Appendix B Historical Reports

Trinity Academy, Barnsley

Coal Mining Risk Assessment

October 2020

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Client Name:	Turner & Townsend
Document Reference:	WIE17125-100-R-7.1.3-CMRA
Project Number:	WIE17125

Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Date	Prepared by	Checked by	Approved by
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Comments

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1. Introduction

Waterman Infrastructure & Environment Ltd (WIE) have been commissioned by Turner & Townsend, to undertake a desk-based Coal Mining Risk Assessment in order to inform the level of risk associated with mining legacy at a proposed development site. The site is located at the Keresforth Centre NHS Facility, Barnsley, and is hereafter referred to as 'the site'.

The entire site is located within a Coal Mining Reporting area, with further portions of the site defined as 'Development High Risk' by The Coal Authority. As such, this report has been prepared in the format of a Coal Mining Risk Assessment, in general accordance with CIRIA C758D (2019) *"Abandoned Mine Workings Manual"* and the layout advocated by The Coal Authority, such that it will be suitable to support a planning application.

1.1 Site Location and Description

The Site is located at National Grid Reference E433423, N405601 at Keresforth Close, Barnsley, S70 6RS. The Site comprises an elongated parcel of land with the former Keresforth Medical Centre located at the north and an area of open space at the south. The Site extends to 7.2 hectares. A Site Location Plan and Site Features Plan are presented as Appendix A.

The Site is split into two distinct land parcels; the Keresforth Centre at the north-east and an area of Public Open Space (POS) at the south-west. The area at the north comprises the existing and part operational Keresforth Medical Centre. A rectangular shaped building immediately to the east of the POS is in use. All other remaining buildings appear to be disused, with windows and doors boarded up. No access was gained to these buildings.

Keresforth Medical Centre

Buildings on-site comprise one-storey properties with pitched roofs aligned along Keresforth Close.

The topography of the site trends downwards to the north and east boundaries, from approximately 145m AOD to 130m AOD. The former grassed areas surrounding the buildings are now overgrown. The edges of the site are vegetated with trees and shrubs.

The hardstanding and roadways were in good repair with drainage grids and manholes recorded across the site.

Public Open Space

The POS is a flat grassed area bounded by trees and bushes. Ground level is higher, at approximately 145m AOD to 150m AOD, than at the adjacent Keresforth Medical Centre to the east.

The Site is bounded to the north and east by a Sports Facility and the playing fields of the Joseph Locke Primary School. The area to the south comprises of allotment gardens at a lower elevation than the current Site surface. Residential developments surround the Site to the south and west.

1.2 Proposed Development

It is proposed to demolish all structures within the site boundary, to facilitate the construction of Trinity Academy, Barnsley, which is to provide a 900-place secondary school. This development will include a new school building in the north-east, hard landscaping car park in the centre of the site and both soft and hard landscaping sports fields in the surrounding area. New residential buildings with private gardens will be built in the north of the site.

The proposed development is presented in the Edward Architecture Drawing Ref. 0632/EA/A/S001,

included in Appendix A.

1.3 Scope and Objectives of Report

The purpose of this Coal Mining Risk Assessment Report is to:

- Present a desk-based review of all readily available information on the coal mining issues which are relevant to the development site;
- Use that information to identify and assess the risks to the proposed development from coal mining legacy, including the cumulative impact of issues;
- Set out appropriate mitigation measures to address any coal mining legacy issues affecting the site, including any necessary remedial works and/or demonstrate how coal mining issues have influenced the proposed development; and
- Demonstrate to the Planning Authority that the application site is, or can be made, safe and stable to meet the requirements of national planning policy with regard to development on unstable land.

1.4 Limitations

The scope of this report is limited to assigning levels of risk associated with coal mining legacy, as informed by desk study review of information available at the time of writing and specifically listed within the report.

The report considers Shallow Coal Mining only. In accordance with current Coal Authority guidance, this is defined as lying at a depth of up to 10 times the thickness of coal seam extraction down to a maximum depth of 30 metres. Workings below this depth (deep mining) do not normally constitute a threat to surface stability, except in particular circumstances.

2. Sources of Information

The sources of information consulted in undertaking this study are listed below. Relevant reports or extracts are appended.

1. British Geological Survey (BGS) database of historical boreholes "GeoIndex" (http://mapapps2.bgs.ac.uk/geoindex/home.html) accessed 04/09/20;
2. British Geological Survey (BGS) map Barnsley Sheet 87 Bedrock and Superficial edition (1:50,000) (2008);
3. British Geological Survey (BGS) map Barnsley Sheet SE30NW (1:10,000) (2005);
4. Coal Authority Consultants Coal Mining Report (Ref 51002312203001, dated 03/10/20);
5. Coal Authority Mine Entry Data Sheet (Ref 51002307645001, dated 07/09/20);
6. Coal Authority Surface Hazards Incident Report (Ref 51002322909001, dated 21/10/20);
7. Coal Authority Interactive Map Viewer (http://mapapps2.bgs.ac.uk/coalauthority/home.html) accessed 04/09/20;
8. Groundsure Report (Ref: WTM1-6786594, dated 9th June 2020).

3. Coal Mining Assessment

3.1 Historical Context

Prior to the introduction of the Coal and Metalliferous Mines Regulation Acts in 1872, there was no legal requirement to record workings and it was only from as late as 1947 that records were considered as fully complete. Consequently, there is a legacy of 'unrecorded' workings within former coal field areas.

Historical mapping included within the Groundsure Report (Ref: WTM1-6786594, dated 9th June 2020), in Appendix B, allow an indication of previous site use and any coal mining activity in the vicinity of site.

The first available map from 1850 (1:10,560 scale) indicates the site to be open farmland. In the vicinity of the site a number of sandstone quarries are identified, the closest being approximately 200m to the west of the Site. Victoria Colliery, and an associated shaft, are identified approximately 650m – 700m south east of the Site. No other coal mining related features are identified.

Next available mapping from 1890 (1:10,560 scale) shows the Site to be unchanged. A substantial brick works is shown approximately 750m north west of the Site. Victoria Colliery is no longer shown. However, an unnamed Colliery is shown approximately 800m east of the Site.

Mapping from 1904 (1:10,560 scale) shows the Site to be unchanged. The unnamed Colliery shown approximately 800m east of the Site is now identified as a Velvet Works. Rob Royd Colliery and Rose Hill Colliery are shown just over 1km south and south west of the Site, respectively. Two "Old Shafts" are shown approximately 1.25km south east of the Site. The brick works to the north has expanded significantly and now includes two "Old Shafts".

Mapping from 1929 (all 1:10,560 scale) shows no notable change to the Site, however, the surrounding area has undergone continued development. A clay pit extending to within 500m has been added to the brick works to the north of the Site with an *"Old Shaft"* being identified approximately 600m north of the Site. Farm House Colliery is identified approximately 1km north west of the Site. Needlewood Colliery is shown approximately 800m south west of the Site. Houndhill Colliery is shown, and noted to be disused, approximately 700m south east of the Site, approximately 150m to the south west of the former site of Victoria Colliery. Rose Hill Colliery is no longer shown. A number of earthworks are shown extending linearly north-south from approximately 150m west of the Site to approximately 400m south of the Site.

The 1938, 1948 and 1956 mapping (1:10,560 scale) indicates that the Site and surroundings are largely unchanged. However, the 1956 map indicates that Farm House Colliery and Needlewood Colliery are now disused. The clay pit to the north of the site is now described as an *"Old Clay Pit".*

The 1966 map (1:10,560 scale) shows that the Site has been subject to earthworks to form playing fields across the western half. Houndhill, Needlewood and Farm House Collieries are no longer shown. A mine is shown in the location of Rob Royd Colliery, but it is no longer named. A significant number of the sandstone quarries identified on the earliest maps are no longer shown, however, the earthworks first shown on the 1929 mapping are still shown extending to the south of the Site.

Mapping from 1973 (1:10,000 scale) shows no notable change to the Site. Rob Royd Colliery is still shown to the south of the Site, however, the earthworks extending to the south of the Site on previous maps are no longer shown. A disused shaft and disused pit are identified in the area of the former brick works and coal pit to the north of the Site.

Mapping from 1983 (1:1,250 scale) shows the currently existing structures to be present in the east of the Site. These are not shown on the 1982 1:10,000 mapping and, therefore, the construction of the existing buildings can be dated to 1982/1983. The 1982 mapping shows the area of the former brick works and clay pit to have been redeveloped.

The Groundsure Report identifies Keresford Hill Pit to have been present on site, however, this is not shown on any of the available historical maps. Kingston Pit is also shown in the Groundsure Report to have been present approximately 30m south east of the Site, again this not shown on any of the available historical maps.

3.2 Geology

The anticipated geology has been determined by reference to the Groundsure Report (Ref: WTM1-6786594, dated 9th June 2020), which includes geological mapping to 1:10,000 scale for artificial ground, superficial deposits and bedrock.

3.2.1 Artificial Ground

The artificial ground 1:10,000 scale map (Figure 1) from the Groundsure Report indicates that a significant proportion of the Site is expected to be underlain by Made Ground.

Figure 1: Excerpt from the Groundsure Report showing the expected Artificial Ground (1:10,000)

A significant area of Made Ground is indicated to be present beneath the playing fields in the western half of the Site. Given the significant mining legacy in the area, it is considered that this may be an area of tipped Colliery Spoil.

3.2.2 Superficial Geology

The Groundsure Report indicates that superficial deposits are unlikely to be present beneath the Site.

3.2.3 Bedrock

The Groundsure Report bedrock map (1:10,000 scale) indicates the site is underlain by the Pennine Middle

Coal Measures Formation, which typically comprises interbedded grey mudstone, siltstone, pale grey sandstone and commonly coal seams, with a bed of mudstone containing marine fossils at the base, and several such marine fossil-bearing mudstones in the upper half of the unit. A geological fault crosses the northern area of the Site trending from north east to south west and downthrowing to the south. The Barnsley Coal is indicated to subcrop beneath the north of the Site, to the north of the fault. The Barnsley Coal is shown to subcrop approximately 100m to the west of the Site, to the south of the fault. The Barnsley Rider Coal is shown to subcrop along the eastern site boundary, to the south of the fault.

An excerpt from the Groundsure Report of the bedrock map (1:10,000 scale) can be seen in Figure 2 below (grey hatching representing Pennine Middle Coal Measures Formation).

Figure 2: Excerpt from the Groundsure Report of the expected Bedrock showing mudstone in grey and sandstone in green (1:10,000)

3.3 Coal Seams Below Site

The BGS maps indicate that the Site is underlain by the Pennine Middle Coal Measures Formation, which typically comprises interbedded grey mudstone, siltstone, pale grey sandstone and commonly coal seams, with a bed of mudstone containing marine fossils at the base, and several such marine fossil-bearing mudstones in the upper half of the unit.

The BGS online Geoindex viewer was accessed to view historic boreholes in the vicinity of the site. The historic boreholes available are presented in Table 1.

Table 1: BGS Historic Boreholes

BH Ref	Date	Distance from Site	Depth (m)	Geology	Seam Depth(s)
SE30NW19	23/02/1971	40m north	37.2m	Significant thickness of weathered deposits above competent rock at 8.2m bgl. Alternating mudstone, siltstone and coal seams to depth. **No voids noted.**	Coal seam at 8.2m bgl with thickness of 0.51m, likely to be the Barnsley Coal. Coal seam at 25.9m bgl with thickness of 0.25m, possibly Dunsil Coal. Coal seam at 26.2m bgl with thickness of 0.15m, possibly Dunsil Coal. Coal seam at 27.7m bgl with thickness of 0.33m, possibly Dunsil Coal. Coal seam at 29.6m bgl with thickness of 0.15m, possibly Dunsil Coal. Coal seam at 35.7m bgl with thickness of 0.18m.
SE30NW212	08/08/1971	275m north east	12.8m	Thin weathered deposits underlain by competent rock at 1.1m bgl. Alternating mudstone, siltstone and coal seams to depth. **No voids noted.**	Coal seam at 9.0m bgl with thickness of 2.74m, likely to be Barnsley Coal.
SE30NW182	12/03/1971	80m west	11.6m	Thin weathered deposits underlain by competent rock at 1.8m bgl. **Broken and weathered mudstone recorded from 3.6m bgl to 7.0m bgl.** **Old workings recorded from 7.0m bgl to 9.0m bgl.** **Broken and weathered mudstone recorded from 9.0m bgl to 11.6m bgl (base of hole).**	Old workings at 7.0m bgl with a thickness of 2.0m, likely to be Barnsley Coal.

Copies of the pertinent historical borehole information and a location plan are included in Appendix G.

Seams that are likely to be present beneath the Site are summarised in Table 2.

Table 2: Possible Coal Seams Beneath the Site

Coal Seam	Depth relative to previous seam	Approximate depth below site (m bgl)	Seam Thickness	Comment
Barnsley Rider Coal	-	0m	0.16m – 0.61m	Not shown to be worked in the vicinity of the Site
Barnsley Coal	40m	0m – 40m	2.29m – 3.1m	Thought to be worked beneath the Site and shown to be worked to the west of the Site in BGS borehole logs.
Dunsil Coal	22m	22m – 62m	0.46m – 0.81m	Possibly shown as a number of thin seams in BGS borehole to the north of the Site.
Gawber Coal	24m	46m – 86m	0.72m	-
Swallow Wood Coal	22m	68m – 108m	0.3m – 1.15m	-
Top Haigh Moor Coal	37m	105m – 145m	0.69m - 1.19m	-
Low Haigh Moor Coal	12m	117m – 157m	0.43m – 1.02m	-
Lidget Coal	42m	159m – 199m	0.3m – 1.52m	The deepest Pennine Middle Coal Measures seam thought to be present beneath the Site.

It should be noted that the coal seams are generalised to represent the entire Barnsley area, as such all seams may not be present across site, depths and thicknesses may also vary substantially.

The Barnsley Rider Coal is shown to subcrop beneath the eastern site boundary and, given the regional dip direction to the east, is not considered to be present beneath the vast majority of the Site, including the areas proposed for development.

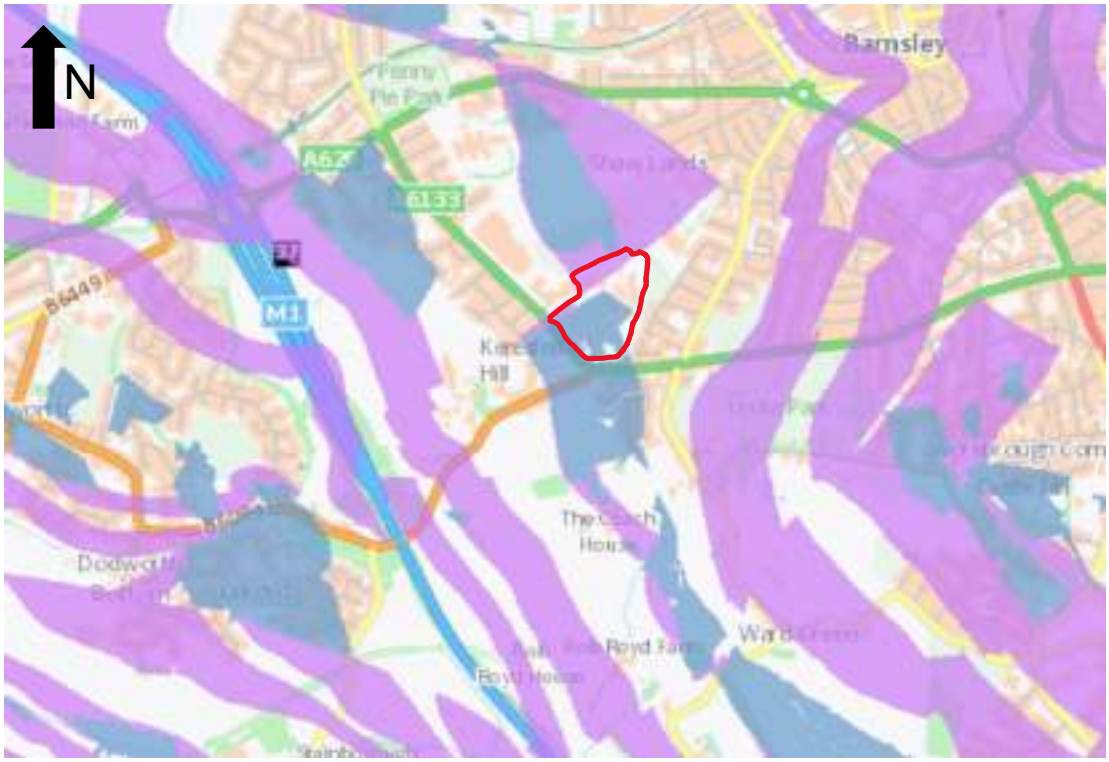
The height in which voids may migrate upwards is typically calculated using the T10 criteria based on 10 times the worked seam thickness in rock. The surface could clearly be impacted by void collapse in the Barnsley Coal given the shallow depth of the seam and the potential thickness of the seam. However, all other seams are at a depth where a thickness of rock greater than 10 times the potential worked seam thickness is present above the seam.

Seams of the Pennine Lower Coal Measures are thought to be present at depths greater than 140m , including the Flockton Thick, Fenton, Parkgate, Thorncliffe and Silkstone coal seams. These deeper seams are also thought to have been worked in the vicinity of the Site, but any workings are unlikely to impact the proposed development due to their depth.

3.4 Coal Authority Interactive Map Viewer

The online Coal Authority Interactive Map Viewer indicates that past shallow workings are present below the western half of the Site. There are further areas of probable shallow workings identified in the western half of the site, as well as in the north east corner of the Site. These are considered to be associated with potential workings in the Barnsley Coal.

Figure 3: Known and Probable Shallow Workings (Probable workings in purple and known workings in blue) (Coal Authority Interactive Map Viewer)



The Development High Risk Area generally corresponds to the areas of known and probable shallow workings.

3.5 Coal Authority Mining Report

The entire site lies within an area where a Coal Authority Mining Report is required for new developments with further portions of the site defined as 'Development High Risk' by The Coal Authority. As part of this study, a Consultants Coal Mining Report was therefore procured.

A summary of the report is presented below, and a copy included within Appendix C:

- Beneath the property underground mining is recorded. An unnamed colliery mined the Barnsley Coal seam at a depth of between 10m and 21m with dipping rate 5.0° to 7.4° in an easterly direction. The seam had an extraction thickness of 274cm and was last worked in 1925;
- Dodworth Colliery, a Colliery approximately 2km west of the Site, and Rob Royd Colliery are identified to have worked beneath the Site;
- Dodworth Colliery worked the Flockton Thick, Top Fenton, Parkgate and Middleton Main seams at depths of between 140m and 253m below ground level in the area. Workings in the Top Fenton and Parkgate are identified beneath the Site itself at approximately 200m below ground level. The seams are identified to dip to the east and north east at an angle of between 3.6° and 7.2°. The seams vary in extraction thickness between 66cm and 150cm. The last workings at Dodworth Colliery beneath the Site date to 1956, and the last workings at Dodworth Colliery in the area date to 1961;
- Rob Royd Colliery worked the Silkstone Coal seam beneath the Site at depths of between 278m and 293m below ground level. The seam is identified to dip to the east and north east at an angle of between 4.2° and 6.7°. The seam had an extraction thickness of 167cm and was last worked in 1910;

- The Coal Authority determine the property to be in an area with probable unrecorded mine workings;
- The Coal Authority recorded no spine roadway at shallow depth;
- 4No. mine shafts are identified in the report to be in the vicinity of the report. One of these, Coal Authority reference 433405-008, is shown to be on the Site itself, within the playing the fields in the west of the Site. A Mine Entry Data Sheet purchased for this shaft, included in Appendix D, confirmed that the Coal Authority do not hold any information relating to shaft or the treatment of the shaft;
- The following mine abandonment plan catalogue numbers intersect with some, or all, of the site boundary: CT86, 917, 780, NE565, 12461, SY209, NE584, NE1034, SY107. The report also notes that they hold further plans which could affect the Site;
- One outcrop within the site boundary is noted, this is the Barnsley Coal seam and it is determined as workable. The bearing of this outcrop is 330°;
- The Coal Authority have recorded one fault within the site boundary and surrounding area;
- The Coal Authority records that unlicensed opencast working has occurred approximately 400m to the west of the Site;
- The Coal Authority have recorded no Managed Tips within 500m of the site boundary;
- The Coal Authority record that the Site has been subject to previous remediation. A Surface Hazard Incident Report was subsequently obtained and provides some detail of the remediation work undertaken. An area of collapse, at the northern end of the playing fields in the west of the site, was treated by opening out the collapse to 2.2m by 1.5m and excavating to a depth of 4.5m below the surface to the base of the workings. 3No roadways could be seen to run off from the base of the excavation in a North-east, South-east and South-westerly direction. 12 Tonnes of clean 75 to 150mm limestone was placed and compacted in layers not exceeding 300mm to within 1.5m of the surface, whereupon a layer of geo-textile terram was placed across the stone and around the exposed sides. The as-dug sandy clay spoil was then placed and compacted in layers not exceeding 150mm thickness to the underside of the existing turf. Finally, the existing topsoil was used to reinstate the surface to the pre-existing field profile. The affected work area was tidied, and new grass seed placed. Full details and the location of the works are detailed in the Surface Hazard Incident Report, included in Appendix E of this report;
- The Coal Authority has not received a damage notice or claim for the subject property, or any, property within 50m of the site 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 preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991;
- The Coal Authority have recorded no mine gas within 500m of the site boundary;
- The Coal Authority have recorded no mine water treatment schemes within 500m of the site boundary;
- The Coal Authority have no record of future underground mining;
- The Coal Authority have not granted any coal mining license within 200m of the enquiry boundary;
- The Coal Authority have no record of court orders;
- No notices have been given, under section 46 of the Coal Mining Subsidence Ace 1991, stating that the land is at risk of subsidence;
- The property is in an area where a notice to withdraw support was given in 1950;
- 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;
- The property is not in an area where a relevant notice has been published under the Coal Industry Act

1975/Coal Industry Act 1994.

3.6 Coal Authority Mine Abandonment Plans

In order to determine the relevance of the above noted Abandonment Plans, The Coal Authority's Mining Consultant and Information Manager for the Barnsley region was contacted (4th September 2020). A large number of abandonment plans are available for the property; however, the majority relate to deep workings. 3No. abandonment plans relate to shallow workings within the Barnsley Coal, and these have been obtained as part of this assessment and are included in Appendix F.

Abandonment Plan 9746 relates to workings in the Barnsley Coal from Houndhill Colliery. This plan shows workings beneath the western area of the Site. These workings date to 1925 and are shown to be at approximately 128m AOD, approximately 22m below ground level.

Abandonment Plan 9116 also relates to workings in the Barnsley Coal from Houndhill Colliery; specifically, No. 2 Pit. This plan essentially provides the same information as shown on 9746.

Abandonment Plan 917 relates to workings in the Barnsley Coal from Keresforth Colliery. This plan shows a "pit" in close proximity to the shaft indicated to be present on site by the Coal Authority (Shaft Ref: 433405-008). A small area of workings is indicated to be present in close proximity to this shaft. Larger scale workings and additional pits are shown to the west and south of the Site. These roughly correlate with the area of worked ground identified to the west and south of the Site in the historical mapping and the indicated line of the Barnsley Coal subcrop. It may be that Keresforth Colliery was formerly present in this area, but was not in existence at the time that the available historical maps were produced. Keresforth Colliery may relate to Keresford Hill Pit identified in the Groundsure Report.

3.7 Previous Ground Investigation

No previous ground investigation data is available for the Site.

3.8 Summary

Parts of the Site are in a Coal Authority High Risk Development Area, and given that the historical borehole records available indicate that the Barnsley Coal is potentially present at shallow depths beneath the Site, the potential presence of **shallow mine workings** and a **mine shaft** is regarded as **probable**. This assessment aligns with the Coal Authority Consultants Coal Mining Report which notes the site to be located in an area with known and probable shallow mine workings.

Considering all information reviewed in undertaking this study, the risk to the development associated with the mining legacy is currently assessed as **high**, and further works are recommended in order to reduce the risk to low.

4. Identification and Assessment of Site-Specific Coal Mining Risks

Table 3 below summarises the potential risks associated with coal mining legacy for the proposed development, as identified from the listed sources of information.

Table 3: Summary of Potential Risks Associated with Coal Mining Legacy

Coal Mining Issue	Yes	No	Risk Assessment	Risk Level
Recorded deep underground coal mining (>30m depth)	X		Coal Authority Report indicates historic mining in seams from depths of approximately 200m below ground level beneath site, last worked 1956.	Low
Recorded shallow underground coal mining (< 30m depth)	X		The Coal Authority Report and Coal Authority Interactive Map Viewer indicate shallow workings beneath the west of the Site.	High
Unrecorded shallow underground coal mining (< 30m depth)	X		Both the Coal Authority Report and Coal Authority Interactive Map Viewer indicate unrecorded shallow workings as probable. Old workings noted at 7m bgl 80m west of site in BGS borehole SE30NW182. Barnsley Coal Seam subcrops below site and is known to have been worked locally.	High
Recorded surface mining (i.e. recorded opencast working)		X	None identified.	-
Unrecorded surface mining (i.e. unrecorded opencast working)	X		Shallow rock, subcrop of the Barnsley Coal and opencast workings in the vicinity indicate potentially economically viable, thus can't be discounted.	Moderate
Mine entries (shafts, adits)	X		Shaft 433405-008 indicated to be present beneath the western half of the Site. Significant numbers of shafts and adits shown in the vicinity of the Site and the potential for unrecorded mine entries cannot be discounted. No records of treatment of Shaft 433405-008 available.	High
Coal mining geology (fissures)	X		A geological fault crosses the northern area of the Site trending from north east to south west and downthrowing to the south. However, no structures are proposed in this area of the Site.	Low
Record of past mine gas emissions or	X		No record of past mine gas, however, if shallow workings	Moderate

Coal Mining Issue	Yes	No	Risk Assessment	Risk Level
potential			are present then potential for mine gas.	
Spontaneous combustion	X		The Barnsley Coal is identified to have a history of spontaneous combustion.	High
Recorded coal mining surface hazard (hazards relating to mine entries and shallow workings)	X		An area of surface collapse in the playing fields in the west of the site was remediated in 2014. It is anticipated that significant shallow workings could be present beneath the western area of the site.	High

5. Mitigation Strategy

5.1 Further Works

This Coal Mining Risk Assessment has identified the following moderate to high coal mining related risks to the proposed development:

- Recorded and Unrecorded Shallow Mine Workings below the Site (ground collapse / settlement risk/ crown hole development) associated with potential workings in the Barnsley Coal Seam;
- Unrecorded Surface Mining (ground collapse / settlement risk/ crown hole development);
- A mine entry (ground collapse / settlement risk/ crown hole development) is identified to be present in the west of the Site. The potential presence of unrecorded mine entries cannot be discounted.
- Potential for mine gas emissions associated with any historical mine workings; and,
- Potential for spontaneous combustion within the Barnsley Coal.

In order to mitigate against the risk of shallow workings, prior to development of the site, a targeted investigation (intrusive ground investigation) should be undertaken to confirm the mining position at the Site. This should be based on a conceptual mining (ground) model to be developed using mapping information currently available to create cross-sections in order to identify areas of site at risk of shallow workings i.e. less than 30m bgl, and based on potential seam thicknesses.

The intrusive ground investigation should include rotary drilling to nominally 30m below ground level to confirm the presence/absence of coal seams below site and evidence of any workings in the form of mine waste or voids. Ground gas monitoring standpipes should be installed to assess the potential risk due to ground gas.

The intrusive investigation should also target the indicated location of mine shaft 433405-008 in the west of the Site. The condition of the shaft and any associated backfill is likely to determine the extent of treatment required given that no structures are proposed in this area of the Site.

The Risk Assessment and Method Statement prepared for the ground investigation should address the potential risk of hazardous mine gas emissions and spontaneous combustion. The design of the proposed development will also consider the potential risks to end users as a result of mine gas and spontaneous combustion.

By completing a detailed ground model first this will allow the ground investigation design to be optimised for the proposed site layout and as such reduce the scope of intrusive investigation required by assessing the likely depth and thickness of seams below site in relation to the T10 criteria as per CIRIA C758D.

It should be noted that any boreholes sunk in order to investigate whether shallow workings exist below the Site will require a license from the Coal Authority granting permission to disturb Coal Authority assets.

Following completion of the ground investigation, risk levels can be re-assessed and, if required, remedial measures appropriate to the development implemented. Dependant on the extents of workings this would most likely take the form of amending development layouts to avoid structures in areas of mining risk where possible, grouting up any former workings identified, utilising alternative foundation solutions, or a combination of these measures.

5.2 Coal Authority Permission

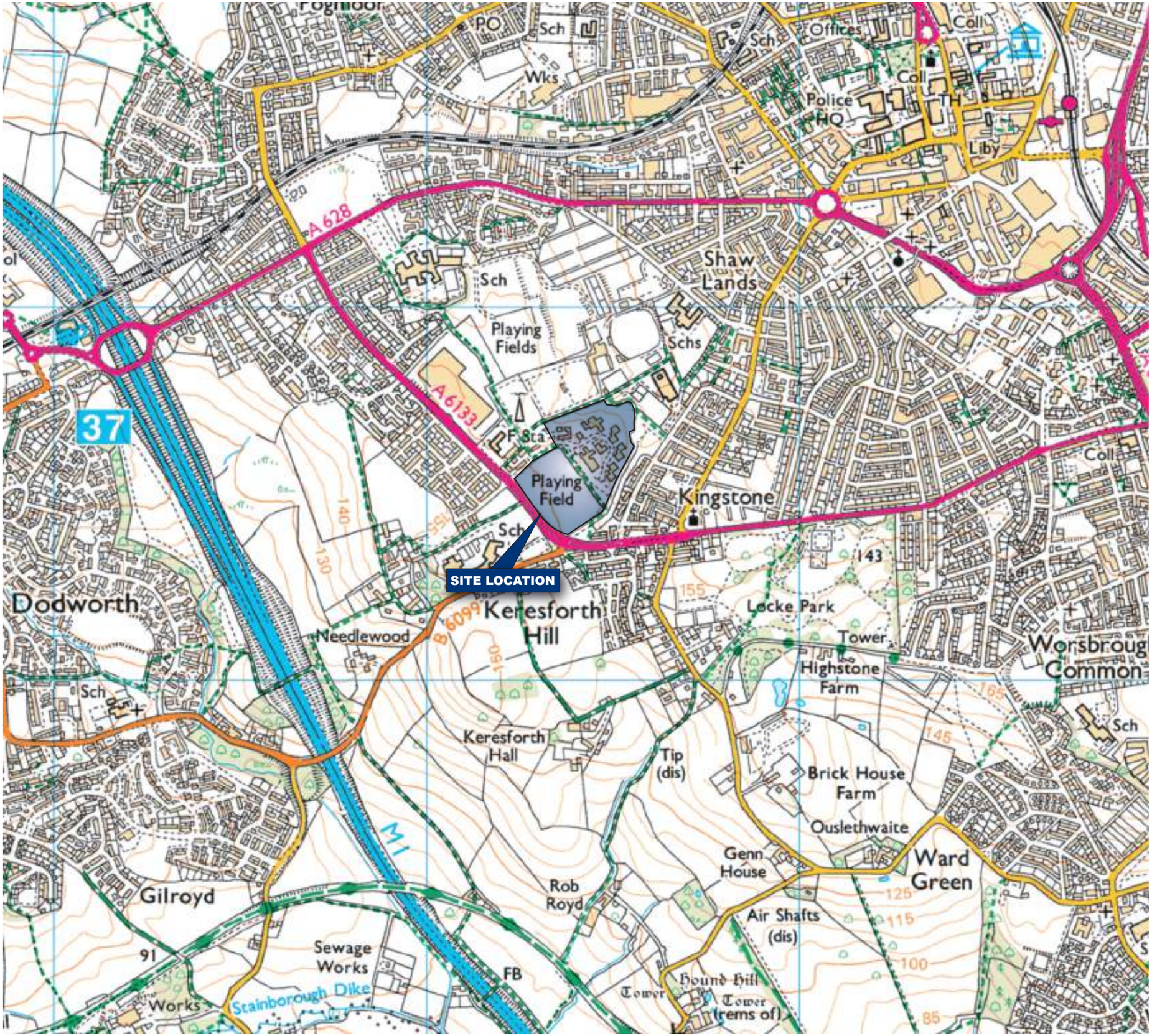
It should be noted that before a ground investigation is undertaken, prior written permission from The Coal Authority is required for intrusive activities which will disturb or enter any coal seams, coal mine workings or coal mine entries (shafts and adits). An additional permit would then be required prior to commencing

any proposed treatment works. Further information on The Coal Authority's permissions process can be found at: www.coal.gov.uk.

