessment of the risks from mining features (Section 3). Recommendations for further intrusive investigation are provided in Section 4.

This report is issued as a digital version only.

1.4 Limitations of Report

This report represents the findings of an assessment of risks associated with possible past shallow coal mining and mine entries on the site. The brief did not require an assessment of the implications for any other end use, nor of other geotechnical or geo-environmental hazards (e.g., contamination, slope stability and landfill/alluvial gas risks). These potential ground hazards may require further assessment prior to development. It should also be appreciated that no site reconnaissance visit or intrusive investigation has been completed at this stage. The report is not a comprehensive site characterisation and should not be construed as such.

Where preventative, ameliorative or remediation works are required, professional judgement will be used to make recommendations that satisfy the site-specific requirements in accordance with good practice guidance.

Consultation with regulatory authorities will be required with respect to proposed works as there may be overriding regional or policy requirements which demand additional work to be undertaken. It should be noted that both regulations and their interpretation by statutory authorities are continually changing.

This report represents the findings and opinions of experienced geo-environmental and geotechnical specialists. Earth Science Partnership does not provide legal advice and the advice of lawyers may also be required.

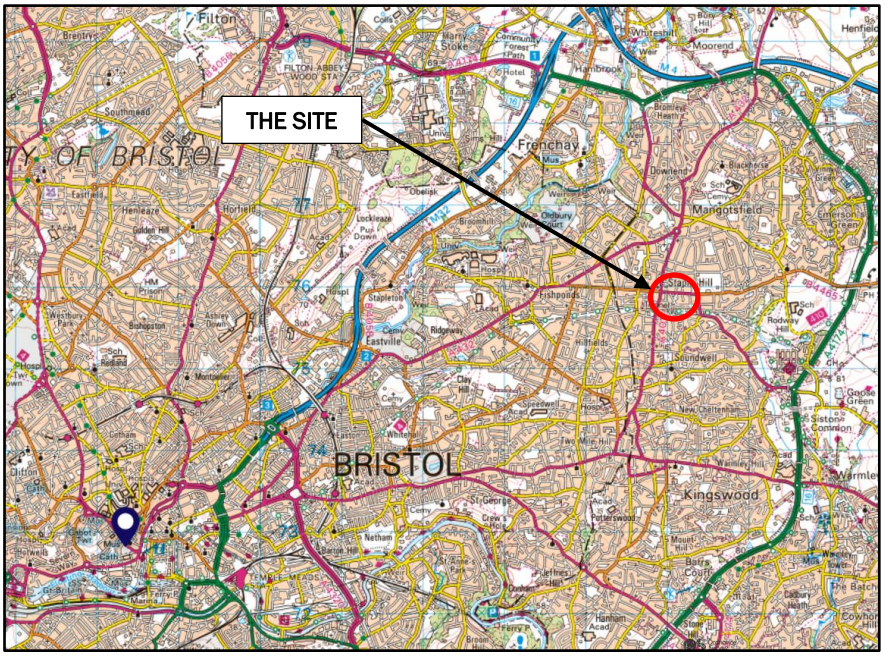
2 Desk Study Review

The information presented in this section was obtained from desk-based research undertaken including a review of historical maps, Coal Authority information, geological maps, and further readily available desk study information.

No site visit has been undertaken as part of this assessment.

2.1 Site Location and Description

The site is located on the southern side of Teewell Avenue in Staple Hill, in eastern Bristol. The National Grid Reference of the site is (ST) 365035 175720, and the postcode is BS16 5NG. The site location is presented on Insert 1 below.



Insert 1 *- Site Location Plan from Ordnance Survey 1:25,000 scale map.*
Reproduced with permission (OS License No.: AL100015788).

Based on the information provided by the Client, and readily available desk study data, the site is located in a predominantly residential area, and currently appears to form the whole of the property of No 83 Teewell Avenue, being occupied by the dwelling fronting onto Teewell Avenue, with a garage to the west and the remainder of the plot comprising a garden area. On-line sources suggest that the property on the site is a bungalow.

The site is bounded by:

- To the north: Teewell Avenue, followed by terraced housing;
- To the east: by an existing access drive, and further housing fronting onto Teewell Avenue;
- To the south: by No 43 Teewell Avenue; and
- To the west: the semi-detached dwellings of No 39 and 41 (apparently) Seymour Road.

It is approximately rectangular in shape some 26m length (north-south) by between 14 and 20m width, and occupying an area of around 420m^2.

A spot height is shown on Teewell Avenue some 20m to the east of the site, suggesting that the ground elevation in the area of the site is around 81m OD. Spot heights provided on the existing site plan provided by the Client indicate elevations of between 80.9m OD on the frontage of the site and 79.4 in the rear garden.

A tunnel is shown immediately south of the site – this is a former railway tunnel, which is now a cycle path.

2.2 Historical Setting

2.2.1 Published Historical Maps

The site history has been assessed from a review of available historical Ordnance Survey County Series and National Grid maps. Extracts from the historical maps are presented in Appendix A and the salient features since the First Edition of the County Series maps are summarised in Table 1 below.

Table 1: *Review of Historical Maps*

Date	On-Site	In Vicinity of Site
1881 - 1916	The site was located in a semi-rural area and was generally undeveloped, with a small structure in the north-eastern corner.	The semi-detached dwellings to the west are shown. The access drive to the east is the only road in the immediate vicinity. A railway tunnel/cutting is shown just to the south/south-east of the site. Air shafts are shown some 120m and 300m to the south-east, which are believed to be related to the tunnel, and not past mining. An unexplained soil mound is indicated some 200m to the east. A number of wells are shown around the site. An old coal pit is shown some 500m to the north-east – this is no longer shown by 1902.
1950 - 1960	A well is shown in the east of the site.	The road to the north-east is labelled as Bath Street.
1961 - 1969	The current dwelling is shown on site.	Teewell Avenue is shown to the east, but did not extend across the frontage of the site.
1971 – present day	The site is shown to be in its present day layout.	Teewell Avenue is now shown immediately to the north of the site.

Notes to Table 1:
1. The above assessment of historical features around the site concentrates on the mining legacy. Other features, relating to other potential geotechnical and geo-environmental hazards may not have been considered.
2. Extracts of historical maps presented in Appendix A.

2.2.2 Other Sources

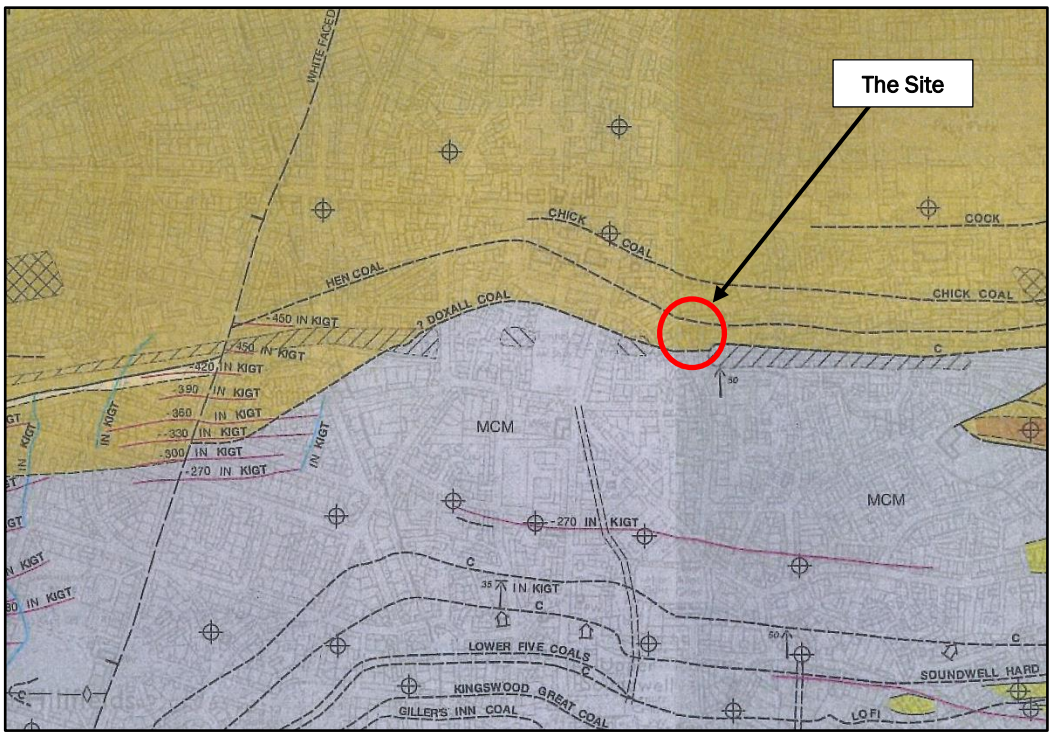
No further information on the history of the site has been identified.

2.3 Geological Setting

2.3.1 Published Geology

The published 1:10,000 scale geological map for the area of the site (Sheet ST67NE and ST67NW, 2003 editions) indicates the site to be underlain by bedrock of the Middle Coal Measures Formation, comprising mainly mudstones, with sandstones, seat earths and coal seams.

No superficial deposits are indicated above the bedrock. An extract from the geological map is presented as Insert 2 below.



Insert 2 - Extract from BGS Geological Map Sheet ST67NE/ST67NW, original 1:10,000 scale. Reproduced with permission (BGS licence number: C15/05 CSL)

The bedrock is indicated to be the Downend Formation, comprised of sandstone with mudstone and conglomerate, seat earths and coal seams. The Hen Coal seam is indicated to crop out conjecturally along Teewell Avenue, immediately to the north of the site. The Chick Coal is indicated to crop out some 75m to the north, and the conjectural outcrop of the possible Doxall coal seam is indicated just to the south of the site. The bedrock is indicated to be dipping at an angle of 50° to the north within the former railway cutting to the south. Given this, based on the conjectural outcrop immediately north of the site, the Hen seam would not be expected to underlie the site. However, it should be appreciated that as the outcrop of the Hen seam is indicated as conjectural, its position is not confirmed and it could be present beneath or to the south of the site, in which case, it could underlie the site. The unnamed coal seam, cropping out to the south, is expected to underlie the site.

The stratigraphical succession shown on the geological map indicates that the Hen seam is up to 1m thickness, and the Doxall coal seam is around 700mm thick. Two unnamed coal seams of 0.6m and 1.2m thickness are indicated between the Hen and Doxall seams on the stratigraphical succession on map ST67NW, but no outcrops of these seams are indicated on either published map.

Mine shafts are shown on the geological maps some 220m to the north-west and 450m to the north-east, both probably associated with workings within the Chick and Cock coal seams north of the site.

Reference to the up-to-date mapping available on the website of the British Geological Survey (BGS, 2024) indicates a similar succession.

2.3.2 Available BGS Borehole Records

Reference to the website of the British Geological Survey (BGS, 2024) indicates no available records of boreholes in the immediate vicinity of the site.

2.4 Coal Authority Records

2.4.1 Coal Authority Website

Reference to the Coal Authority website (CA, 2024) provides the following salient information:

- The outcrops of the Hen, Chick and Cock coal seams are indicated to cross the area to the north of the site, as shown on the geological map. The outcrop of the possible Doxall seam is shown to the south of the site.
- Recorded past shallow coal mine workings are indicated within the Hen seam to the west and the Chick seam to the east.
- Probable shallow coal mine workings are identified within the Hen and Chick seam to the north, and within the possible Doxall coal seam to the south of the site.
- A series of mine shafts are shown to the north and east of the site.
- No past surface hazard or surface mining is identified in the vicinity of the site.
- 'Development High Risk Areas' associated within the coal outcrops to the north and south of the site are shown to cover the complete site.

2.4.2 Coal Authority Mining Report

A Consultants Mining Report has been obtained from the Coal Authority as part of this assessment, and is presented in Appendix C. This identifies the following:

- Recorded mine workings within two coal seams between 339 and 375m depth beneath the site. The shallowest recorded workings are within the Two Feet Nine coal seam, where a seam of 1.1m thickness was worked until 1856.
- There are also 'probable unrecorded shallow workings' beneath the site.
- No spine roadways are recorded at shallow depth.
- Two mine shafts are recorded some 55m to the east of the site.
- The Parrot coal seam is indicated to crop out in an east-west orientation through the north of the site, with the possible Doxall coal seam cropping out 26m to the south, approximately along the line of the former railway tunnel. The Parrot appears to be an alternative name for the Hen coal seam shown on geological maps.
- No faults, fissures or breaklines are recorded.
- No opencast mining sites are recorded within 500 metres of the enquiry boundary.
- The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.
- There is no current Stop Notice delaying the start of remedial works or repairs to the property.
- The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.
- There are no recorded mine gas emissions within 500 metres of the enquiry boundary.

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

2.5 Other Sources of Mining Information

Coal mining records are currently unavailable from the Bristol Coal Mining Archives (BCMA).

3 Assessment of Coal Mining Risks

3.1 Summary of Mining Hazard

The potential coal mining risks identified at the site are summarised in Table 2 below:

Table 2: *Identified Coal Mining Risks*

Coal Mining Aspect	Identified Hazard	Risk Assessment
Underground Coal Mining (recorded at shallow depth[1])	No	See Section 3.2
Underground Coal Mining (unrecorded shallow[1])	Possible	
Recorded Mine Entries (shafts and adits)	No	See Section 3.4
Unrecorded Mine Entries (shafts and adits)	Possible	
Recorded Coal Mining Geology (fissures)	No	None identified.
Recorded Past Mine Gas Emissions or Potential	Possible	See Section 3.6
Recorded Surface Coal Mining Hazard	No	None identified.
Recorded Surface Mining (opencast workings)	No	None identified.

Notes to Table 2:
1. The Coal Authority defines shallow depth as within 30m of the ground surface.
2. Identified risks are discussed further in the following sections.

3.2 Abandoned Coal Mine Workings

The site is located in an area of past mining, with the Coal Measures bedrock close to the surface and no reported overlying superficial deposits. The Coal Authority show the Hen/Parrot seam to crop out across the northern part of the site, as shown on Figure 2. The strata dips to the north, i.e. this coal seam would be expected to underlie the northern margins of the site, as shown on Figure 3. The possible Doxall coal seam is shown to crop out around 25m south of the site. Given the dip to the north, we would expect this seam to underlie all of the site. The dip angle of the bedrock in the area is shown to be steep, around 50°.

There are no recorded workings within the Hen/Parrot coal seam beneath the site, however, the seam is indicated to be up to 1m in thickness, and to have been worked in the area. The mine workings in the Staple Hill area are generally old, and there was no requirement for colliery owners to survey their mine workings until 1872. Hence, many workings before this date (including those in the Staple Hill area) were not surveyed and no records exist of their presence or extent. Given the available information, we cannot discount that the Hen/Parrot coal seam is also worked beneath the north-western margins of the site (north of the outcrop shown on Figure 2), but the workings pre-date mandatory requirement for surveying. Any workings present would be at shallow depth beneath the north of the site and, therefore, within the north-western margins of the site, we consider that the subsidence risk could be High.

The possible Doxall coal seam, cropping out some 25m to the south and therefore underlying the whole site, is indicated to be around 700mm thickness, which would be sufficient thickness for it to be worked. Again, workings could pre-date 1872 and we cannot discount that workings within the Doxall coal seam are present beneath the whole of the site.

As discussed above, the dip of the bedrock strata is steep (50°) so, given the seam outcrop is 25m to the south, any workings within the Doxall seam would be expected at a depth of around 30m beneath the southern boundary of the site, and deeper beneath the remainder of the site, as illustrated on Figure 3.

Given a seam thickness of 0.7m and the very shallow depth to bedrock, at this depth, we would anticipate that the subsidence risk above any workings within the Doxall seam is likely to be **Low**.

It is noted that the Coal Authority identify 'probable' shallow coal mine workings beneath the site within both these seams, and identify the site as lying within a 'Development High Risk Area'. As discussed above, based on the presently available information, we anticipate that the subsidence risk above any workings within the Hen/Parrot seam could be High to the north of the outcrop i.e. possibly beneath the northern margins of the site. However, the Doxall seam is anticipated to be at sufficient depth that any workings are unlikely to pose a significant subsidence risk to the proposed development. Two thin seams are indicated between the Doxall and the Hen/Parrot seams, however, if thin, these are unlikely to have been worked, particularly given the steep dip of the bedrock strata in the area.

It should be appreciated that the above assessment is based on available desk study information only and would need to be confirmed by intrusive investigation (see Section 4). In particular, the location of the outcrop of the Hen/Parrot coal seam would need to be confirmed, along with the depth to the Doxall coal seam beneath the southern part of the site and the Hen/Parrot seam beneath the northern margins.

3.3 Shallow Ironstone Mine Workings

No ironstone bands are identified within the Coal Measures strata beneath the site, so the subsidence risk associated with shallow ironstone mine workings is likely to be Low.

3.4 Mine Entries

No mine entries are recorded by the Coal Authority on the site. However, the outcrop of the Hen/ Parrot coal seam is shown to cross the north of the site (see Figure 2).

No superficial soils are indicated beneath the site. Therefore, the Coal Measures bedrock is expected to be present at shallow depth, and unrecorded past 'crop workings' (mine entries along the outcrop of the coal seam) could be present along the seam outcrop.

We have identified no direct evidence of old mine entries on the site during this desk study assessment however, given the above, we cannot discount that old mine entries, probably dating from before the First Edition of the historical mapping, could be present on site.

Based on the above, we consider that the risk of mine entries beneath the site is **Moderate/High**.

3.5 Opencast Workings

Where coal seams crop out at the surface, the potential for opencast, surface mine workings is always present. However, the historical maps show no indication of such workings.

Given the recorded site history, although not totally discounted, we consider that the risk of backfilled opencast workings beneath the site is Low.

3.6 Mine Gas Emissions

As discussed in Section 2.4.2, the Coal Authority has no record of a mine gas emission requiring action in the vicinity of the site. Notwithstanding this, given the probability of shallow mine workings and mine entries along the outcrop, there is a potential risk from mine gas and a mine gas risk assessment based on the guidelines published by Wilson et al (2021) would be required. We note that the Coal Authority identify the outcrop of the Hen/Parrot coal seam in the vicinity of the proposed dwelling structures.

3.7 Potential Combustibility

Although outside the brief, the developer should be aware of the potential for a combustibility risk where the coal seam crops out across the site. The risks off combustion will be controlled by the carbon content of the outcropping coal and the nature of development immediately above the outcrop. We note that the Coal Authority identify the outcrop of the Hen/Parrot coal seam in the vicinity of the proposed dwelling structures. Further guidance on the risk of potential combustibility can be provided, if required.

4 Recommended Investigation

Further intrusive investigation will be required to confirm the Conceptual Ground Model and the likely mining risks to the proposed development. In particular, the investigation would need to (as a minimum):

- Confirm the location of the outcrop of the Hen/Parrot coal seam (shown conjecturally on Figure 2) – the precise position of this outcrop will control the potential subsidence risks beneath the site;
- Confirm the depth and thickness of the Hen/Parrot seam (if present) beneath the north-western margins of the site; and
- Confirm the depth and thickness of the possible Doxall seam beneath the southern part of the site.

We consider that the appropriate further investigation would comprise rotary drillholes probably followed by trial trenching.

We recommend that initially a line of rotary drillholes should be constructed north-south through the site in order to establish the depth to the Hen/Parrot and Doxall coal seams, and their thickness. At least one drillhole would be required on the western side of the northern boundary with Teewell Avenue to locate the Hen/Parrot coal seam (if present), and a further drillhole would be required in the southern margins to confirm the depth to the Doxall coal seam.

Further drillholes would be required between these two, with their locations depending on the findings. These drillholes should be taken to a minimum of 40m depth, and extended to greater depth to identify coal seams as required. We consider that a minimum of five drillholes would be required.

If the outcrop of the Hen/Parrot coal seam is identified within the site boundary, its precise position would need to be established by trial trenching. Trial trenching would also allow an inspection of the area of the outcrop for possible past mine entries, and allow sampling for an assessment of the risk from combustibility.

A shallow site strip to expose the bedrock may also be required across the footprints of the proposed dwellings to identify the possible presence of mine entries along the seam outcrop (if present).

A preliminary UXO report (Appendix D) has identified records that show ‘several HE (high explosive) bombs fell in close proximity to the site’ during World War Two. A detailed UXO desk study is recommended prior to any intrusive investigation or future ground works.

5 References

BRITISH GEOLOGICAL SURVEY (BGS). 2024. Website accessed February 2024.

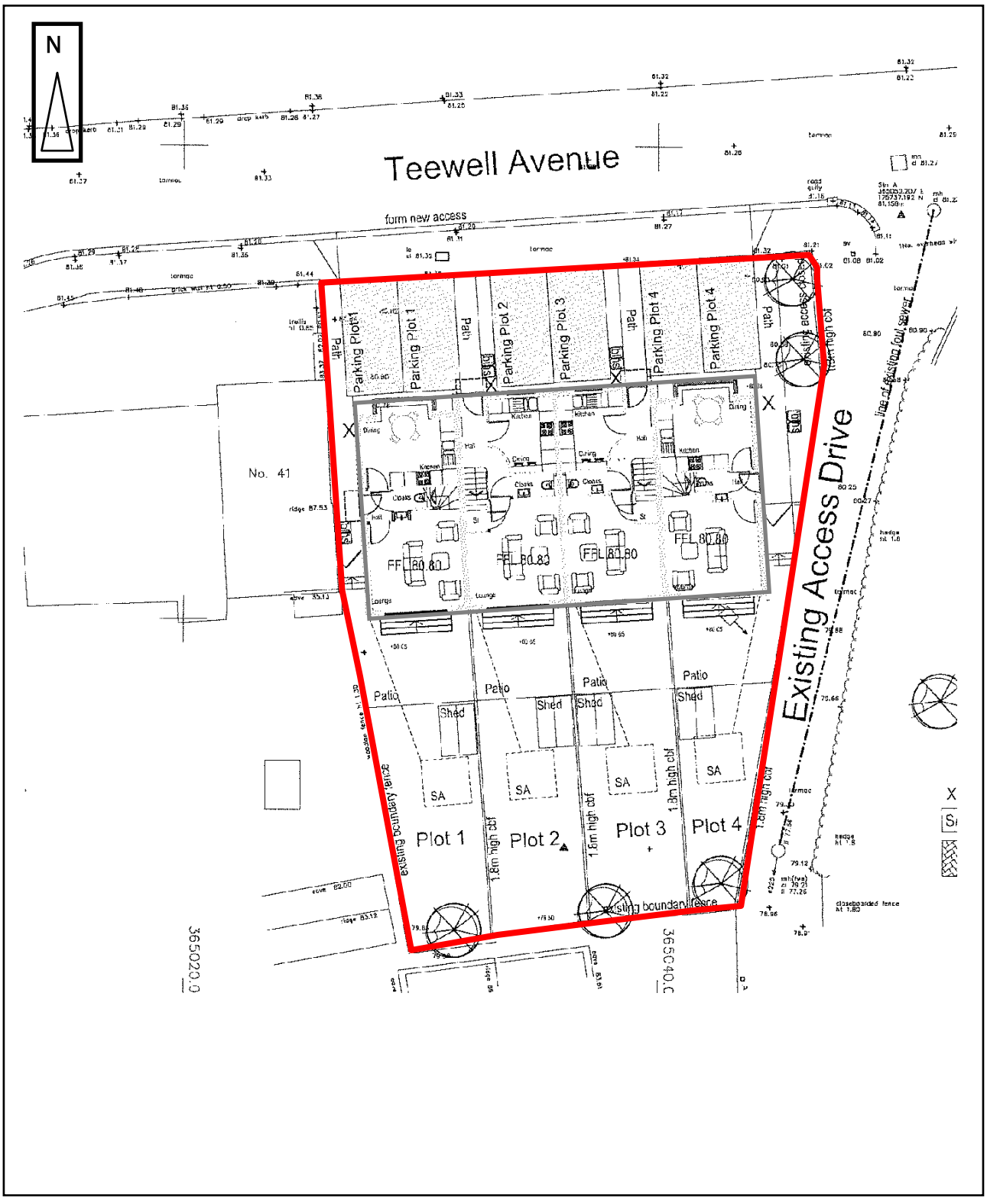
BRITISH STANDARDS INSTITUTION (BSI). 2020. Code of Practice for Ground Investigation. BS5930:2015+A1:2020. HMSO, London. .

COAL AUTHORITY (CA). 2014. Risk Based Approach to Development Management. Guidance for Developers.

COAL AUTHORITY. 2024. Website accessed February 2024.

WILSON S, HENMAN T, LEE A, and MEREDITH R. 2021. Good Practice for Risk Assessment for Coal Mine Gas Emissions. CL:AIRE.

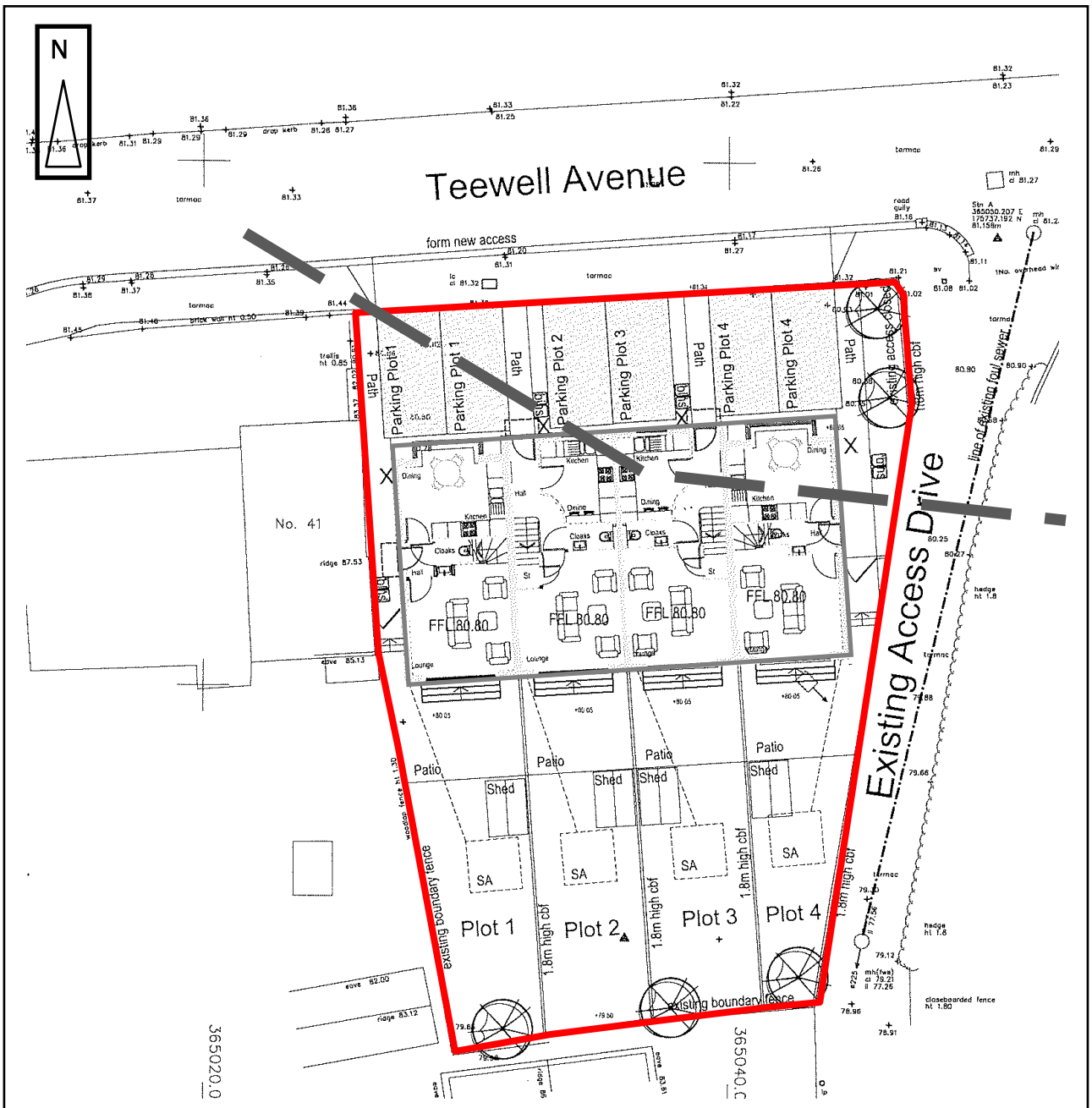
FIGURES



PROJECT:	PROPOSED RESIDENTIAL DEVELOPMENT 83 TEEWELL AVENUE, STAPLE HILL, BRISTOL
SCALE:	1:2,500 (approx. at A4)
FIGURE 1:	PROPOSED DEVELOPMENT LAYOUT

After David Cahill Design Consultants Ltd, 2023.

