



SITE OFF EGGINTON ROAD, ETWALL, DERBYSHIRE

**PHASE I & II
GEO-ENVIRONMENTAL INVESTIGATION
FOR
REDROW HOMES LTD**

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PHASE I & II GEO-ENVIRONMENTAL INVESTIGATION: SITE OFF EGGINTON ROAD, ETWALL, DERBYSHIRE

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Executive Summary

This presents the salient points of the report and should not be referred to in isolation. The conclusions and recommendations presented below are considered reasonable based on the findings of the site investigation. However, these cannot be guaranteed to gain regulatory approval and therefore copies of this report should be sent to the appropriate Regulatory Authorities and / or other organisations (as appropriate) by the Client for their comments and approval prior to undertaking any irrecoverable works associated with the subject site.

Enabling / Earthworks	Specific testing (e.g. waste acceptance criteria testing) may be required at the discretion of the Client's designated waste handler if the off-site movement / disposal of soils is undertaken. Where applicable, such requirements must be verified directly with them by the Client. Additionally, where soils are imported there will be the necessity to ensure compliance with all regulatory licensing procedures (i.e. U1, MMP etc) and also to validate the soils prior to importation, subject to the approval of the Local Authority / NHBC. Drainage ditches are present in parts of the site. Should any proposed structures (including highways) cross the path of the current drainage ditches / ponds then suitable remedial treatment with an engineered fill will be required. These works and any other changes to the site's topographic levels should be discussed with Geo-Matters Ltd in advance and may need to be accompanied by an Earthworks Specification. Buried structures / deep made ground are not anticipated at this stage (with the exception of made ground associated with culverted drainage ditches). Historic field boundaries are recorded some areas which were not encountered during the site works, and therefore engineers from Geo-Matters Ltd should be contacted for further advice if such features are encountered during site works.
Foundations	Due to localised variability, it is recommended that all foundations must be deepened through any made ground and locally soft shallow natural soils to terminate within the underlying competent natural soils across the site at a minimum depth of 0.90m begl. A nett allowable bearing pressure of 75kN/m² should be achievable across the site in the underlying undisturbed natural soils at the specified founding depths. Foundations terminating within cohesive soils will need to be deepened within the influencing distance of trees due to the recorded medium volume change potential of natural soils beneath the site. Zoning may be feasible in some areas subject to final layouts / levels.
Floor Slabs	Ground bearing floor slabs should be suitable on site where the depth of made ground is less than 600mm deep, where suitably strong shallow natural soils are present and where foundations are not located within the zone of influence of trees. Where this is not the case a suspended floor would be a viable alternative. A suspended floor slab with a clear void and heave precautions will also be required if deepening is due to trees in excess of 1.50m depth to comply with appropriate Standards (e.g. NHBC Standards Chapter 4.2).
Building Near Trees	Cohesive soils were recorded across the parts of the site (cohesive bands within superficial strata and cohesive weathered bedrock). Soils of medium volume change potential should be assumed across the site when calculating foundation depths for such assessments.
Groundwater	Perched groundwater was encountered in 12 no. of the 35 no. exploratory locations completed during the recent intrusive investigation. Groundwater was generally encountered perched within the orangish brown superficial granular strata in northern, central and some western parts of the site.

Road Construction	As a standard / generic approach, CBR values of less than 2% can usually be anticipated in made ground, CBR values of between 2% and 5% can be anticipated in natural cohesive soils and values of between 5% and 10% in natural granular soils respectively based on general road construction guidance literature.
Drainage	At this stage, based on the ground conditions encountered in our recent investigation, it is considered that soakaways are unlikely to be feasible for the proposed development.
Ground Gas and Radon	Based on the ground gas concentrations and flow rates detected to date, the site would be indicatively classified as Characteristic Situation 1 or NHBC 'Green' . The site is recorded to be within an area where radon protective measures are not necessary for new properties.
Mining	No precautions necessary.
Excavations	Variable stability was noted in the exploratory holes completed across the site during the recent ground investigation, with some granular soils exhibiting local collapse etc. All excavations should be assumed to be unstable as a precautionary measure.
Sulphate Classification	DS1 – AC1 conditions are present across the site in accordance with BRE Special Digest 1 'Concrete in Aggressive Ground 2005'. Minimum concrete specification should be in accordance with NHBC Standards, Section 3.1.
Contamination	Chemical analysis results have been compared with current relevant guidance and site-specific screening values which indicates that there are no elevated levels of contaminants present across the site.
Remediation	Remediation works to protect human health are not considered necessary subject to the approval of the Local Authority / NHBC.
Topsoil	Topsoil was encountered across the site during the recent intrusive works, and generally extended to an average depth of 0.39m begl. Chemical analysis indicates that the topsoil is chemically suitable for re-use in all areas of the site.
Further Works	• Completion of the ongoing gas monitoring programme and reporting under separate cover; • Preparation of an appropriate Earthworks Specification should any cut and fill works be required; • Trees and hedgerows are present around the site, and the site is underlain by cohesive soils, which have been recorded to have a medium volume change potential. A foundation schedule may therefore be required should foundations terminate within natural cohesive soils (or within an influencing depth). The foundation schedule should be prepared once the development layout has been finalised in order to mitigate the effect of existing / proposed trees and landscaping; and • The Client will need to liaise with appropriately licenced waste management contractors to determine requirements for additional analysis etc. should materials be considered for off-site removal / disposal.

The executive summary given above is an overview of the key findings and conclusions of the report. There may be other information contained in the body of the report which puts into context the findings of the executive summary. No reliance should be placed on the executive summary until the whole report has been read in full.

1.0 INTRODUCTION

1.1 Preamble

Geo-Matters Ltd were appointed by Redrow Homes Ltd (hereafter referred to as 'the Client') to undertake a Phase I and II Geo-Environmental Investigation of the site off Egginton Road, Etwall (hereafter referred to as 'the site').

1.2 Report Status

This report provides factual geotechnical and environmental information, alongside associated construction issues and recommendations, in relation to a proposed redevelopment of the site for a residential end-use (see Section 1.4 below, and our notes concerning our terms and conditions at the end of this report).

1.3 Previous Reports

Geo-Matters Ltd have not been made aware of any previous third party geotechnical and / or environmental reports relating to the site.

1.4 Proposed Development

This report has been prepared on the understanding that the site is to be re-developed for a residential end-use. The proposals show the construction of residential dwellings with associated infrastructure and private gardens. The plan also shows an attenuation pond in the south-western part of the site, with areas of soft landscaping distributed throughout the site. The proposed development is shown to have one access point from Egginton Road off the western site boundary.

Extracts of the 'Sketch Feasibility Layout' plan (ref: from Autodesk Viewer - 'P19-2981 Sketch Feasibility Layout - Cad Base 16.12.19.dwg') are shown on our Proposed Site Layout Plan Drawing 001 in Appendix I.

Should the development proposals alter (e.g. layout, site levels, type or foundation option), then the recommendations in this report may be subject to change. Whilst it may be utilised by others for reference purposes at the Client's discretion, it has not been prepared for any other purposes (e.g. waste classification etc.) and therefore additional works may be required by third-parties dependent upon their own requirements / works.

Drawings showing the Proposed Site Layout Plan (Drawing 001), Site Location Plan (Drawing 002), General Site Features Plan (Drawing 003) and General Photographic Records (Drawings 004a – 004c) are presented within Appendices I, II, III and IV respectively.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Location

The site can be accessed from Egginton Road along the western boundary and from Jacksons Lane on the southern boundary. The site is situated approximately 1.12km to the south of the centre of the village of Etwall, as presented on the Site Location Plan (Drawing 002) in Appendix II. The site is roughly centred at National Grid Reference 427100, 330970.

2.2 Description

The following general observations have been made concerning the site:

2.2.1 Site:

- The site is approximately 8.79ha in size, and forms a roughly L-shaped parcel of land;
- The western part of the site is currently accessed from a gated entrance off Egginton Road, and the remaining parts are accessed from ungated field entrances along the southern boundary of the site off Jacksons Lane;
- The site supports arable fields, which were ploughed and partially under crop at the time of investigation;
- The site is divided into three roughly rectangular fields which are demarked by fencing / hedgerows which contain mature and semi-mature trees / shrubs;
- Waterlogged ground and standing water were encountered across the northernmost part of the northern field, and in the northern part of the south-eastern field. This is considered likely to be as the result of persistent rainfall around the time of investigation;
- A small roughly circular area of standing water was identified in the central part of the western field. This is considered likely to be as the result of damaged field drains (later encountered at shallow depth in this location);
- The majority of fields are bounded or divided from one another by hedgerows and / or fencing. Drainage ditches (generally between 0.60m and 1.00m deep) are present along the majority of these boundaries as shown on the General Site Features Plan (Drawing 003) which is included within Appendix III;
- There is an overall negative north-east to south-west gradient across the site;
- The site boundaries include mature and semi mature trees and shrubs.

Both a Site Features Plan and a General Photographic Record showing the general aspects of the site are included in Appendix III (Drawing 003) and Appendix IV (Drawings 004a – 004c) respectively.

2.2.2 Surrounding Area:

- The land beyond the northern boundary supports newly built residential housing with further houses, small businesses and the centre of Etwall village beyond this;
- The land beyond the eastern boundary supports arable farmland with a solar farm and the Toyota car factory beyond this;
- To the south of the site is arable farmland and woodland with the A50 road and open farmland beyond this; and
- To the west of the site is houses, allotments and a pumping station with arable farmland, a disused railway and the A50 beyond this.

3.0 GEO-ENVIRONMENTAL SETTING

3.1 Geology, Hydrogeology and Mining

A review of the following information has been undertaken:

- British Geological Survey 1:50,000 Scale Mapping Sheet 141 Solid & Drift;
- Coal Mining Searches, The Law Society Guidance Notes and Directory 1998 Edition; and
- Site Specific Environmental and Geological Data Report (Ref. 237420924_1_1 dated March 2020).

Table 3.1: Geological Information

Artificial Ground	No records of artificial ground are recorded onsite. An area of 'worked ground' is recorded on geological mapping approx. 30m to the east of the site, this broadly corresponds with an area of depressed ground level shown on open access lidar mapping, suggesting that this feature is unlikely to have been fully infilled. Furthermore, this feature is not recorded as a landfill suggesting that it is unlikely to have been infilled with putrescible materials.
Drift Deposits	The Etwall Sand and Gravel is recorded at shallow depth across the majority of the site. These strata are recorded as poorly sorted sands and gravels of flint and mudstone. A relatively small area in the south westernmost part of the site is recorded to be underlain at shallow depth by the Egginton Common Sand and Gravel Member. These strata are recorded as poorly sorted sands and gravels of flint and sandstone. An area running from north to south across the western part of the site is recorded as not being underlain by any superficial deposits. Head deposits are recorded in close proximity to the western boundary of the site (recorded within approx. 20m of the western site boundary). These are generally recorded to comprise poorly sorted clays, sands and gravels, and due to their close proximity to the site may also be encountered at shallow depths in western parts of the site.
Solid Geology	The solid geology beneath the site is recorded to comprise the Gunthorpe Member. These strata are generally recorded to comprise reddish brown mudstone occasionally interbedded with dolomitic siltstone and fine grained sandstone, with gypsum veins and nodules recorded in places.
Discontinuities	No faults or other discontinuities are recorded either onsite or in close proximity to the site.
Radon	The site is not in a radon affected area in accordance with the Site-Specific Environmental Data Report (Appendix V). The Environmental Data Report states that radon protective measures are not required for new properties.

Table 3.1: Geological Information (Continued)

Ground Workings	No records of ground working related features or natural cavities are recorded within a 250m radius of the site. The nearest recorded feature relates to an opencast clay and shale quarry recorded 274m north-west of the site. An area of 'potentially infilled land' is recorded 213m north-west of the site, which has been recorded as 'unknown filled ground (pit, quarry etc.)'. 7 no. records of potentially filled land relating to water are recorded within a 250m radius of the site. These relate to ponds recorded 33m north-east, 52m west and 82m south-east of the site, with further records identified between 130m north and 243m north-west of the site. An area of 'worked ground' is recorded on geological mapping approx. 30m to the east of the site on BGS mapping. No other records are identified within a potentially influencing distance of the site in accordance with the Environmental Data Report.												
Mining	The site does not lie within a coal mining reporting area. The site is not recorded to be set within 250m of a brine, gypsum, tin or clay extraction area, although small scale clay extraction features have been identified between 213m and 274m north-west of the site. No other records are identified within a potentially influencing distance of the site in accordance with the Environmental Data Report.												
Natural Ground Stability Hazards	The site has been classified as having the following hazard ratings: <table border="0"> <tr> <td>Shrinking / Swelling Clay</td><td>- Very Low Hazard Rating</td></tr> <tr> <td>Landslide</td><td>- Very Low Hazard Rating</td></tr> <tr> <td>Ground Dissolution</td><td>- Very Low Hazard Rating</td></tr> <tr> <td>Compressible Ground</td><td>- Very Low Hazard Rating</td></tr> <tr> <td>Collapsible Ground</td><td>- Very Low Hazard Rating</td></tr> <tr> <td>Running Sand</td><td>- Very Low Hazard Rating</td></tr> </table>	Shrinking / Swelling Clay	- Very Low Hazard Rating	Landslide	- Very Low Hazard Rating	Ground Dissolution	- Very Low Hazard Rating	Compressible Ground	- Very Low Hazard Rating	Collapsible Ground	- Very Low Hazard Rating	Running Sand	- Very Low Hazard Rating
Shrinking / Swelling Clay	- Very Low Hazard Rating												
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Compressible Ground	- Very Low Hazard Rating												
Collapsible Ground	- Very Low Hazard Rating												
Running Sand	- Very Low Hazard Rating												
Soil Chemistry	Soil chemistry for the site does not highlight any elevated natural contaminants. Although concentrations of lead are recorded to range between 100mg/kg and 200mg/kg, so may be recorded at levels close to its T1SV for a residential end use with gardens.												
BGS Borehole Records	A borehole to the west of the site (ref. SK23SE774) did not record the strata encountered, however it did state that the borehole was for water supply for a house and stables, and that in the 1960s the 'pump and rising main' were removed. Water was recorded from 1.60m depth in this location. A borehole has been recorded in the central part of the western field (ref. SK23SE72) and recorded no groundwater, and identified topsoil over 'clay and stone' with clay recorded from 2.10m depth. Further boreholes in close proximity to the site include SK23SE10 to the west of the site which recorded clay to 1.00m depth over silt and siltstone and recorded water from 3.00m depth. SK23SE222 to the west of the site recorded gravel over clay from 2.30m depth with water encountered from 4.30m depth. SK23SE11 to the south of the site recorded sand over clay from 2.25m depth with water recorded from 4.45m depth.												

Table 3.1: Geological Information (Continued)

Hydrogeology & Hydrology	The drift deposits beneath the majority of the site are recorded as a 'Secondary A Aquifer', which are defined as being of permeable layers capable of supporting water supplies at a local rather than strategic scale. The drift deposits across a small area in the westernmost part of the site are recorded as a 'Secondary Aquifer – Undifferentiated', which are defined as being of permeable layers capable of supporting water supplies at a local rather than strategic scale. The solid geology beneath the site is recorded as a 'Secondary B Aquifer', which are defined as predominantly lower permeability layers which may store / yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. The northern part of the site is recorded as having a combined groundwater vulnerability classification of 'Medium'. The central / southern part of the site is recorded as having a combined groundwater vulnerability classification of 'High', and the western part of the site is recorded as having a combined groundwater classification of 'High'. No groundwater or surface water abstraction licenses are recorded within a 250m radius of the site. No potable water abstraction licenses are recorded within a 1km radius of the site, although one groundwater source for 'general farming and domestic' purposes is recorded 976m east of the site. The site is not set within an Environment Agency Groundwater 'Source Protection Zone'. The nearest surface water feature is recorded 68m west of the site relating to Egginton Brook. The nearest river quality record is identified 449m west of the site for Egginton Brook and is recorded as having a river quality rating of 'C'. No other records are identified within a potentially influencing distance of the site in accordance with the Environmental Data Report.
Flooding	The site is not recorded to be within an Environment Agency flood risk area. Accordingly, the risk of flooding is recorded as 'Very Low'. The majority of the site has been classified as having 'Potential for Groundwater Flooding of Property Situated Below Ground Level' with a small area in the western part of the site having no recorded risk of groundwater flooding. This report is not intended for use in flood risk assessment.

* This table does not present a full summary of the content of the third party environmental database report. Please refer to this for more information (Appendix V).

3.2 Environmental Data Search

The principal considerations of immediate relevance within a 250m radius of the site are given in Table 3.2 (below). For a comprehensive list of environmental data, please refer to the site specific environmental data report presented in Appendix V.

Table 3.2: Environmental Data

Category	Entries and Notes*
Historic Industrial Sites	3 no. records of potentially contaminative land uses are recorded within a 250m radius of the site from 1950 to 1980 historic mapping. These records relate to a 'sewage farm' recorded 7m to the south of the site. No other records are identified within a potentially influencing distance of the site in accordance with the Environmental Data Report.
Potentially Infilled Land	4 no. records of potentially infilled land (non-water) are recorded within a 250m radius of the site these records relate to an area of 'Unknown Filled Ground (Pit, quarry etc.)' recorded 213m to the north-west of the site. 7 no. records of potentially infilled land (water) are recorded within a 250m radius of the site. These relate to records of 'Unknown Filled Ground (Pond, marsh, river, stream, dock etc)' the closest record is identified 33m north-east of the site. With further records identified 82m south-east of the site, 208m south-west of the site, 52m west of the site, 243m north-west of the site, and between 130m and 135m north of the site. No other records are identified within a potentially influencing distance of the site in accordance with the Environmental Data Report.
Environmental Permits, Incidents and Registers	There are 4 no. records of discharge consents recorded within a 250m radius of the site. These relate to records identified between 200m and 221m south-east of the site relating to 'Discharge of Other Matter - Surface Water' and 'Sewage Discharges - Final / Treated Effluent - Water Company' into a stream / river. No other records relating to Environmental permits, incidents or registers are recorded within a 250m radius of the site.
UXO Risk	The site is recorded to be set within an area with a low risk from unexploded ordnance.
Landfills and other Waste Sites	No historical landfill sites are recorded within a 250m radius of the site. There are no other records of landfills or waste sites identified within a 250m radius of the site.
Current Land Use	2 no. 'trade directory entries' are recorded within a 250m radius of the site. These relate to a carpet business identified 147m north-west of the site, and a haulage company identified 235m north-west of the site. A historic tank has been recorded approx. 19m south-east of the site. No other records of potentially contaminative current land uses are recorded within a 250m radius of the site.
Sensitive Land Use	The site is recorded to lie within a DEFRA 'Nitrate Vulnerable Zone'. No other records of sensitive land uses are recorded within a 500m radius of the site.

* This table does not present a full summary of the content of the third party environmental database report. Please refer to this for more information (Appendix V).

4.0 HISTORY OF LAND USE

A study of historical Ordnance Survey maps has been undertaken to identify any potentially contaminative former land-uses. The main historical features of the site and surrounding area (within a 250m radius) are summarised in Table 4.1 and Table 4.2 and are shown on the historical maps presented in Appendix VI. It should be noted, however, that considerable periods of time may have elapsed between successive Ordnance Survey map editions and it is possible that further land uses have occurred in the intervening years which were not recorded. In these circumstances, whilst we have tried to ascertain the complete record of the site history, the possibility that other significant land uses may have taken place cannot be discounted.

Table 4.1 Principal Historical On-Site Features

OS Map Date Range(s)~	Principal On-Site Features
1880 - 1886	The site is divided into five fields. A track runs from east to west across the western part of the site.
1901	The western part of the site is identified as 'allotment gardens'.
1922 - 1955	The western part of the site is no longer identified as 'allotment gardens'.
1970 - 2020	The site is divided into three fields.

* Historical map incomplete.

Table 4.2 Principal Historical Off-Site Features

OS Map Date Range(s)~	Principal Off-Site Features	Direction
1880 - 1882	Scrubland. Pond. Houses. Brickyard.	E SE SE & NW NW
1885 - 1886	Well.	NW
1901 - 1923	Pond. Tanks. Scrubland is no longer identified. Pump. Houses. Brickyard is no longer identified. Well is no longer identified.	S S & SW E W NW NW NW
1924 - 1955	Sewage Works.	NW
1970 - 1996	Increase in number of houses. Sewage works no longer present.	N & NW NW
1999 - 2020	A50 Dual Carriageway. Tanks no longer identified. Drains.	S S & SW S & W

~ Possibility of a map inaccuracy.

5.0 PHASE I GEOTECHNICAL ASSESSMENT

5.1 Anticipated Ground Conditions

Soils – Made Ground / Topsoil

On the basis of the available information, cultivated topsoil is expected across the majority of the site, based on its undeveloped nature and current use as arable farmland.

Made ground / variable ground conditions may be expected along the eastern boundary associated with the area of 'worked ground' (which may or may not encroach onto site) identified on BGS mapping to the east of the site. Small quantities of made ground may also be encountered associated with the allotments historically identified in the western part of the site, and associated with areas where existing drainage ditches are culverted underground (at field access points). No other significant made ground / variable ground conditions are expected at this stage.

Natural Strata

The Etwall Sand and Gravel Member is recorded at shallow depth across the majority of the site. These strata are recorded as poorly sorted sands and gravels comprising predominantly flint and mudstone, and are generally encountered to thicknesses of up to 3.00m in accordance with BGS map data. These strata may have weathered at shallow depths to form highly variable granular and cohesive soils.

A relatively small area in the south westernmost part of the site is recorded to be underlain at shallow depth by the Egginton Common Sand and Gravel Member. These strata are recorded as poorly sorted sands and gravels comprising predominantly flint and sandstone and are generally encountered to thicknesses of up to 4.50m in accordance with BGS map data. These strata may have weathered at shallow depths to form highly variable granular and cohesive soils.

An area running from north to south across the western part of the site is recorded as not being underlain by any superficial deposits. Therefore, soils representative of underlying weathered bedrock (Gunthorpe Member Mudstone) may be encountered at shallow depth in this area.

Head deposits are recorded in close proximity to the western boundary of the site (recorded within approx. 20m of the western site boundary).

These are generally recorded to comprise poorly sorted clays, sands and gravels, and due to their close proximity to the site may also be encountered at shallow depths in western parts of the site.

The solid geology beneath the site is recorded to comprise the Gunthorpe Member. These strata are generally recorded to comprise reddish brown mudstone occasionally interbedded with dolomitic siltstone and fine grained sandstone, with gypsum veins and nodules recorded in places. These strata may have weathered at shallow depths to form interbedded granular and cohesive soils.

A BGS borehole, recorded in the central part of the western field identified topsoil over 'clay and stone' with clay recorded from 2.10m depth, shallow groundwater was not recorded to have been encountered in this borehole. Further boreholes in close proximity to the site include SK23SE10 to the west of the site which recorded clay to 1.00m depth over silt and siltstone, and recorded groundwater from 3.00m depth. SK23SE222 to the west of the site which recorded gravel over clay from 2.30m depth, with groundwater encountered from 4.30m depth. SK23SE11 to the south of the site which recorded sand over clay from 2.25m depth, with groundwater recorded from 4.45m depth. The strata encountered in the nearby / onsite BGS boreholes broadly correspond with the strata sequence described in available BGS mapping.

Groundwater

The drift deposits beneath the majority of the site (Etwall Sand and Gravel Member) are recorded as a 'Secondary A Aquifer', with the drift deposits across a small area in the westernmost part of the site (Egginton Common Sand and Gravel Member) recorded as a 'Secondary Aquifer – Undifferentiated'.

The solid geology beneath the site (Gunthorpe Member Mudstone) are recorded as a 'Secondary B Aquifer'.

Groundwater is therefore likely to be encountered across the site (particularly in granular superficial deposits) during intrusive works, subject to confirmation of ground and prevailing weather conditions.

Stability Issues (e.g. Mining / Slopes)

The site has been classified as having:

Table 5.1: Ground Hazard Classifications

Hazard	Maximum Designated Rating
Shrinking / Swelling Clay	Very Low Hazard Rating
Landslide	Very Low Hazard Rating
Ground Dissolution	Very Low Hazard Rating
Compressible Ground	Very Low Hazard Rating
Collapsible Ground	Very Low Hazard Rating
Running Sand	Very Low Hazard Rating

No issues relating to coal mining have been identified at this stage.

Granular superficial deposits are anticipated across the majority of the site associated with the Etwall Sand and Gravel Member, and the Egginton Common Sand and Gravel Member. Due to these being positioned over the underlying cohesive / low permeability Gunthorpe Mudstone Member, and in accordance with nearby BGS borehole records and aquifer classification of these strata, perched groundwater may be encountered at relatively shallow depth which could lead to instability of excavations.

Drainage ditches are present along field boundaries in parts of the site and must to be factored into any future layout designs in terms of stability etc. In addition, historic field boundaries were shown on some historic mapping which should also be considered in terms of construction awareness and possible contingencies.

The topography of the site is variable, with an overall slight negative north-east to south-west gradient across the site. Although considered unlikely at this stage, the shallow slopes across the site may need to be taken into account by designers and specialist engineers as part of any future redevelopment works pending final layout proposals.

Given the absence of significant historical development at the site, significant depths of made ground are not anticipated during intrusive investigations. Although variable ground conditions (with potentially greater depths of made ground) may be expected in the around access tracks, culverted drainage ditches etc.

Ground Gas and Radon

No significant potential ground gas sources have been identified within an influencing distance of the site. However, gas monitoring is recommended due to the proposed sensitive residential end use of the site.

Records of potentially infilled land are identified within a 250m radius of the site. However, these relate to ponds, and area of 'worked ground' to the east of the site recorded on BGS mapping, and a small quarry recorded 213m to the north-west of the site, and are not considered to pose a significant ground gas risk to the site, subject to regulatory approval.

The property is not in a radon effected area in accordance with the Site-Specific Environmental Data Report (Appendix V). Accordingly, the Environmental Data Report states that radon protection measures are **not** required for new properties, subject to the approval of the regulatory authorities and NHBC.

Contamination and Performance of Building Materials

Following a review of available records, several minor potentially contaminative former land uses have been identified at the site and within its vicinity.

These include the site's current use as arable farmland (possible use of pesticides) and its historic use as allotments (possible use of pesticides). Potentially contaminative land uses within close proximity to the site include a historic tank recorded approx. 19m south-east of the site (not identified during the site walkover), and an area of 'worked ground' to the east (which may or may not encroach onto site) as identified on BGS mapping.

Issues relating to these potentially contaminative land uses within redevelopment / construction areas are therefore subject to laboratory testing, final layout proposals and regulatory discussions.

6.0 PHASE I ENVIRONMENTAL ASSESSMENT

6.1 Phase I Conceptual Model

The following is based on the desk study information listed above and the site assessment undertaken by Geo-Matters Ltd.

6.1.1 Site Summary:

A review of all available desk study information indicates that the site has not been significantly developed since earliest available mapping (1880), where the site originally comprised five fields with an associated access track. The western part of the site was later developed into allotments, and by the mid-1920s the allotments were no longer identified. The site has been recorded to comprise three agricultural fields from the 1970s to the present day.

The surrounding area to the north-west and north of the site has been progressively developed with an increase in the number of houses from the early 1900s and the early 1970s. Ponds are recorded to the south-east and south of the site which remain to the present day. Tanks have been recorded to the south and south-west of the site on historic mapping however these were not observed during the recent site walkover.

Significant potential ground gas sources have not been identified within an influencing distance of the site. Records of potentially infilled land are identified within a 250m radius of the site relating to ponds, an area of 'worked ground' to the east of the site recorded on BGS mapping, and a small quarry recorded over 200m to the north-west of the site. These have been considered and are not considered to pose a significant ground gas risk subject to regulatory approval. Furthermore, there are no recorded landfills or other waste sites within close proximity to the site. However, due to the sensitive proposed end use of the site (residential housing) gas monitoring is recommended to fully assess risks to end users).

Potentially contaminative land uses have been recorded on site / within an influencing distance. These include the sites current use as arable farmland (where pesticides may have been used), its historic use as allotments, slightly elevated levels of metals in natural strata (as recorded in the Environmental Data Report for the site) and small quantities of made ground which may be present associated with culverted drainage ditches, site access points, field drains etc.

Potentially contaminative land uses within close proximity to the site include a historic tank recorded approx. 19m south-east of the site (although this was not observed during the site walkover), and an area of 'worked ground' (which may or may not encroach onto site) identified on BGS mapping to the east of the site.

6.1.2 S-P-R Characterisation:

The statutory guidance describes contaminated land in terms of 'significant pollutants' and 'pollutant linkages', using SOURCE-PATHWAY-RECEPTOR' scenarios for the site. For a pollutant linkage to exist all three of these elements must be present. These have been clearly defined in the guidance as follows (see overleaf):

.....potential source as 'a contaminant which is in, or under the land and which has the potential to cause significant harm or to cause pollution of controlled waters'.

.....potential pathway as 'one or more routes or means by, or through, which a receptor is being exposed to, or affected by a contaminant, or could be so exposed or affected'.

.....potential receptor as 'A living organism, a group of living organisms, an ecological system or a piece of property which is being or could be, harmed by a contaminant or controlled waters which are being, or could be, polluted by a contaminant'.

Examination of the desk study information has identified the following:

Potential Sources:

The review of the available desk study information has revealed the following potential sources of contamination identified resulting from former and / or existing land uses that must be considered in a SOURCE-PATHWAY-RECEPTOR scenario.

Table 6.1 Potential Sources of Contamination

Potential Onsite Sources	Associated Potential Contaminants ^{a,b}	
	<i>Metals and Inorganics</i>	<i>Organics and Others</i>
Made Ground	General Suite	TPH, PAHs, Asbestos,
Agricultural Fields	General Suite	Pesticides
Historic Allotments	General Suite	Pesticides, TPH, Asbestos
Natural Strata	General Suite	-
Potential Offsite Sources		
Allotment Gardens	-	TPH, PAH, Asbestos, Pesticides
Historic Tank	-	TPH
Area of 'Worked Ground'	-	Ground Gas
Areas of Potentially Infilled Land	-	TPH, PAH, Asbestos, Ground Gas

^a Professional experience alongside DoE Industry Profiles and CLR8 (withdrawn but used for reference);

^b Subject to Local Authority comments / planning conditions; and

Acronyms – PAHs = Polycyclic Aromatic Hydrocarbons, TPH = Total Petroleum Hydrocarbons.

Potential Pathways:

- Direct ingestion of soil and dust;
- Dermal contact with soil and dust;
- Inhalation of vapour and dust;
- Made ground (if identified); and
- Migration on / within groundwater or saturated soils.

Potential Receptors:

- Ground workers employed in the redevelopment of the site;
- Future end users of the site (including properties);
- Vegetation (gardens and landscaping);
- Controlled waters; and
- Neighbouring land users.

6.1.3 Potential Pollutant Linkages:

A potential pollutant linkage is defined as 'the relationship between a contaminant, a pathway and a receptor' where the pollutant is the contaminant in the pollutant linkage. For land to be identified as contaminated under the current UK guidance all three elements of the pollutant linkage must be present. In many cases there may be more than one pollutant linkage on any given site.

A review of the desk study information, the features noted in the site visit and the potential sources, pathways and receptors listed above has led to the following potential significant pollutant linkages (SPL) being considered (Table 6.2 overleaf).