APPENDICES

A. Drawings

- Site Location Plan
- Site Layout
- Proposed Development Layout



Project Details	WIE17125-103: Keresforth Academy
Figure Title	Figure A1: Site Location Plan
Figure Ref	WIE17125-103_GR_PRA_A1A
Date	June 2020
File Location	\\s-lncs\wiel\projects\wie17125\103\graphics\pra\issued figures

Site Boundary

N

Project Details	WIE17125-103: Keresforth Academy
Figure Title	Figure A2: Site Plan
Figure Ref	WIE17125-103_GR_PRA_A2A
Date	June 2020
File Location	\\s-lncs\wiel\projects\wie17125\103\graphics\pra\issued figures

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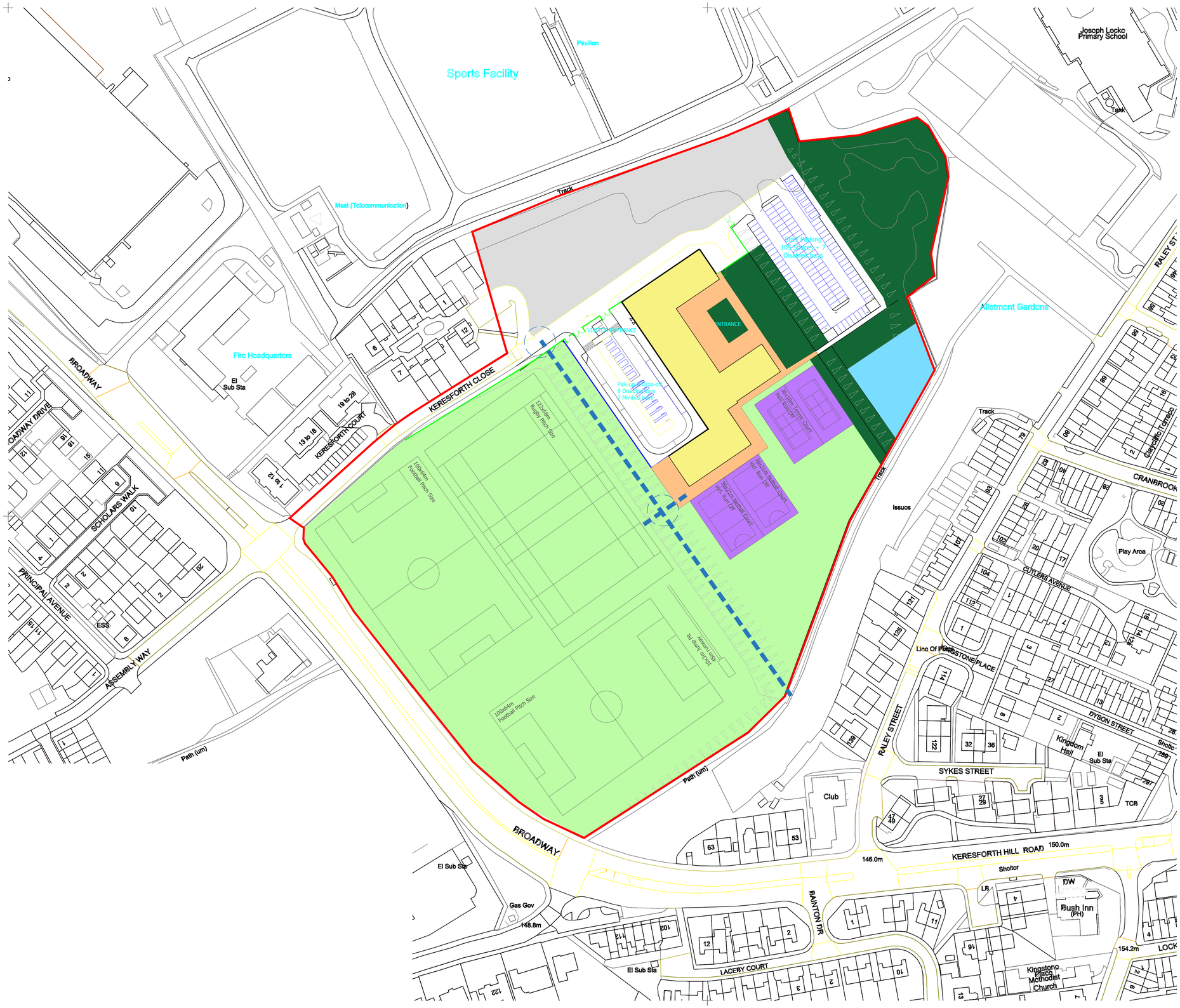


SITE AREA: 17.7 ACRES

KEY

- Soft Outdoor PE
  Area:35,100m^2
  BB103 Area: 37,500m^2
- Hard Outdoor PE
  Area: 2800m^2
  BB103: Area 1750m^2
- Soft Social
  Area: 2400m^2
  BB103 Area: 2400m^2
- Hard Social
  Area: 1660m^2
  BB103 Area: 1100m^2
- Habitat
  Area: 460m^2
  BB103 Area: 450m^2
- Float
  Area
  BB103 Area: 5300m^2
- School Building
  Area: 3280m^2
- Area to be allocated
  Area: 6150m^2

Revision:	Date:	Drawn:	Checked:

Suitability: S2 — Information

Proposed Outline Site Plan

Location:
Keresforth Close, Broadway
Barnsley
S70 6RA

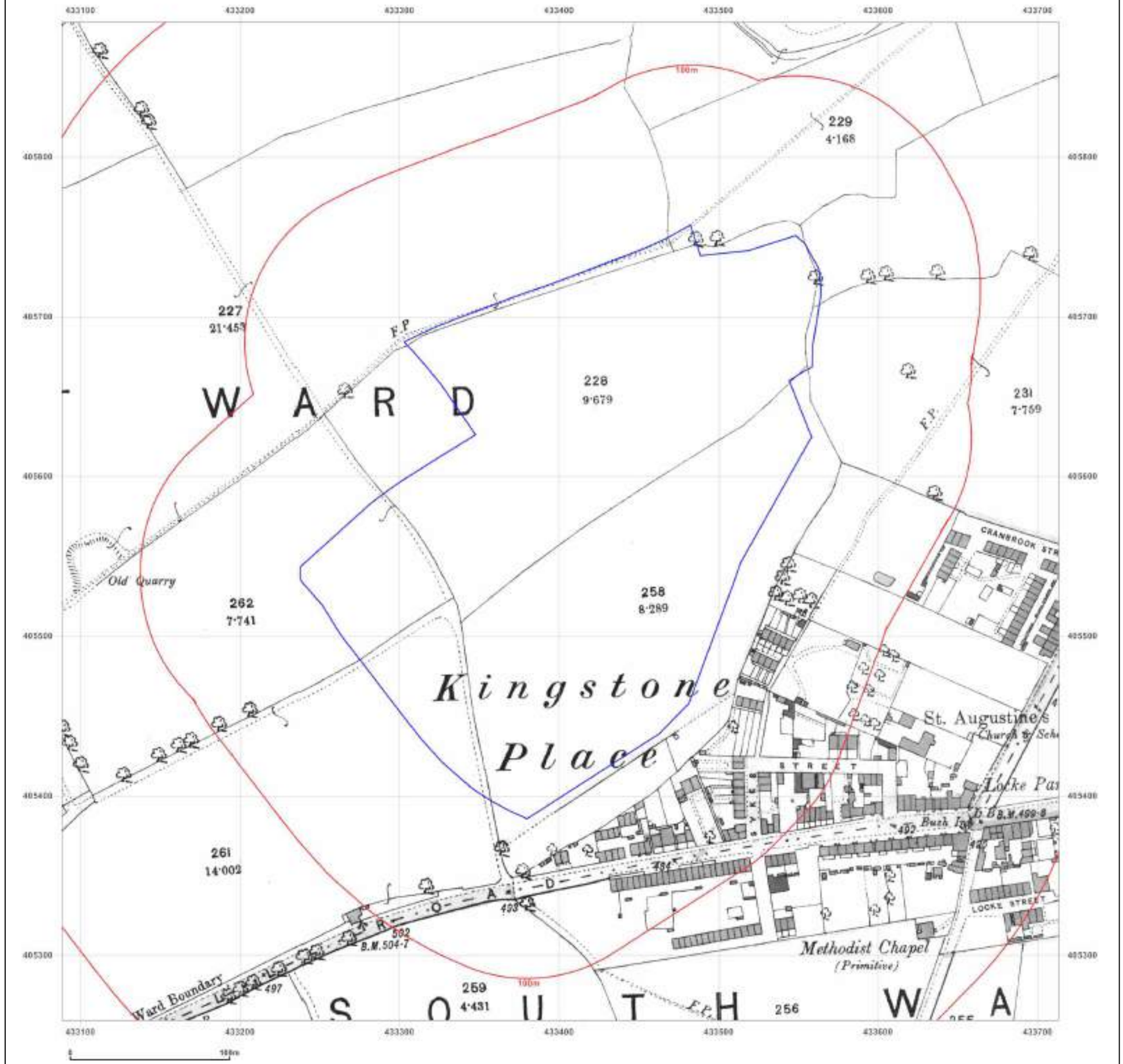
Client:
Turner & Townsend / DfE

UPRN	Originator	Zone	Level	Type	Role	Number	Revision
TRNTY	WBA	EX	ZZ	DR	A	EX-001	P2

Date: 08/04/2020 Drawn: SML Checked: MS Scale: 1:500 Int Job No: 3766_015
CAD REF:

WATSON BATTY ARCHITECTS
Shires House, Shires Road
Guiseley, Leeds LS20 8EU
Leeds | Loughborough
T: 01943 876 665
E: enquiries@watsonbatty.com
W: www.watsonbatty.com
FUTURE BUILT

B. Groundsure Report (Ref: WTM1-6786594, dated 9th June 2020)



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Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: County Series

Map date: **1893**

Scale: 1:2,500

Printed at: 1:2,500

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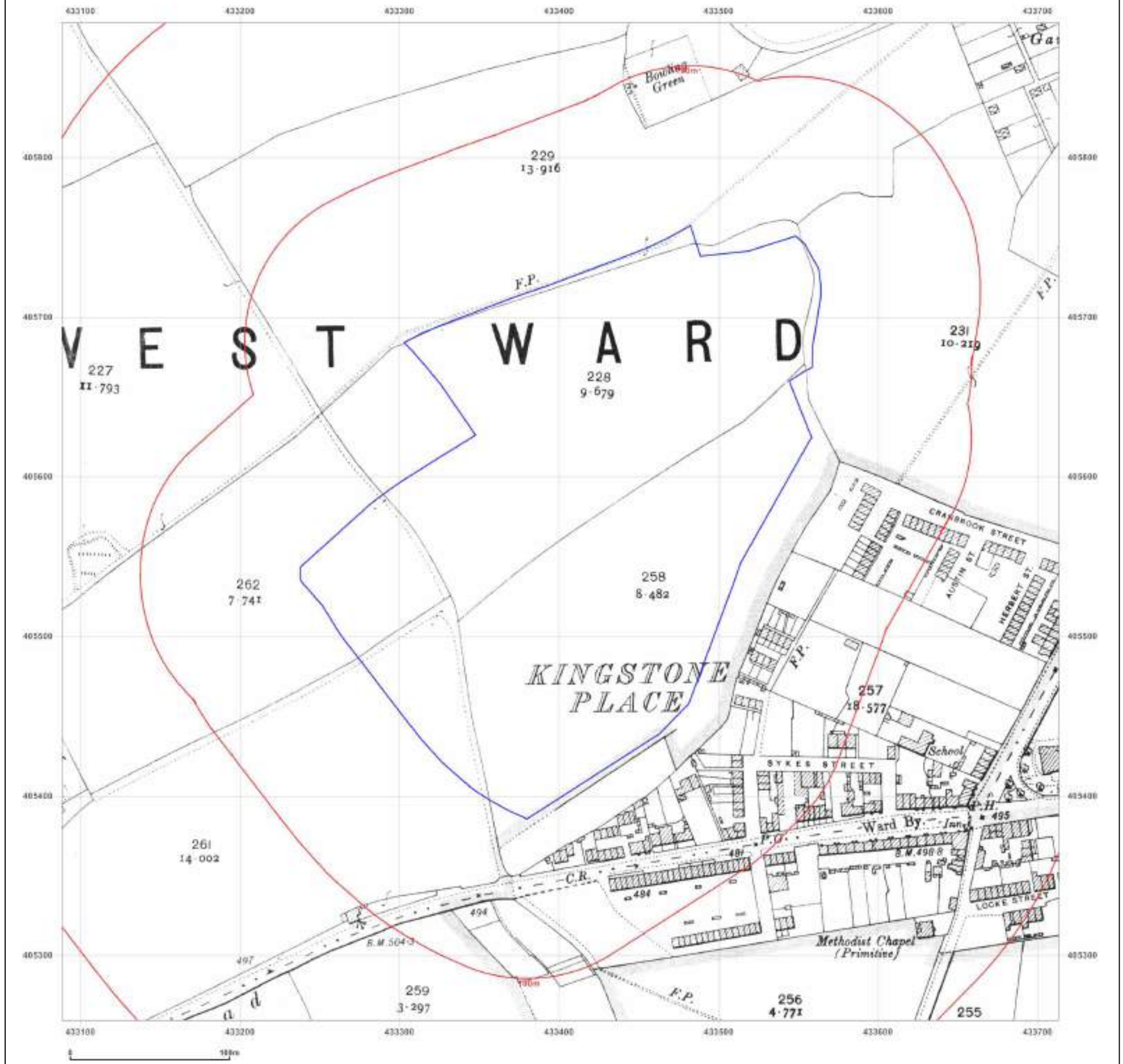
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: County Series
Map date: **1906**
Scale: 1:2,500
Printed at: 1:2,500

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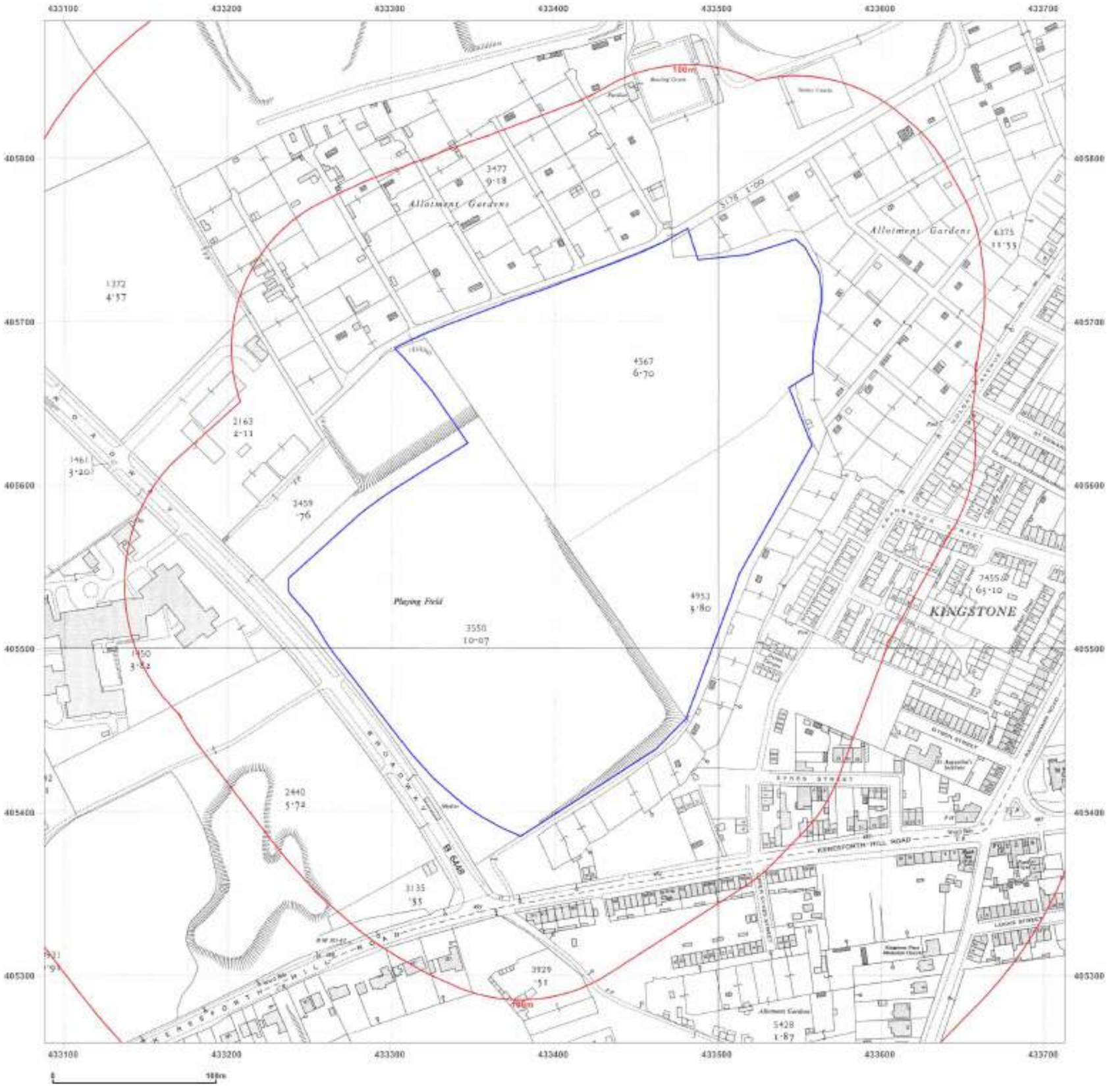

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1959**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1959
Revised 1959
Edition 1961
Copyright 1961
Levelled 1930

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Production date: 09 June 2020

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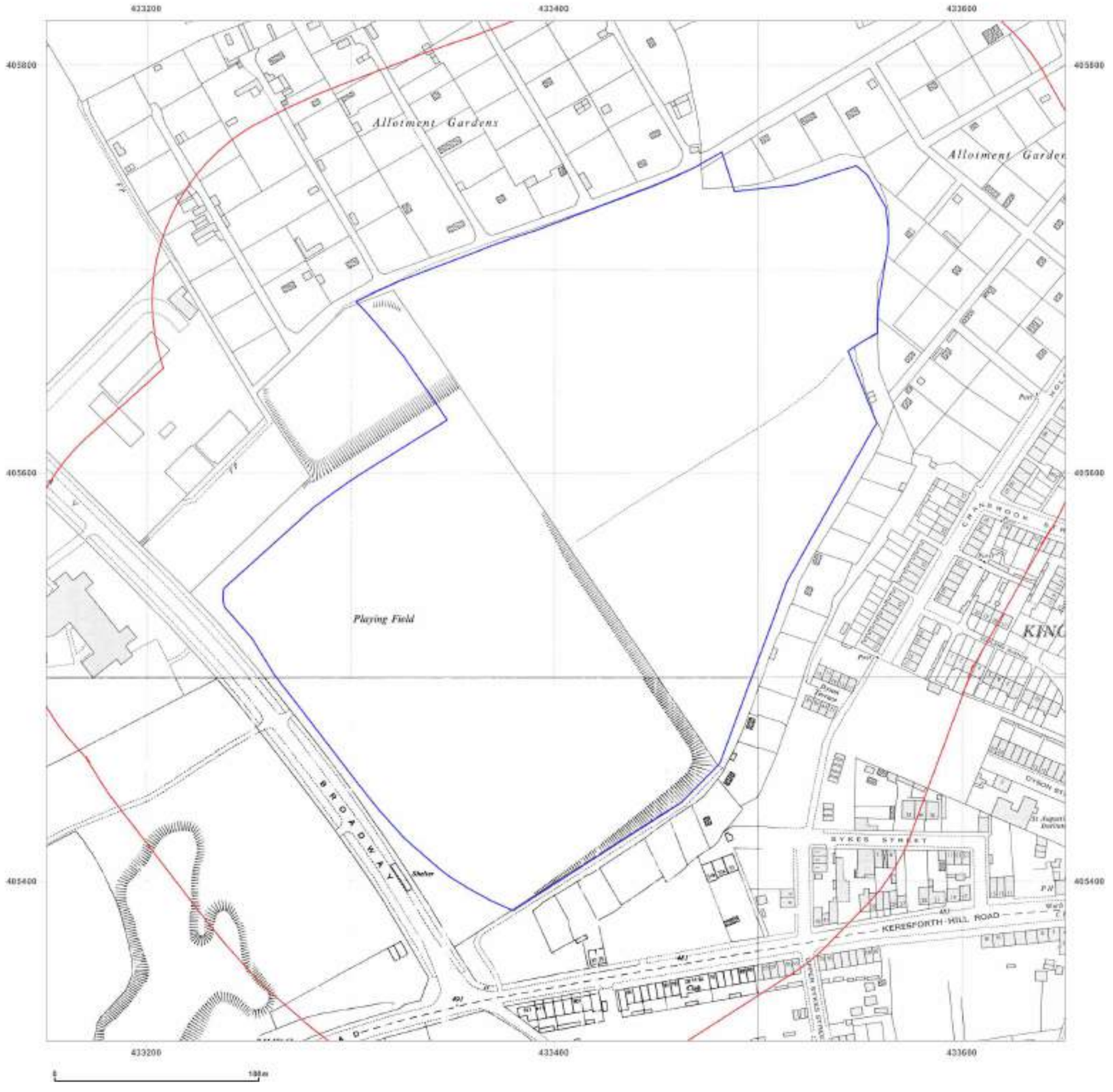

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1960**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1959 Revised 1958 Edition N/A Copyright 1960 Levelled 1930	Surveyed 1959 Revised 1959 Edition N/A Copyright 1960 Levelled 1930
Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	Surveyed 1959 Revised 1959 Edition N/A Copyright 1960 Levelled 1930

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Production date: 09 June 2020

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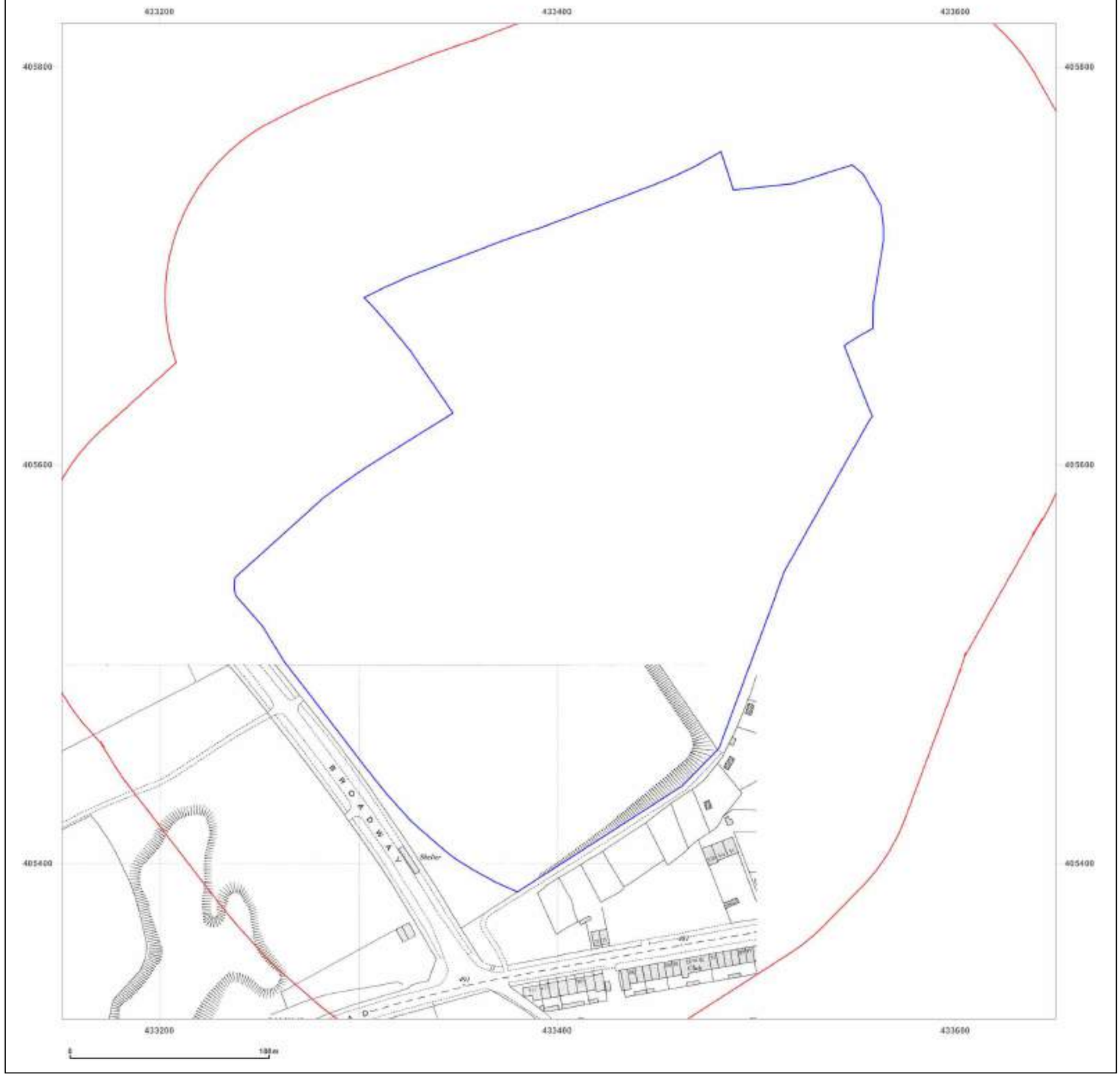

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Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1960**

Scale: 1:1,250

Printed at: 1:2,000

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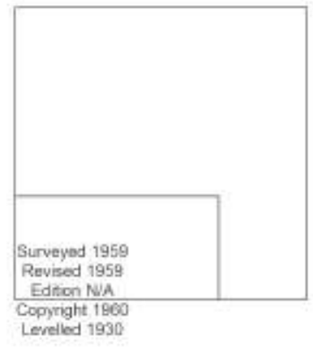

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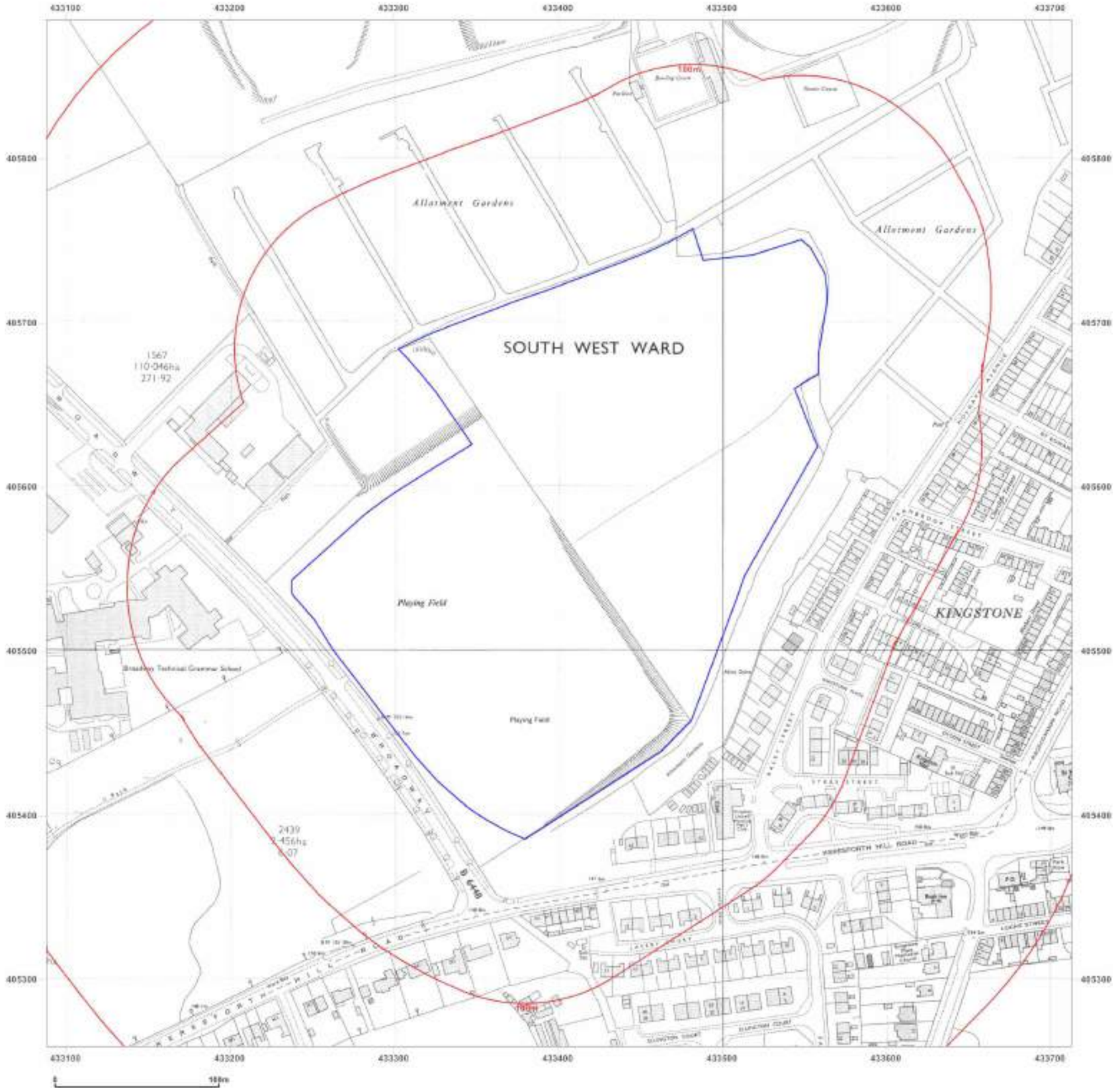

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1969**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1959
Revised 1969
Edition N/A
Copyright 1971
Levelled 1963

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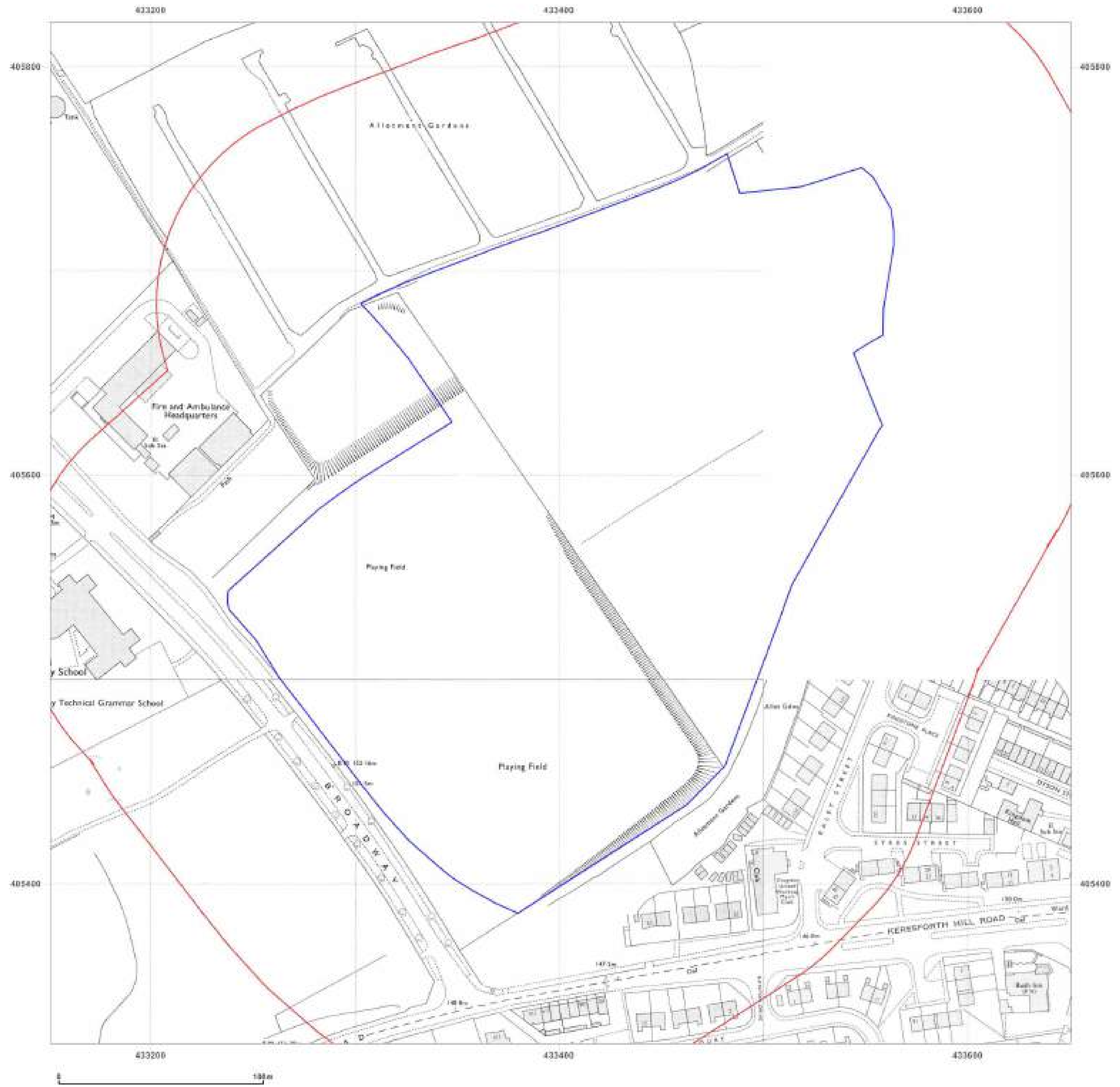