Earth Science Partnership
Consulting Engineers | Geologists | Environmental Scientists
33 Cardiff Road, Taff's Well, Cardiff CF15 7RB
Tel: 029 2081 3385 enquiries@earthsciencepartnership.com

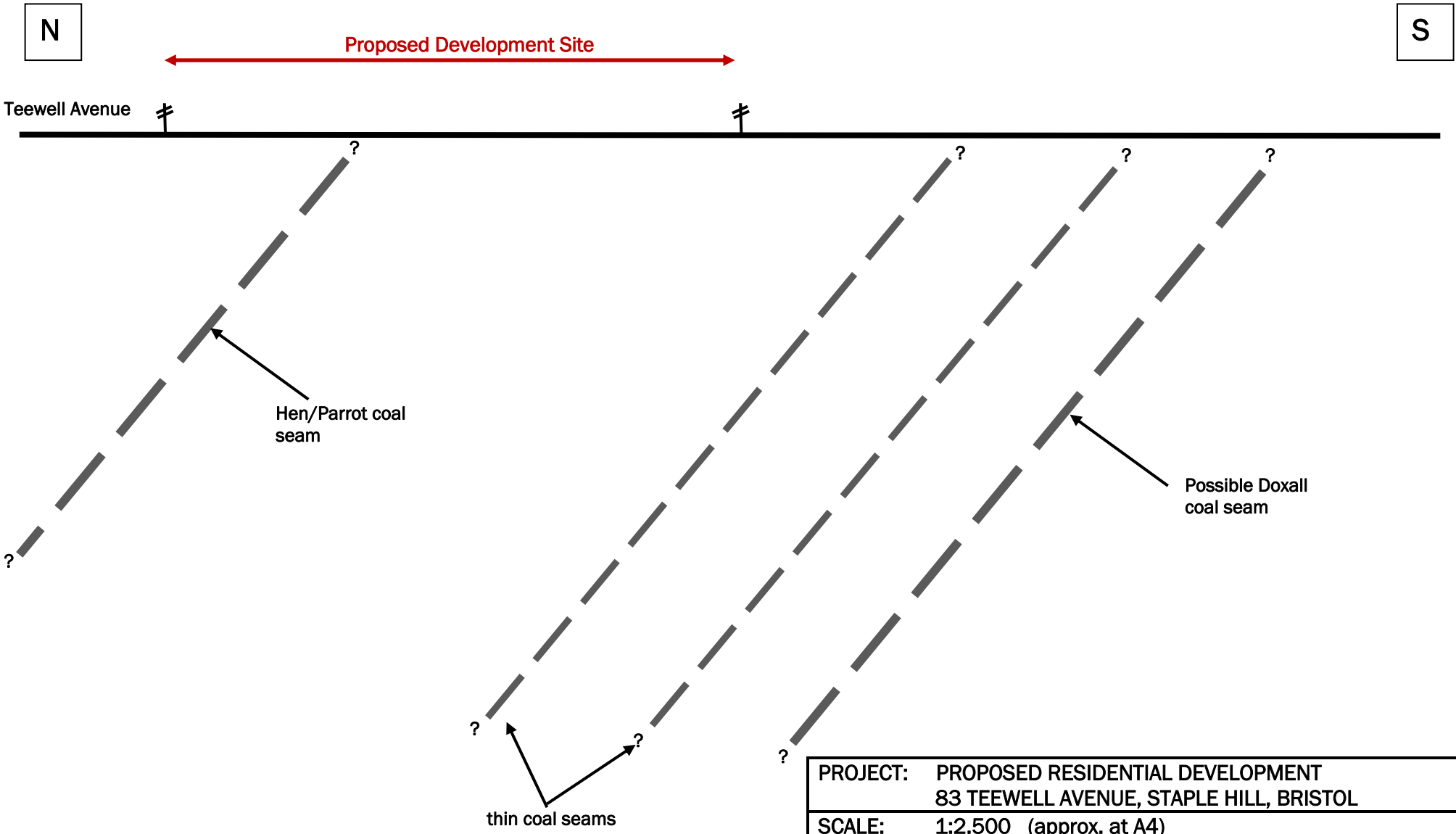


Conjectural Outcrop of Hen/Parrot coal seam
(after Coal Authority)

Seam outcrop position to be confirmed by intrusive investigation.

PROJECT:	PROPOSED RESIDENTIAL DEVELOPMENT 83 TEEWELL AVENUE, STAPLE HILL, BRISTOL
SCALE:	1:2,500 (approx. at A4)
FIGURE 2:	CONJECTURAL OUTCROP OF COAL SEAM

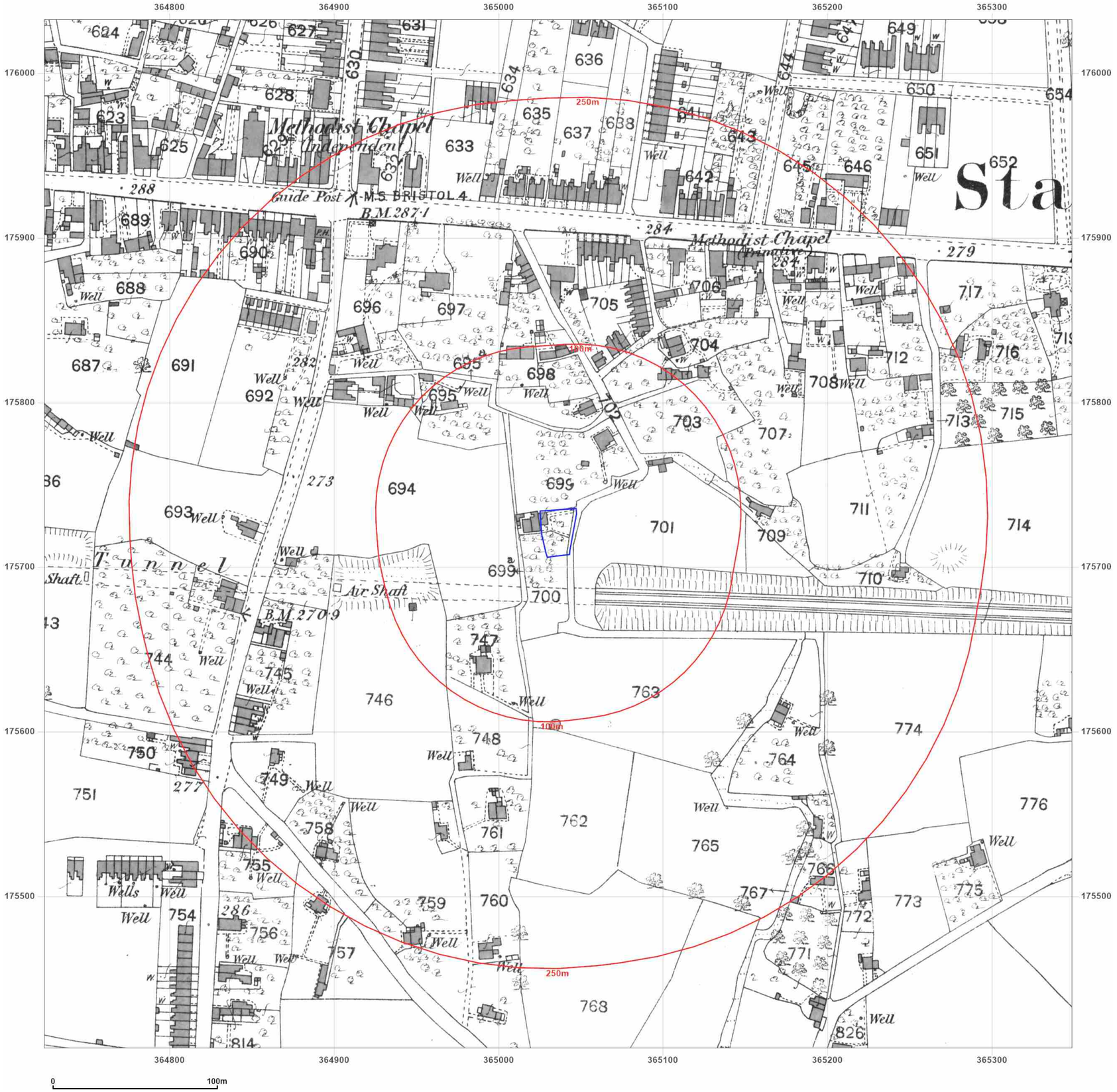
Earth Science Partnership
Consulting Engineers | Geologists | Environmental Scientists
33 Cardiff Road, Taff's Well, Cardiff CF15 7RB
Tel: 029 2081 3385 enquiries@earthsciencepartnership.com



PROJECT:	PROPOSED RESIDENTIAL DEVELOPMENT 83 TEEWELL AVENUE, STAPLE HILL, BRISTOL
SCALE:	1:2,500 (approx. at A4)
FIGURE 3:	CONCEPTUAL GROUND MODEL (illustrative only)

Earth Science Partnership
Consulting Engineers | Geologists | Environmental Scientists
33 Cardiff Road, Taff's Well, Cardiff CF15 7RB
Tel: 029 2081 3385 enquiries@earthsciencepartnership.com

APPENDIX A Extracts from Historical Maps



esp

ENGINEERS
GEOLOGISTS
SCIENTISTS

Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1882**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1882
Revised 1882
Edition N/A
Copyright N/A
Levelled N/A

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Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

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ENGINEERS
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SCIENTISTS

Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1903**

Scale: 1:2,500

Printed at: 1:2,500

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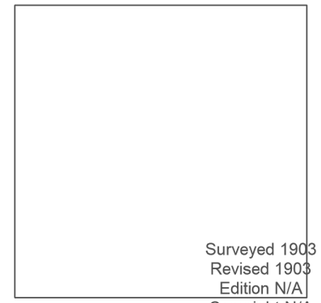

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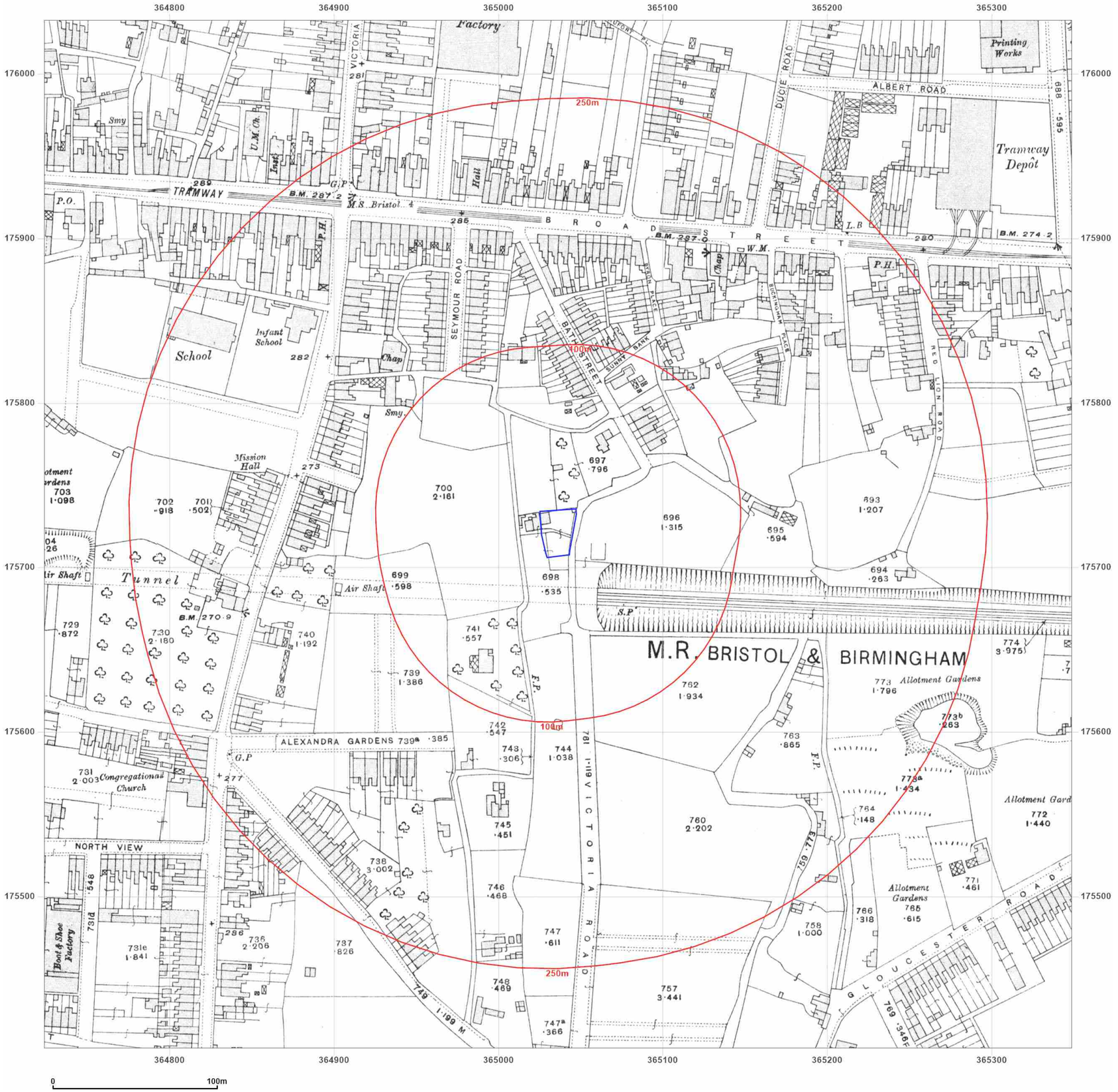
Production date: 07 February 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



esp

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1916**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1916
Revised 1916
Edition N/A
Copyright N/A
Levelled N/A

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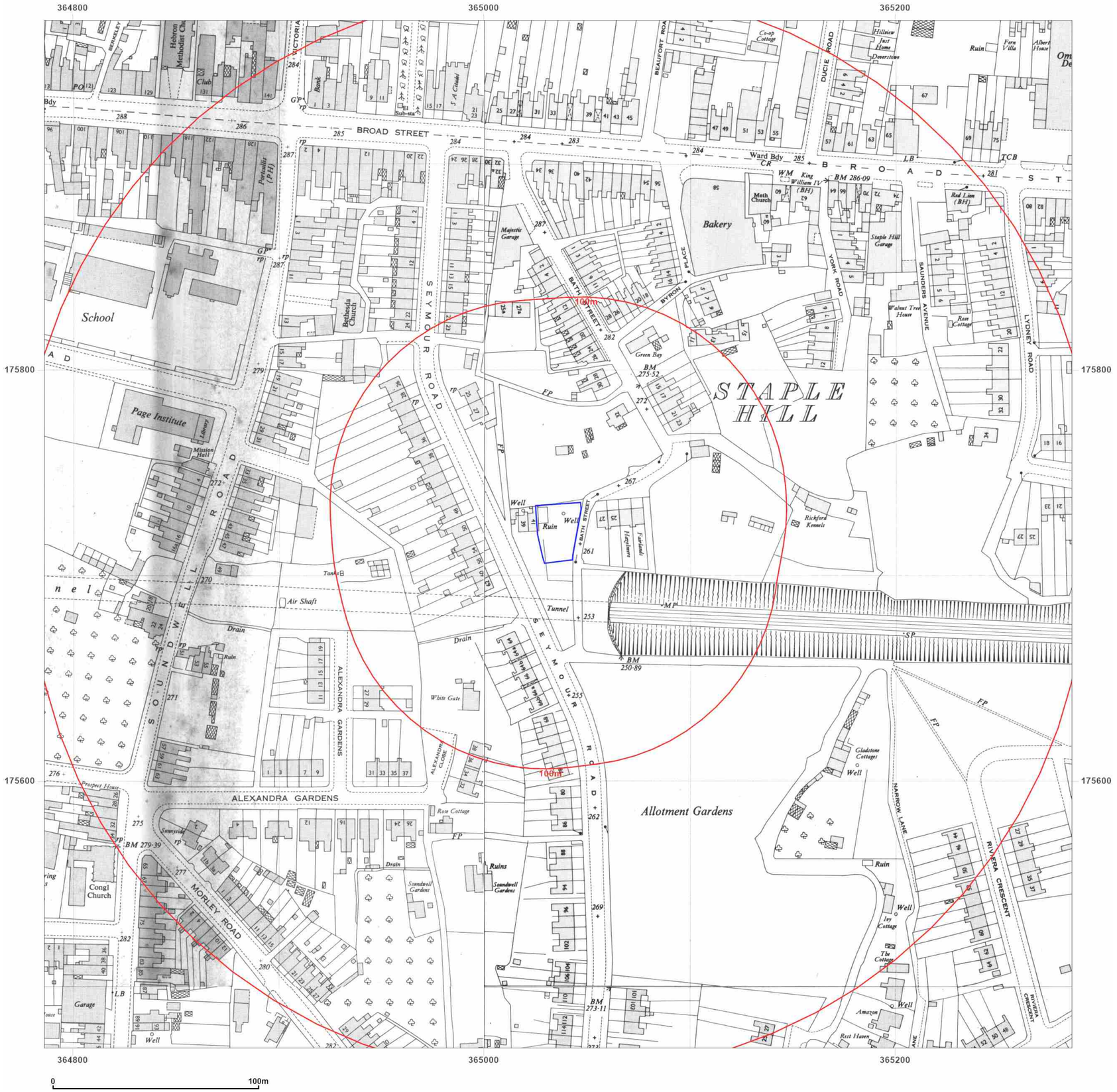

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1949-1950**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1950 Revised 1950 Edition N/A Copyright N/A Levelled 1945		Surveyed 1949 Revised 1949 Edition N/A Copyright N/A Levelled 1945
Surveyed 1950 Revised 1950 Edition N/A Copyright N/A Levelled 1945		Surveyed 1949 Revised 1949 Edition N/A Copyright N/A Levelled 1945

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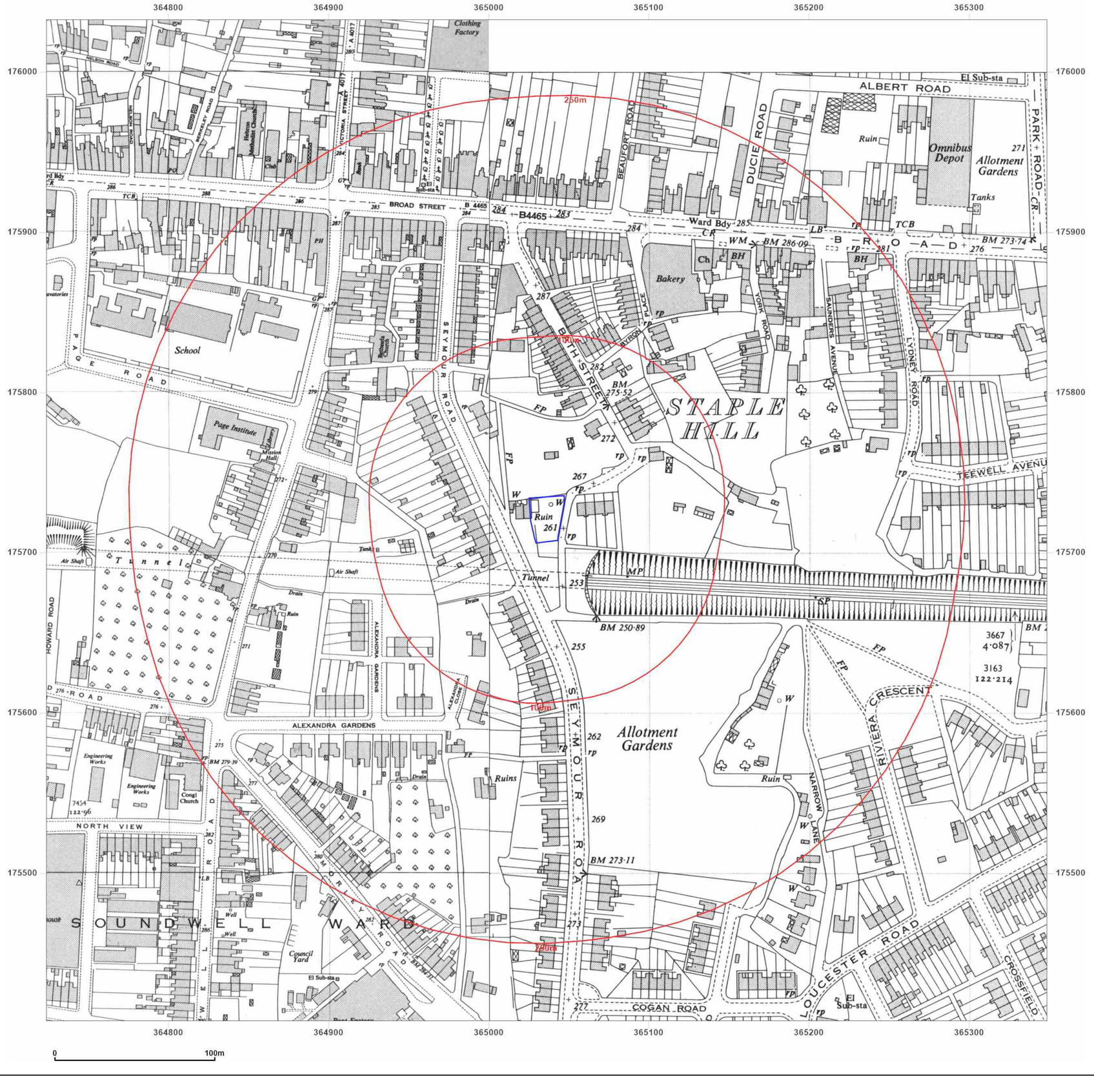

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1949-1954**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed N/A
Revised 1952
Edition N/A
Copyright 1954
Levelled 1945

Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1949
Revised 1949
Edition N/A
Copyright N/A
Levelled 1945

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1951-1955**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A		Surveyed 1949 Revised 1955 Edition N/A Copyright N/A Levelled 1945
Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A		

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Site Details:

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Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1956-1961**

Scale: 1:1,250

Printed at: 1:2,000

N
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Surveyed 1960 Revised 1960 Edition N/A Copyright N/A Levelled N/A		Surveyed N/A Revised 1955 Edition 1956 Copyright N/A Levelled 1945
Surveyed 1958 Revised 1958 Edition N/A Copyright 1959 Levelled 1945		Surveyed 1949 Revised 1961 Edition N/A Copyright 1961 Levelled 1957

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1961-1964**

Scale: 1:1,250

Printed at: 1:2,000

N
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Surveyed N/A
Revised 1960
Edition N/A
Copyright 1961
Levelled 1957

Surveyed 1949
Revised 1963
Edition N/A
Copyright 1964
Levelled 1957

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Site Details:

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Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1967-1971**

Scale: 1:1,250

Printed at: 1:2,000

N
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Surveyed 1949 Revised 1971 Edition N/A Copyright 1971 Levelled 1957		Surveyed 1971 Revised 1971 Edition N/A Copyright N/A Levelled N/A
Surveyed 1967 Revised 1967 Edition N/A Copyright N/A Levelled N/A		Surveyed 1949 Revised 1967 Edition N/A Copyright 1968 Levelled 1957

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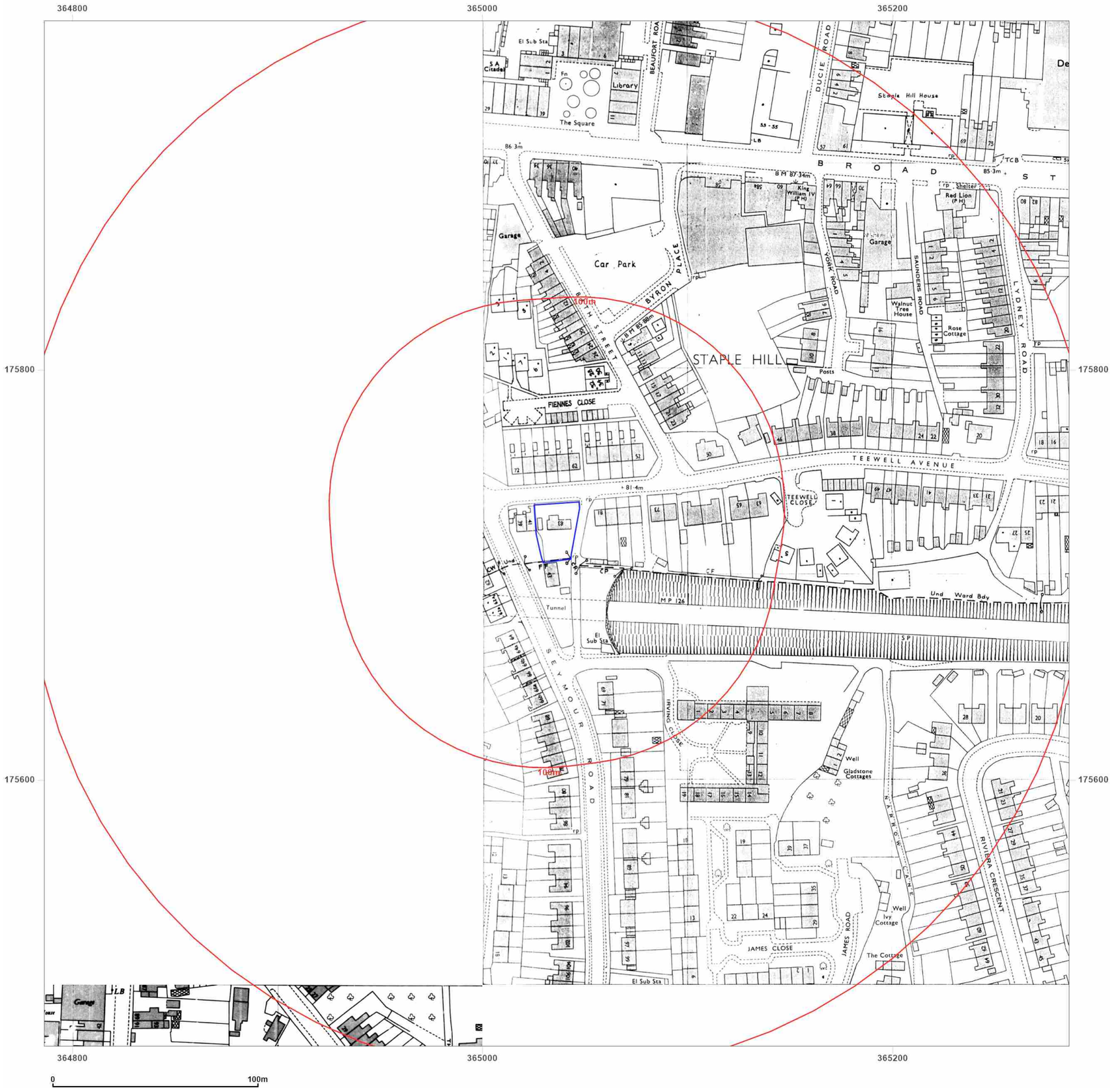

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1968-1971**

Scale: 1:1,250

Printed at: 1:2,000

N
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Surveyed 1957
Revised 1971
Edition N/A
Copyright 1971
Levelled 1957

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

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Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1984-1989**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1957 Revised 1985 Edition N/A Copyright 1985 Levelled 1957		Surveyed 1957 Revised 1988 Edition N/A Copyright 1988 Levelled 1957
Surveyed 1957 Revised 1984 Edition N/A Copyright 1984 Levelled 1957		Surveyed 1957 Revised 1989 Edition N/A Copyright 1989 Levelled 1957

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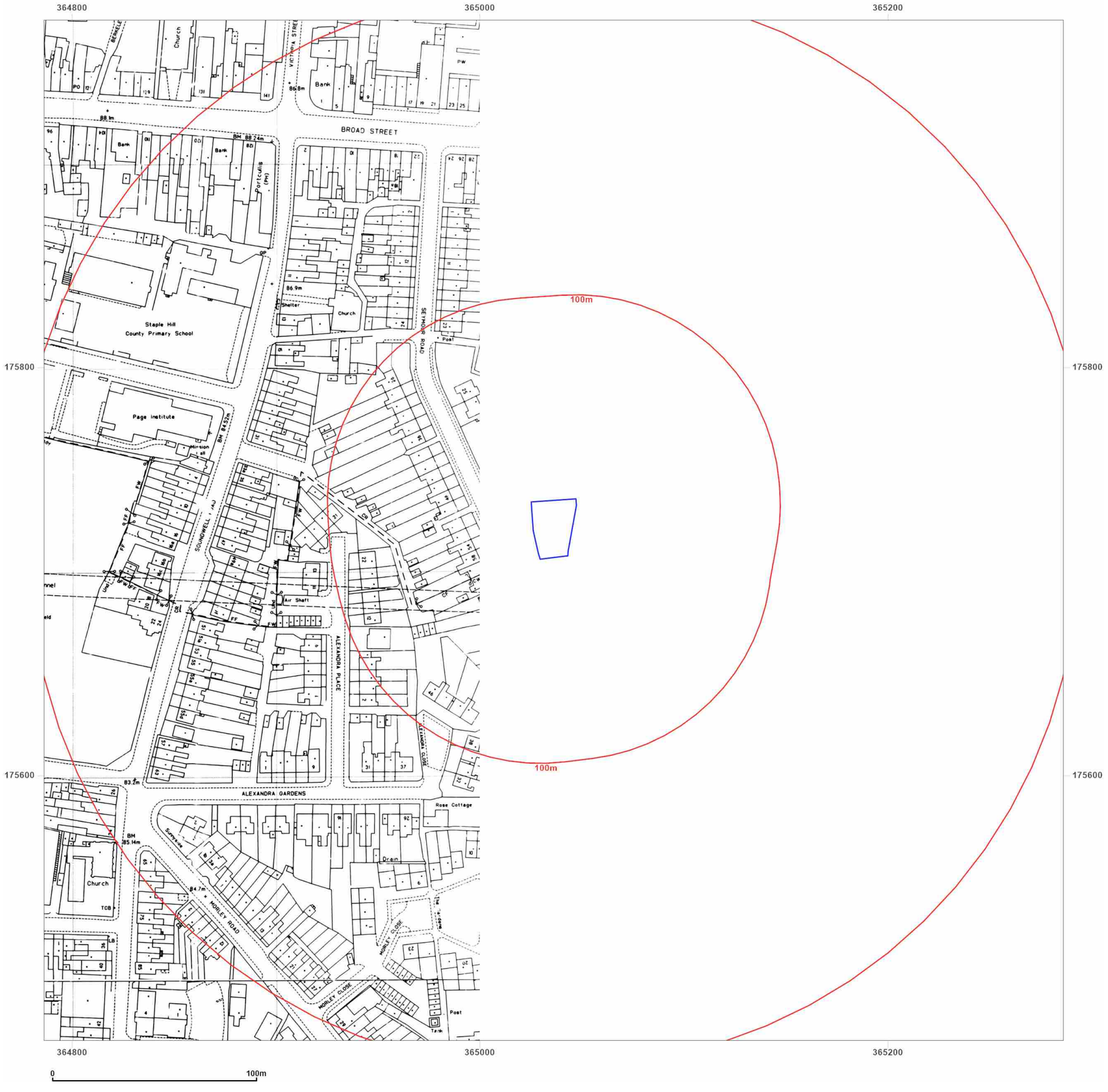

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1992**

Scale: 1:1,250

Printed at: 1:2,000

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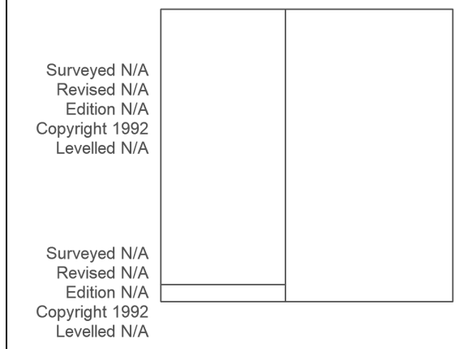