Table 6.2 Potential Pollutant Linkages

Potential Source	Pathway	Receptors					SPL*
		Controlled Waters	Ground workers	End-users	Flora	Building materials	
Metal / metalloids and inorganics in SOIL	Direct Ingestion		✓	✓			✓
	Dermal Contact		✓	✓			✓
	Inhalation		✓	✓			✓
	Leaching/direct movement				✓	✓	✓
Asbestos containing materials in SOIL	Inhalation		✓	✓			✓
Organics in SOIL (hydrocarbons, PAH, pesticides etc.)	Direct Ingestion		✓	✓			✓
	Dermal Contact		✓	✓			✓
	Inhalation		✓	✓			✓
	Leaching/direct movement				✓	✓	✓
Metal / metalloids and inorganics In CONTROLLED WATERS	Direct Ingestion	✓	✓	✓	✓		✓
	Dermal Contact	✓	✓	✓	✓		✓
	Inhalation						
	Leaching/direct movement	✓	✓	✓	✓		✓
Organics in CONTROLLED WATERS (hydrocarbons, PAH, pesticides etc.)	Direct Ingestion	✓	✓	✓	✓		✓
	Dermal Contact	✓	✓	✓	✓		✓
	Inhalation						
	Leaching/direct movement	✓	✓	✓	✓		✓
GROUND GAS (Carbon Dioxide and Methane)	Direct Ingestion						
	Dermal Contact						
	Inhalation			✓	✓		✓
	Leaching/direct movement			✓	✓	✓	

* Potential SPL identified pending Local Authority comments and confirmation of ground conditions.

6.1.4 Model Status and Uncertainty

The potential significant linkages listed above are based on available data reviewed to date. Therefore, the linkages identified are tentative in nature and are subject to the following uncertainties:

- Presence and nature of any made ground and the underlying strata;
- Presence and depth of any groundwater at shallow depth; and
- Actual presence of contaminants or ground gas sources in soils and / or water.

7.0 RATIONALE FOR PHASE II INVESTIGATION

7.1 Scope of Environmental Ground Investigation

The Phase II Environmental Investigation will comprise the recovery of soil samples from all exploratory holes positioned to provide optimum coverage across accessible areas of the site as outlined on the Site Investigation Plan presented in Appendix VII (Drawing 005) and identified in Table 7.1 below in general accordance with BS5930:2015.

Samples will be selected for analysis on the basis of their onsite visual descriptions with particular attention given to samples displaying any olfactory evidence of contamination. All samples will be taken in snap top plastic containers and 250ml amber glass jars or vials. All samples will be placed in cooled containers and transported to Geo-Matters Ltd.'s storage facility before awaiting transfer to a UKAS / MCERTS accredited laboratory.

Table 7.1: Exploratory Hole Layout Rationale

Potential Source / Issue	Exploratory Holes
General Site Coverage	All Holes
Ground Gas / Groundwater Level Monitoring Wells	WS01, WS03, WS07 & WS08
Former Allotments	TP08, TP09, TP12, TP13, TP15, HTP08 & HTP09
Historic Field Boundaries	TP06, TP11
Area of Waterlogged Ground*	TP15
Arable Farmland (pesticides)	All Holes

*Roughly circular area noted during site investigation, as shown on the site features plan (Drawing 003).

The samples taken during the intrusive investigation will be analysed for a range of contaminants in accordance with NHBC Standards Chapter 4.1 'Land Quality – managing ground conditions' and CLR 8 'Potential Contaminants for the Assessment of Land' (withdrawn but used for reference purposes where applicable). The soil samples will be analysed for the following parameters: arsenic, cadmium, chromium, copper, nickel, zinc, lead, mercury, selenium, hexavalent chromium, sulphate, phenols, pesticides, asbestos, speciated polyaromatic hydrocarbons (PAHs). If samples are observed to display visual or olfactory evidence of contamination (e.g. evidence of hydrocarbon staining or odours) they shall be scheduled for appropriate additional analysis.

7.2 Scope of Geotechnical Investigation

The geotechnical investigation will comprise the advancement of exploratory locations across accessible areas of the site to determine the geomorphological characteristics of the site. The visual description of the soils will be used as the basis of determining the basic engineering properties of the soils encountered and all soils logging will be in accordance to BS5930:2015 where applicable.

During site works, samples will be collected; where necessary; to allow for classification testing and chemical analysis to be undertaken to determine the potential effects of soil upon the performance of building materials.

Equivalent *in situ* SPT's will be taken within all window sampler boreholes with hand shear vane readings also taken within trial pits where possible (i.e. cohesive non-friable soils) to allow strength profiling of the underlying strata to be determined.

8.0 SITE WORKS

All fieldwork and soil descriptions were carried out in general accordance with BS EN 14688 'Geotechnical Investigation and Testing – Identification and Classification of Soil' and / or BS5930:2015. Each of the exploratory locations was positioned on site by Geo-Matters Ltd. The locations of these exploratory holes are shown on the Site Investigation Plan presented in Appendix VII (Drawing 005).

Prior to any excavation, the locations were checked for the presence of underground services by a specialist utilities detection team, and with reference to service plans where supplied. Where necessary exploratory holes were re-located to areas deemed to be a safe distance from identified services or other obstacles (see limitations section for further information).

All exploratory locations were backfilled with the arisings once representative samples had been obtained, with the exception of the four monitoring points (WS01, WS03, WS07 and WS08) which were installed as gas and groundwater monitoring wells and fitted with flush lockable covers.

8.1 Scope of Investigation

A summary of the ground investigation undertaken by Geo-Matters Ltd is outlined in the table below:

Table 8.1: Method of Investigation

Method of Investigation	No.	Max Depth (m)	Sampling Regime
Window Sampling	7	2.00	1 & 2
Trial Pits	16	4.20	1 & 2
Hand Dug Pits	11	0.60	1

¹ – 500ml plastic tubs, 250ml amber jars and 40ml glass vials.

² – Bulk bags.

The investigation was carried out under the supervision of an Engineer from Geo-Matters Ltd.

Disturbed samples were collected from each discrete horizon within the exploratory holes (where possible) to provide soils for laboratory testing.

Exploratory Hole Logs are presented in Appendix VIII.

8.2 Limitations to the Investigation

The majority of the site was fully accessible during our recent intrusive investigation works with the exception of areas of waterlogged ground and standing water across the northernmost part of the northern field, and the northern part of the southern field. This made plant movement difficult and unsafe, and therefore holes were moved to relatively 'dry' areas where possible in order to safely complete investigation works. The re-configuration of plant routes and exploratory hole positions resulted in the eventual replacement of boreholes with trial pits in south-western areas, and also require other borehole positions to be terminated earlier / shallower than originally intended once sufficiently consistent SPT data was recorded.

Exploratory holes were located between the tramlines (window sampling), or to the side (trial pits) to minimise crop damage as far as reasonably practicable.

No other significant limitations were encountered across the site.

9.0 PHASE II GEOTECHNICAL ASSESSMENT

9.1 Ground Conditions

The geotechnical element of the works was undertaken concurrently with the environmental investigation. The ground conditions encountered within the exploratory locations are summarised in the table below with the logs presented in Appendix VIII.

Table 9.1: Summary of Ground Conditions at the Site

General Description	Maximum Thickness (m)
TOPSOIL comprising dark brown slightly silty gravelly fine to coarse sand. Gravel is medium to coarse and angular to subangular of mudstone and sandstone. (ALL EXPLORATORY LOCATIONS)	0.60
Loose to medium dense light yellowish brown and grey slightly silty gravelly fine to coarse SAND. Gravel is medium to coarse and subrounded to subangular of mudstone and sandstone including cobbles. (ETWALL SAND AND GRAVEL MEMBER) (WS07, TP06, TP07a, TP11, TP12, HTP02, HTP07 & HTP11)	0.60+
Loose to dense greyish brown and yellowish brown sandy fine to coarse and subrounded to subangular GRAVEL of mudstone and sandstone including cobbles. (ETWALL SAND AND GRAVEL MEMBER) (WS03, WS07 & TP05)	0.70+
Firm to stiff light grey and yellowish brown slightly silty slightly gravelly sandy CLAY. Gravel is medium to coarse and angular of weak mudstone and sandstone. (TP07, TP08 – TP10, TP13, TP15, HTP01 & HTP09)	0.75+
Soft to stiff orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse and subrounded to angular of mixed lithologies including sandstone. (WS01, WS05 & WS08)	0.60+
Loose to very dense orangish brown slightly silty gravelly fine to coarse SAND. Gravel is fine to coarse and subrounded of mudstone, flint and sandstone including rare cobbles. (ETWALL SAND AND GRAVEL MEMBER) (WS01, WS02, WS04 – WS07, TP01, TP05, TP07a, TP12, HTP08 & HTP10)	2.10+)
Loose to very dense orangish brown slightly silty slightly sandy fine to medium and subrounded to subangular GRAVEL of mudstone, flint, sandstone and quartzite including cobbles. (ETWALL SAND AND GRAVEL MEMBER) (WS08, TP02 – TP04, TP06, TP10 & TP11)	1.90+
Firm to stiff reddish brown, light grey and yellowish brown mottled slightly sandy slightly gravelly CLAY. Gravel is fine to medium and subrounded of mudstone and quartzite including cobbles. (GUNTORPE MEMBER) (TP07a – TP10, TP12, TP13 & TP15)	3.60+
Reddish brown weathered MUDSTONE recovered as a clayey fine to coarse and angular gravel of weak platy mudstone including cobbles and boulders. (GUNTORPE MEMBER) (TP09 & TP12)	0.30+

* Not fully penetrated at all locations.

9.1.1 Soils – Made Ground / Topsoil

None of the trial pits or boreholes completed encountered made ground, although rare ceramic, cement and brick fragments were noted at the surface within the topsoil whilst walking across the fields.

Highly localised shallow made ground is present on site, associated with small quantities of gravel at ground level at site access points. Deeper made ground is considered likely to be present where drainage ditches are culverted underground at field access points. Terracotta field drains were encountered in southern and western parts of the site (where cohesive soils were encountered), with the field drains noted at depths of between 0.50m and 1.00m begl.

No evidence of the historic field boundary was located in TP6, TP11, WS5 or WS7, and no changes in topography / vegetation / ground conditions were noted in the vicinity of this feature at the time of investigation.

Organic / putrescible materials were not identified within any of the exploratory locations completed during the recent investigation.

Natural topsoil was encountered across the site during the recent site works. This was encountered in thicknesses ranging between 0.20m (in HTP02) and 0.60m begl (in TP04 and TP09), with an average thickness of 0.39m. It is considered that the variable depths of topsoil are due to the cultivation / ploughing of the arable fields.

The topsoil is **not** considered to be suitable bearing strata for the proposed development due to the variability of composition and strength associated with such materials.

9.1.2 Soils – Natural Strata

Across most northern / central parts of the site the topsoil is underlain by orangish brown sands and gravels of mudstone, sandstone and flint containing variable proportions of silt and clay. Where perched water is encountered within these strata instability of excavations was noted, with collapse beginning from depths ranging between 0.00m begl in TP05 and 2.50m begl in TP06. Trial pits were terminated on collapse at depths of between 1.70m begl (TP02) and 2.50m begl (TP06) in the northern / central parts of the site. The instability of trial pit sides in these areas meant that the orangish brown granular strata were not fully penetrated in most northern / central parts of the site.

Orangish brown slightly sandy gravelly clays were encountered interbedded with the orangish brown sands and gravels in WS01 in the northern part of the site and in WS05 and WS08 in the southern part of the site, with the overall cohesive content of the orangish brown strata noted to increase towards the southern part of the site.

The orangish brown clays, sands and gravels are considered to be representative of the Etwall Sand and Gravel Member.

At variable points across the site (although predominantly in central / southern and western parts of the site) the topsoil was underlain at shallow depth by thin bands of yellowish brown and greyish brown clays, sands and gravels (containing variable proportions of clay, silt, sand and gravel). Where fully penetrated these were encountered to depths of between 0.50m begl (in TP08 in the western part of the site), and 1.10m begl (in TP05 in the central part of the site and TP10 in the southern part of the site). The yellowish brown and greyish brown clays, sands and gravels were encountered to highly variable depths and are considered likely to also be representative of the Etwall Sand and Gravel Member.

The orangish brown and yellowish brown / grey clays are considered likely to be representative of localised cohesive bands within the Etwall Sand and Gravel Member, formed through the predominantly alluvial processes which created the Etwall Sand and Gravel Member.

Where the strata representative of the Etwall Sand and Gravel Member were fully penetrated they were found to be underlain by reddish brown clays (which contained variable proportions of sand and gravel). The reddish brown clays were only encountered in central and western parts of the site from depths of between 0.50m begl (in TP08 in the westernmost part of the site) and 1.80m in TP07a in the central part of the site. These strata are considered to be representative of the weathered Gunthorpe Member.

In TP09 (from 3.80m begl) and TP12 (from 3.60m begl) in the western part of the site the reddish brown clays were found to be underlain by weathered mudstone representative of the Gunthorpe Member Mudstone.

The spatial and depth distribution of strata encountered broadly corresponds with that recorded in BGS logs and mapping.

Which recorded superficial sand and gravel deposits across the majority of the site, with an area in the western part of the site where no superficial is recorded (relatively shallow thicknesses of superficial recorded in this area).

The natural strata encountered across the site are considered to be a suitable bearing stratum for the proposed development, although precautions should be taken where granular soils and perched water are encountered.

9.1.3 Visual and Olfactory Observations

No visual or olfactory evidence of possible contamination (such as by hydrocarbons or asbestos) were noted during the recent intrusive investigation. In addition, no significant natural organic materials were noted within the natural strata.

9.1.4 Groundwater and Excavations

Perched groundwater was encountered in 12 no. of the 35 no. exploratory locations completed during the recent intrusive investigation. The perched groundwater led to instability of trial pit sides when encountered at shallow depth. This was generally encountered perched within the orangish brown superficial granular strata in northern, central and some western parts of the site.

Water was encountered in HTP01 – HTP04, TP01, TP02 and TP04 – TP06 from depths of between 0.15m and 1.90m begl in the northern / central parts of the site. Water was encountered in TP11 between 1.60m and 2.00m begl in the southern part of the site, and was encountered in HTP08 and TP13 between 0.20m and 0.65m begl in the western part of the site.

Based on the above, dewatering is likely to be required in excavations particularly where granular soils are encountered, subject to prevailing weather conditions.

It should also be noted that waterlogged ground and standing water was encountered across the northernmost part of the northern field, and in the northern part of the southern field, which is considered likely to be as the result of persistent rainfall around the time of investigation.

Additionally, a small roughly circular area of standing water was identified in the central part of the western field, which is considered likely to be as the result of damaged field drains encountered at shallow depth in this location.

9.1.5 Stability Issues (e.g. Mining / Slopes)

Table 9.2: Ground Hazard Classifications

Hazard	Maximum Designated Rating
Shrinking / Swelling Clay	Very Low Hazard Rating
Landslide	Very Low Hazard Rating
Ground Dissolution	Very Low Hazard Rating
Compressible Ground	Very Low Hazard Rating
Collapsible Ground	Very Low Hazard Rating
Running Sands	Very Low Hazard Rating

No coal or other mining issues have been recorded at the subject site in accordance with the Environmental Data Report for the site (included in Appendix V).

Evidence of instability was encountered during the site investigation (instability / collapse of trial pit sides noted in TP01 – TP06 and TP11), with casing utilised in boreholes to prevent collapse at shallow depth due to a combination of granular soils and groundwater. Such issues must therefore need to be taken into account prior to any future redevelopment of the site (i.e. for construction and design considerations).

The topography of the site is variable, with an overall slight negative north-east to south-west gradient across the site. Although considered unlikely at this stage, the shallow slopes across parts of the site may need to be taken into account by designers and specialist engineers as part of any future redevelopment works pending final layout proposals.

Drainage ditches and historic field boundaries are located in parts of the site. The Client's appointed structural engineer should consider future construction works / layout etc. in relation to these features.

9.2 Contamination and Performance of Building Materials

9.2.1 Sulphates

pH and water soluble sulphate concentrations in 12 no. soil samples at depths of between 0.10m and 1.80m begl were analysed as part of the investigation including 6 no. of natural topsoil, 1 no. of orangish brown clayey subsoil, 3 no. of orangish brown granular subsoil, 1 no. of yellowish brown and grey cohesive subsoil, and 2 no. of reddish brown cohesive subsoil.

pH values indicate generally neutral conditions to be present, with the highest water soluble sulphate results recorded in the reddish brown cohesive subsoil.

Table 9.3: Summary of Soil Analysis for Concrete Specification

Determinand	Units	No. of Samples	Min	Max	Mean	BRE Classification
pH	pH	12	6.5	7.7	7.08	AC-1
Water Soluble Sulphate	g/l	12	0.012	0.056	0.021	DS-1

The results were assessed in accordance with the requirements of BRE Special Digest 1 (2005), 'Concrete in Aggressive Ground', assuming mobile groundwater conditions and natural soils.

As 12 no. soil samples were tested the mean of the highest 20% of the sulphate test results (rounded up to the nearest 100mg/l) and the lowest 20% of the pH results are the characteristic values for the site. Accordingly, **DS1 – AC1** conditions are present across the site in accordance with BRE Special Digest 1 'Concrete in Aggressive Ground 2005'. Minimum concrete specification should be in accordance with NHBC Standards, Section 3.1.

9.3 Geotechnical Testing

The geotechnical laboratory testing was carried out in accordance with BS EN 14688 'Geotechnical Investigation and Testing – Identification and Classification of Soil'. Full details of the test results are presented in Appendix IX.

3 no. representative samples of the natural granular soils were tested for Particle Size Distribution with the results broadly corresponding with the Engineer's logs.

2 no. of the samples originally scheduled for confirmatory plasticity index testing were found to be too gravelly for plasticity testing (TP11 at 1.50m begl and TP12 at 2.20m begl). Because of this alternative samples were tested for plasticity testing from more suitable test locations.

A total of 5 no. representative soil samples were tested for Plasticity Index, with additional samples analysed for moisture content, the results are presented in Table 9.4:

Table 9.4: Plasticity Index Results

Determinand	No. of Samples	Range	Remark
Moisture Content	26	4.60% - 26.00%	-
% passing 425µm test sieve	5	36.0% - 91.0%	-
Plasticity Index (unmodified)	5	22.0% - 31.0%	Medium
Modified Plasticity Index	5	11.16% - 25.23%	Low to Medium Plasticity

From the results outlined in Table 9.4, on-site cohesive soils have been calculated to have modified plasticity indices ranging between 11.18% and 25.23% indicating cohesive made ground soils to have an overall **MEDIUM** volume change potential as a maximum classification, which should be used when calculating foundation depths across the site in accordance with the relevant standards (e.g. NHBC Standards, Chapter 4.2).

Variability was noted in some areas of the site in respect of ground conditions concerning granular / cohesive soils, therefore zoning may be feasible in some areas subject to final layouts / levels and appropriate testing, subject to regulatory approval.

Equivalent *in situ* standard penetration tests (SPTs) were undertaken at suitable depths within the natural strata in the window sampler exploratory holes advanced across the site. The SPT values generally increased with depth (ranging between 13.0 and +50.0) with SPT 'refusals' encountered between 0.90m and 2.00m begl. The SPT results are summarised in Table 9.5 and 9.5a.

Table 9.5: Summary of *In Situ* SPT Results

Strata	Range Reported	Remark
Orangish brown CLAY	30.0	Medium dense to dense
Orangish brown SAND	13.0 to +50.0	Medium dense to very dense
Orangish brown GRAVEL	44.0 to +50.0	Dense to very dense
Greyish / yellowish brown GRAVEL	+50.0	Very dense

Table 9.5a: *In Situ* SPT 'N' Value Results v Depth Table

Depth (m)	Range Reported
1.0m	13.0 to +50.0
2.0m	30.0 to +50.0

In addition, equivalent *in situ* hand shear vane readings were undertaken within all trial pits where possible for additional composition profiling. Hand shear vane readings of between 50kPa and 110kPa were recorded in natural soils across the site.

The highest hand shear vane readings were recorded in the reddish brown clays with readings of between 60kPa and 110kPa encountered.

Generally, slightly lower values were recorded in the grey and yellowish brown clays with results of between 50kPa and 60kPa recorded.

No hand shear vane readings were undertaken in the granular soils or underlying bedrock due to the granular nature of these materials.

9.4 Geotechnical Hazards for the Proposed Development

It is understood that the proposed development at the site is to comprise residential housing with private gardens, areas of public open space and associated infrastructure. Table 9.6 (overleaf) summarises the main geotechnical hazards identified during intrusive works associated with the proposed development.

Table 9.6: Summary of Geotechnical Hazards

Hazard	Comment
Granular Soils & Groundwater	Granular soils are present across the site. Groundwater / perched water has been encountered at variable depths in granular soils across the northern and central parts of the site. If water is found during construction then alternative foundation strategies may need to be considered as groundwater will reduce the bearing capacity of these materials. If present within an influencing depth of foundations and / or encountered during foundation excavations, then Geo-Matters Ltd should be contacted for further advice.
Soft / Loose Soils	Localised granular soils which collapsed at variable depths have been identified in northern and central parts of the site, which will need to be taken into account as part of any redevelopment of the site (e.g. TP01, TP02, TP03, TP06 and TP11).
Variable Ground Conditions	Advice should be sought where foundations straddle variable soil types (i.e. cohesive / granular). An adjustment of the foundation depths or a suitable mesh reinforcement may be sufficient to mitigate against differential settlement. If such conditions or other variations (e.g. historic field boundaries) are encountered during construction works then engineers from Geo-Matters Ltd should be contacted for further advice.
Drainage Ditches / Slope Stability	Drainage ditches are present in central and south-western parts of the site. Therefore, pending final layout proposals, construction in close proximity to these may need to be assessed by specialist engineers to ensure the integrity and safety of works in such areas. Additionally, should any proposed structures cross the drainage ditches then dewatering of these and filling with a suitable / engineered material will be required. These works and any other changes to the site's topographic levels should be accompanied by an Earthworks Specification.
Slopes / Earthworks	Slightly sloping ground is present across the site. Should topographical modification / re-profiling of the site be warranted as part of future proposed layouts, then an earthworks specification and re-appraisal of foundation depths may be required.
Cohesive Soils	Test data indicates that cohesive soils at the site have a maximum medium volume change potential. Foundation depths may therefore need to be deepened (where cohesive soils are encountered within the influence of foundations), with additional deepening likely to be required where they are constructed within an influencing distance of trees.

Due to localised variability, it is recommended that all foundations must be deepened through any made ground and locally soft shallow natural soils to terminate within the underlying competent natural soils across the site at a minimum depth of 0.90m begl. A nett allowable bearing pressure of 75kN/m² should be achievable across the site in the underlying undisturbed natural soils at the specified founding depths. Traditional foundations terminating within the natural soils should be suitable for the proposed low-rise residential end use across all areas of the site, which should also be confirmed by your Structural Engineer.

Foundations terminating within cohesive soils will need to be deepened within the influencing distance of trees due to the recorded medium volume change potential of natural soils beneath the site (see Section 9.3). Zoning may be feasible in some areas subject to final layouts / levels.

Granular soils and pockets of granular soils within cohesive strata were noted across the site. Where groundwater is encountered in granular soils / pockets within influencing distance of foundations, bearing capacities of granular soils will be reduced. If encountered during foundation excavations, then Geo-Matters Ltd should be contacted for further advice.

Advice should be sought where foundations straddle variable soil types (i.e. cohesive / granular). An adjustment of the foundation depths or a suitable mesh reinforcement may be sufficient to mitigate against differential settlement.

It is recommended that the foundation schedule is provided to Geo-Matters Ltd for review prior to commencement of construction works to confirm issues / risks associated with these ground conditions. As further review may be undertaken by ourselves, there may be a potential to increase the recommended bearing capacities in some areas once a foundation schedule has been completed and reviewed.

9.5 Soakaways

Initial infiltration testing was undertaken in 4 no. boreholes across the site by Geo-Matters Ltd as part of our recent investigation works (WS01, WS03, WS05 and WS08). These works were completed to provide an initial assessment of the suitability; or not; for soakaways to be incorporated at the site as part of any proposed drainage design.

All borehole soakaway locations were filled with water following drilling and were subsequently monitored at regular intervals during the day.

It was noted that water levels were decreasing at variable rates within the boreholes. However, by the end of the day of testing none of the boreholes had fully emptied, and therefore it is considered they would have likely failed the BRE 24-hour criteria (50% empty within 24 hours) as outlined in BRE 365 document.

Based on the shallow perched groundwater and variability of shallow natural strata it is considered that soakaways are unlikely to be feasible for the proposed

development. All drainage proposals should be agreed with the Local Authority prior to finalising designs.

10.0 ANALYSIS, RESULTS AND INTERPRETATION

10.1 Chemical Analyses of Soils

In December 2014 DEFRA released a set of 'Category 4 Screening Levels' (C4SLs) for a select number of determinands. These are screening values which were intended to indicate a level at which land may be considered as 'suitable for use' and 'definitely not contaminated'. Third parties (e.g. LQM, CIEH etc.) have used DEFRA's general risk assessment approach and methodology to calculate further screening values for additional determinands which are common to brownfield / redevelopment sites across the UK. However, these third party values have been derived based upon health criteria values (HCVs) which represent a lower (minimal) risk level and are therefore more conservative. In order to allow a thorough assessment of risks to human health based on the proposed end use, a tiered assessment has been undertaken which uses the more conservative of these authoritative values as an initial screening exercise.

A combined set of Tier 1 Screening Values (T1SVs) shall therefore be used in consideration of potential risks to future end-users at the subject site with reference to the proposed residential end-use **with** private gardens.

Due to ongoing revisions to the contaminated land assessment framework (including the derivation and release of authoritative screening values), the following assessment (and related conclusions / recommendations) may be revised by Geo-Matters Ltd should replacement screening values etc. be released in the near future.

10.1.1 Testing

Representative soil samples from the exploratory locations were analysed for the range of contaminants outlined in Section 7.1. Representative samples of the near surface and underlying natural strata were analysed. The environmental analysis was scheduled by Geo-Matters Ltd and carried out by a UKAS / MCERTS accredited laboratory.

The full details of the chemical test results are presented in Appendix IX and are summarised in Table 10.1 overleaf.

Table 10.1: Laboratory Analysis of Soil Samples

Determinand	No. of Samples Analysed	Concentration Range (mg/kg)	Tier 1 Screening Values (mg/kg)	No. Exceeding Threshold
Metals				
Arsenic	12	5.8 – 15.0	37.0 ^b	0
Cadmium	12	<0.2 – 0.9	11.0 ^b	0
Chromium (Total)	12	20.0 – 66.0	910.0 ^b	0
Chromium VI	12	<4.0*	6.0 ^b	0
Lead	12	12.0 – 190.0	200.0 ^a	0
Selenium	12	<1.0*	250.0 ^b	0
Nickel	12	13.0 – 61.0	130.0 ^b	0
Copper	12	8.9 – 83.0	2400.0 ^b	0
Zinc	12	34.0 – 230.0	3700.0 ^b	0
Mercury	12	<0.3 – 0.9	40.0 ^b	0
Organics and Inorganics				
Benzo(a)pyrene	12	<0.05*	2.2 ^b	0
Benzo(b)fluoranthene	12	<0.05*	2.6 ^b	0
TPH C ₆ -C ₁₀	4	<0.1*	27.0 ^b	0
TPH C ₁₀ -C ₂₅	4	<10.0* – 16.0	74.0 ^b	0
TPH C ₂₅ -C ₄₄	4	<10.0* – 42.0	1100.0 ^b	0
Phenols	12	<1.0*	280.0 ^b	0
pH	12	6.5 – 7.7	N/A	-
Water Sol. Sulphate (g/l)	12	0.012 – 0.056	N/A	-
Total Sulphate	12	130.0 – 700	N/A	-
Asbestos	6	ND	D ^c	0
Pesticide (TICs)	3	ND	Varies	0

^a DEFRA C4SL values for a residential end use with gardens / plant uptake;

^b LQM 'S4UL' values (at 1% SOM for organics) for a residential end use with gardens / plant uptake (Copyright Land Quality Management Ltd reproduced with permission; Publication Number S4UL3676 All Rights Reserved);

^c Geo-Matters Ltd general screening level;

* Contaminants all recorded below laboratory limits of detection; and

N/A = Not Applicable, ND = Not Detected, D = Detected, TIC = Tentatively Identified Compound.

Of the 12 no. samples analysed for metals, PAHs and phenols, 6 no. comprised natural topsoil, 1 no. comprised orangish brown clayey subsoil, 3 no. comprised orangish brown granular subsoil, 1 no. comprised yellowish brown and grey cohesive subsoil, and 2 no. comprised reddish brown cohesive subsoil. Of the 6 no. samples analysed for asbestos, 4 no. samples analysed for TPH and 3 no. samples analysed for pesticides, all comprised natural topsoil. Samples were tested from depths of between 0.10m and 1.80m begl.

Metals

The results were compared with the referenced Tier 1 Screening Values (T1SVs) which are an initial and conservative set of values which are considered most appropriate (overall) to the proposed residential end use with private gardens.

Zootoxic Metals

None of the samples analysed for zootoxic metals recorded concentrations in excess of their respective T1SVs for a residential end use. On this basis, no risks have been identified from these determinands at the subject site.

Phytotoxic Metals

None of the samples analysed for phytotoxic metals recorded concentrations that were deemed excessive. On this basis, no risks have been identified from these determinands at the subject site.

However, it is recommended that your preferred landscaping contractor is consulted to verify that ground conditions at the site are suitable for the proposed / likely planting requirements.

Inorganics and Organics

In lieu of published DEFRA Category 4 Screening Levels for inorganics and organics, the results have been assessed by comparison to available alternative T1SVs including the LQM / CIEH Generic Assessment Criteria (2nd Edition).

Inorganics

The pH values recorded from the soil samples averaged 7.08, indicating that generally near neutral soil conditions prevail within soils at the site, although the range of pH values varied between 6.5 and 7.7.

Organics

The significance of the PAH laboratory results have been assessed using the T1SV for benzo(a)pyrene. This is considered, in terms of toxicity, to present the greatest hazard to human health. The T1SV of 2.2mg/kg (residential end use with plant uptake) was not exceeded within any of the samples tested. On this basis, no risks have been identified from PAHs at the subject site based on the proposed residential end use with private gardens.

Total Petroleum Hydrocarbons (TPH)

None of the samples analysed for TPH recorded concentrations that were deemed excessive. On this basis, **no** risks have been identified from these determinands at the subject site.

Asbestos

6 no. representative soil samples were screened for the presence of asbestos containing materials. None of the samples analysed for asbestos recorded concentrations that were deemed excessive. On this basis, **no** risks have been identified from these determinands at the subject site.

Pesticides

None of the samples analysed for pesticides recorded concentrations that were deemed excessive. On this basis, **no** risks have been identified from these determinands at the subject site.

General Contaminants*Visual, Olfactory and Field Measurements*

No visual and / or olfactory evidence of potential contamination were noted during the site investigation. Small quantities of anthropogenic materials i.e. cement, ceramic and brick fragments were noted on topsoil in some parts of the site. Representative samples were taken for subsequent analysis, although no exceedances of the determinands listed in Table 10.1 were recorded within these samples.

10.2 CLEA Statistical Analysis

In August 2008, the Environment Agency (EA) withdrew the core regulatory guidance documents for the assessment of human health risks from contaminated land (CLR7 to CLR10), including the soil guideline value (SGV) documents. The newly published EA guidance documents (SC050021.TR1, SC050021.SR2 and SC050021.SR3) have been consulted; alongside the CL:AIRE / CIEH guidance note on statistical interpretation of contaminated land data; and the risk assessment for the subject site has been undertaken in broad accordance with these documents.

With reference to the documents listed above, statistical analysis on sample data is not required for determinands where no exceedances above the relevant T1SV were recorded.

With reference to the documents listed above, statistical analysis on sample data is not required for determinands where exceedances above the relevant T1SV were not recorded or when there is an insufficient number of test results to make use of statistical analyses. Therefore, further statistical analysis is not considered necessary at this stage.