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1970-1974**

Scale: 1:1,250

Printed at: 1:2,000

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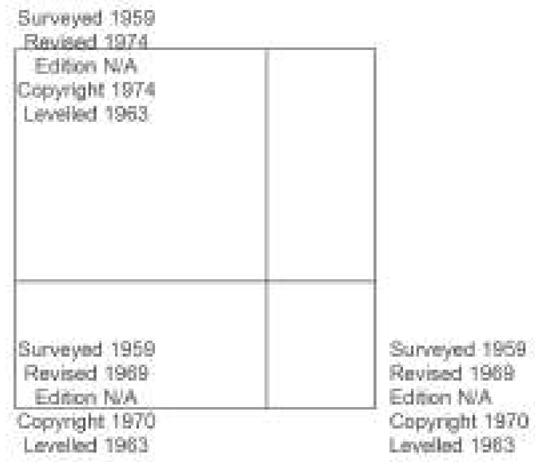

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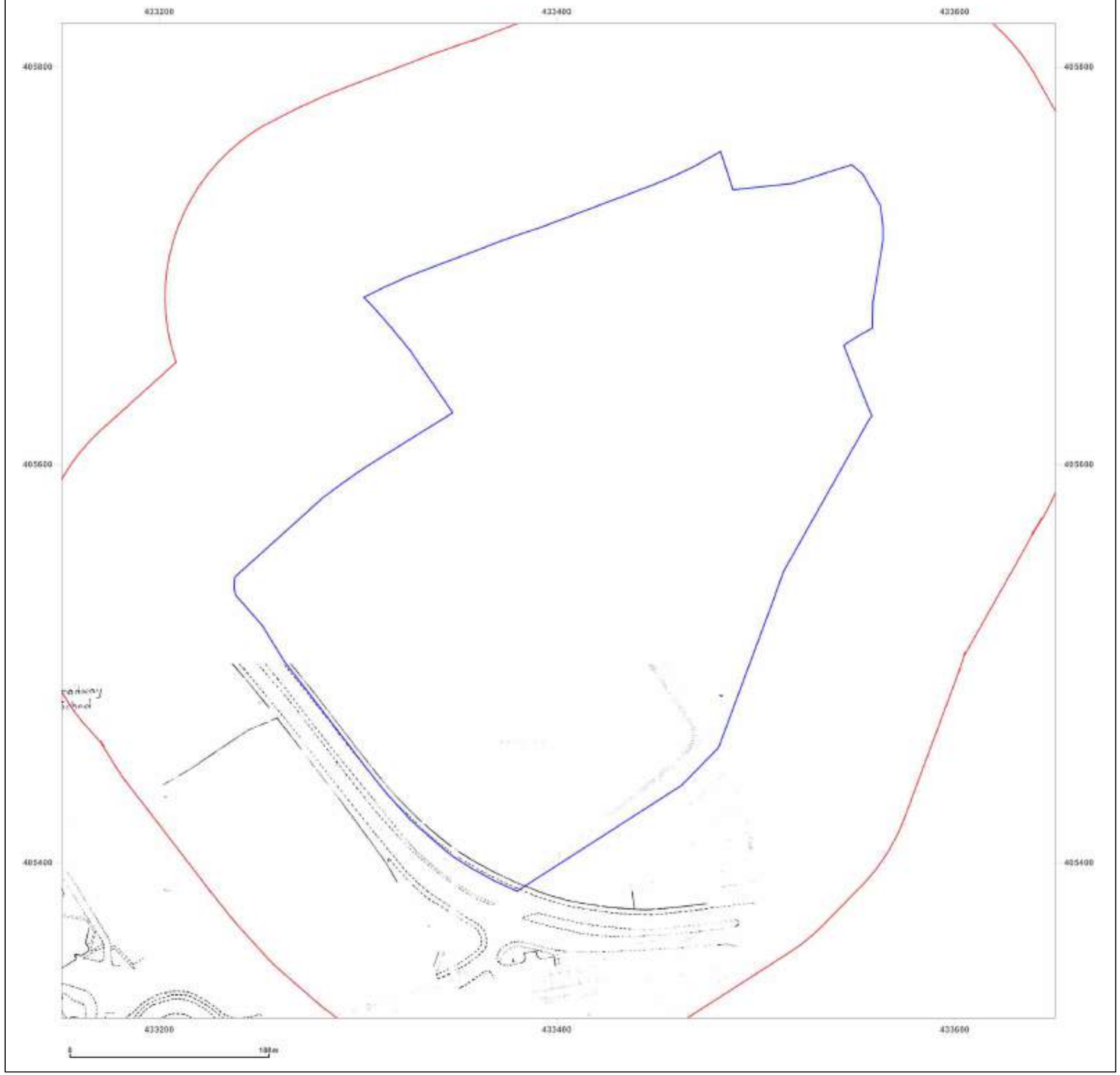

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid
Map date: **1974**
Scale: 1:1,250
Printed at: 1:2,000

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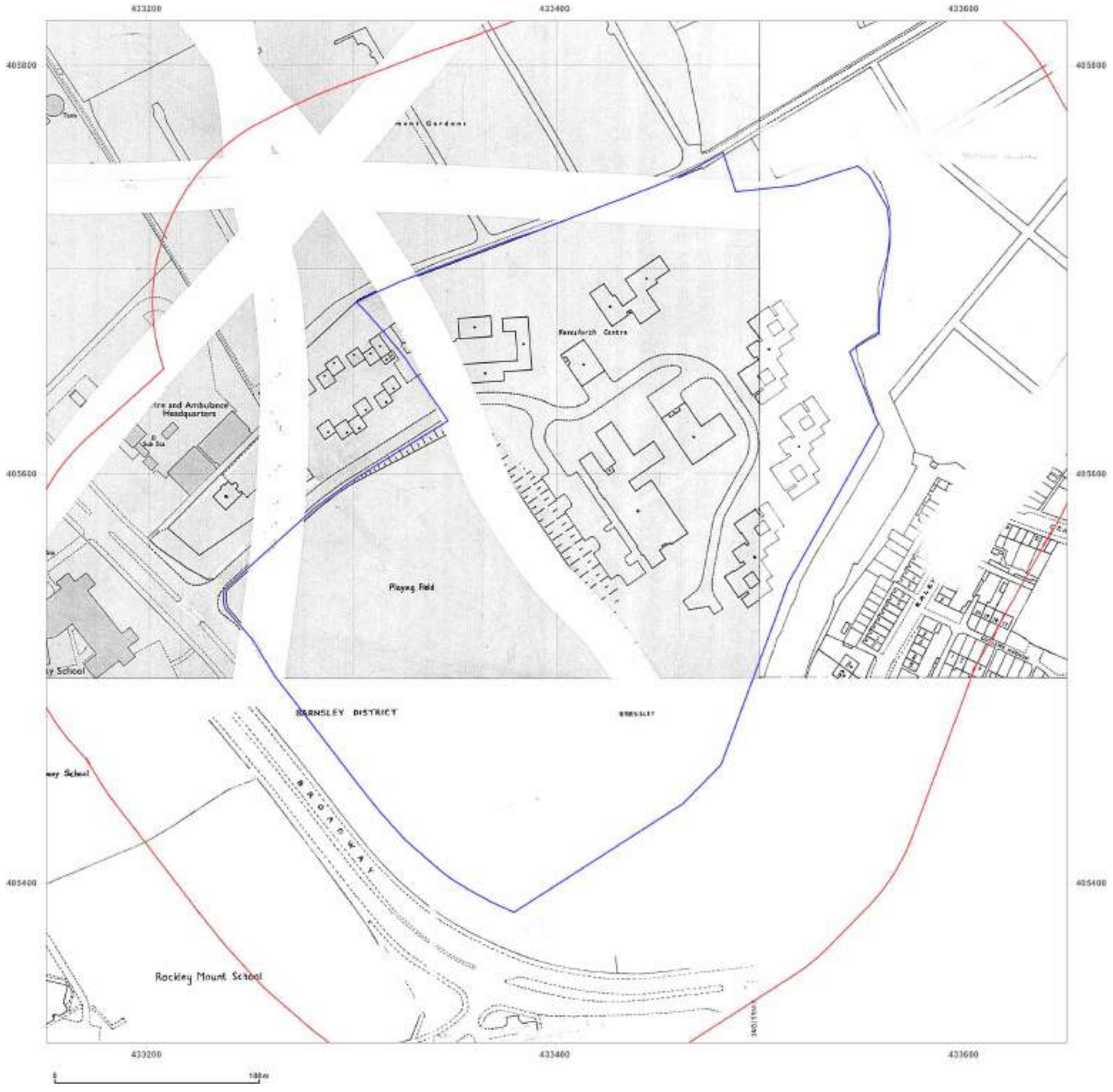

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid
Map date: **1978-1983**
Scale: 1:1,250
Printed at: 1:2,000

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Surveyed N/A Revised N/A Edition N/A Copyright 1963 Levelled N/A	Surveyed 1963 Revised 1983 Edition N/A Copyright 1983 Levelled 1963
Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	

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Production date: 09 June 2020

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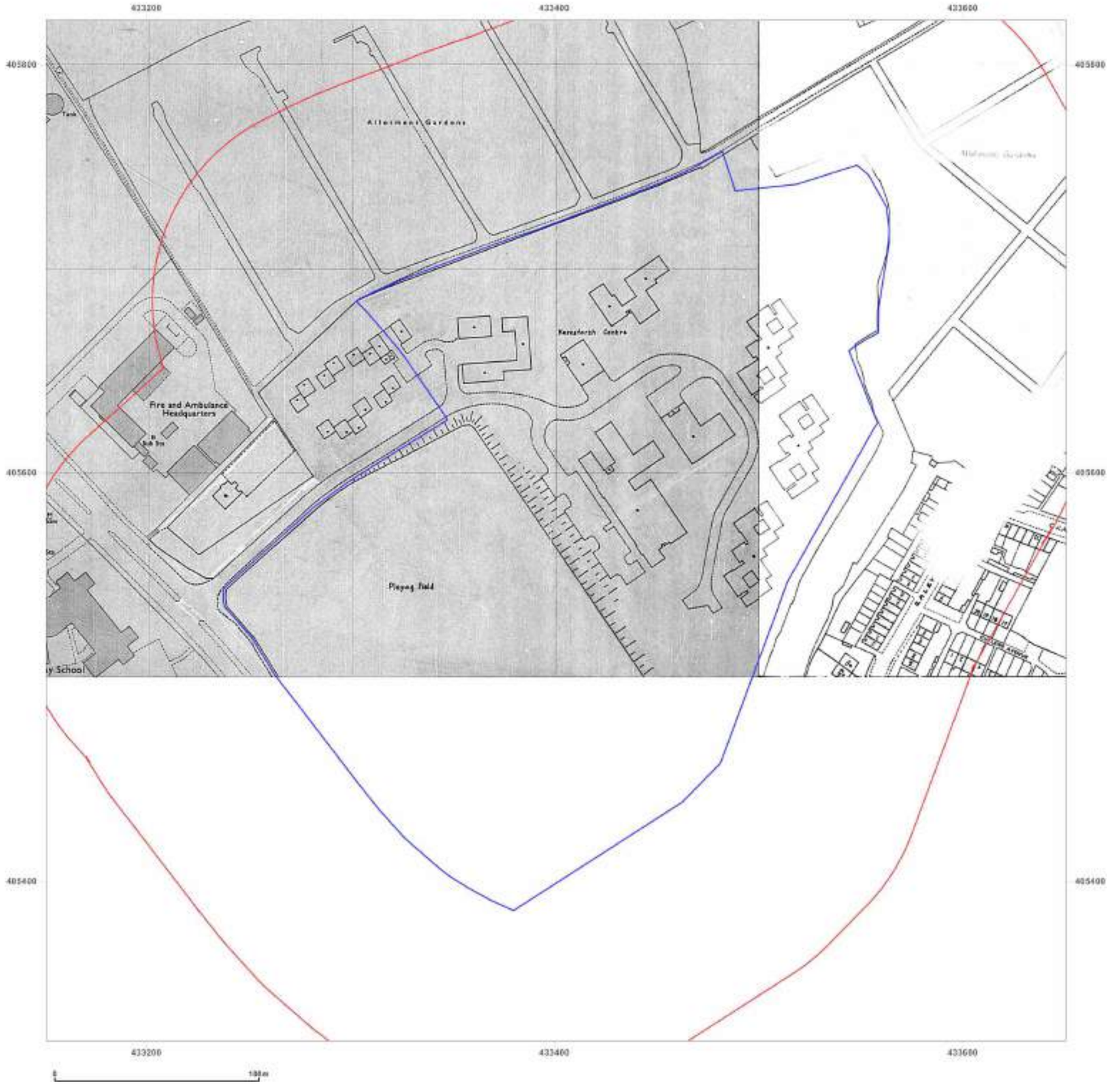

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1983**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1963
Revised 1983
Edition N/A
Copyright 1963
Levelled 1963

Surveyed 1963
Revised 1983
Edition N/A
Copyright 1963
Levelled 1963

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Production date: 09 June 2020

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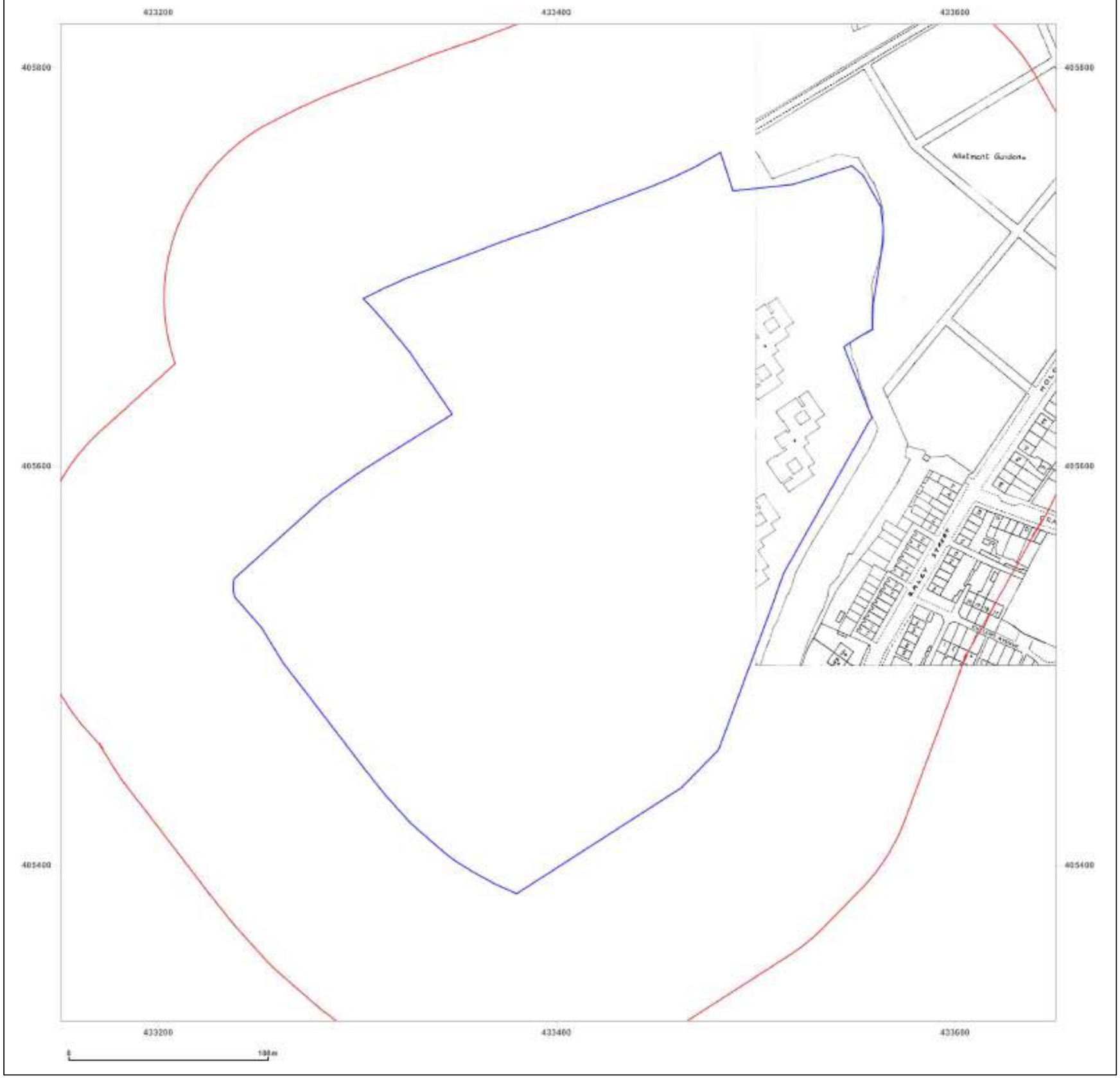

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid
Map date: **1983**
Scale: 1:1,250
Printed at: 1:2,000

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Production date: 09 June 2020

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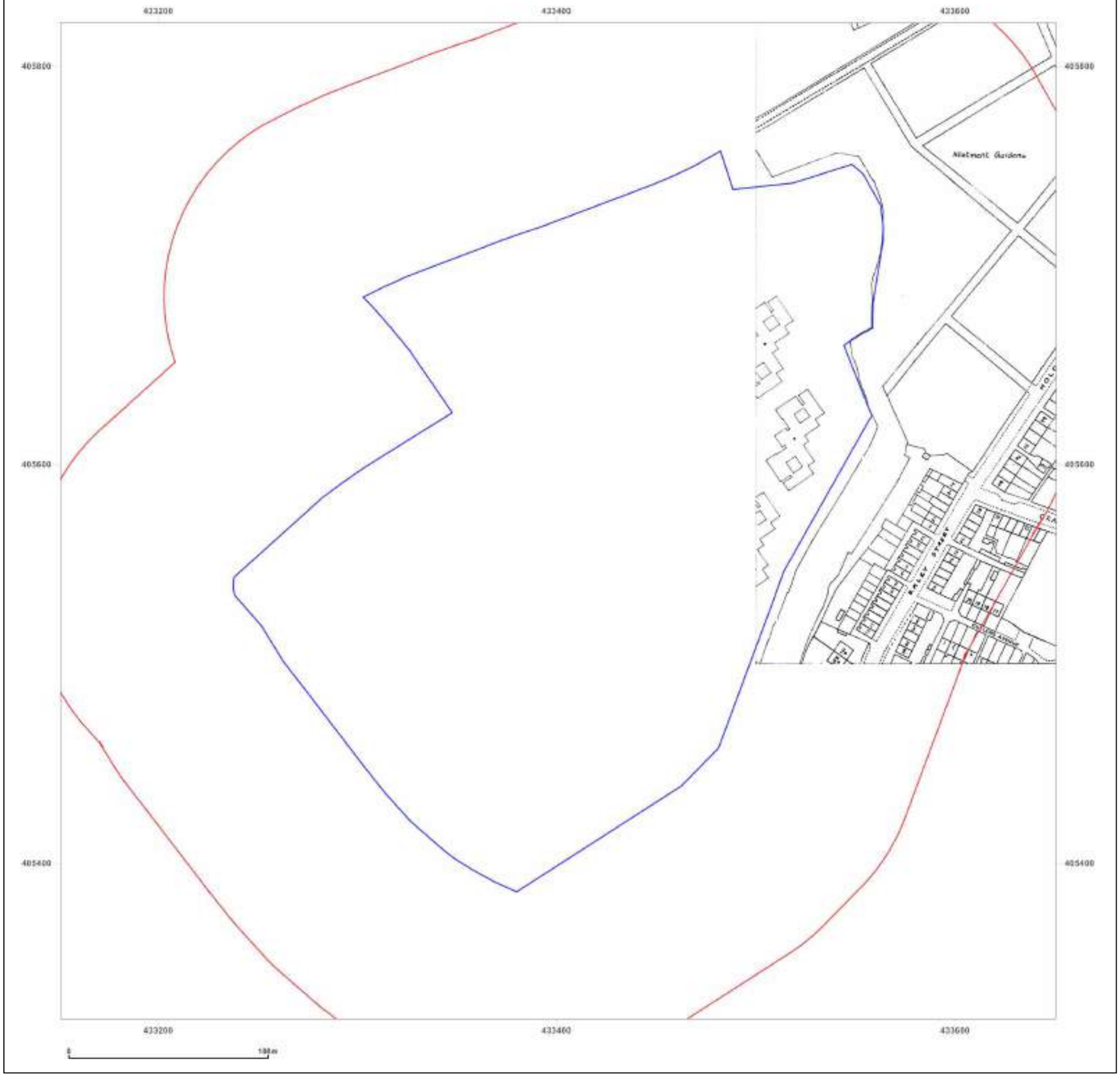

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid
Map date: **1983**
Scale: 1:1,250
Printed at: 1:2,000

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Production date: 09 June 2020

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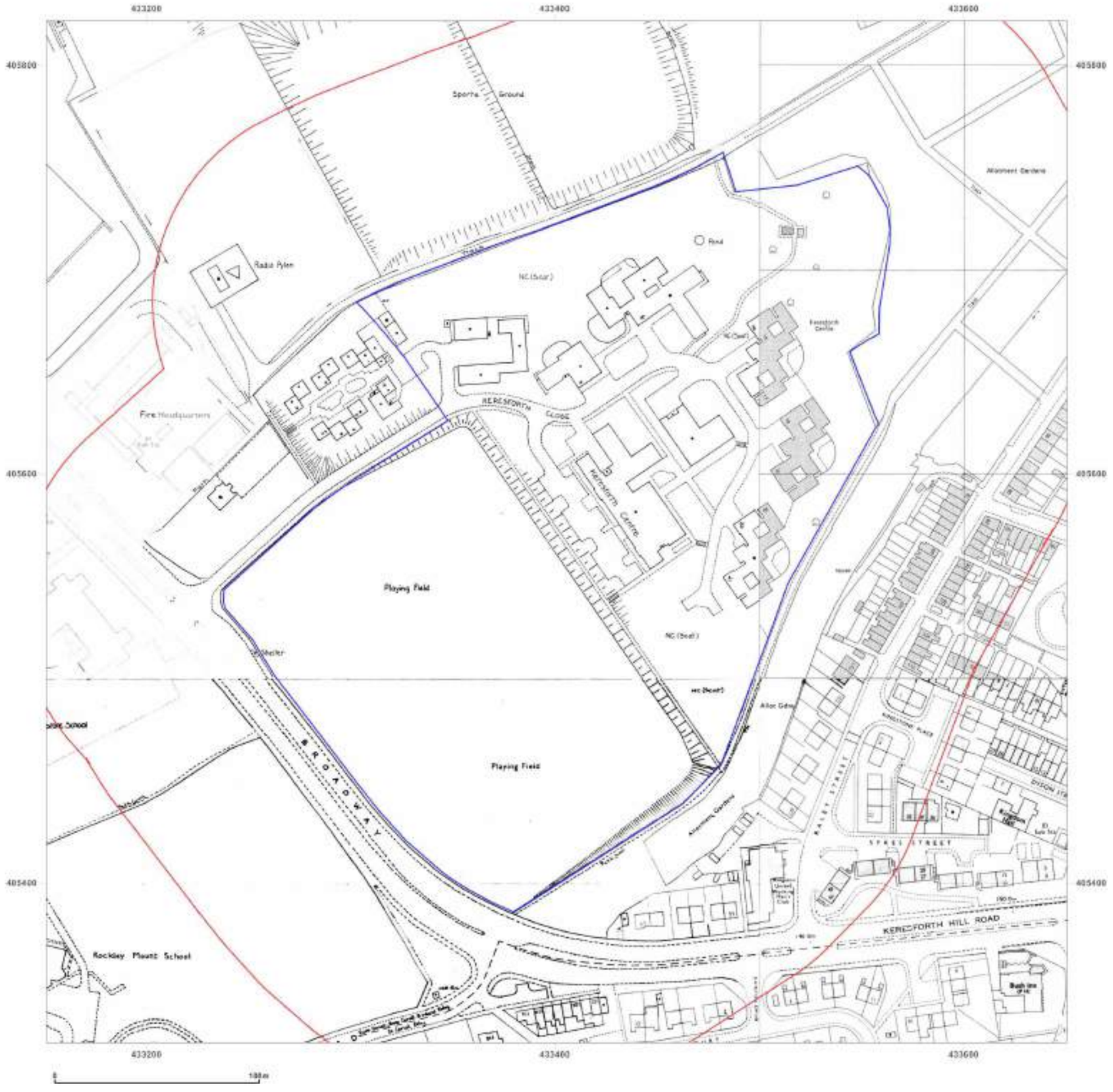

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1989-1991**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1963 Revised 1991 Edition N/A Copyright 1991 Levelled 1963	Surveyed 1959 Revised 1989 Edition N/A Copyright 1989 Levelled N/A
Surveyed 1963 Revised 1991 Edition N/A Copyright 1991 Levelled 1963	Surveyed 1963 Revised 1991 Edition N/A Copyright 1991 Levelled 1963

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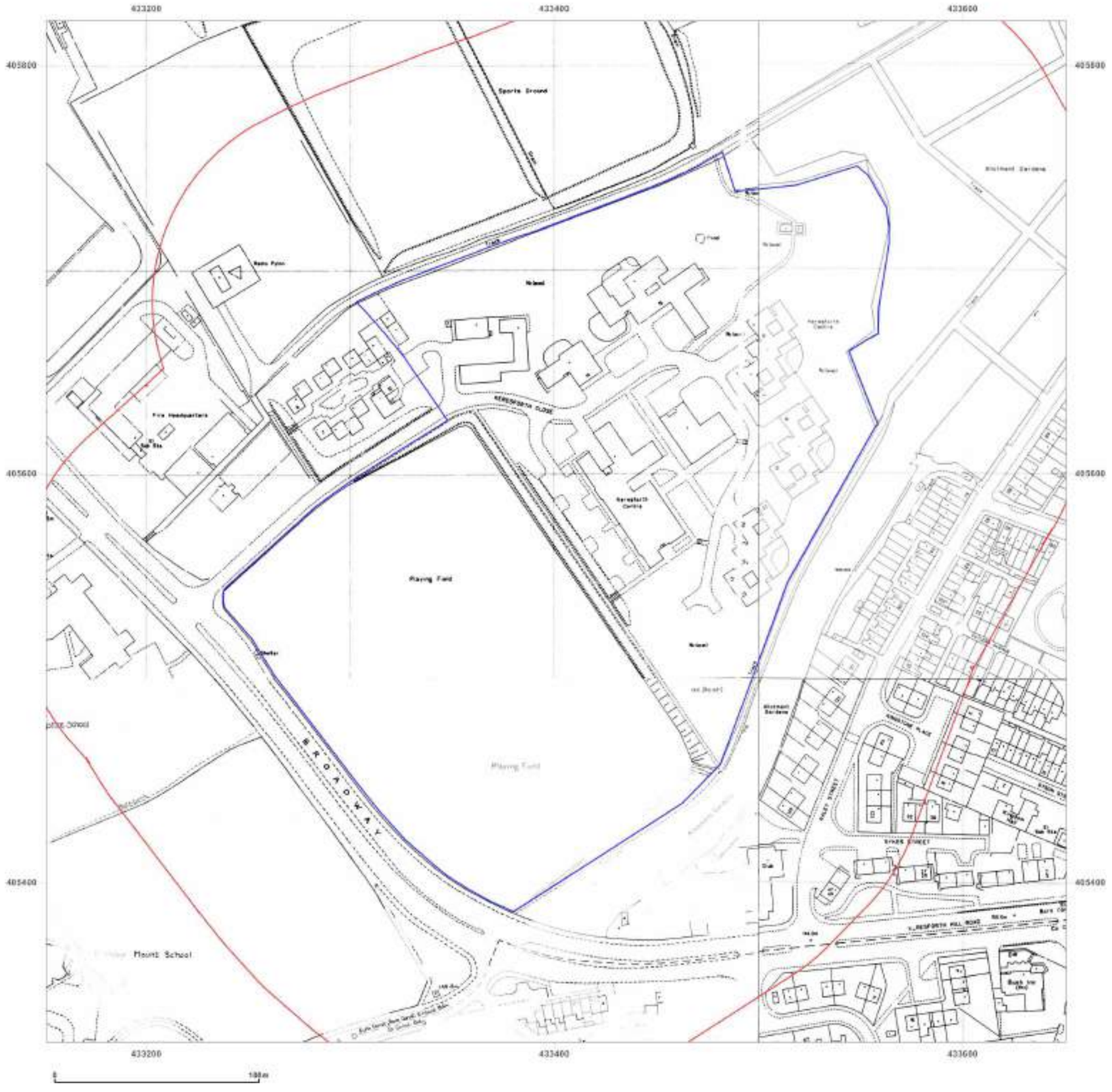

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Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1991-1993**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed 1993 Revised 1993 Edition N/A Copyright N/A Levelled N/A
Surveyed N/A Revised N/A Edition N/A Copyright 1991 Levelled 1963	Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A

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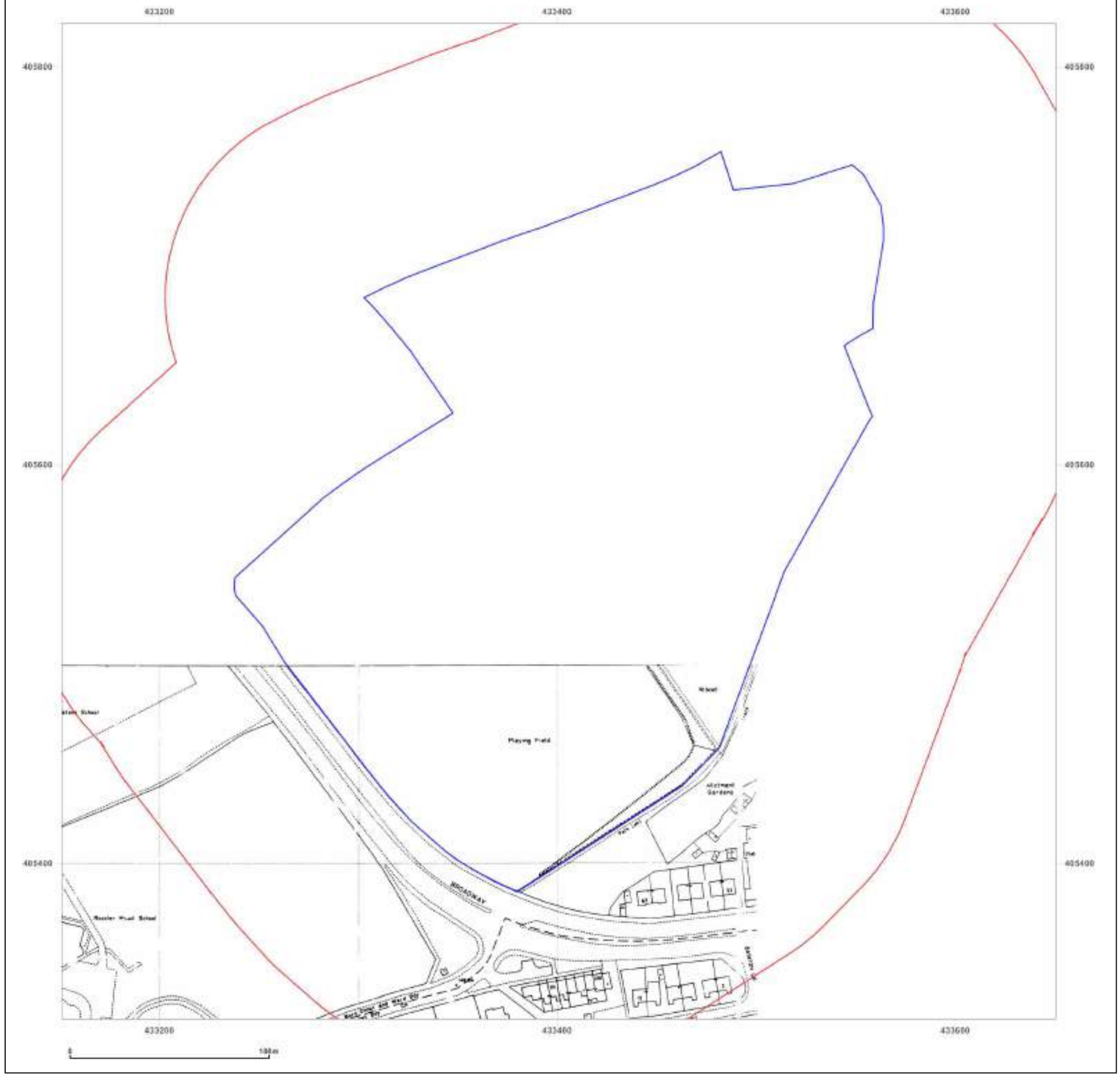

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid
Map date: **1993**
Scale: 1:1,250
Printed at: 1:2,000