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Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1989-1992**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed N/A Revised 1989 Edition N/A Copyright 1989 Levelled N/A		Surveyed N/A Revised 1991 Edition N/A Copyright 1991 Levelled N/A
Surveyed N/A Revised N/A Edition N/A Copyright 1991 Levelled 1957		Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A

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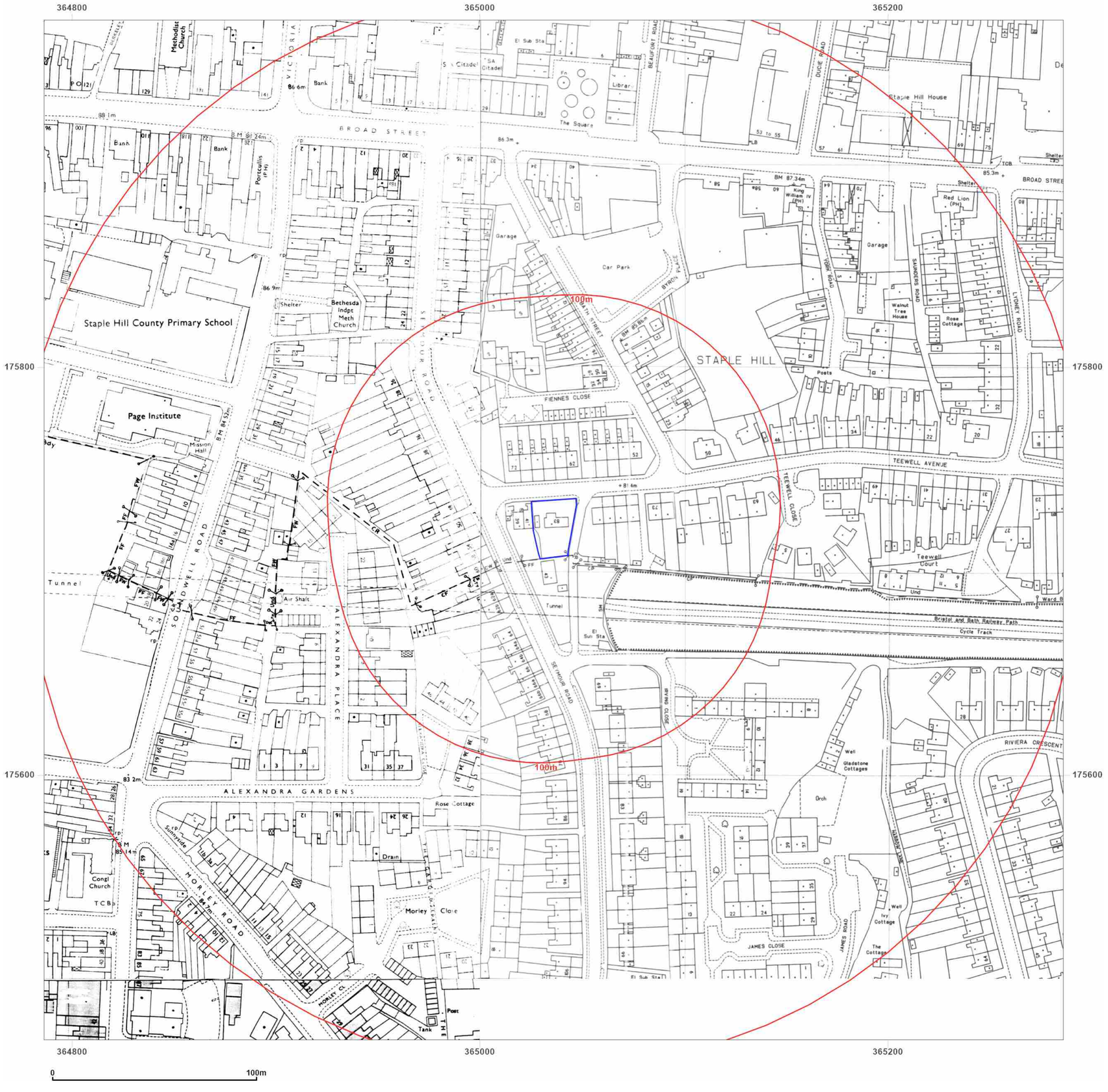

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1991-1992**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed N/A Revised 1991 Edition N/A Copyright 1991 Levelled N/A		Surveyed N/A Revised 1992 Edition N/A Copyright 1992 Levelled N/A
Surveyed 1957 Revised 1991 Edition N/A Copyright 1991 Levelled 1957		

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Site Details:

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Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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2003

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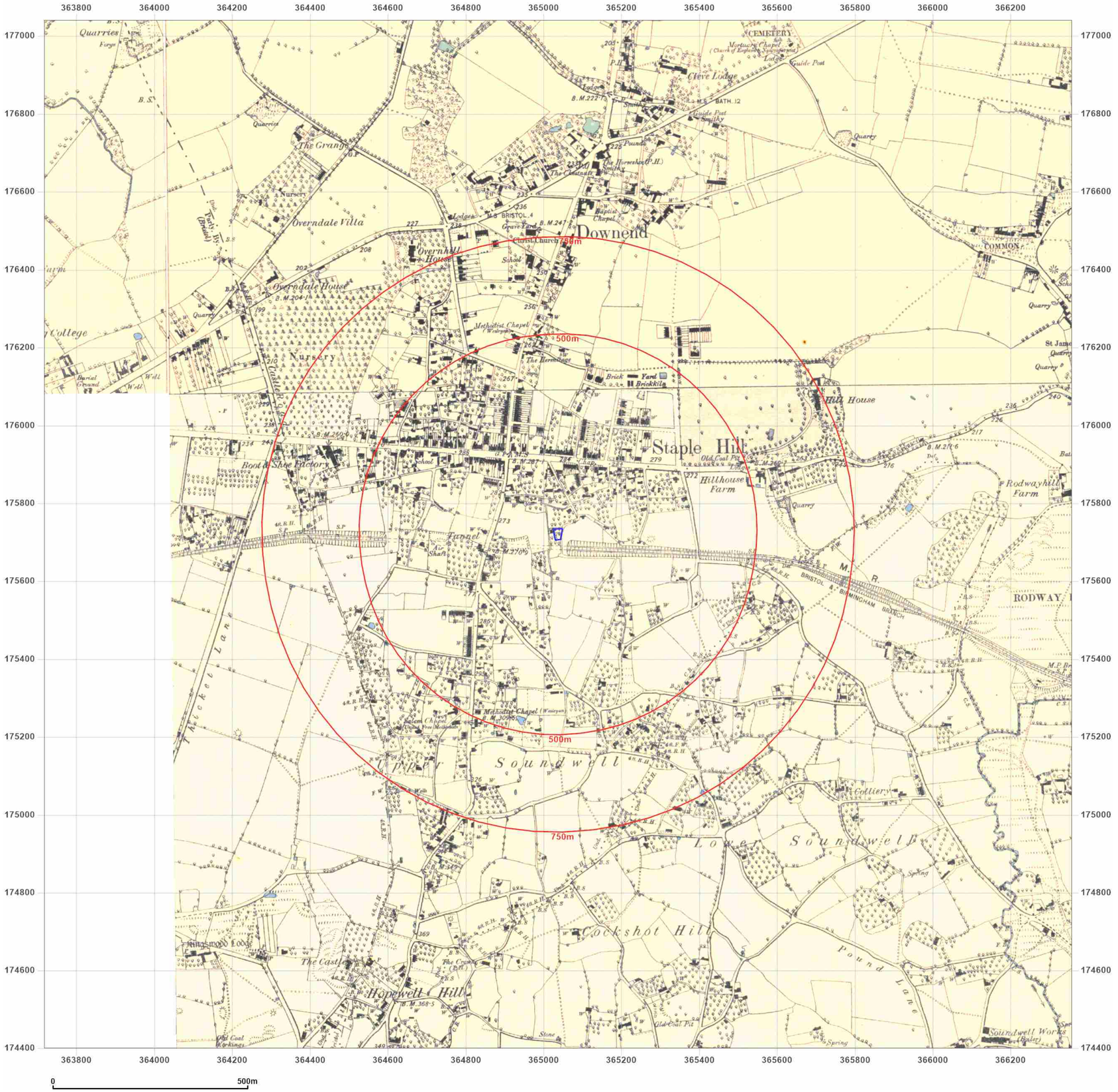

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1881-1886**

Scale: 1:10,560

Printed at: 1:10,560

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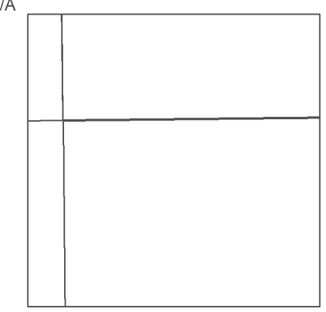
Surveyed 1881
Revised 1881
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1881
Revised N/A
Edition 1886
Copyright N/A
Levelled N/A



Surveyed 1881
Revised 1881
Edition N/A
Copyright N/A
Levelled N/A

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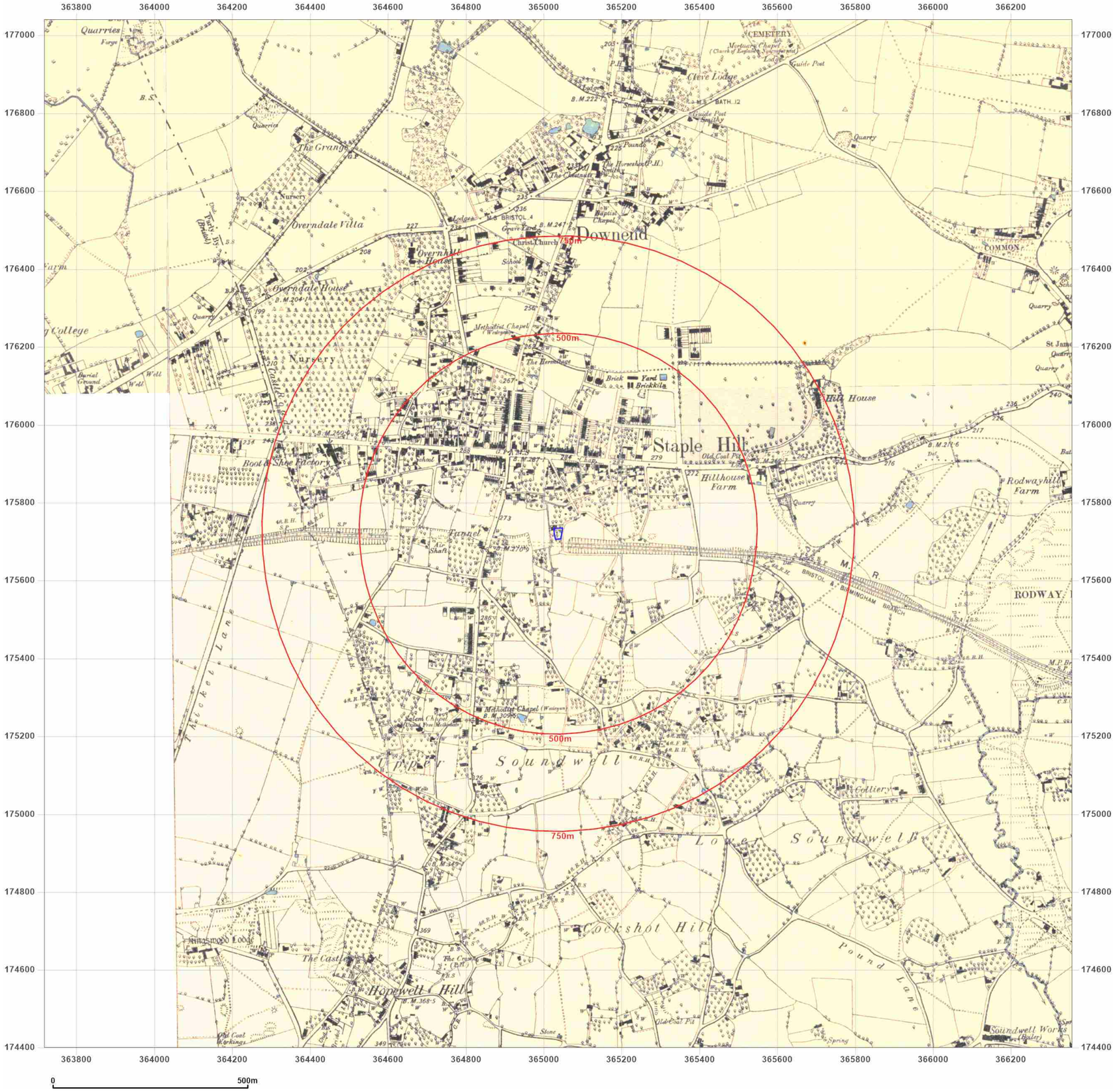

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1881-1887**

Scale: 1:10,560

Printed at: 1:10,560

N
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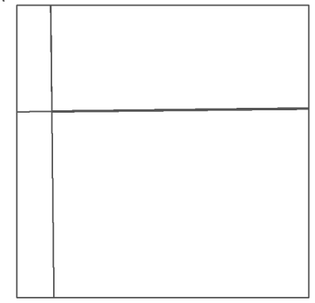
Surveyed 1881
Revised N/A
Edition 1883
Copyright N/A
Levelled N/A

Surveyed 1881
Revised 1881
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1881
Revised N/A
Edition 1887
Copyright N/A
Levelled N/A

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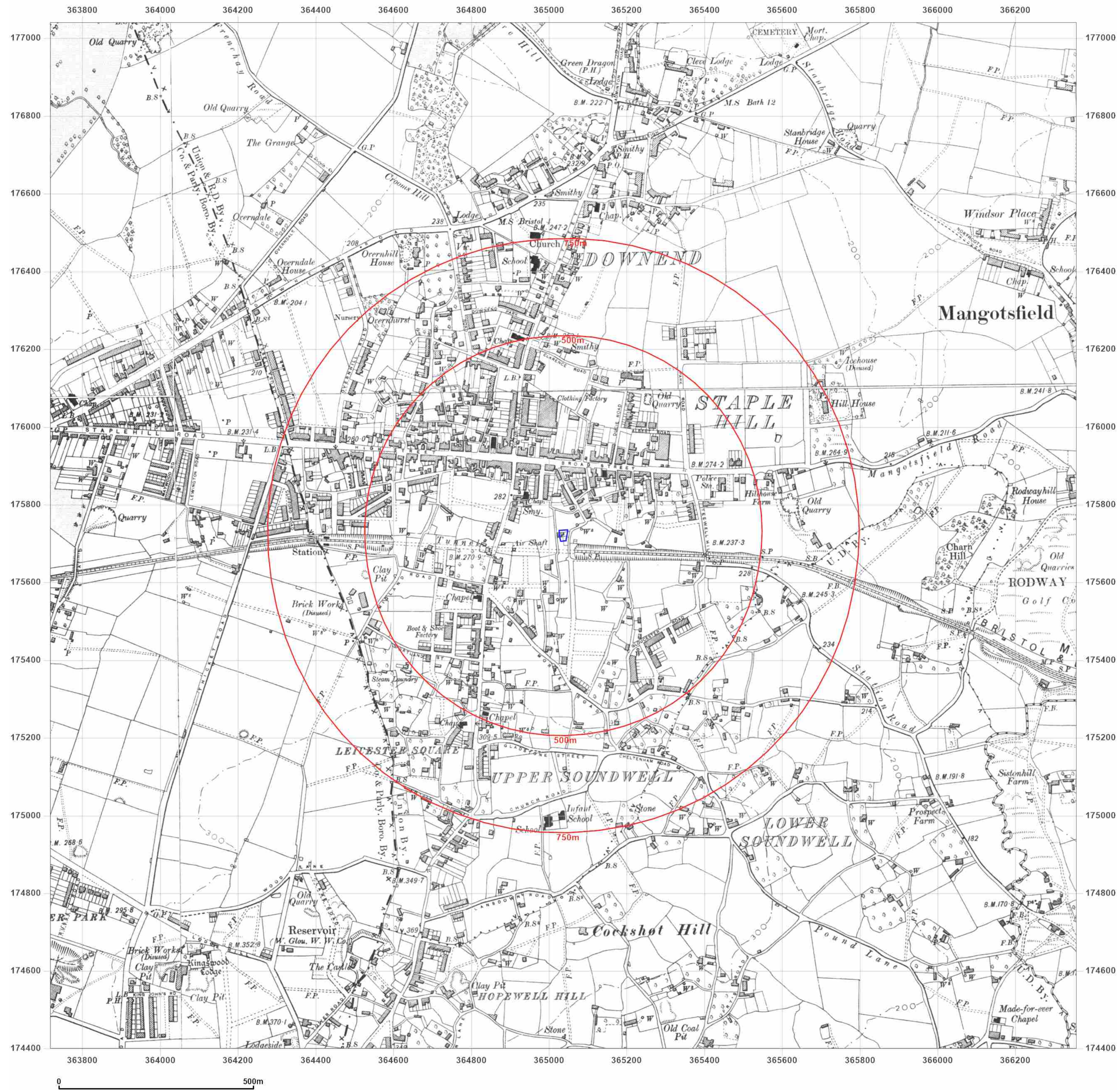

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

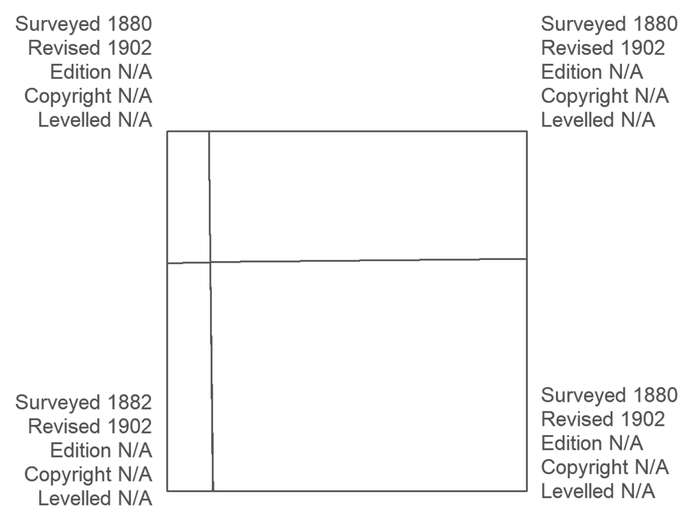
Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1902**

Scale: 1:10,560

Printed at: 1:10,560



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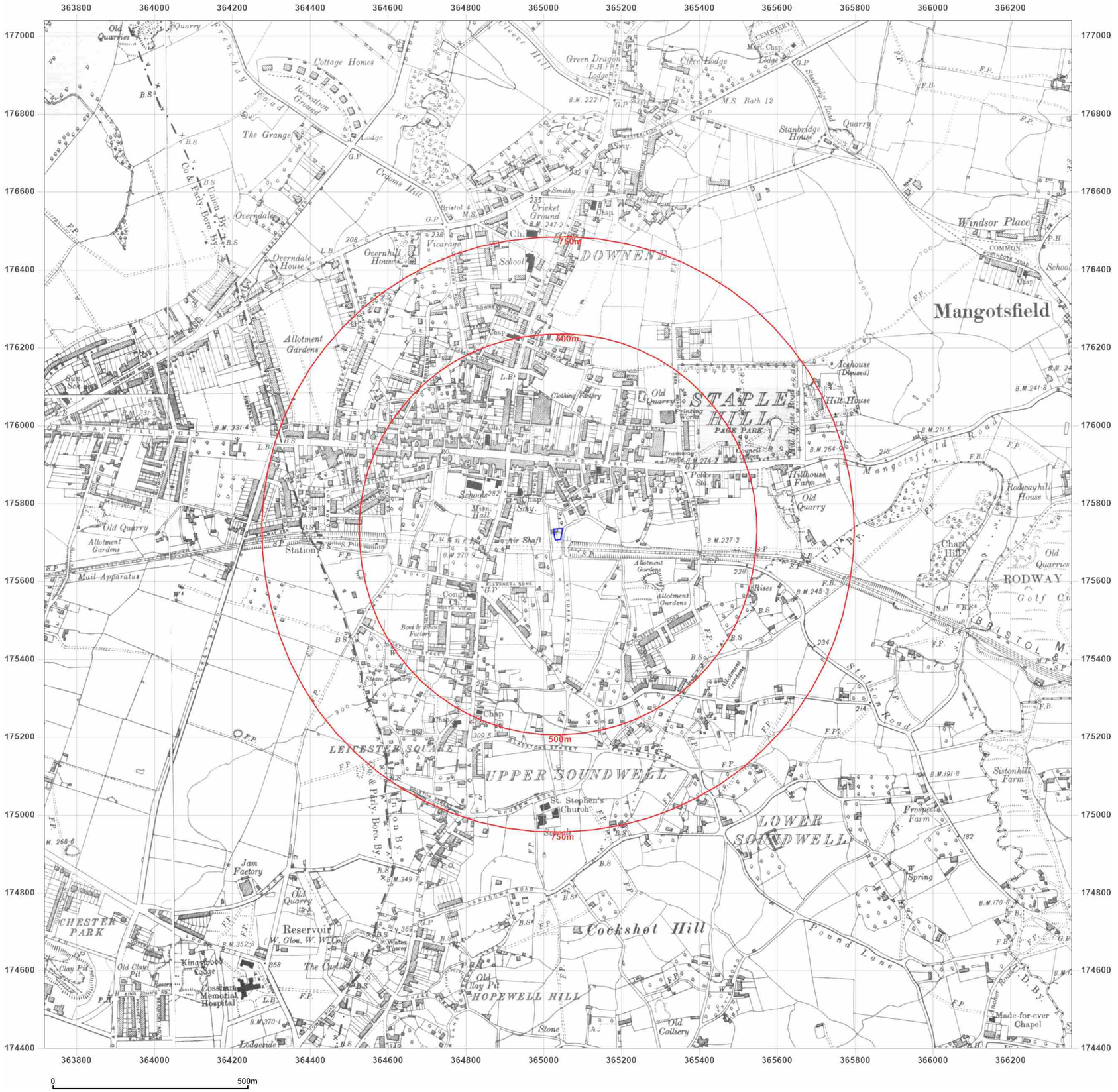

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1912-1913**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1880
Revised 1913
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1880
Revised 1912
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1882
Revised 1913
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1880
Revised 1912
Edition N/A
Copyright N/A
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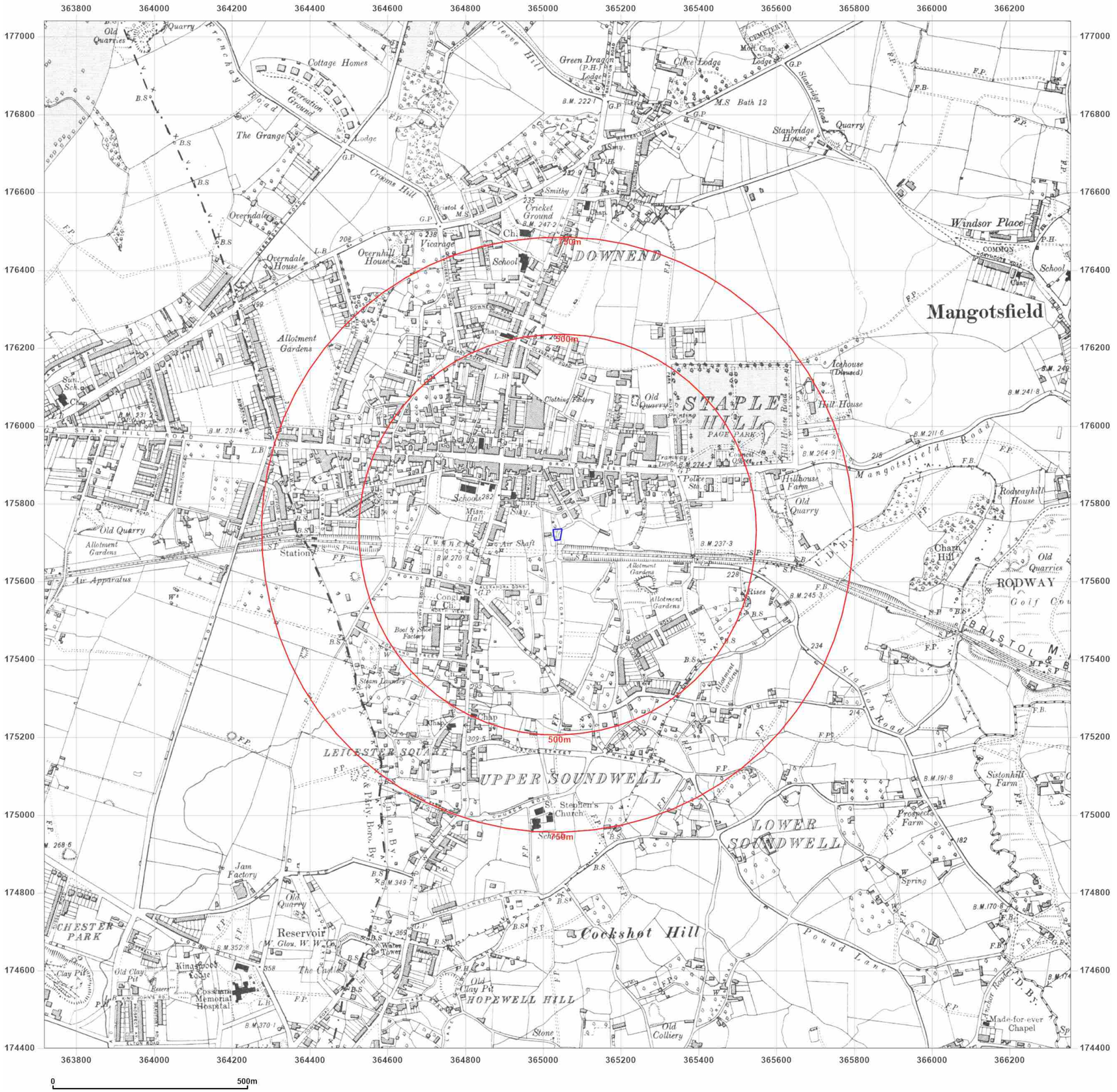

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1921**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1882
Revised 1921
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1936-1938**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
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Surveyed 1880
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

Surveyed 1880
Revised 1936
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1882
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

Surveyed 1880
Revised 1938
Edition 1938
Copyright N/A
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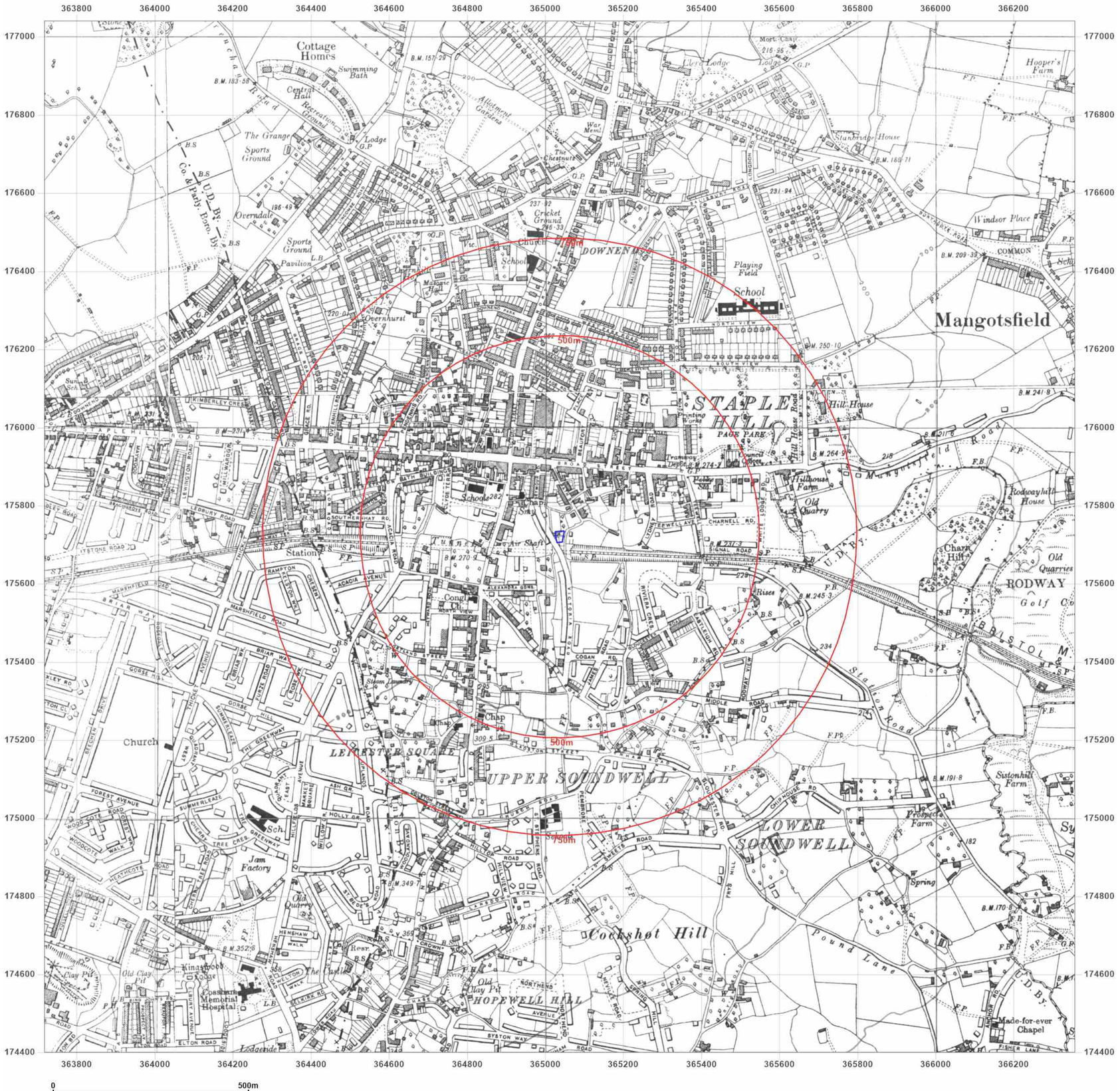