10.5 Summary of Chemical Analysis

The chemical analysis undertaken to date has indicated that soil concentrations in the samples tested are below the respective assessment criteria based on a proposed residential end use with private gardens. Exceedances would also not be recorded for public open space end-uses (associated with the soft landscaping / public open space proposed for parts of the site).

10.6 Ground Gas & Radon

Due to the sensitive nature of the proposed development (residential housing), a ground gas monitoring programme was considered prudent to confirm the absence of risks. A ground gas monitoring exercise was therefore commenced concurrently with the site investigation works discussed herein.

Interpretation of gas monitoring data is specified in CIRIA C665 (2007) 'Assessing risks posed by hazardous ground gases to buildings', BS8485:2015+A1:2019 'Code of Practice for the Design or Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings' and other related guidance (as appropriate). This guidance includes the calculation of volumetric flow rates of ground based on maximum recorded gas concentrations and maximum recorded gas flow rates. Limiting factors are applied to the gas monitoring results and a characteristic situation is then applied to the site. This provides a worst-case scenario in relation to the ingress of gas to future structures.

The monitoring programme (6 no. visits) is still ongoing at the time of writing. This has found no significant levels of gas across the site (i.e. all concentrations of methane below 1% v/v and all concentrations of carbon dioxide below 5% v/v, with no significant flow detected).

The site is therefore provisionally classified in accordance with BS8485:2015 +A1:2019 as Modified Wilson & Card Characteristic Situation 1 **CS1** (equivalent to a C665 / NHBC Traffic Light classification of **GREEN** (if the floor slabs are to utilise a clear ventilated sub-floor void of at least 150mm)). Subject to completion of the full monitoring programme.

Based upon the categorisation of the proposed development (private residential dwellings, as described in Table 3 of BS8485:2015+A1:2019), a 'Type A' building type has been established. Based upon Table 4 of BS8485:2015, this would require a 'minimum gas protection score' of 0 points.

Based on the 'minimum gas protection score' of '0 points', no requirements with regards to incorporation of gas protection measures are considered necessary within new buildings constructed across the site, subject to regulatory / NHBC approval.

The completed ground gas risk assessment will be reported under separate cover once all monitoring rounds are complete.

The site is not in a radon affected area, in accordance with the Site Specific Environmental Data Report (Appendix V). Accordingly the Environmental Data report states that radon protective measures are **not** required for new properties, subject to the approval of the regulatory authorities and NHBC.

10.7 Controlled Waters Risk Assessment

The majority of the site is mapped as being underlain by superficial deposits which are recorded by the Environment Agency to have a maximum classification of 'Secondary A Aquifer', with the underlying bedrock classified as a 'Secondary B Aquifer'.

No groundwater or surface water abstraction licenses are recorded within a 250m radius of the site. No potable water abstraction licenses are recorded within a 1km radius of the site, and the site is not set within an Environment Agency Groundwater 'Source Protection Zone'.

Groundwater was encountered in 12 no. of the 35 no. exploratory locations completed during the recent intrusive investigation. However, the concentrations of the contaminants detected within soil samples analysed to date are not considered to be significant in terms of risk to controlled waters, subject to regulatory approval.

11.0 PHASE II ENVIRONMENTAL ASSESSMENT

11.1 Phase II Conceptual Model

11.1.1 Site Summary

The results of the scheduled chemical analysis were compared with the appropriate T1SVs based on a proposed residential end use with private gardens.

In light of the chemical analysis results the SOURCE-PATHWAY-RECEPTOR characteristics have been re-assessed as outlined in Table 11.1 overleaf.

11.1.2 Source-Pathway-Receptor Characterisation and Risk Assessment

The results of the chemical testing analyses indicate that no chemicals have been recorded at concentrations sufficient to act as a source in a SOURCE-PATHWAY-RECEPTOR scenario. The potential pathways and receptors have therefore been revised from those listed in Section 6.1.3.

11.1.3 Identified Pollutant Linkages

In view of the above; the pollutant linkages have been reassessed as listed in Table 11.1 overleaf.

Table 11.1: Identified Pollutant Linkages

Potential Source	Pathway	Receptors					SPL *
		Controlled Waters	Ground workers	End-users	Flora	Building materials	
Metal / metalloids and inorganics in SOIL	Direct Ingestion						
	Dermal Contact						
	Inhalation						
	Leaching/direct movement						
Asbestos containing materials in SOIL	Inhalation						
Organics in SOIL (hydrocarbons, VOCs, PAHs etc.)	Direct Ingestion						
	Dermal Contact						
	Inhalation						
	Leaching/direct movement						
Metal / metalloids and inorganics in CONTROLLED WATER	Direct Ingestion						
	Dermal Contact						
	Inhalation						
	Leaching/direct movement						
Organics in CONTROLLED WATER (hydrocarbons, PAHs etc.)	Direct Ingestion						
	Dermal Contact						
	Inhalation						
	Leaching/direct movement						
GROUND GAS (Carbon Dioxide and Methane) #	Direct Ingestion						
	Inhalation						
	Leaching/direct movement						

*Subject to Local Authority / NHBC approval; and

Subject to completion of gas monitoring programme.

11.1.4 Model Status, Uncertainty and Justification

The conceptual model is considered to represent the current site conditions based on the information derived from the site investigation.

11.2 Risk Assessment

11.2.1 Qualitative Risk Assessment

The regulatory framework within England which addresses risks from contaminated land is presented within and across several regimes. This includes sections 78 (A) to (YC) in Part IIA of the Environmental Protection Act 1990 (which was retrospectively inserted by Section 57 of the Environment Act 1995), Building Regulations, Environmental Permitting Regulations and the National Planning Policy Framework (NPPF) 2018. The contaminated land regime (principally under Part IIA of the EPA (1990)) sets out a risk-based approach within which the identification and remediation of contaminated land presenting unacceptable risks to people and the environment is described. Related regimes (such as those listed above) provide additional guidance through frameworks which focus on specific subsequent scenarios (e.g. re-use of land for new uses).

In the context of the planning system (as identified within the NPPF), the reuse of brownfield land is endorsed (s.118 pp35) and an emphasis is placed upon remediating and mitigating contaminated land (where appropriate). The NPPF states that (s.178/179 pp51-52):

"Planning policies and decisions should also ensure that:

- a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);*
- after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and*
- adequate site investigation information prepared by a competent person is available to inform these assessments".*

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

And additionally, the NPPF states that (s. 180 pp52):

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development".

The core legislation (Part IIA) adopts the principle of a 'suitable for use' approach for; the assessment of contaminated land, the derivation of a site-specific risk assessment and subsequent determination of a remedial strategy. Action is only required if unacceptable risks are posed to human health or to the environment, taking into account the current land-use and geo-environmental settings.

The legislation places a responsibility on the Local Authority to determine whether the land under its jurisdiction is contaminated by consideration of whether: -

- ***Significant harm is being caused;***
- ***There is a significant possibility of significant harm being caused; or***
- ***Pollution of controlled waters is being caused or is likely to be caused.***

The statutory guidance describes a risk assessment methodology in terms of 'significant pollutants' and 'pollutant linkages', using SOURCE-PATHWAY-RECEPTOR' scenarios for the site.

On the basis of the above and also upon available data, the geo-environmental setting and proposed end-uses, a qualitative Source-Pathway-Receptor risk assessment (Table 11.2) is presented overleaf.

Table 11.2: Qualitative Risk Assessment Summary Table

Source	Pathway	Target (Receptor)	Comments	Risk Level	Action*
Metals / Metalloids in soils and dust	Direct ingestion (active) Inhalation (passive) Dermal contact.	Ground workers, End users	Significant contamination was not encountered	LOW	NO FURTHER ACTION REQUIRED
Metals / Metalloids in soils and dust	Near surface soils	Plants within the proposed landscaped areas and gardens	Significant contamination was not encountered	LOW	NO FURTHER ACTION REQUIRED
Metal / Metalloids compounds in waters	As above (plus skin contact)	Ground workers, Site users	Significant contamination was not encountered	LOW	NO FURTHER ACTION REQUIRED
Inorganics in soils and dust	Direct ingestion (active) Inhalation (passive)	Ground workers, End-users and the Property	Significant contamination was not encountered	LOW	NO FURTHER ACTION REQUIRED
Organic compounds in soils and dust	As above (plus skin contact)	Ground workers, Site Users	Significant contamination was not encountered	LOW	NO FURTHER ACTION REQUIRED
Organic compounds in waters	As above (plus skin contact)	Ground workers, Site Users	Significant contamination was not encountered	LOW	NO FURTHER ACTION REQUIRED
Ground Gas	Inhalation (Passive), Ingress	End-Users	Significant ground gas was not encountered	LOW#	NO FURTHER ACTION REQUIRED
Asbestos	Inhalation (passive), Ingress	End Users	Significant contamination was not encountered	LOW	NO FURTHER ACTION REQUIRED

Notes: LOW / MODERATE / HIGH - Risk level is assigned a low / moderate / high qualitative value, based on assessed requirement for action in context of Part II EPA 90;

* Subject to Local Authority Approval; and

Subject to completion of gas monitoring programme.

11.3 Site Status

Human Health Risks

The Phase II Conceptual Model and the Qualitative Risk Assessment outlined above indicate that soils across the site should be treated as uncontaminated in the context of the proposed re-development of the site for a residential land-use with private gardens, subject to regulatory authority / NHBC approval.

No significant levels of ground gas have been identified across the site, which is classified in accordance with **CS1** (equivalent to a C665 / NHBC Traffic Light classification of GREEN) where no special gas protection measures are required. Furthermore, the site is set within an area where radon protective measures are **not** required for new buildings subject to completion of gas monitoring programme.

12.0 RECOMMENDATIONS

The conclusions and recommendations presented below are considered reasonable based on the findings of the site investigation. However, these cannot be guaranteed to gain regulatory approval and therefore copies of this report should be sent to the appropriate Regulatory Authorities and / or other organisations (as appropriate) by the Client for their comments and approval prior to undertaking any irrecoverable works associated with the subject site.

12.1 Enabling / Earthworks: Significant enabling works are not envisaged at this stage.

Specific testing (e.g. waste acceptance criteria testing) may be required at the discretion of the Client's designated waste handler if the off-site movement / disposal of soils is undertaken. Where applicable, such requirements must be verified directly with them by the Client. Additionally, where soils are imported there will be the necessity to ensure compliance with all regulatory licensing procedures (i.e. U1, MMP etc) and also to validate the soils prior to importation, subject to the approval of the Local Authority / NHBC.

Drainage ditches are present in parts of the site. Should any proposed structures (including highways) cross the path of the current drainage ditches / ponds then suitable remedial treatment with an engineered fill will be required. These works and any other changes to the site's topographic levels should be discussed with Geo-Matters Ltd in advance and may need to be accompanied by an Earthworks Specification.

Buried structures / deep made ground are not anticipated at this stage (with the exception of made ground associated with culverted drainage ditches). However, historic mapping indicated the presence of historic field boundaries in some areas which were not encountered during the site works, and therefore engineers from Geo-Matters Ltd should be contacted for further advice if such features are encountered during site works.

A number of geotechnical hazards have been identified and highlighted earlier in this report (see Table 9.6) that should be taken into consideration.

12.2 Foundations: Due to localised variability, it is recommended that all foundations must be deepened through any made ground and locally soft shallow natural soils to terminate within the underlying competent natural soils across the site at a minimum depth of 0.90m begl.

A nett allowable bearing pressure of 75kN/m² should be achievable across the site in the underlying undisturbed natural soils at the specified founding depths. Traditional foundations terminating within the natural soils should be suitable for the proposed low-rise residential end use across all areas of the site, which should also be confirmed by your Structural Engineer.

Foundations terminating within cohesive soils will need to be deepened within the influencing distance of trees due to the recorded medium volume change potential of natural soils beneath the site (see Section 9.3). Zoning may be feasible in some areas subject to final layouts / levels.

Granular soils and pockets of granular soils within cohesive strata were noted across the site. Where groundwater is encountered in granular soils / pockets within influencing distance of foundations, bearing capacities of granular soils will be reduced. If encountered during foundation excavations, then Geo-Matters Ltd should be contacted for further advice.

Advice should be sought where foundations straddle variable soil types (i.e. cohesive / granular). An adjustment of the foundation depths or a suitable mesh reinforcement may be sufficient to mitigate against differential settlement.

It is recommended that the foundation schedule is provided to Geo-Matters Ltd for review prior to commencement of construction works to confirm issues / risks associated with these ground conditions. As further review may be undertaken by ourselves, there may be a potential to increase the recommended bearing capacities in some areas once a foundation schedule has been completed and reviewed.

12.3 Floor Slabs: Ground bearing floor slabs should be suitable on site where the depth of made ground is less than 600mm deep, where suitably strong shallow natural soils are present and where foundations are not located within the zone of influence of trees. Where this is not the case a suspended floor would be a viable alternative. A suspended floor slab with a clear void and heave precautions will also be required if deepening is due to trees in excess of 1.50m depth to comply with appropriate standards (e.g. NHBC Standards Chapter 4.2).

12.4 Road Construction: As a standard / generic approach, CBR values of less than 2% can usually be anticipated in made ground, CBR values of between 2% and 5% can be anticipated in natural cohesive soils and values of between 5% and 10% in natural granular soils respectively based on general road construction guidance literature. However, *in situ* CBR tests should be considered to confirm specific conditions in the areas of proposed road construction. All road construction proposals should be agreed with the Local Authority prior to finalising designs.

12.5 Groundwater: Perched groundwater was encountered in 12 no. of the 35 no. exploratory locations completed during the recent intrusive investigation. This was generally encountered perched within the orangish brown superficial granular strata in northern, central and some western parts of the site.

Water was encountered in HTP01 – HTP04, TP01, TP02 and TP04 – TP06 from depths of between 0.15m and 1.90m begl in the northern / central parts of the site. Water was encountered in TP11 between 1.60m and 2.00m begl in the southern part of the site, and was encountered in HTP08 and TP13 between 0.20m and 0.65m begl in the western part of the site.

Based on the above, dewatering is likely to be required in excavations particularly where granular soils are encountered, subject to prevailing weather conditions.

12.6 Building Near Trees: Cohesive soils were recorded across the parts of the site (cohesive bands within superficial strata and cohesive weathered bedrock). Should foundations terminate within cohesive soils (within the zone of tree influence), foundation designs may need to be adjusted locally with regard to building near trees and hedgerows in accordance with NHBC Standards (Chapter 4.2). Soils of **medium** volume change potential should be assumed across the site when calculating foundation depths for such assessments.

12.7 Drainage: At this stage, based on the ground conditions encountered in our recent investigation, it is considered that soakaways are unlikely to be feasible for the proposed development.

12.8 Ground Gas and Radon: A ground gas monitoring programme (6 no. weeks) is currently ongoing and the final results will be reported under separate cover. Based on the ground gas concentrations and flow rates detected to date, the site would be indicatively classified as **Characteristic Situation 1** or **NHBC 'Green'**. Where specific gas protection measures would not be required within new buildings constructed at the site, subject to Local Authority / NHBC approval.

In accordance with the Site Specific Environmental Data Report (included within our Appendix V) the site is recorded to be within an area where radon protective measures are **not necessary** for new properties.

12.9 Mining: No precautions relating to mining are considered necessary, subject to regulatory authority approval.

12.10 Excavations: Variable stability was noted in the exploratory holes completed across the site during the recent ground investigation, with some granular soils exhibiting local collapse etc. All excavations should be assumed to be unstable as a precautionary measure. No man entry into unsupported excavations should therefore be allowed without an appropriate risk assessment by the Client and / or their appointed site contractors. Reference to CIRIA report 97 (1983) should be made to establish a suitable means of support or battering of excavation sides.

12.11 Sulphate Classification: The pH values recorded from the soil samples ranged between 6.5 and 7.7 with the average pH indicating neutral soil conditions on site.

The results were assessed in accordance with the requirements of BRE Special Digest 1 (2005), 'Concrete in Aggressive Ground', assuming mobile groundwater conditions and natural soils. As 12 no. soil samples were tested the mean of the highest 20% of the sulphate test results (rounded up to the nearest 100mg/l) and the lowest 20% of the pH results are the characteristic values for the site. Accordingly, **DS1 – AC1** conditions are present across the site in accordance with BRE Special Digest 1 'Concrete in Aggressive Ground 2005'. Minimum concrete specification should be in accordance with NHBC Standards, Section 3.1.

12.12 Contamination: Chemical analysis results have been compared with current relevant guidance and site-specific screening values which indicates that there are no elevated levels of contaminants present across the site.

12.13 Remediation: Remediation works to protect human health are not considered necessary subject to the approval of the Local Authority / NHBC.

12.14 Topsoil: Topsoil was encountered across the site during the recent intrusive works, and generally extended to an average depth of 0.39m begl. Chemical analysis indicates that the topsoil is chemically suitable for re-use in all areas of the site.

There is unlikely to be a requirement to import additional topsoil onto the site for use in private gardens etc., however, if they are then it is reiterated that any such works must be undertaken in full compliance with all regulatory licensing procedures (i.e. U1, MMP etc), and validation of the soils prior to importation will be required, subject to the approval of the Local Authority / NHBC.

Where topsoil is discussed herein (and where it has been recorded within Engineer's logs for this site) it has been described and classified in general accordance with prevailing logging practice (e.g. BS5930 / ISO14688). Additional inspection(s) and analyses will be required should classification of such material be required against standards such as BS3882: 2015 'Specification for Topsoil'.

12.15 Further Works: At this stage the following further works will be necessary, subject to comments from the Regulatory Authorities:

- Completion of the ongoing gas monitoring programme and reporting under separate cover;
- Preparation of an appropriate Earthworks Specification should any cut and fill works be required;
- Trees and hedgerows are present around the site, and the site is underlain by cohesive soils, which have been recorded to have a medium volume change potential. A foundation schedule may therefore be required should foundations terminate within natural cohesive soils (or within an influencing depth). The foundation schedule should be prepared once the development layout has been finalised in order to mitigate the effect of existing / proposed trees and landscaping; and
- The Client will need to liaise with appropriately licenced waste management contractors to determine requirements for additional analysis etc. should materials be considered for off-site removal / disposal.

INFORMATION SOURCES

Geological data	British Geological Survey (BGS) 1:50,000 scale Series, Sheet 141 Solid and Drift Edition. Coal Mining Searches, The Law Society Guidance Notes and Directory 1998 Edition. Site Specific Environmental and Geological Data Report (Ref. 237420924_1_1 dated March 2020)
Environmental	https://wimby.co.uk/ Lidar Mapping Site Specific Environmental and Geological Data Report (Ref. 237420924_1_1 dated March 2020) BRE Report BR211 'Radon: Protective Measures for New Buildings' (2015 Edition). Environment Agency (EA) & DEFRA: "Model Procedures for the Management of Land Contamination – Contaminated Land Report 11" (CLR11) (2004). Department for Environment, Food and Rural Affairs (DEFRA) – "SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document" (December 2014). DEFRA and Contaminated Land: Applications in Real Environments (CL:AIRE) "SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination: Final Project Report" (Revision 2 dated 24th September 2014). Chartered Institute of Environmental Health (CIEH): "Professional Practice Note: Reviewing human health risk assessment reports invoking contaminant oral bioavailability measurements or estimates" (2009). CL:AIRE in Association with EIC and AGS: "Soil Generic Assessment Criteria for Human Health Risk Assessment" (updated January 2010 version) (Reference purposes).
Historical	As presented Appendix VI.

Terms and Conditions

This report has been prepared for the sole use and reliance of the Client and their appointed agents (e.g. Geo-Matters Ltd). No other third party may rely upon or reproduce the content of this report without the written approval of Geo-Matters Ltd. If any unauthorised third party comes into possession of this report, they rely upon it entirely at their own risk and the authors do not owe them any warranty, duty of care or skill.

The findings and recommendations made in this report are based on published information (as referenced in Section 3 and at the end of this report). Geo-Matters Ltd cannot accept responsibility for the reliability and authenticity of published information or reports prepared by third parties. There may be conditions prevailing on site which have not been revealed by this assessment and which have not been taken into account by this report. Responsibility cannot be accepted for any conditions not revealed by this investigation and assessment. It should be noted that groundwater levels etc. may vary due to seasonal and other effects. Whilst it may be utilised by others for reference purposes at the Client's discretion, it has not been prepared for any other purposes (e.g. waste classification, drainage excavations etc.) and therefore additional works may be required by third parties dependent upon their own requirements / works. Any works which are proposed at greater depths than reported herein may require confirmatory investigation works as necessary.

Should the development proposals alter (e.g. layout, type or foundation option), then the recommendations in this report may be subject to change.

The conclusions and recommendations presented herein are considered reasonable based on the assessments of the site undertaken by Geo-Matters Ltd. However, these cannot be guaranteed to gain regulatory approval and therefore copies of this report should be sent to the appropriate regulatory authorities and / or other organisations (as appropriate) by the Client for their comments and approval prior to undertaking any irrecoverable works associated with the site.

The possibility of significant variation in ground conditions existing between / beneath test locations / depths cannot be discounted and must be considered within the design proposals for the subject site. All soakaway designs should be approved by the relevant statutory authority prior to implementation and must adhere to the standard design and ground setting requirements, upon which your appointed drainage design engineers should advise you.

Standard Risk Assessment – Considerations and Methodology

Geo-Matters Ltd have based our standard risk assessment methodology upon current legislation and prevailing best practice and available guidance. This includes the DEFRA / EA document 'Contaminated Land Report 11 (CLR11) Model Procedures for the Management of Land Contamination' (2004) and the NHBC / EA / CIEH document 'Guidance for the Safe Development of Housing on Land Affected by Contamination' (2008).

Our risk assessment methodology is based upon a phased approach, which takes the following steps:

1. Hazard Identification and Assessment:

- a. Preliminary risk assessment;
- b. Derivation of initial conceptual site model (CSM); and
- c. Identification of feasible pollutant linkages (which leads onto step '2' if identified).

2. Risk Estimation and Evaluation:

- a. Investigation of the identified potential risks (as highlighted in CSM);
- b. Completion of Generic Quantitative Risk Assessment (GQRA); and
- c. Evaluation of risks / confirmation of pollutant linkages (leading onto step '3' if identified).

3. Remediation Design / Implementation / Verification:

- a. Completion of Detailed Quantitative Risk Assessment (DQRA) if necessary;
- b. Collation of remedial strategy;
- c. Implementation of remedial strategy / validation; and
- d. Final reporting.

Risk terminology and classification is defined through standard wording and descriptions, as contained in the documents referenced above. This includes the balance, comparison and assessment of risk as a dynamic categorisation / classification of probability vs. possible consequence(s), as shown in the table A1 below:

Table A1: Risk Categorisation

Probability (Likelihood)		Consequence			
		Severe	Medium	Mild	Minor
	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Not likely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Risk levels are described as follows:

Table A1: Risk Level Descriptions

Term	Description
Very High Risk	A high probability exists that severe / significant harm could arise to someone or something from the hazard which has been identified. Remedial action is required.
High Risk	Harm is likely to arise to someone or something from the hazard which has been identified. Remedial action is usually required.
Moderate Risk	Harm could potentially arise to someone or something from the hazard which has been identified without remedial action, although it is considered to be relatively <u>unlikely</u> that such harm would be severe.
Low Risk	Harm could theoretically arise to someone or something from the hazard which has been identified without remedial action, although it is considered that any effects would be mild.
Very Low Risk	Harm is not likely to arise to someone or something from the hazard which has been identified.

The NHBC / EA / CIEH document 'Guidance for the Safe Development of Housing on Land Affected by Contamination' (2008) defines the following (reproduced verbatim):

"Severity (consequence) can be defined as the adverse effects (or harm) arising from a defined hazard, which impairs the quality of human health or the environment in the short or longer term. For example a consequence defined as "Severe" could be defined as "Highly elevated concentrations likely to result in 'significant harm' to human health as defined by the EPA 1990, Part 2A, if exposure occurs". The type and form of the contaminant needs to be known in order to understand the effect on humans and therefore severity of potential harm. For instance different forms of cyanide behave differently. Complex cyanide ("blue billy") is relatively "non toxic" whereas free cyanide is "highly toxic" (Environment Agency 2002b).

Probability can be defined as the chance of a particular event occurring in a given period of time. For example, a "High Likelihood" could be defined as "where an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution"

APPENDIX I

Proposed Layout Plan



DO NOT SCALE
NOTES:



Approx. Site Boundary

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CLIENT:



PROJECT:

Site off Egginton Road, Etwall

TITLE:

Proposed Site Layout Plan

SCALE@SIZE :

NTS

SSUE:

Final

DESIGN/DRAWN :

AT

DATE:

April 2020

PROJECT No:

GML20127

DRAWING No:

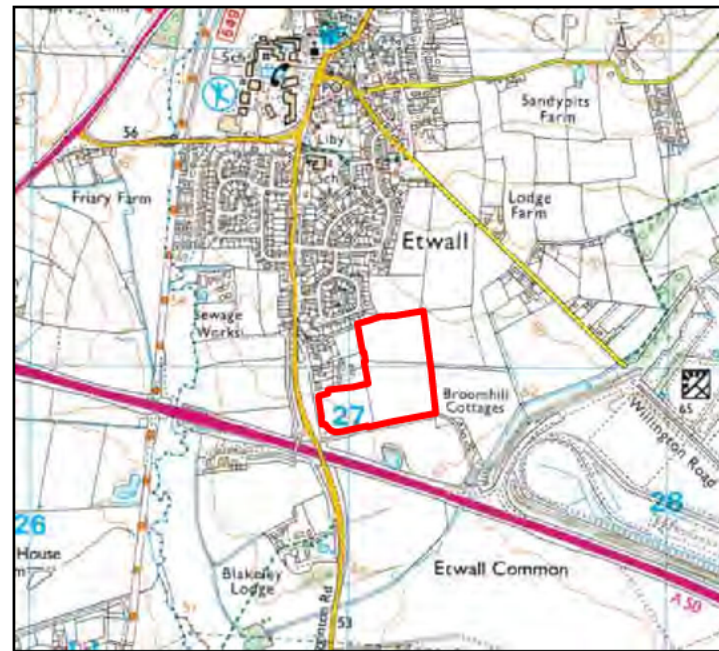
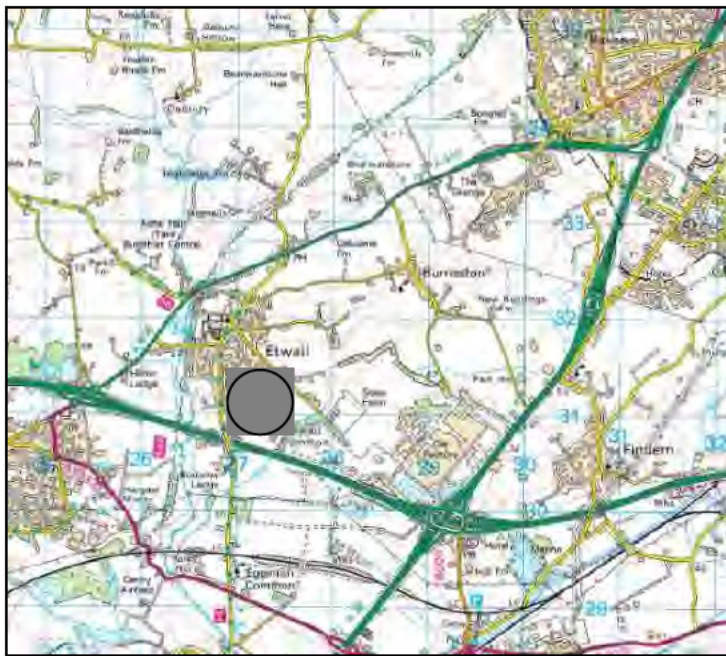
001

The proposed layout plan shown is an extract taken from Autodesk Viewer - 'P19-2981 Sketch Feasibility Layout - Cad Base 16.12.19.dwg'.