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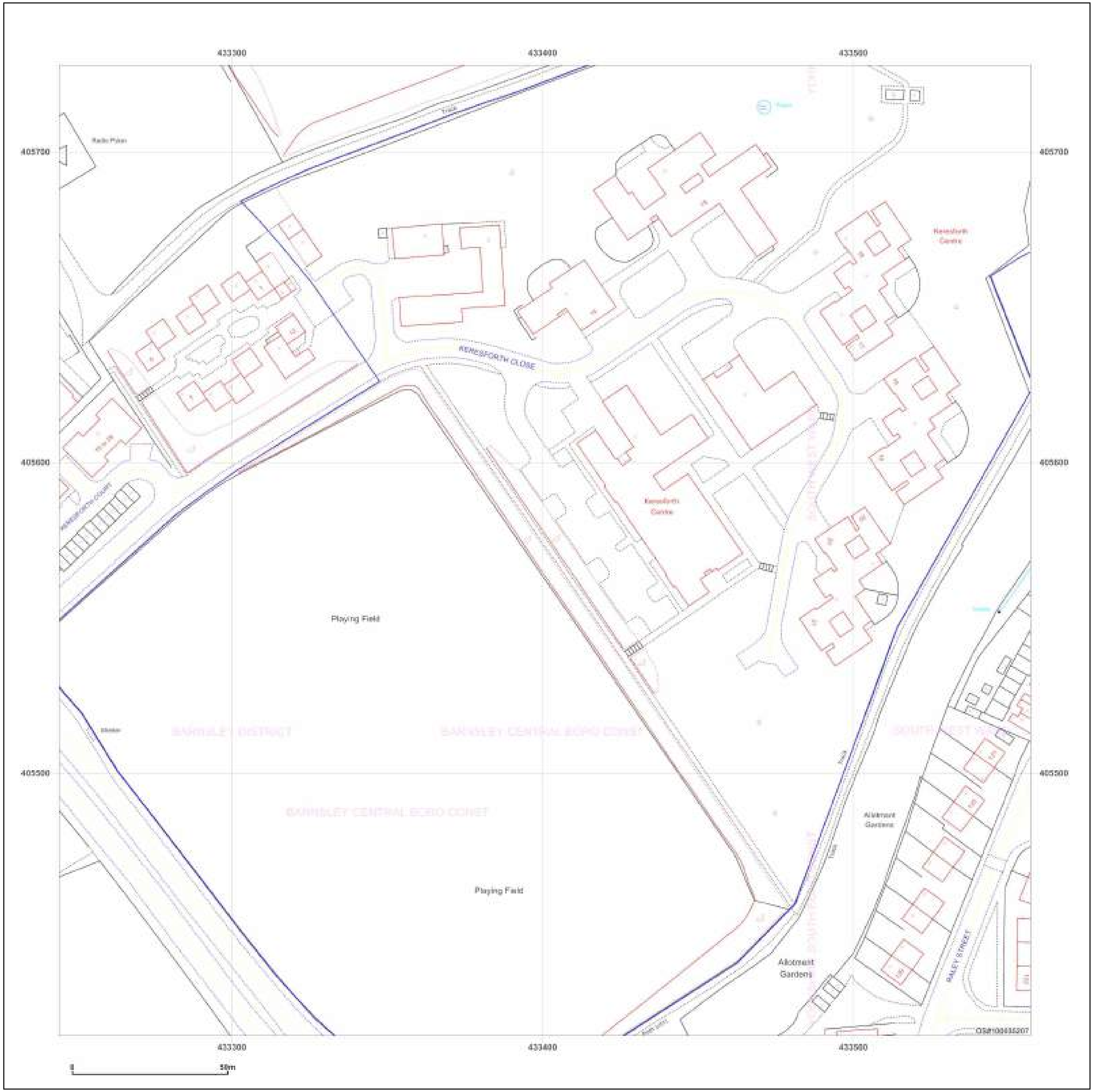

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: LandLine

Map date: **2003**

Scale: 1:1,250

Printed at: 1:1,250

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2003

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Production date: 09 June 2020

Map legend available at:
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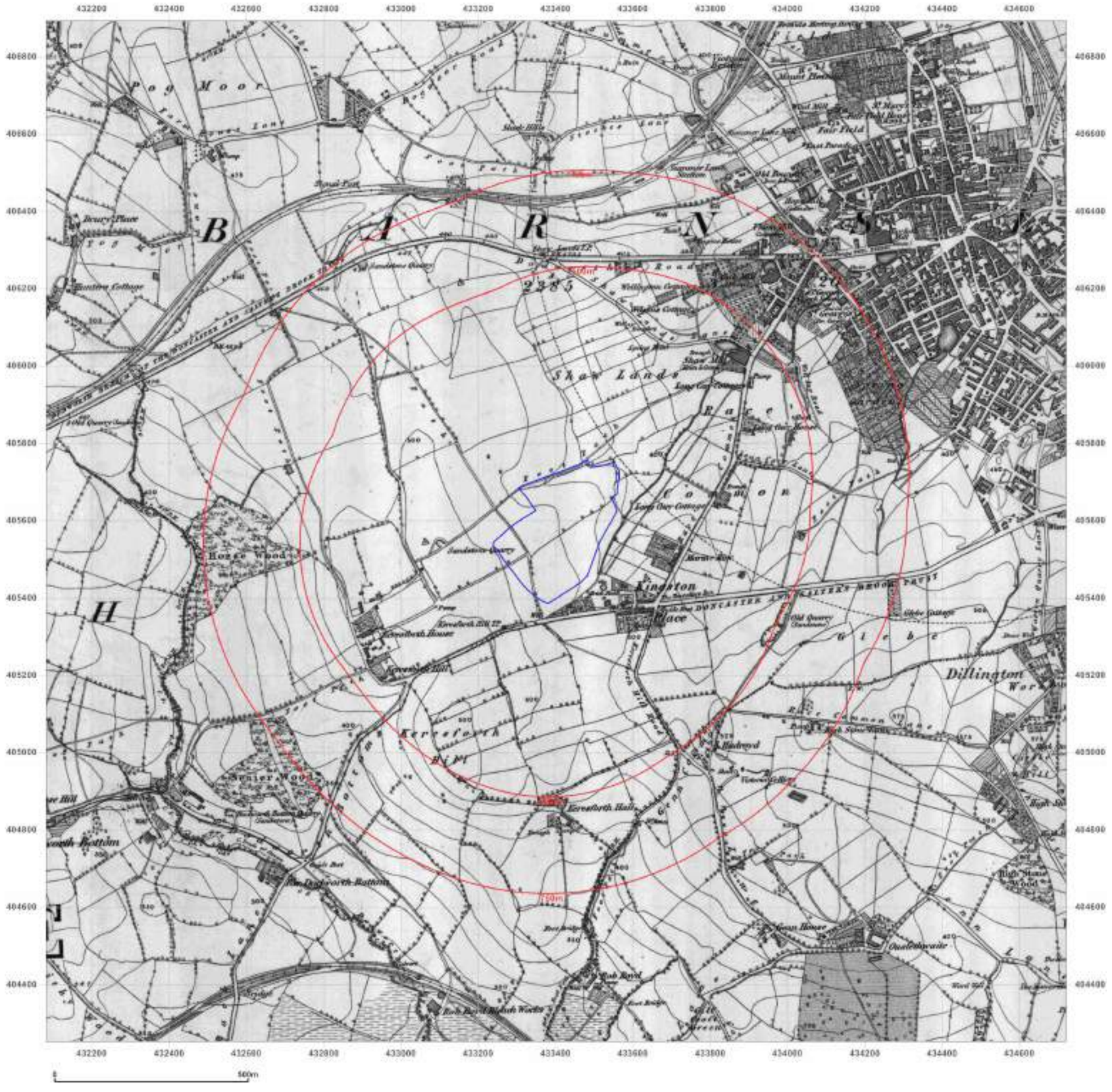

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Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: County Series

Map date: **1850**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1851
Revised N/A
Edition 1850
Copyright N/A
Levelled N/A

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Production date: 09 June 2020

Map legend available at:
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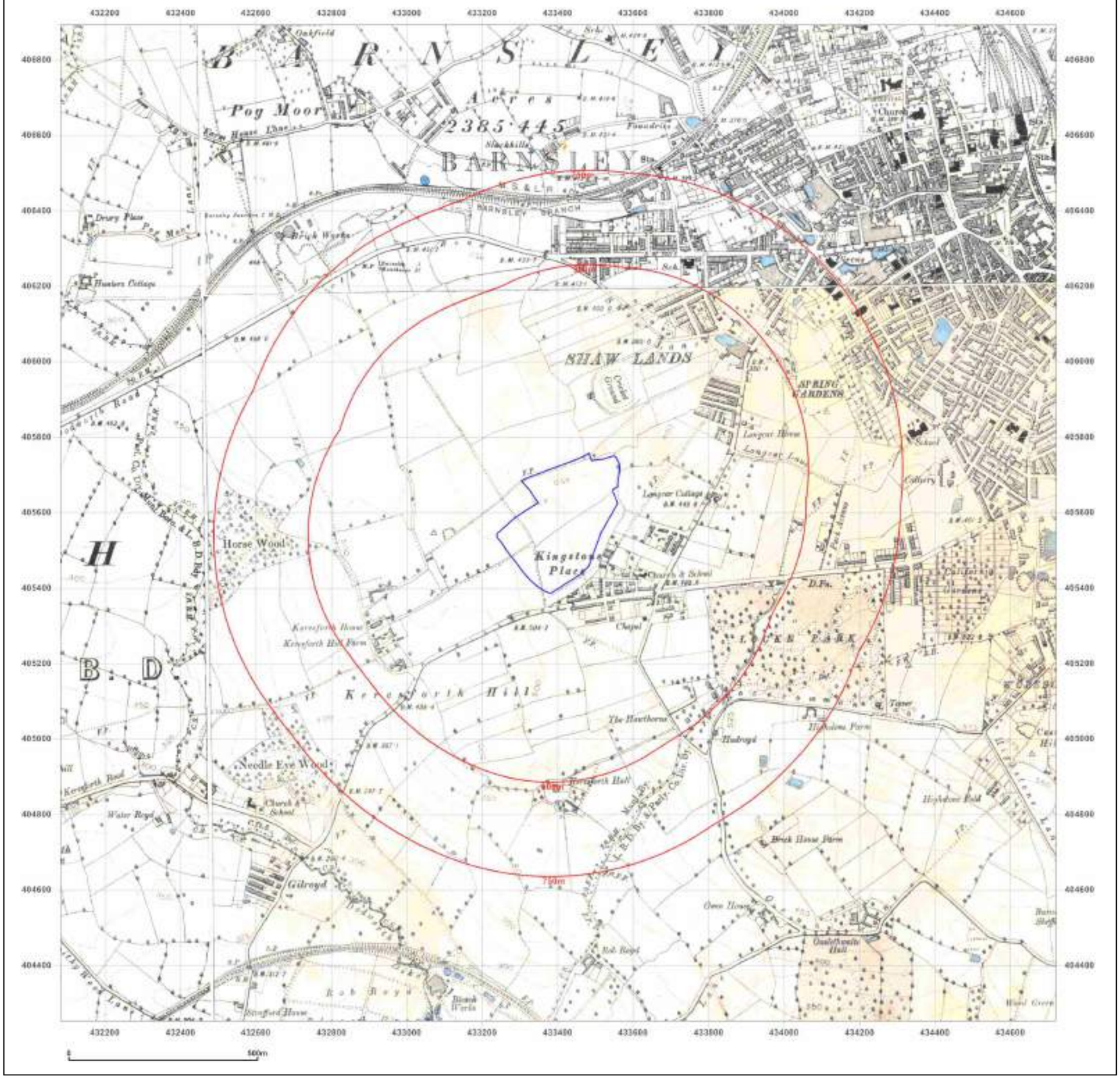

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: County Series
Map date: **1890-1891**
Scale: 1:10,560
Printed at: 1:10,560

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Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1890
Edition 1890
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1890
Edition 1890
Copyright N/A
Levelled N/A

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Production date: 09 June 2020

Map legend available at:
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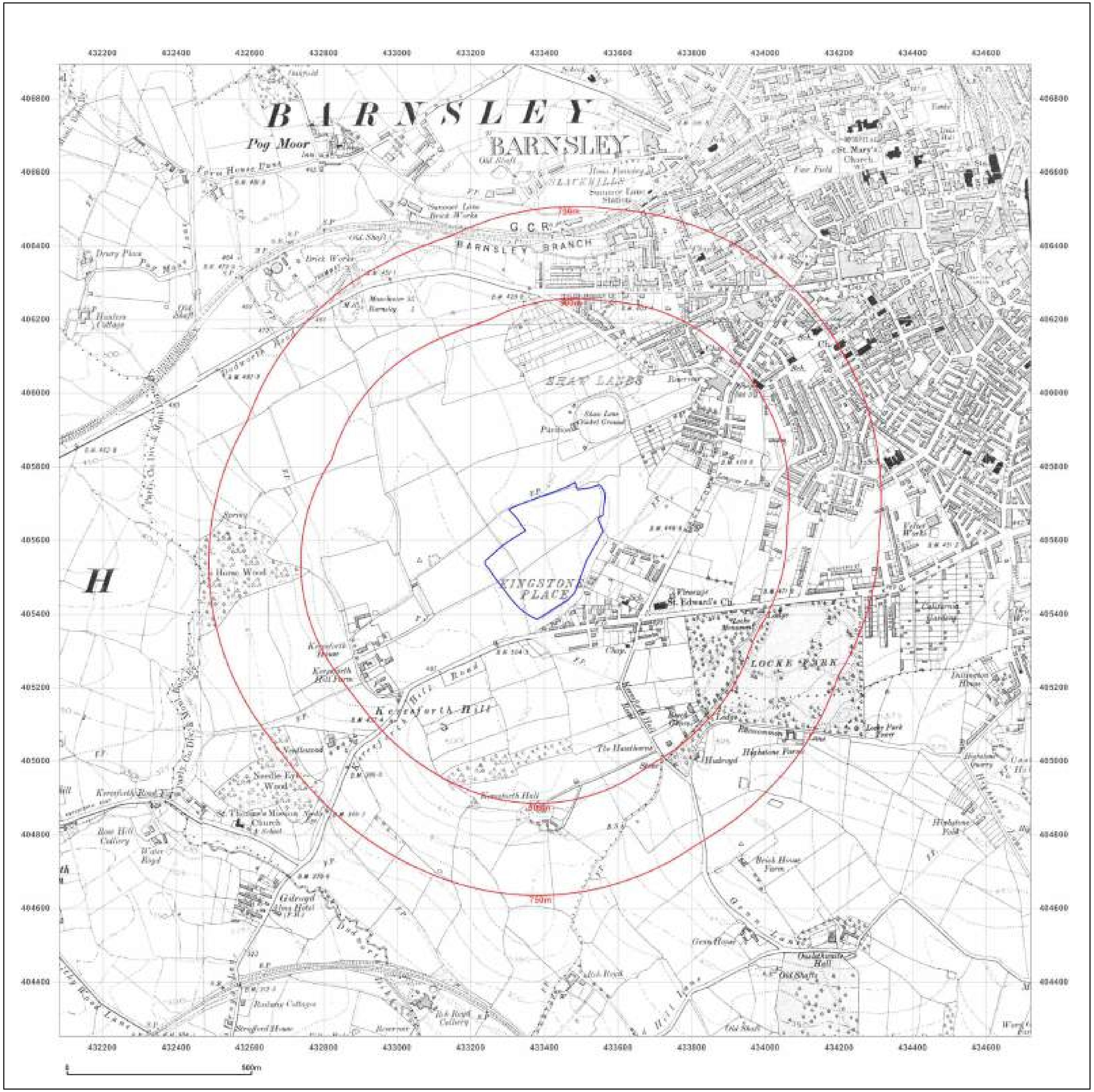

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: County Series

Map date: **1904**

Scale: 1:10,560

Printed at: 1:10,560

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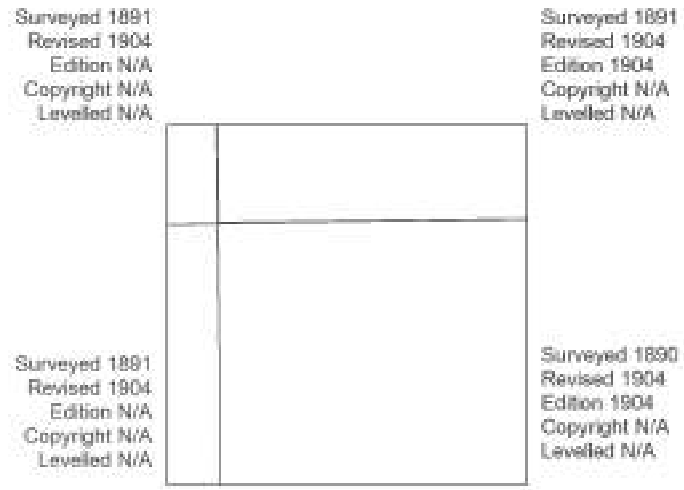

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W: www.groundsure.com

Production date: 09 June 2020

Map legend available at:
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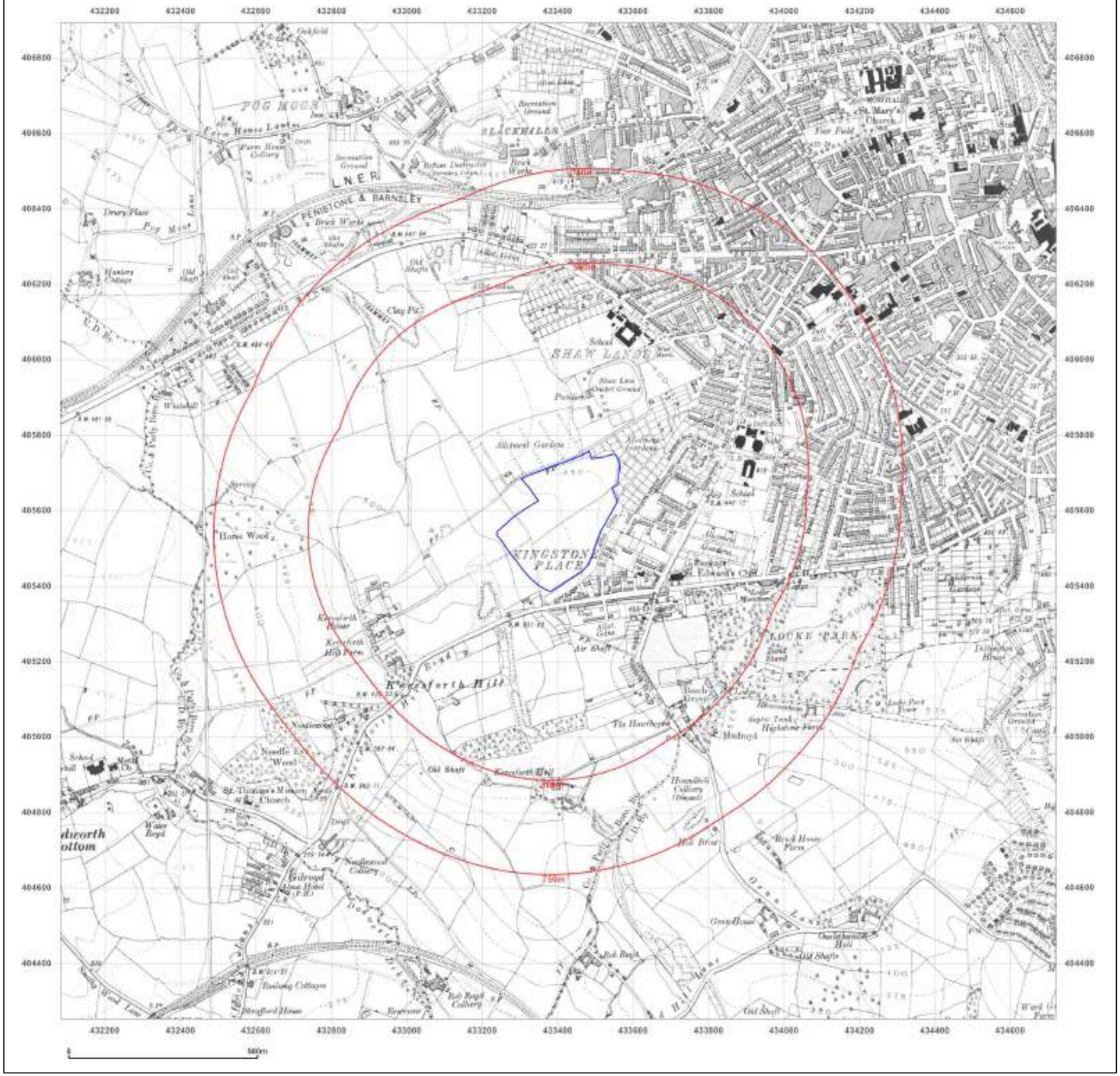

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Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: County Series

Map date: **1929**

Scale: 1:10,560

Printed at: 1:10,560

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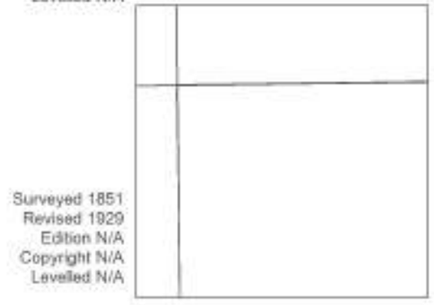
Surveyed 1851
Revised 1929
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1851
Revised 1929
Edition 1929
Copyright N/A
Levelled 1915



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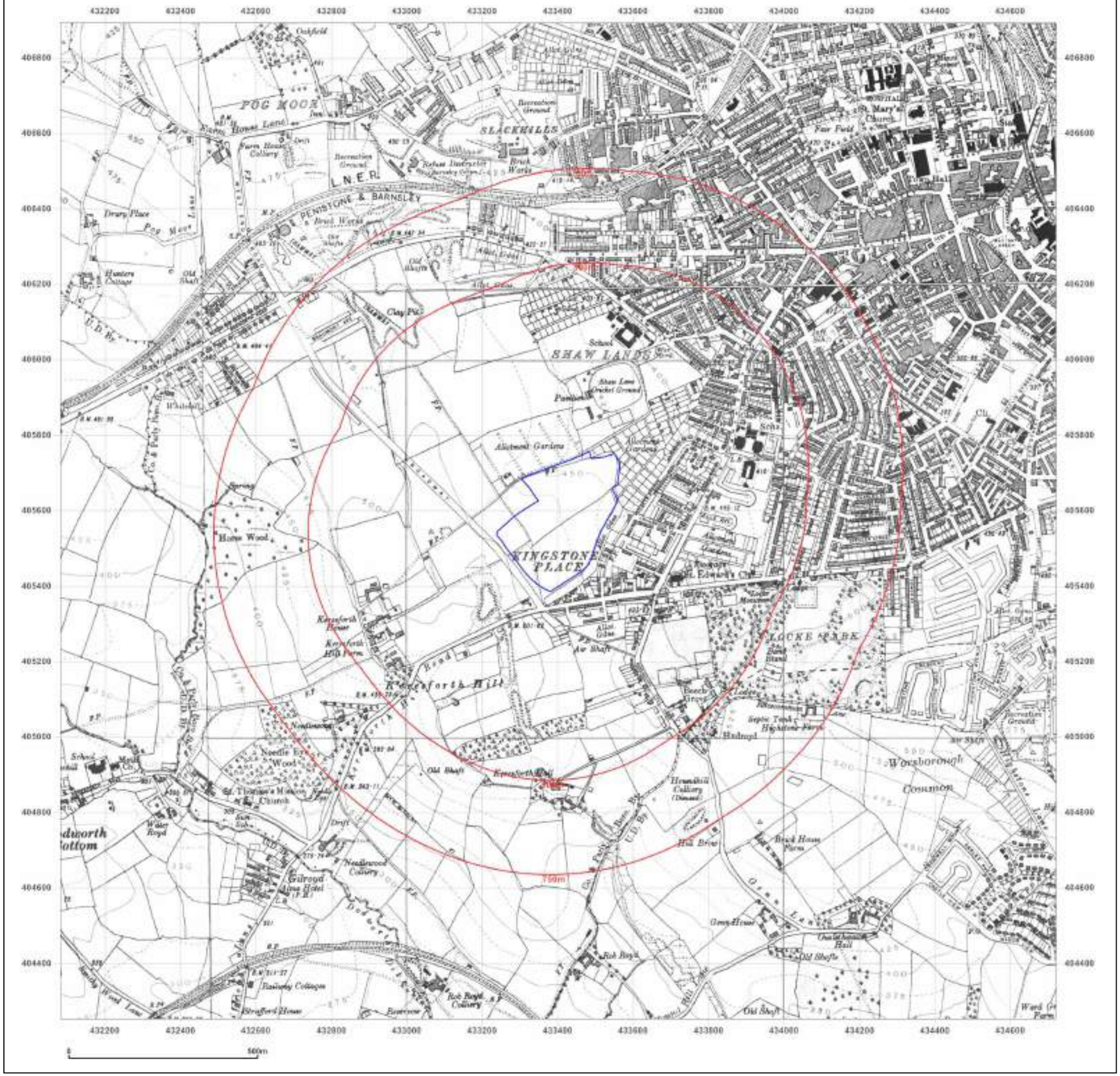

Site Details:

KERESFORTH CENTRE,
KERESFORTH CLOSE,
BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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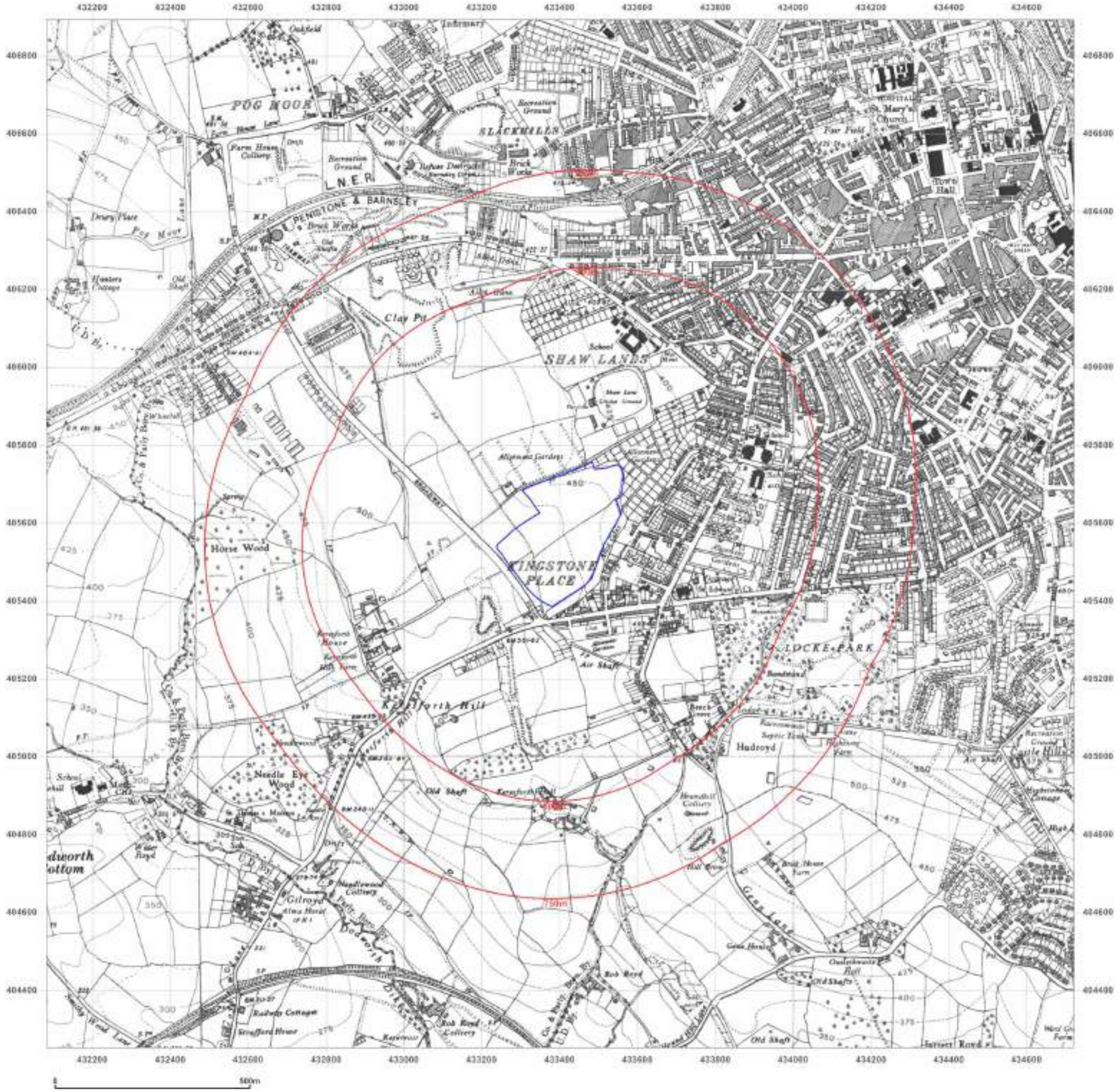

Site Details:

KERESFORTH CENTRE,
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BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

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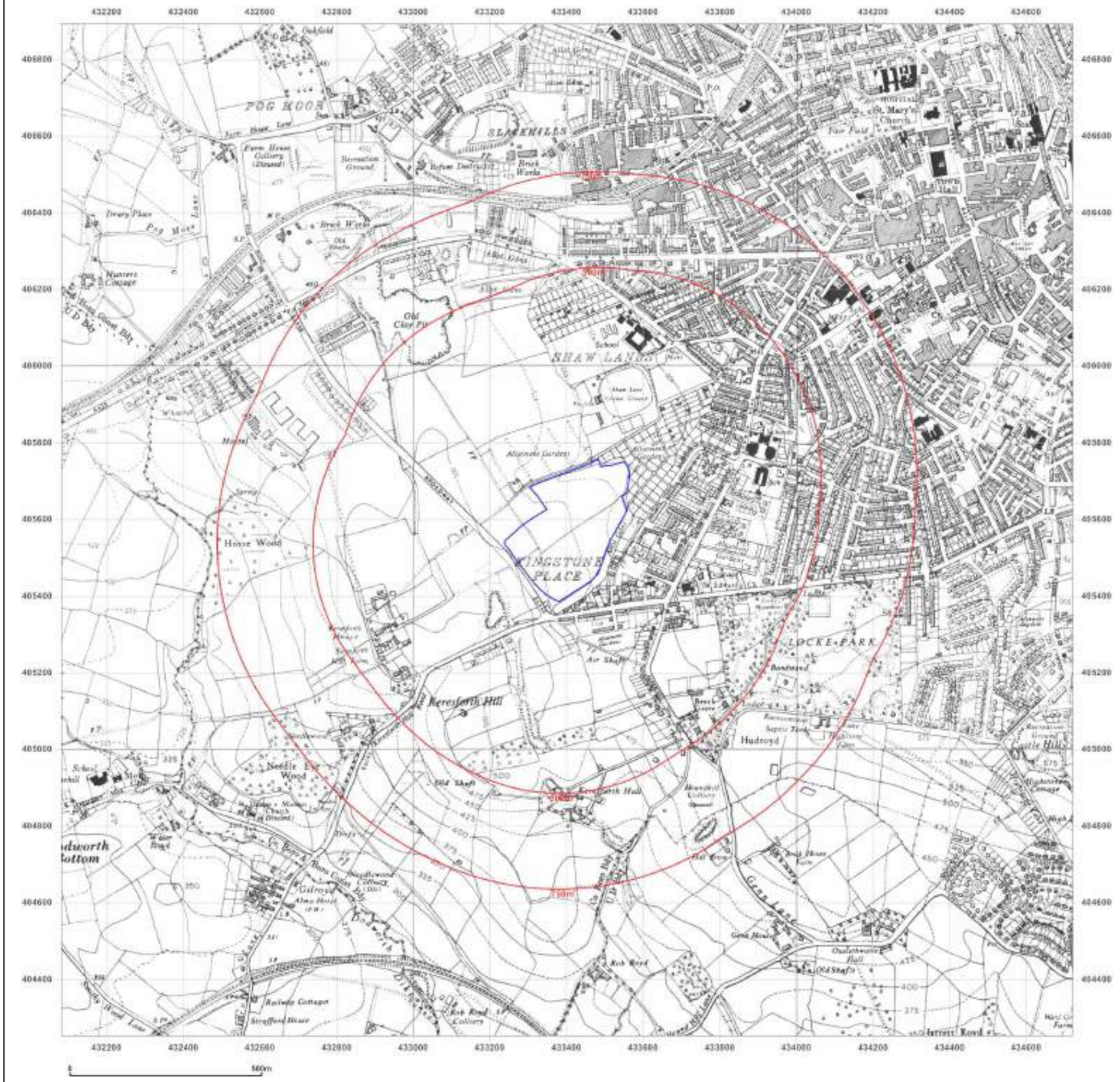

Surveyed N/A
Revised 1955
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Revised 1955
Edition N/A
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Site Details:

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BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: Provisional

Map date: **1956**

Scale: 1:10,560

Printed at: 1:10,560

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Production date: 09 June 2020