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1936-1938**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1880
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1880
Revised 1936
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1882
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1880
Revised 1938
Edition N/A
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Levelled N/A

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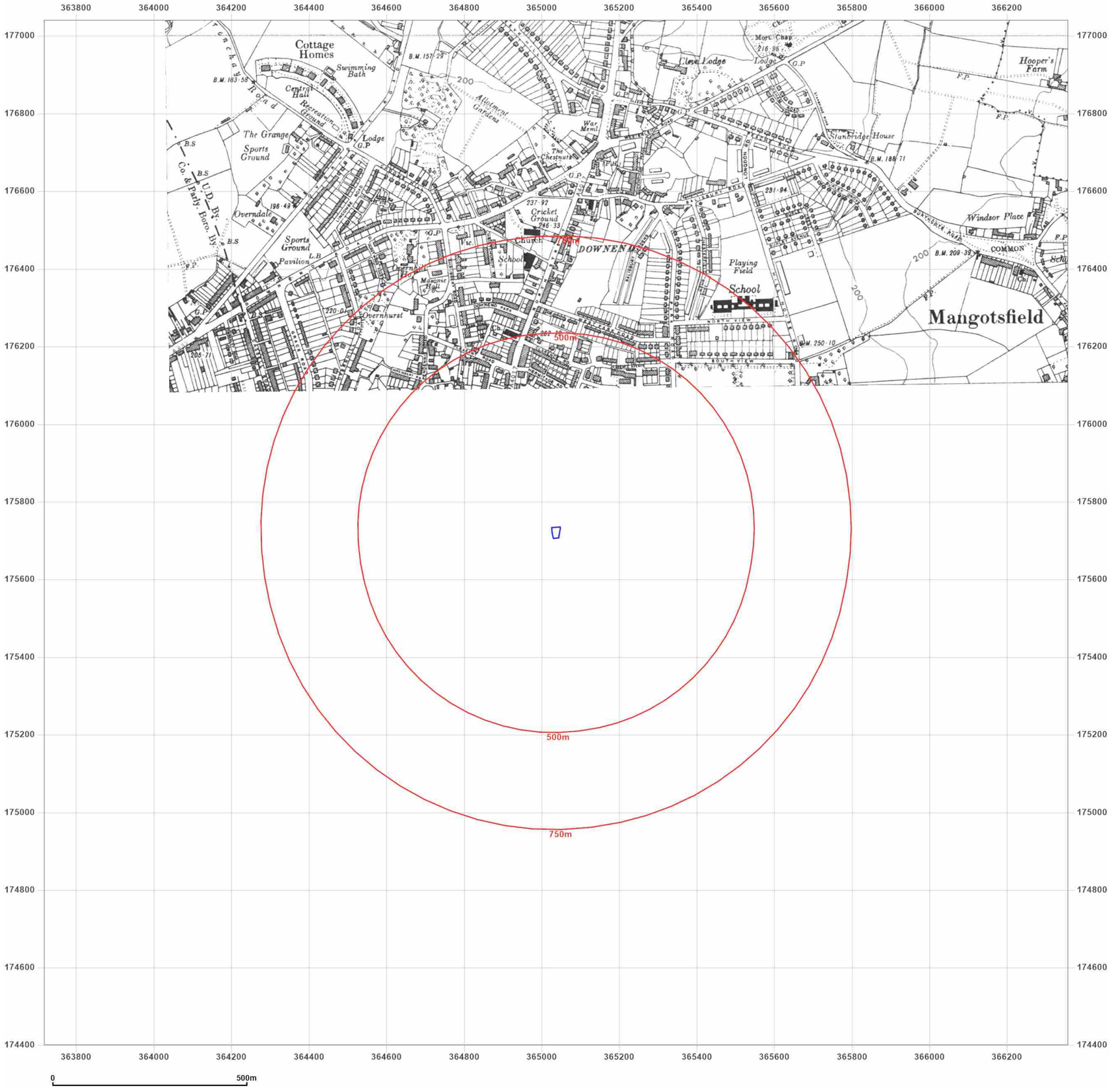

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SCIENTISTS

Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
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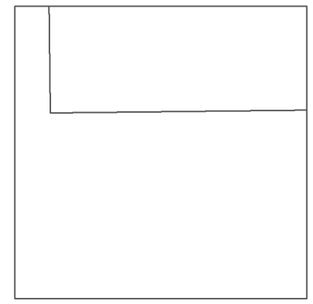
Surveyed 1880
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A



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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: Provisional

Map date: **1953-1955**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed N/A
Revised 1954
Edition 1955
Copyright N/A
Levelled N/A

Surveyed 1953
Revised 1953
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1955
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1953
Revised 1953
Edition N/A
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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: Provisional

Map date: **1965-1969**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed N/A
Revised 1969
Edition 1955
Copyright N/A
Levelled N/A

Surveyed 1965
Revised 1965
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1969
Revised 1969
Edition N/A
Copyright N/A
Levelled N/A

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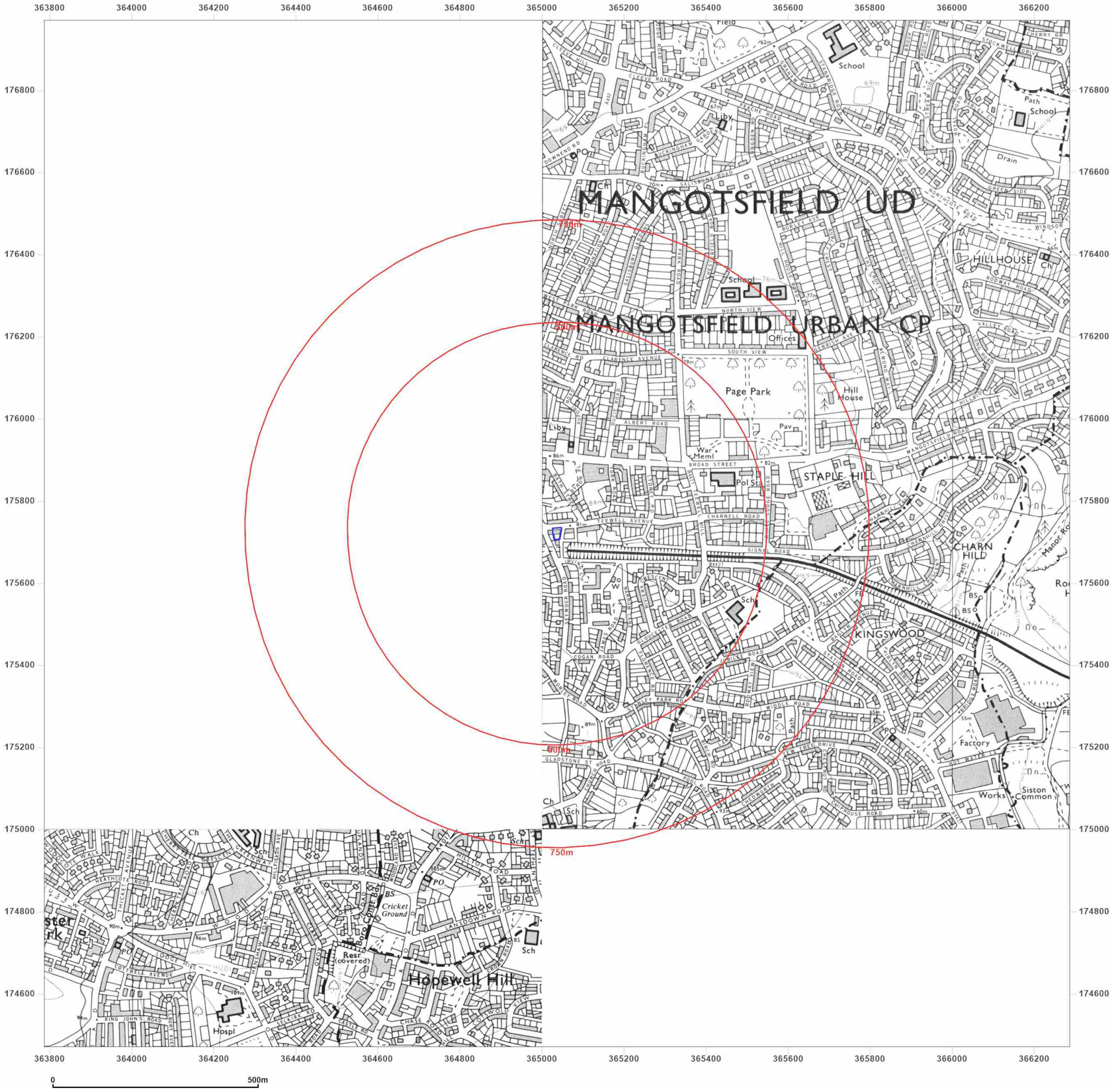

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid
Map date: **1971-1973**
Scale: 1:10,000
Printed at: 1:10,000

N
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Surveyed 1971
Revised 1971
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
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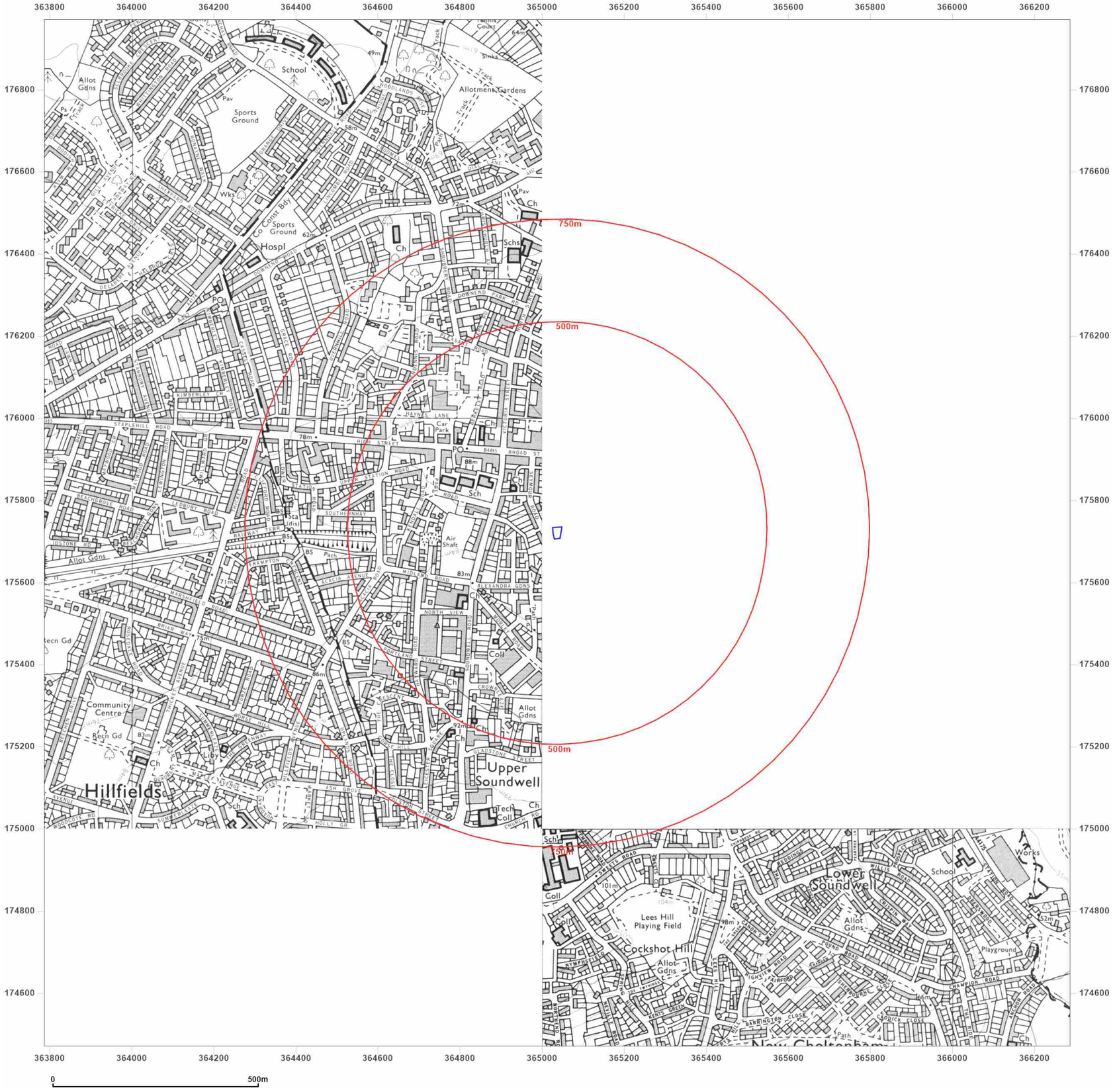

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **1978-1983**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1977
Revised 1978
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1980
Revised 1983
Edition N/A
Copyright N/A
Levelled N/A

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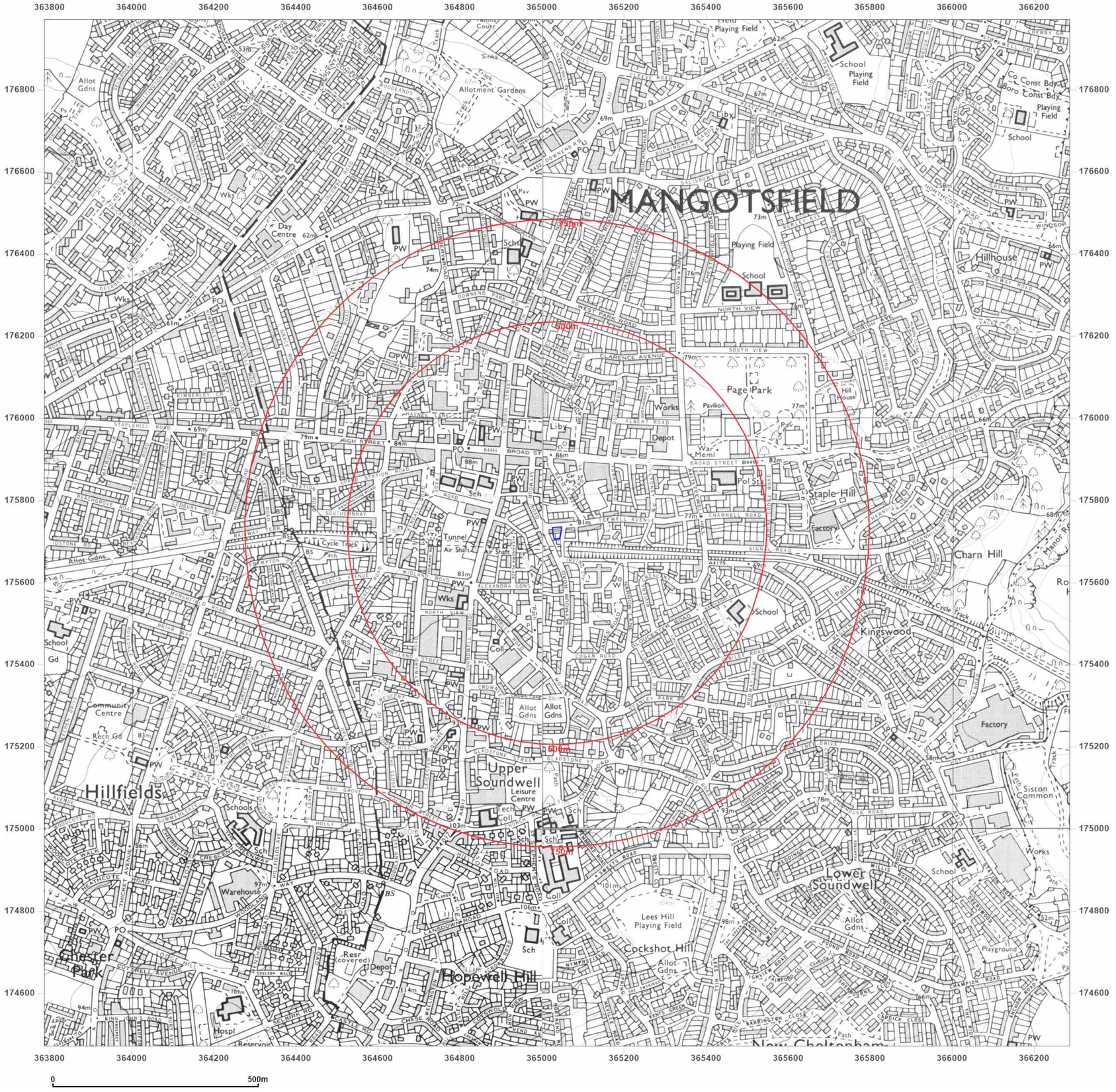

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid
Map date: **1986-1991**
Scale: 1:10,000
Printed at: 1:10,000

N
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Surveyed 1988
Revised 1990
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1990
Revised 1991
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1983
Revised 1986
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1991
Revised 1991
Edition N/A
Copyright N/A
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Production date: 07 February 2024

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

N
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2001

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N
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2010

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Production date: 07 February 2024

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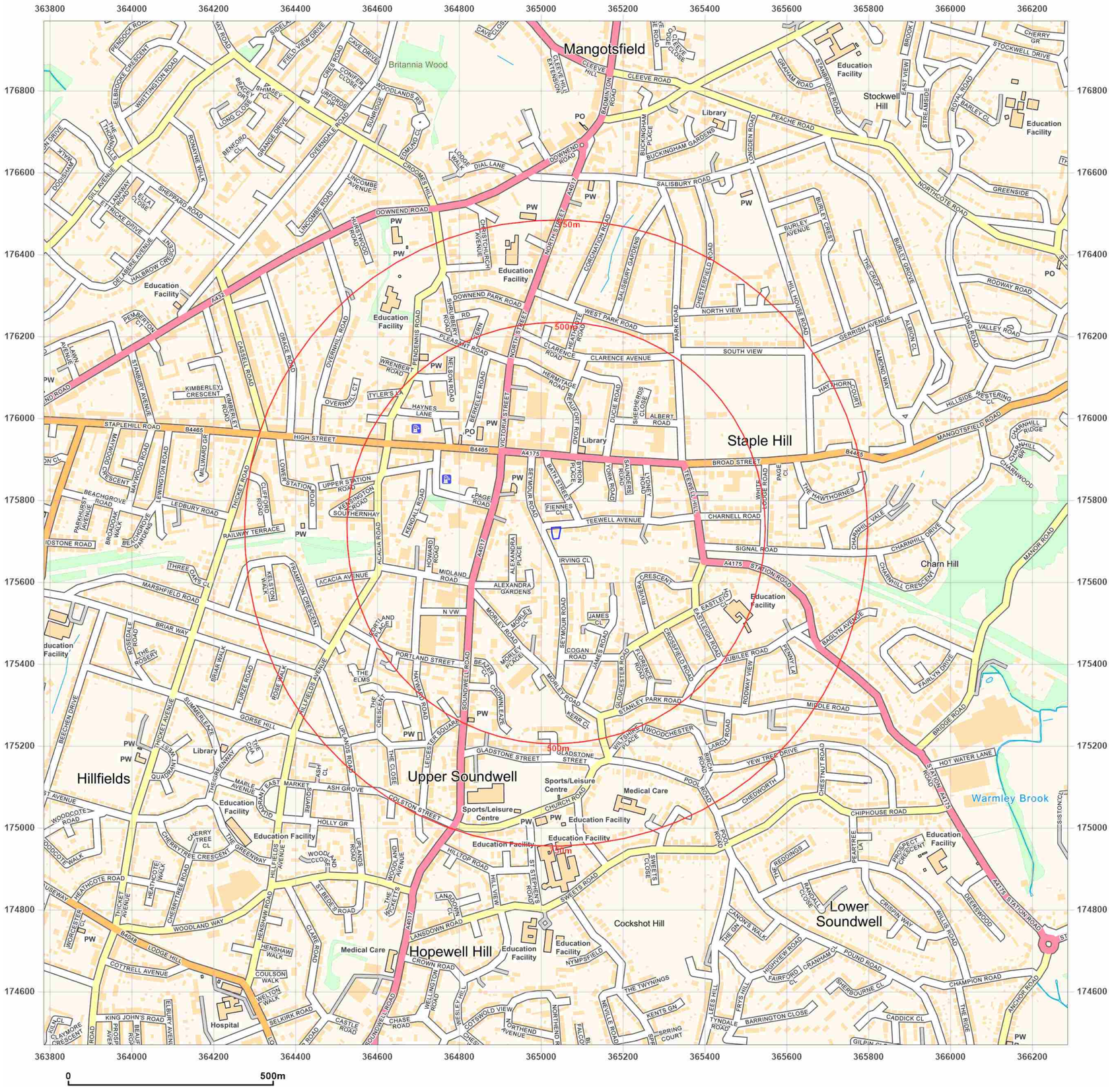

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Site Details:

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Client Ref: 8839_83_Teewell_Avenue_PO12256_BC
Report Ref: ESP-6OG-U18-TOL-WU6
Grid Ref: 365036, 175720

Map Name: National Grid

Map date: **2024**

Scale: 1:10,000

Printed at: 1:10,000

N
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2024

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APPENDIX B Environmental and Geological Data Report

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

83, TEEWELL AVENUE, STAPLE HILL, BS16 5NG

Order Details

Date: 07/02/2024

Your ref: 8839_83_Teewell_Avenue_PO12256_BC

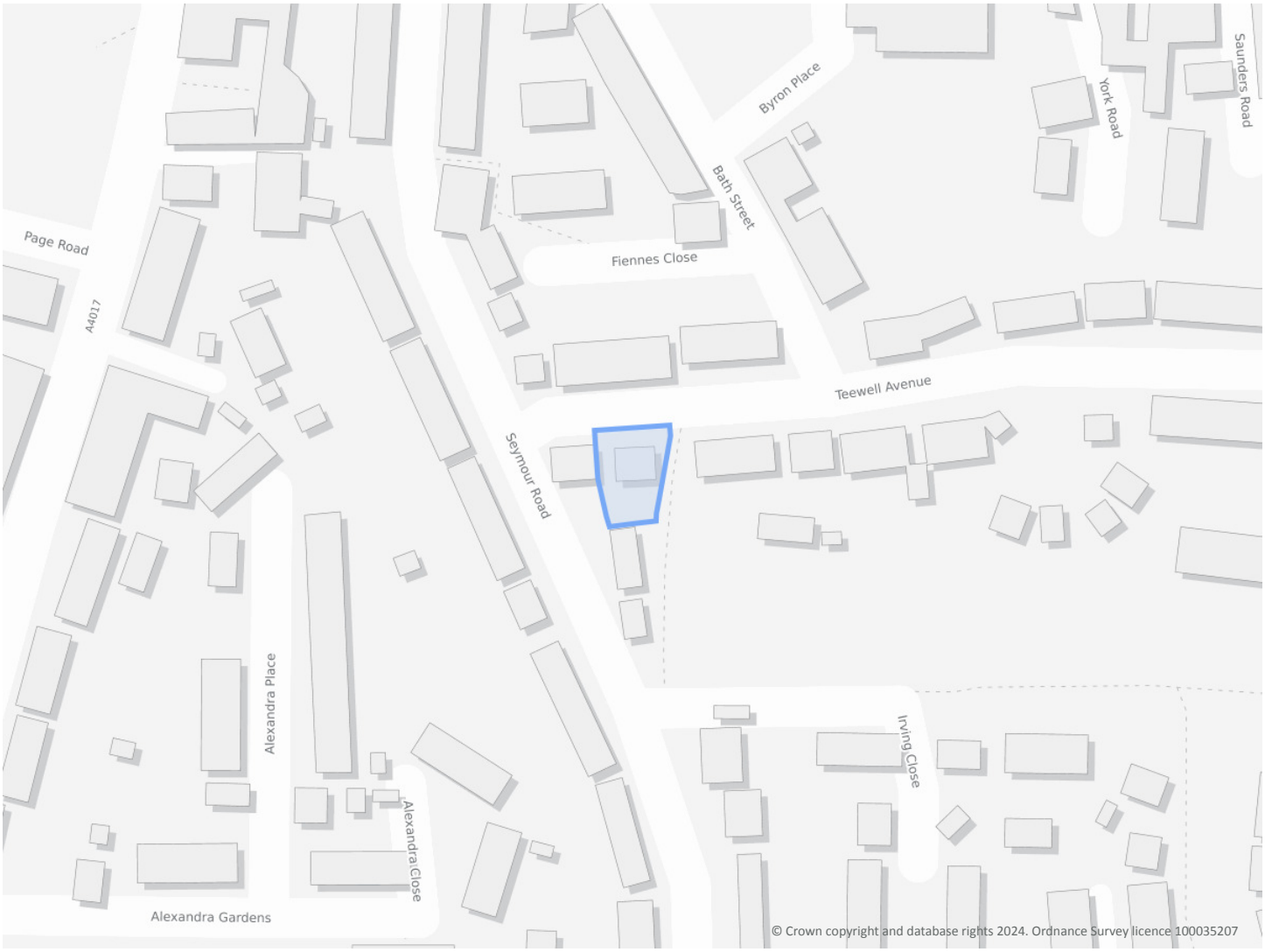
Our Ref: ESP-NDR-AOM-A7N-NI6

Site Details

Location: 365035 175716

Area: 0.05 ha

Authority: South Gloucestershire Council ↗



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

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	10	11	50	-
18 >	1.2 >	Historical tanks >	0	0	14	5	-
19 >	1.3 >	Historical energy features >	0	1	6	18	-
20	1.4	Historical petrol stations	0	0	0	0	-
21 >	1.5 >	Historical garages >	0	0	8	3	-
21	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
22 >	2.1 >	Historical industrial land uses >	0	24	14	67	-
26 >	2.2 >	Historical tanks >	0	0	24	13	-
28 >	2.3 >	Historical energy features >	0	4	10	38	-
30	2.4	Historical petrol stations	0	0	0	0	-
30 >	2.5 >	Historical garages >	0	0	14	8	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
32	3.1	Active or recent landfill	0	0	0	0	-
32	3.2	Historical landfill (BGS records)	0	0	0	0	-
33	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
33	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
33 >	3.5 >	Historical waste sites >	0	0	0	1	-
34 >	3.6 >	Licensed waste sites >	0	0	0	2	-
34 >	3.7 >	Waste exemptions >	0	0	0	16	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
36 >	4.1 >	Recent industrial land uses >	0	1	18	-	-
38 >	4.2 >	Current or recent petrol stations >	0	0	2	0	-
38	4.3	Electricity cables	0	0	0	0	-
38	4.4	Gas pipelines	0	0	0	0	-
38	4.5	Sites determined as Contaminated Land	0	0	0	0	-

38	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
39	4.7	Regulated explosive sites	0	0	0	0	-
39	4.8	Hazardous substance storage/usage	0	0	0	0	-
39	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
39	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
39 >	**4.11 >**	**Licensed pollutant release (Part A(2)/B) >**	0	0	1	1	-
40	4.12	Radioactive Substance Authorisations	0	0	0	0	-
40	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
40	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
40	4.15	Pollutant release to public sewer	0	0	0	0	-
41	4.16	List 1 Dangerous Substances	0	0	0	0	-
41	4.17	List 2 Dangerous Substances	0	0	0	0	-
41 >	**4.18 >**	**Pollution Incidents (EA/NRW) >**	0	0	0	2	-
41	4.19	Pollution inventory substances	0	0	0	0	-
42	4.20	Pollution inventory waste transfers	0	0	0	0	-
42	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
43	5.1	Superficial aquifer	None (within 500m)				
44 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
46 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
47	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
47	5.5	Groundwater vulnerability- local information	None (within 0m)				
48	5.6	Groundwater abstractions	0	0	0	0	0
48	5.7	Surface water abstractions	0	0	0	0	0
48	5.8	Potable abstractions	0	0	0	0	0
48	5.9	Source Protection Zones	0	0	0	0	-
49	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

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

50	6.2	Surface water features	0	0	0	-	-
51 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
51 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
52 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
53	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
53	7.2	Historical Flood Events	0	0	0	-	-
53	7.3	Flood Defences	0	0	0	-	-
54	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
54	7.5	Flood Storage Areas	0	0	0	-	-
55	7.6	Flood Zone 2	None (within 50m)				
55	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
56 >	8.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
58 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
59	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
60	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
60	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
60	10.4	Special Protection Areas (SPA)	0	0	0	0	0
60	10.5	National Nature Reserves (NNR)	0	0	0	0	0
61	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
61 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	2
61	10.8	Biosphere Reserves	0	0	0	0	0
61	10.9	Forest Parks	0	0	0	0	0
62	10.10	Marine Conservation Zones	0	0	0	0	0
62 >	10.11 >	Green Belt >	0	0	0	0	1
62	10.12	Proposed Ramsar sites	0	0	0	0	0