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APPENDIX II

Site Location Plan



- DO NOT SCALE
- NOTES:
-  Approx. Site Location
 -  Approx. Site Boundary

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 **REDROW**

PROJECT:

Site off Egginton Rd., Etwall

TITLE:

Site Location Plan

SCALE@SIZE :

NTS

SSUE:

Final

DESIGN/DRAWN :

AT

DATE:

April 2020

PROJECT No:

GML20127

DRAWING No:

002

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APPENDIX III

Site Features Plan



- DO NOT SCALE
- NOTES:
- Approx. Site Boundary
 - Approx. Location of Trees / Bushes
 - Approx. location of Field Drainage Ditches
 - Approx. direction of slopes / gradients
 - Approx. Location of Waterlogged Ground

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PROJECT:

Site off Egginton Rd., Etwell

TITLE:

Site Features Plan

SCALE@SIZE :	SSUE:
NTS	Final
DESIGN/DRAWN :	DATE:
AT	April 2020
PROJECT No:	DRAWING No:
GML20127	003

APPENDIX IV

General Photographic Record



DO NOT SCALE
NOTES:



Approx. Site Boundary

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PROJECT:

Site off Egginton Rd., Etwall

TITLE:

General Photographic Record

SCALE@SIZE :
NTS

ISSUE:
Final

DESIGN/DRAWN :
AT

DATE:
April 2020

PROJECT No:
GML20127

DRAWING No:
004a

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NOTES:



Approx. Site Boundary

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PROJECT:

Site off Egginton Rd., Etwall

TITLE:

General Photographic Record

SCALE@SIZE :
NTS

ISSUE:
Final

DESIGN/DRAWN:
AT

DATE:
April 2020

PROJECT No:
GML20127

DRAWING No:
004b

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DO NOT SCALE
NOTES:



Approx. Site Boundary

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REDROW

PROJECT:

Site off Egginton Rd., Etwall

TITLE:

General Photographic Record

SCALE@SIZE :
NTS

ISSUE:
Final

DESIGN/DRAWN :
AT

DATE:
April 2020

PROJECT No:
GML20127

DRAWING No:
004c

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APPENDIX V

Environmental Data Report

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

237420924_1_1

Customer Reference:

GML20127

National Grid Reference:

427100, 330970

Slice:

A

Site Area (Ha):

8.79

Search Buffer (m):

1000

Site Details:

Egginton Road

Etwall

DERBY

DE65 6PX

Client Details:

Ms A Copestake

GEO-Matters Ltd

104 Bondgate

Castle Donington

Derby

DE74 2NR

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	30
Hazardous Substances	-
Geological	32
Industrial Land Use	37
Sensitive Land Use	40
Data Currency	41
Data Suppliers	47
Useful Contacts	48

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2		4	9	22
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 10		Yes		
Pollution Incidents to Controlled Waters	pg 11				1
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 11			1	
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 11				1 (*10)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 14	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 16	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 16	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 16		15	24	79

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 30				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 30	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 30		1		3
Potentially Infilled Land (Water)	pg 30		7	4	6
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 32	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 32	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 34			1	4
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 35	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 35	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 35	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 36	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 37		2	1	6
Fuel Station Entries					
Points of Interest - Commercial Services	pg 37		1		1
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 37		1	2	9
Points of Interest - Public Infrastructure	pg 38			2	8
Points of Interest - Recreational and Environmental	pg 39		1		1
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 40	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SW)	0	1	427100 330970
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	0	1	426950 331000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	0	1	426950 330850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (SW)	0	1	426950 330800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (NE)	3	1	427250 331050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	10	1	426900 330850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	125	1	426900 331100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (N)	151	1	427050 331300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	188	1	427450 330970
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A18SE (N)	192	1	427100 331350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14NW (E)	201	1	427450 331050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (W)	206	1	426700 330850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	240	1	426750 331100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	272	1	426700 330650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	306	1	427500 330650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (SE)	307	1	427300 330550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	353	1	426550 330850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (SE)	365	1	427350 330500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9NW (SE)	377	1	427550 330600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	427	1	427100 331600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (S)	442	1	427000 330350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A9NW (SE)	448	1	427600 330550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	448	1	426450 330900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (S)	472	1	427150 330350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	478	1	427100 331650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9NW (SE)	485	1	427650 330550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	488	1	427750 330750
1	Discharge Consents Operator: Severn Trent Water Limited Property Type: Undefined Or Other Location: Broomhill Gravel Pits, Etwall Sewage Farm, Etwall Sewage Farm Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6150 Permit Version: 1 Effective Date: 30th May 1963 Issued Date: 30th May 1963 Revocation Date: 19th December 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of Egginton Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	200	2	427400 330701
1	Discharge Consents Operator: Severn Trent Water Limited Property Type: Undefined Or Other Location: Broomhill Road, Etwall Sewage Farm, Etwall Sewage Farm Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6151 Permit Version: 1 Effective Date: 30th May 1963 Issued Date: 30th May 1963 Revocation Date: 19th December 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of Egginton Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	200	2	427400 330702
1	Discharge Consents Operator: Severn Trent Water Limited Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: Broomhill Cottages, Etwall Sewage Farm, Etwall Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6146 Permit Version: 1 Effective Date: 30th May 1963 Issued Date: 30th May 1963 Revocation Date: 27th March 2013 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Egginton Brook Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	201	2	427400 330700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Broomhill Cottages Stw, Jacksons Lane, Etwall, Derbyshire, De65 6nq Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/45827/R Permit Version: 1 Effective Date: 10th November 2003 Issued Date: 10th November 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Trib Egginton Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	221	2	427430 330700
3	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/46320/R Permit Version: 2 Effective Date: 1st January 2010 Issued Date: 14th October 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	460	2	426600 331310
3	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/46320/R Permit Version: 2 Effective Date: 1st January 2010 Issued Date: 14th October 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	460	2	426600 331310
3	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/46320/R Permit Version: 1 Effective Date: 2nd February 2007 Issued Date: 2nd February 2007 Revocation Date: 31st December 2009 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	460	2	426600 331310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/46320/R Permit Version: 1 Effective Date: 2nd February 2007 Issued Date: 2nd February 2007 Revocation Date: 31st December 2009 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	460	2	426600 331310
3	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/45584/R Permit Version: 1 Effective Date: 18th March 2002 Issued Date: 18th March 2002 Revocation Date: 31st March 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	460	2	426600 331310
3	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/45584/R Permit Version: 2 Effective Date: 1st April 2005 Issued Date: 18th March 2002 Revocation Date: 30th March 2006 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	460	2	426600 331310
3	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/45584/R Permit Version: 3 Effective Date: 31st March 2006 Issued Date: 18th March 2002 Revocation Date: 1st February 2007 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	460	2	426600 331310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/08092/R Permit Version: 1 Effective Date: 2nd September 1980 Issued Date: 2nd September 1980 Revocation Date: 17th March 2002 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	488	2	426520 331220
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/46320/R Permit Version: 2 Effective Date: 1st January 2010 Issued Date: 14th October 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	503	2	426510 331230
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: Sewage Disposal Works - Water Company Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/46320/R Permit Version: 1 Effective Date: 2nd February 2007 Issued Date: 2nd February 2007 Revocation Date: Not Supplied Discharge Type: Discharge Of Other Matter-Crude Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	503	2	426510 331230
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/46320/R Permit Version: 1 Effective Date: 2nd February 2007 Issued Date: 2nd February 2007 Revocation Date: 31st December 2009 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	503	2	426510 331230

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/45584/R Permit Version: 1 Effective Date: 18th March 2002 Issued Date: 18th March 2002 Revocation Date: 31st March 2005 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	503	2	426510 331230
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: Sewage Disposal Works - Water Company Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Uncategorised Lower Trent Reference: T/36/45584/R Permit Version: 1 Effective Date: 18th March 2002 Issued Date: 18th March 2002 Revocation Date: 31st March 2005 Discharge Type: Discharge Of Other Matter-Crude Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	503	2	426510 331230
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/45584/R Permit Version: 2 Effective Date: 1st April 2005 Issued Date: 18th March 2002 Revocation Date: 30th March 2006 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	503	2	426510 331230
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: Sewage Disposal Works - Water Company Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Uncategorised Lower Trent Reference: T/36/45584/R Permit Version: 2 Effective Date: 1st April 2005 Issued Date: 18th March 2002 Revocation Date: 30th March 2006 Discharge Type: Discharge Of Other Matter-Crude Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	503	2	426510 331230

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/45584/R Permit Version: 3 Effective Date: 31st March 2006 Issued Date: 18th March 2002 Revocation Date: 1st February 2007 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	503	2	426510 331230
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: Sewage Disposal Works - Water Company Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/45584/R Permit Version: 3 Effective Date: 31st March 2006 Issued Date: 18th March 2002 Revocation Date: 1st February 2007 Discharge Type: Discharge Of Other Matter-Crude Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	503	2	426510 331230
4	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Stw Eggington Road, Etwall, Derby, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/08092/R Permit Version: 1 Effective Date: 2nd September 1980 Issued Date: 2nd September 1980 Revocation Date: 17th March 2002 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Etwall Brook Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	531	2	426490 331250
5	Discharge Consents Operator: Anthony James William Eley Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: An Stp Serving Polly Joke, Willington Road, Etwall, Derby, De65 6nr Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/46268/S Permit Version: 1 Effective Date: 28th June 2006 Issued Date: 28th June 2006 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: A Trib Of The Eggington Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A14NW (E)	500	2	427740 331140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Discharge Consents Operator: Severn Trent Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Etwall Gravel Pit Cottages Stw, Egginton Road, Etwall, Derbyshire, De65 6nq Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: T/36/45822/R Permit Version: 1 Effective Date: 10th November 2003 Issued Date: 10th November 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Trib Egginton Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A8SW (S)	542	2	426980 330250
7	Discharge Consents Operator: Mr H Mitchell Property Type: Not Given Location: Land Adjacent Highfield, Willington Road, ETWALL, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Not Given Reference: WQ/72/1644/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 31st January 1978 Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge: Groundwater Environment: Receiving Water: Not Supplied Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14NE (E)	554	2	427800 331100
8	Discharge Consents Operator: Severn Trent Water Limited Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: Gravel Pit Cottages, Etwall Sewage Farm, Etwall Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6149 Permit Version: 1 Effective Date: 30th May 1963 Issued Date: 30th May 1963 Revocation Date: 19th May 2008 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of Egginton Brook Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A8SW (S)	691	2	427000 330102
8	Discharge Consents Operator: Severn Trent Water Limited Property Type: Undefined Or Other Location: Little Slade Plot, Etwell Sewage Farm, Burton On Trent, Staffordshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6147 Permit Version: 1 Effective Date: 30th May 1963 Issued Date: 30th May 1963 Revocation Date: 19th December 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of Egginton Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A8SW (S)	692	2	427000 330101

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	Discharge Consents Operator: Severn Trent Water Limited Property Type: Undefined Or Other Location: Little Slade Plot, Etwell Sewage Farm, Burton On Trent, Staffordshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6145 Permit Version: 1 Effective Date: 30th May 1963 Issued Date: 30th May 1963 Revocation Date: 19th December 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Receiving Water Not Defined Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	A8SW (S)	693	2	427000 330100
9	Discharge Consents Operator: Mr W Spencer Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Rockingham House Willington Road, Etwell, ., Derbyshire, De65 6nr Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Npswqd001812 Permit Version: 1 Effective Date: 26th June 2008 Issued Date: 26th June 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Egginton Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	703	2	427891 331417
10	Discharge Consents Operator: Severn Trent Water Limited Property Type: Undefined Or Other Location: Blakeley Lodge, Etwell Sewage Farm, Etwell Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6148 Permit Version: 1 Effective Date: 30th May 1963 Issued Date: 30th May 1963 Revocation Date: 1st March 2001 Discharge Type: Trade Discharge - Process Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of Egginton Brook Status: Application refused - 1961 Rivers (Prevention of Pollution) Act Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	735	2	426700 330100
11	Discharge Consents Operator: Mitchell Farm Services Property Type: Not Given Location: Old Station Yard, ETWALL, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Not Given Reference: 3/28/36/2316/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 16th May 1973 Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge: Groundwater Environment: Receiving Water: Not Supplied Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	772	2	426500 331700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	Discharge Consents Operator: Severn Trent Water Limited Property Type: Undefined Or Other Location: Housing Site, Etwall Village, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6813 Permit Version: 1 Effective Date: 29th May 1963 Issued Date: 29th May 1963 Revocation Date: 19th December 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Receiving Water Not Defined Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A11NE (W)	903	2	426000 331001
12	Discharge Consents Operator: Severn Trent Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Etwall Village Sewage Disposal Wks, Etwall Village, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6811 Permit Version: 1 Effective Date: 29th May 1963 Issued Date: 29th May 1963 Revocation Date: 1st March 2001 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Receiving Water Not Defined Status: Application refused - 1961 Rivers (Prevention of Pollution) Act Positional Accuracy: Approximate location provided by supplier	A11NE (W)	903	2	426000 331000
12	Discharge Consents Operator: Severn Trent Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Etwall Village Sewage Disposal Wks, Etwall Village, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6812 Permit Version: 1 Effective Date: 29th May 1963 Issued Date: 29th May 1963 Revocation Date: 1st March 2001 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Receiving Water Not Defined Status: Application refused - 1961 Rivers (Prevention of Pollution) Act Positional Accuracy: Approximate location provided by supplier	A11NE (W)	903	2	426000 331000
12	Discharge Consents Operator: Severn Trent Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Etwall Village Sewage Disposal Wks, Etwall Village, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Derwent Reference: Dt/6814 Permit Version: 1 Effective Date: 29th May 1963 Issued Date: 29th May 1963 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Receiving Water Not Defined Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Approximate location provided by supplier	A11NE (W)	903	2	426000 331000
	Nearest Surface Water Feature	A13SW (W)	68	-	426820 330923

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Other Location: Main Street, ETWALL Authority: Environment Agency, Midlands Region Pollutant: Miscellaneous - Other Note: Etwall Brook; 500Lt Foam/Petrol Mixture; Other Adverse Effects Incident Date: 4th May 1996 Incident Reference: 2000661 Catchment Area: Trent Catchment : Lower Dove Receiving Water: Not Given Cause of Incident: Fire Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	821	2	426450 331720
	River Quality Name: Eggington Bk GQA Grade: River Quality C Reach: Bradbourn & Trusley To A38 Road Bridge Estimated Distance (km): 10.5 Flow Rate: Flow less than 0.62 cumecs Flow Type: River Year: 2000	A12NE (W)	449	2	426455 330982
14	Water Abstractions Operator: Mr M Spencer Licence Number: 03/28/36/0013 Permit Version: 100 Location: New Close Farm - Well Authority: Environment Agency, Midlands Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: New Close Farm - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15NW (E)	976	2	428200 331300
	Water Abstractions Operator: Mr W C Brockley Licence Number: 03/28/36/0022 Permit Version: 100 Location: Friary Farm - Well Authority: Environment Agency, Midlands Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Friary Farm - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	1036	2	426100 331600
	Water Abstractions Operator: Mr E W Harvey Licence Number: 03/28/36/0021 Permit Version: 100 Location: Marsh Cottage Farm - Borehole Authority: Environment Agency, Midlands Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Marsh Cottage Farm - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NE (N)	1338	2	427400 332500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Severn Trent Water Limited Licence Number: 03/28/36/0168 Permit Version: 101 Location: Land At Etwall - Borehole Authority: Environment Agency, Midlands Region Abstraction: Water supply related: Process water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Etwall - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 22nd October 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4SE (SE)	1485	2	428050 329590
	Water Abstractions Operator: Severn Trent Water Ltd Licence Number: 03/28/36/0168 Permit Version: 102 Location: Land At Etwall - Borehole Authority: Environment Agency, Midlands Region Abstraction: Water supply related: Process water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Etwall - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 22nd October 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4SE (SE)	1485	2	428050 329590
	Water Abstractions Operator: Severn Trent Water Limited Licence Number: 03/28/36/0168 Permit Version: 100 Location: Land At Etwall - Borehole Authority: Environment Agency, Midlands Region Abstraction: Water supply related: Process water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Etwall - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 23rd June 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A4SE (SE)	1485	2	428050 329590
	Water Abstractions Operator: D Ferneyhough & Co Licence Number: 03/28/36/0164 Permit Version: 101 Location: Land At Eggington - Eggington Brook- 3 Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Eggington - Eggington Brook Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 13th August 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2SW (SW)	1626	2	426300 329300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: D Ferneyhough & Co Licence Number: 03/28/36/0164 Permit Version: 100 Location: Land At Eggington - Eggington Brook- 3 Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Eggington - Eggington Brook Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 30th September 1997 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2SW (SW)	1626	2	426300 329300
	Water Abstractions Operator: D Ferneyhough & Co Licence Number: 03/28/36/0164 Permit Version: 101 Location: Land At Eggington - Eggington Brook Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Eggington - Eggington Brook Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 13th August 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1820	2	426580 329010
	Water Abstractions Operator: D Ferneyhough & Co Licence Number: 03/28/36/0164 Permit Version: 100 Location: Land At Eggington - Eggington Brook Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Eggington - Eggington Brook Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 30th September 1997 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1820	2	426580 329010
	Water Abstractions Operator: E, M F And K G Shuttlewood Licence Number: 03/28/36/0020 Permit Version: 100 Location: Park Farm - Borehole (1) Authority: Environment Agency, Midlands Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Park Farm Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1991	2	428800 332400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial: <90% Patchiness: <3m Superficial Thickness: Medium Superficial Recharge:	A13NW (W)	0	3	426927 330996
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial: <90% Patchiness: <3m Superficial Thickness: Medium Superficial Recharge:	A13SW (SW)	0	3	426928 330829
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial: <90% Patchiness: <3m Superficial Thickness: Medium Superficial Recharge:	A13SW (W)	0	3	427000 330970
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial: <90% Patchiness: <3m Superficial Thickness: High Superficial Recharge:	A13SE (SW)	0	3	427100 330970

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial: <90% Patchiness: <3m Superficial Thickness: Medium Superficial Recharge:	A13SW (W)	0	3	426996 330952
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial: <90% Patchiness: <3m Superficial Thickness: High Superficial Recharge:	A13SW (SW)	0	3	427000 330926
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial: <90% Patchiness: <3m Superficial Thickness: High Superficial Recharge:	A13SE (E)	0	3	427243 330961
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: <3m Superficial Thickness: High Superficial Recharge:	A13NE (N)	0	3	427100 331000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: High	A13NE (E)	0	3	427246 331000
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A13SE (SW)	0	3	427100 330970
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NW (W)	0	3	426927 330996
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (SW)	0	3	427100 330970
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SW (SW)	0	3	426928 330829
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
15	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 211.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SW (W)	68	4	426820 330923
16	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 53.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NW (W)	125	4	426840 331022
17	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NW (W)	134	4	426817 331018

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 65.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NW (W)	142	4	426818 331028
19	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 178.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SE (S)	159	4	427192 330679
20	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 290.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14NW (E)	204	4	427463 331103
21	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 3.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14NW (NE)	204	4	427439 331163
22	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 42.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SE (SE)	212	4	427385 330676
23	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14SW (SE)	215	4	427465 330757
24	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14SW (SE)	217	4	427446 330724
25	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 109.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14SW (SE)	218	4	427443 330720
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14SW (SE)	220	4	427482 330786

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 116.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14SW (SE)	221	4	427484 330790
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	233	4	427363 330641
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	236	4	427365 330639
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	251	4	427380 330629
31	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 2.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	259	4	427389 330625
32	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	259	4	427388 330624
33	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 6.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	260	4	427388 330623
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 57.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	264	4	427385 330617
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 334.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14SW (E)	271	4	427542 330891

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 112.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	300	4	427355 330568
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 225.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14SW (SE)	336	4	427579 330716
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 62.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (W)	348	4	426567 330789
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 61.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (W)	358	4	426543 330862
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 740.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Etwall Brook Catchment Name: Trent Primacy: 1	A12SE (W)	380	4	426524 330979
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	384	4	427299 330471
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NE (SW)	385	4	426726 330473
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 359.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (SW)	396	4	426531 330726
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 72.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	398	4	427290 330455

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NE (SW)	400	4	426712 330464
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 160.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NE (SW)	402	4	426710 330463
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (W)	406	4	426507 330799
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 215.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Etwall Brook Catchment Name: Trent Primacy: 1	A12SE (W)	418	4	426495 330792
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	433	4	427242 330409
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 53.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	436	4	427241 330406
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 147.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12NE (NW)	444	4	426618 331310
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	463	4	427201 330370
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 258.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	466	4	427192 330365

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 66.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NW (SE)	507	4	427689 330566
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 195.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	515	4	426386 330976
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	517	4	426381 330906
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 465.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	517	4	426381 330906
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 43.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	518	4	426380 330898
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 49.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	524	4	426377 330855
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1352.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Etwell Brook Catchment Name: Trent Primacy: 1	A12SW (W)	527	4	426398 330686
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 136.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	536	4	426371 330806
62	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 128.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	536	4	426371 330806

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	537	4	426392 330696
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 110.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NW (SE)	544	4	427750 330593
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 108.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8SW (S)	549	4	426957 330243
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8SW (S)	549	4	426966 330243
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 134.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14SE (SE)	550	4	427794 330678
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 27.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NE (SW)	550	4	426575 330379
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 110.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	555	4	427780 330630
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12NW (W)	566	4	426364 331099
71	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 37.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 2	A17SE (NW)	567	4	426507 331365

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NE (SW)	567	4	426581 330352
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12NW (W)	568	4	426364 331103
74	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 23.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 2	A17SE (NW)	572	4	426499 331359
75	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 503.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12NW (W)	573	4	426363 331116
76	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 158.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NE (SW)	573	4	426582 330344
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 31.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Etwall Brook Catchment Name: Trent Primacy: 1	A12NE (NW)	578	4	426472 331303
78	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 2	A17SE (NW)	580	4	426506 331392
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 2	A17SE (NW)	587	4	426478 331348
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 24.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 2	A17SE (NW)	592	4	426499 331406

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14NE (E)	594	4	427851 331015
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8SW (S)	595	4	426856 330205
83	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 179.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8SW (S)	596	4	426853 330204
84	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 32.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	599	4	426463 331343
85	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	599	4	426463 331343
86	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	600	4	426472 331367
87	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 70.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14NE (E)	602	4	427859 331020
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	604	4	426498 331430
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 385.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Etwall Brook Catchment Name: Trent Primacy: 1	A17SE (NW)	607	4	426447 331321

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	612	4	426500 331449
91	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 2	A7NW (SW)	617	4	426352 330567
92	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 48.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	622	4	426501 331468
93	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 19.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NW (SW)	629	4	426331 330585
94	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NW (SW)	629	4	426331 330585
95	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 2	A7NW (SW)	630	4	426338 330566
96	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 25.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NW (SW)	631	4	426327 330590
97	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 19.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NW (SW)	633	4	426334 330566
98	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 4.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NW (SW)	633	4	426334 330566

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
99	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 91.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NW (SW)	637	4	426330 330566
100	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 390.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	643	4	427820 330519
101	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 22.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	643	4	427820 330519
102	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 53.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	647	4	426502 331515
103	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 35.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	647	4	427836 330536
104	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 298.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NW (SW)	647	4	426328 330547
105	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	660	4	426244 330817
106	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 158.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	664	4	426241 330816
107	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7SE (SW)	668	4	426639 330198

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
108	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 66.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7SE (SW)	669	4	426643 330195
109	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	678	4	426504 331568
110	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	684	4	426507 331580
111	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 100.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SE (NW)	695	4	426508 331598
112	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 792.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7SE (SW)	700	4	426684 330143
113	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NW (SW)	725	4	426238 330560
114	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 44.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NW (SW)	729	4	426234 330559
115	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 272.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	765	4	427982 330568
116	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 241.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	777	4	427972 330515

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
117	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.8 Watercourse Level: Underground Permanent: True Watercourse Name: Etwall Brook Catchment Name: Trent Primacy: 1	A17NE (NW)	808	4	426445 331696
118	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 53.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Etwall Brook Catchment Name: Trent Primacy: 1	A17NE (NW)	820	4	426445 331713
119	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	820	4	426082 330827
120	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 192.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A11SE (W)	834	4	426067 330828
121	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 47.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17NE (NW)	845	4	426456 331760
122	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 210.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Etwall Brook Catchment Name: Trent Primacy: 1	A17NE (NW)	845	4	426456 331760
123	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SW (NW)	867	4	426286 331588
124	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 269.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17NE (NW)	869	4	426470 331802
125	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 300.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A17SW (NW)	872	4	426282 331591

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
126	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 56.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A11NE (W)	938	4	425973 331066
127	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A11NE (W)	973	4	425933 331027
128	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 190.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A11NE (W)	973	4	425933 331027
129	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 49.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A11NE (W)	976	4	425929 331021
130	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A11SE (W)	994	4	425906 330977
131	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 428.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A11SE (W)	997	4	425903 330969
132	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 82.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 2	A11SE (W)	997	4	425903 330969

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
133	Historical Landfill Sites Licence Holder: Redland Aggregates Limited Location: Etwall, Derbyshire Name: Etwall Sand and Gravel Quarry Operator Location: Bradgate House, Crosby, Leicester Boundary Accuracy: As Supplied Provider Reference: EAHLD23812 First Input Date: 31st May 1991 Last Input Date: 28th February 1992 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 1000/0156 BGS Ref: Not Supplied Other Ref: LE43	A8SE (S)	841	2	427152 329973
	Local Authority Landfill Coverage Name: South Derbyshire District Council - Has no landfill data to supply		0	5	427100 330970
	Local Authority Landfill Coverage Name: Derbyshire County Council - Had landfill data but passed it to the relevant environment agency		0	6	427100 330970
134	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A13NW (NW)	213	-	426792 331121
135	Potentially Infilled Land (Non-Water) Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (S)	667	-	426921 330125
136	Potentially Infilled Land (Non-Water) Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (S)	709	-	426999 330084
137	Potentially Infilled Land (Non-Water) Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A19NE (NE)	906	-	427770 331902
138	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NE (NE)	33	-	427264 331180
139	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SW (W)	52	-	426851 330881
140	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	82	-	427355 330862
141	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NE (N)	130	-	427122 331290
142	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NW (N)	135	-	427060 331287
143	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NW (SW)	208	-	426919 330586
144	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NW (NW)	243	-	426848 331301
145	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A12SE (SW)	419	-	426530 330653
146	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A14SW (SE)	479	-	427729 330708

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
147	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NW (S)	485	-	426912 330309
148	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A18SW (N)	492	-	426919 331616
149	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (SW)	540	-	426584 330385
150	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A19SW (NE)	575	-	427645 331572
151	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A18NW (N)	620	-	426886 331741
152	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A19SE (NE)	680	-	427855 331445
153	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A19NE (NE)	792	-	427802 331723
154	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A9NE (E)	821	-	428057 330612

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A13SE (SW)	0	1	427100 330970
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SW)	0	1	427100 330970
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (W)	25	1	427000 331000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NW (S)	292	1	427000 330500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SE (W)	336	1	426562 330927
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NE (W)	358	1	426552 331000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SW (W)	512	1	426388 330960

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	740	1	428000 331000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	761	1	428000 331166
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	801	1	428062 331000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NE (SE)	809	1	428000 330500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A23SW (N)	844	1	427048 332000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14NE (E)	868	1	428093 331285

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9SW (S)	886	1	427500 330000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A15NW (E)	900	1	428124 331290
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9SE (SE)	964	1	427997 330219
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: 200 - 300 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9SE (SE)	964	1	428000 330222
155	BGS Recorded Mineral Sites Site Name: Etwall Location: Etwall, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 34557 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Triassic Geology: Gunthorpe Member Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	274	1	426785 331266
156	BGS Recorded Mineral Sites Site Name: Gravelpit Houses Gravel Pit Location: Egginton, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 247856 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Egginton Common Sand And Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8SW (S)	722	1	427008 330072

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
157	BGS Recorded Mineral Sites Site Name: Etwall Common Location: Egginton, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 34571 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Egginton Common Sand & Gravel Member, Trent Valley Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8SW (S)	771	1	426866 330026
158	BGS Recorded Mineral Sites Site Name: Etwall Location: Etwall, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 1346 Type: Opencast Status: Ceased Operator: Redland Aggregates Operator Location: Not Supplied Periodic Type: Quaternary Geology: River Trent Gravel Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 100m	A9SW (S)	886	1	427500 330000
159	BGS Recorded Mineral Sites Site Name: Willington Road Location: Etwall, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 34583 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Etwall Sand & Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A15NW (E)	894	1	428149 331048
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	426996 330952
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	426927 330996

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	0	1	427243 330961
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	171	1	427000 331305
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A14NW (E)	186	1	427440 331011
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A14NW (E)	220	1	427473 331026
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	13	1	427172 330822
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	30	1	426871 330855
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	97	1	426919 330700
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	99	1	426803 330879
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
160	Contemporary Trade Directory Entries Name: Topley Carpets & Window Blinds Location: A, 77, Egginton Road, Etwall, Derby, DE65 6NP Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NW (NW)	147	-	426886 331070
161	Contemporary Trade Directory Entries Name: R J Fairbanks Location: 86, Egginton Road, Etwall, Derby, DE65 6NP Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NW (NW)	235	-	426816 331241
162	Contemporary Trade Directory Entries Name: Hollingworth & Sons Location: Ash View, Willington Road, Etwall, Derby, Derbyshire, DE65 6NR Classification: Dairies Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	353	-	427481 331424
163	Contemporary Trade Directory Entries Name: Elbar Services Ltd Location: Oak Deane, Etwall, Derby, DE65 6LX Classification: Recycling Centres Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A18NW (N)	598	-	426951 331737
164	Contemporary Trade Directory Entries Name: C Changes Location: 18, Old Station Close, Etwall, Derby, DE65 6PQ Classification: Electricity Generating & Distributing Equipment Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	651	-	426491 331507
165	Contemporary Trade Directory Entries Name: Ebarks Location: 17, Mill Meadow Way, Etwall, Derby, DE65 6NL Classification: Catering Equipment Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	683	-	426586 331657
166	Contemporary Trade Directory Entries Name: D C Tooling Location: 17, Willington Road, Etwall, Derby, DE65 6JG Classification: Machine Tools - Manufacturers & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NW (N)	763	-	427005 331914
167	Contemporary Trade Directory Entries Name: K Spray Location: 27, Lawn Avenue, Etwall, DERBY, DE65 6JB Classification: Paint Spraying Equipment & Accessories Status: Inactive Positional Accuracy: Automatically positioned to the address	A23SE (N)	942	-	427199 332115
168	Contemporary Trade Directory Entries Name: Dorling Koper Design Location: 18, Church Hill, Etwall, Derby, DE65 6LT Classification: Children & Babywear - Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A23SW (N)	992	-	426950 332137
169	Points of Interest - Commercial Services Name: R J Fairbanks Location: 86 Egginton Road, Etwall, Derby, DE65 6NP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13NW (NW)	235	7	426816 331241
170	Points of Interest - Commercial Services Name: Travelling Car Valet Location: Ivy Court, Willington Road, Etwall, Derby, DE65 6JG Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18NW (N)	795	7	426971 331942
171	Points of Interest - Manufacturing and Production Name: Tank Location: DE65 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	19	7	427268 330837

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
172	Points of Interest - Manufacturing and Production Name: Tank Location: DE65 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	453	7	427388 330418
173	Points of Interest - Manufacturing and Production Name: Works Location: DE65 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	480	7	426557 331248
174	Points of Interest - Manufacturing and Production Name: Tank Location: DE65 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	521	7	427794 330885
175	Points of Interest - Manufacturing and Production Name: Tank Location: DE65 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	703	7	427348 330155
176	Points of Interest - Manufacturing and Production Name: Tank Location: DE65 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A9SE (SE)	863	7	427917 330281
177	Points of Interest - Manufacturing and Production Name: Toyota Solar Farm (DECC) Location: Burnaston, Derby, DE1 9TA Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to address or location	A15NW (E)	870	7	428131 331006
177	Points of Interest - Manufacturing and Production Name: Toyota Solar Farm - Solar Photovoltaics (DECC) Location: Burnaston, Derby, DE1 9TA Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to address or location	A15NW (E)	876	7	428137 331003
178	Points of Interest - Manufacturing and Production Name: Tank Location: DE65 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15SW (E)	897	7	428154 330686
179	Points of Interest - Manufacturing and Production Name: Tank Location: DE65 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A9SE (SE)	960	7	427825 330070
180	Points of Interest - Manufacturing and Production Name: Tank Location: DE65 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A9SE (SE)	992	7	427989 330169
181	Points of Interest - Manufacturing and Production Name: G Shepherd Location: Gorse Farm, Etwall Road, Egginton, Derby, DE65 6GW Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A3NW (S)	998	7	426856 329798
182	Points of Interest - Public Infrastructure Name: Sewage Works Location: DE65 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A12NE (NW)	456	7	426584 331252

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
182	Points of Interest - Public Infrastructure Name: Sewage Works Location: DE65 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	493	7	426545 331255
182	Points of Interest - Public Infrastructure Name: Outfall Location: DE65 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	501	7	426512 331230
182	Points of Interest - Public Infrastructure Name: Outfall Location: DE65 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	512	7	426500 331232
183	Points of Interest - Public Infrastructure Name: Weir Location: DE65 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	544	7	426425 330581
184	Points of Interest - Public Infrastructure Name: Terragenia Ltd Location: 52 Willington Road, Etwall, Derby, DE65 6NR Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location	A18NE (N)	570	7	427160 331738
185	Points of Interest - Public Infrastructure Name: Sludge Bed Location: DE65 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	620	7	426745 330206
185	Points of Interest - Public Infrastructure Name: Sludge Bed Location: DE65 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	621	7	426743 330205
186	Points of Interest - Public Infrastructure Name: Sluice Location: DE65 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	714	7	427693 330278
187	Points of Interest - Public Infrastructure Name: Graveyard Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A23SW (N)	968	7	426835 332089
188	Points of Interest - Recreational and Environmental Name: Play Area Location: DE65 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	150	7	427211 331321
189	Points of Interest - Recreational and Environmental Name: Play Area Location: DE65 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	574	7	426915 331701

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
190	Nitrate Vulnerable Zones Name: River Trent (Source To Confluence With Derwent) Nvz Description: Surface Water Source: Environment Agency, Head Office	A13SE (SW)	0	3	427100 330970

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Derbyshire Dales District Council - Environmental Health Department Amber Valley Borough Council - Environmental Health Division (Air Pollution) South Derbyshire District Council - Environmental Health Department Derby City Unitary Council - Environmental Health Department East Staffordshire Borough Council - Environmental Health Department	April 2014 December 2019 January 2015 October 2014 October 2014	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Midlands Region	October 2019	Quarterly
Enforcement and Prohibition Notices Environment Agency - Midlands Region	March 2013	Annual Rolling Update
Integrated Pollution Controls Environment Agency - Midlands Region	October 2008	Variable
Integrated Pollution Prevention And Control Environment Agency - Midlands Region	January 2020	Quarterly
Local Authority Integrated Pollution Prevention And Control Derby City Unitary Council - Environmental Health Department South Derbyshire District Council - Environmental Health Department Derbyshire Dales District Council - Environmental Health Department Amber Valley Borough Council - Environmental Health Division (Air Pollution) East Staffordshire Borough Council - Environmental Health Department	April 2014 January 2015 June 2014 October 2013 October 2014	Variable Variable Variable Variable Variable
Local Authority Pollution Prevention and Controls Derby City Unitary Council - Environmental Health Department South Derbyshire District Council - Environmental Health Department Derbyshire Dales District Council - Environmental Health Department Amber Valley Borough Council - Environmental Health Division (Air Pollution) East Staffordshire Borough Council - Environmental Health Department	April 2014 January 2015 June 2014 May 2016 October 2014	Not Applicable Annual Rolling Update Annual Rolling Update Not Applicable Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Derby City Unitary Council - Environmental Health Department East Staffordshire Borough Council - Environmental Health Department South Derbyshire District Council - Environmental Health Department Derbyshire Dales District Council - Environmental Health Department Amber Valley Borough Council - Environmental Health Division (Air Pollution)	April 2014 January 2013 January 2015 June 2014 May 2016	Variable Variable Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	January 2020	
Pollution Incidents to Controlled Waters Environment Agency - Midlands Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Midlands Region	July 2015	Annual Rolling Update
Prosecutions Relating to Controlled Waters Environment Agency - Midlands Region	March 2013	Annual Rolling Update
Registered Radioactive Substances Environment Agency - Midlands Region	June 2016	
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	January 2020 January 2020 January 2020 January 2020	Quarterly Quarterly Quarterly Quarterly