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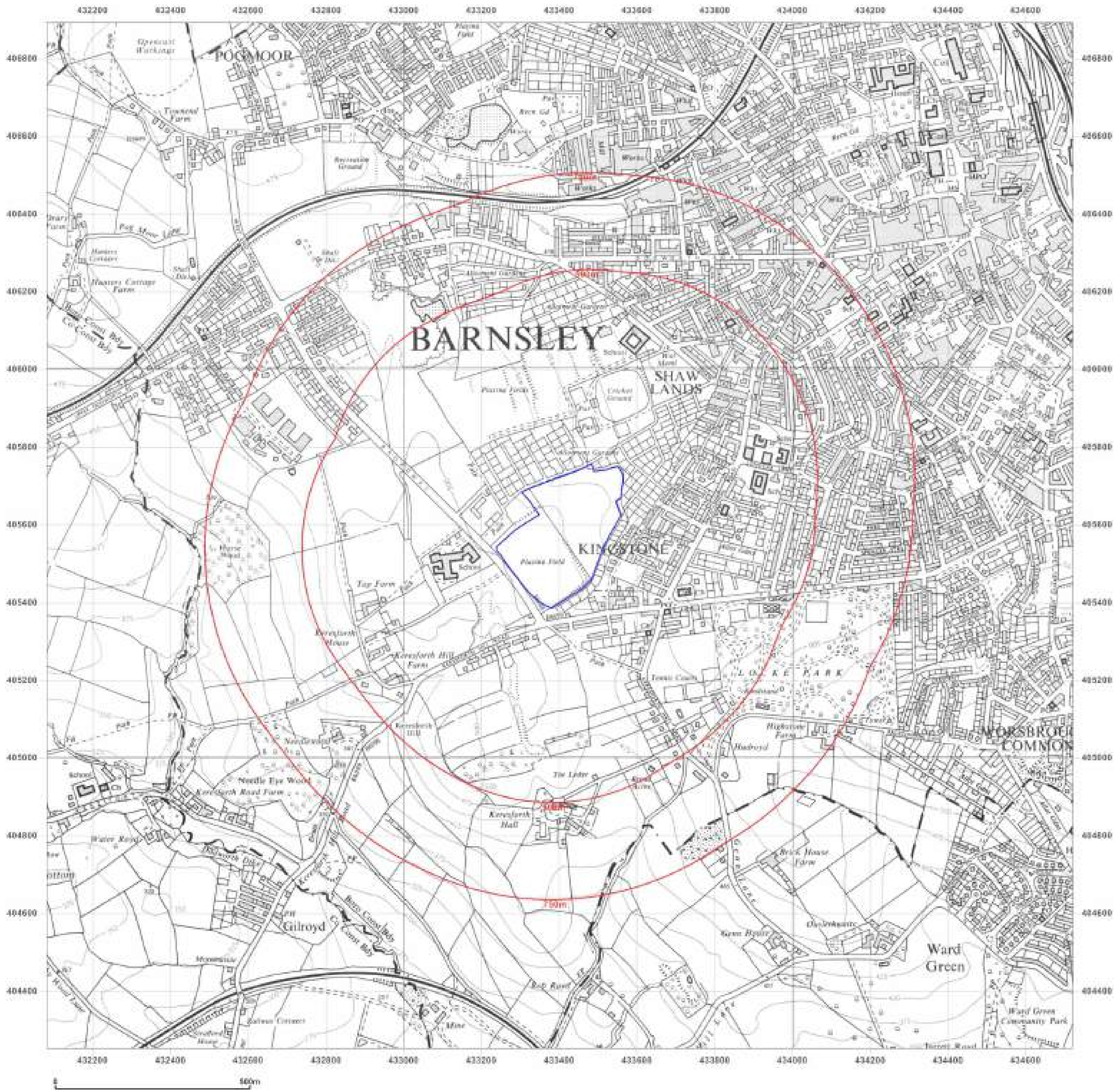

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BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: Provisional

Map date: **1965-1966**

Scale: 1:10,560

Printed at: 1:10,560

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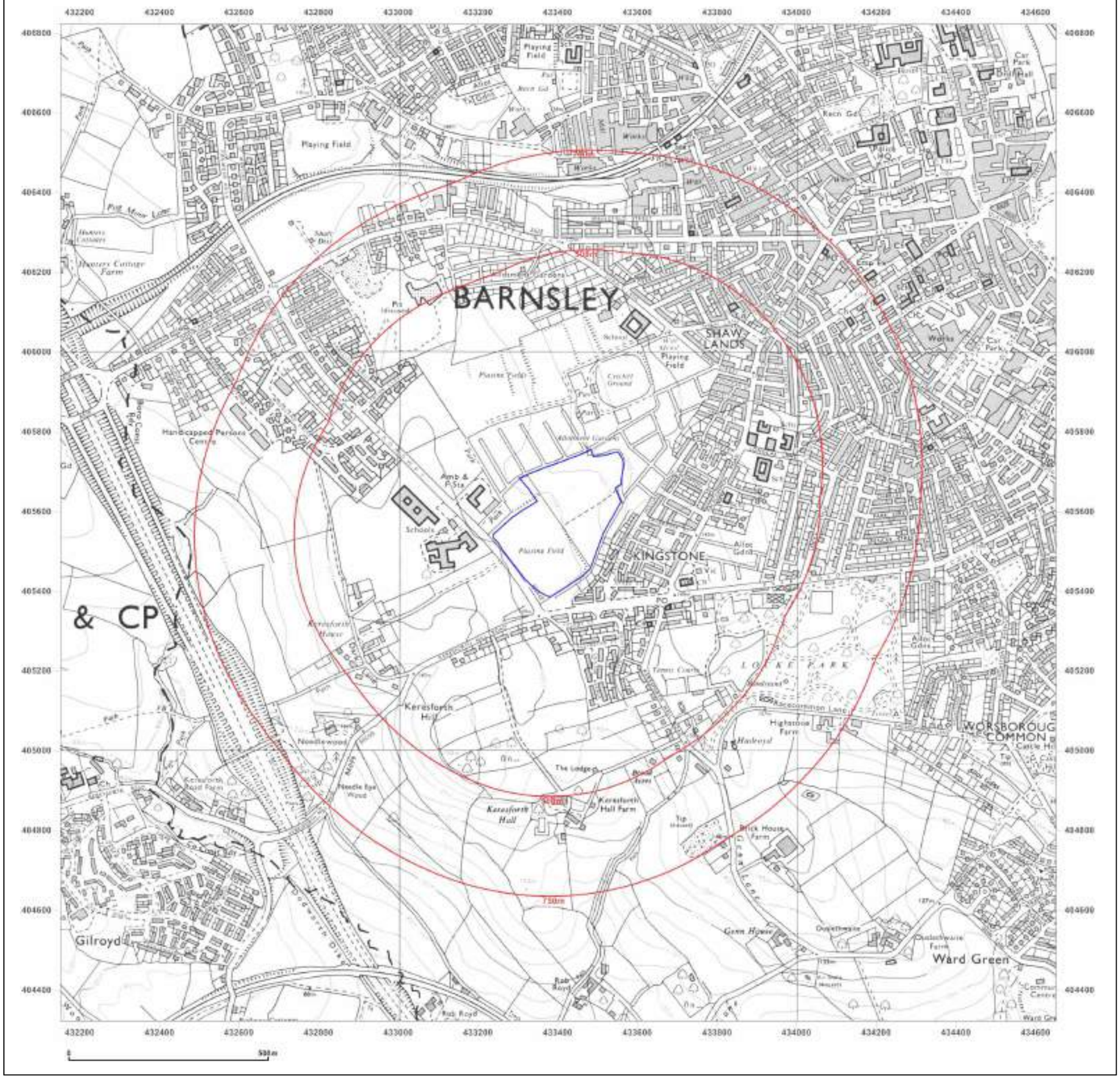

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Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1973-1977**

Scale: 1:10,000

Printed at: 1:10,000

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Revised 1973
Edition N/A
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Surveyed 1973
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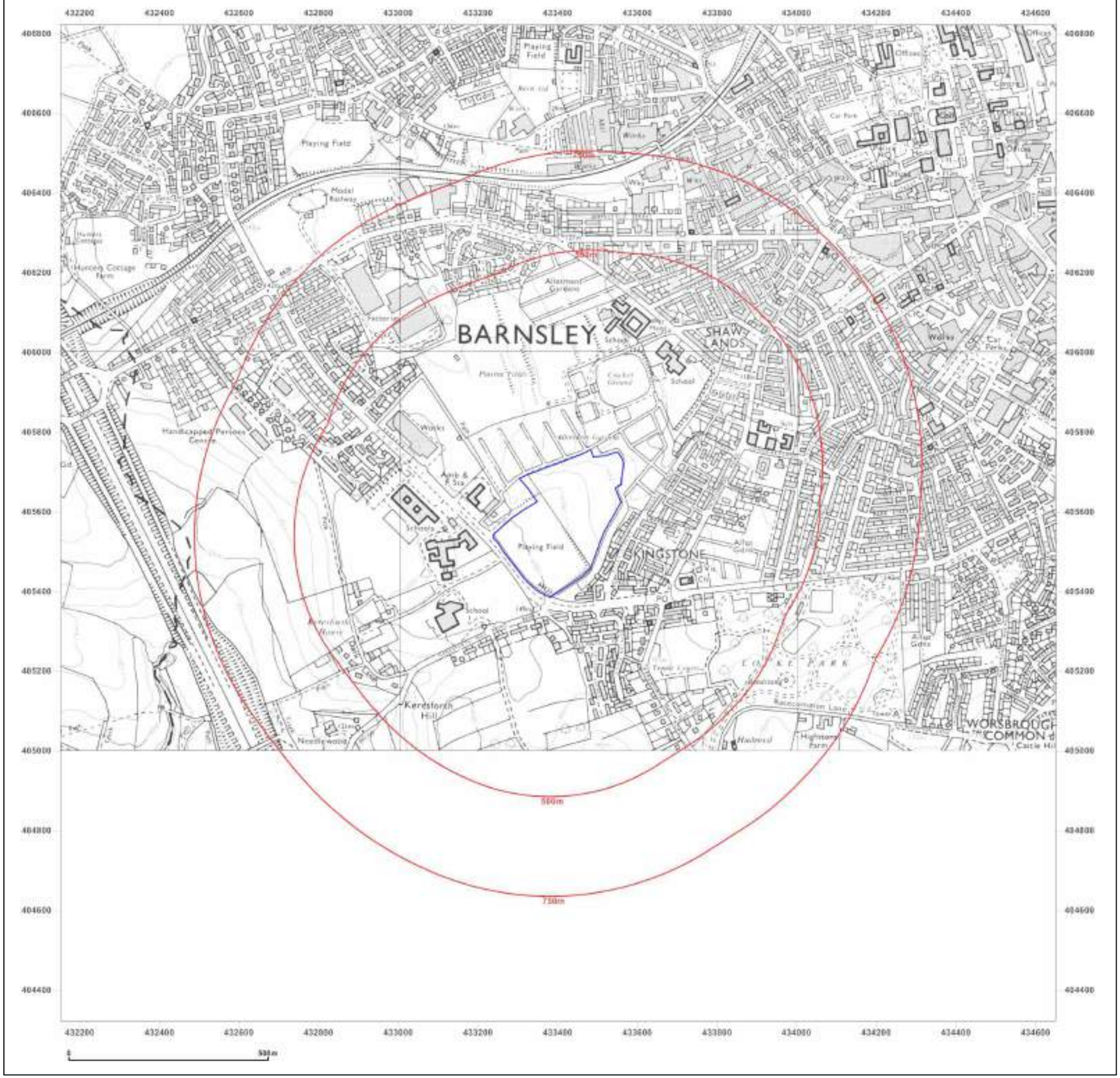

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Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1982**

Scale: 1:10,000

Printed at: 1:10,000

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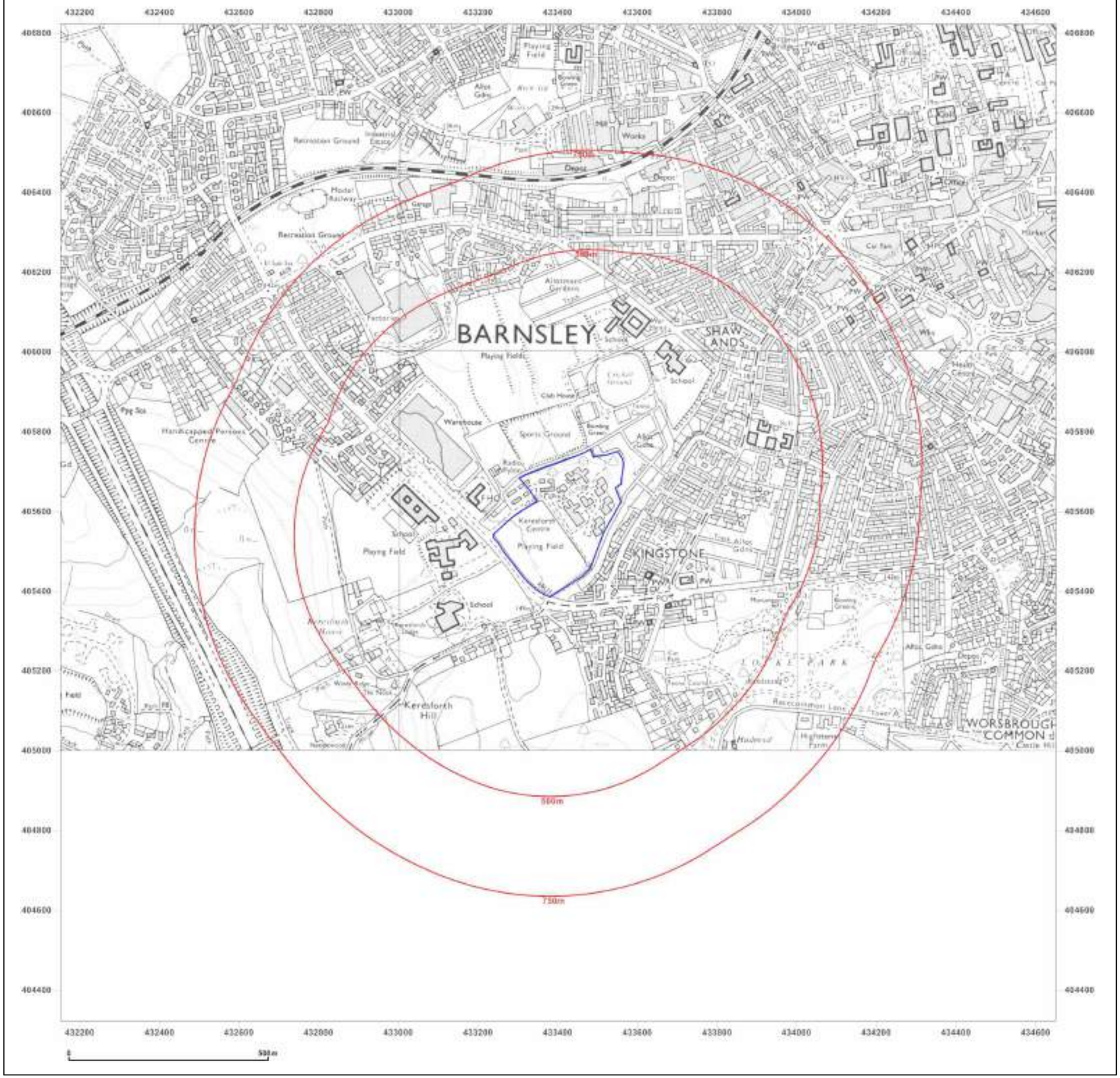

Site Details:

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BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid

Map date: **1993**

Scale: 1:10,000

Printed at: 1:10,000

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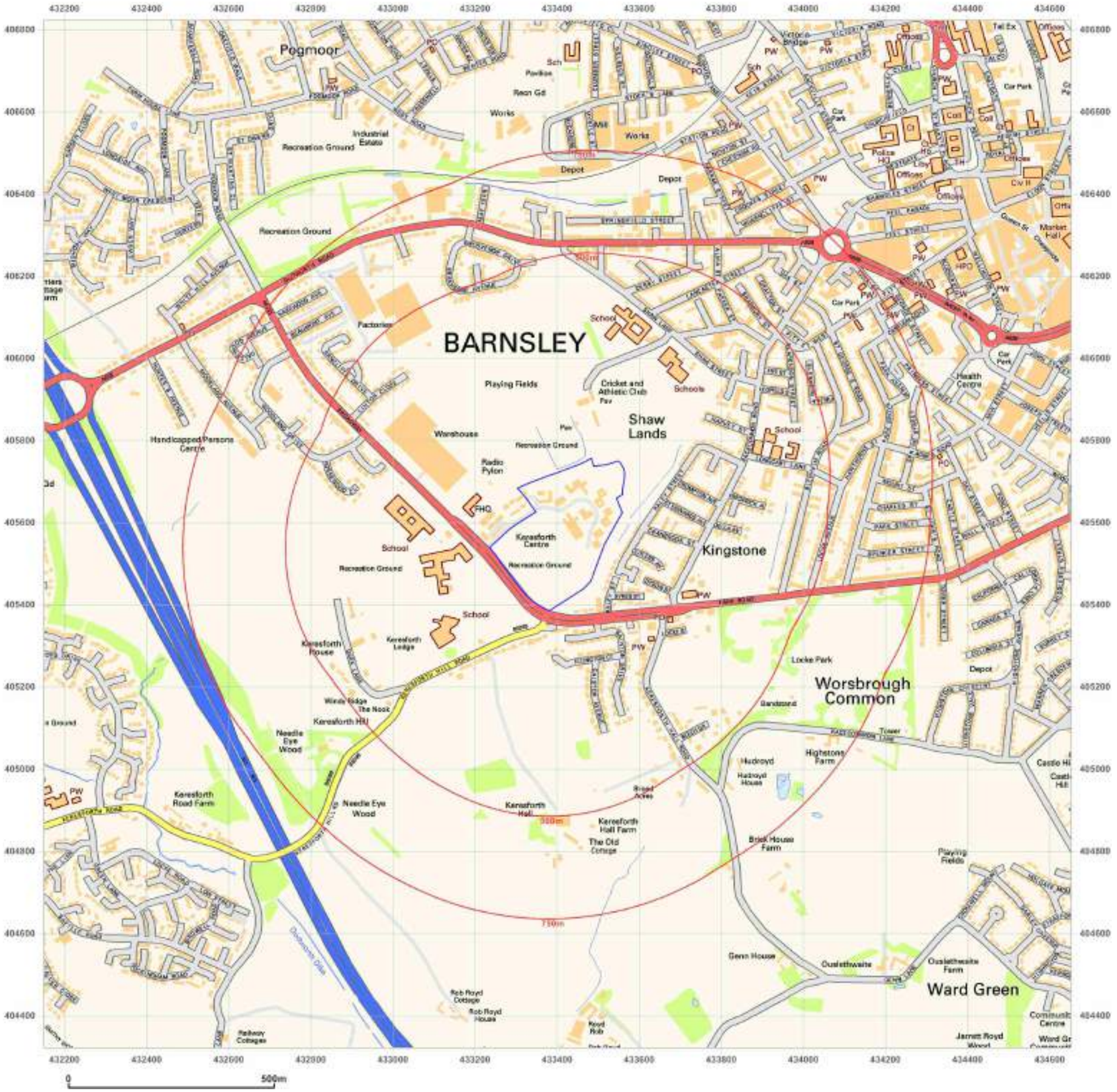

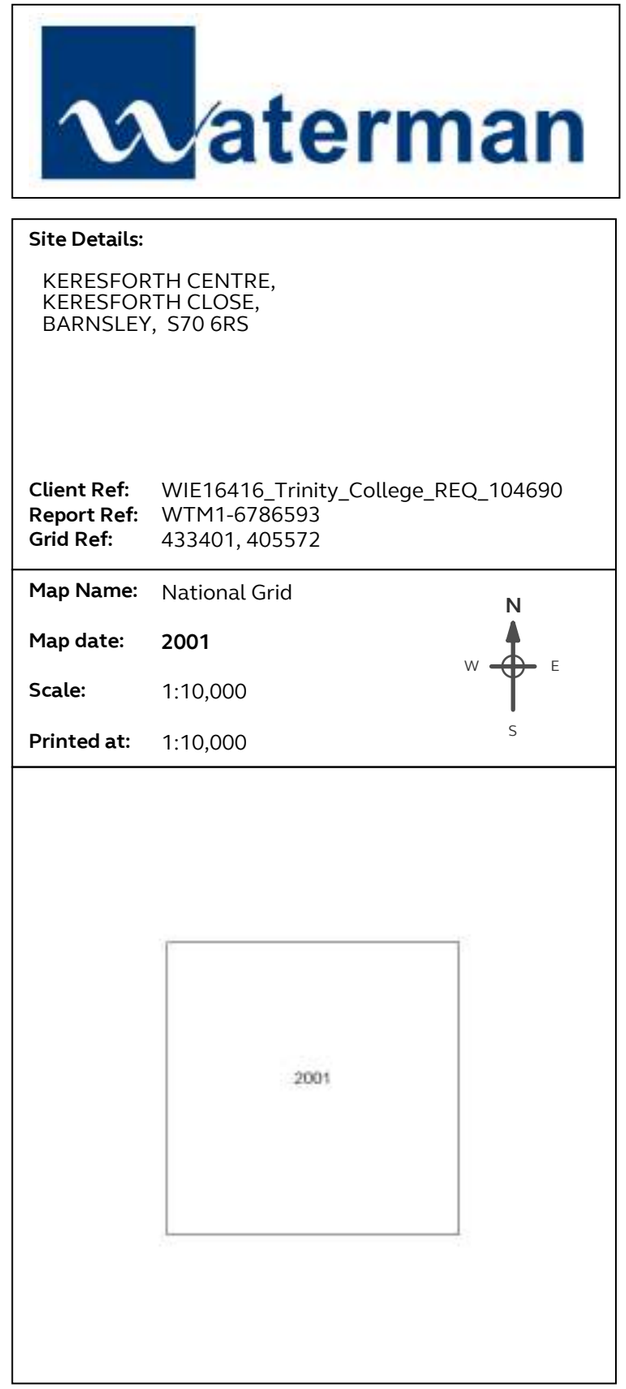

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Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid
Map date: 2001
Scale: 1:10,000
Printed at: 1:10,000

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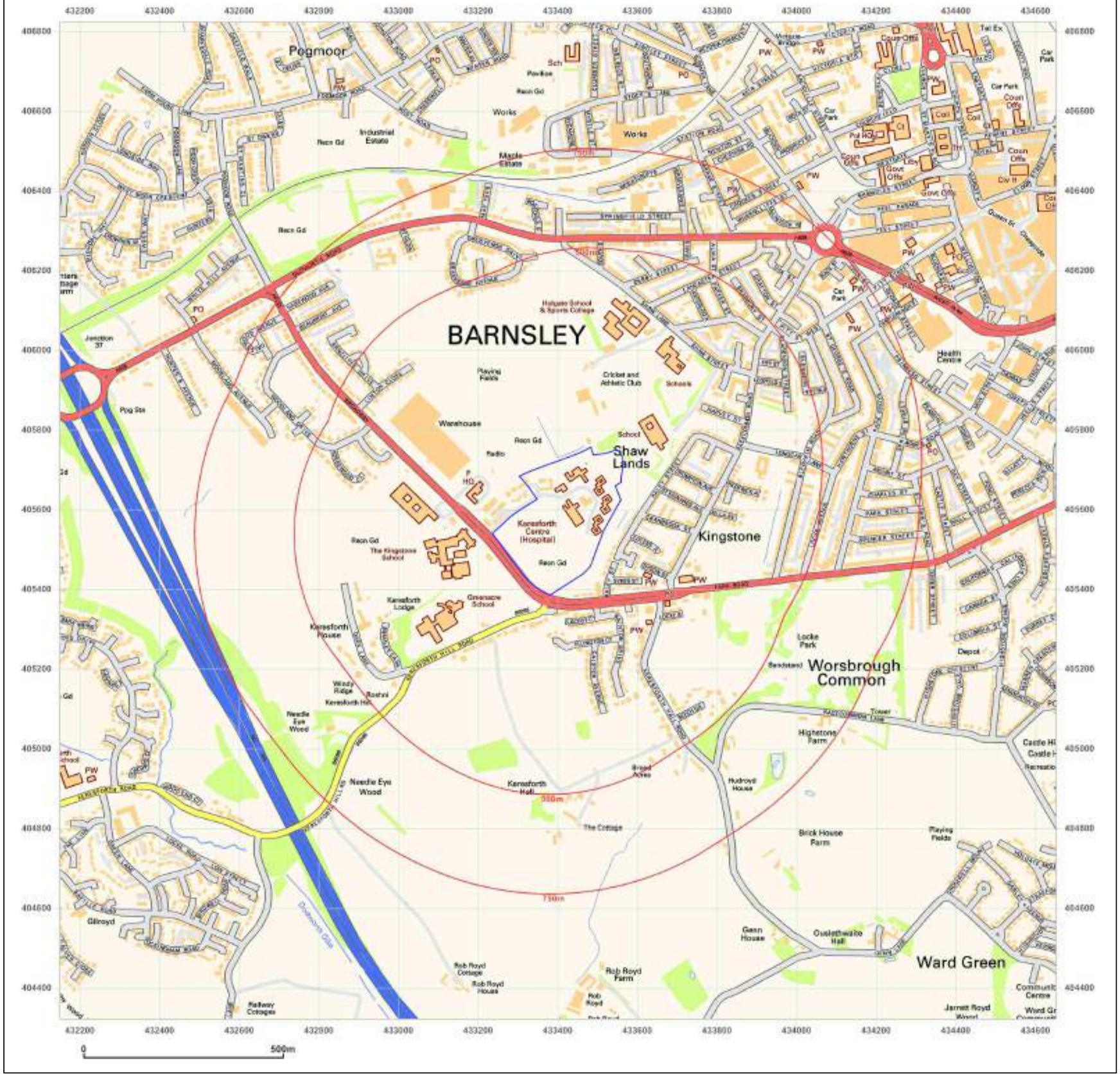

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BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid
Map date: **2010**
Scale: 1:10,000
Printed at: 1:10,000

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2010

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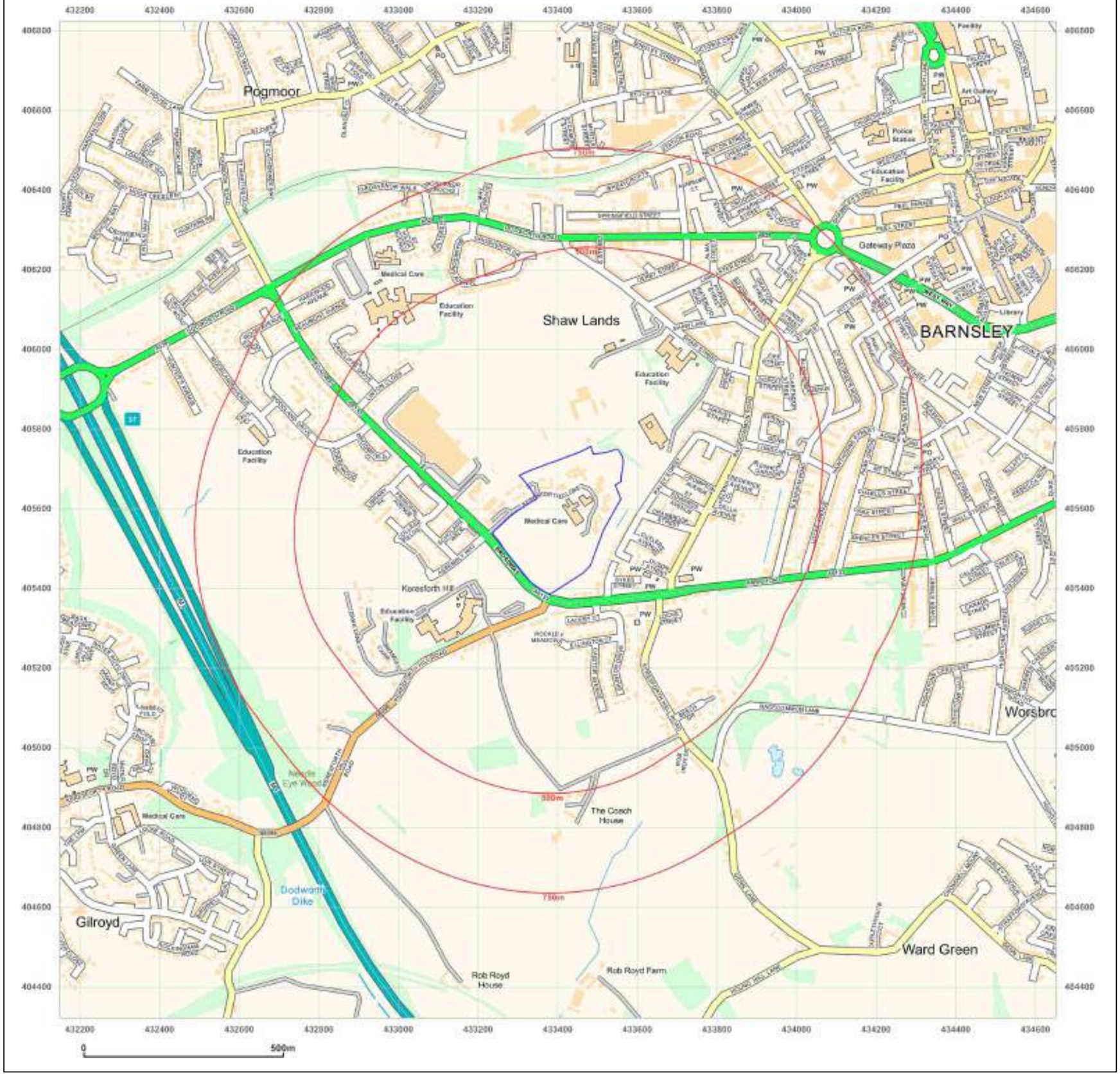

waterman

Site Details:

KERESFORTH CENTRE,
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BARNSLEY, S70 6RS

Client Ref: WIE16416_Trinity_College_REQ_104690
Report Ref: WTM1-6786593
Grid Ref: 433401, 405572

Map Name: National Grid
Map date: **2020**
Scale: 1:10,000
Printed at: 1:10,000

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Enviro+Geo Insight

KERESFORTH CENTRE, KERESFORTH CLOSE, BARNSLEY, S70 6RS

Order Details

Date: 09/06/2020

Your ref: WIE16416_Trinity_College_REQ_104690

Our Ref: WTM1-6786594

Client: Waterman Infrastructure & Environment Limited

Site Details

Location: 433423 405601

Area: 7.23 ha

Authority: Barnsley Metropolitan Borough Council

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

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	Historical industrial land uses	0	3	18	17	-
16	1.2	Historical tanks	0	0	1	5	-
17	1.3	Historical energy features	0	0	7	4	-
17	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	2	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
19	2.1	Historical industrial land uses	0	4	22	20	-
21	2.2	Historical tanks	0	0	3	10	-
22	2.3	Historical energy features	0	0	17	7	-
23	2.4	Historical petrol stations	0	0	0	0	-
23	2.5	Historical garages	0	0	0	3	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
25	3.1	Active or recent landfill	0	0	0	0	-
25	3.2	Historical landfill (BGS records)	0	0	0	0	-
26	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
26	3.4	Historical landfill (EA/NRW records)	0	0	0	1	-
26	3.5	Historical waste sites	0	0	0	0	-
26	3.6	Licensed waste sites	0	0	0	0	-
27	3.7	Waste exemptions	0	0	1	0	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
28	4.1	Recent industrial land uses	1	2	7	-	-
29	4.2	Current or recent petrol stations	0	0	0	0	-
29	4.3	Electricity cables	0	0	0	0	-
29	4.4	Gas pipelines	0	0	0	0	-
30	4.5	Sites determined as Contaminated Land	0	0	0	0	-

30	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
30	4.7	Regulated explosive sites	0	0	0	0	-
30	4.8	Hazardous substance storage/usage	0	0	0	0	-
30	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
31	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
31	**4.11**	**Licensed pollutant release (Part A(2)/B)**	0	0	0	1	-
31	4.12	Radioactive Substance Authorisations	0	0	0	0	-
31	**4.13**	**Licensed Discharges to controlled waters**	0	0	0	12	-
33	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
34	4.15	Pollutant release to public sewer	0	0	0	0	-
34	4.16	List 1 Dangerous Substances	0	0	0	0	-
34	4.17	List 2 Dangerous Substances	0	0	0	0	-
34	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
34	4.19	Pollution inventory substances	0	0	0	0	-
35	4.20	Pollution inventory waste transfers	0	0	0	0	-
35	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
36	5.1	Superficial aquifer	None (within 500m)				
37	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
39	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
40	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
40	5.5	Groundwater vulnerability- local information	None (within 0m)				
41	**5.6**	**Groundwater abstractions**	0	0	0	4	3
43	5.7	Surface water abstractions	0	0	0	0	0
44	**5.8**	**Potable abstractions**	0	0	0	4	0
45	5.9	Source Protection Zones	0	0	0	0	-
45	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
46	**6.1**	**Water Network (OS MasterMap)**	0	1	0	-	-

47	6.2	Surface water features	0	1	0	-	-
47	6.3	WFD Surface water body catchments	1	-	-	-	-
47	6.4	WFD Surface water bodies	0	0	0	-	-
48	6.5	WFD Groundwater bodies	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
49	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
49	7.2	Historical Flood Events	0	0	0	-	-
49	7.3	Flood Defences	0	0	0	-	-
49	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
50	7.5	Flood Storage Areas	0	0	0	-	-
51	7.6	Flood Zone 2	None (within 50m)				
51	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding	
52	8.1	Surface water flooding	1 in 30 year, Greater than 1.0m (within 50m)

Page	Section	Groundwater flooding	
54	9.1	Groundwater flooding	Negligible (within 50m)

Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
55	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
56	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
56	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
56	10.4	Special Protection Areas (SPA)	0	0	0	0	0
56	10.5	National Nature Reserves (NNR)	0	0	0	0	0
57	10.6	Local Nature Reserves (LNR)	0	0	0	0	1
57	10.7	Designated Ancient Woodland	0	0	0	0	1
57	10.8	Biosphere Reserves	0	0	0	0	0
58	10.9	Forest Parks	0	0	0	0	0
58	10.10	Marine Conservation Zones	0	0	0	0	0
58	10.11	Green Belt	0	0	1	0	1
58	10.12	Proposed Ramsar sites	0	0	0	0	0

59	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
59	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
59	10.15	Nitrate Sensitive Areas	0	0	0	0	0
59	**10.16**	**Nitrate Vulnerable Zones**	1	0	1	0	2
61	10.17	SSSI Impact Risk Zones	0	-	-	-	-
61	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
62	11.1	World Heritage Sites	0	0	0	-	-
63	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
63	11.3	National Parks	0	0	0	-	-
63	**11.4**	**Listed Buildings**	0	0	1	-	-
64	11.5	Conservation Areas	0	0	0	-	-
64	11.6	Scheduled Ancient Monuments	0	0	0	-	-
64	**11.7**	**Registered Parks and Gardens**	0	0	1	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
65	**12.1**	**Agricultural Land Classification**	Grade 3 (within 250m)				
66	12.2	Open Access Land	0	0	0	-	-
66	12.3	Tree Felling Licences	0	0	0	-	-
66	12.4	Environmental Stewardship Schemes	0	0	0	-	-
66	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
67	13.1	Priority Habitat Inventory	0	0	0	-	-
67	13.2	Habitat Networks	0	0	0	-	-
67	13.3	Open Mosaic Habitat	0	0	0	-	-
67	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
68	**14.1**	**10k Availability**	Identified (within 500m)				
69	**14.2**	**Artificial and made ground (10k)**	1	0	2	3	-
71	14.3	Superficial geology (10k)	0	0	0	0	-

71	14.4	Landslip (10k)	0	0	0	0	-
72	14.5	Bedrock geology (10k)	5	0	7	23	-
74	14.6	Bedrock faults and other linear features (10k)	3	0	2	26	-
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)	1	0	2	2	-
79	15.3	Artificial ground permeability (50k)	1	0	-	-	-
80	15.4	Superficial geology (50k)	0	0	0	0	-
80	15.5	Superficial permeability (50k)	None (within 50m)				
80	15.6	Landslip (50k)	0	0	0	0	-
80	15.7	Landslip permeability (50k)	None (within 50m)				
81	15.8	Bedrock geology (50k)	3	0	7	5	-
82	15.9	Bedrock permeability (50k)	Identified (within 50m)				
83	15.10	Bedrock faults and other linear features (50k)	3	0	4	17	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
85	16.1	BGS Boreholes	0	1	42	-	-
Page	Section	Natural ground subsidence					
88	17.1	Shrink swell clays	Very low (within 50m)				
89	17.2	Running sands	Very low (within 50m)				
91	17.3	Compressible deposits	Very low (within 50m)				
93	17.4	Collapsible deposits	Very low (within 50m)				
94	17.5	Landslides	Very low (within 50m)				
95	17.6	Ground dissolution of soluble rocks	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
96	18.1	Natural cavities	0	0	0	0	-
97	18.2	BritPits	1	2	11	8	-
100	18.3	Surface ground workings	0	2	17	-	-
101	18.4	Underground workings	0	0	2	0	15
102	18.5	Historical Mineral Planning Areas	0	0	0	0	-

102	**18.6**	**Non-coal mining**	1	0	0	1	2
103	18.7	Mining cavities	0	0	0	0	0
103	18.8	JPB mining areas	None (within 0m)				
104	**18.9**	**Coal mining**	Identified (within 0m)				
104	18.10	Brine areas	None (within 0m)				
104	18.11	Gypsum areas	None (within 0m)				
104	18.12	Tin mining	None (within 0m)				
104	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
105	**19.1**	**Radon**	Between 1% and 3% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
107	**20.1**	**BGS Estimated Background Soil Chemistry**	9	3	-	-	-
108	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
108	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
109	21.1	Underground railways (London)	0	0	0	-	-
109	21.2	Underground railways (Non-London)	0	0	0	-	-
109	21.3	Railway tunnels	0	0	0	-	-
109	21.4	Historical railway and tunnel features	0	0	0	-	-
109	21.5	Royal Mail tunnels	0	0	0	-	-
110	21.6	Historical railways	0	0	0	-	-
110	21.7	Railways	0	0	0	-	-
110	21.8	Crossrail 1	0	0	0	0	-
110	21.9	Crossrail 2	0	0	0	0	-
110	21.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 01/07/2018

Site Area: 7.23ha

Recent site history - 2013 aerial photograph

Capture Date: 07/06/2013

Site Area: 7.23ha

Recent site history - 2012 aerial photograph

Capture Date: 26/03/2012

Site Area: 7.23ha

Recent site history - 2009 aerial photograph

Capture Date: 11/09/2009

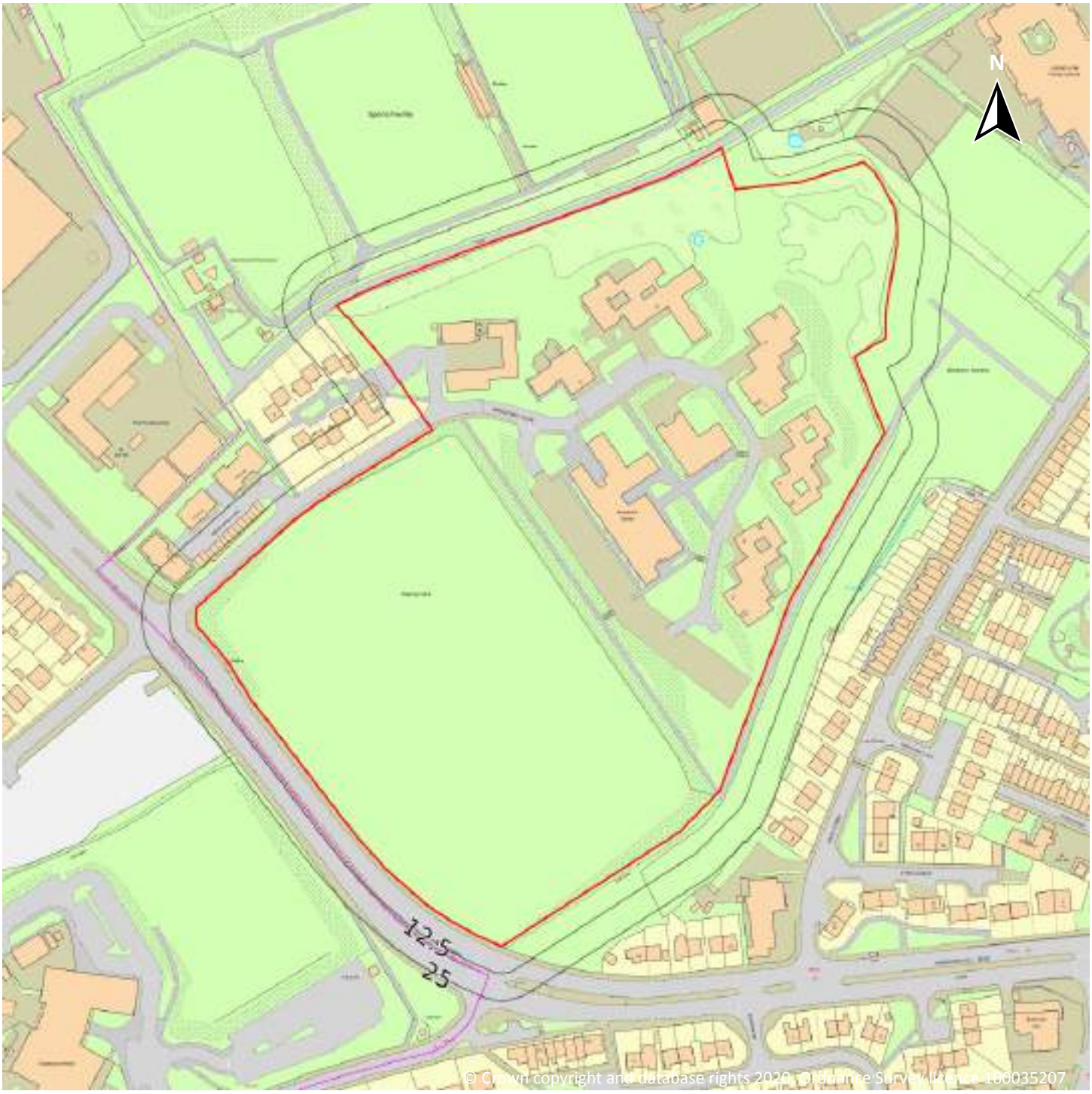
Site Area: 7.23ha

Recent site history - 1999 aerial photograph

Capture Date: 10/07/1999

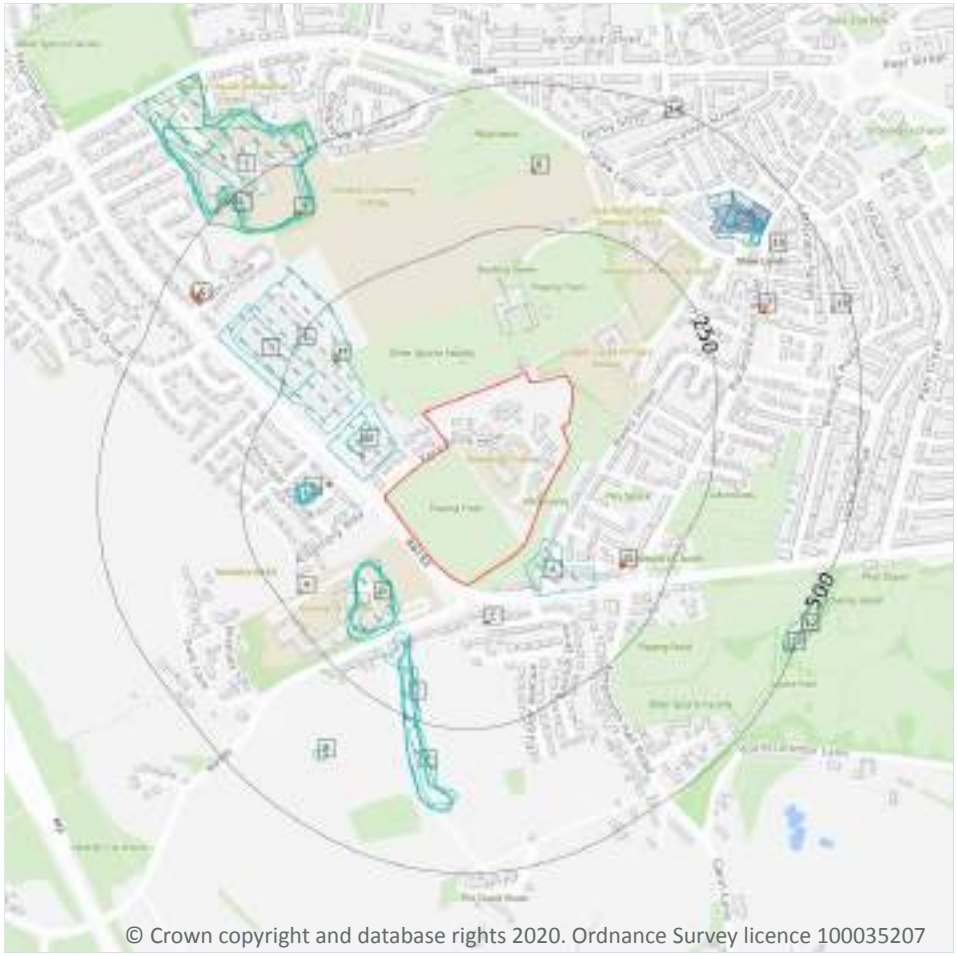
Site Area: 7.23ha

OS MasterMap site plan



Site Area: 7.23ha

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	38

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 14**

ID	Location	Land use	Dates present	Group ID
A	26m E	Brick Field	1850	1428451

ID	Location	Land use	Dates present	Group ID
B	43m NW	Fire and Ambulance Station	1973 - 1982	1469911
A	44m SE	Unspecified Heap	1850	1417624
D	74m SW	Unspecified Heap	1966	1417623
D	81m SW	Refuse Heap	1938	1495446
B	81m NW	Fever Hospital	1993	1422016
D	81m SW	Refuse Heap	1948	1465004
D	83m SW	Refuse Heap	1951	1496027
1	106m W	Unspecified Warehouse	1993	1418717
E	111m W	Unspecified Pit	1890 - 1904	1500945
E	113m W	Unspecified Pit	1951	1531910
E	119m W	Unspecified Pit	1948	1541023
E	121m W	Unspecified Pit	1938	1541914
E	122m W	Sandstone Quarry	1850	1451613
F	124m SW	Unspecified Pits	1938	1479746
F	127m SW	Unspecified Pits	1951	1514217
F	135m SW	Unspecified Pits	1948	1501992
2	165m SW	Unspecified Pit	1966	1455321
H	174m NW	Unspecified Tank	1982	1433410
3	201m W	Unspecified Works	1982	1438961
4	211m SW	Unspecified Pump	1850	1456724
5	260m S	Unspecified Pit	1966	1455323
I	356m NE	Unspecified Mill	1948	1544561
8	374m SW	Unspecified Quarry	1904	1428041
I	380m NE	Unspecified Mill	1951	1519666
I	383m NE	Sawmill	1850	1419538
I	385m NE	Unspecified Mill	1938	1526790
J	397m NW	Unspecified Factories	1982 - 1993	1479904
J	401m NW	Unspecified Quarry	1966	1428050

ID	Location	Land use	Dates present	Group ID
J	407m NW	Old Clay Pit	1951	1408275
J	408m NW	Clay Pit	1938 - 1948	1534585
J	409m NW	Unspecified Disused Pit	1973	1431756
10	416m NE	Unspecified Pump	1850	1456730
L	452m NW	Unspecified Ground Workings	1993	1414407
11	468m E	Unspecified Shaft	1850	1425321
12	477m E	Old Sandstone Quarry	1850	1421996
13	479m E	Unspecified Quarry	1938	1428046
J	482m NW	Tramway Sidings	1938 - 1948	1491835

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**6**

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 14**

ID	Location	Land use	Dates present	Group ID
H	172m NW	Unspecified Tank	1974 - 1983	237018
9	406m NW	Unspecified Tank	1991	228987
14	480m N	Unspecified Tank	1959 - 1981	233869
L	488m NW	Tanks	1988 - 1991	239026
L	497m NW	Tanks	1988 - 1991	242425
L	498m NW	Tanks	1988 - 1991	240581

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	11

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 14**

ID	Location	Land use	Dates present	Group ID
C	69m SE	Electricity Substation	1969 - 1991	141705
C	70m SE	Electricity Substation	-	128809
B	74m NW	Electricity Substation	1974 - 1991	144598
E	95m W	Electricity Substation	1974 - 1991	146594
G	166m E	Electricity Substation	1969 - 1991	140766
G	166m E	Electricity Substation	1970	138030
G	167m E	Electricity Substation	-	128636
6	346m N	Electricity Substation	1991	131132
7	350m E	Electricity Substation	1989 - 1993	136712
K	430m NW	Electricity Substation	1969 - 1970	142539
K	438m NW	Electricity Substation	1991	142452

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	2

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 14**

ID	Location	Land use	Dates present	Group ID
I	359m NE	Garage	1981	41972
I	413m NE	Garage	1959 - 1960	45779

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	46

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

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

ID	Location	Land Use	Date	Group ID
A	26m E	Brick Field	1850	1428451
B	43m NW	Fire and Ambulance Station	1973	1469911
B	43m NW	Fire and Ambulance Station	1982	1469911

ID	Location	Land Use	Date	Group ID
A	44m SE	Unspecified Heap	1850	1417624
D	74m SW	Unspecified Heap	1966	1417623
D	81m SW	Refuse Heap	1938	1495446
B	81m NW	Fever Hospital	1993	1422016
D	81m SW	Refuse Heap	1948	1465004
D	81m SW	Refuse Heap	1948	1465004
D	83m SW	Refuse Heap	1951	1496027
1	106m W	Unspecified Warehouse	1993	1418717
E	111m W	Unspecified Pit	1890	1500945
E	113m W	Unspecified Pit	1951	1531910
E	119m W	Unspecified Pit	1948	1541023
E	119m W	Unspecified Pit	1948	1541023
E	121m W	Unspecified Pit	1938	1541914
E	121m W	Unspecified Pit	1904	1500945
E	122m W	Sandstone Quarry	1850	1451613
F	124m SW	Unspecified Pits	1938	1479746
F	127m SW	Unspecified Pits	1951	1514217
F	135m SW	Unspecified Pits	1948	1501992
F	135m SW	Unspecified Pits	1948	1501992
2	165m SW	Unspecified Pit	1966	1455321
H	174m NW	Unspecified Tank	1982	1433410
3	201m W	Unspecified Works	1982	1438961
4	211m SW	Unspecified Pump	1850	1456724
5	260m S	Unspecified Pit	1966	1455323
J	356m NE	Unspecified Mill	1948	1544561
7	374m SW	Unspecified Quarry	1904	1428041
J	380m NE	Unspecified Mill	1951	1519666
J	383m NE	Sawmill	1850	1419538

ID	Location	Land Use	Date	Group ID
J	385m NE	Unspecified Mill	1938	1526790
K	397m NW	Unspecified Factories	1993	1479904
K	397m NW	Unspecified Factories	1982	1479904
K	401m NW	Unspecified Quarry	1966	1428050
K	407m NW	Old Clay Pit	1951	1408275
K	408m NW	Clay Pit	1948	1534585
K	409m NW	Unspecified Disused Pit	1973	1431756
9	416m NE	Unspecified Pump	1850	1456730
K	440m NW	Clay Pit	1938	1534585
M	452m NW	Unspecified Ground Workings	1993	1414407
10	468m E	Unspecified Shaft	1850	1425321
11	477m E	Old Sandstone Quarry	1850	1421996
12	479m E	Unspecified Quarry	1938	1428046
K	482m NW	Tramway Sidings	1938	1491835
K	487m NW	Tramway Sidings	1948	1491835

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**13**

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

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

ID	Location	Land Use	Date	Group ID
H	172m NW	Unspecified Tank	1974	237018
H	172m NW	Unspecified Tank	1983	237018
H	172m NW	Unspecified Tank	1983	237018
8	406m NW	Unspecified Tank	1991	228987
N	480m N	Unspecified Tank	1960	233869

ID	Location	Land Use	Date	Group ID
N	480m N	Unspecified Tank	1959	233869
N	481m N	Unspecified Tank	1981	233869
M	488m NW	Tanks	1988	239026
M	488m NW	Tanks	1991	239026
M	497m NW	Tanks	1988	242425
M	497m NW	Tanks	1991	242425
M	498m NW	Tanks	1988	240581
M	498m NW	Tanks	1991	240581

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m **24**

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

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

ID	Location	Land Use	Date	Group ID
C	69m SE	Electricity Substation	1969	141705
C	70m SE	Electricity Substation	1970	141705
C	70m SE	Electricity Substation	-	128809
C	70m SE	Electricity Substation	1991	141705
C	70m SE	Electricity Substation	1991	141705
B	74m NW	Electricity Substation	1983	144598
B	74m NW	Electricity Substation	1983	144598
B	74m NW	Electricity Substation	1991	144598
B	75m NW	Electricity Substation	1974	144598
E	95m W	Electricity Substation	1983	146594
E	95m W	Electricity Substation	1983	146594
E	95m W	Electricity Substation	1991	146594

ID	Location	Land Use	Date	Group ID
E	96m W	Electricity Substation	1974	146594
G	166m E	Electricity Substation	1991	140766
G	166m E	Electricity Substation	1969	140766
G	166m E	Electricity Substation	1970	138030
G	167m E	Electricity Substation	-	128636
6	346m N	Electricity Substation	1991	131132
I	350m E	Electricity Substation	1993	136712
I	350m E	Electricity Substation	1989	136712
L	430m NW	Electricity Substation	1970	142539
L	437m NW	Electricity Substation	1969	142539
L	438m NW	Electricity Substation	1991	142452
L	438m NW	Electricity Substation	1991	142452

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	**3**

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

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

ID	Location	Land Use	Date	Group ID
J	359m NE	Garage	1981	41972

ID	Location	Land Use	Date	Group ID
J	413m NE	Garage	1960	45779
J	413m NE	Garage	1959	45779

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill

Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	1

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

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

ID	Location	Details		
2	490m NW	Site Address: Disused Quarry, Dodworth Road, Barnsley, Yorkshire Licence Holder Address: -	Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: Barnsley County Borough Council Licence Holder: - First Recorded 31/12/1968 Last Recorded: -

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	1

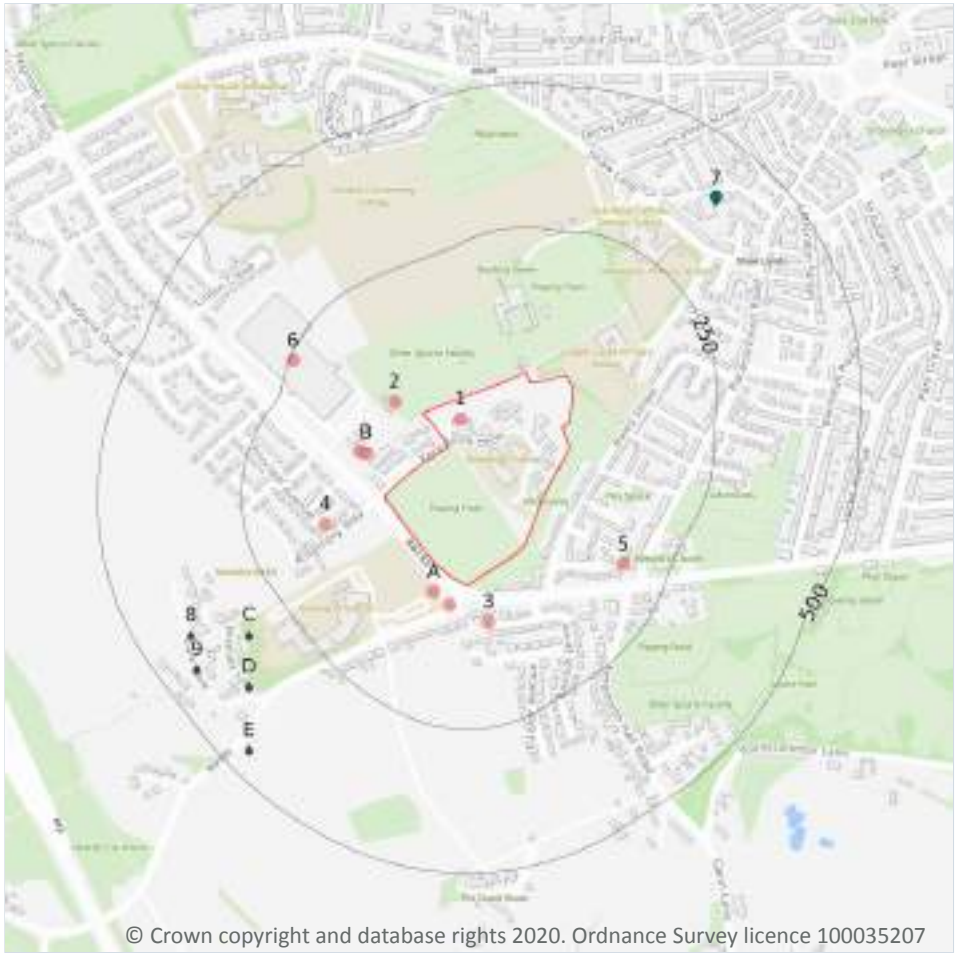
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

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

ID	Location	Site	Reference	Category	Sub-Category	Description
1	82m NW	The Cooperative NDC Broadway S70 6RA	EPR/XE5152EQ/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place

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

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

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

Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m	10

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 28**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Chimney**	**South Yorkshire, S70**	**Chimneys**	**Industrial Features**
A	39m SW	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities
A	44m SW	Gas Governor	South Yorkshire, S70	Gas Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
2	53m W	Mast (Telecommunication)	South Yorkshire, S70	Telecommunications Features	Infrastructure and Facilities
3	73m SE	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities
B	77m NW	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities
B	84m NW	Barnsley Fire Station	Barnsley Fire Station, Broadway, Barnsley, South Yorkshire, S70 6RA	Fire Brigade Stations	Central and Local Government
4	113m W	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities
5	171m E	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities
6	244m W	Warehouse	South Yorkshire, S70	Container and Storage	Transport, Storage and Delivery

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	**0**

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	1

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

Features are displayed on the Current industrial land use map on **page 28**

ID	Location	Address	Details	
7	403m NE	Seals Packaging And Gaskets, Shaw Lane, Barnsley, S70 6HE	Process: Asbestos Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	12

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

Features are displayed on the Current industrial land use map on **page 28**

ID	Location	Address	Details	
C	330m SW	KERESFORTH HOUSE, DARK LANE, OFF KERESFORTH HILL ROAD, BARNSLEY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3815 Permit Version: 1 Receiving Water: TRIBUTARY OF DODWORTH DYKE	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 03/09/1984 Effective Date: 03/09/1984 Revocation Date: 15/01/1985
C	330m SW	KERESFORTH HOUSE, DARK LANE, OFF KERESFORTH HILL ROAD, BARNSLEY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3815 Permit Version: 2 Receiving Water: TRIBUTARY OF DODWORTH DYKE	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 16/01/1985 Effective Date: 16/01/1985 Revocation Date: 14/11/2006
D	385m SW	1 BRAMLEY CARR, KERESFORTH HILL, BARNSLEY	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: WRA8056 Permit Version: 2 Receiving Water: LAND	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 23/09/2003 Effective Date: 23/09/2003 Revocation Date: 25/07/2012
D	385m SW	1 BRAMLEY CARR, KERESFORTH HILL, BARNSLEY	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: WRA8056 Permit Version: 3 Receiving Water: LAND	Status: VARIED UNDER EPR 2010 Issue date: 26/07/2012 Effective Date: 26/07/2012 Revocation Date: -
8	411m SW	1 BRAMLEY CARR, KERESFORTH HILL, BARNSLEY	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: WRA8056 Permit Version: 1 Receiving Water: LAND	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 03/09/2003 Effective Date: 03/09/2003 Revocation Date: 22/09/2003
9	438m SW	CHERRY TREES, DARK LANE, BARNSLEY	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: WRA7645 Permit Version: 1 Receiving Water: TRIB OF DODWORTH DYKE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 20/11/2000 Effective Date: 20/11/2000 Revocation Date: -
E	458m SW	DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSLEY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 1 Receiving Water: TRIB OF DODWORTH DYKE	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 29/06/1982 Effective Date: 29/06/1982 Revocation Date: 25/04/1983

ID	Location	Address	Details	
E	458m SW	DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSLEY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 2 Receiving Water: TRIB OF DODWORTH DYKE	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 26/04/1983 Effective Date: 26/04/1983 Revocation Date: 09/10/1997
E	458m SW	DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSLEY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 3 Receiving Water: TRIB OF DODWORTH DYKE	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 10/10/1997 Effective Date: 10/10/1997 Revocation Date: -
E	458m SW	DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSLEY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 1 Receiving Water: TRIB OF DODWORTH DYKE	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 29/06/1982 Effective Date: 29/06/1982 Revocation Date: 25/04/1983
E	458m SW	DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSLEY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 2 Receiving Water: TRIB OF DODWORTH DYKE	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 26/04/1983 Effective Date: 26/04/1983 Revocation Date: 09/10/1997
E	458m SW	DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSLEY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 3 Receiving Water: TRIB OF DODWORTH DYKE	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 10/10/1997 Effective Date: 10/10/1997 Revocation Date: -

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	0

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

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer

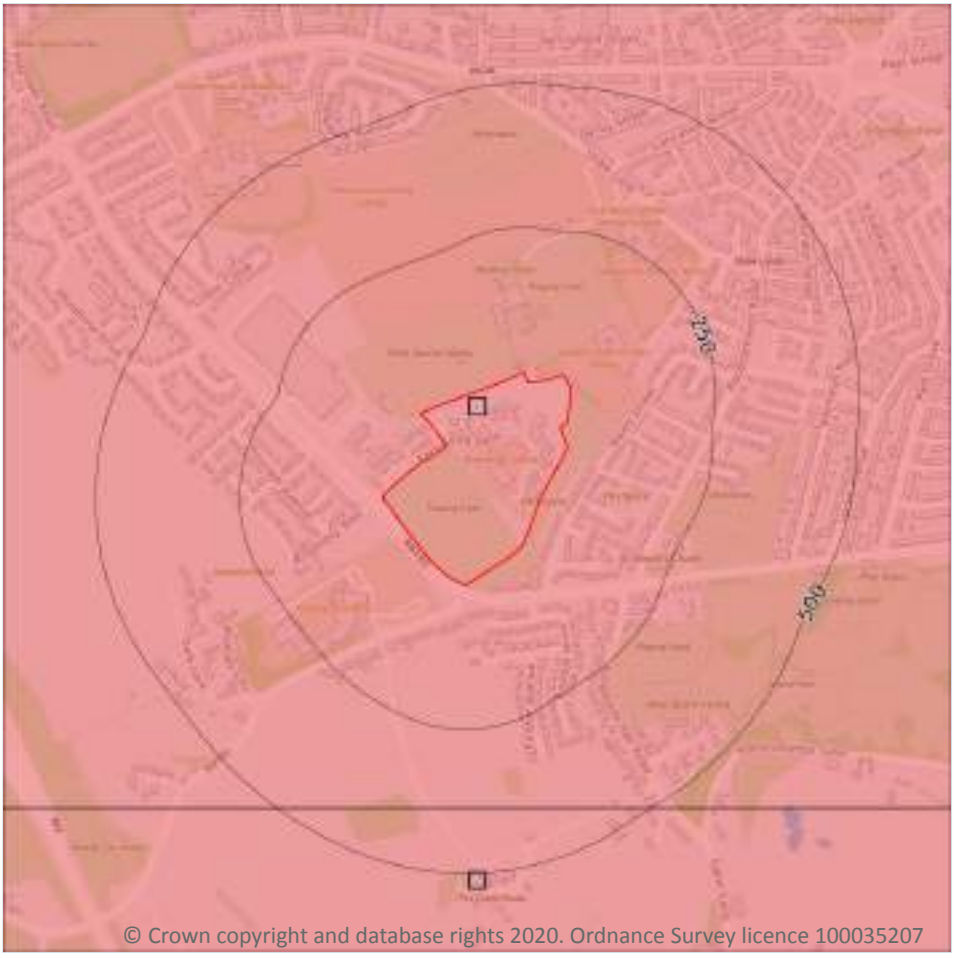
5.1 Superficial aquifer

Records within 500m	0

Aquifer status of groundwater held within superficial geology.