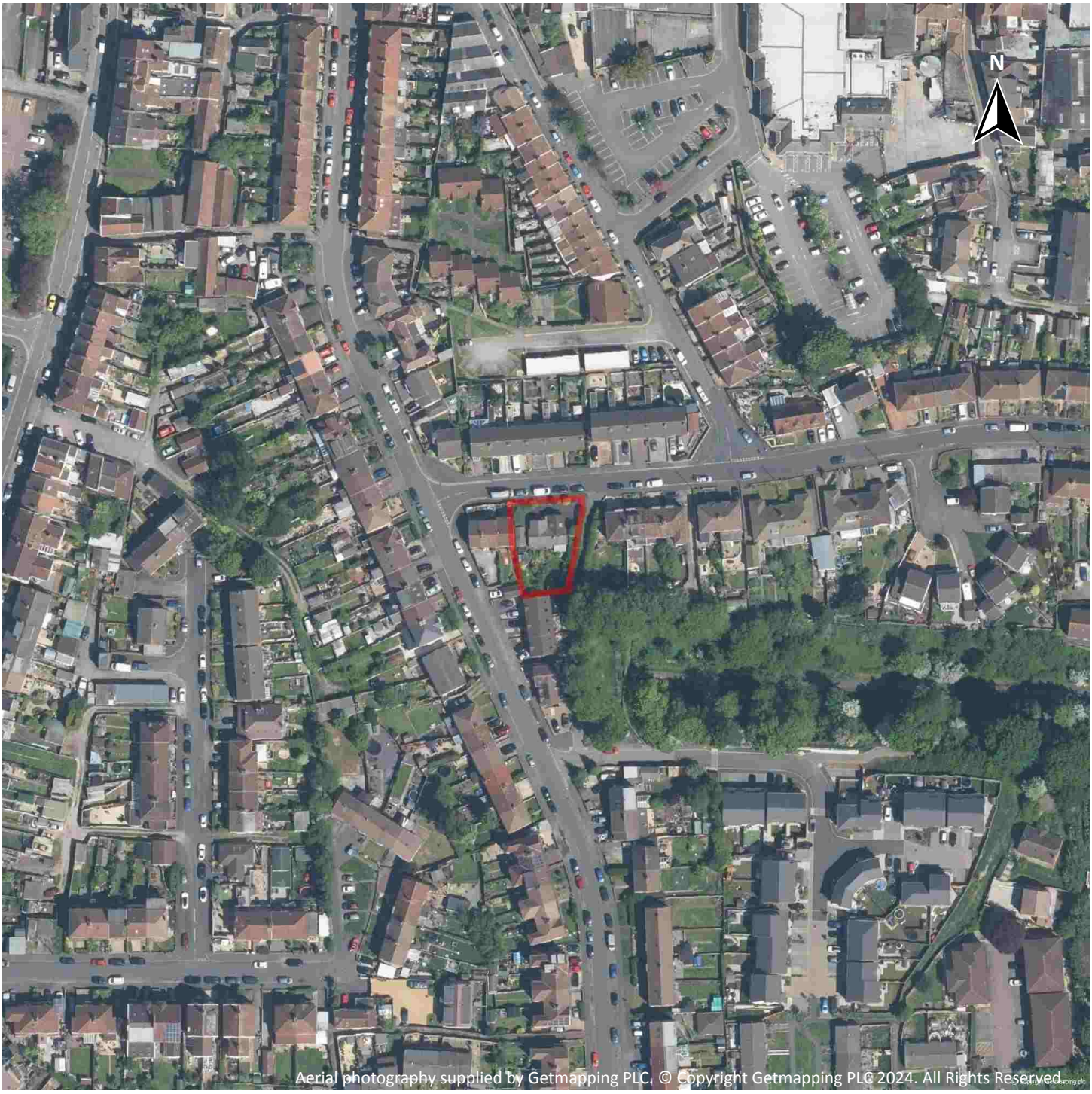
62	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
63	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
63	10.15	Nitrate Sensitive Areas	0	0	0	0	0
63	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
64 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
65	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
66	11.1	World Heritage Sites	0	0	0	-	-
66	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
66	11.3	National Parks	0	0	0	-	-
66	11.4	Listed Buildings	0	0	0	-	-
67	11.5	Conservation Areas	0	0	0	-	-
67	11.6	Scheduled Ancient Monuments	0	0	0	-	-
67	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
68 >	12.1 >	Agricultural Land Classification >	Urban (within 250m)				
69	12.2	Open Access Land	0	0	0	-	-
69	12.3	Tree Felling Licences	0	0	0	-	-
69	12.4	Environmental Stewardship Schemes	0	0	0	-	-
69	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
70	13.1	Priority Habitat Inventory	0	0	0	-	-
70	13.2	Habitat Networks	0	0	0	-	-
70	13.3	Open Mosaic Habitat	0	0	0	-	-
70	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
71 >	14.1 >	10k Availability >	Identified (within 500m)				
72 >	14.2 >	Artificial and made ground (10k) >	0	1	1	2	-
74	14.3	Superficial geology (10k)	0	0	0	0	-

74	14.4	Landslip (10k)	0	0	0	0	-
75 >	14.5 >	Bedrock geology (10k) >	1	3	0	2	-
76 >	14.6 >	Bedrock faults and other linear features (10k) >	1	3	3	5	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
77 >	15.1 >	50k Availability >	Identified (within 500m)				
78	15.2	Artificial and made ground (50k)	0	0	0	0	-
78	15.3	Artificial ground permeability (50k)	0	0	-	-	-
79	15.4	Superficial geology (50k)	0	0	0	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) >	1	1	0	2	-
81 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
81 >	15.10 >	Bedrock faults and other linear features (50k) >	1	1	2	3	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
83	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
84 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
86 >	17.2 >	Running sands >	Negligible (within 50m)				
88 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
89 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
90 >	17.5 >	Landslides >	Very low (within 50m)				
92 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
94 >	18.1 >	BritPits >	0	0	0	2	-
95 >	18.2 >	Surface ground workings >	0	12	7	-	-
96 >	18.3 >	Underground workings >	0	8	4	4	0
97	18.4	Underground mining extents	0	0	0	0	-
97	18.5	Historical Mineral Planning Areas	0	0	0	0	-

97 >	18.6 >	Non-coal mining >	0	2	0	0	2
98	18.7	JPB mining areas	None (within 0m)				
98	18.8	The Coal Authority non-coal mining	0	0	0	0	-
99 >	18.9 >	Researched mining >	0	0	0	3	-
99	18.10	Mining record office plans	0	0	0	0	-
99	18.11	BGS mine plans	0	0	0	0	-
99 >	18.12 >	Coal mining >	Identified (within 0m)				
100	18.13	Brine areas	None (within 0m)				
100	18.14	Gypsum areas	None (within 0m)				
100	18.15	Tin mining	None (within 0m)				
100	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
101	19.1	Natural cavities	0	0	0	0	-
101	19.2	Mining cavities	0	0	0	0	0
101	19.3	Reported recent incidents	0	0	0	0	-
101	19.4	Historical incidents	0	0	0	0	-
102	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
103 >	20.1 >	Radon >	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
105 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	5	-	-	-
105	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
106	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
107	22.1	Underground railways (London)	0	0	0	-	-
107	22.2	Underground railways (Non-London)	0	0	0	-	-
108	22.3	Railway tunnels	0	0	0	-	-
108 >	22.4 >	Historical railway and tunnel features >	0	27	0	-	-
109	22.5	Royal Mail tunnels	0	0	0	-	-

109 >	22.6 >	Historical railways >	0	4	0	-	-
110	22.7	Railways	0	0	0	-	-
110	22.8	Crossrail 1	0	0	0	0	-
110	22.9	Crossrail 2	0	0	0	0	-
110	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 06/05/2020

Site Area: 0.05ha

Recent site history - 2017 aerial photograph

Capture Date: 14/06/2017

Site Area: 0.05ha

Recent site history - 2014 aerial photograph

Capture Date: 09/09/2014

Site Area: 0.05ha

Recent site history - 2006 aerial photograph

Capture Date: 05/06/2006

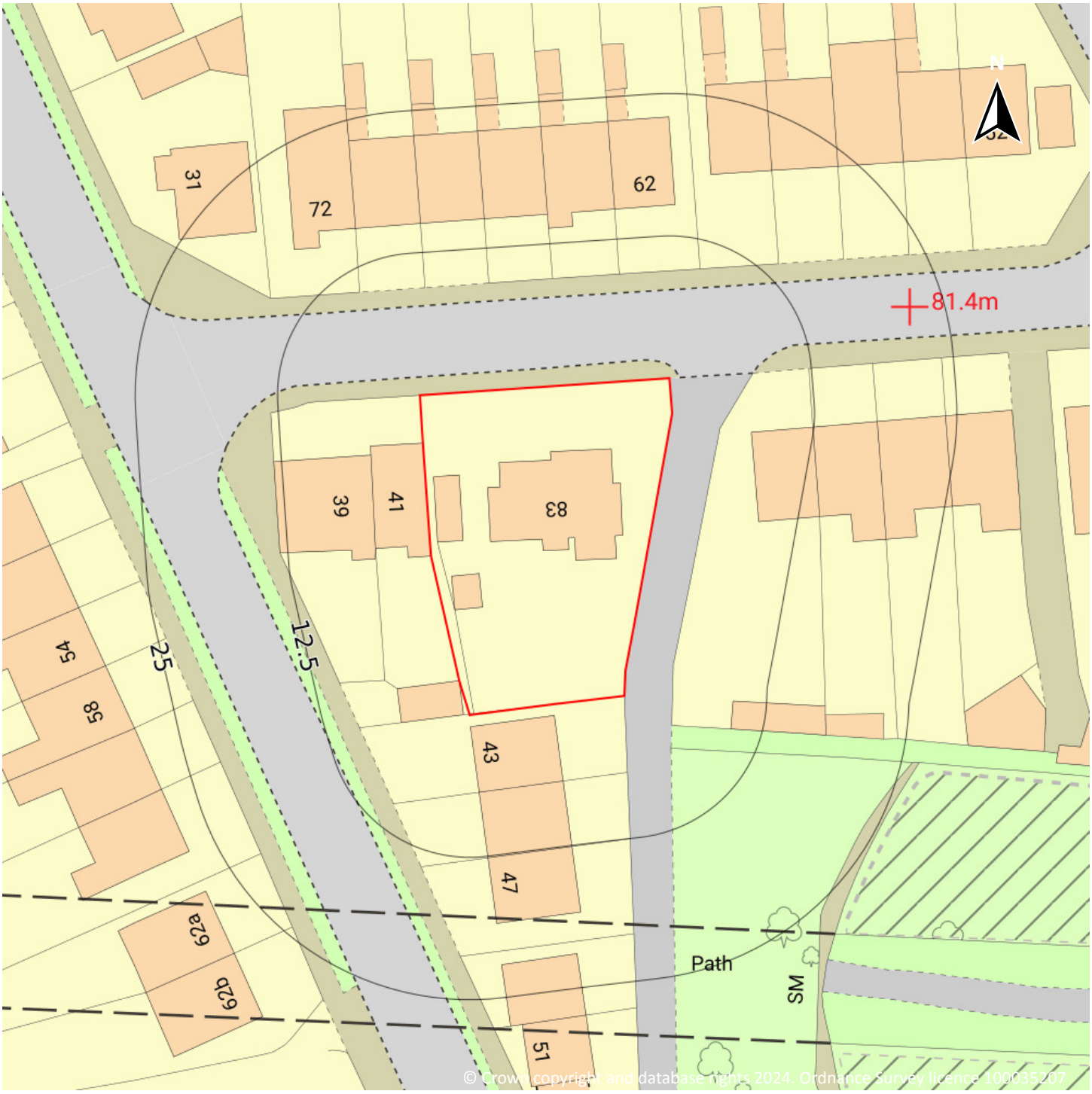
Site Area: 0.05ha

Recent site history - 1999 aerial photograph

Capture Date: 24/07/1999

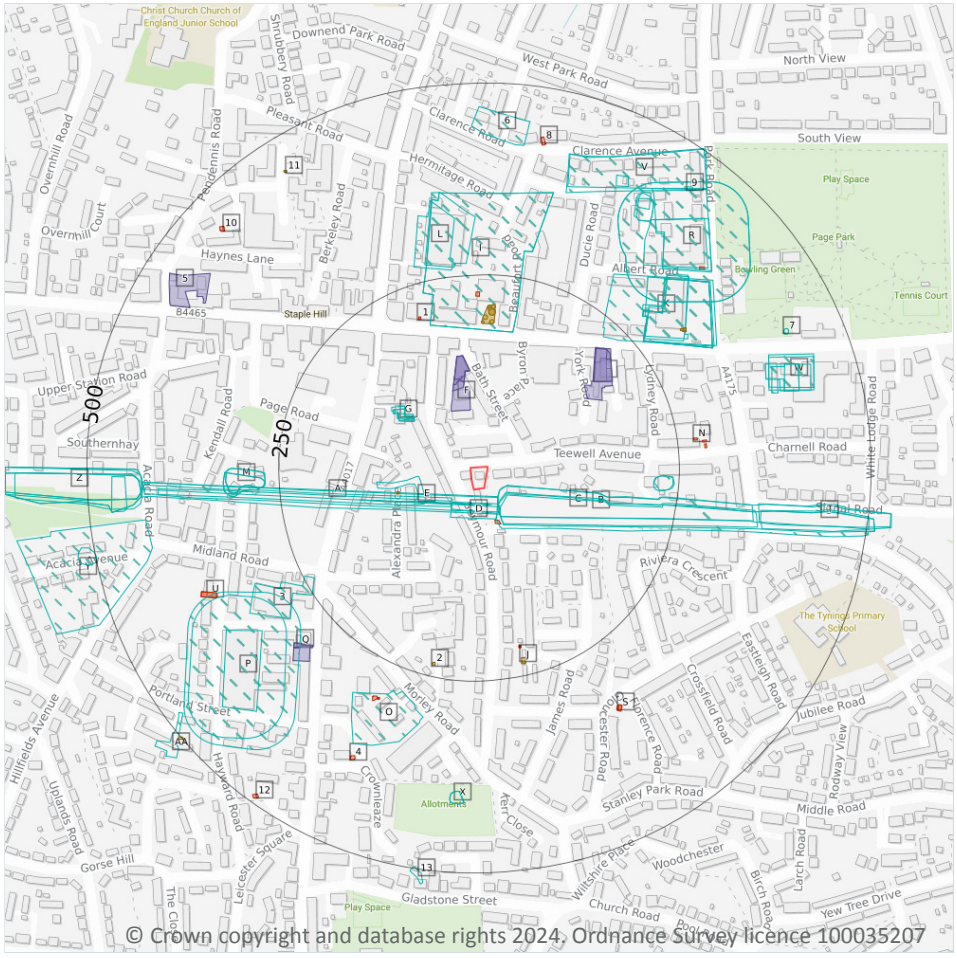
Site Area: 0.05ha

OS MasterMap site plan



Site Area: 0.05ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

1.1 Historical industrial land uses

Records within 500m	71

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 15 >**

ID	Location	Land use	Dates present	Group ID
A	8m S	Tunnel	1881	1206790

ID	Location	Land use	Dates present	Group ID
A	9m S	Tunnel	1887 - 1938	1234295
A	18m S	Tunnel	1990 - 1991	1224938
B	20m SE	Cuttings	1887	1205921
C	20m SE	Cuttings	1881	1255763
B	26m SE	Cuttings	1912	1251011
C	27m SE	Cuttings	1921 - 1991	1260421
D	28m S	Tunnel	1953	1225866
C	31m SE	Cuttings	1902	1224772
A	31m SW	Tunnel	1954	1234594
E	64m W	Unspecified Ground Workings	1887	1245067
G	95m NW	Smithy	1902	1204797
G	95m NW	Smithy	1938	1244032
G	97m NW	Smithy	1938	1224316
G	98m NW	Smithy	1912	1195577
I	178m N	Clothing Factory	1902	1215389
I	178m N	Clothing Factory	1938	1238071
C	217m E	Unspecified Heap	1881	1196114
C	217m E	Unspecified Heap	1887	1208419
K	227m NE	Tramway Depot	1921 - 1938	1247803
3	238m SW	Unspecified Works	1990	1179052
L	259m N	Clothing Factory	1921	1269696
K	260m NE	Unspecified Depot	1969	1259145
K	261m NE	Unspecified Commercial/Industrial	1971	1159179
K	261m NE	Omnibus Depot	1953	1165499
K	261m NE	Unspecified Depot	1991	1223649
L	262m N	Clothing Factory	1912	1257784
K	264m NE	Tramway Depot	1938	1191067
K	267m NE	Tramway Depot	1912	1234639

ID	Location	Land use	Dates present	Group ID
M	268m W	Unspecified Heap	1887	1237946
M	268m W	Unspecified Heap	1881	1217985
M	269m W	Unspecified Heap	1978 - 1990	1197938
M	269m W	Unspecified Heap	1954	1262269
O	279m S	Boot Factory	1954	1174641
P	282m SW	Boot and Shoe Factory	1902 - 1912	1200428
P	300m SW	Boot and Shoe Factory	1921	1269076
R	301m NE	Printing Works	1938	1192659
R	301m NE	Printing Works	1921	1224896
P	332m SW	Unspecified Commercial/Industrial	1938	1159181
R	332m NE	Unspecified Works	1991	1179051
R	344m NE	Printing Works	1938	1271332
R	346m NE	Printing Works	1912	1229790
T	356m E	Cuttings	1887	1190674
T	360m E	Cuttings	1912	1191857
V	372m N	Brick Yard	1886	1224364
V	377m NE	Unspecified Old Quarry	1902 - 1912	1201670
V	377m NE	Unspecified Quarry	1921 - 1938	1216200
V	380m N	Brick Yard	1881	1198619
W	380m E	Police Station	1938	1256047
W	381m E	Police Station	1971 - 1991	1259556
W	381m E	Police Station	1912	1266992
W	383m E	Police Station	1921 - 1938	1245368
V	391m NE	Unspecified Quarry	1881	1193399
X	394m S	Unspecified Pit	1887	1202310
X	394m S	Unspecified Pit	1881	1266348
W	399m E	Police Station	1902	1221473
V	402m NE	Brick Kilns	1881	1177758

ID	Location	Land use	Dates present	Group ID
6	421m N	Smithy	1902	1188969
7	423m NE	Old Coal Pit	1881 - 1887	1230101
Y	425m W	Disused Brick Works	1902	1164915
Z	428m W	Cuttings	1881	1224688
Z	428m W	Cuttings	1902 - 1938	1222183
Z	429m W	Cuttings	1887	1221040
Z	429m W	Cuttings	1887	1232992
Z	431m W	Cuttings	1954	1192028
Z	431m W	Cuttings	1978	1253321
9	442m NE	Brick Kiln	1886	1271555
Z	450m W	Cuttings	1990	1247482
AA	478m SW	Steam Laundry	1912	1224176
13	498m S	Unspecified Ground Workings	1881	1161148
Y	499m W	Clay Pit	1902	1177699

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**19**

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 15 >**

ID	Location	Land use	Dates present	Group ID
E	96m W	Tanks	1960	188119
E	96m W	Tanks	1950	188441
E	96m W	Tanks	1950	186774
I	186m N	Tanks	1992	192222

ID	Location	Land use	Dates present	Group ID
I	186m N	Unspecified Tank	1971 - 1988	187032
I	187m N	Unspecified Tank	1971 - 1988	193401
I	192m N	Unspecified Tank	1971 - 1988	186122
I	197m N	Tanks	1971 - 1988	188556
I	197m N	Unspecified Tank	1971	174431
I	206m N	Unspecified Tank	1971	174432
I	206m N	Unspecified Tank	1971	174430
J	226m S	Unspecified Tank	1975	190000
J	231m S	Unspecified Tank	1989	185336
2	231m S	Unspecified Tank	1972 - 1991	184343
K	308m NE	Tanks	1949 - 1955	185805
K	310m NE	Unspecified Tank	1964 - 1992	189949
K	311m NE	Tanks	1949 - 1955	181087
11	453m NW	Unspecified Tank	1974	174429
AA	498m SW	Tanks	1991	189427

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**25**

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 15 >**

ID	Location	Land use	Dates present	Group ID
D	44m S	Electricity Substation	1971 - 1992	110272
1	204m N	Electricity Substation	1950	107555
J	210m S	Electricity Substation	1971	100779

ID	Location	Land use	Dates present	Group ID
J	210m S	Electricity Substation	1988	101162
J	210m S	Electricity Substation	1971	101171
J	211m S	Electricity Substation	1992	102427
I	222m N	Electricity Substation	1971 - 1992	113290
N	271m E	Electricity Substation	1971	98076
N	282m E	Electricity Substation	1992	98077
N	284m E	Electricity Substation	1971	98078
O	298m SW	Electricity Substation	1972 - 1991	109732
O	298m SW	Electricity Substation	1950	100762
O	298m SW	Electricity Substation	1950	100802
O	298m SW	Electricity Substation	1967	102236
S	332m SE	Electricity Substation	1949 - 1992	112510
S	332m SE	Electricity Substation	1975	100369
S	334m SE	Electricity Substation	1949	100198
S	334m SE	Electricity Substation	1968	100373
U	360m SW	Electricity Substation	1950 - 1985	102820
U	361m SW	Electricity Substation	1950	103898
R	378m NE	Electricity Substation	1949 - 1955	103479
4	380m SW	Electricity Substation	1967 - 1991	106622
8	425m N	Electricity Substation	1982 - 1992	109717
10	445m NW	Electricity Substation	1974 - 1992	111338
12	487m SW	Electricity Substation	1967 - 1991	110069

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	**11**

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 15 >**

ID	Location	Land use	Dates present	Group ID
F	75m N	Garage	1955 - 1971	35243
F	103m N	Garage	1949	33252
F	110m N	Garage	1971 - 1988	35107
F	117m N	Garage	1992	32843
H	157m NE	Garage	1971 - 1988	35731
H	178m NE	Garage	1964 - 1971	34953
H	178m NE	Garage	1949 - 1955	34973
H	178m NE	Garage	1992	34094
Q	292m SW	Garage	1971	34594
Q	292m SW	Garage	1950 - 1967	35024
5	407m NW	Garage	1971 - 1985	35745

This data is sourced from Ordnance Survey / Groundsure.

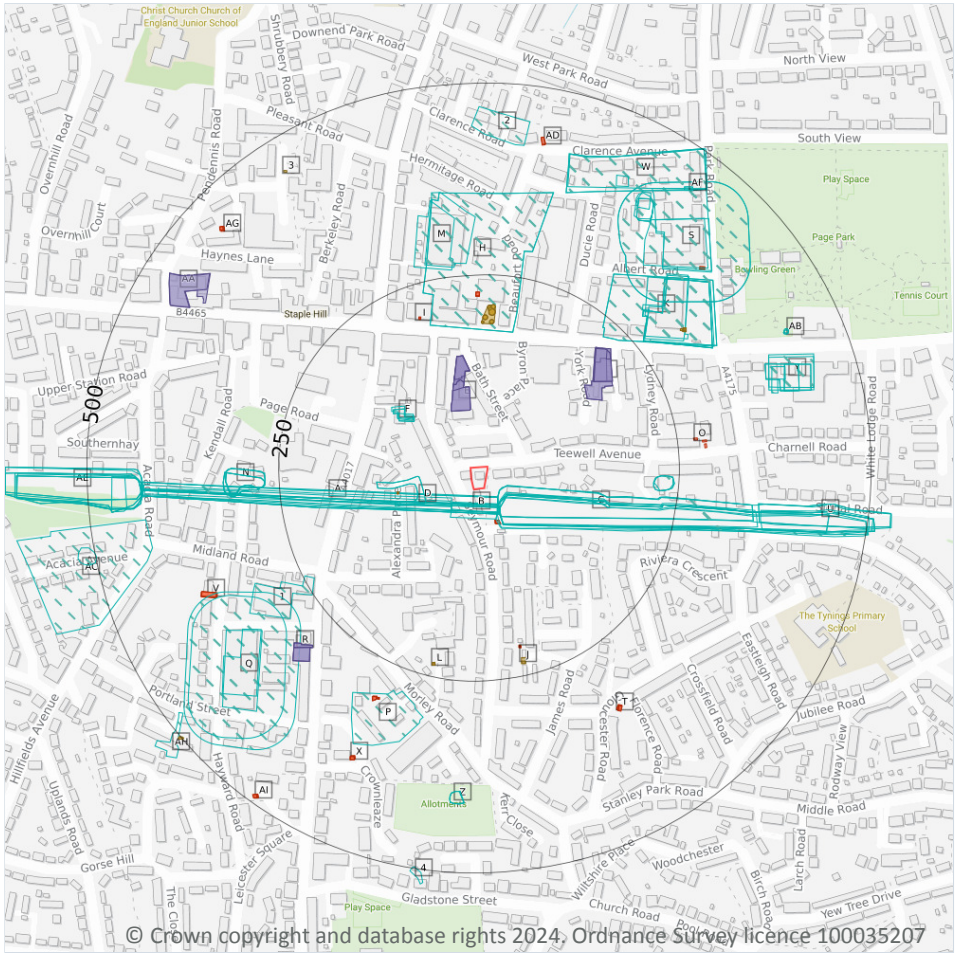
1.6 Historical military land

Records within 500m	**0**

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

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

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

2.1 Historical industrial land uses

Records within 500m	105

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

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

ID	Location	Land Use	Date	Group ID
A	8m S	Tunnel	1881	1206790
A	9m S	Tunnel	1887	1234295
A	9m S	Tunnel	1887	1234295

ID	Location	Land Use	Date	Group ID
B	18m S	Tunnel	1991	1224938
A	20m S	Tunnel	1912	1234295
C	20m SE	Cuttings	1887	1205921
C	20m SE	Cuttings	1887	1205921
A	20m S	Tunnel	1938	1234295
C	20m SE	Cuttings	1881	1255763
A	22m S	Tunnel	1921	1234295
A	22m S	Tunnel	1938	1234295
A	22m S	Tunnel	1902	1234295
C	26m SE	Cuttings	1912	1251011
C	27m SE	Cuttings	1991	1260421
C	27m SE	Cuttings	1971	1260421
C	27m SE	Cuttings	1953	1260421
C	28m SE	Cuttings	1938	1260421
C	28m SE	Cuttings	1969	1260421
B	28m S	Tunnel	1953	1225866
C	31m SE	Cuttings	1921	1260421
C	31m SE	Cuttings	1938	1260421
C	31m SE	Cuttings	1902	1224772
A	31m SW	Tunnel	1954	1234594
A	34m SW	Tunnel	1990	1224938
D	64m W	Unspecified Ground Workings	1887	1245067
D	64m W	Unspecified Ground Workings	1887	1245067
F	95m NW	Smithy	1938	1244032
F	95m NW	Smithy	1902	1204797
F	97m NW	Smithy	1938	1224316
F	98m NW	Smithy	1912	1195577
H	178m N	Clothing Factory	1938	1238071

ID	Location	Land Use	Date	Group ID
H	178m N	Clothing Factory	1902	1215389
C	217m E	Unspecified Heap	1881	1196114
C	217m E	Unspecified Heap	1887	1208419
C	217m E	Unspecified Heap	1887	1208419
K	227m NE	Tramway Depot	1921	1247803
K	227m NE	Tramway Depot	1938	1247803
1	238m SW	Unspecified Works	1990	1179052
M	259m N	Clothing Factory	1921	1269696
K	260m NE	Unspecified Depot	1969	1259145
K	261m NE	Unspecified Depot	1991	1223649
K	261m NE	Unspecified Commercial/Industrial	1971	1159179
K	261m NE	Omnibus Depot	1953	1165499
M	262m N	Clothing Factory	1912	1257784
K	264m NE	Tramway Depot	1938	1191067
K	267m NE	Tramway Depot	1912	1234639
N	268m W	Unspecified Heap	1887	1237946
N	268m W	Unspecified Heap	1887	1237946
N	268m W	Unspecified Heap	1881	1217985
N	269m W	Unspecified Heap	1990	1197938
N	269m W	Unspecified Heap	1954	1262269
N	269m W	Unspecified Heap	1978	1197938
P	279m S	Boot Factory	1954	1174641
Q	282m SW	Boot and Shoe Factory	1902	1200428
Q	300m SW	Boot and Shoe Factory	1921	1269076
S	301m NE	Printing Works	1921	1224896
S	301m NE	Printing Works	1938	1192659
Q	332m SW	Unspecified Commercial/Industrial	1938	1159181
Q	332m SW	Boot and Shoe Factory	1912	1200428

ID	Location	Land Use	Date	Group ID
S	332m NE	Unspecified Works	1991	1179051
S	344m NE	Printing Works	1938	1271332
S	346m NE	Printing Works	1912	1229790
U	356m E	Cuttings	1887	1190674
U	356m E	Cuttings	1887	1190674
U	360m E	Cuttings	1912	1191857
W	372m N	Brick Yard	1886	1224364
W	372m N	Brick Yard	1886	1224364
W	377m NE	Unspecified Quarry	1921	1216200
W	377m NE	Unspecified Quarry	1938	1216200
W	377m NE	Unspecified Old Quarry	1902	1201670
W	378m NE	Unspecified Old Quarry	1912	1201670
W	380m N	Brick Yard	1881	1198619
Y	380m E	Police Station	1938	1256047
Y	381m E	Police Station	1991	1259556
Y	381m E	Police Station	1971	1259556
Y	381m E	Police Station	1912	1266992
Y	383m E	Police Station	1921	1245368
W	391m NE	Unspecified Quarry	1881	1193399
Z	394m S	Unspecified Pit	1887	1202310
Z	394m S	Unspecified Pit	1887	1202310
Z	394m S	Unspecified Pit	1881	1266348
Y	399m E	Police Station	1938	1245368
Y	399m E	Police Station	1902	1221473
W	402m NE	Brick Kilns	1881	1177758
2	421m N	Smithy	1902	1188969
AB	423m NE	Old Coal Pit	1887	1230101
AB	423m NE	Old Coal Pit	1887	1230101

ID	Location	Land Use	Date	Group ID
AB	425m NE	Old Coal Pit	1881	1230101
AC	425m W	Disused Brick Works	1902	1164915
AE	428m W	Cuttings	1881	1224688
AE	428m W	Cuttings	1921	1222183
AE	428m W	Cuttings	1938	1222183
AE	428m W	Cuttings	1902	1222183
AE	429m W	Cuttings	1887	1221040
AE	429m W	Cuttings	1887	1232992
AE	430m W	Cuttings	1912	1222183
AE	430m W	Cuttings	1938	1222183
AE	431m W	Cuttings	1954	1192028
AE	431m W	Cuttings	1978	1253321
AF	442m NE	Brick Kiln	1886	1271555
AF	442m NE	Brick Kiln	1886	1271555
AE	450m W	Cuttings	1990	1247482
AH	478m SW	Steam Laundry	1912	1224176
4	498m S	Unspecified Ground Workings	1881	1161148
AC	499m W	Clay Pit	1902	1177699

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m **37**

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

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

ID	Location	Land Use	Date	Group ID
D	96m W	Tanks	1950	188441
D	96m W	Tanks	1960	188119

ID	Location	Land Use	Date	Group ID
D	96m W	Tanks	1950	186774
H	186m N	Tanks	1992	192222
H	186m N	Unspecified Tank	1971	187032
H	187m N	Unspecified Tank	1988	187032
H	187m N	Unspecified Tank	1971	187032
H	187m N	Unspecified Tank	1971	193401
H	187m N	Unspecified Tank	1988	193401
H	187m N	Unspecified Tank	1971	193401
H	192m N	Unspecified Tank	1988	186122
H	192m N	Unspecified Tank	1971	186122
H	192m N	Unspecified Tank	1971	186122
H	197m N	Tanks	1988	188556
H	197m N	Tanks	1971	188556
H	197m N	Unspecified Tank	1971	174431
H	206m N	Unspecified Tank	1971	174432
H	206m N	Unspecified Tank	1971	174430
J	226m S	Unspecified Tank	1975	190000
J	231m S	Unspecified Tank	1989	185336
L	231m S	Unspecified Tank	1972	184343
L	231m S	Unspecified Tank	1984	184343
L	231m S	Unspecified Tank	1991	184343
L	231m S	Unspecified Tank	1991	184343
K	308m NE	Tanks	1955	185805
K	308m NE	Tanks	1949	185805
K	310m NE	Unspecified Tank	1988	189949
K	310m NE	Unspecified Tank	1971	189949
K	311m NE	Unspecified Tank	1992	189949
K	311m NE	Unspecified Tank	1971	189949

ID	Location	Land Use	Date	Group ID
K	311m NE	Unspecified Tank	1964	189949
K	311m NE	Tanks	1955	181087
K	311m NE	Tanks	1949	181087
K	311m NE	Tanks	1949	181087
3	453m NW	Unspecified Tank	1974	174429
AH	498m SW	Tanks	1991	189427
AH	498m SW	Tanks	1991	189427

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**52**

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 22 >**

ID	Location	Land Use	Date	Group ID
B	44m S	Electricity Substation	1971	110272
B	44m S	Electricity Substation	1988	110272
B	44m S	Electricity Substation	1971	110272
B	45m S	Electricity Substation	1992	110272
I	204m N	Electricity Substation	1950	107555
I	205m N	Electricity Substation	1950	107555
J	210m S	Electricity Substation	1971	100779
J	210m S	Electricity Substation	1988	101162
J	210m S	Electricity Substation	1971	101171
J	211m S	Electricity Substation	1992	102427
H	222m N	Electricity Substation	1971	113290
H	223m N	Electricity Substation	1988	113290
H	223m N	Electricity Substation	1971	113290

ID	Location	Land Use	Date	Group ID
H	223m N	Electricity Substation	1992	113290
O	271m E	Electricity Substation	1971	98076
O	282m E	Electricity Substation	1992	98077
O	284m E	Electricity Substation	1971	98078
P	298m SW	Electricity Substation	1972	109732
P	298m SW	Electricity Substation	1950	100762
P	298m SW	Electricity Substation	1950	100802
P	298m SW	Electricity Substation	1967	102236
P	299m SW	Electricity Substation	1984	109732
P	299m SW	Electricity Substation	1991	109732
P	299m SW	Electricity Substation	1991	109732
T	332m SE	Electricity Substation	1989	112510
T	332m SE	Electricity Substation	1975	100369
T	333m SE	Electricity Substation	1992	112510
T	334m SE	Electricity Substation	1968	100373
T	334m SE	Electricity Substation	1949	100198
T	334m SE	Electricity Substation	1949	112510
V	360m SW	Electricity Substation	1985	102820
V	361m SW	Electricity Substation	1950	103898
V	362m SW	Electricity Substation	1950	102820
V	362m SW	Electricity Substation	1971	102820
S	378m NE	Electricity Substation	1949	103479
S	378m NE	Electricity Substation	1955	103479
S	378m NE	Electricity Substation	1949	103479
X	380m SW	Electricity Substation	1972	106622
X	380m SW	Electricity Substation	1967	106622
X	382m SW	Electricity Substation	1984	106622
X	382m SW	Electricity Substation	1991	106622

ID	Location	Land Use	Date	Group ID
X	382m SW	Electricity Substation	1991	106622
AD	425m N	Electricity Substation	1992	109717
AD	426m N	Electricity Substation	1982	109717
AG	445m NW	Electricity Substation	1992	111338
AG	446m NW	Electricity Substation	1974	111338
AG	447m NW	Electricity Substation	1989	111338
AG	447m NW	Electricity Substation	1989	111338
AI	487m SW	Electricity Substation	1972	110069
AI	487m SW	Electricity Substation	1967	110069
AI	488m SW	Electricity Substation	1984	110069
AI	488m SW	Electricity Substation	1991	110069

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	22

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'.