Agency & Hydrological	Version	Update Cycle
Water Abstractions Environment Agency - Midlands Region	January 2020	Quarterly
Water Industry Act Referrals Environment Agency - Midlands Region	October 2017	Quarterly
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	October 2019	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2019	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2019	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2019	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2019	Quarterly
Flood Defences Environment Agency - Head Office	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	January 2020	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water Suitability Environment Agency - Head Office	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	October 2019	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Midlands Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	November 2019 November 2019 November 2019 November 2019	Quarterly Quarterly Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	January 2020 January 2020 January 2020 January 2020	Quarterly Quarterly Quarterly Quarterly
Local Authority Landfill Coverage Amber Valley Borough Council Derby City Council Derbyshire County Council Derbyshire Dales District Council East Staffordshire Borough Council - Environmental Health Department South Derbyshire District Council Staffordshire County Council - Waste Management	May 2000 May 2000 May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Derbyshire Dales District Council East Staffordshire Borough Council - Environmental Health Department Amber Valley Borough Council Derby City Council Derbyshire County Council South Derbyshire District Council Staffordshire County Council - Waste Management	April 2003 March 2004 May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	March 2003 March 2003 March 2003 March 2003	Not Applicable Not Applicable Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	March 2003 March 2003 March 2003 March 2003	Not Applicable Not Applicable Not Applicable Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	March 2003 March 2003 March 2003 March 2003	Not Applicable Not Applicable Not Applicable Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Derby City Unitary Council - Development and Cultural Services Derbyshire County Council Derbyshire Dales District Council East Staffordshire Borough Council - Planning Department South Derbyshire District Council Staffordshire County Council Amber Valley Borough Council	February 2016 February 2016 February 2016 February 2016 February 2016 February 2016 January 2016	Variable Variable Variable Variable Variable Variable Variable
Planning Hazardous Substance Consents Derby City Unitary Council - Development and Cultural Services Derbyshire County Council Derbyshire Dales District Council East Staffordshire Borough Council - Planning Department South Derbyshire District Council Staffordshire County Council Amber Valley Borough Council	February 2016 February 2016 February 2016 February 2016 February 2016 February 2016 January 2016	Variable Variable Variable Variable Variable Variable Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2019	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	January 2020	Quarterly
Fuel Station Entries Catalist Ltd - Experian	December 2019	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	March 2020	Quarterly
Points of Interest - Education and Health PointX	March 2020	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2020	Quarterly
Points of Interest - Public Infrastructure PointX	March 2020	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2020	Quarterly
Underground Electrical Cables National Grid	December 2015	

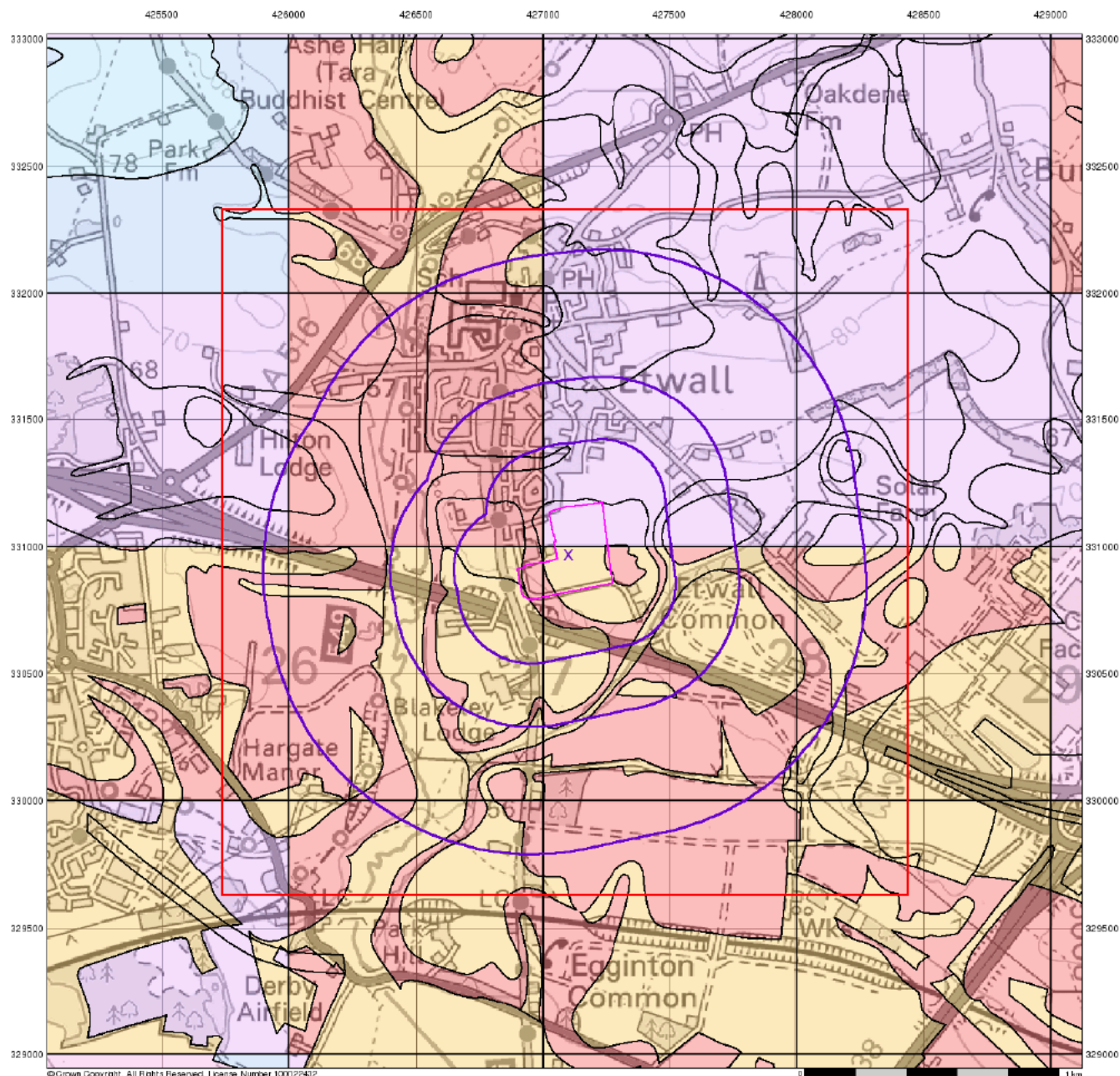
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	August 2018	Bi-Annually
Areas of Adopted Green Belt Amber Valley Borough Council Derby City Unitary Council - Development and Cultural Services Derbyshire Dales District Council East Staffordshire Borough Council South Derbyshire District Council	February 2020 February 2020 February 2020 February 2020 February 2020	As notified As notified As notified As notified As notified
Areas of Unadopted Green Belt Amber Valley Borough Council Derby City Unitary Council - Development and Cultural Services Derbyshire Dales District Council East Staffordshire Borough Council South Derbyshire District Council	February 2020 February 2020 February 2020 February 2020 February 2020	As notified As notified As notified As notified As notified
Areas of Outstanding Natural Beauty Natural England	June 2019	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	March 2019	Bi-Annually
Marine Nature Reserves Natural England	July 2019	Bi-Annually
National Nature Reserves Natural England	July 2019	Bi-Annually
National Parks Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
Ramsar Sites Natural England	April 2019	Bi-Annually
Sites of Special Scientific Interest Natural England	March 2019	Bi-Annually
Special Areas of Conservation Natural England	June 2019	Bi-Annually
Special Protection Areas Natural England	April 2019	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	South Derbyshire District Council Civic Offices, Civic Way, Swadlincote, Derbyshire, DE11 0AH	Telephone: 01283 221000 Fax: 01283 550128 Website: www.south-derbys.gov.uk
6	Derbyshire County Council County Offices, Matlock, Derbyshire, DE4 3AG	Telephone: 01629 580000 Fax: 01629 580119 Website: www.derbyshire.gov.uk
7	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
8	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



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Groundwater Vulnerability

General

- Specified Site ○ Specified Buffer(s) X Bearing Reference Point
- Slice 8 Map ID

Agency and Hydrological

Bedrock Aquifers

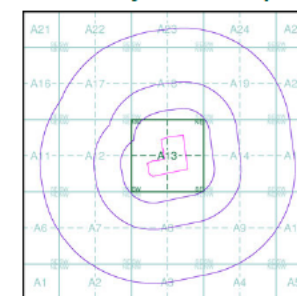
- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

- Unproductive Aquifer
- Soluble Rock

Site Sensitivity Context Map - Slice A

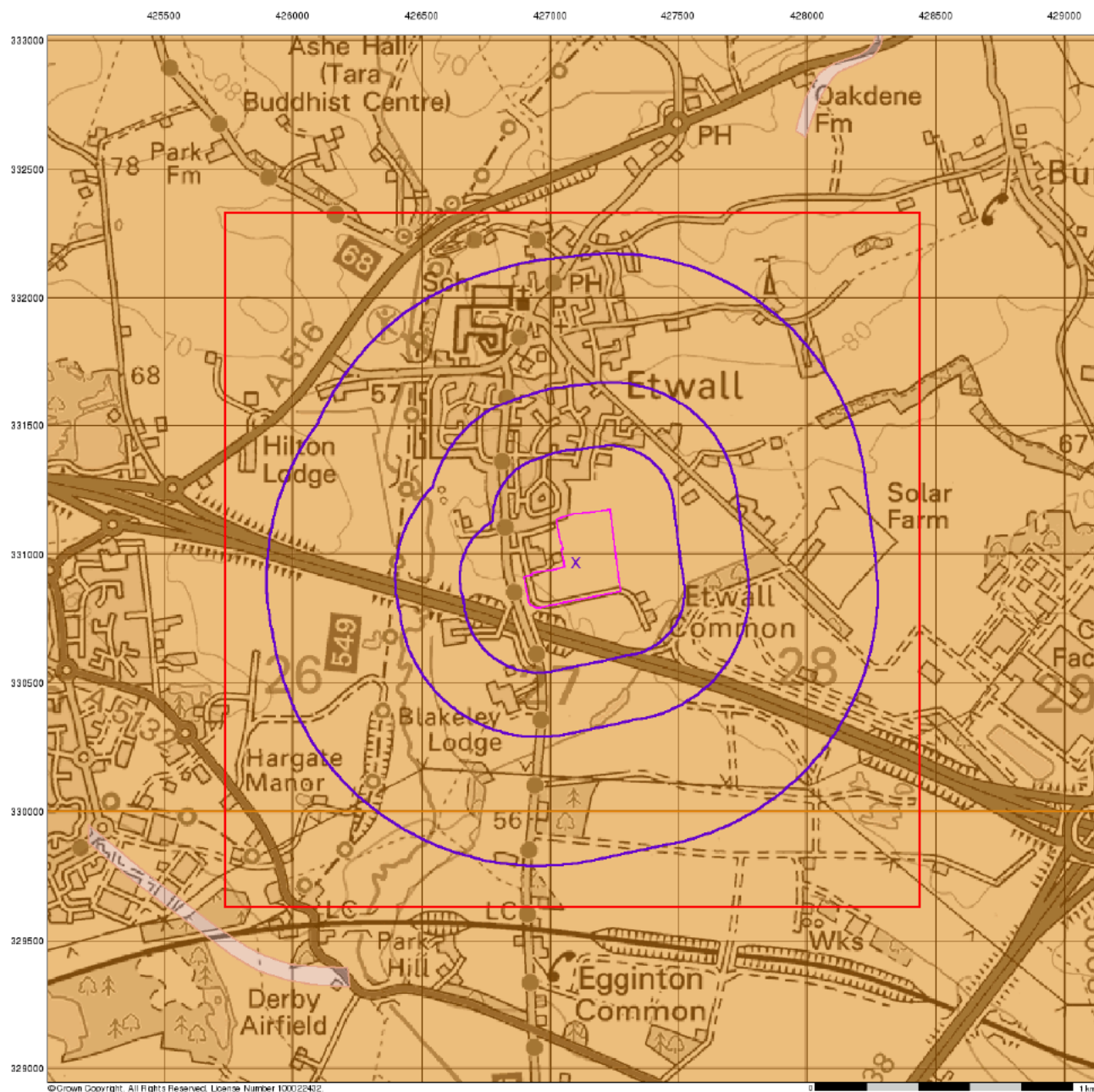


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Eginton Road, Et wall, DERBY, DE65 6PX



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Bedrock Aquifer Designation

General

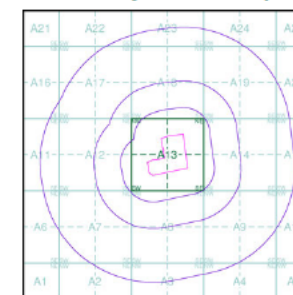
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- 8 Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A

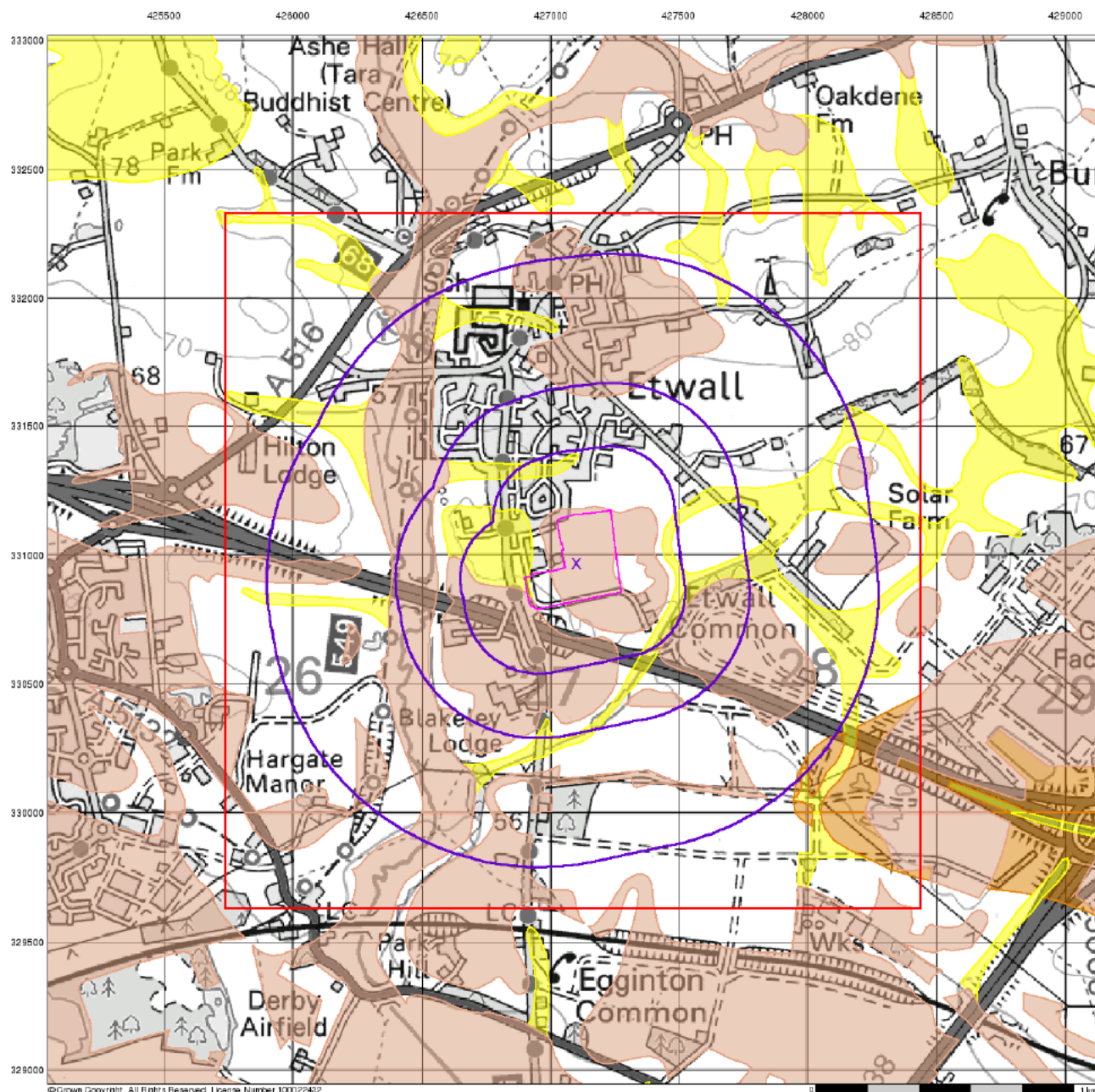


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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Superficial Aquifer Designation

General

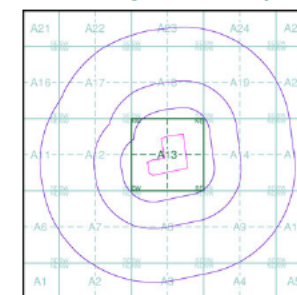
- Specified Site
- Specified Buffer(s)
- x Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A

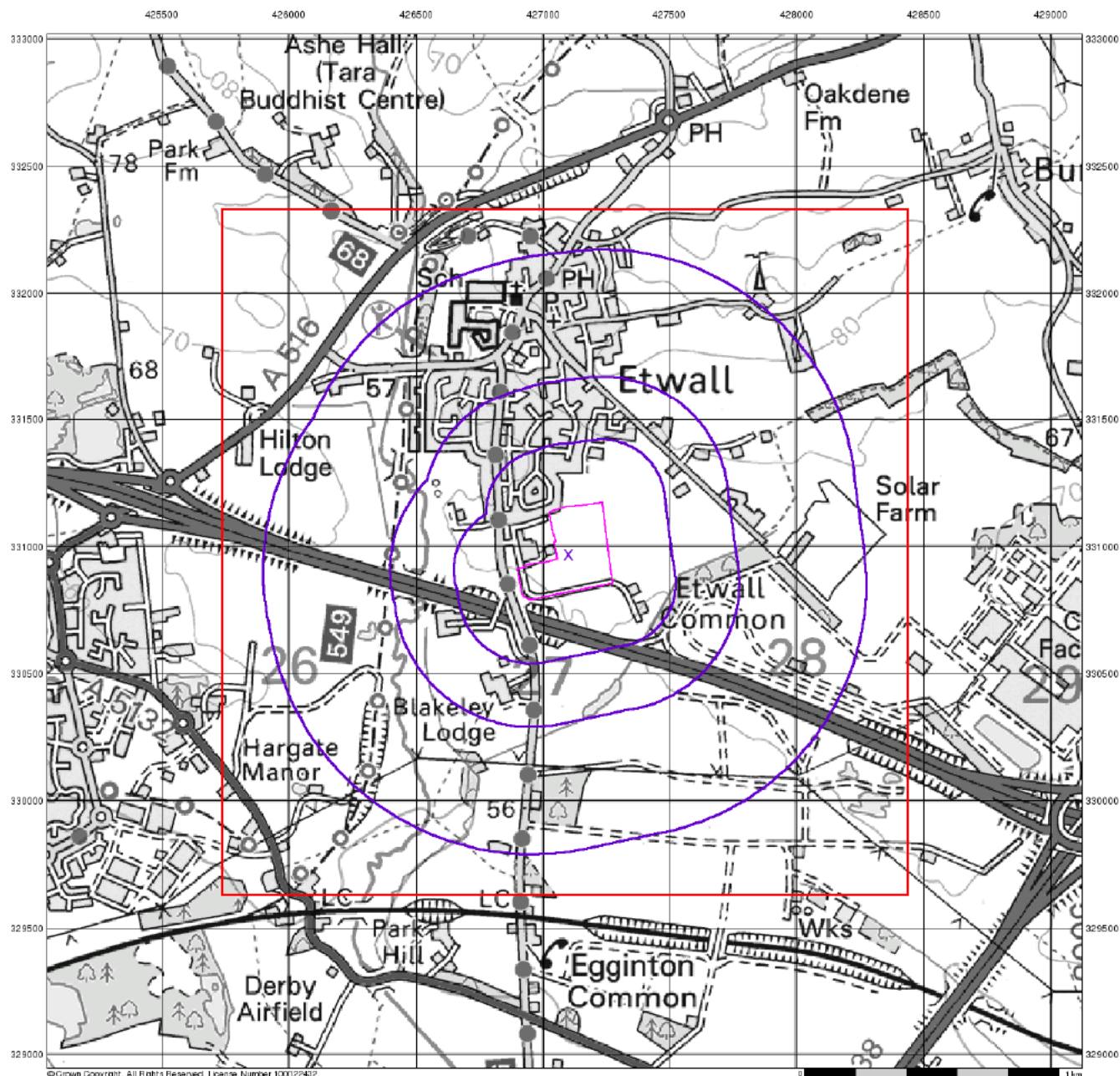


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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Source Protection Zones

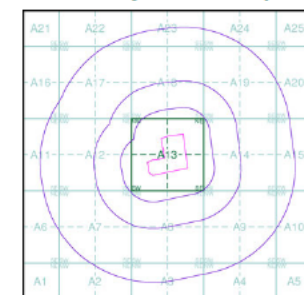
General

- ◊ Specified Site ○ Specified Buffer(s) X Bearing Reference Point
- Slice 8 Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- ▨ Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- ▨ Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- ▨ Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A

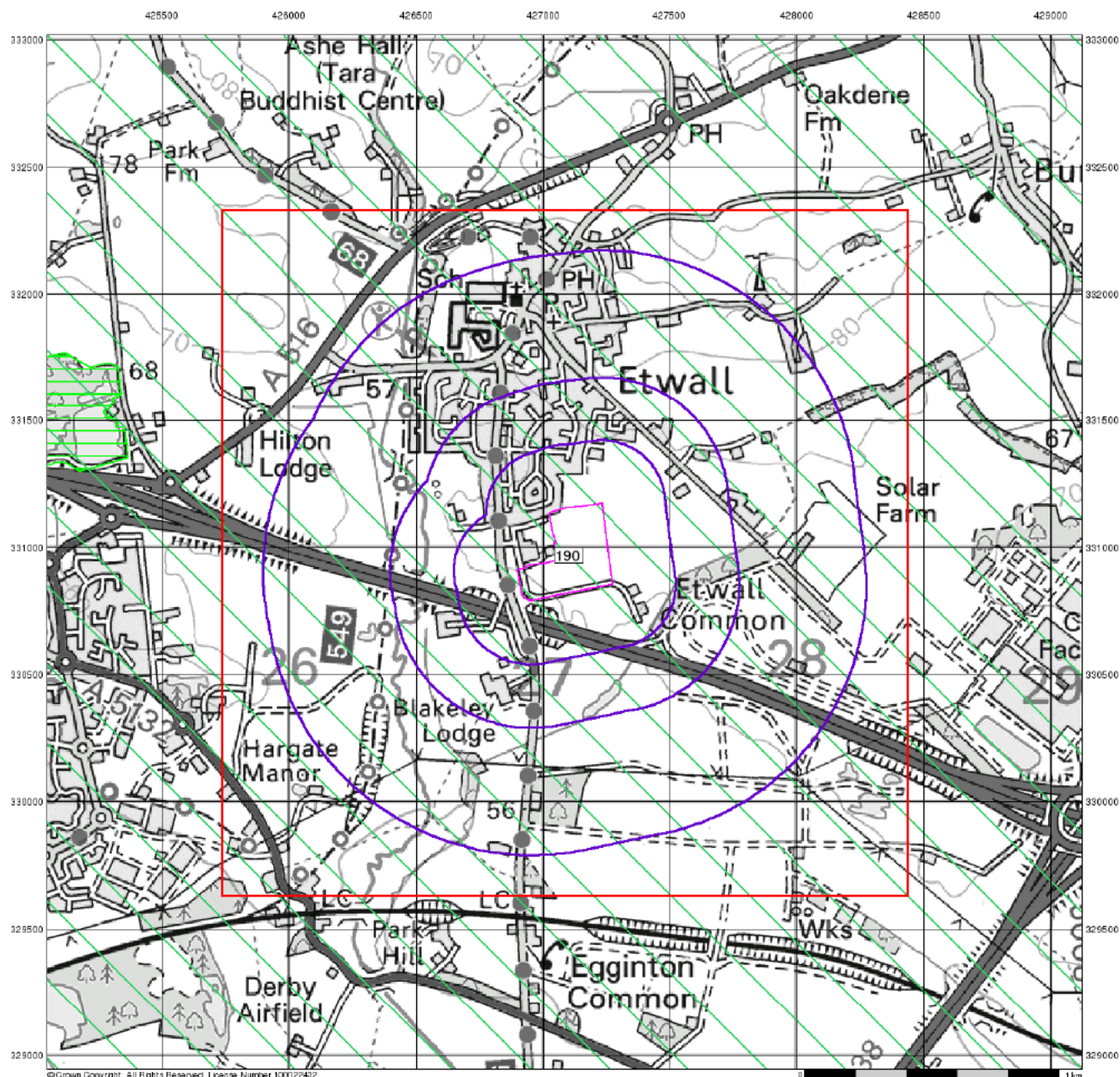


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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Sensitive Land Uses

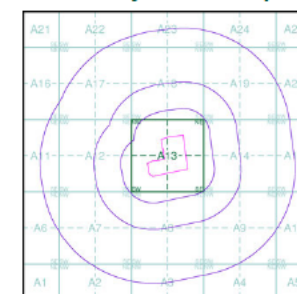
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A

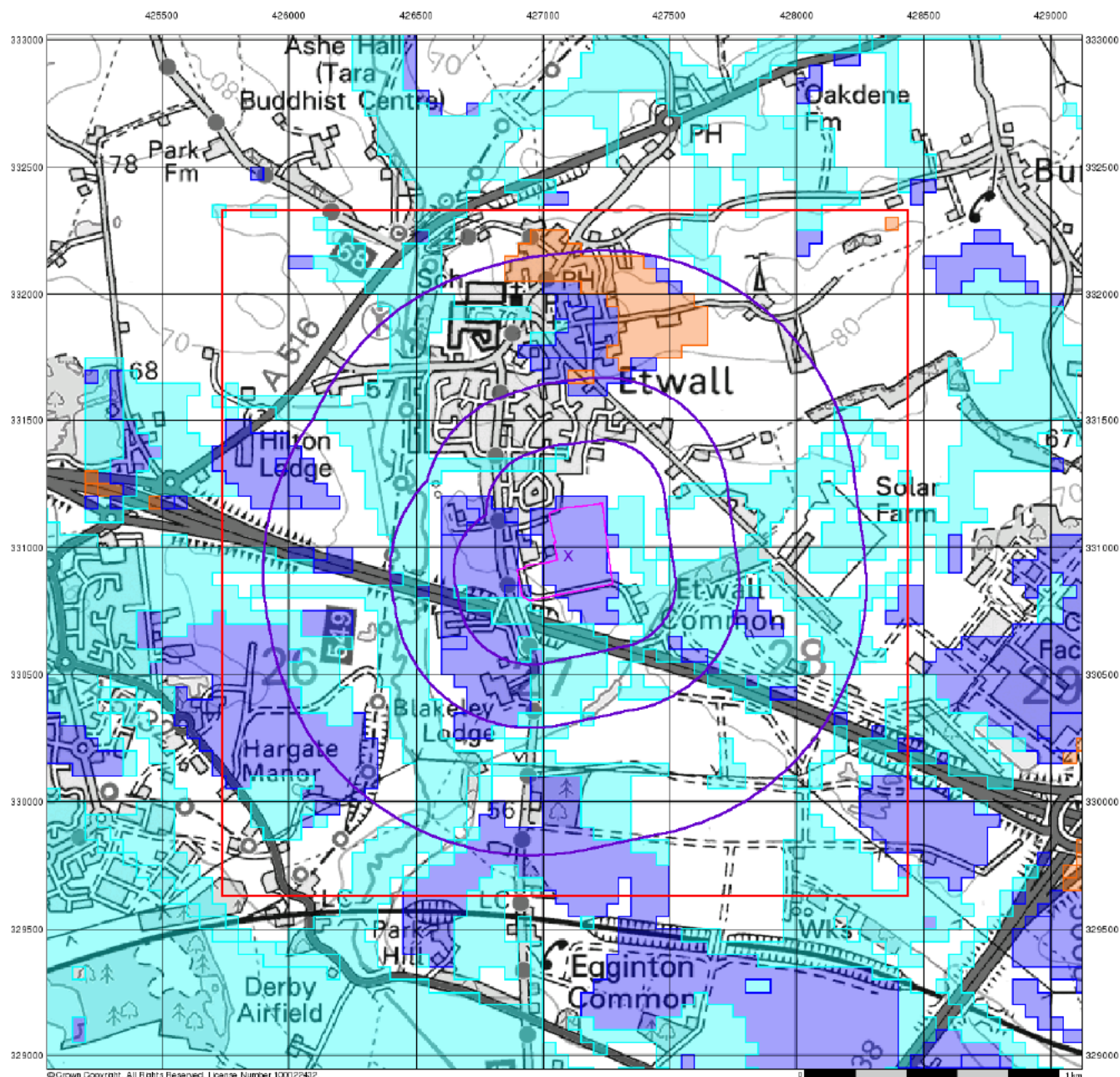


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



BGS Flood GFS Data

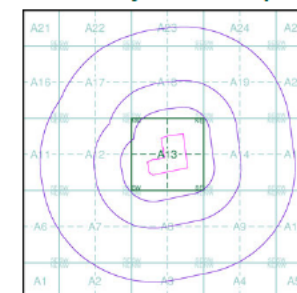
General

- ◇ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A

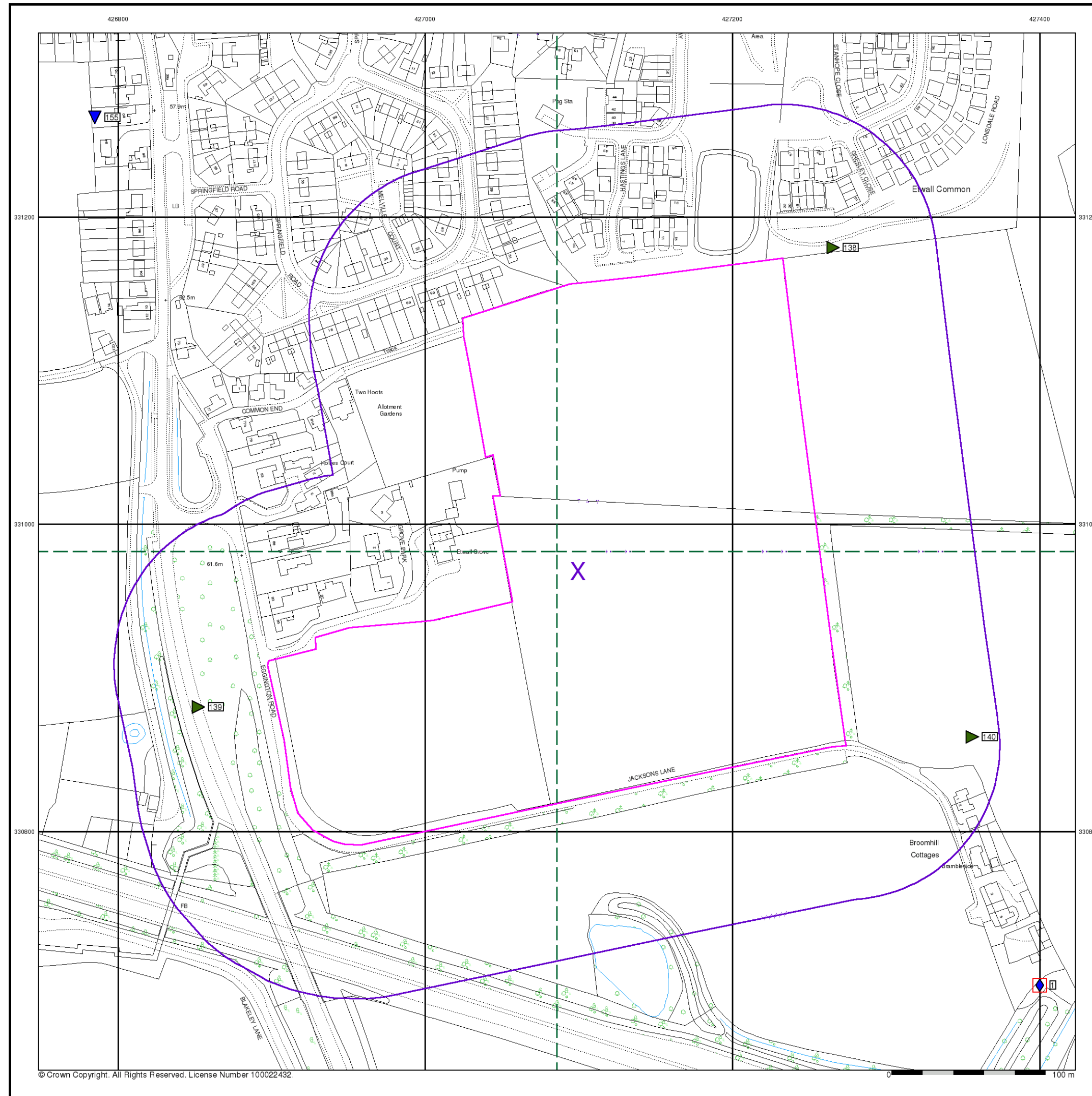


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

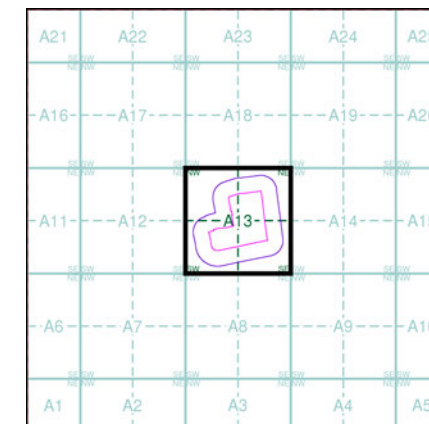
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13