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

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

5.2 Bedrock aquifer

Records within 500m	2

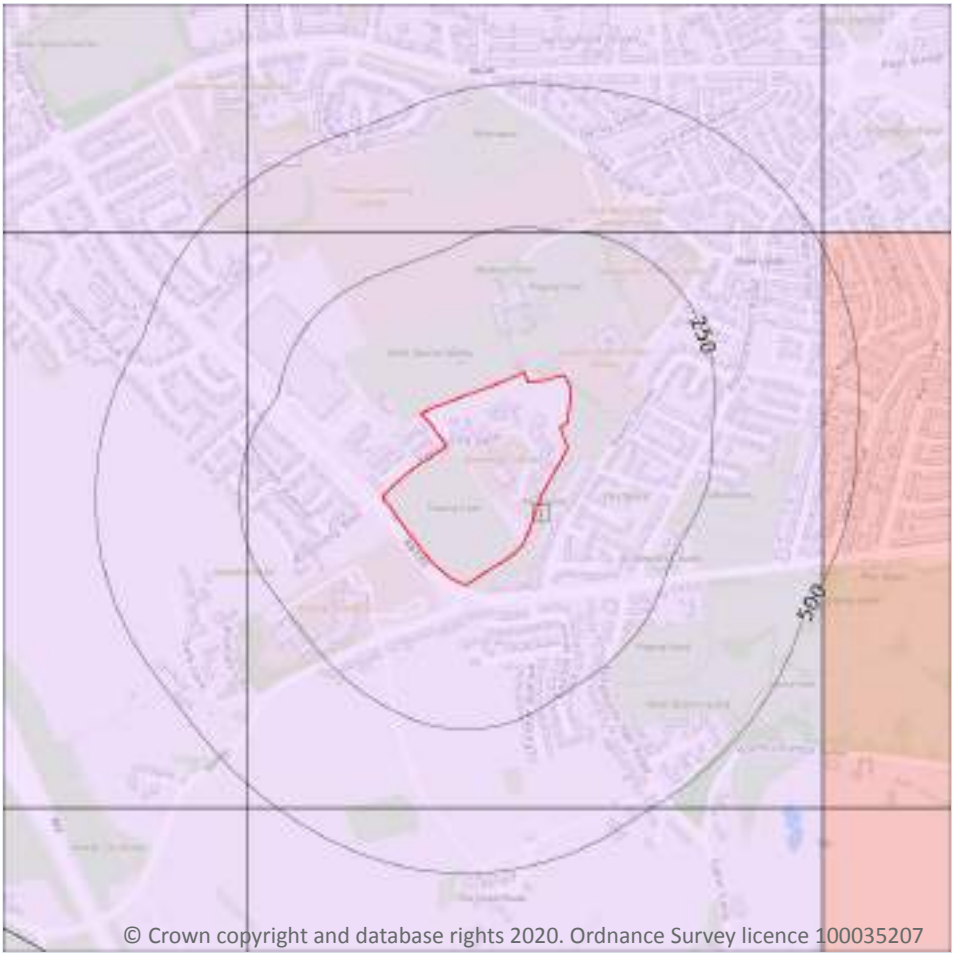
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 37**

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	386m S	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	1

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 39**

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**

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

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

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

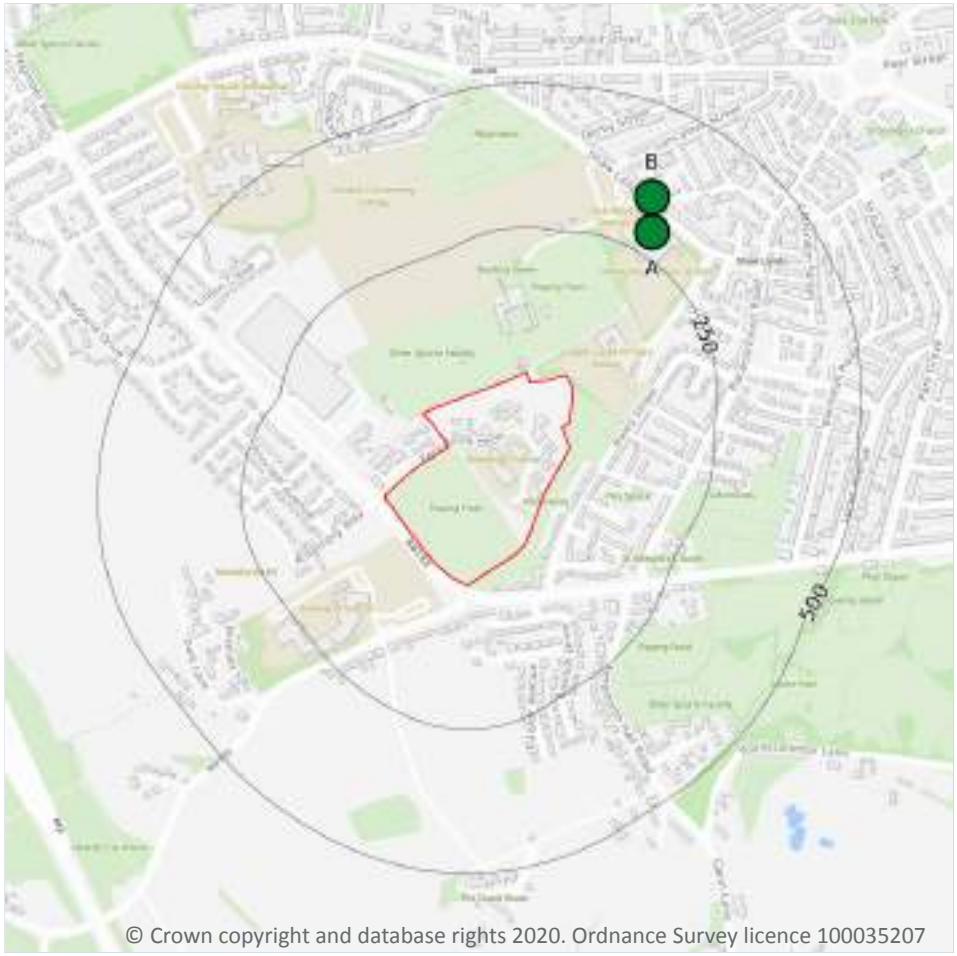
5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	7

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 41**

ID	Location	Details	
A	291m NE	Status: Historical Licence No: 2/27/08/110 Details: Water Bottling Direct Source: GROUNDWATERS Point: WELL/SPRING - SANDSTONE/MIDDLE COAL MEASURES - SHAW LANE Data Type: Point Name: SHELDALE WATER LIMITED Easting: 433700 Northing: 406000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 23/03/1994 Expiry Date: 31-Dec-03 Issue No: 100 Version Start Date: 01/12/1999 Version End Date: -
A	291m NE	Status: Historical Licence No: 2/27/08/110 Details: Water Bottling Direct Source: GROUNDWATERS Point: SPRING-SANDSTONE/MIDDLE COAL MEASURES-SHAW LANE Data Type: Point Name: SHELDALE DEVELOPMENTS LTD Easting: 433700 Northing: 406000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 23/03/1994 Expiry Date: 31/12/2003 Issue No: 101 Version Start Date: 08/04/2003 Version End Date: -
B	344m NE	Status: Historical Licence No: 2/27/08/133 Details: Water Bottling Direct Source: GROUNDWATERS Point: SPRING-SANDSTONE/MIDDLE COAL MEASURES-SHAW LANE Data Type: Point Name: SHELDALE DEVELOPMENTS LTD Easting: 433700 Northing: 406060	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/01/2004 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/01/2004 Version End Date: -
B	344m NE	Status: Historical Licence No: 2/27/08/133 Details: Water Bottling Direct Source: GROUNDWATERS Point: SPRING - SANDSTONE&MIDDLE COAL MEASURES - BARNSLEY Data Type: Point Name: SHELDALE DEVELOPMENTS LTD Easting: 433700 Northing: 406060	Annual Volume (m^3): 350000 Max Daily Volume (m^3): 1400 Original Application No: - Original Start Date: 01/01/2004 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/01/2004 Version End Date: -

ID	Location	Details	
-	1695m SW	Status: Active Licence No: 2/27/08/145/R01 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: GROUNDWATERS Point: SILKSTONE MINESHAFT-COAL MEASURES-STRAFFORDCOLLIERY-BARNSLEY Data Type: Point Name: THE COAL AUTHORITY Easting: 432200 Northing: 404154	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/04/2017 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 01/04/2017 Version End Date: -
-	1698m SW	Status: Historical Licence No: 2/27/08/145 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: GROUNDWATERS Point: SILKSTONE MINESHAFT-COAL MEASURES-STRAFFORDCOLLIERY-BARNSLEY Data Type: Point Name: THE COAL AUTHORITY Easting: 432200 Northing: 404150	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/12/2008 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 17/12/2008 Version End Date: -
-	1910m E	Status: Active Licence No: NE/027/0008/014 Details: Spray Irrigation - Direct Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - OAKWELL ROAD - BARNSLEY Data Type: Point Name: Barnsley Football Club 2002 Ltd Easting: 435336 Northing: 406441	Annual Volume (m^3): 21,400 Max Daily Volume (m^3): 100 Original Application No: - Original Start Date: 29/06/2015 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 29/06/2015 Version End Date: -

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	4

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.

Features are displayed on the Abstractions and Source Protection Zones map on **page 41**

ID	Location	Details	
A	291m NE	Status: Historical Licence No: 2/27/08/110 Details: Water Bottling Direct Source: GROUNDWATERS Point: WELL/SPRING - SANDSTONE/MIDDLE COAL MEASURES - SHAW LANE Data Type: Point Name: SHELDALE WATER LIMITED Easting: 433700 Northing: 406000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 23/03/1994 Expiry Date: 31-Dec-03 Issue No: 100 Version Start Date: 01/12/1999 Version End Date: -
A	291m NE	Status: Historical Licence No: 2/27/08/110 Details: Water Bottling Direct Source: GROUNDWATERS Point: SPRING-SANDSTONE/MIDDLE COAL MEASURES-SHAW LANE Data Type: Point Name: SHELDALE DEVELOPMENTS LTD Easting: 433700 Northing: 406000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 23/03/1994 Expiry Date: 31/12/2003 Issue No: 101 Version Start Date: 08/04/2003 Version End Date: -
B	344m NE	Status: Historical Licence No: 2/27/08/133 Details: Water Bottling Direct Source: GROUNDWATERS Point: SPRING-SANDSTONE/MIDDLE COAL MEASURES-SHAW LANE Data Type: Point Name: SHELDALE DEVELOPMENTS LTD Easting: 433700 Northing: 406060	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/01/2004 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/01/2004 Version End Date: -

ID	Location	Details	
B	344m NE	Status: Historical Licence No: 2/27/08/133 Details: Water Bottling Direct Source: GROUNDWATERS Point: SPRING - SANDSTONE&MIDDLE COAL MEASURES - BARNSLEY Data Type: Point Name: SHELDALE DEVELOPMENTS LTD Easting: 433700 Northing: 406060	Annual Volume (m^3): 350000 Max Daily Volume (m^3): 1400 Original Application No: - Original Start Date: 01/01/2004 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/01/2004 Version End Date: -

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

5.9 Source Protection Zones

Records within 500m	**0**

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m	**0**

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

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

6 Hydrology

Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	**1**

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

Features are displayed on the Hydrology map on **page 46**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	26m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	1

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

Features are displayed on the Hydrology map on **page 46**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 46**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	**On site**	**River WB catchment**	**Dearne from Cawthorne Dyke to Lundwood STW**	**GB104027063171**	**Dearne**	**Don and Rother**

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on **page 46**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	2094m NE	River	Dearne from Cawthorne Dyke to Lundwood STW	GB104027063171	Moderate	Good	Moderate	2016

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

6.5 WFD Groundwater bodies

Records on site	1

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

Features are displayed on the Hydrology map on **page 46**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	**On site**	**Don & Rother Millstone grit & Coal Measures**	**GB40402G992300**	**Poor**	**Poor**	**Good**	**2015**

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

7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding

Site Outline
Search buffers in metres (m)

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

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

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

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

8.1 Surface water flooding

Highest risk on site	**1 in 100 year, 0.1m - 0.3m**
Highest risk within 50m	**1 in 30 year, Greater than 1.0m**

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

Features are displayed on the Surface water flooding map on **page 52**

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

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

Return period	Maximum modelled depth
1 in 1000 year	Between 0.1m and 0.3m
1 in 250 year	Between 0.1m and 0.3m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding

9.1 Groundwater flooding

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

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

Features are displayed on the Groundwater flooding map on **page 54**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations

Site Outline

Search buffers in metres (m)

Local Nature Reserves (LNR)

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	1

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

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

ID	Location	Name	Data source
-	1833m S	Worsborough Country Park	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	1

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

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

ID	Location	Name	Woodland Type
-	1986m SW	LOWE WOOD	Ancient Replanted Woodland

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	2

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

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

ID	Location	Name	Local Authority name
1	95m S	South and West Yorkshire	Barnsley
-	1692m SE	South and West Yorkshire	Barnsley

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	4

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

Location	Name	Type	NVZ ID	Status
On site	**River Dearne NVZ**	**Surface Water**	**S278**	**Existing**

Location	Name	Type	NVZ ID	Status
225m NW	River Dearne NVZ	Surface Water	S278	Existing
528m SE	River Dearne NVZ	Surface Water	S278	Existing
587m NE	River Dearne NVZ	Surface Water	S278	Existing

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

SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site	0

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.

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

Site Outline

Search buffers in metres (m)

- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	1

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

Features are displayed on the Visual and cultural designations map on **page 62**

ID	Location	Name	Grade	Reference Number	Listed date
2	232m E	Church Of St Edward, Barnsley, S70	II	1033368	14/12/1998

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

11.7 Registered Parks and Gardens

Records within 250m	1

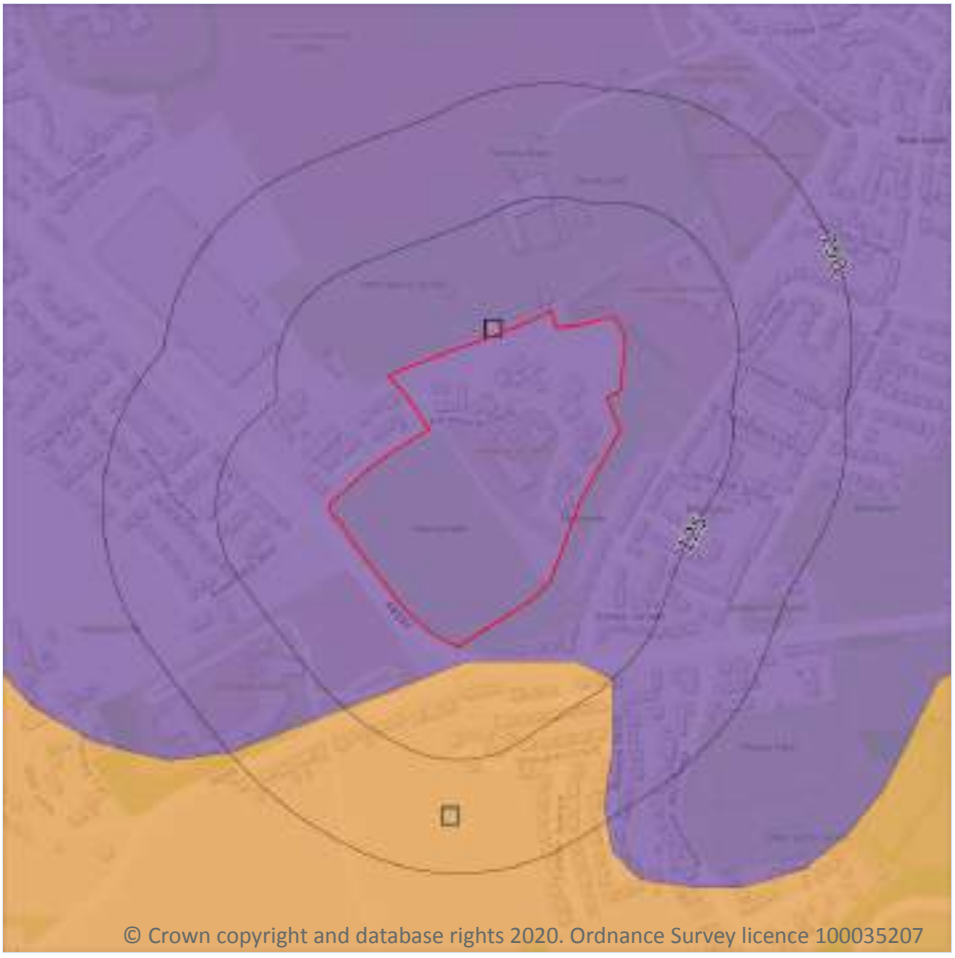
Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the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

Features are displayed on the Visual and cultural designations map on **page 62**

ID	Location	Name	Grade
1	231m SE	Locke Park	II

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	2

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

Features are displayed on the Agricultural designations map on **page 65**

ID	Location	Classification	Description
1	**On site**	**Urban**	**-**
2	18m S	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations

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.

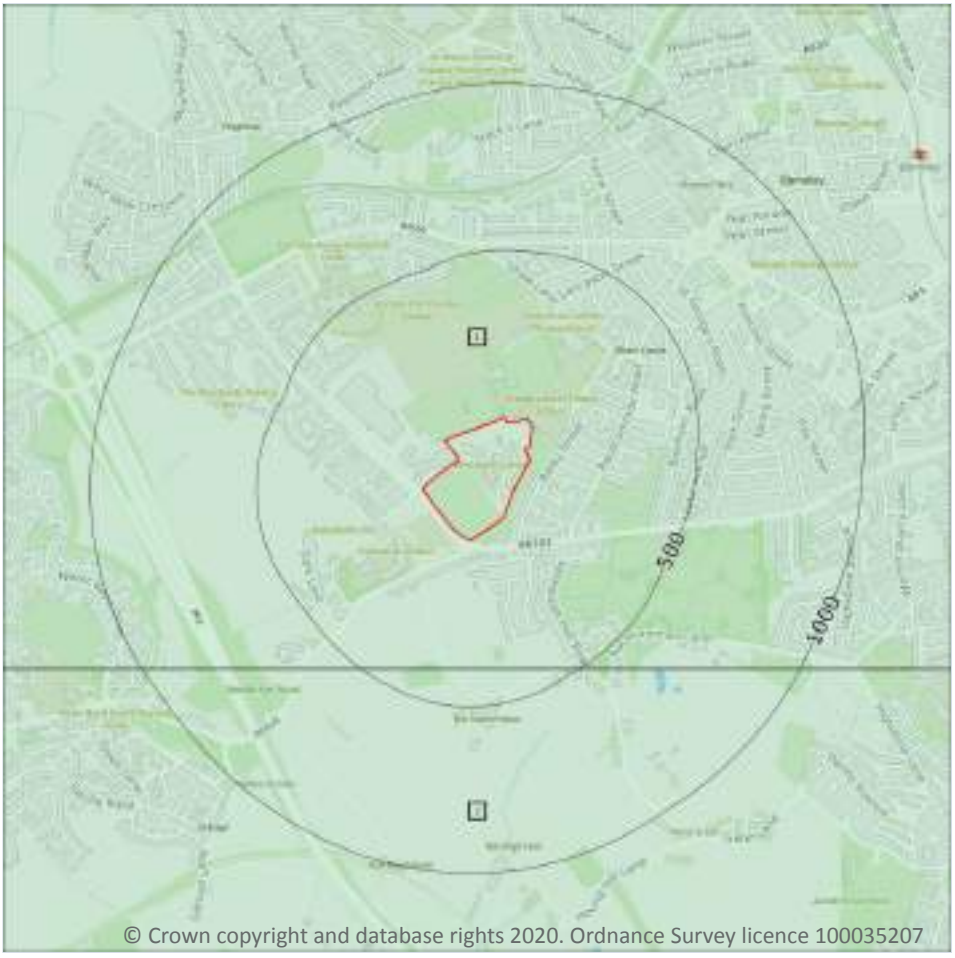
13.4 Limestone Pavement Orders

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 68**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SE30NW**
2	386m S	Full	Full	Full	Full	SE30SW

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	6

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 69**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**MGR-ARTDP**	**Made Ground (Undivided)**	**Artificial Deposit**
2	134m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	230m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	403m W	WMGR-ARTDP	Infilled Ground	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
5	435m SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	467m SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock

Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m	35

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 72**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**PMCM-MDSS**	**Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone**	**Bolsovian Sub-age - Duckmantian Sub-age**
3	**On site**	**PMCM-SDST**	**Pennine Middle Coal Measures Formation - Sandstone**	**Bolsovian Sub-age - Duckmantian Sub-age**

ID	Location	LEX Code	Description	Rock age
4	**On site**	**PMCM-MDSS**	**Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone**	**Bolsovian Sub-age - Duckmantian Sub-age**
7	**On site**	**BNR-SDST**	**Barnsley Rock - Sandstone**	**Duckmantian Sub-age**
8	**On site**	**PMCM-MDSS**	**Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone**	**Bolsovian Sub-age - Duckmantian Sub-age**
9	64m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
10	101m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
12	142m SE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
13	198m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
14	203m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
15	216m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
17	245m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
19	262m E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
21	283m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
22	301m SE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
24	329m SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
25	337m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
28	355m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
29	386m S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
30	386m S	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
33	396m S	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

ID	Location	LEX Code	Description	Rock age
34	397m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
36	399m SE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
38	403m W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
40	427m SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
43	438m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
44	448m SE	KNR-SDST	Kent's Rock - Sandstone	Duckmantian Sub-age
47	452m E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
51	468m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
53	471m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
55	474m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
58	474m SE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
61	476m E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
62	485m E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
63	486m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	**31**

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 72**

ID	Location	Category	Description
2	**On site**	**ROCK**	**Coal seam, inferred**
5	**On site**	**ROCK**	**Coal seam, inferred**
6	**On site**	**FAULT**	**Normal fault, inferred**
11	116m SW	ROCK	Coal seam, inferred
16	216m SW	FAULT	Normal fault, inferred
18	260m SW	ROCK	Coal seam, inferred
20	263m SW	ROCK	Coal seam, inferred
23	301m SE	ROCK	Coal seam, inferred
26	337m NE	FAULT	Normal fault, inferred
27	352m SW	ROCK	Coal seam, inferred
31	387m SW	ROCK	Coal seam, inferred
32	396m S	ROCK	Coal seam, observed
35	398m S	ROCK	Coal seam, observed
37	403m W	ROCK	Coal seam, observed
39	417m W	ROCK	Coal seam, observed
41	435m SW	ROCK	Coal seam, observed
42	436m SW	ROCK	Coal seam, inferred
45	448m SE	ROCK	Coal seam, inferred
46	448m SE	ROCK	Coal seam, observed
48	452m E	ROCK	Coal seam, inferred
49	463m SW	ROCK	Coal seam, observed
50	467m SW	ROCK	Coal seam, observed
52	471m SW	ROCK	Coal seam, inferred
54	472m W	ROCK	Coal seam, inferred
56	474m SW	ROCK	Coal seam, observed
57	474m SW	ROCK	Coal seam, observed
59	475m SW	ROCK	Coal seam, observed
60	476m E	ROCK	Coal seam, observed

ID	Location	Category	Description
64	487m W	ROCK	Coal seam, observed
65	491m SW	ROCK	Coal seam, observed
66	498m SE	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

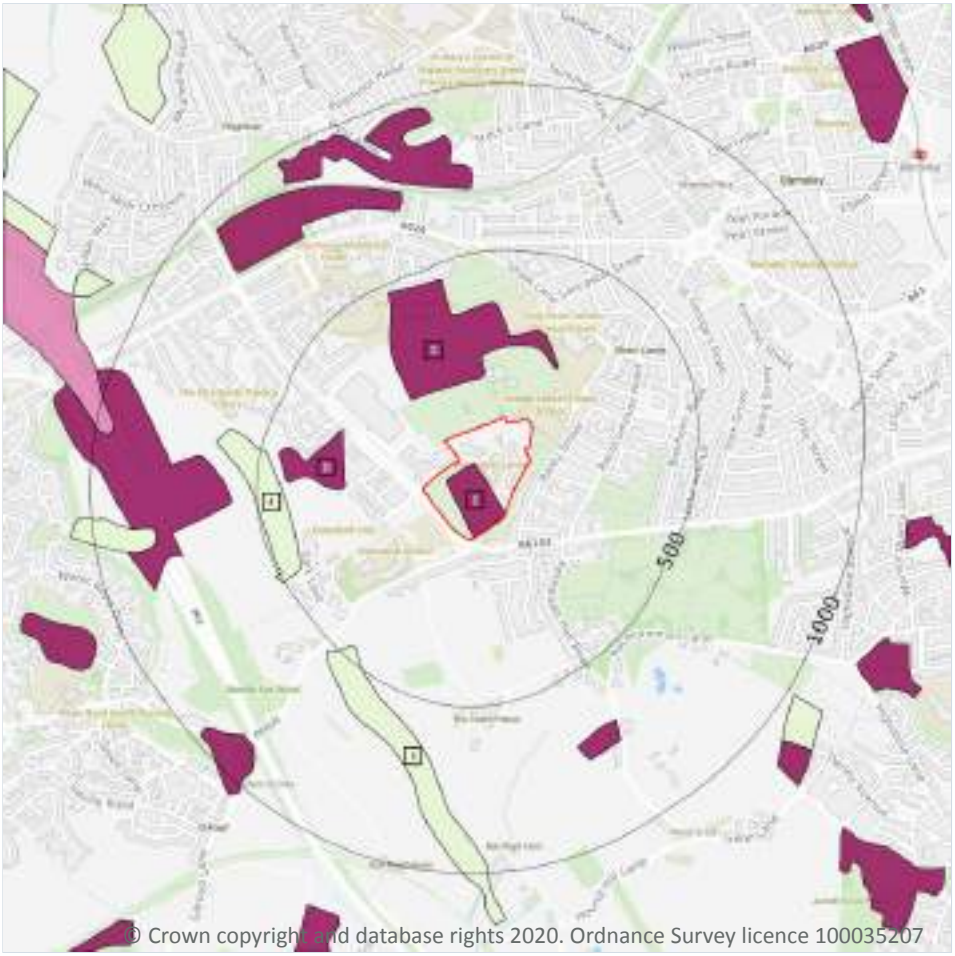
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

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**	**No coverage**	**Full**	**Full**	**Full**	**EW087_barnsley_v4**

This data is sourced from the British Geological Survey.

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



Site Outline

Search buffers in metres (m)

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

15.2 Artificial and made ground (50k)

Records within 500m	5

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 78**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**MGR-ARTDP**	**MADE GROUND (UNDIVIDED)**	**ARTIFICIAL DEPOSIT**
2	134m NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	234m W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	405m W	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

ID	Location	LEX Code	Description	Rock description
5	460m SW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m	**1**

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

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

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	15

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 81**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**PMCM-MDSS**	**PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
5	**On site**	**PMCM-SDST**	**PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE**	**WESTPHALIAN**

ID	Location	LEX Code	Description	Rock age
6	**On site**	**PMCM-MDSS**	**PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
7	64m SW	BNR-SDST	BARNSLEY ROCK - SANDSTONE	WESTPHALIAN
9	104m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10	138m SE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
12	193m SW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
13	206m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
15	217m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	249m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
18	258m SE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
21	336m NE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
24	385m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
26	397m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
27	399m SE	KNR-SDST	KENT'S ROCK - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	**2**

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**
On site	**Fracture**	**Moderate**	**Low**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**24**

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.

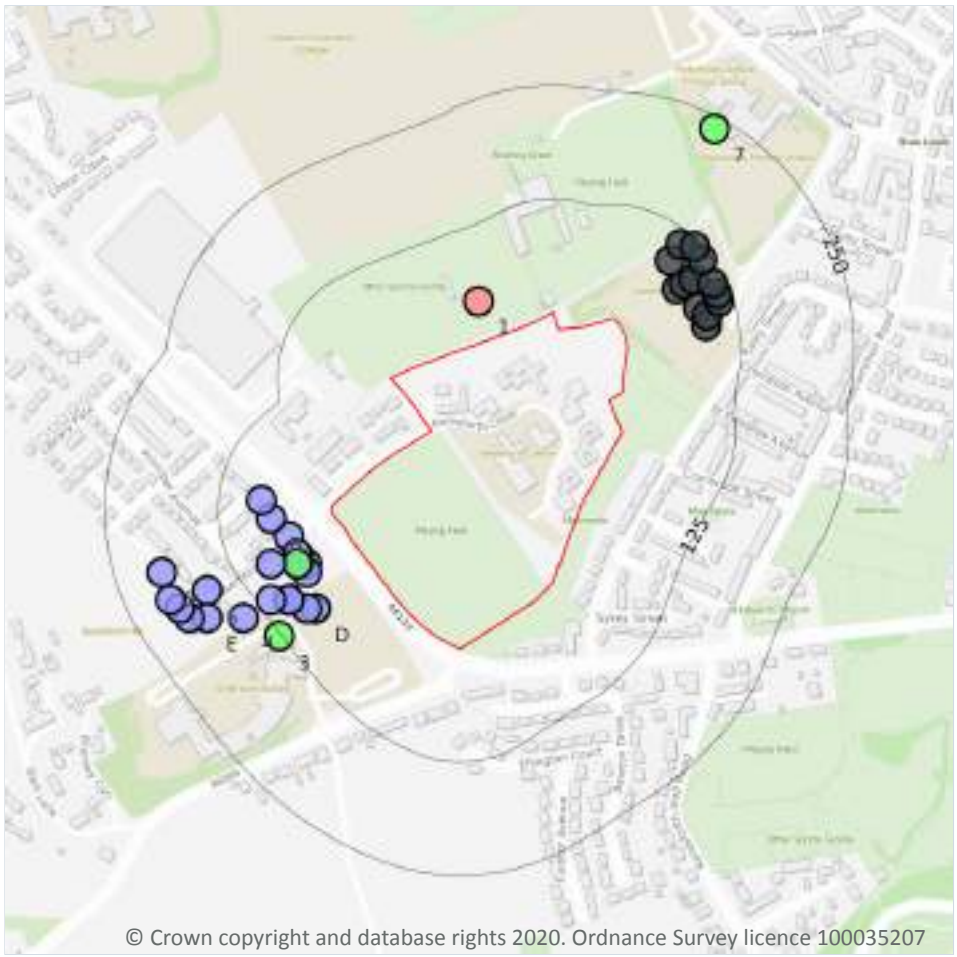
Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 81**

ID	Location	Category	Description
2	**On site**	**FAULT**	**Fault, inferred**
3	**On site**	**ROCK**	**Coal seam, inferred**
4	**On site**	**ROCK**	**Coal seam, inferred**
8	104m SW	ROCK	Coal seam, inferred
11	160m NW	ROCK	Coal seam, inferred
14	217m SW	FAULT	Fault, inferred, displacement unknown
16	249m SW	ROCK	Coal seam, inferred
19	261m SW	ROCK	Coal seam, inferred
20	312m SE	ROCK	Coal seam, inferred
22	336m NE	FAULT	Fault, inferred
23	353m SW	ROCK	Coal seam, inferred
25	385m SW	ROCK	Coal seam, inferred
28	405m W	ROCK	Coal seam, inferred
29	437m SE	ROCK	Coal seam, inferred
30	442m SW	ROCK	Coal seam, inferred
31	452m E	ROCK	Coal seam, inferred
32	460m SW	ROCK	Coal seam, inferred
33	460m SW	ROCK	Coal seam, inferred
34	473m SW	ROCK	Coal seam, inferred
35	475m NW	ROCK	Coal seam, inferred
36	484m SW	ROCK	Coal seam, inferred

ID	Location	Category	Description
37	488m W	ROCK	Coal seam, inferred
38	488m W	ROCK	Coal seam, inferred
39	498m SW	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.