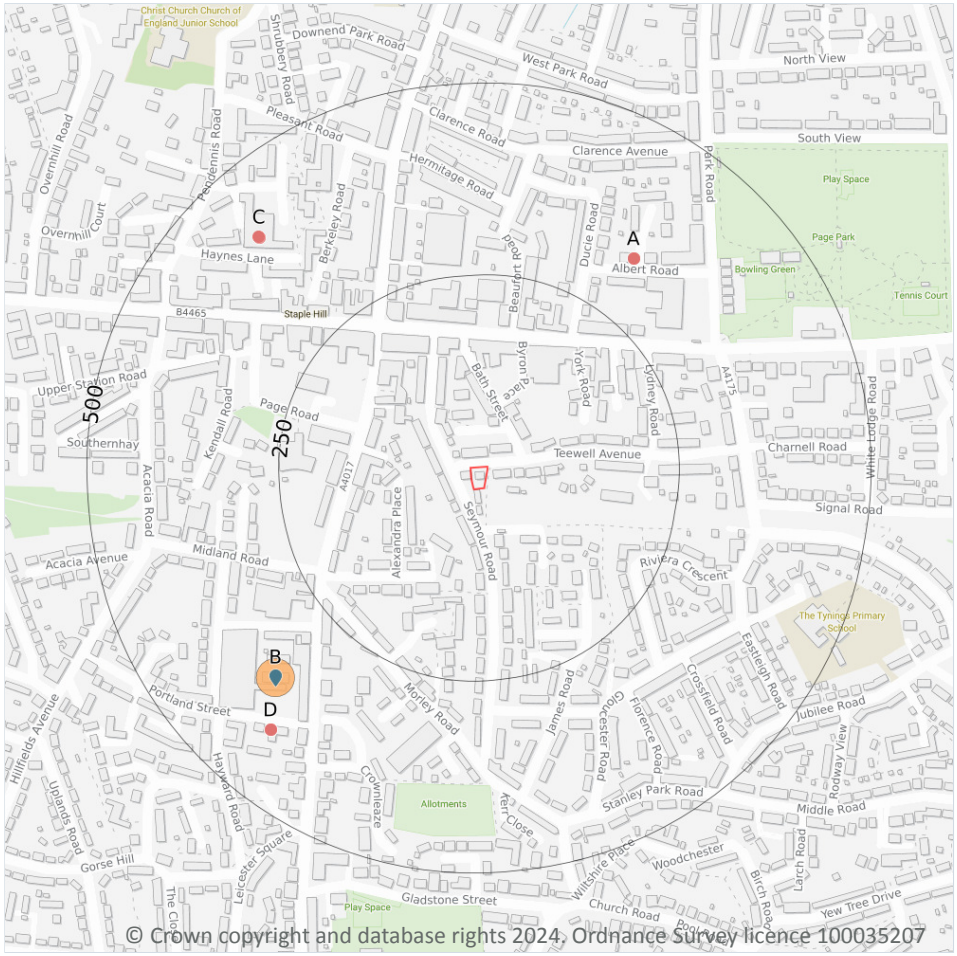
Features are displayed on the Past land use - un-grouped map on **page 22 >**

ID	Location	Land Use	Date	Group ID
E	75m N	Garage	1971	35243
E	75m N	Garage	1964	35243

ID	Location	Land Use	Date	Group ID
E	75m N	Garage	1955	35243
E	103m N	Garage	1949	33252
E	110m N	Garage	1988	35107
E	110m N	Garage	1971	35107
E	117m N	Garage	1992	32843
G	157m NE	Garage	1988	35731
G	157m NE	Garage	1971	35731
G	178m NE	Garage	1971	34953
G	178m NE	Garage	1964	34953
G	178m NE	Garage	1955	34973
G	178m NE	Garage	1949	34973
G	178m NE	Garage	1992	34094
R	292m SW	Garage	1971	34594
R	292m SW	Garage	1950	35024
R	292m SW	Garage	1960	35024
R	297m SW	Garage	1959	35024
R	297m SW	Garage	1967	35024
R	297m SW	Garage	1950	35024
AA	407m NW	Garage	1985	35745
AA	415m NW	Garage	1971	35745

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	0

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

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

3.5 Historical waste sites

Records within 500m	1

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

Features are displayed on the Waste and landfill map on **page 32 >**

ID	Location	Address	Further Details	Date
B	331m SW	Site Address: Hayward Road, Industrial Estate, 4,Hayward Road,Staple Hill, BRISTOL, Avon, BS16 4NY	Type of Site: Waste Transfer Station (Conversion) Planning application reference: PK04/3600/F Description: Scheme comprises change of use of building from tyre sale and fitting to the dismantling of ELV storage of vehicle parts and sales (Sui Generis) as defined in the town and country planning (use class) order 1995. An application (ref: PK04/3600/F) for Det ailed Planning permission was submitted to South Gloucestershire D.C. on 15th November 2004. Data source: Historic Planning Application Data Type: Point	-

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

3.6 Licensed waste sites

Records within 500m **2**

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

Features are displayed on the Waste and landfill map on **page 32 >**

ID	Location	Details		
B	357m SW	Site Name: Metro City / All Car Spares Site Address: Unit 4, North View, Staple Hill, Bristol, Avon, BS16 4NY Correspondence Address: -	Type of Site: ELV Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GWY002 EPR reference: EA/EPR/JP3593FD/A001 Operator: Staples / Gwyther Dean Waste Management licence No: 26120 Annual Tonnage: 185	Issue Date: 15/03/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
B	357m SW	Site Name: Metro City / All Car Spares Site Address: Unit 4, Staple Hill, North View, Bristol, Avon, BS16 4NY Correspondence Address: -	Type of Site: Metal Recycling Site (Vehicle Dismantler) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 658196 EPR reference: EA/EPR/JP3593FD Operator: Dean Gwyther Waste Management licence No: 26120 Annual Tonnage: 185	Issue Date: 15/03/2005 Effective Date: 15/03/2005 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

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

3.7 Waste exemptions

Records within 500m **16**

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.

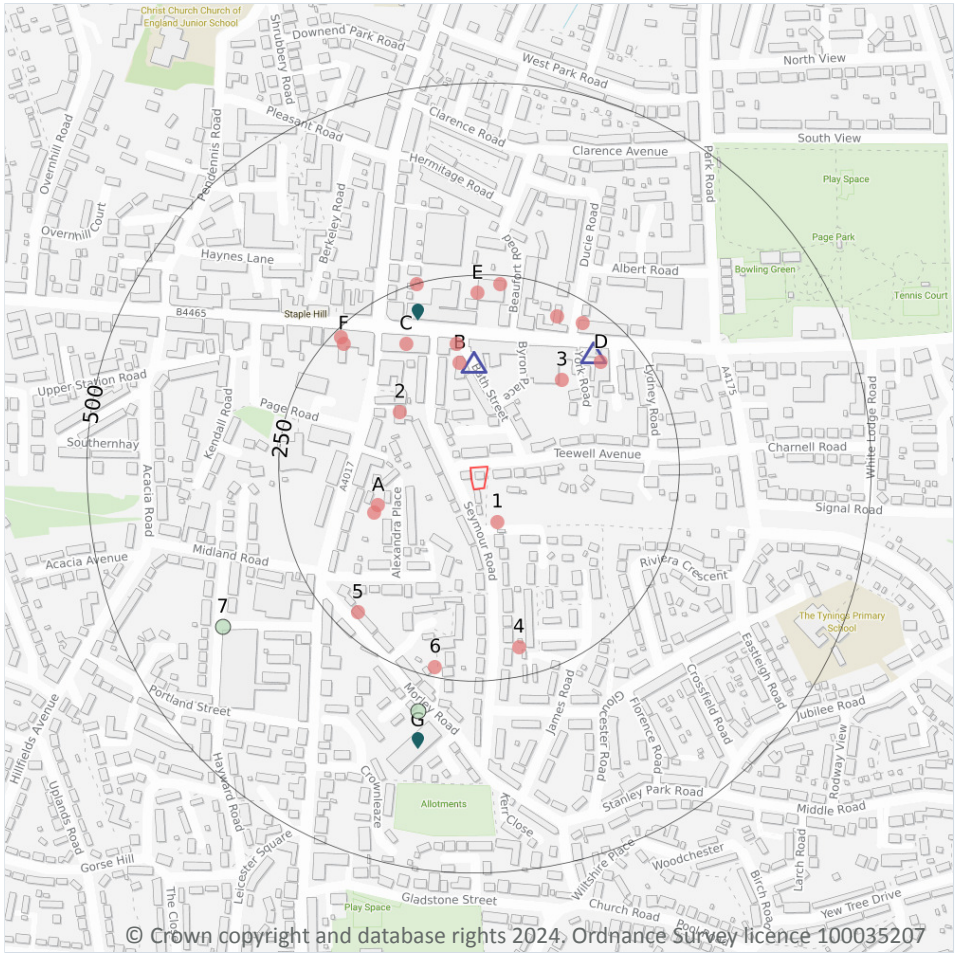
Features are displayed on the Waste and landfill map on **page 32 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	331m NE	5, ALBERT ROAD, STAPLE HILL, BRISTOL, BS16 5LA	WEX281760	Using waste exemption	Not on a farm	Use of waste in construction
A	331m NE	5, ALBERT ROAD, STAPLE HILL, BRISTOL, BS16 5LA	WEX281760	Using waste exemption	Not on a farm	Use of waste for a specified purpose

ID	Location	Site	Reference	Category	Sub-Category	Description
A	331m NE	5, ALBERT ROAD, STAPLE HILL, BRISTOL, BS16 5LA	WEX281760	Using waste exemption	Not on a farm	Use of baled end-of-life tyres in construction
A	331m NE	5, ALBERT ROAD, STAPLE HILL, BRISTOL, BS16 5LA	WEX281760	Treating waste exemption	Not on a farm	Manual treatment of waste
A	331m NE	5, ALBERT ROAD, STAPLE HILL, BRISTOL, BS16 5LA	WEX281760	Treating waste exemption	Not on a farm	Sorting mixed waste
A	331m NE	5, ALBERT ROAD, STAPLE HILL, BRISTOL, BS16 5LA	WEX281760	Treating waste exemption	Not on a farm	Recovery of scrap metal
C	408m NW	NELSON HOUSE, NELSON ROAD, STAPLE HILL, BRISTOL, BS16 5HT	WEX317826	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	408m NW	NELSON HOUSE, NELSON ROAD, STAPLE HILL, BRISTOL, BS16 5HT	WEX189521	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	408m NW	NELSON HOUSE, NELSON ROAD, STAPLE HILL, BRISTOL, BS16 5HT	WEX030544	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	409m NW	1 Nelson House Nelson Road BRISTOL BS16 5HT	EPR/CE5185LA/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
D	411m SW	1, PORTLAND STREET, STAPLE HILL, BRISTOL, BS16 4PS	WEX303519	Treating waste exemption	Not on a Farm	Preparatory treatments (baling, sorting, shredding etc)
D	411m SW	1, PORTLAND STREET, STAPLE HILL, BRISTOL, BS16 4PS	WEX303519	Storing waste exemption	Not on a Farm	Storage of waste in secure containers
D	411m SW	1, PORTLAND STREET, STAPLE HILL, BRISTOL, BS16 4PS	WEX303519	Storing waste exemption	Not on a Farm	Storage of waste in a secure place
D	411m SW	1, PORTLAND STREET, STAPLE HILL, BRISTOL, BS16 4PS	WEX303519	Treating waste exemption	Not on a Farm	Recovery of scrap metal
D	411m SW	1, PORTLAND STREET, STAPLE HILL, BRISTOL, BS16 4PS	WEX303519	Treating waste exemption	Not on a Farm	Sorting mixed waste
D	411m SW	1, PORTLAND STREET, STAPLE HILL, BRISTOL, BS16 4PS	WEX303519	Treating waste exemption	Not on a Farm	Manual treatment of waste

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	19

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 36 >**

ID	Location	Company	Address	Activity	Category
1	47m SE	Electricity Sub Station	Gloucestershire, BS16	Electrical Features	Infrastructure and Facilities
2	117m NW	Seymour Road Garage	Seymour Body Repairs 24a, Seymour Road, Staple Hill, Gloucestershire, BS16 4TG	Vehicle Repair, Testing and Servicing	Repair and Servicing

ID	Location	Company	Address	Activity	Category
A	126m W	Air Shaft	Gloucestershire, BS16	Unspecified Quarries Or Mines	Extractive Industries
A	134m W	Electricity Sub Station	Gloucestershire, BS16	Electrical Features	Infrastructure and Facilities
B	138m N	Bath Street Garage	Bath Street Garage, Bath Street, Staple Hill, Gloucestershire, BS16 5NT	Vehicle Repair, Testing and Servicing	Repair and Servicing
3	149m NE	Electricity Sub Station	Gloucestershire, BS16	Electrical Features	Infrastructure and Facilities
B	163m N	On the Hill Motors	32, Broad Street, Staple Hill, Gloucestershire, BS16 5NU	Secondhand Vehicles	Motoring
C	182m NW	Staple Hill Computers	12, Broad Street, Staple Hill, Gloucestershire, BS16 5NX	Electrical Equipment Repair and Servicing	Repair and Servicing
D	201m NE	Staplehill MOT Centre Ltd	72-74, Broad Street, Staple Hill, Gloucestershire, BS16 5NL	Vehicle Repair, Testing and Servicing	Repair and Servicing
4	212m S	Electricity Sub Station	Gloucestershire, BS16	Electrical Features	Infrastructure and Facilities
D	216m NE	B M Motoring Centre	53-55, Broad Street, Staple Hill, Bristol, Gloucestershire, BS16 5LS	Vehicle Repair, Testing and Servicing	Repair and Servicing
5	220m SW	Precision Alloys Ltd	3, Morley Road, Staple Hill, Gloucestershire, BS16 4QS	Metals Manufacturers, Fabricators and Stockholders	Industrial Products
D	225m NE	W D M	57, Broad Street, Staple Hill, Bristol, Gloucestershire, BS16 5LT	Industrial Engineers	Engineering Services
E	227m N	Electricity Sub Station	Gloucestershire, BS16	Electrical Features	Infrastructure and Facilities
F	231m NW	Abc Blinds (SW) Ltd	120, High Street, Staple Hill, Gloucestershire, BS16 5HH	Curtains and Blinds	Consumer Products
6	237m S	Tank	Gloucestershire, BS16	Tanks (Generic)	Industrial Features
E	238m N	Top to Bottom	6 The Square, Broad Street, Staple Hill, Gloucestershire, BS16 5LR	Curtains and Blinds	Consumer Products
F	240m NW	Scrap My Car in Bristol	118, High Street, Staple Hill, Gloucestershire, BS16 5HH	Vehicle Breakdown and Recovery Services	Personal, Consumer and Other Services
C	249m N	Electricity Sub Station	Gloucestershire, BS16	Electrical Features	Infrastructure and Facilities

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 36 >**

ID	Location	Company	Address	LPG	Status
B	137m N	FLARE	32, Bath Street, Staple Hill, Bristol, South Gloucestershire, BS16 5NU	Not Applicable	Obsolete
D	202m NE	OBSOLETE	74, Broad Street, Staple Hill, Bristol, South Gloucestershire, BS16 5NL	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 36 >**

ID	Location	Address	Details	
C	214m N	VIP Cleaners Bristol, 13 Broad Street, Staple Hill, Bristol, South Gloucestershire, BS16 5LN	Process: Dry Cleaning Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
G	335m S	Precision Alloys Ltd, Units 3 Morley Road, Staple Hill, South Gloucestershire, BS16 4QT	Process: Boiler & Furnace Processes Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement 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	0

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

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	2

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 36 >**

ID	Location	Details	
G	298m S	Incident Date: 01/07/2003 Incident Identification: 170354 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
7	373m SW	Incident Date: 28/03/2003 Incident Identification: 146870 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) 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

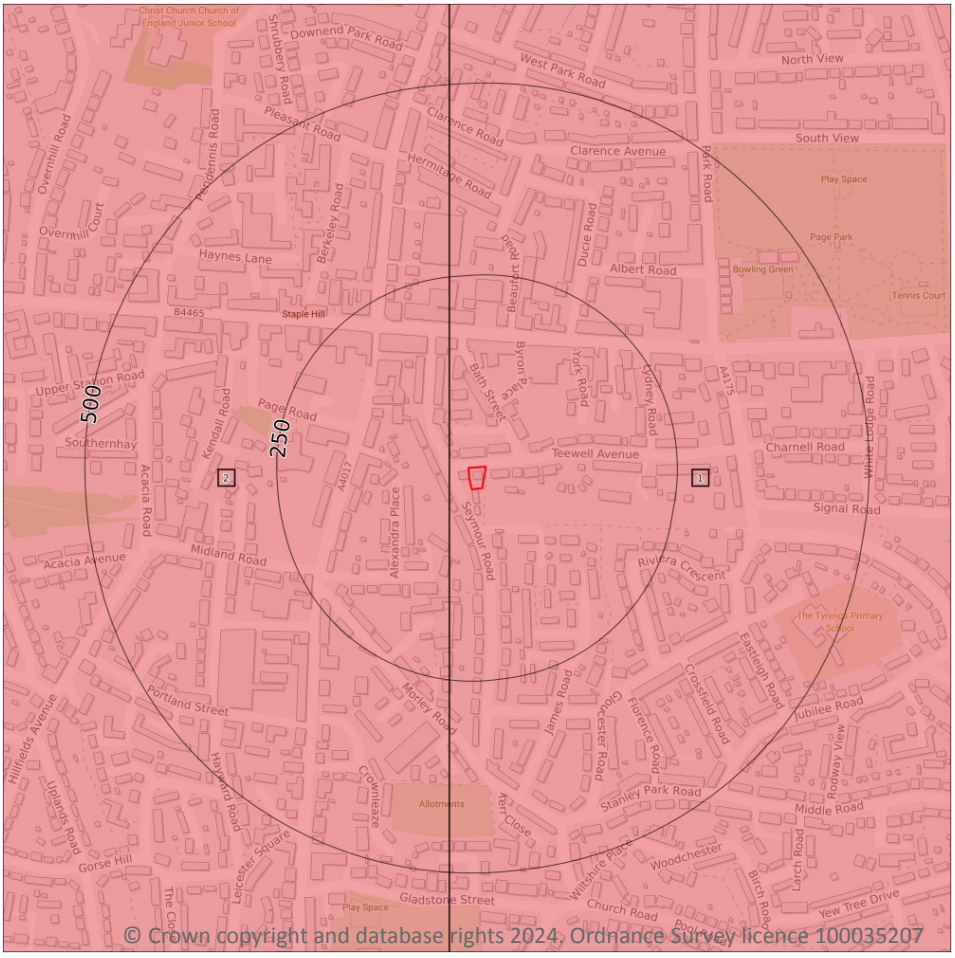
5.1 Superficial aquifer

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



5.2 Bedrock aquifer

Records within 500m	2

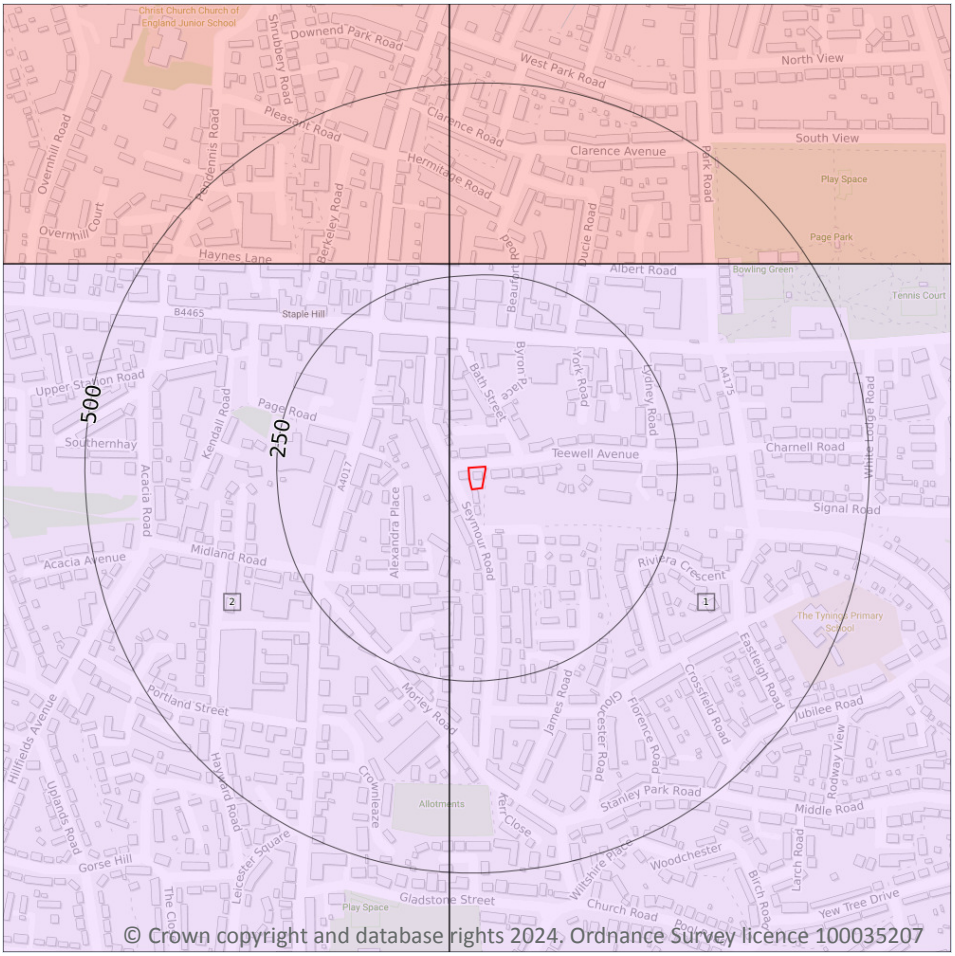
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 44 >**

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	25m W	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



Site Outline

Search buffers in metres (m)

Superficial vulnerability

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

Bedrock vulnerability

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

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

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 46 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures**
2	25m W	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: Medium 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

5.6 Groundwater abstractions

Records within 2000m	0

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.

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

5.7 Surface water abstractions

Records within 2000m	0

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.

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

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Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	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 50 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	**On site**	**River**	**Siston Bk - source to conf R Avon (Brist)**	**GB109053027450**	**Avon Bristol Urban**	**Avon Bristol and Somerset Nort**

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 50 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	2810m SE	River	Siston Bk - source to conf R Avon (Brist)	GB109053027450 ↗	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

Records on site	1

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

Features are displayed on the Hydrology map on **page 50 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	**On site**	**Bristol Triassic**	**GB40902G804800** ↗	**Good**	**Good**	**Good**	**2019**

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

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

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

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding

Site Outline

Search buffers in metres (m)

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

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

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

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

8.1 Surface water flooding

Highest risk on site	**Negligible**
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 56 >**

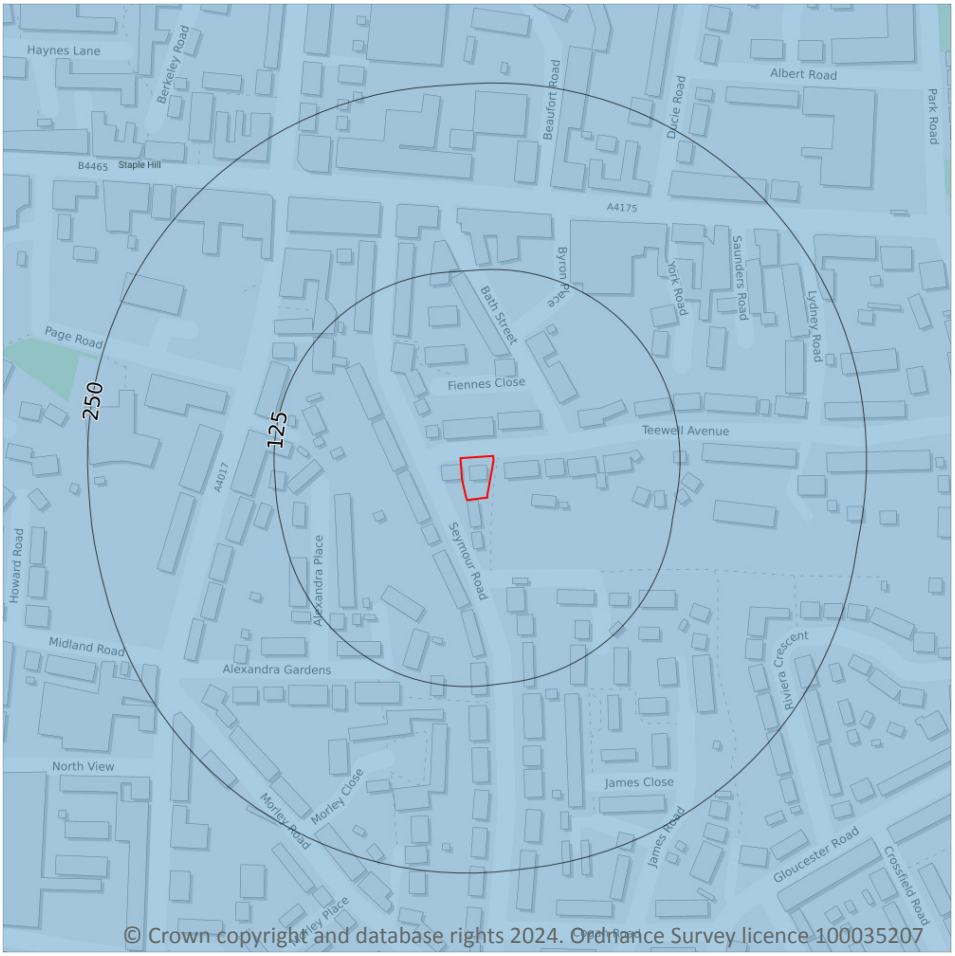
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site	**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 58 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations

Site Outline

Search buffers in metres (m)

Designated Ancient Woodland

Green Belt

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	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	2

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 59 >**

ID	Location	Name	Woodland Type
-	1681m NW	Unknown	Ancient & Semi-Natural Woodland
-	1945m NW	Unknown	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	1

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

Features are displayed on the Environmental designations map on **page 59 >**

ID	Location	Name	Local Authority name
-	1394m E	Bath and Bristol	South Gloucestershire

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	0

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

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

SSSI Impact Zones and Units

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- Site Outline

Search buffers in metres (m)

- SSSI Impact Risk Zones

SSSI Units

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

10.17 SSSI Impact Risk Zones

Records on site	1

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 64 >**

ID	Location	Type of developments requiring consultation
1	**On site**	**Minerals, Oil and Gas - Oil & gas exploration/extraction.** **Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m².** **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.** **Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.**

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 Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	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 Historic England, Cadw and Historic Environment Scotland.