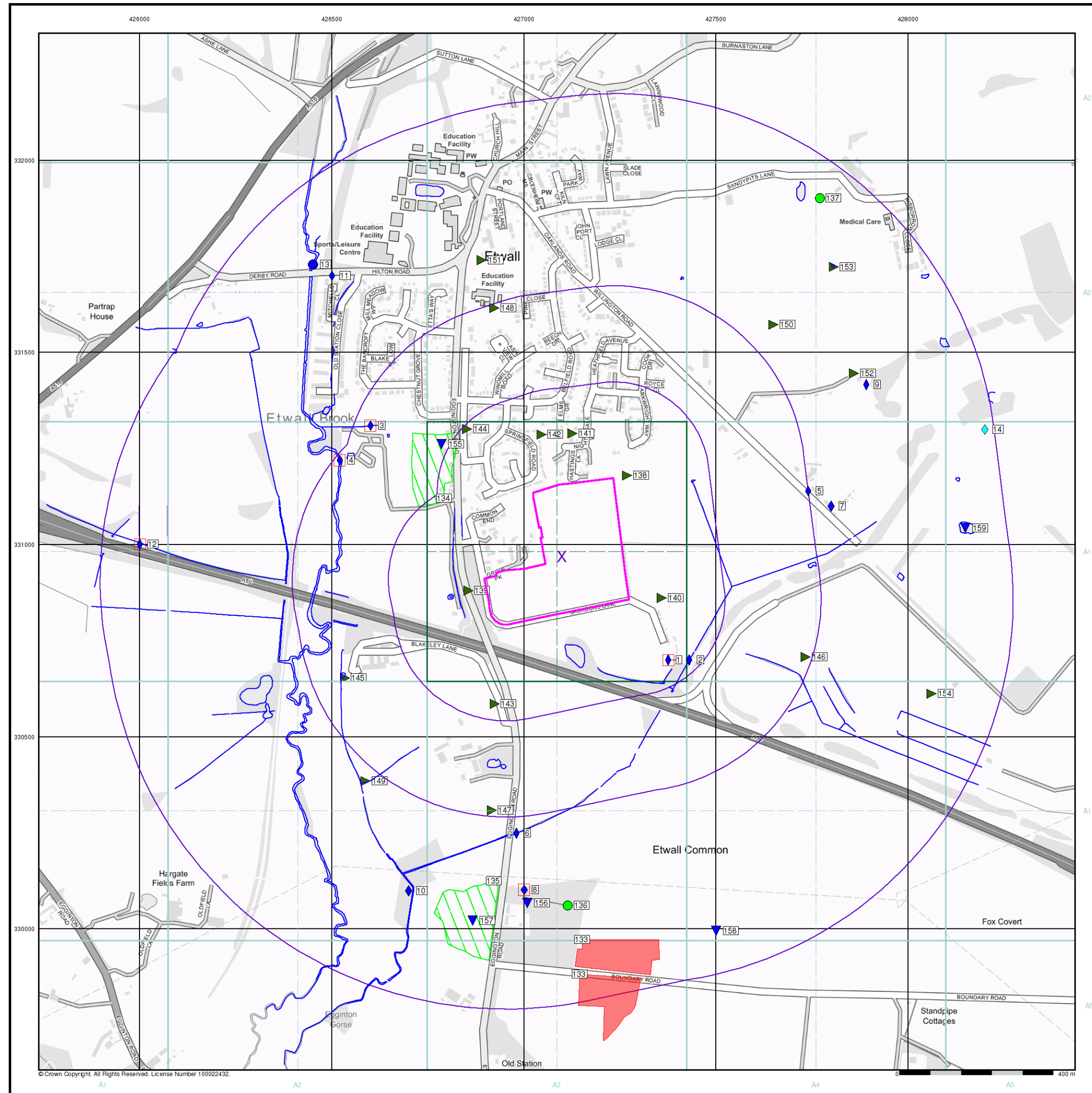


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Plot Buffer (m): 100

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



- General

Specified Site

Specified Buffer(s)

Bearing Reference Point

Map ID

Several of Type at Location

Agency and Hydrological

Contaminated Land Register Entry or Notice (Location)

Contaminated Land Register Entry or Notice

Discharge Consent

Enforcement or Prohibition Notice

Integrated Pollution Control

Integrated Pollution Prevention Control

Local Authority Integrated Pollution Prevention and Control

Local Authority Pollution Prevention and Control

Local Authority Pollution Prevention and Control Enforcement

Pollution Incident to Controlled Waters

Prosecution Relating to Authorised Processes

Prosecution Relating to Controlled Waters

Registered Radioactive Substance

River Network or Water Feature

River Quality Sampling Point

Substantiated Pollution Incident Register

Water Abstraction

Water Industry Act Referral

Hazardous Substances

COMAH Site

Explosive Site

NIHHS Site

Planning Hazardous Substance Consent

Planning Hazardous Substance Enforcement

BGS Recorded Mineral Site

Waste

BGS Recorded Landfill Site (Location)

EA Historic Landfill (Buffered Point)

EA Historic Landfill (Polygon)

Integrated Pollution Control Registered Waste Site

Licensed Waste Management Facility (Landfill Boundary)

Licensed Waste Management Facility (Location)

Local Authority Recorded Landfill Site (Location)

Local Authority Recorded Landfill Site

Potentially Infilled Land (Non-water)

Potentially Infilled Land (Non-water)

Potentially Infilled Land (Non-water)

Potentially Infilled Land (Water)

Potentially Infilled Land (Water)

Potentially Infilled Land (Water)

Registered Landfill Site (Location)

Registered Landfill Site (Point Buffered to 100m)

Registered Landfill Site (Point Buffered to 250m)

Registered Waste Transfer Site (Location)

Registered Waste Transfer Site

Registered Waste Treatment or Disposal Site (Location)

Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A

Order Details

Order Number:

237420924_1_1

Customer Ref:

GML20127

National Grid Reference:

427100, 330970

Slice:

A

Site Area (Ha):

8.79

Search Buffer (m):

1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX

Landmark

INFORMATION GROUP

Tel:

0844 844 9952

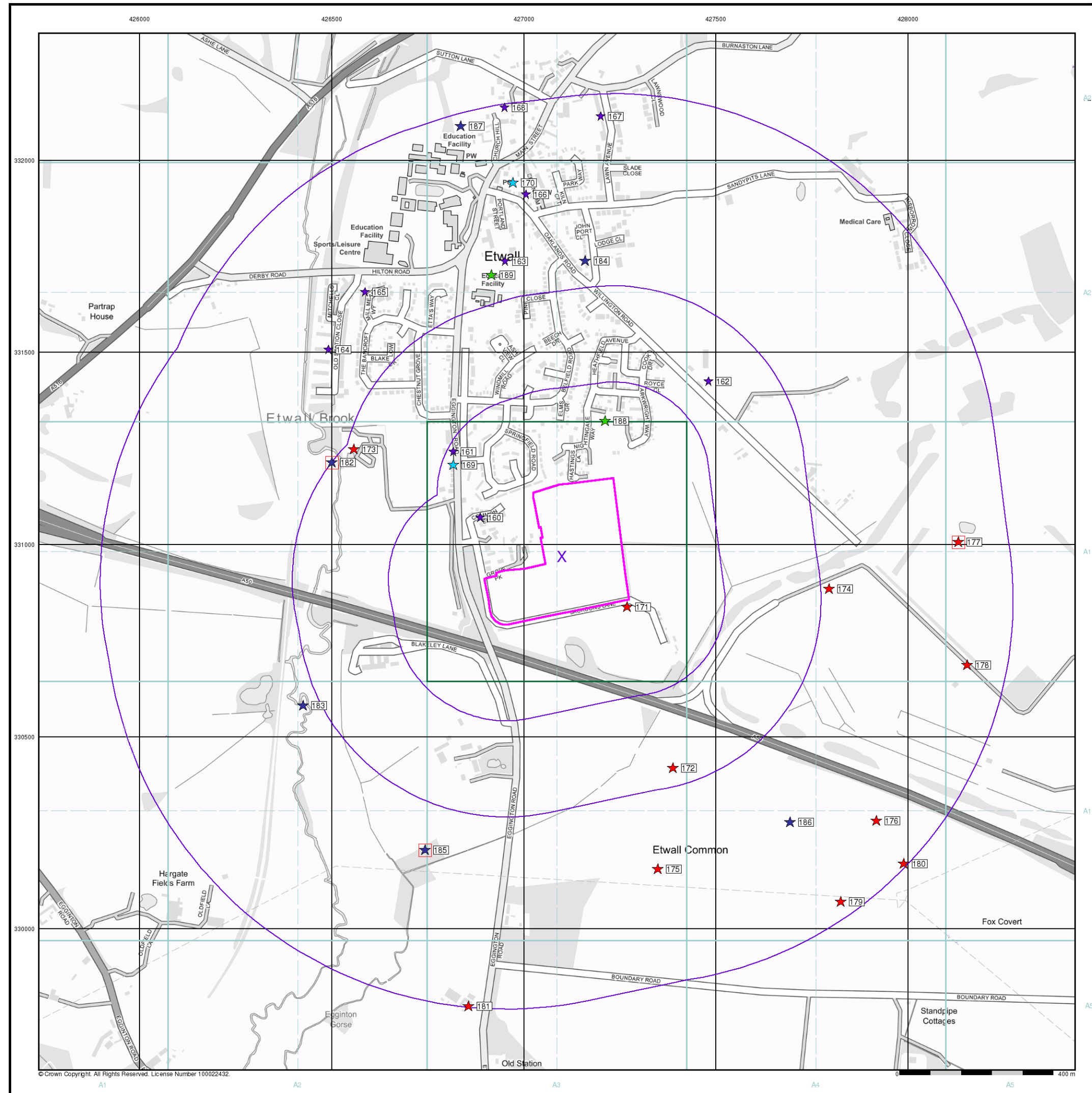
Fax:

0844 844 9951

Web:

www.envirocheck.co.uk

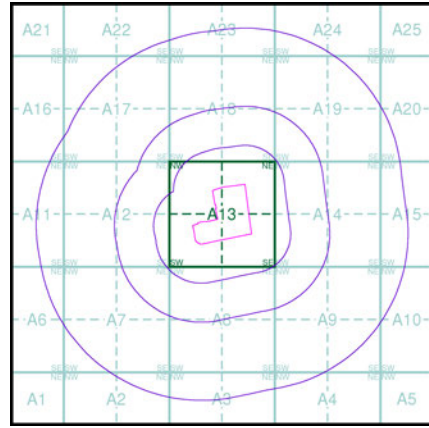
A Landmark Information Group Service v50.0 06-Mar-2020 Page 1 of 6



Industrial Land Use Map

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Slice
 - Map ID
- Industrial Land Use**
- Contemporary Trade Directory Entry
 - Fuel Station Entry
 - Gas Pipeline
 - Points of Interest - Commercial Services
 - Points of Interest - Education and Health
 - Points of Interest - Manufacturing and Production
 - Points of Interest - Public Infrastructure
 - Points of Interest - Recreational and Environmental
 - Underground Electrical Cables

Industrial Land Use Map - Slice A

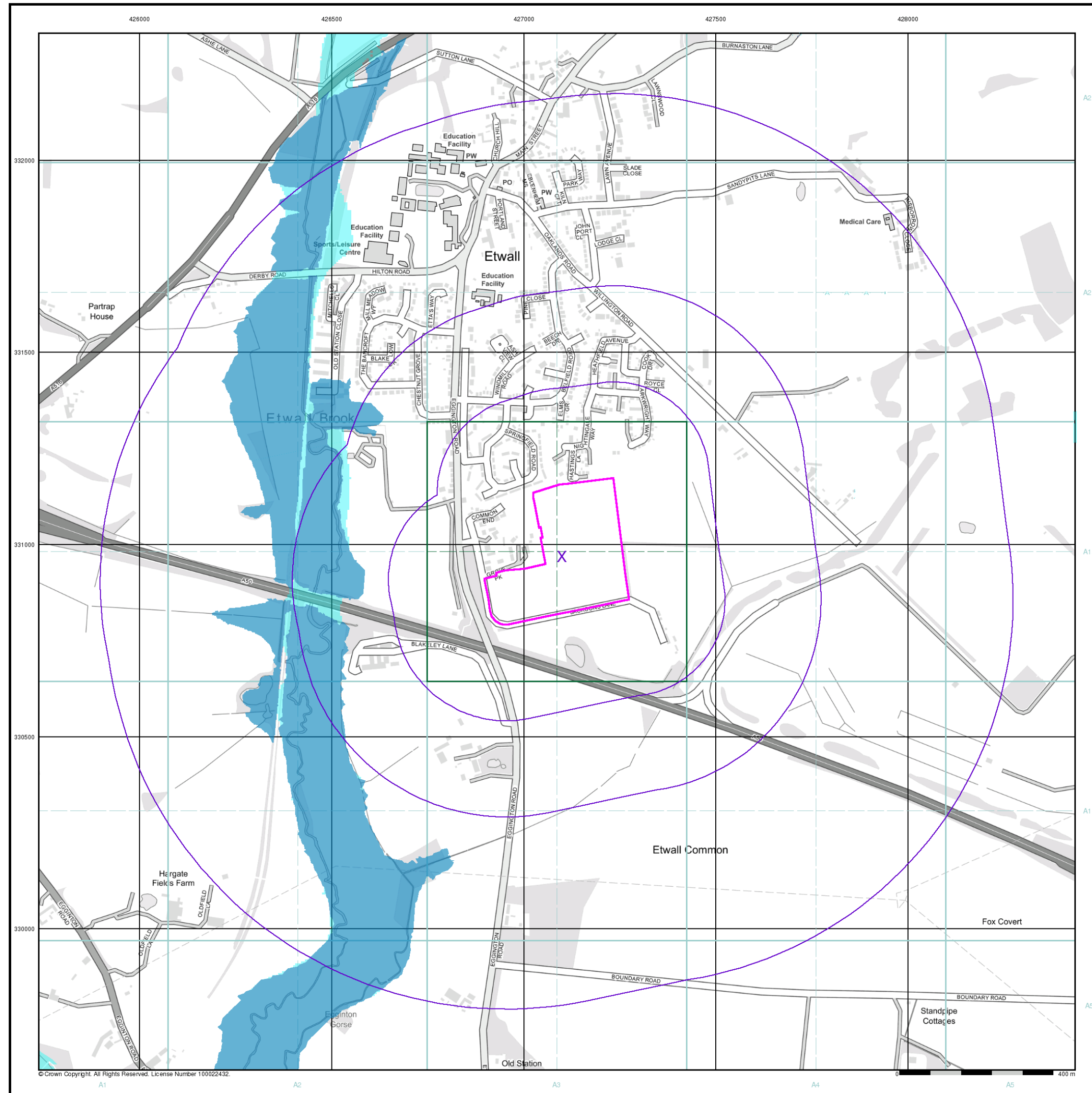


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



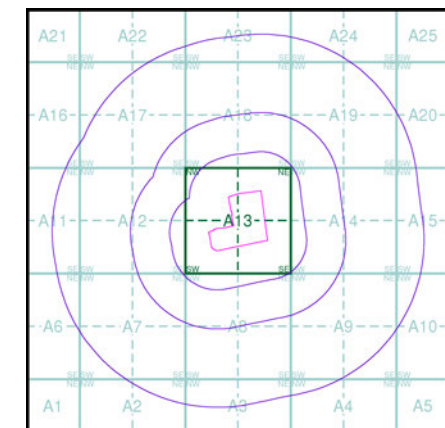
General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point

Agency and Hydrological (Flood)

-  Extreme Flooding from Rivers or Sea without Defences (Zone 2)
-  Flooding from Rivers or Sea without Defences (Zone 3)
-  Area Benefiting from Flood Defence
-  Flood Water Storage Areas
-  Flood Defence

Flood Map - Slice A

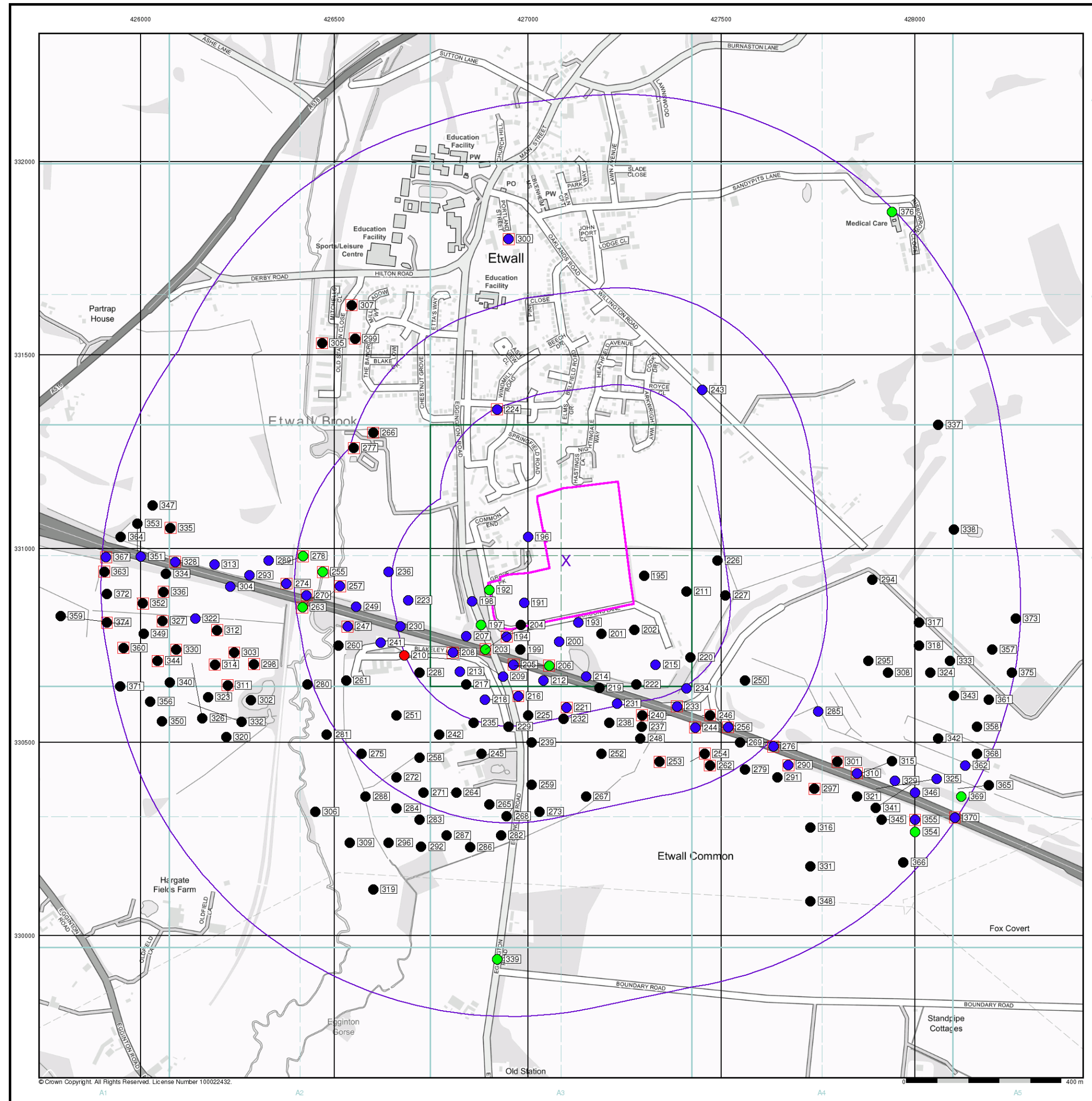


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Map ID
-  Several of Type at Location

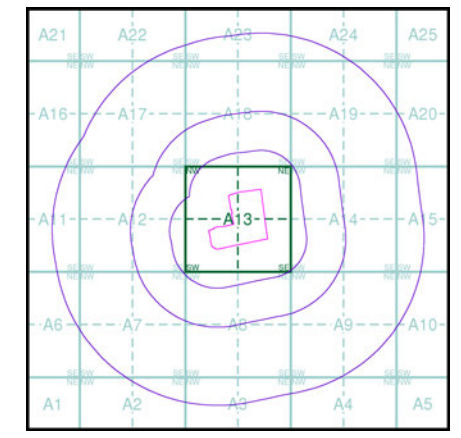
Agency and Hydrological (Boreholes)

-  BGS Borehole Depth 0 - 10m
-  BGS Borehole Depth 10 - 30m
-  BGS Borehole Depth 30m +
-  Confidential
-  Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A

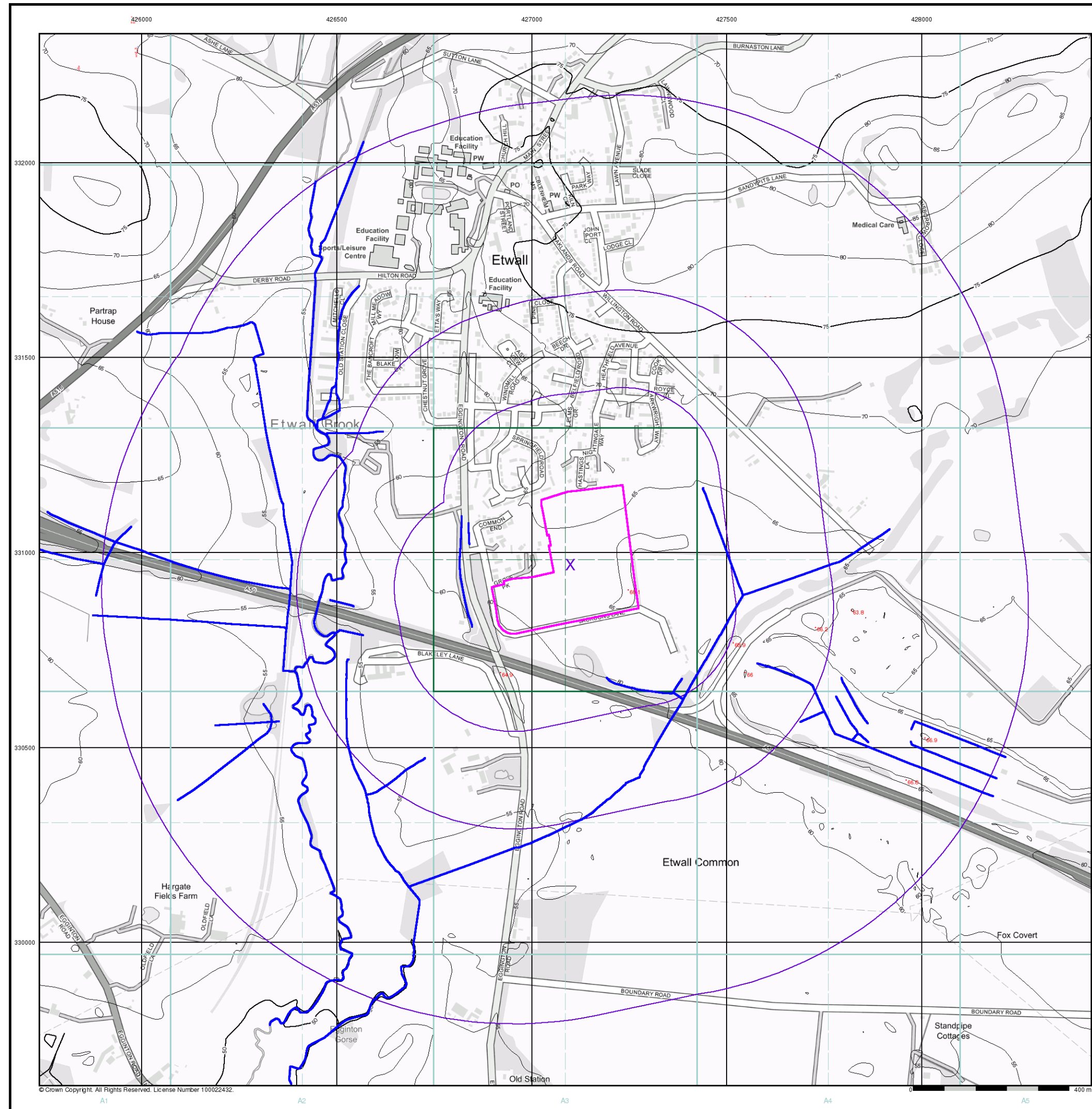


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



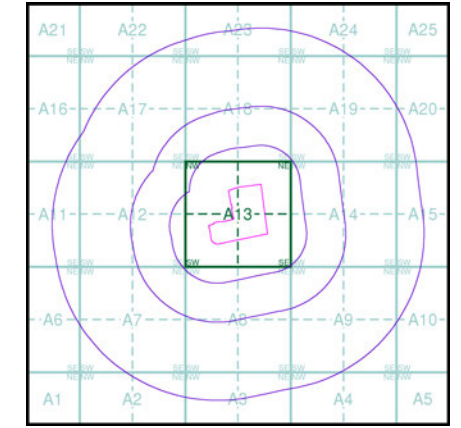
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- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point

- OS Water Network Data**
- | | |
|--------------|-------------------------|
| Canal | Drain |
| Reservoir | Other |
| Foreshore | Lake |
| Marsh | Transfer |
| Tidal River | Lock Or Flight Of Locks |
| Inland River | Sea |

- Contours (height in meters)**
- Standard Contour 105 100 95
- Master Contour
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

Order Number: 237420924_1_1

Customer Ref: GML20127

National Grid Reference: 427100, 330970

Slice: A

Site Area (Ha): 8.79

Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX

General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point

Risk of Flooding from Surface Water

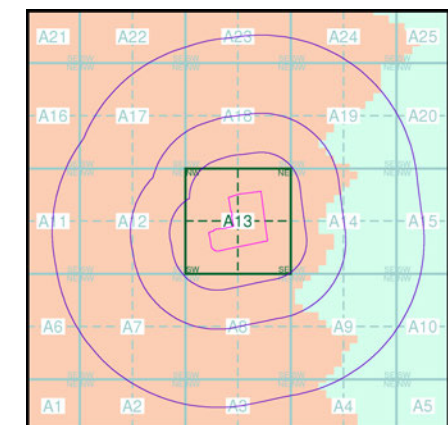
-  High - 30 Year Return
-  Medium - 100 Year Return
-  Low - 1000 Year Return

Suitability

See the suitability map below

-  National to county
-  County to town
-  Town to street
-  Street to parcels of land
-  Property

EA/NRW Suitability Map - Slice A

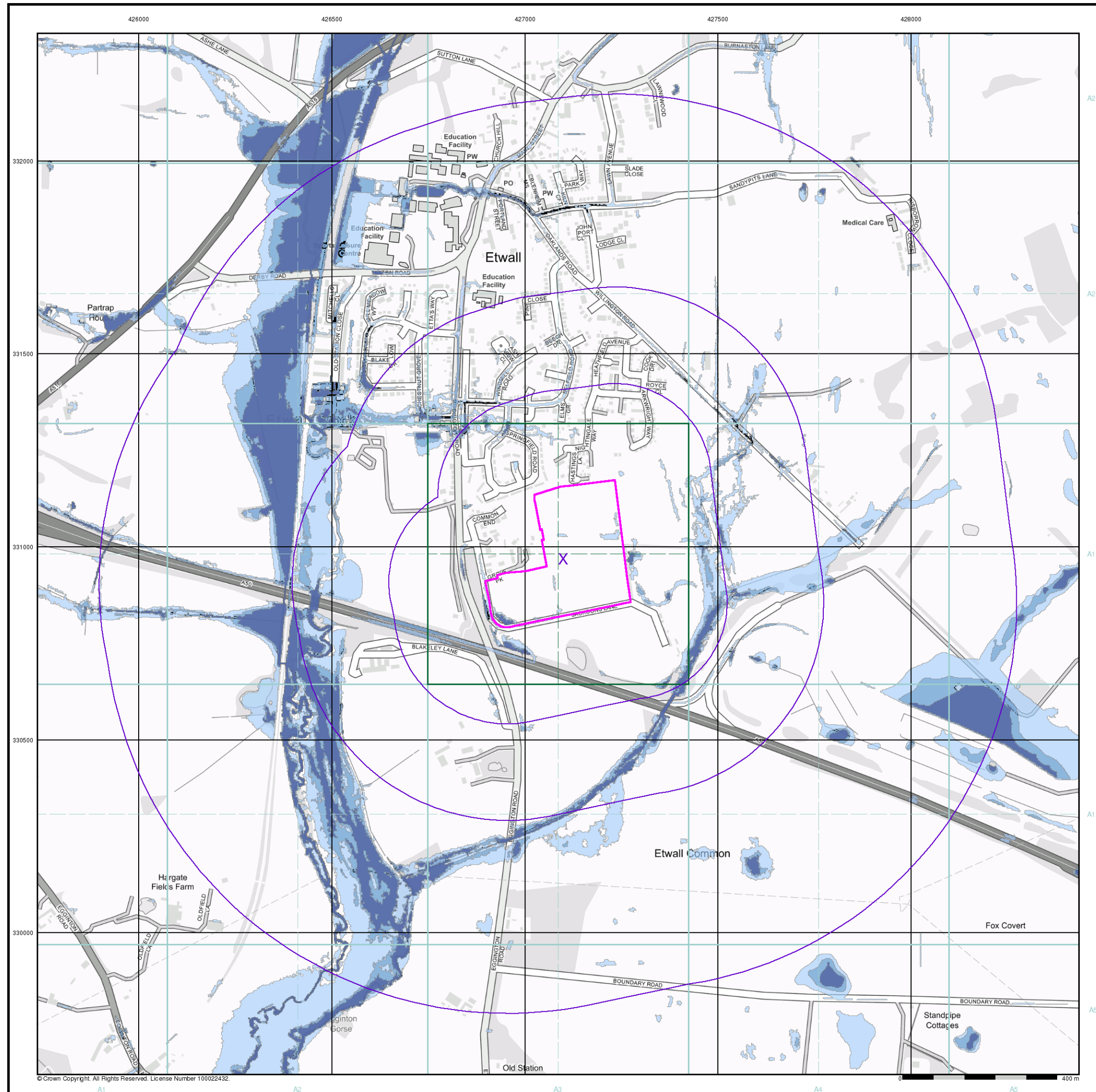


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX

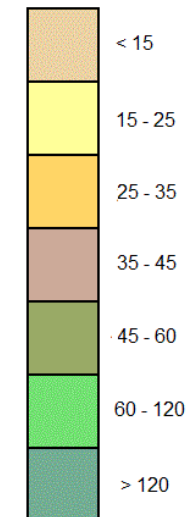


General

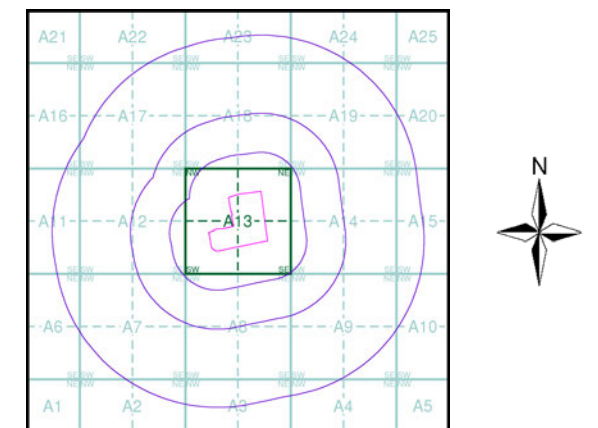
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A