16 Boreholes



Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m	43

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 85**

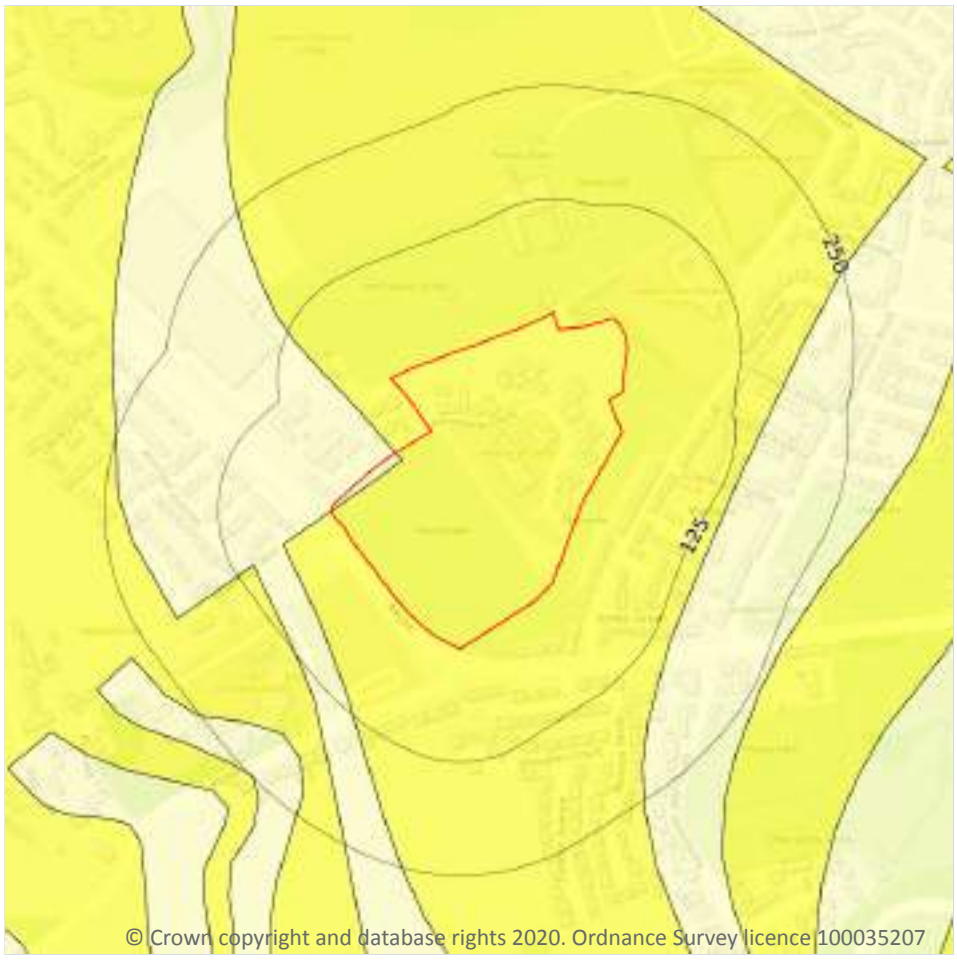
ID	Location	Grid reference	Name	Length	Confidential	Web link
1	44m N	433400 405770	SITE INVESTIGATION BROADWAY BARNSLEY	37.19	N	83872
A	54m SW	433190 405510	SPECIAL SCH BROADWAY 12	3.05	N	84058
A	56m SW	433210 405480	SPECIAL SCH BROADWAY 7	5.49	N	84053

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	58m SW	433200 405490	SPECIAL SCH BROADWAY 11	2.13	N	84057
A	58m SW	433200 405490	SPECIAL SCH BROADWAY 10	4.57	N	84056
A	61m SW	433210 405470	SPECIAL SCH BROADWAY 6	8.84	N	84052
A	65m SW	433200 405480	SPECIAL SCH BROADWAY 8	4.57	N	84054
A	65m SW	433200 405480	SPECIAL SCH BROADWAY 9	8.23	N	84055
A	65m SW	433200 405480	SPECIAL SCH BROADWAY 5	16.46	N	84051
B	68m W	433170 405530	SPECIAL SCH BROADWAY 24	3.05	N	84070
C	74m NE	433618 405783	BARNSLEY SCHOOLS PFI - LONGCAR TPLC5	-	Y	N/A
D	77m SW	433220 405430	SPECIAL SCH BROADWAY 2	11.58	N	84048
D	77m SW	433220 405430	SPECIAL SCH BROADWAY 4	8.84	N	84050
B	78m W	433160 405550	SPECIAL SCH BROADWAY 20	3.05	N	84066
C	84m NE	433627 405788	BARNSLEY SCHOOLS PFI - LONGCAR BHLC5	-	Y	N/A
D	85m SW	433210 405430	SPECIAL SCH BROADWAY 3	7.62	N	84049
C	86m E	433642 405762	BARNSLEY SCHOOLS PFI - LONGCAR TPLC6	-	Y	N/A
2	87m SW	433170 405480	SPECIAL SCH BROADWAY 13	3.05	N	84059
C	89m NE	433611 405814	BARNSLEY SCHOOLS PFI - LONGCAR BHLC1	-	Y	N/A
C	89m E	433651 405742	BARNSLEY SCHOOLS PFI - LONGCAR TPLC4	-	Y	N/A
C	93m E	433652 405754	BARNSLEY SCHOOLS PFI - LONGCAR BHLC7	-	Y	N/A
D	95m SW	433190 405440	SPECIAL SCH BROADWAY 17	3.05	N	84063
D	95m SW	433190 405440	SPECIAL SCH BROADWAY 15	4.57	N	84061
D	95m SW	433190 405440	SPECIAL SCH BROADWAY 16	5.18	N	84062
D	95m SW	433190 405440	SPECIAL SCH BROADWAY 19	3.05	N	84065
D	95m SW	433190 405440	SPECIAL SCH BROADWAY 18	3.05	N	84064
C	96m NE	433637 405794	BARNSLEY SCHOOLS PFI - LONGCAR BHLC2	-	Y	N/A
C	110m E	433665 405770	BARNSLEY SCHOOLS PFI - LONGCAR BHLC3	-	Y	N/A
C	110m NE	433623 405832	BARNSLEY SCHOOLS PFI - LONGCAR TPLC1	-	Y	N/A
D	111m SW	433170 405440	SPECIAL SCH BROADWAY 14	6.1	N	84060
C	111m NE	433663 405778	BARNSLEY SCHOOLS PFI - LONGCAR TPLC3	-	Y	N/A

ID	Location	Grid reference	Name	Length	Confidential	Web link
C	112m NE	433658 405789	BARNSLEY SCHOOLS PFI - LONGCAR BHLC6	-	Y	N/A
C	117m NE	433647 405816	BARNSLEY SCHOOLS PFI - LONGCAR TPLC2	-	Y	N/A
C	119m NE	433638 405830	BARNSLEY SCHOOLS PFI - LONGCAR BHLC4	-	Y	N/A
3	127m SW	433180 405400	SPECIAL SCH BROADWAY 1	11.58	N	84047
4	147m SW	433140 405420	SPECIAL SCH BROADWAY 23	3.05	N	84069
5	162m SW	433100 405450	SPECIAL SCH BROADWAY 21	3.05	N	84067
E	180m SW	433100 405420	SPECIAL SCH BROADWAY 22	3.05	N	84068
E	195m SW	433080 405420	SPECIAL SCH BROADWAY 27	3.05	N	84073
E	198m SW	433070 405430	SPECIAL SCH BROADWAY 26	3.05	N	84072
6	199m W	433050 405470	SPECIAL SCH BROADWAY 28	3.35	N	84074
E	202m SW	433060 405440	SPECIAL SCH BROADWAY 25	3.05	N	84071
7	237m NE	433660 405960	SHAW ST BARNSLEY 4	12.8	N	84078

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	2

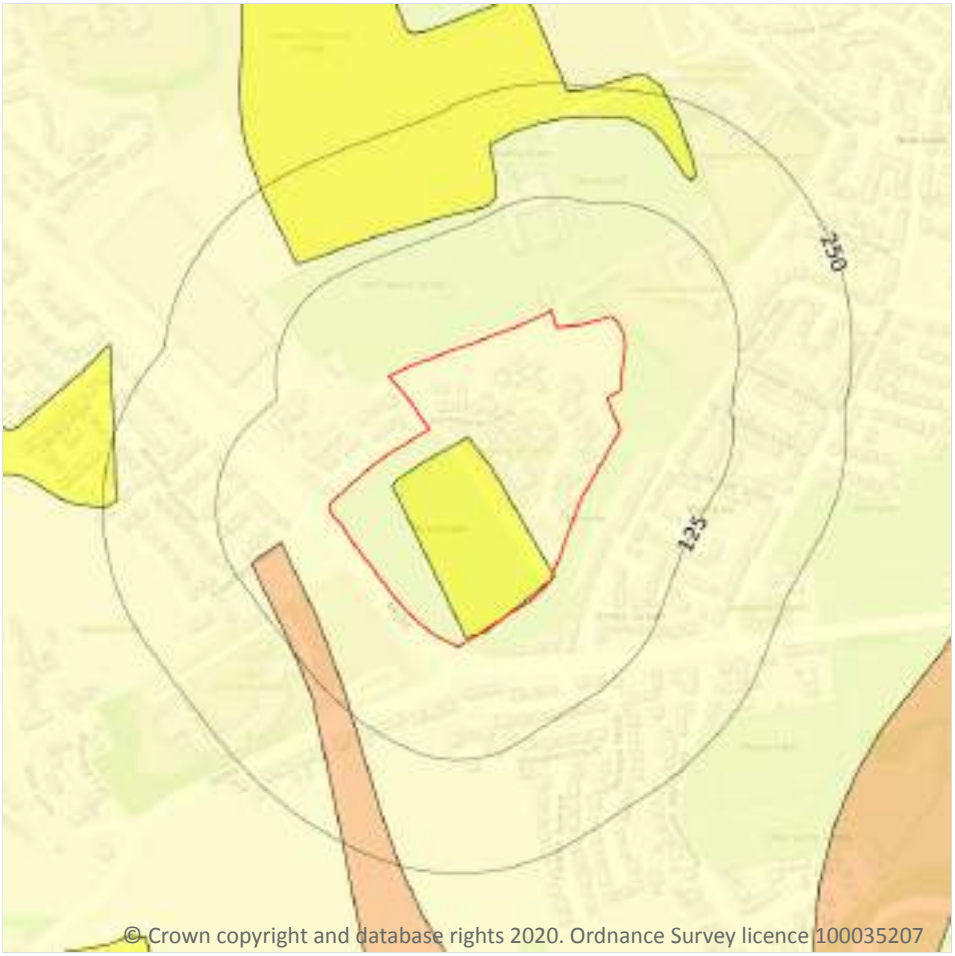
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 88**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	2

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

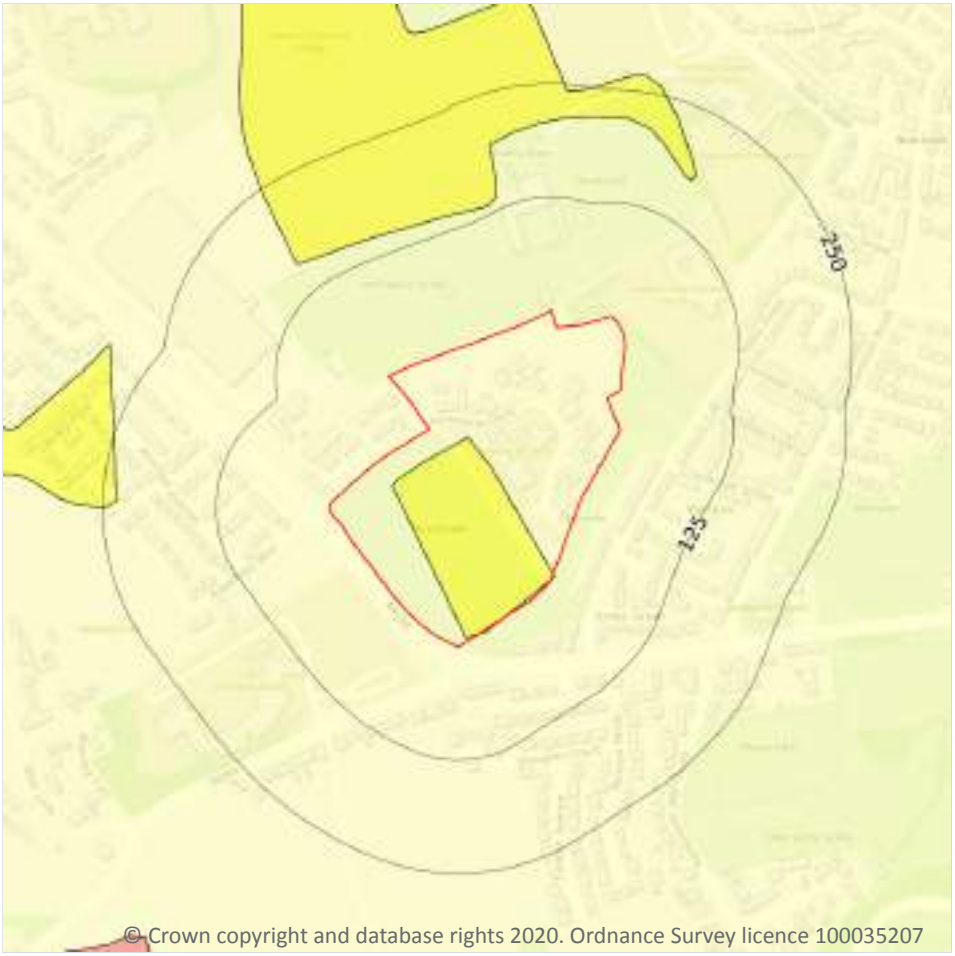
Features are displayed on the Natural ground subsidence - Running sands map on **page 89**

Location	Hazard rating	Details
On site	**Negligible**	**Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.**

Location	Hazard rating	Details
On site	**Very low**	**Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	2

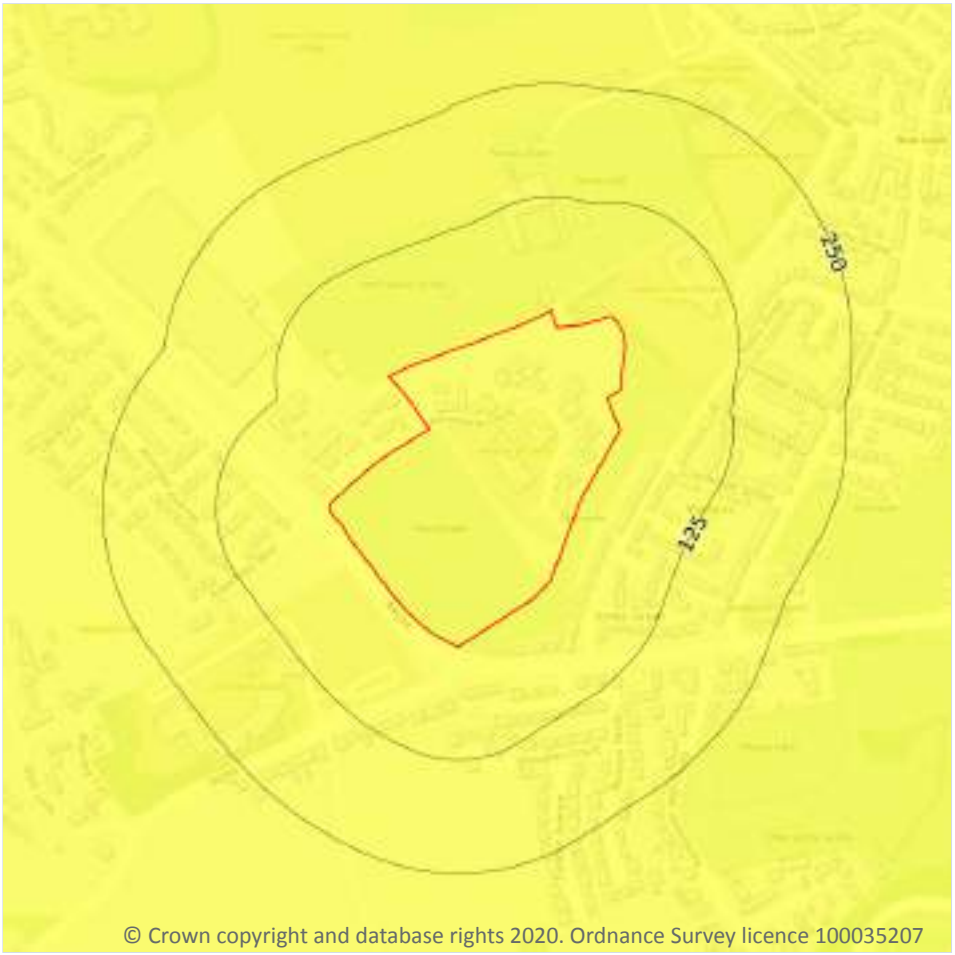
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 91**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
On site	**Very low**	**Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	**1**

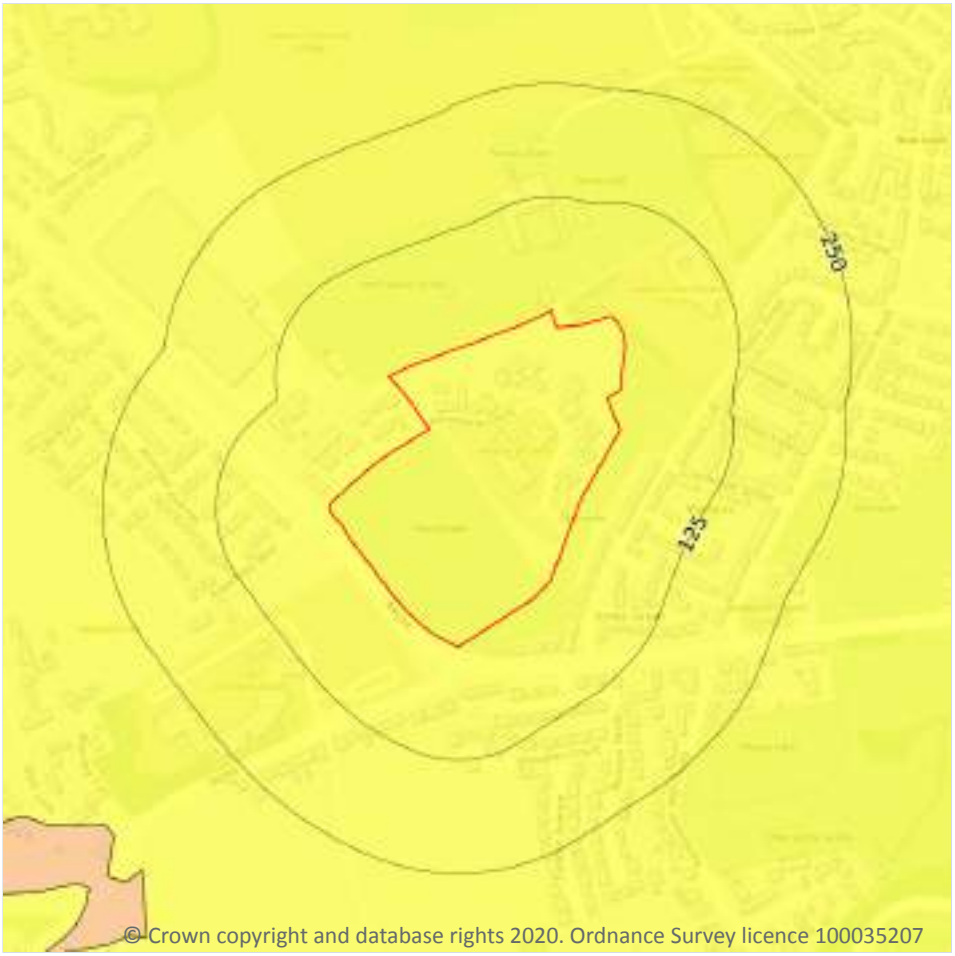
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 93**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	1

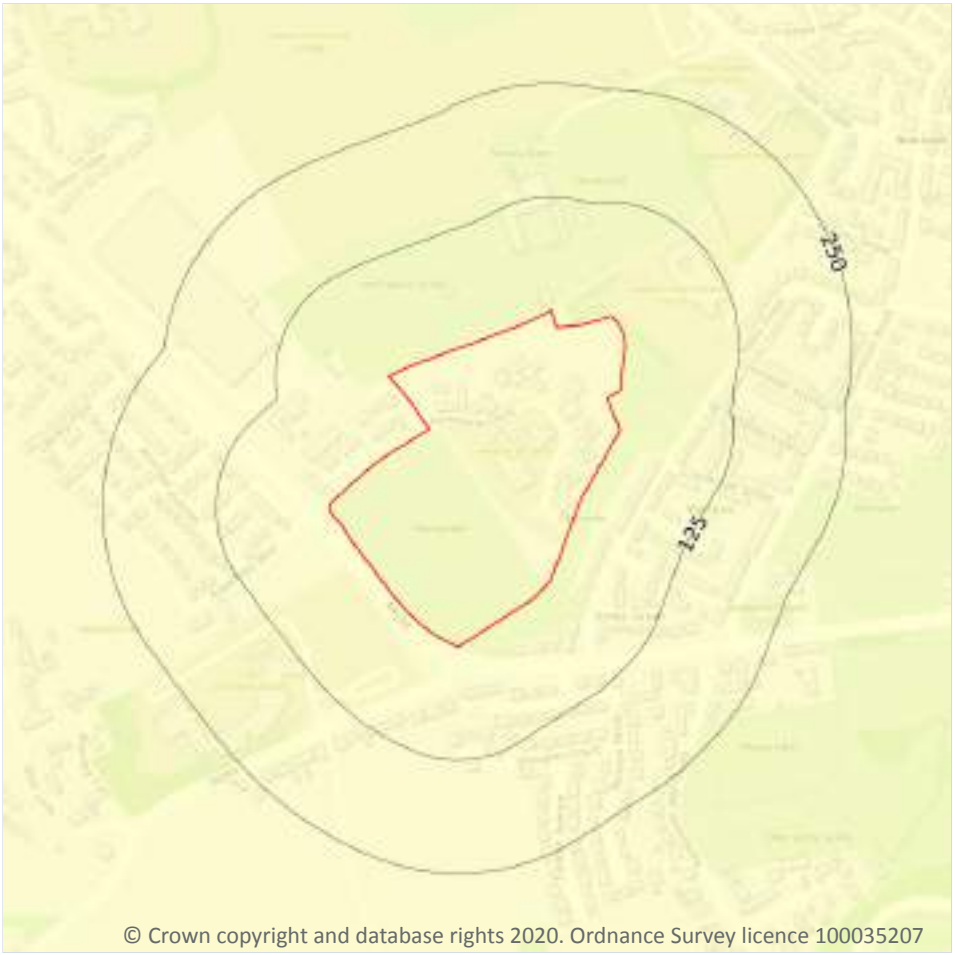
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 94**

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.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

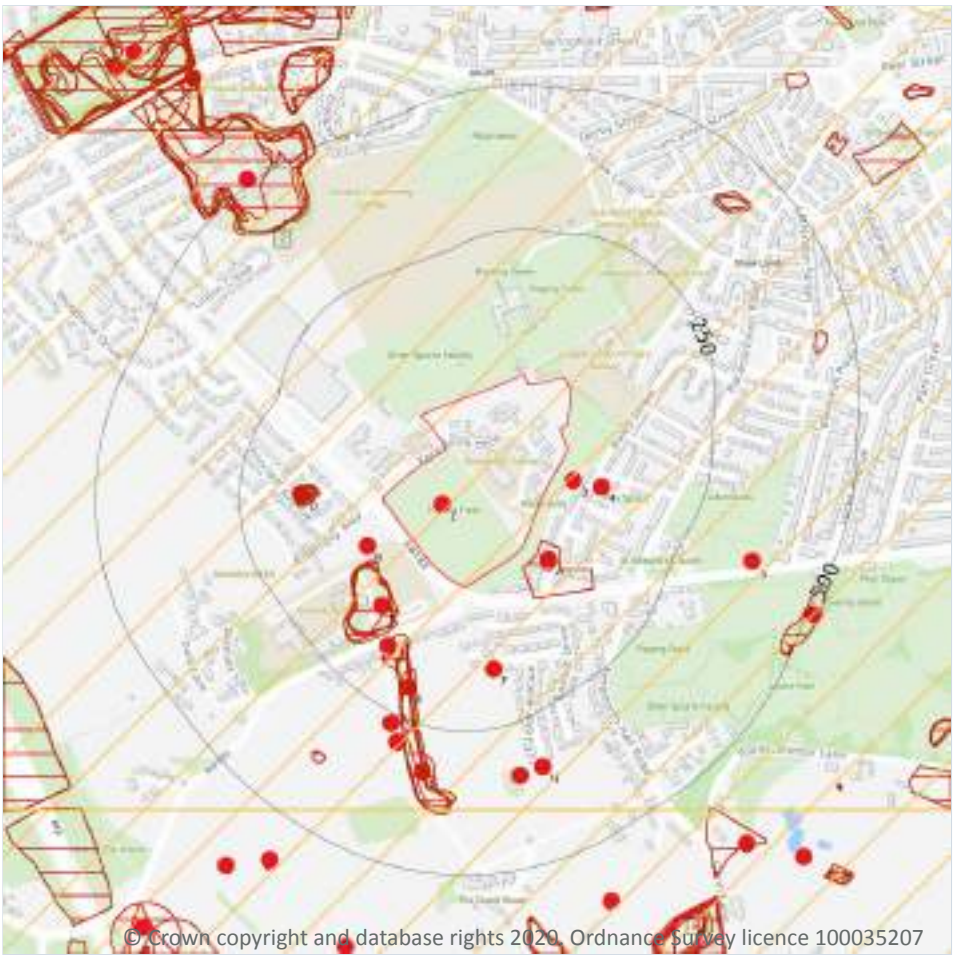
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 95**

Location	Hazard rating	Details
On site	**Negligible**	**Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.**

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m	0

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

This data is sourced from Peter Brett Associates (PBA).

18.2 BritPits

Records within 500m	22

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining, ground workings and natural cavities map on **page 96**

ID	Location	Details	Description
1	**On site**	**Name: Keresford Hill Pit** **Address: Keresforth Hill, BARNSLEY, South Yorkshire** **Commodity: Coal, Deep** **Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)**	**Type: Ceased** **Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority**
3	33m SE	Name: Kingston Pit Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
A	48m SE	Name: Kingston Place Brick Field Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Clay & Shale Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
B	68m SW	Name: Keresford Hill Pit Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
4	81m SE	Name: Kingston Pit Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

ID	Location	Details	Description
B	89m SW	Name: Keresford Hill Pit Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
C	113m SW	Name: Keresford Hill Pit Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
C	123m SW	Name: Hound Hill Colliery Drift Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
D	142m W	Name: Keresford House Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Sandstone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
F	149m S	Name: Hound Hill Colliery Air Shaft Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
C	154m SW	Name: Keresforth Hill Drift Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

ID	Location	Details	Description
E	198m SW	Name: Hound Hill Colliery Drift Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
E	219m SW	Name: Keresforth Hill Shaft Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
E	222m S	Name: Keresforth Hill Shaft Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
E	268m SW	Name: Keresforth Hill Drift Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
E	282m SW	Name: Keresforth Hill Drift Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
E	294m SW	Name: Keresforth Hill Coal Workings Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Surface Mined Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

ID	Location	Details	Description
E	303m S	Name: Keresforth Hill Drift Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
G	327m S	Name: Keresforth Hill Shaft Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
H	338m SE	Name: Kingston Main Colliery Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
H	340m S	Name: Keresforth Hill Shaft Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
5	373m SE	Name: Park Road Pit Address: Keresforth Hill, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	**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, ground workings and natural cavities map on **page 96**

ID	Location	Land Use	Year of mapping	Mapping scale
A	26m E	Brick Field	1850	1:10560
A	44m SE	Unspecified Heap	1850	1:10560
C	74m SW	Unspecified Heap	1966	1:10560
C	81m SW	Refuse Heap	1938	1:10560
C	81m SW	Refuse Heap	1948	1:10560
C	81m SW	Refuse Heap	1948	1:10560
C	83m SW	Refuse Heap	1951	1:10560
D	111m W	Unspecified Pit	1890	1:10560
D	113m W	Unspecified Pit	1951	1:10560
D	119m W	Unspecified Pit	1948	1:10560
D	119m W	Unspecified Pit	1948	1:10560
D	121m W	Unspecified Pit	1938	1:10560
D	121m W	Unspecified Pit	1904	1:10560
D	122m W	Sandstone Quarry	1850	1:10560
E	124m SW	Unspecified Pits	1938	1:10560
E	127m SW	Unspecified Pits	1951	1:10560
E	135m SW	Unspecified Pits	1948	1:10560
E	135m SW	Unspecified Pits	1948	1:10560
E	165m SW	Unspecified Pit	1966	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	**17**

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining, ground workings and natural cavities map on **page 96**

ID	Location	Land Use	Year of mapping	Mapping scale
F	146m S	Air Shaft	1951	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
F	148m S	Air Shaft	1938	1:10560
O	582m SW	Unspecified Old Shaft	1951	1:10560
O	589m SW	Unspecified Old Shaft	1938	1:10560
S	679m SE	Disused Colliery	1951	1:10560
S	687m SE	Disused Colliery	1938	1:10560
-	710m E	Colliery	1890	1:10560
X	775m SW	Colliery	1938	1:10560
P	789m NW	Unspecified Disused Shaft	1973	1:10000
P	789m NW	Unspecified Disused Shaft	1966	1:10560
P	792m NW	Unspecified Old Shafts	1948	1:10560
P	793m NW	Unspecified Old Shafts	1951	1:10560
-	800m NW	Unspecified Old Shaft	1904	1:10560
X	829m SW	Drift	1938	1:10560
-	951m NW	Colliery	1948	1:10560
-	953m NW	Disused Colliery	1951	1:10560
-	971m N	Unspecified Old Shaft	1904	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m **0**

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m **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, ground workings and natural cavities map on **page 96**

ID	Location	Name	Commodity	Class	Likelihood
2	**On site**	**Not available**	**Iron Ore (Bedded)**	**B**	**Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered**
7	386m S	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
11	512m NE	Sheffield Area	Vein Mineral/Iron ore	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	914m E	Sheffield Area	Vein Mineral/Iron ore	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	**0**

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

This data is sourced from Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site	**0**

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	1

Areas which could be affected by past, current or future coal mining.

Location	Details
On site	**The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.**

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

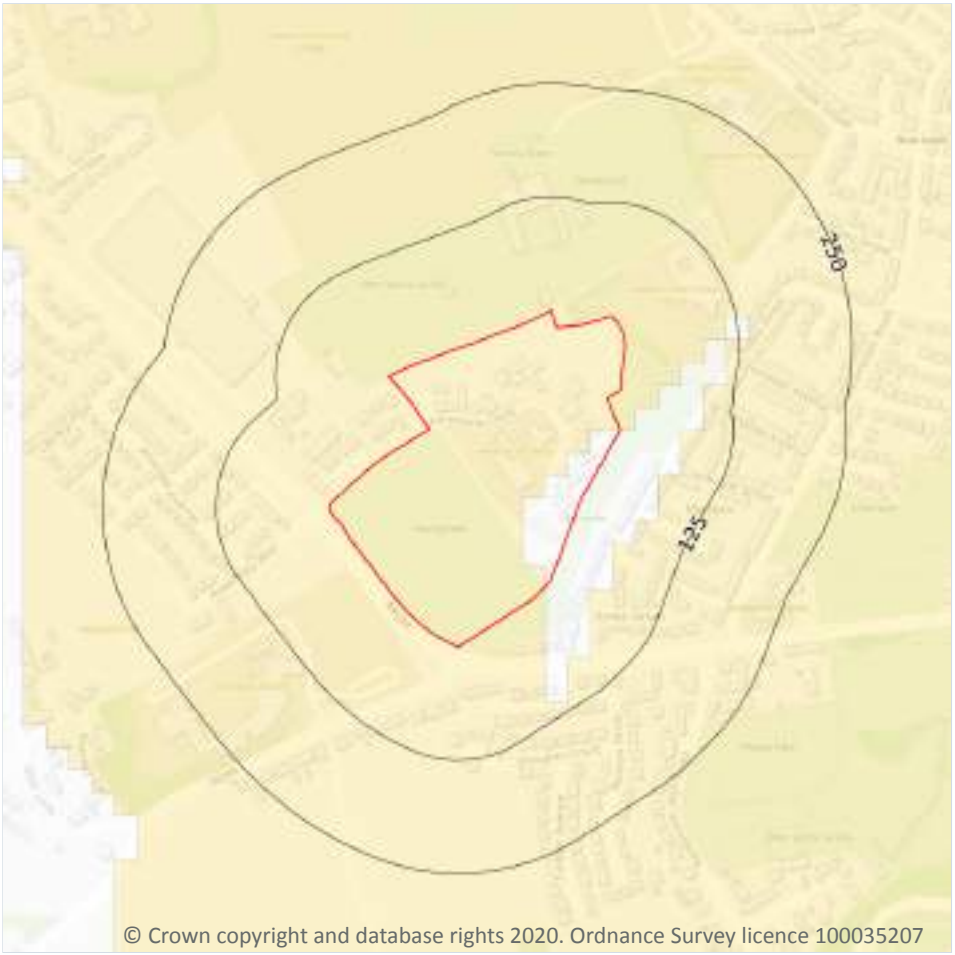
18.13 Clay mining

Records on site	0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Radon



Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

19.1 Radon

Records on site	2

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 105**

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

This data is sourced from the British Geological Survey and Public Health England.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m **12**

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**
On site	**25 - 35 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
On site	**25 - 35 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
On site	**25 - 35 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
On site	**25 - 35 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
On site	**25 - 35 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**
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**
On site	**15 - 25 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
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**
3m SE	25 - 35 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
24m 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 SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	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: https://www.groundsure.com/terms-and-conditions-jan-2020/.

C. Coal Authority Consultants Coal Mining Report (Ref 51002312203001, dated 03/10/20)

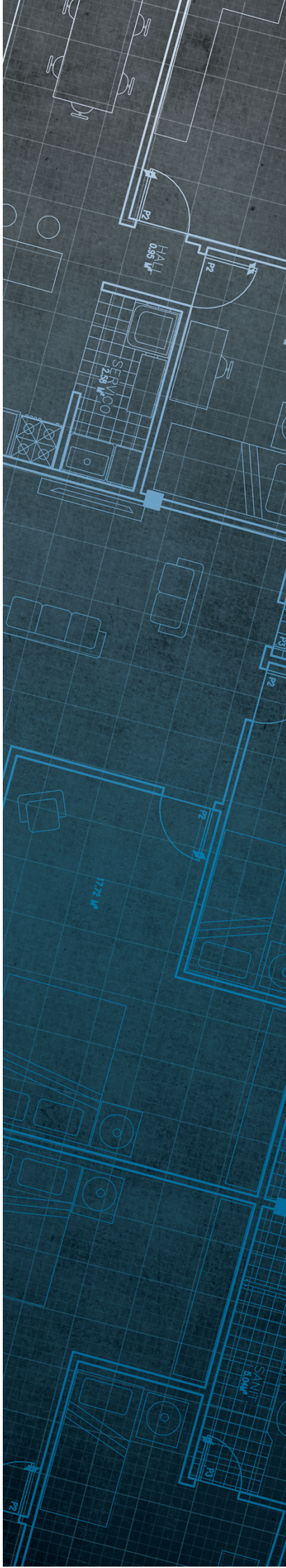
The Coal Authority

Consultants

Coal Mining Report

Keresforth Centre
Keresforth Close
Barnsley
S70 6RS

Date of enquiry:	**3 October 2020**
Date enquiry received:	**3 October 2020**
Issue date:	**3 October 2020**
Our reference:	**51002312203001**
Your reference:	**WIE17125**



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

Andrew Mould

Enquiry address

Keresforth Centre
Keresforth Close
Barnsley
S70 6RS

Approximate position of property

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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	BARNSLEY	Coal	6IE3	10	Beneath Property	5.9	East	274	1924
unnamed	BARNSLEY	Coal	6IE5	14	North	5.0	East	274	1870
unnamed	BARNSLEY	Coal	6IE2	21	Beneath Property	7.4	East	274	1925
DODWORTH	FLOCKTON THICK	Coal	6IE9	140	West	3.6	North-East	70	1942
DODWORTH	FLOCKTON THICK	Coal	6IE8	176	South	6.4	East	66	1949
DODWORTH	TOP FENTON	Coal	6IED	186	Beneath Property	4.4	North-East	91	1956
DODWORTH	PARKGATE	Coal	6IEF	207	Beneath Property	3.8	North-East	137	1942
DODWORTH	PARKGATE	Coal	6IEE	218	South-East	6.9	East	86	1958
DODWORTH	TOP FENTON	Coal	6IEC	218	South-West	6.5	East	86	1945
DODWORTH	MIDDLETON MAIN	Coal	6IEH	244	West	4.9	North-East	150	1961
DODWORTH	MIDDLETON MAIN	Coal	6IEG	253	South-West	7.2	East	122	1958
ROB ROYD	SILKSTONE	Coal	6IEJ	278	Beneath Property	4.2	North-East	167	1910
ROB ROYD	SILKSTONE	Coal	6IEI	293	Beneath Property	6.7	East	167	1904

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.