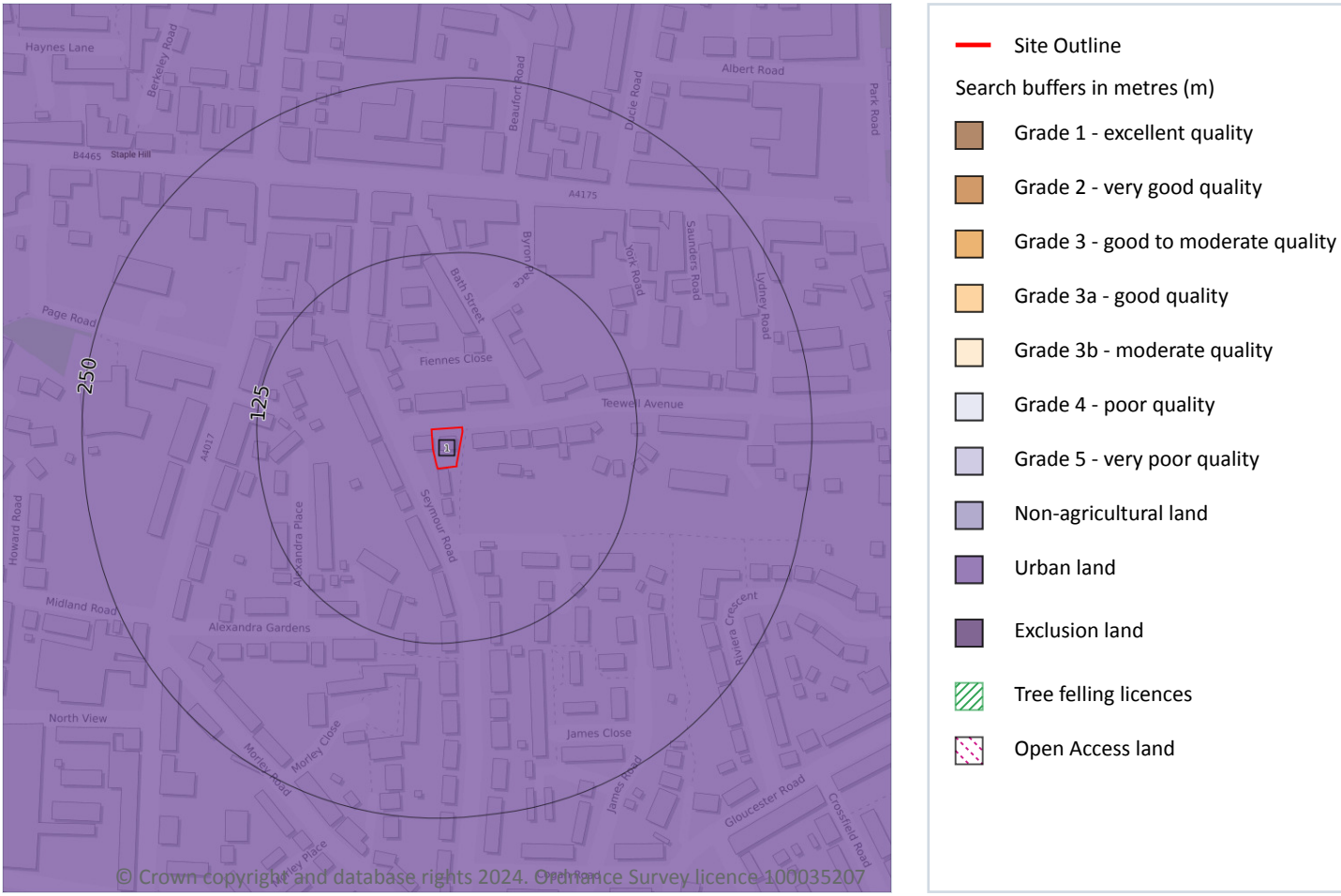
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



12.1 Agricultural Land Classification

Records within 250m	1

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 68 >**

ID	Location	Classification	Description
1	**On site**	**Urban**	-

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. The schemes identified may be historical schemes that have now expired, or may still be active.

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

13.1 Priority Habitat Inventory

Records within 250m	0

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

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

Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	2

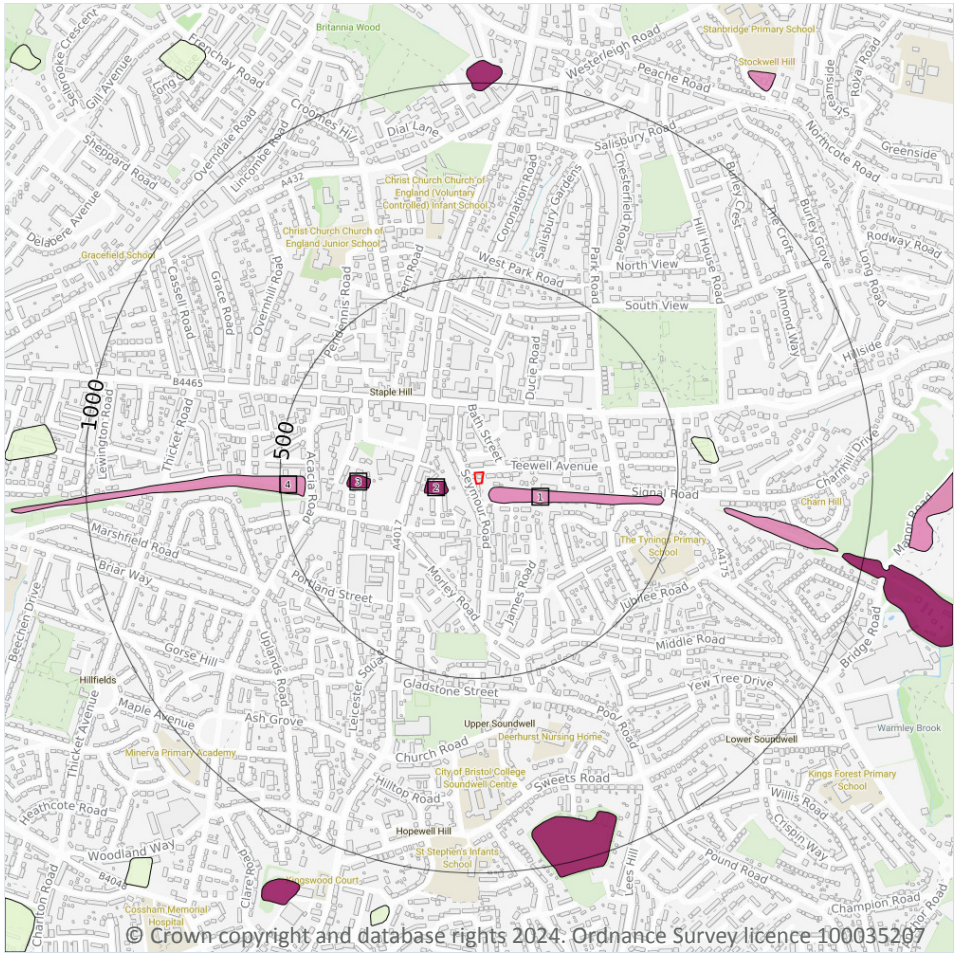
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 71 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**ST67NE**
2	25m W	Full	Full	Full	Full	ST67NW

This data is sourced from the British Geological Survey.

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



Site Outline

Search buffers in metres (m)

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

14.2 Artificial and made ground (10k)

Records within 500m	4

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 72 >**

ID	Location	LEX Code	Description	Rock description
1	28m SE	WGR-VOID	Worked Ground (Undivided)	Void
2	74m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	269m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	435m W	WGR-VOID	Worked Ground (Undivided)	Void

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.

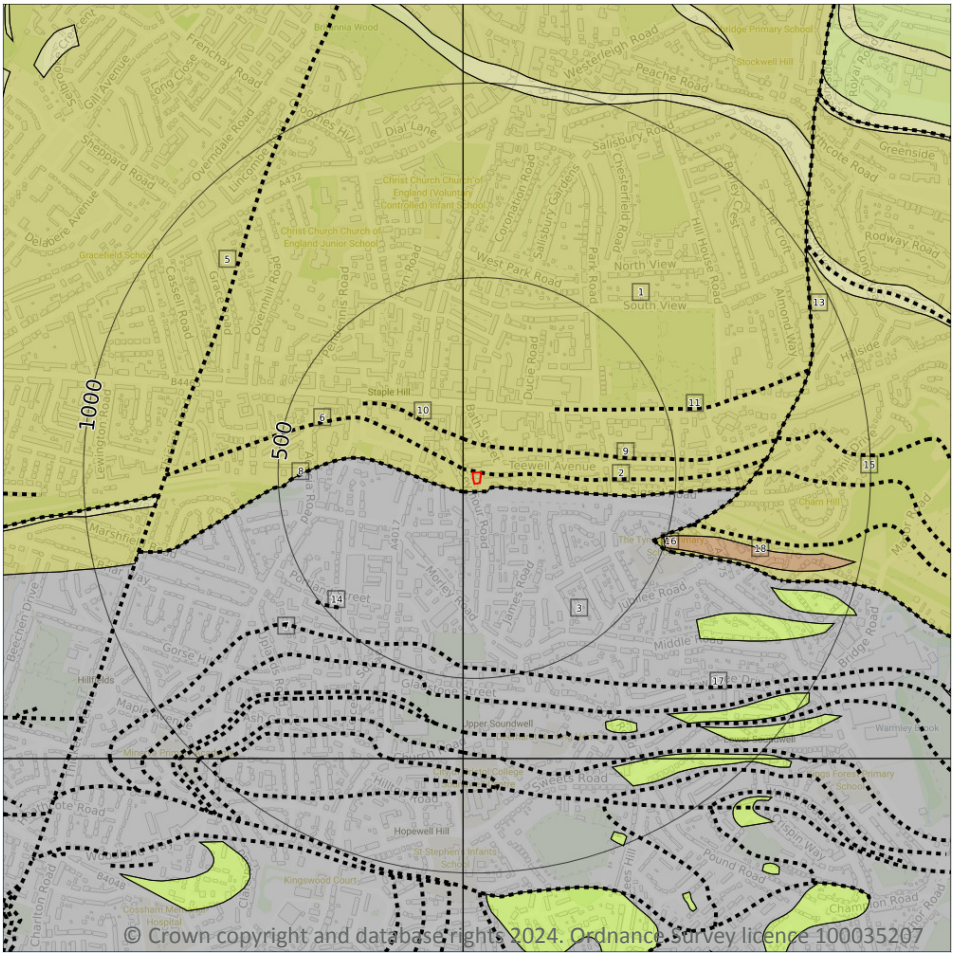
14.4 Landslip (10k)

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 **6**

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 75 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**DN-SDST**	**Downend Member - Sandstone**	**Bolsovian Sub-age**
3	21m S	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
5	25m W	DN-SDST	Downend Member - Sandstone	Bolsovian Sub-age

ID	Location	LEX Code	Description	Rock age
7	36m SW	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
15	471m E	DN-SDST	Downend Member - Sandstone	Bolsovian Sub-age
18	492m E	DN-CONG	Downend Member - Conglomerate	Bolsovian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m **12**

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 75 >**

ID	Location	Category	Description
2	**On site**	**ROCK**	**Coal seam, inferred**
4	21m S	ROCK	Coal seam, inferred coincident with bedrock geology boundary
6	27m NW	ROCK	Coal seam, inferred
8	36m SW	ROCK	Coal seam, inferred
9	69m N	ROCK	Coal seam, inferred
10	91m N	ROCK	Coal seam, inferred
11	249m NE	ROCK	Coal seam, inferred
12	435m S	ROCK	Coal seam, inferred
13	464m E	FAULT	Normal fault, observed
14	469m SW	ROCK	Coal seam, inferred
16	471m E	ROCK	Coal seam, inferred coincident with bedrock geology boundary
17	472m S	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability

Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 77 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW264_bristol_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	0

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.

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

15.4 Superficial geology (50k)

Records within 500m	0

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.

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.

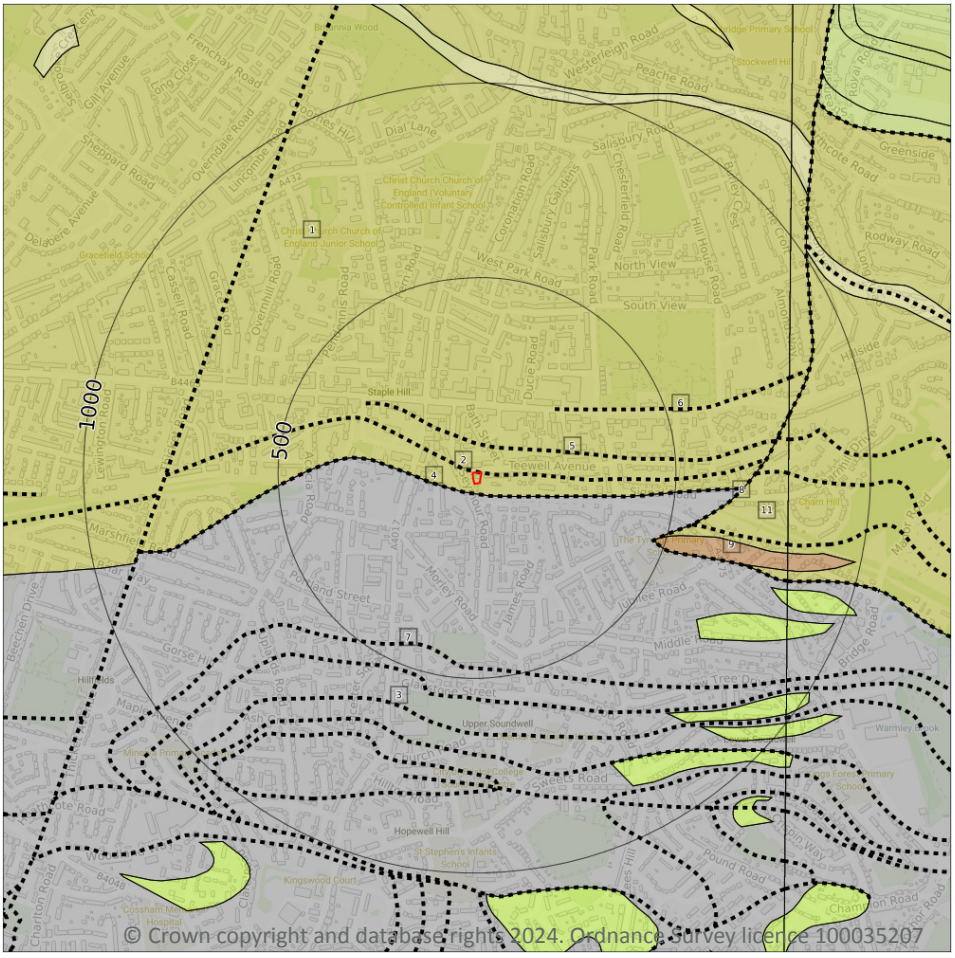
15.7 Landslip permeability (50k)

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 **4**

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**	**DN-SDST**	**DOWNEND MEMBER - SANDSTONE**	**WESTPHALIAN**
3	25m S	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
9	471m E	DN-CONG	DOWNEND MEMBER - CONGLOMERATE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
11	485m E	DN-SDST	DOWNEND MEMBER - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	**4**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**High**	**Moderate**
25m W	Fracture	High	Moderate
25m S	Fracture	Moderate	Low
36m SW	Fracture	Moderate	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**7**

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
2	**On site**	**ROCK**	**Coal seam, inferred**
4	25m S	ROCK	Coal seam, observed
5	70m N	ROCK	Coal seam, inferred
6	249m NE	ROCK	Coal seam, inferred
7	435m S	ROCK	Coal seam, inferred
8	464m E	FAULT	Fault, observed, displacement unknown
10	471m E	ROCK	Coal seam, observed

This data is sourced from the British Geological Survey.

16 Boreholes

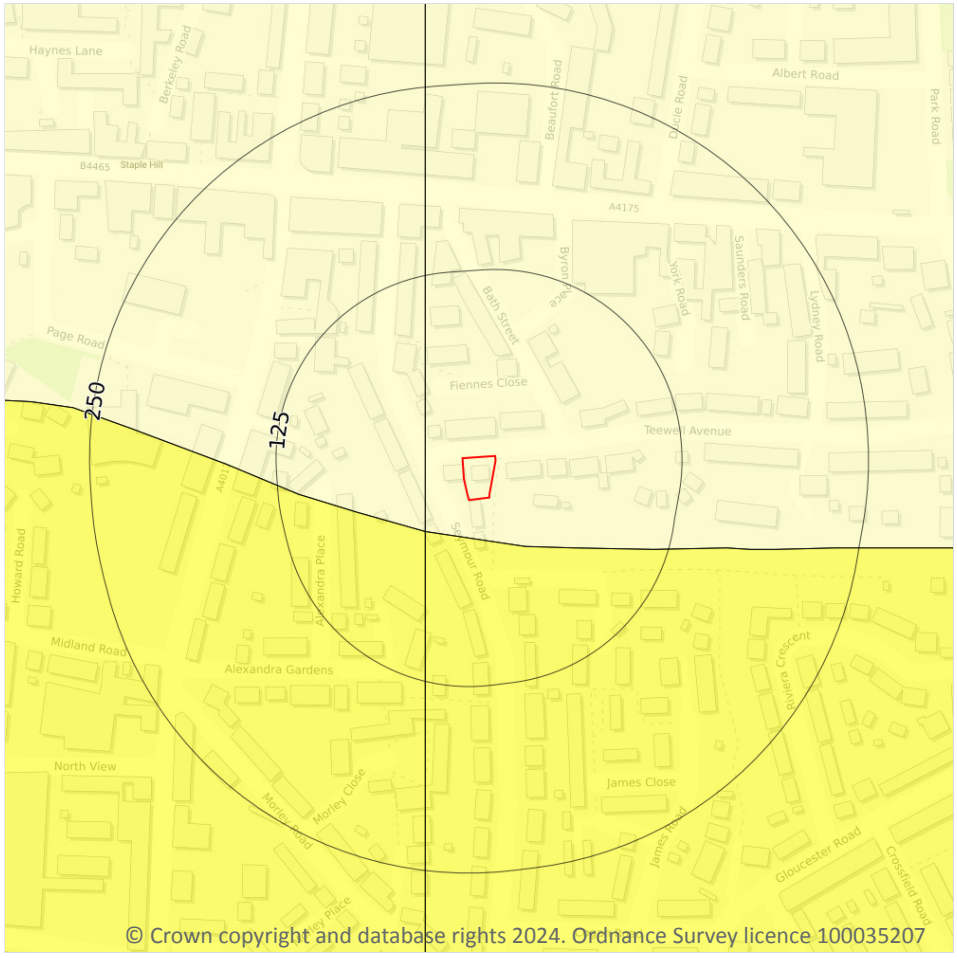
16.1 BGS Boreholes

Records within 250m	0

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.

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	4

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).

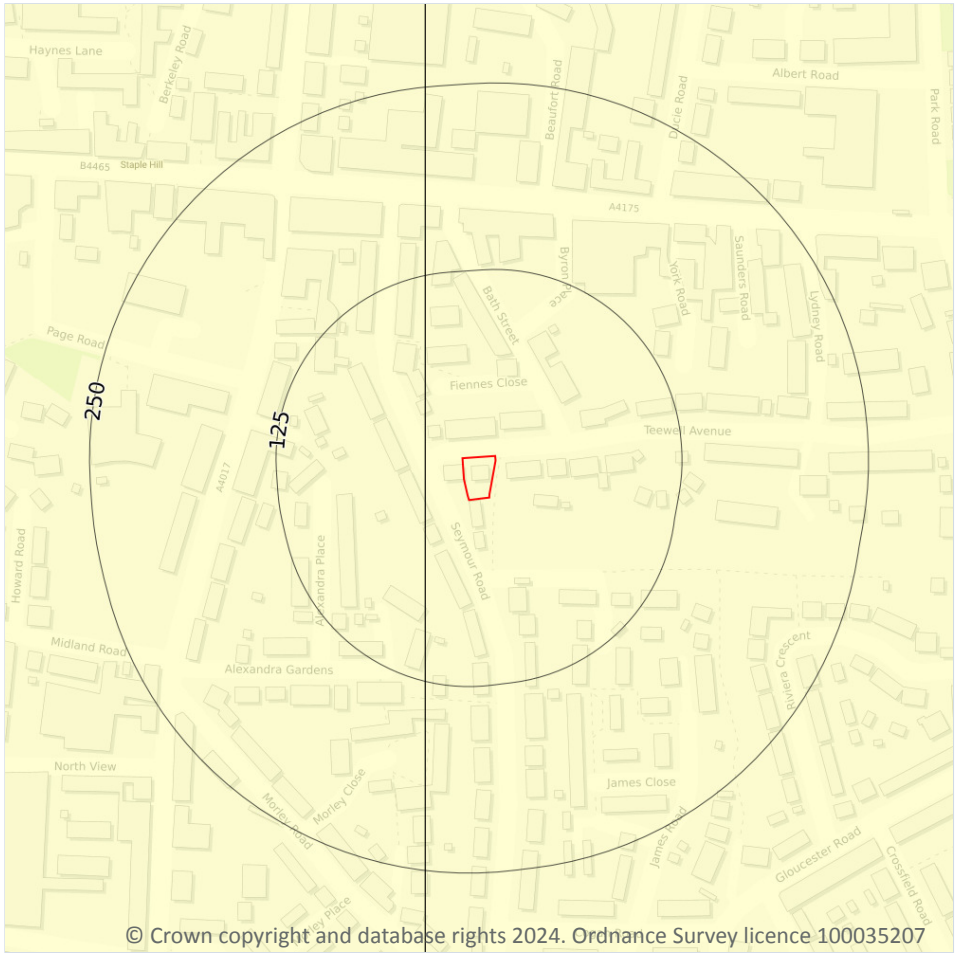
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 84 >**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
25m W	Negligible	Ground conditions predominantly non-plastic.
25m S	Very low	Ground conditions predominantly low plasticity.

Location	Hazard rating	Details
36m SW	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.

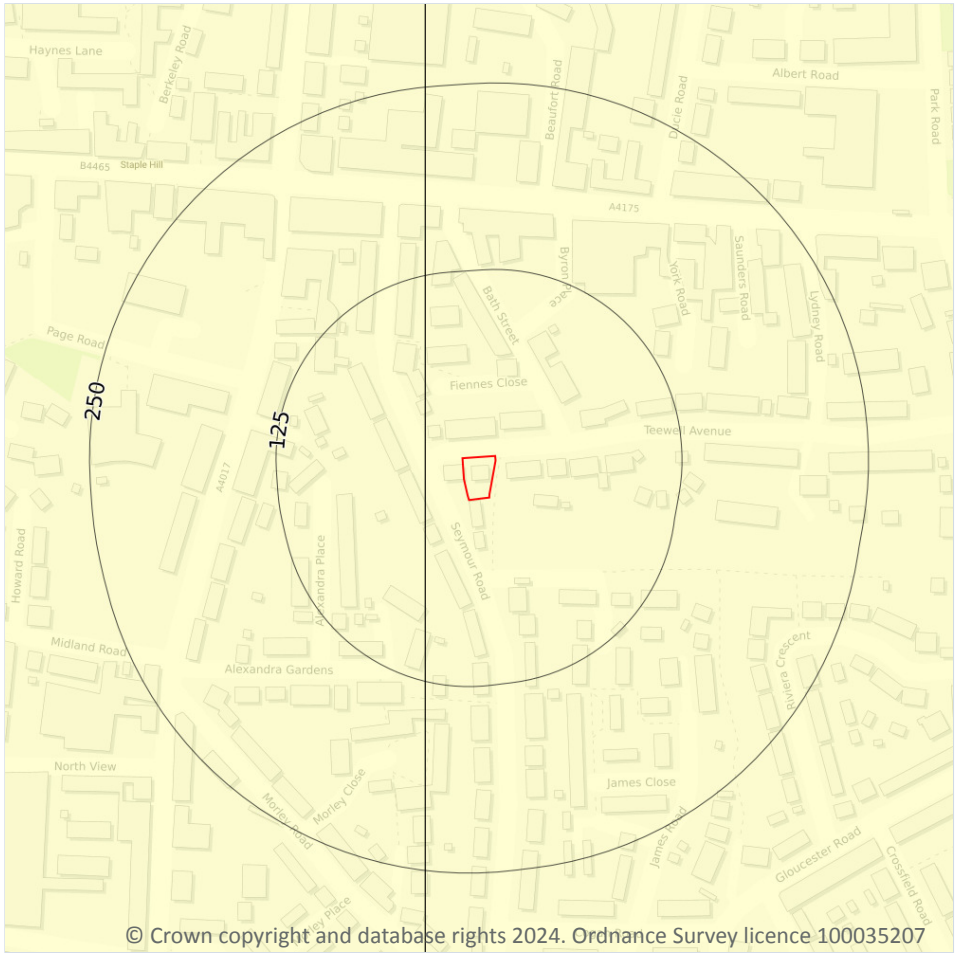
Features are displayed on the Natural ground subsidence - Running sands map on **page 86 >**

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
25m W	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.

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

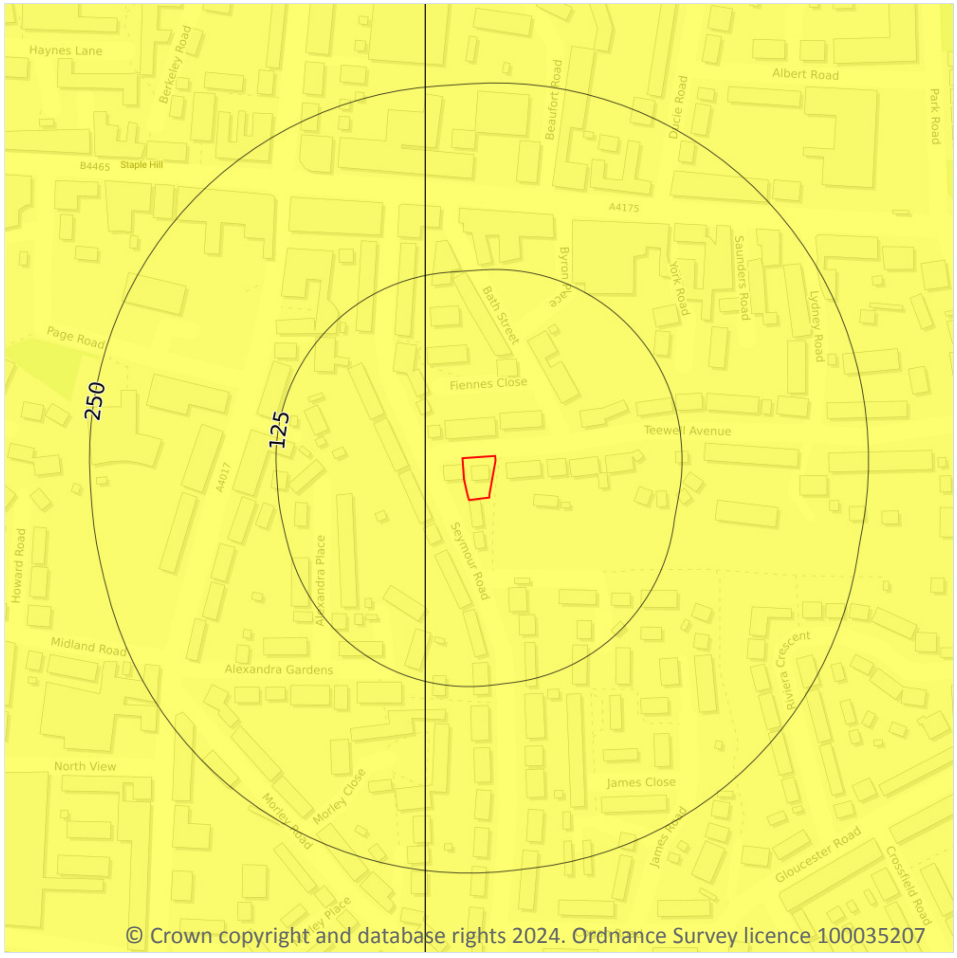
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

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.**
25m W	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m	2

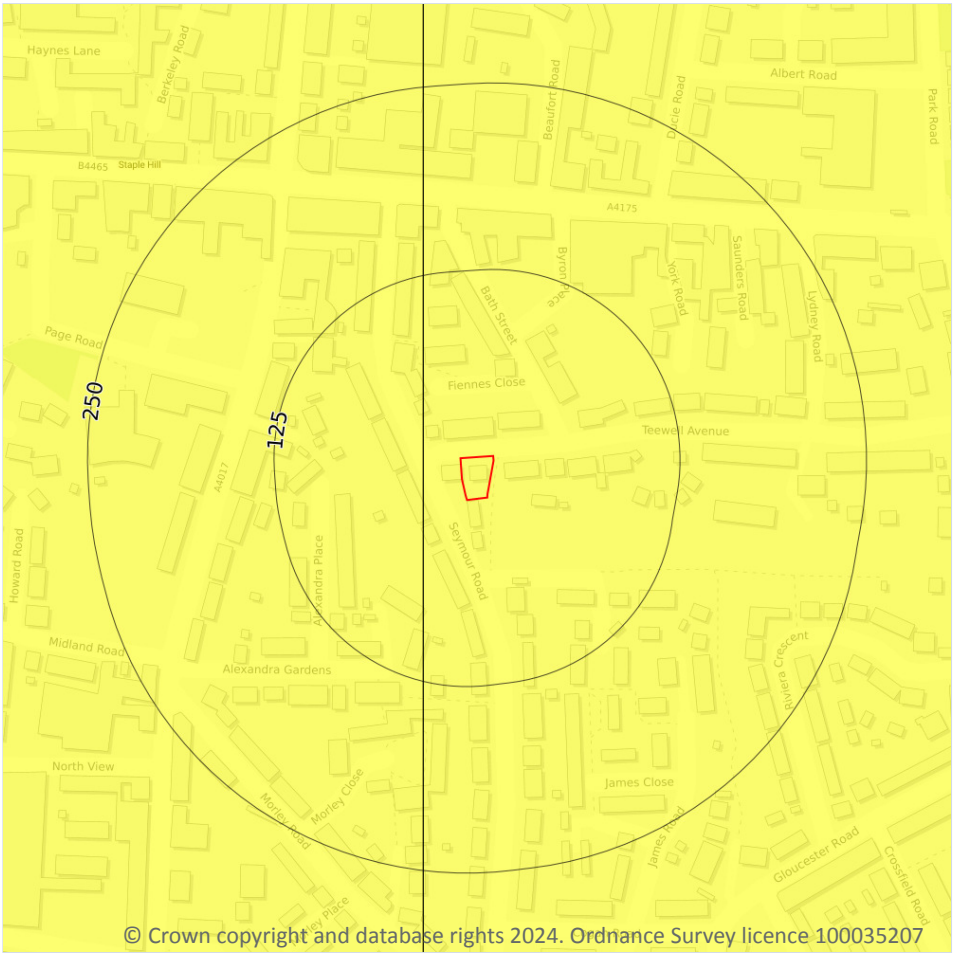
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 89 >**

Location	Hazard rating	Details
On site	**Very low**	**Deposits with potential to collapse when loaded and saturated are unlikely to be present.**
25m W	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.