Order Details

Order Details: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

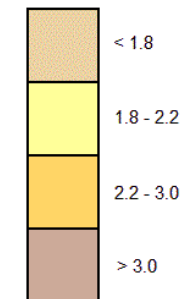
Egginton Road, Etwall, DERBY, DE65 6PX

General

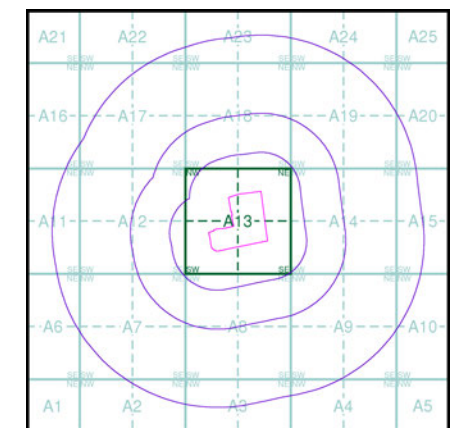
 Specified Site
  Specified Buffer(s)
  Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A

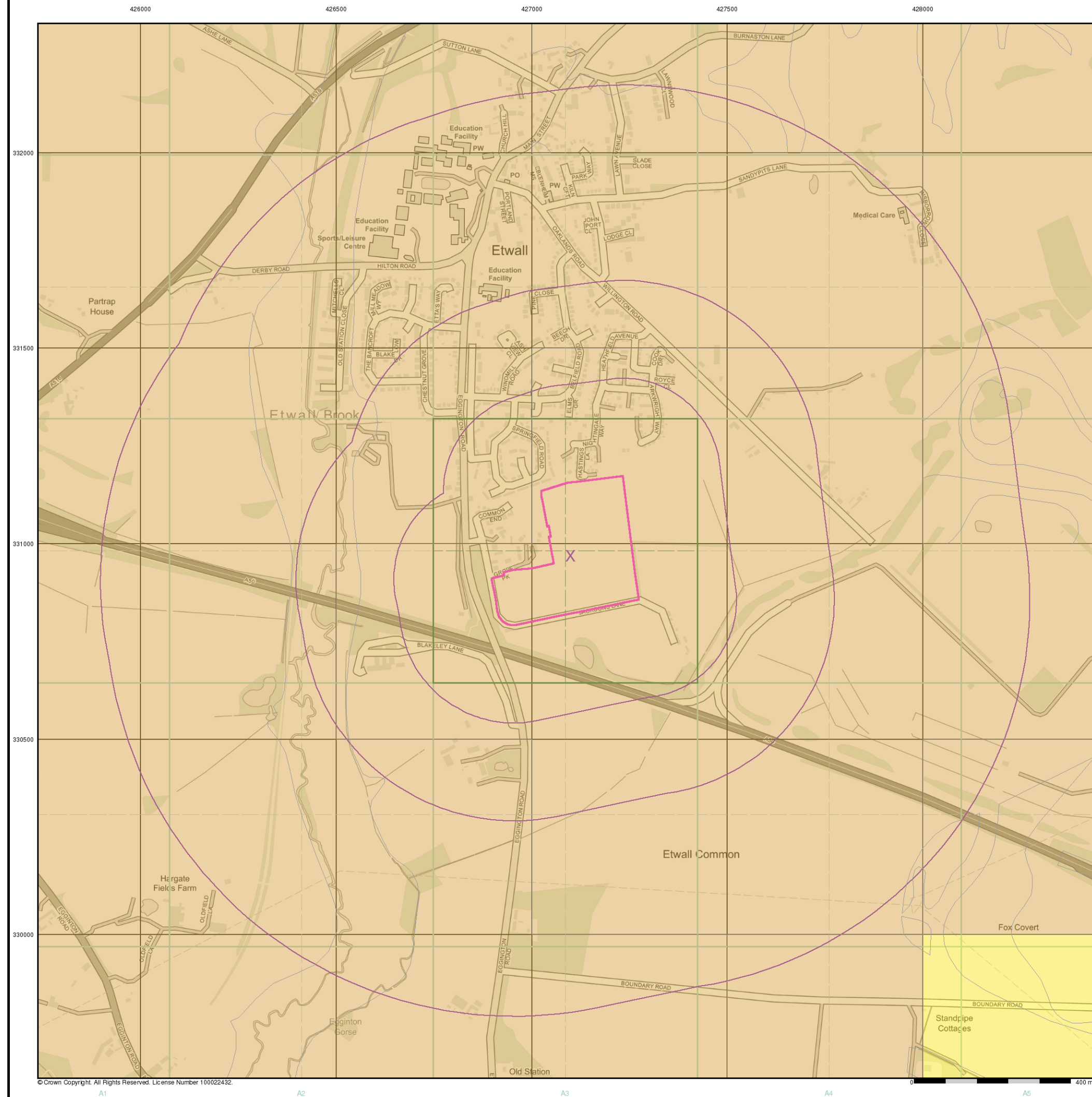


Order Details

Order Details: 237420924_1_1
 Customer Ref: GML20127
 National Grid Reference: 427100, 330970
 Slice: A
 Site Area (Ha): 8.79
 Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX

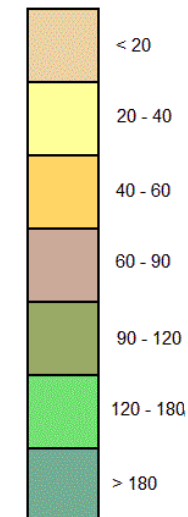


General

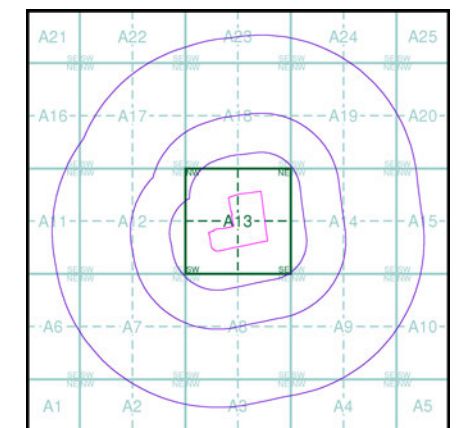
 Specified Site
  Specified Buffer(s)
  Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A

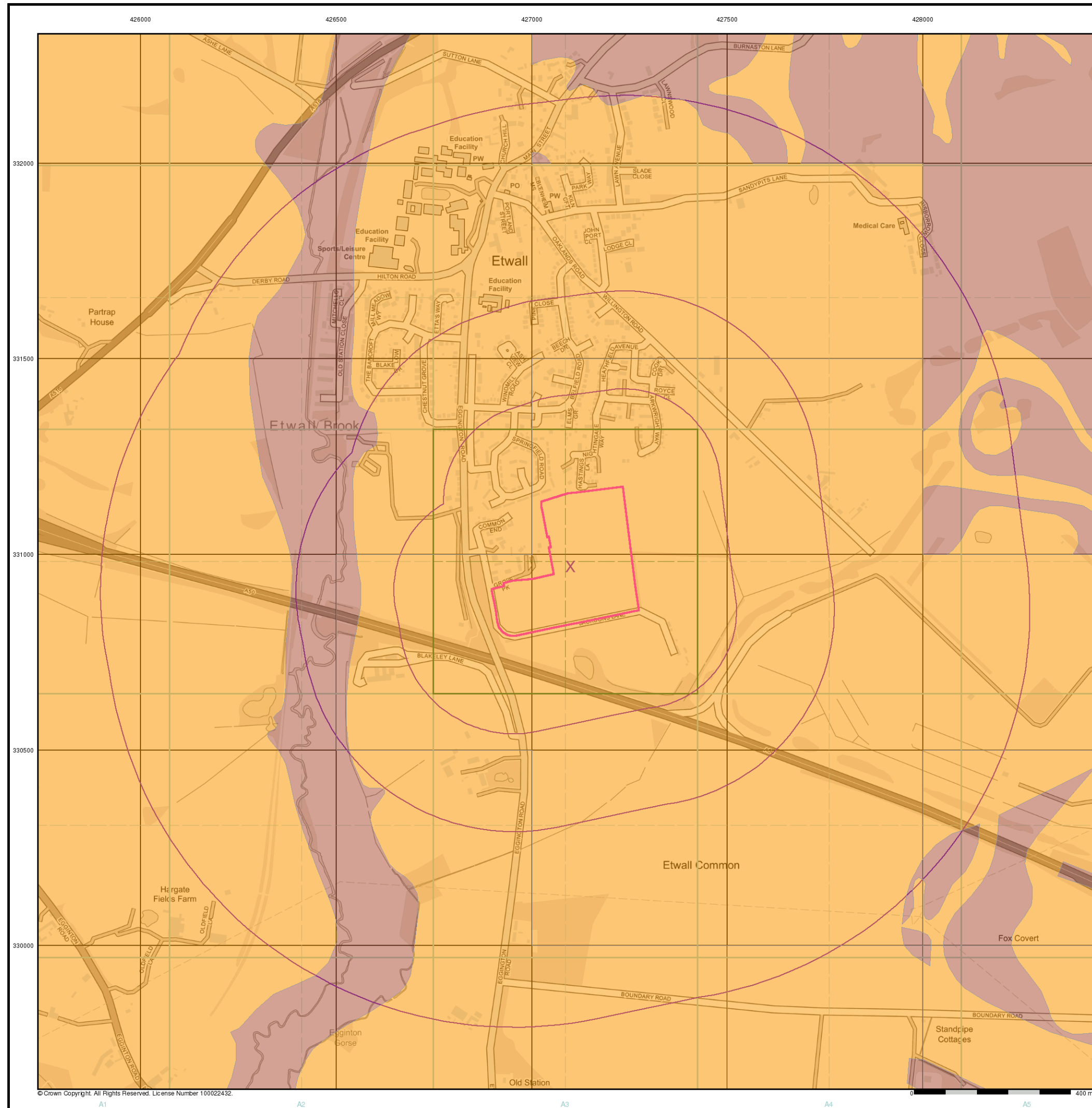


Order Details

Order Details: 237420924_1_1
 Customer Ref: GML20127
 National Grid Reference: 427100, 330970
 Slice: A
 Site Area (Ha): 8.79
 Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX

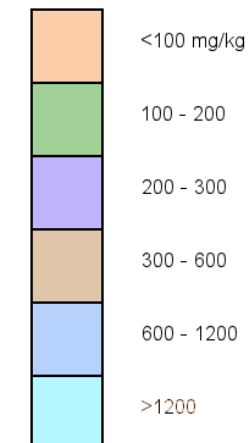


General

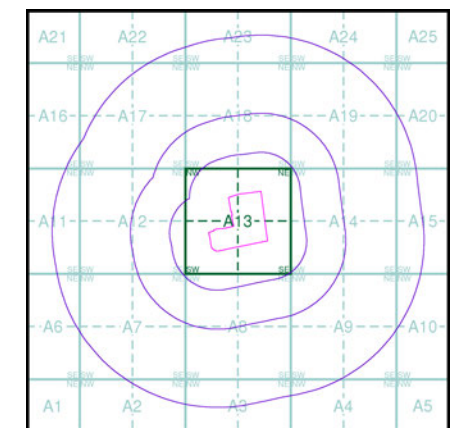
 Specified Site
  Specified Buffer(s)
  Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A

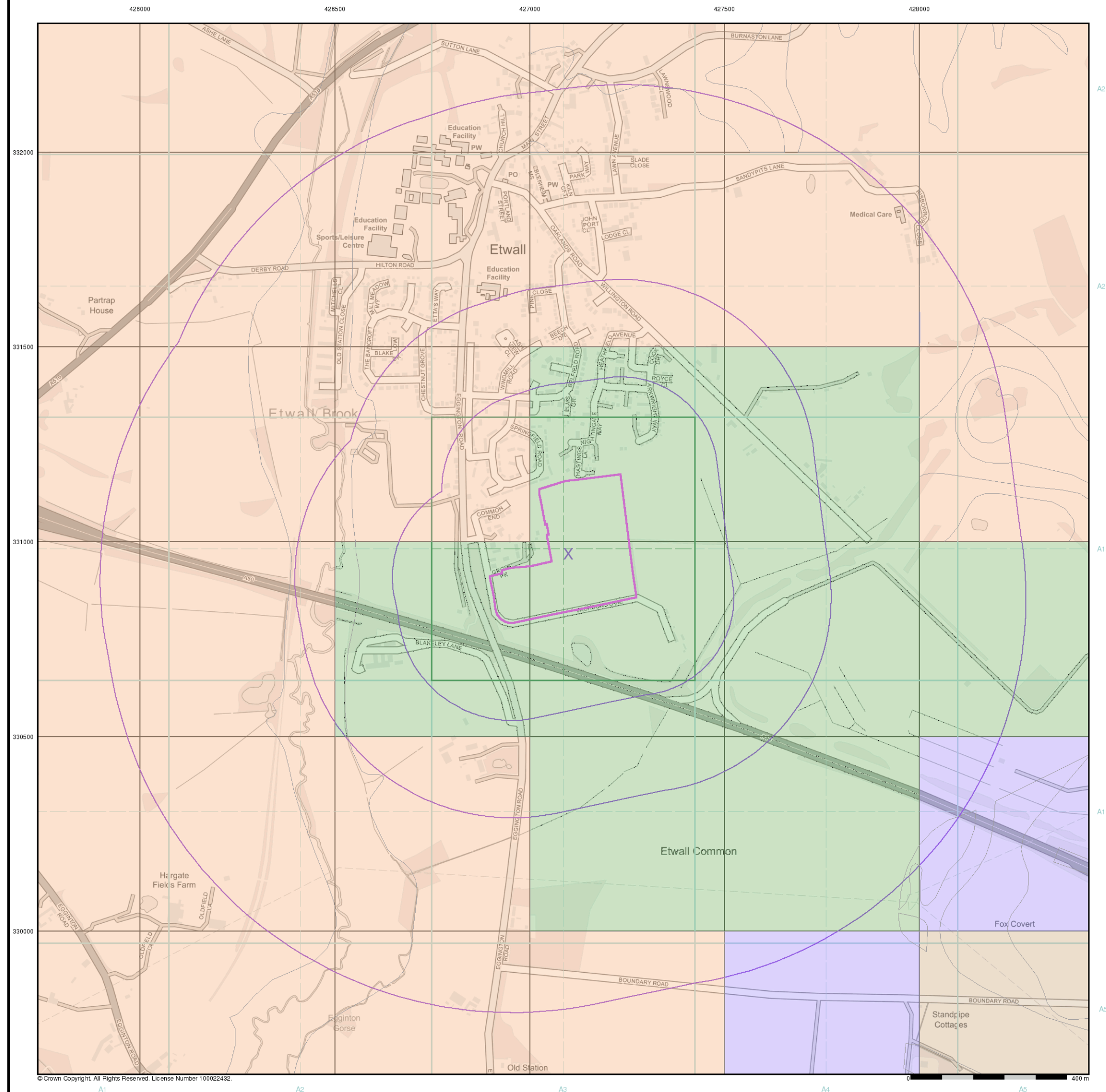


Order Details

Order Details: 237420924_1_1
 Customer Ref: GML20127
 National Grid Reference: 427100, 330970
 Slice: A
 Site Area (Ha): 8.79
 Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX

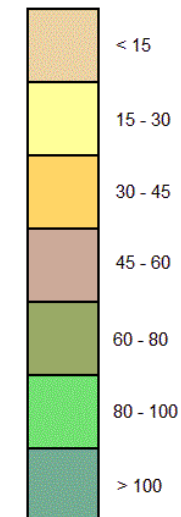


General

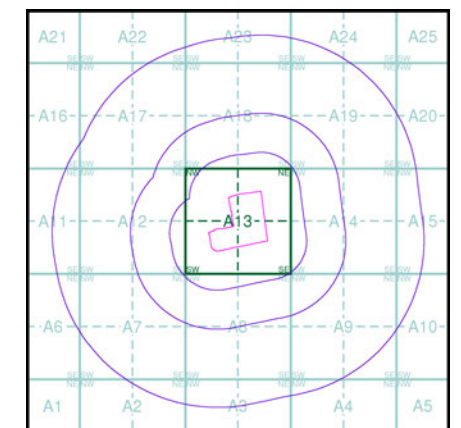
 Specified Site
  Specified Buffer(s)
  Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A

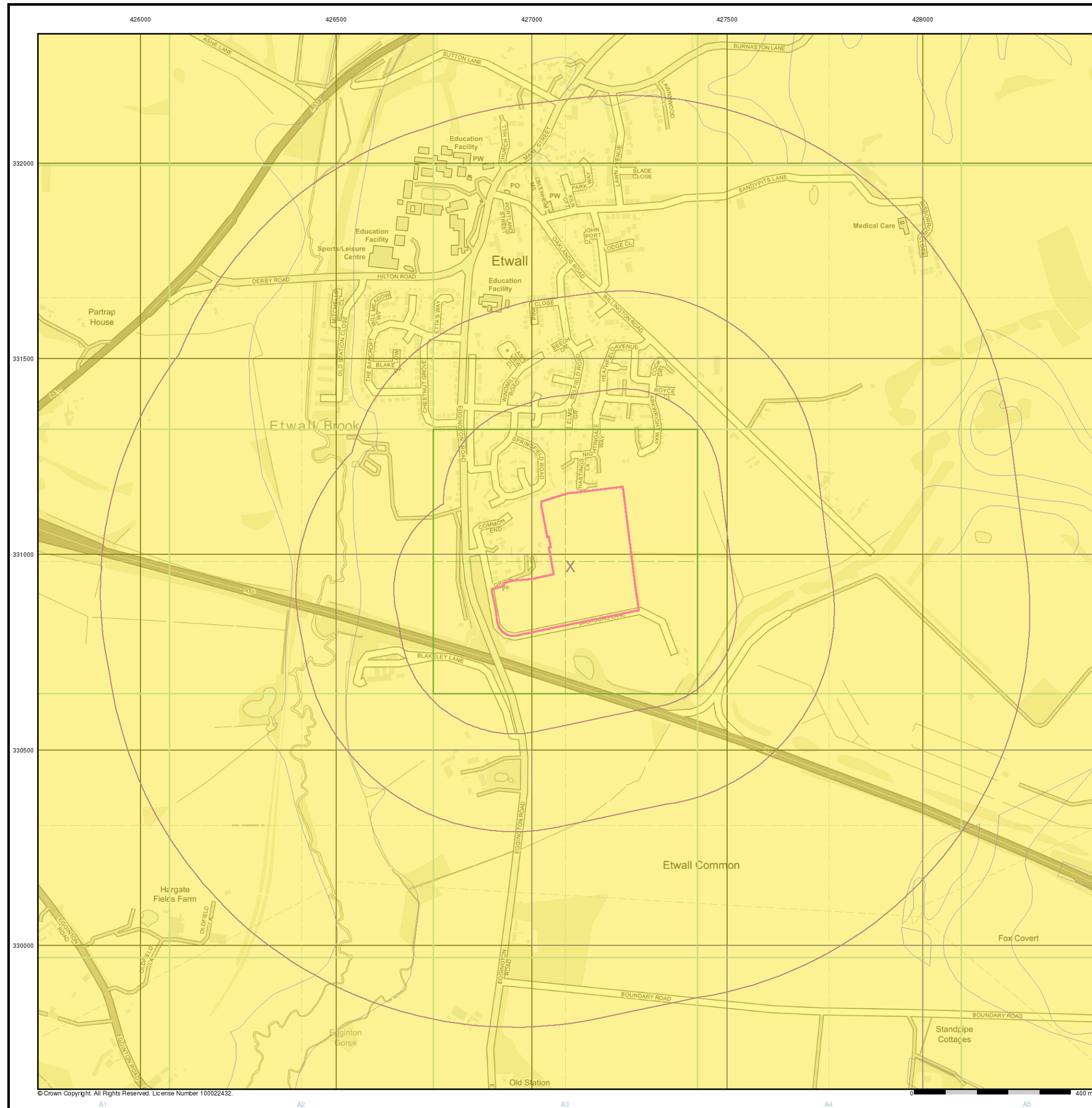


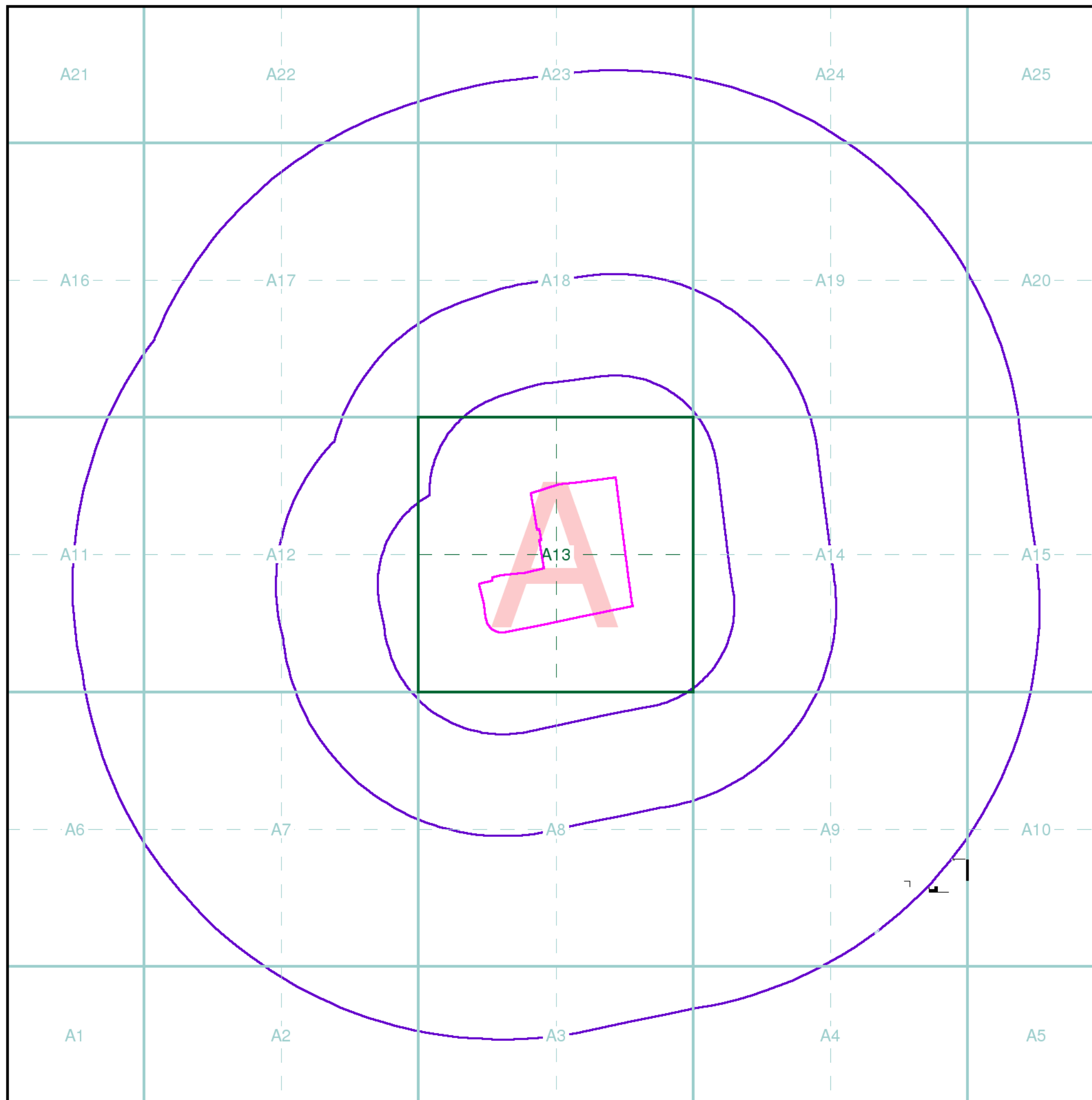
Order Details

Order Details: 237420924_1_1
 Customer Ref: GML20127
 National Grid Reference: 427100, 330970
 Slice: A
 Site Area (Ha): 8.79
 Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX





Index Map

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

Slice

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

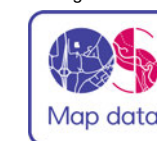
Segment

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

Quadrant

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

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

Ms A Copestake, GEO-Matters Ltd, 104 Bondgate, Castle Donington, Derby, DE74 2NR

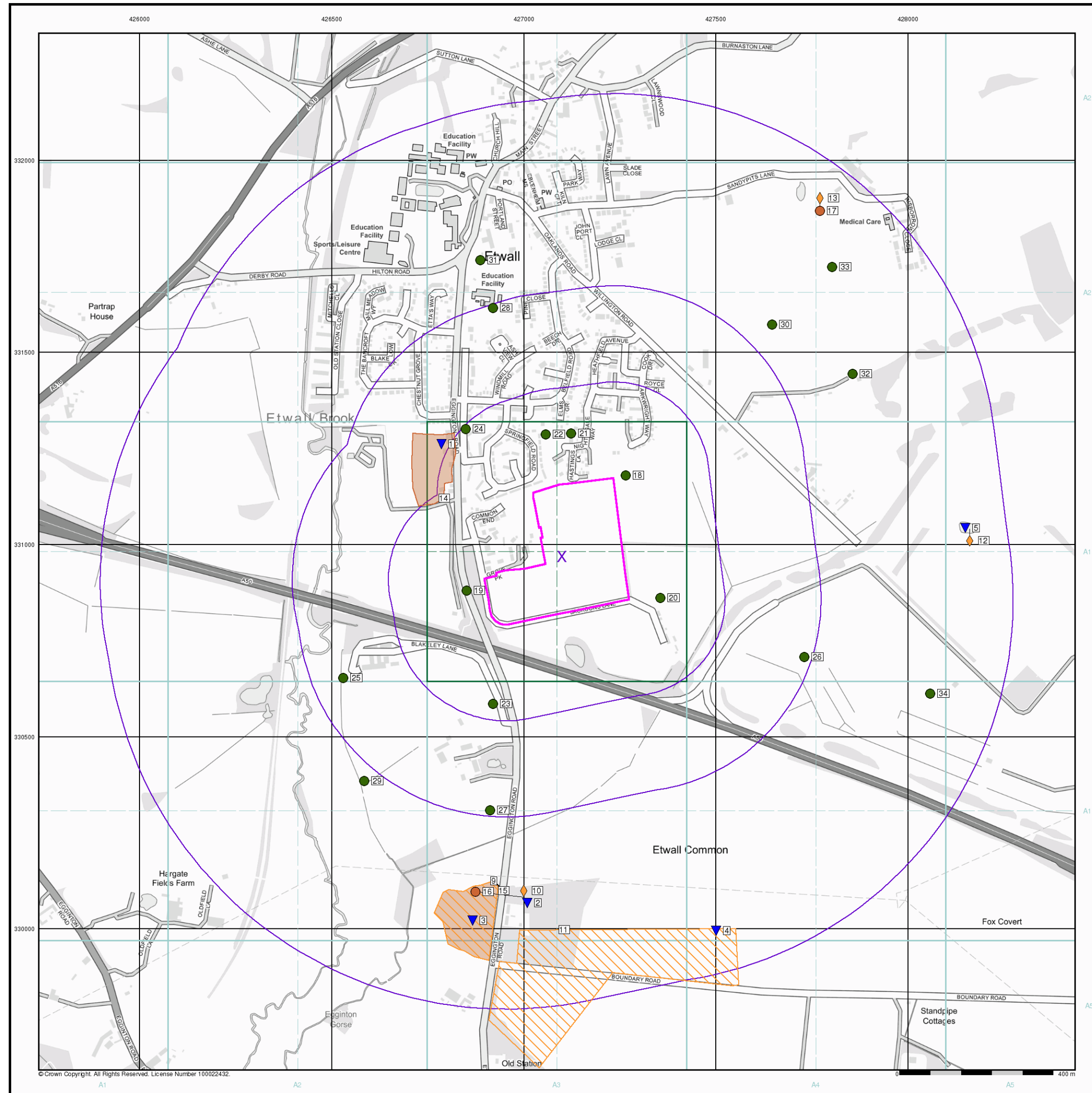
Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427110, 330970
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX

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



Historical Land Use Information (1:10,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

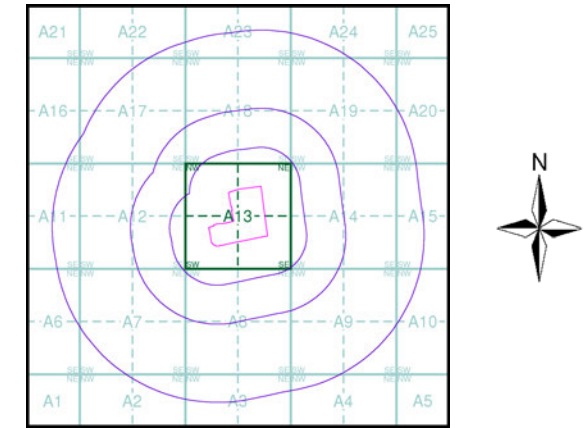
	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