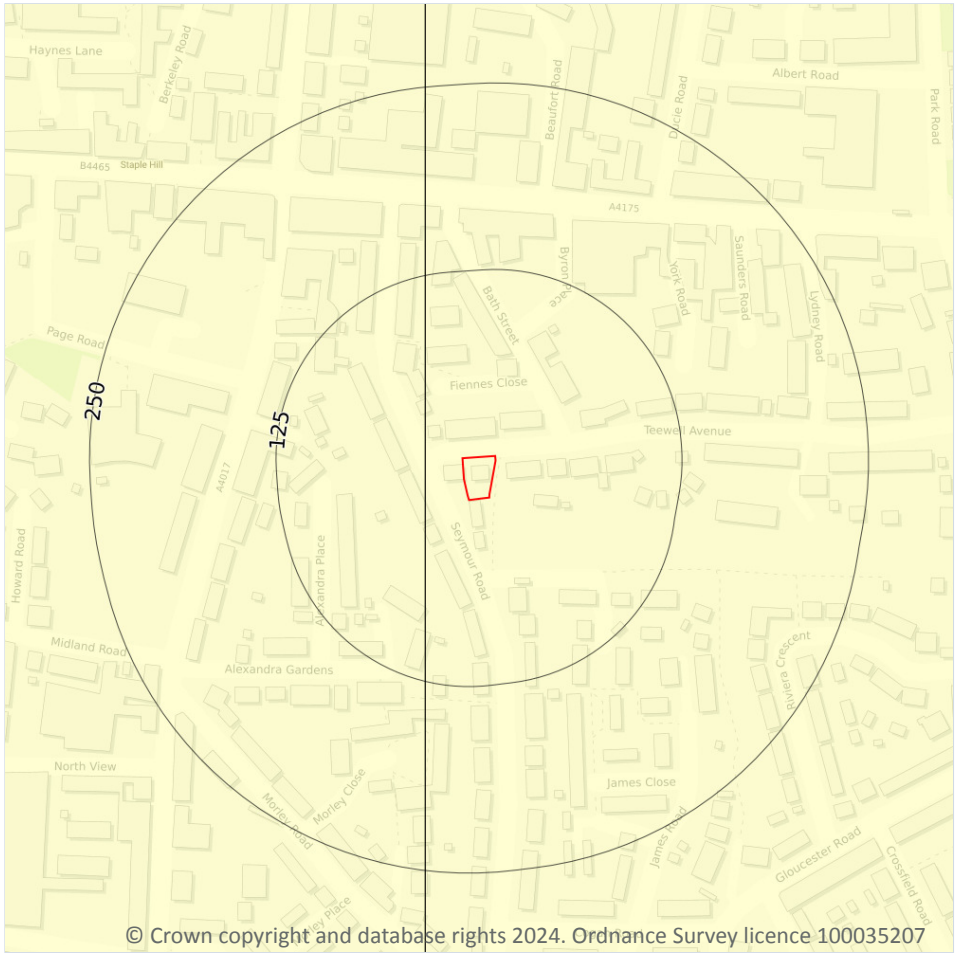
Features are displayed on the Natural ground subsidence - Landslides map on **page 90 >**

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
25m W	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.

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	2

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.

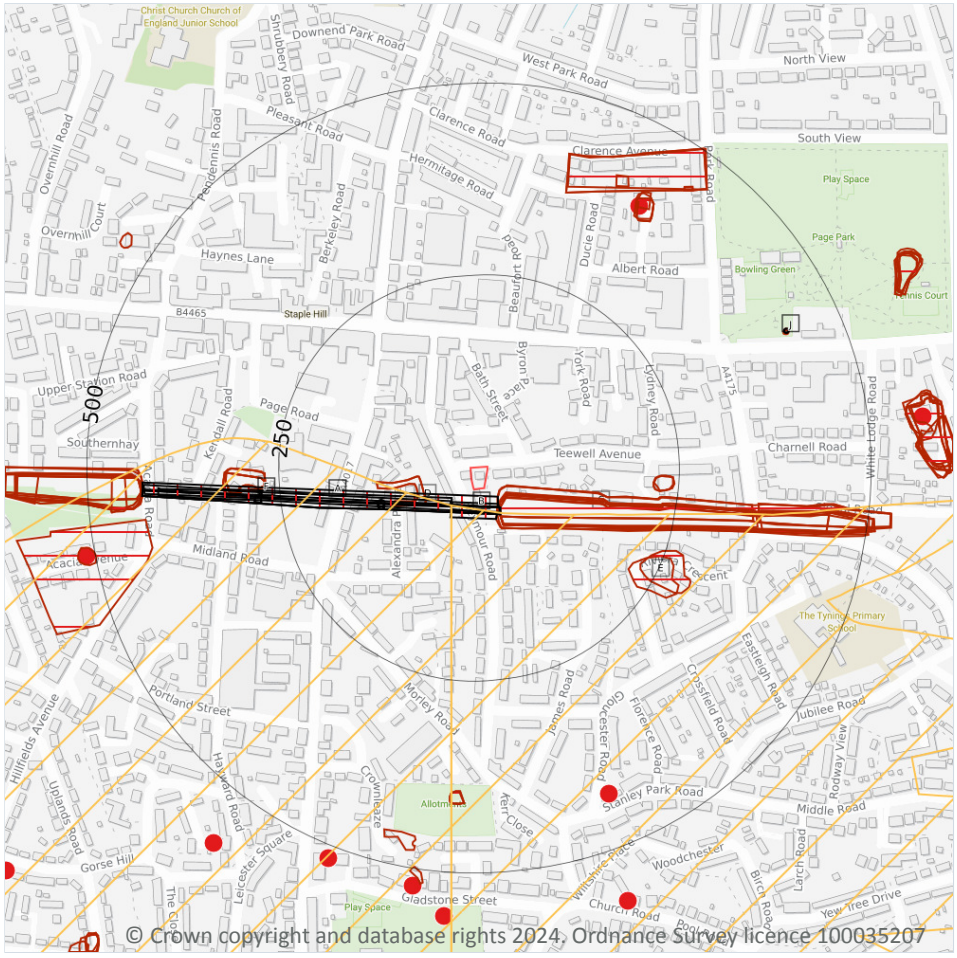
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 92 >**

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.**

Location	Hazard rating	Details
25m W	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 and ground workings



Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

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 BritPits

Records within 500m	2

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 and ground workings map on **page 94 >**

ID	Location	Details	Description
H	392m NE	Name: Staple Hill Address: Kingswood, BRISTOL, Avon Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
3	429m S	Name: Old Soundwell Colliery Address: Soundwell, Kingswood, BRISTOL, Avon Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m **19**

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 and ground workings map on **page 94 >**

ID	Location	Land Use	Year of mapping	Mapping scale
C	20m SE	Cuttings	1887	1:10560
C	20m SE	Cuttings	1887	1:10560
C	20m SE	Cuttings	1881	1:10560
C	26m SE	Cuttings	1912	1:10560
C	27m SE	Cuttings	1991	1:10000
C	27m SE	Cuttings	1971	1:10000
C	27m SE	Cuttings	1953	1:10560
C	28m SE	Cuttings	1938	1:10560
C	28m SE	Cuttings	1969	1:10560
C	31m SE	Cuttings	1921	1:10560
C	31m SE	Cuttings	1938	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
C	31m SE	Cuttings	1902	1:10560
D	64m W	Unspecified Ground Workings	1887	1:10560
D	64m W	Unspecified Ground Workings	1887	1:10560
E	215m SE	Pond	1921	1:10560
C	217m E	Unspecified Heap	1881	1:10560
C	217m E	Unspecified Heap	1887	1:10560
C	217m E	Unspecified Heap	1887	1:10560
E	226m SE	Pond	1912	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	**16**

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 and ground workings map on **page 94 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	8m S	Tunnel	1881	1:10560
B	18m S	Tunnel	1991	1:10000
A	22m S	Tunnel	1921	1:10560
A	22m S	Tunnel	1938	1:10560
A	22m S	Tunnel	1902	1:10560
B	28m S	Tunnel	1953	1:10560
A	31m SW	Tunnel	1949	1:10560
A	34m SW	Tunnel	1990	1:10000
D	117m W	Air Shaft	1990	1:10000
D	118m W	Air Shaft	1921	1:10560
D	118m W	Air Shaft	1938	1:10560
D	118m W	Air Shaft	1902	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
F	274m W	Air Shaft	1881	1:10560
F	275m W	Air Shaft	1978	1:10000
F	275m W	Air Shaft	1990	1:10000
J	425m NE	Old Coal Pit	1881	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	4

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 and ground workings map on **page 94 >**

ID	Location	Name	Commodity	Class	Likelihood
1	25m S	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
2	36m SW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	706m S	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	707m S	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, 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 prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	3

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

Location	Mineral type
430m S	Unspecified
438m S	Unspecified
484m SW	Unspecified

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 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.

18.13 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.

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 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 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m	0

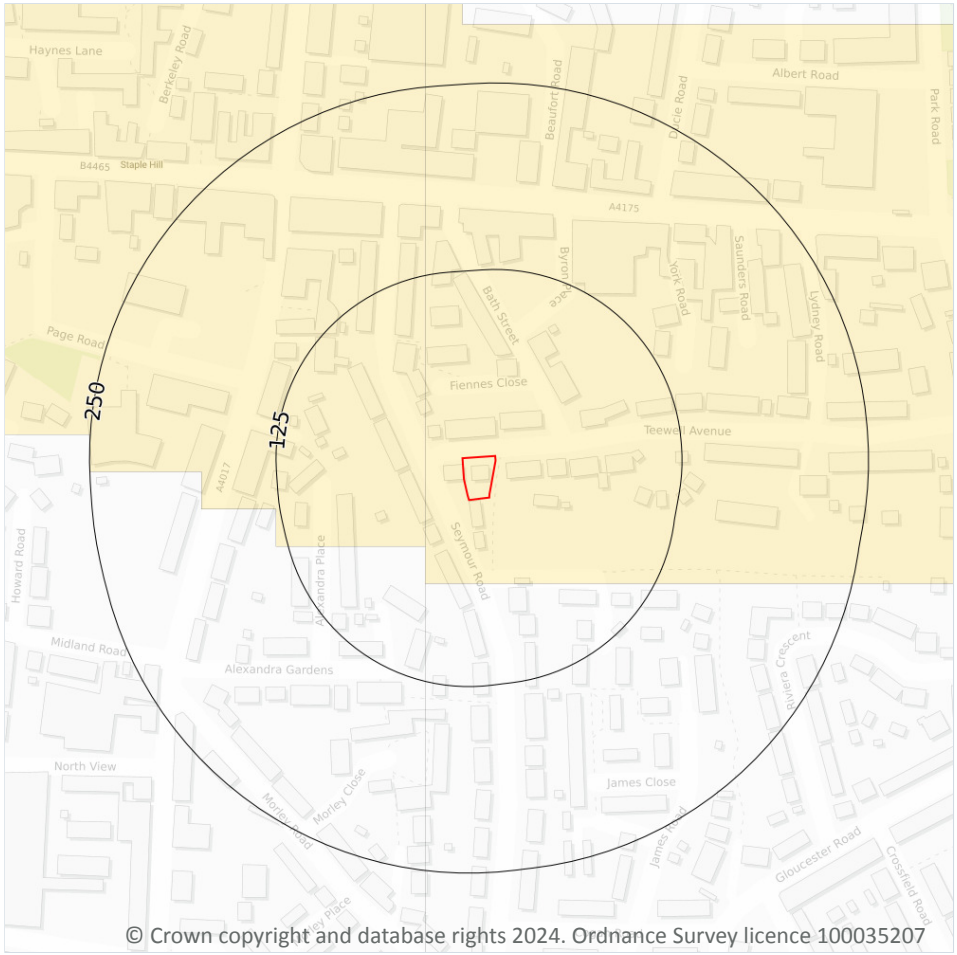
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.

20 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%

20.1 Radon

Records on site	1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 103 >**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 1% and 3%**	**None**

This data is sourced from the British Geological Survey and UK Health Security Agency.

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	6

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 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
25m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
25m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
25m S	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
36m SW	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
36m SW	25 - 35 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.

21.2 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.

21.3 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.

22 Railway infrastructure and projects

Site Outline

Search buffers in metres (m)

- Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

22.1 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.

22.2 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.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	27

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on **page 107 >**

Location	Land Use	Year of mapping	Mapping scale
8m S	Tunnel	1881	10560
9m S	Tunnel	1887	10560
18m S	Tunnel	1991	10000
18m S	Tunnel	1971	1250
18m S	Tunnel	1964	1250
18m S	Tunnel	1955	1250
18m S	Tunnel	1949	1250
18m S	Tunnel	1949	2500
18m S	Tunnel	1992	1250
18m S	Tunnel	1971	1250
18m S	Tunnel	1988	1250
19m S	Tunnel	1882	2500
19m S	Tunnel	1903	2500
19m S	Tunnel	1916	2500
20m S	Tunnel	1912	10560
20m S	Tunnel	1938	10560
22m S	Tunnel	1921	10560

Location	Land Use	Year of mapping	Mapping scale
22m S	Tunnel	1938	10560
22m S	Tunnel	1902	10560
28m S	Tunnel	1953	10560
31m SW	Tunnel	1954	10560
33m SW	Tunnel	1971	1250
33m SW	Tunnel	1950	1250
33m SW	Tunnel	1960	1250
33m SW	Tunnel	1950	2500
33m SW	Tunnel	1985	1250
34m SW	Tunnel	1990	10000

This data is sourced from Ordnance Survey/Groundsure.

22.5 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.

22.6 Historical railways

Records within 250m	**4**

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

Features are displayed on the Railway infrastructure and projects map on **page 107 >**

Location	Description
22m S	Abandoned
22m S	Historic
31m SE	Abandoned

Location	Description
31m SE	Historic

This data is sourced from OpenStreetMap.

22.7 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.

22.8 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.

22.9 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.

22.10 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.

APPENDIX C Coal Authority Mining Report

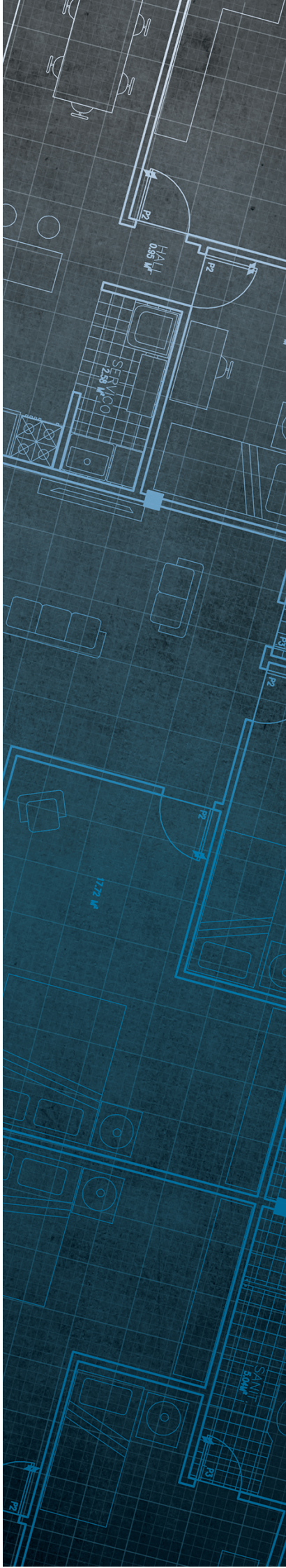
The Coal Authority

Consultants

Coal Mining Report

83 Teewell Avenue
Staple Hill
Bristol
BS16 5NG

Date of enquiry:	**7 February 2024**
Date enquiry received:	**7 February 2024**
Issue date:	**7 February 2024**
Our reference:	**51003403870001**
Your reference:	**8839 PO12257 BC**



Consultants

Coal Mining Report

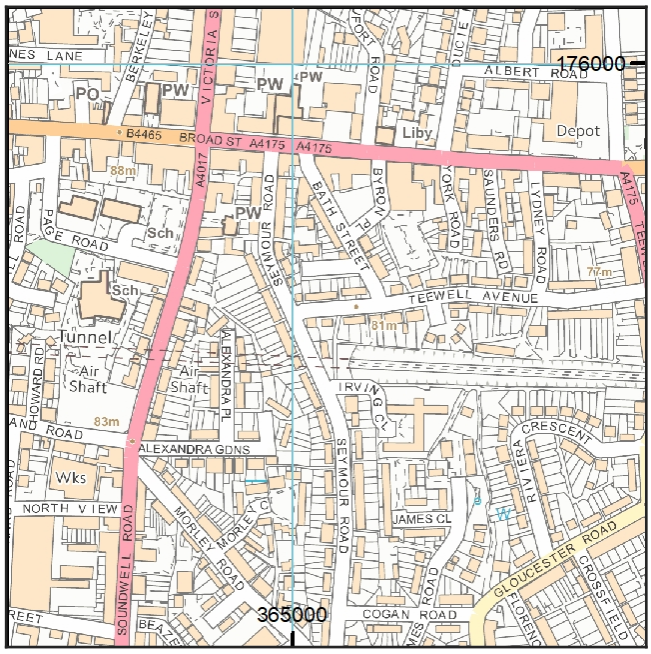
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

Earth Science Partnership

Enquiry address

83 Teewell Avenue
Staple Hill
Bristol
BS16 5NG



Approximate position of property

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	TWO FOOT NINE	Coal	3APH	339	South	43.8	N/A	110	1856
unnamed	FOUR FEET	Coal	3BV0	375	South	50.6	North	122	1858

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	365175-012	365104 175735		Coal	
Shaft	365175-092	365107 175753		Coal	

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

17639		

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
PARROT	Coal	Yes	Within	N/A	117
UNNAMED 1	Coal	Yes	26.1	South	96

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

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

Withdrawal of support notices
The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land
The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk.**

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines
Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips
Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations
Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites
Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence
Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

Mine water treatment schemes
Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining
Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing
Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders
Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices
Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices
Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

The Coal Authority

Summary of findings

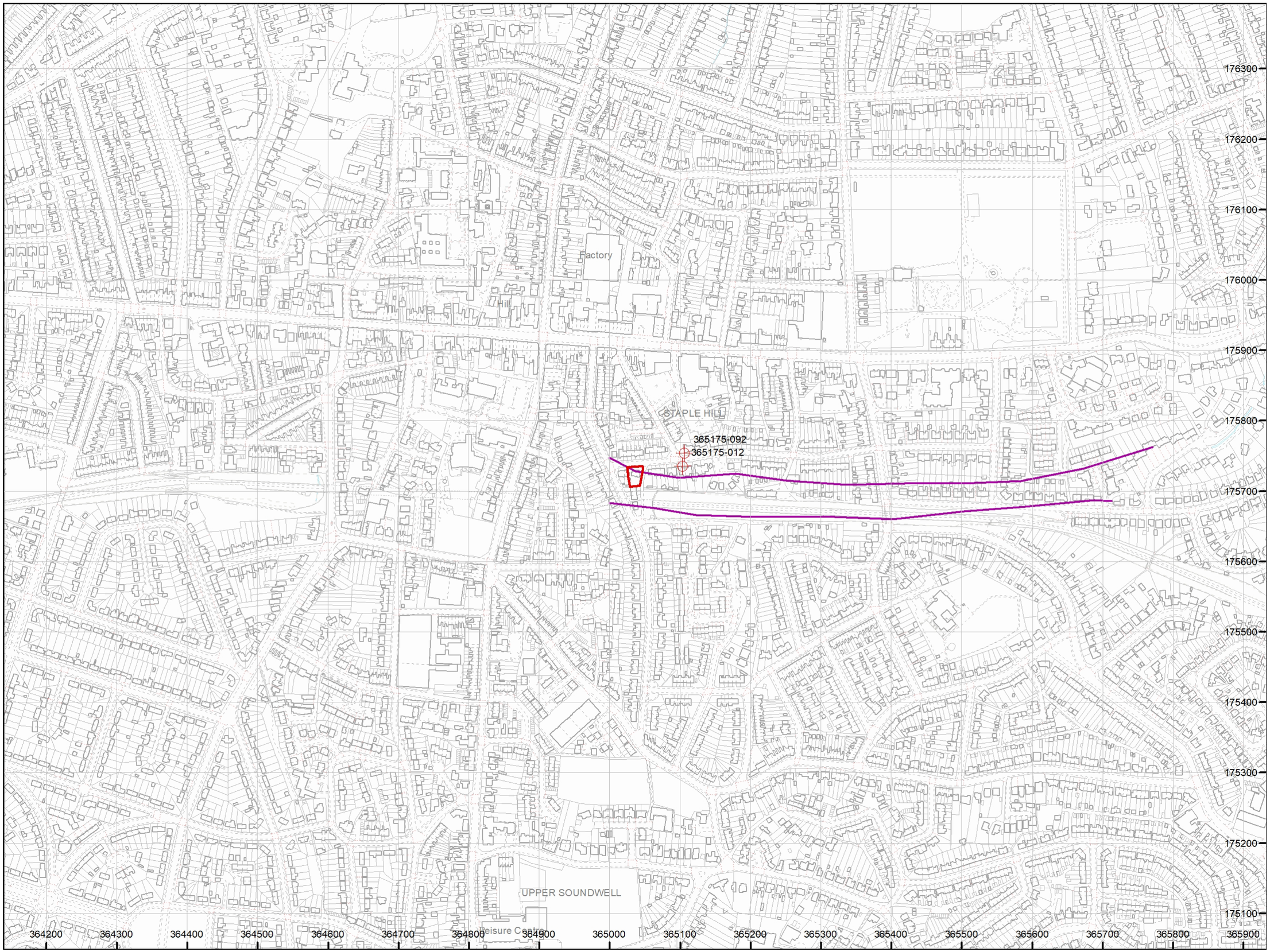
The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

Approximate position of the enquiry boundary shown

Disused mine shaft

Outcrop (Proven)



How to contact us
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com

APPENDIX D Preliminary UXO Risk Assessment

Becky Cross

From: Nathan Towers <Nathan.Towers@zetica.com>
Sent: 14 February 2024 14:11
To: Becky Cross; Uxo
Cc: Research Team
Subject: RE: Zetica UXO PDSA 8 Teewell Avenue, Bristol, Gloucestershire

Hi Becky

No problem, the findings of the PDSA still stand. Please see our updated PDSA below.

Pre-Desk Study Assessment	
Site:	83 Teewell Avenue, Bristol, Gloucestershire
Client:	Earth Science Partnership
Contact:	Becky Cross
Date:	14th February 2024
Pre-WWI Military Activity on or Affecting the Site	None identified.
WWI Military Activity on or Affecting the Site	None identified.
WWI Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: ■ Transport infrastructure and public utilities. ■ Industries important to the war effort, including munitions factories, and engineering and metal works. ■ Military camps and training areas.
WWI Bombing	None identified on the Site.
Interwar Military Activity on or Affecting the Site	None identified.
WWII Military Activity on or Affecting the Site	None identified.
WWII Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: ■ Transport infrastructure and public utilities. ■ Industries important to the war effort, including aircraft manufacturing, and engineering and metal works. ■ Royal Air Force (RAF) Pucklechurch. ■ Military camps and training areas. ■ Anti-Aircraft (AA) and anti-invasion defences.
WWII Bombing Decoys (within 5km of Site)	None.
WWII Bombing	During WWII the Site was located in the Urban District (UD) of Mangotsfield, which officially recorded 86No. High Explosive (HE) bombs with a bombing density of 56.2 bombs per 405 hectares (ha).

	Readily available records have been found to indicate that several HE bombs fell in close proximity to the Site.
Post-WWII Military Activity on or Affecting the Site	None identified.
Recommendation	It is recommended that a detailed desk study is commissioned to assess, and potentially zone, the Unexploded Ordnance (UXO) hazard level on the Site.
Further information	For information about Zetica's detailed UXO desk studies and other UXO services, please visit our website: www.zeticauxo.com. Details and downloadable resources covering the most common sources of UXO hazard affecting sites in the UK can be found here. If you have any further queries, please don't hesitate to get in contact with us at uxo@zetica.com or 01993 886 682.

This summary is based on a cursory review of readily available records. Caution is advised if you plan to action work based on this summary.

It should be noted that where a potentially significant source of UXO hazard has been identified on the Site, the requirement for a detailed desk study and risk assessment has been confirmed and no further research will be undertaken at this stage. It is possible that further in-depth research as part of a detailed UXO desk study and risk assessment may identify other potential sources of UXO hazard on the Site.

Many thanks

Nath

Nathan Towers
Risk Assessor
Zetica Limited

T. 01993 886 682 | E. Nathan.Towers@zetica.com | W. www.zeticauxo.com | T. @ZeticaUXO

From: Becky Cross <becky.cross@earthsciencepartnership.com>
Sent: Wednesday, February 14, 2024 12:26 PM
To: Nathan Towers <Nathan.Towers@zetica.com>; Uxo <Uxo@zetica.com>
Cc: Research Team <ResearchTeam@zetica.com>
Subject: RE: Zetica UXO PDSA 8 Teewell Avenue, Bristol, Gloucestershire

Hi Nathan,

Many thanks for sending across the PDSA.

Just wanted to check – I mistakenly put the address in my original email as '8' Teewell Avenue but the email header & site plan were for no. 83 which is the correct address. Apologies for the mix up – would the same conclusions still stand?

GENERAL NOTES

1. Earth Science Partnership (ESP) believes that providing information about limitations is essential to help clients identify and therefore manage their risks. These risks can be mitigated through further investigation or research, but they cannot be eliminated. This report may not be used for any purpose other than that for which it was commissioned.

2. This report includes available factual data for the site as obtained only from the sources described in the text. The data are related to the site on the basis of the site location and boundary information provided by the client. The findings and opinions conveyed in this assessment are based on the information obtained from a variety of sources as detailed in the report, which ESP believe are reliable. Nevertheless, ESP cannot and does not guarantee the authenticity or reliability of the information it has relied on. It is possible that the assessment failed to indicate the existence of further sources of information on the site. Assuming such sources do exist, their information could not have been considered in the formulation of the opinions and findings in this report. It should be recognised that different conditions on site may have existed between and subsequent to the various map surveys.

3. In preparing this report it has been assumed that all past and present occupants of the site have provided all relevant and other information, especially relating to known or potential hazards. This report is not required to identify insufficiencies or mistakes in the information provided by the user/owner or from any other source, but has sought to compensate for these where obvious in the light of other information.

4. Reports are normally prepared and written in the context of a stated purpose, and should not, therefore be used in a different context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission.

5. The opinions presented in this report are based on the findings derived from a site inspection, investigations and a review of historical and other records. The report details any indicators that may suggest that hazardous substances exist at the site at levels likely to warrant mitigation. Not finding such indicators does not mean that hazardous substances do not exist at the site. The most recent site inspection was undertaken as detailed within the report. Circumstances on sites are subject to change and certain indicators of the presence of hazardous substances that may have been latent at the time of this inspection may subsequently have become observable.

6. The work carried out for the assessment can only investigate a small portion of the subsurface conditions. Certain indicators or evidence of hazardous substances may have been outside the limited portion of the subsurface investigated, latent at the time of the work or only partially intercepted by the works, and thus their full significance could not be appreciated. In this regard, groundwater levels are particularly susceptible to variation and it should be noted that groundwater levels are subject to diurnal, seasonal, and climatic changes and are solely dependent on the time the ground investigation was carried out and the weather before and during the investigation.

7. Accordingly, it is possible that the assessment failed to indicate the presence or significance of hazardous substances. Assuming such substances exist, their presence could not have been considered in the formulation of the report's findings and opinions. The conclusions resulting from this study and contained in this report are not necessarily indicative of future conditions or operating practices at or adjacent to the site. Where differing ground conditions or suspect materials are encountered during future site works, additional specialist advice should be sought to assess whether the new information will materially affect the recommendations currently provided herein and whether further consideration is required. Any limiting factors should be assessed by an appropriately qualified specialist.

8. The assessment was prepared for the sole internal use and reliance of the Client. The report shall not be relied upon by or transferred to other parties without the express written authorisation of the Earth Science Partnership. If an unauthorised party comes into possession of the report, they rely on it at their peril and the authors owe them no duty of care and skill.

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