Historical Land Use

	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

- Mining Data**
- Potential Mining Area
 - BGS Recorded Mineral Site

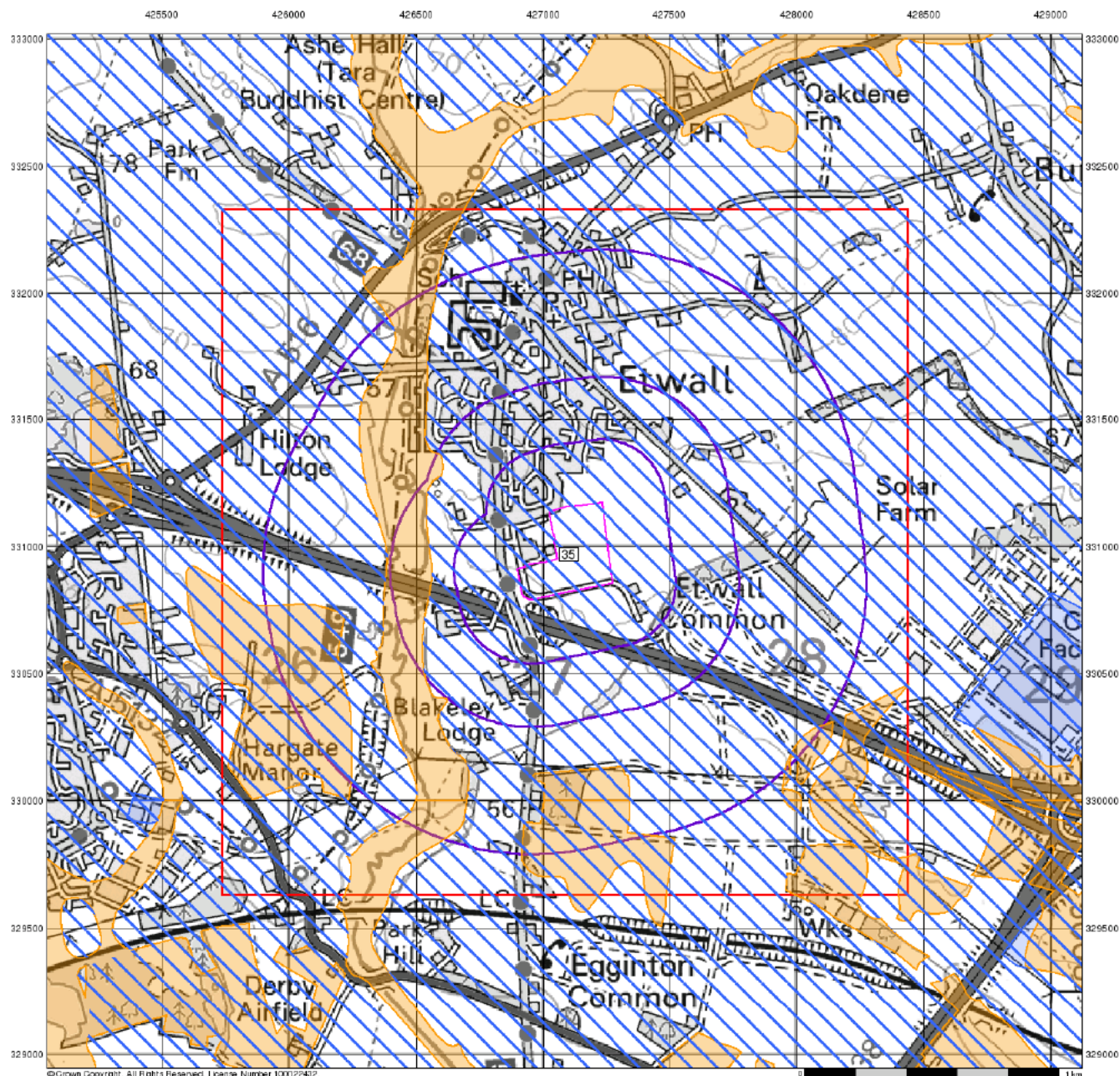
Mining and Ground Stability - Slice A



Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details
Eggington Road, Etwall, DERBY, DE65 6PX



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Ground Stability Data (1:50,000)

General

- Scaled Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Potential for Compressible Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Potential for Collapsible Ground Stability Hazards

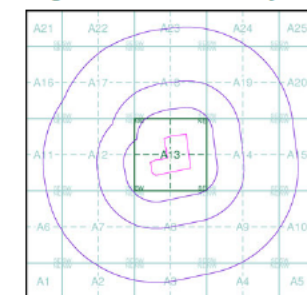
- High
- Moderate
- Low
- Very Low

Brine Pumping and Salt Mining

- Brine Pumping Related Feature
- Salt Mining Related Feature

- | Point | Polygon |
|-------|---------|
| | |
| | |

Mining and Ground Stability - Slice A



Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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Ground Stability Data (1:50,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

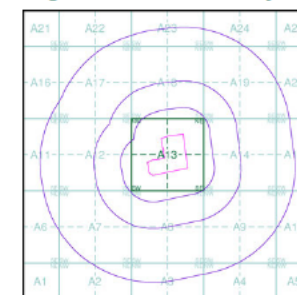
Potential for Landslide Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Potential for Ground Dissolution Stability Hazards

- High
- Moderate
- Low
- Very Low

Mining and Ground Stability - Slice A

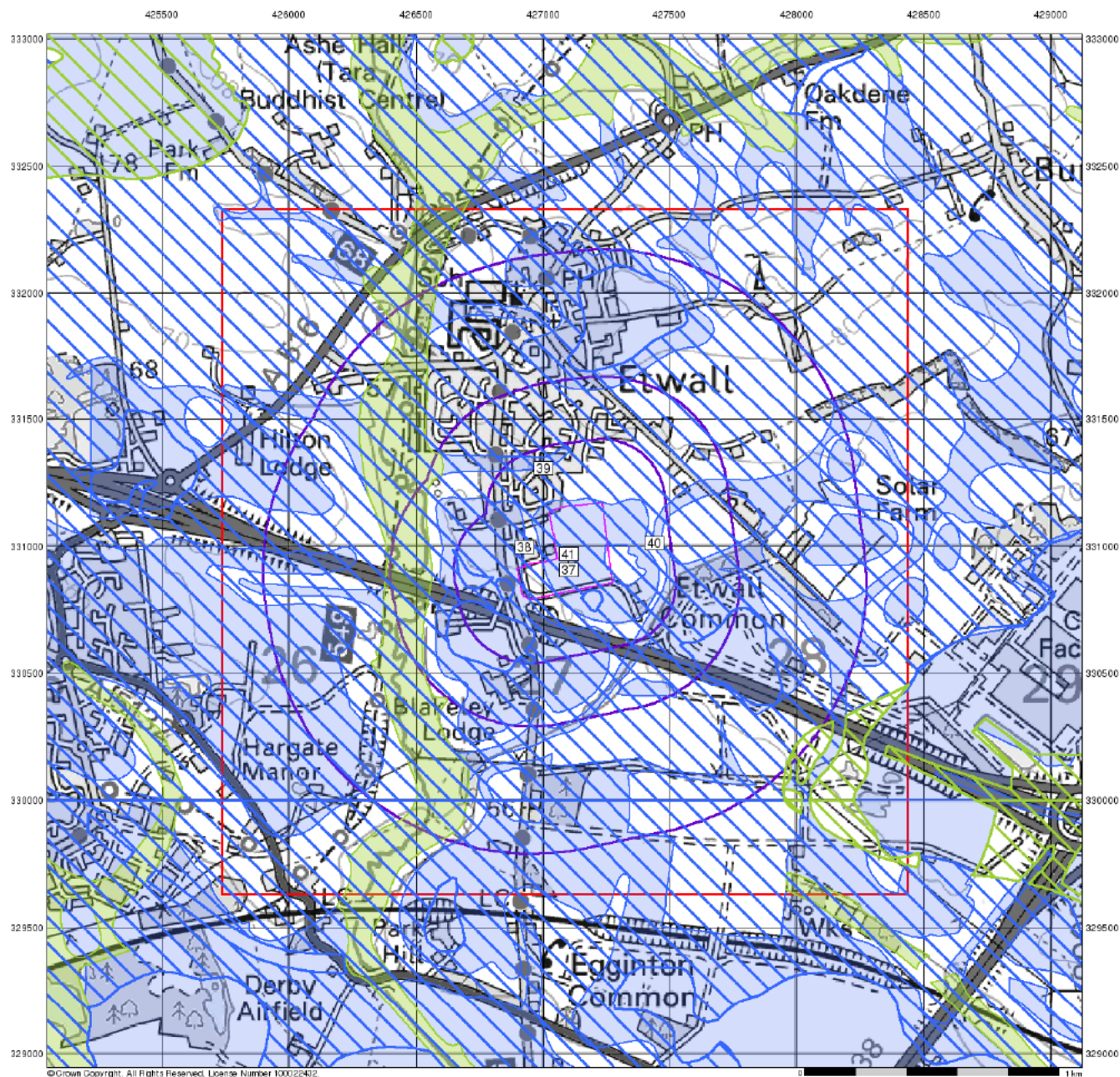


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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Ground Stability Data (1:50,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

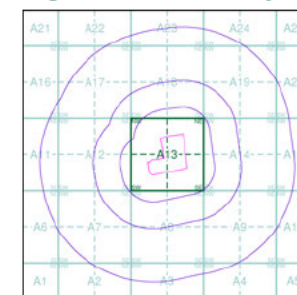
Potential for Running Sand Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX

Envirocheck[®] Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:

237420924_1_1

Customer Reference:

GML20127

National Grid Reference:

427100, 330970

Slice:

A

Site Area (Ha):

8.79

Search Buffer (m):

1000

Site Details:

Egginton Road

Etwall

DERBY

DE65 6PX

Client Details:

Ms A Copestake

GEO-Matters Ltd

104 Bondgate

Castle Donington

Derby

DE74 2NR

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	2
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	3
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	5
The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.	
Historical Map List	6
The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.	
Data Currency	7
Data Suppliers	8
Useful Contacts	9

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The brine subsidence data relating to the Droitwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

The Mining Instability data was obtained on licence from Ove Arup & Partners Limited (for further information, contact mining.review@arup.com). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The supplied Mining Instability data is derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1			1	4
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability			n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)	pg 2		3	n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents					
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits	pg 3				5
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 3		1		3
Potentially Infilled Land (Water)	pg 3		7	4	6
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Salt Mining Related Features					

Report Version v53.0

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	BGS Recorded Mineral Sites Site Name: Etwall Location: Etwall, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 34557 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Triassic Geology: Gunthorpe Member Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	274	1	426785 331266
2	BGS Recorded Mineral Sites Site Name: Gravelpit Houses Gravel Pit Location: Egginton, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 247856 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Egginton Common Sand And Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8SW (S)	722	1	427008 330072
3	BGS Recorded Mineral Sites Site Name: Etwall Common Location: Egginton, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 34571 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Egginton Common Sand & Gravel Member, Trent Valley Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8SW (S)	771	1	426866 330026
4	BGS Recorded Mineral Sites Site Name: Etwall Location: Etwall, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 1346 Type: Opencast Status: Ceased Operator: Redland Aggregates Operator Location: Not Supplied Periodic Type: Quaternary Geology: River Trent Gravel Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 100m	A9SW (S)	886	1	427500 330000
5	BGS Recorded Mineral Sites Site Name: Willington Road Location: Etwall, Derby, Derbyshire Source: British Geological Survey, National Geoscience Information Service Reference: 34583 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Etwall Sand & Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A15NW (E)	894	1	428149 331048
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Extractive Industries or Potential Excavations from 1950-1980 Use: Sewage Farm First Map Published 1970 Date: Last Map Published Not Applicable Date:	A13SE (S)	7	-	427133 330820
7	Extractive Industries or Potential Excavations from 1950-1980 Use: Pond First Map Published 1970 Date: Last Map Published N/A Date:	A13SW (W)	45	-	426856 330889
8	Extractive Industries or Potential Excavations from 1950-1980 Use: Pond First Map Published 1970 Date: Last Map Published N/A Date:	A13SE (S)	80	-	427110 330742

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1887	A8SW (S)	667	-	426921 330125
10	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1924 - 1955	A8SW (S)	709	-	426999 330084
11	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1996	A8SE (S)	796	-	427105 329998
12	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1901 - 1924	A15NW (E)	905	-	428161 331041
13	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1924	A19NE (NE)	906	-	427770 331902
14	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A13NW (NW)	213	-	426792 331121
15	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (S)	667	-	426921 330125
16	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (S)	709	-	426999 330084
17	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A19NE (NE)	906	-	427770 331902
18	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NE (NE)	33	-	427264 331180
19	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SW (W)	52	-	426851 330881
20	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	82	-	427355 330862
21	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NE (N)	130	-	427122 331290
22	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NW (N)	135	-	427060 331287
23	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NW (SW)	208	-	426919 330586
24	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NW (NW)	243	-	426848 331301
25	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A12SE (SW)	419	-	426530 330653
26	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A14SW (SE)	479	-	427729 330708
27	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NW (S)	485	-	426912 330309
28	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A18SW (N)	492	-	426919 331616
29	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (SW)	540	-	426584 330385

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
30	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A19SW (NE)	575	-	427645 331572
31	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A18NW (N)	620	-	426886 331741
32	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A19SE (NE)	680	-	427855 331445
33	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A19NE (NE)	792	-	427802 331723
34	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A9NE (E)	821	-	428057 330612

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
35	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
36	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
37	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
38	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	0	1	426927 330996
39	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	171	1	427000 331305
40	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A14NW (E)	186	1	427440 331011
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	426996 330952
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	0	1	427243 330961
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A14NW (E)	220	1	427473 331026
41	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	427100 330970
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	13	1	427172 330822
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	30	1	426871 330855
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	97	1	426919 330700
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	99	1	426803 330879

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Ordnance Survey Plan	SK2630	1970
Ordnance Survey Plan	SK2730	1970
Ordnance Survey Plan	SK2631	1971
Ordnance Survey Plan	SK2731	1971

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Derbyshire	054_SW	1887
Derbyshire	054_NW	1888
Derbyshire	054_NW	1901
Derbyshire	054_SW	1901
Staffordshire	034_SW	1924
Derbyshire	054_NW	1924
Derbyshire	054_SW	1924
Ordnance Survey Plan	SK22NE	1955
Ordnance Survey Plan	SK23SE	1955
1:10,000	Mapsheet	Published Date
Ordnance Survey Plan	SK23SE	1993
Ordnance Survey Plan	SK22NE	1996

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2019	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Man Made Mining Cavities Peter Brett Associates	December 2019	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	December 2019	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	Version	Update Cycle
Subterranean Features Landmark Information Group Limited	February 2020	Bi-Annually
Ground Stability Data (1:50,000)	Version	Update Cycle
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Brine Subsidence Solution Area Johnson Poole & Bloomer	January 2015	Annual Rolling Update

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	
The Coal Authority	
Ove Arup	
Peter Brett Associates	
Wardell Armstrong	
Johnson Poole & Bloomer	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk



Historical Land Use Information (1:2,500)

General

- Specified Site Specified Buffer(s) X Bearing Reference Point Map ID
Several of Type at Location

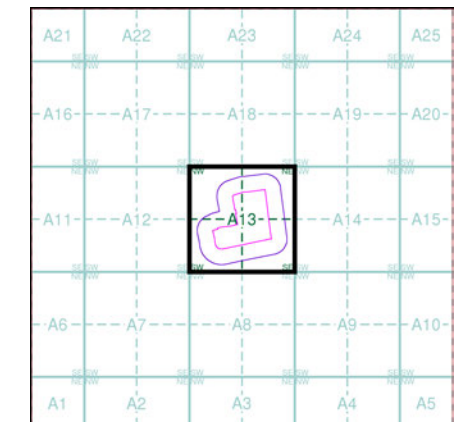
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	■
Extractive Industries Activity from 1893 - 1915	▲	—	■
Extractive Industries Activity from 1906 - 1937	▲	—	■
Extractive Industries Activity from 1924 - 1949	▲	—	■
Extractive Industries Activity from 1950 - 1980	▲	—	■

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	---	■

Mining and Ground Stability - Segment A13



Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Plot Buffer (m): 100

Site Details

Eggington Road, Etwell, DERBY, DE65 6PX

APPENDIX VI

Historic Mapping

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

	Gravel Pit		Sand Pit		Other Pits
	Quarry		Shingle		Orchard
	Osiers		Reeds		Marsh
	Mixed Wood		Deciduous		Brushwood
	Fir		Furze		Rough Pasture
	Arrow denotes flow of water		Trigonometrical Station		
	Site of Antiquities		Bench Mark		
	Pump, Guide Post, Signal Post		Well, Spring, Boundary Post		
	285 Surface Level				
	Sketched Contour		Instrumental Contour		
	Main Roads		Fenced Minor Roads		Un-Fenced Minor Roads
	Sunken Road		Raised Road		
	Road over Railway		Railway over River		
	Railway over Road		Level Crossing		
	Road over River or Canal		Road over Stream		
	Road over Stream				
	County Boundary (Geographical)				
	County & Civil Parish Boundary				
	Administrative County & Civil Parish Boundary				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	Rural District Boundary				
	Civil Parish Boundary				

Ordnance Survey Plan 1:10,000

	Chalk Pit, Clay Pit or Quarry		Gravel Pit
	Sand Pit		Disused Pit or Quarry
	Refuse or Slag Heap		Lake, Loch or Pond
	Dunes		Boulders
	Coniferous Trees		Non-Coniferous Trees
	Orchard		Scrub
	Bracken		Heath
	Marsh		Reeds
	Building		Glasshouse
	Sloping Masonry		Pylon
	Cutting		Embankment
	Road Under		Road Over
	Level Crossing		Foot Bridge
	Standard Gauge Multiple Track		Standard Gauge Single Track
	Siding, Tramway or Mineral Line		Narrow Gauge
	Geographical County		Administrative County, County Borough or County of City
	Municipal Borough, Urban or Rural District, Burgh or District Council		Borough, Burgh or County Constituency
	Civil Parish		
	Boundary Post or Stone		Police Station
	Church		Post Office
	Club House		Public Convenience
	Fire Engine Station		Public House
	Foot Bridge		Signal Box
	Fountain		Spring
	Guide Post		Telephone Call Box
	Mile Post		Telephone Call Post
	Mile Stone		Well

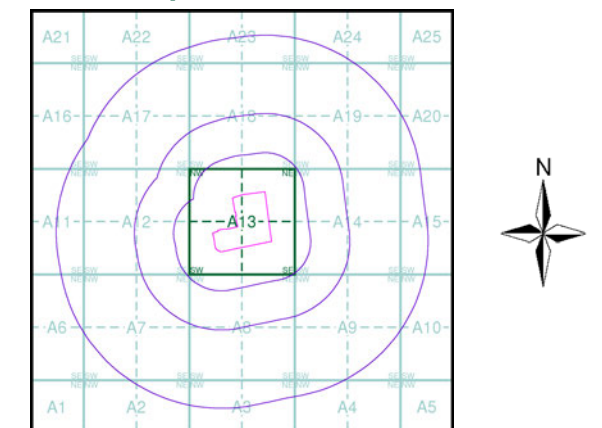
1:10,000 Raster Mapping

	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil, parish or community boundary
	District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
	Area of wooded vegetation		Non-coniferous trees
	Non-coniferous trees (scattered)		Coniferous trees
	Coniferous trees (scattered)		Positioned tree
	Orchard		Coppice or Osiers
	Rough Grassland		Heath
	Scrub		Marsh, Salt Marsh or Reeds
	Water feature		Flow arrows
	Mean high water (springs)		Mean low water (springs)
	Telephone line (where shown)		Electricity transmission line (with poles)
	Bench mark (where shown)		Triangulation station
	Point feature (e.g. Guide Post or Mile Stone)		Pylon, flare stack or lighting tower
	Site of (antiquity)		Glasshouse
	General Building		Important Building

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Derbyshire	1:10,560	1885 - 1886	3
Derbyshire	1:10,560	1901	4
Derbyshire	1:10,560	1924	5
Ordnance Survey Plan	1:10,000	1955	6
Ordnance Survey Plan	1:10,000	1968	7
Ordnance Survey Plan	1:10,000	1973 - 1976	8
Derby	1:10,000	1991	9
Ordnance Survey Plan	1:10,000	1993 - 1996	10
10K Raster Mapping	1:10,000	2000	11
10K Raster Mapping	1:10,000	2006	12
VectorMap Local	1:10,000	2020	13

Historical Map - Slice A



Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

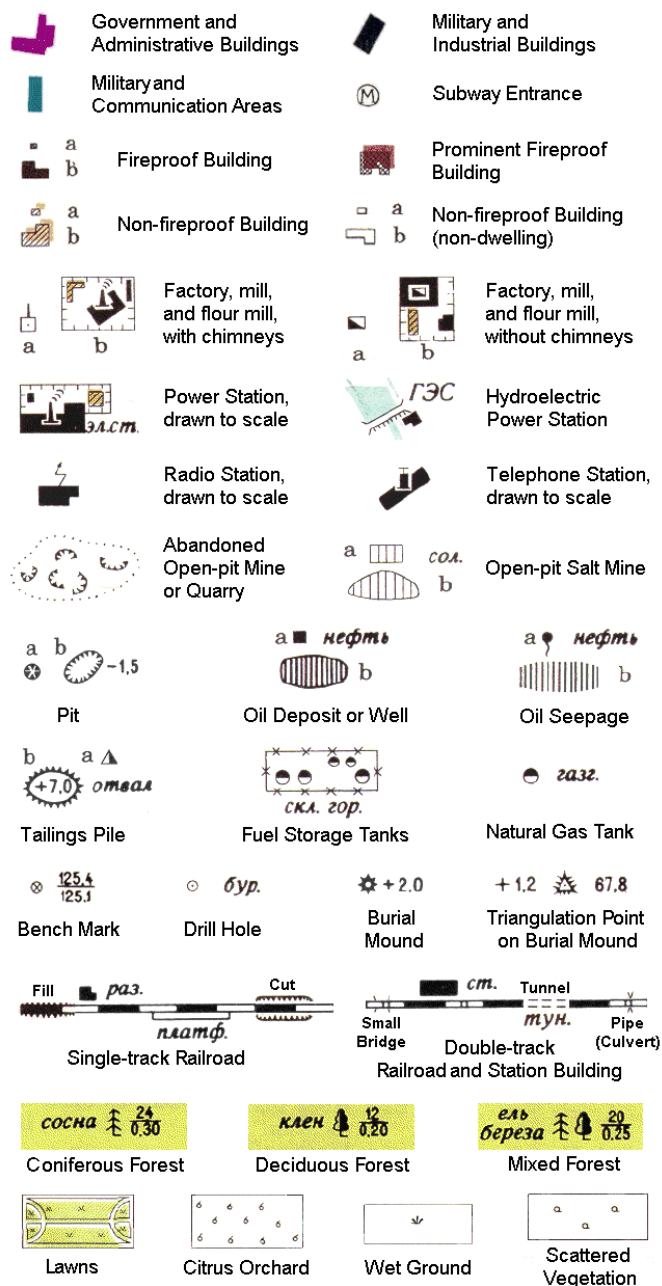
Site Details

Egginton Road, Etwell, DERBY, DE65 6PX

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale



243.8 Values for prominent elevations

186.0 Numbers for spot elevations, depth soundings, contour lines, etc.

0.2 Velocity of the current, width of river bed, depth of river

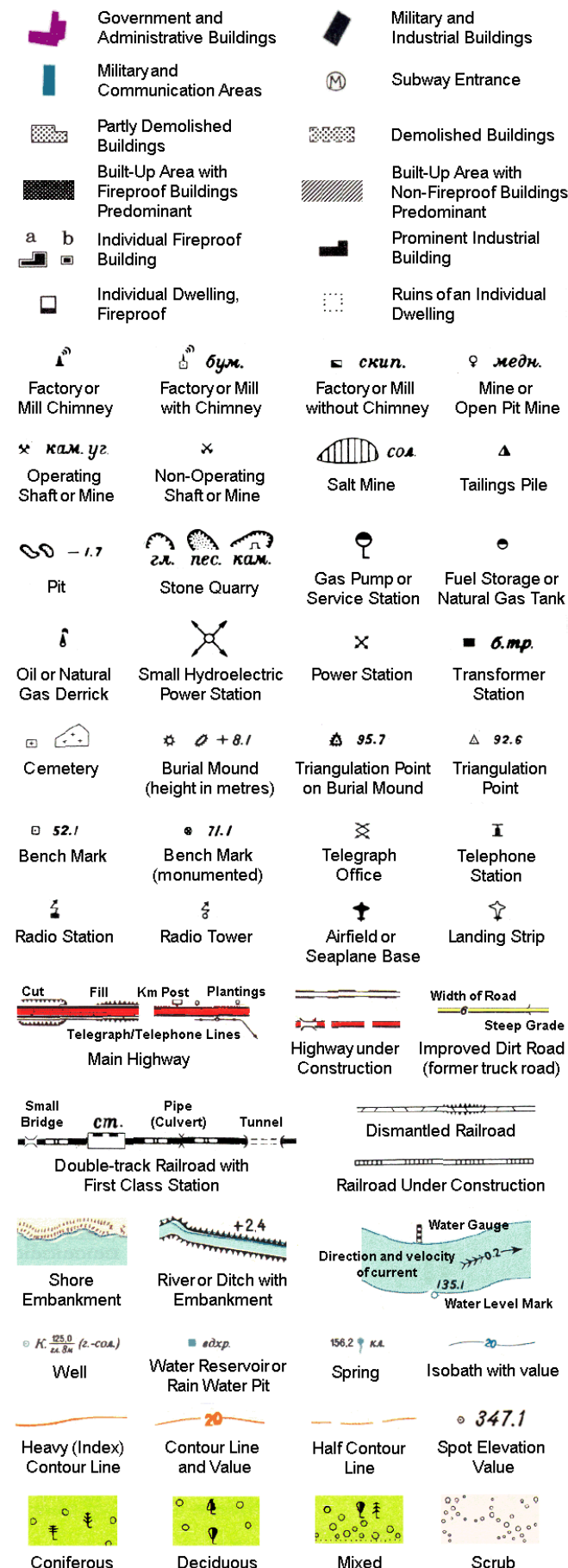
180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	Ъ (-)
Д д (D)	Л л (L)	У у (U)	Ы (Y)
Е е (E)	М м (M)	Ф ф (F)	Ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

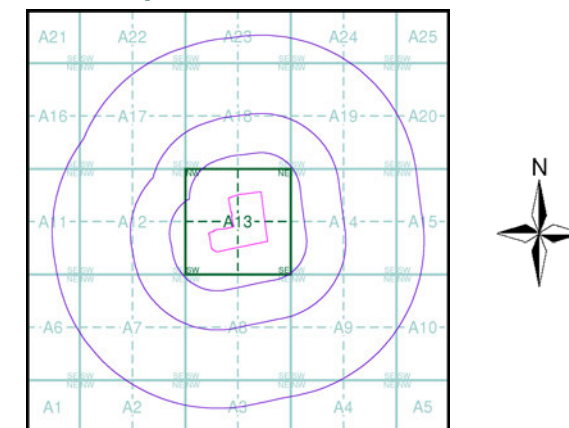


Key to Numbers on Mapping

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Derbyshire	1:10,560	1885 - 1886	3
Derbyshire	1:10,560	1901	4
Derbyshire	1:10,560	1924	5
Ordnance Survey Plan	1:10,000	1955	6
Ordnance Survey Plan	1:10,000	1968	7
Ordnance Survey Plan	1:10,000	1973 - 1976	8
Derby	1:10,000	1991	9
Ordnance Survey Plan	1:10,000	1993 - 1996	10
10K Raster Mapping	1:10,000	2000	11
10K Raster Mapping	1:10,000	2006	12
VectorMap Local	1:10,000	2020	13

Russian Map - Slice A

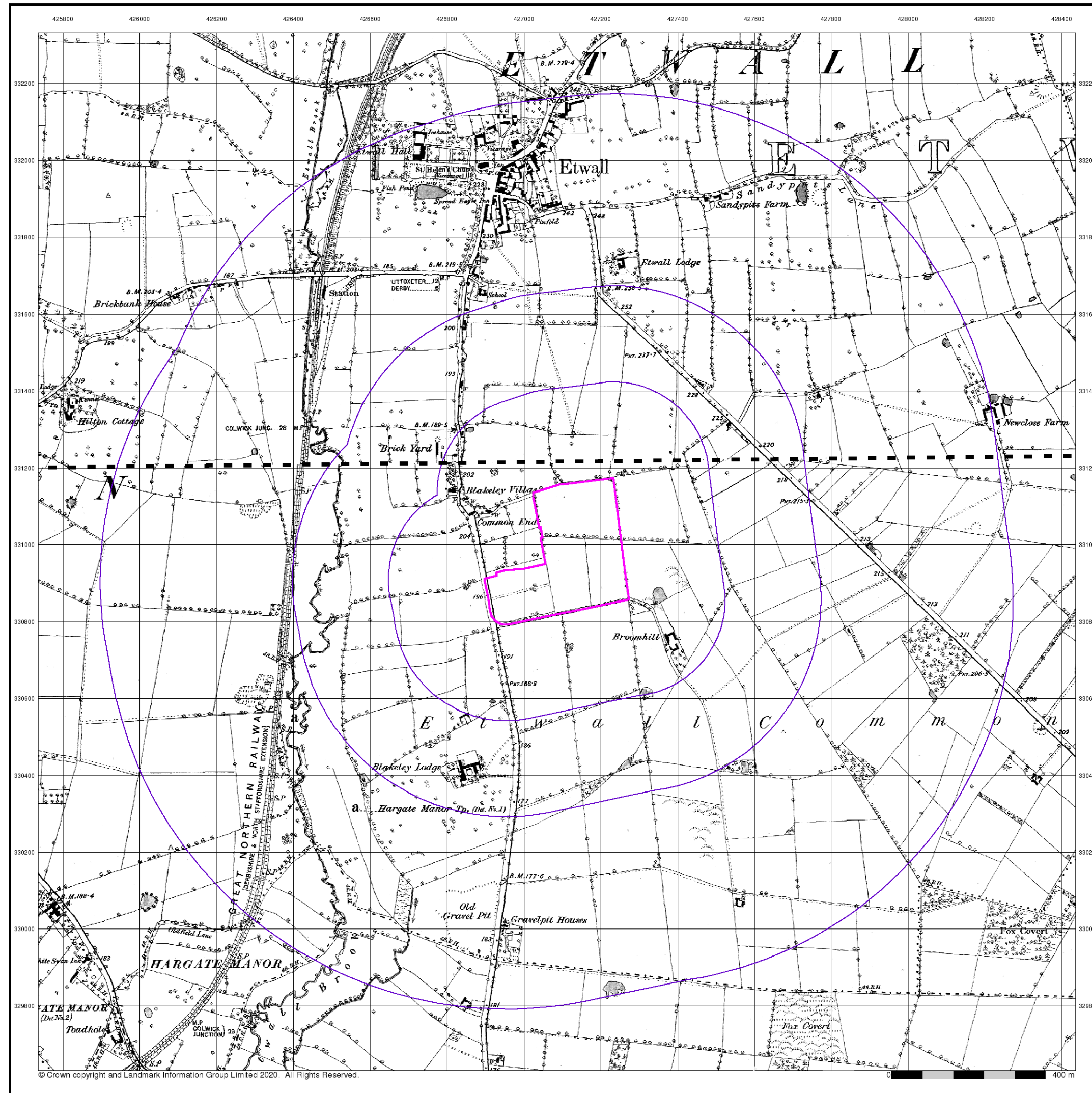


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



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Derbyshire

Published 1885 - 1886

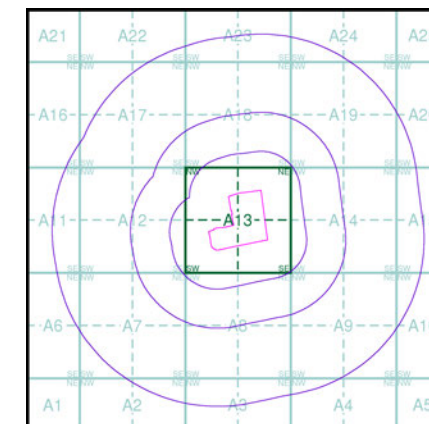
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

054NW
1885
1:10,560
054SW
1886
1:10,560

Historical Map - Slice A

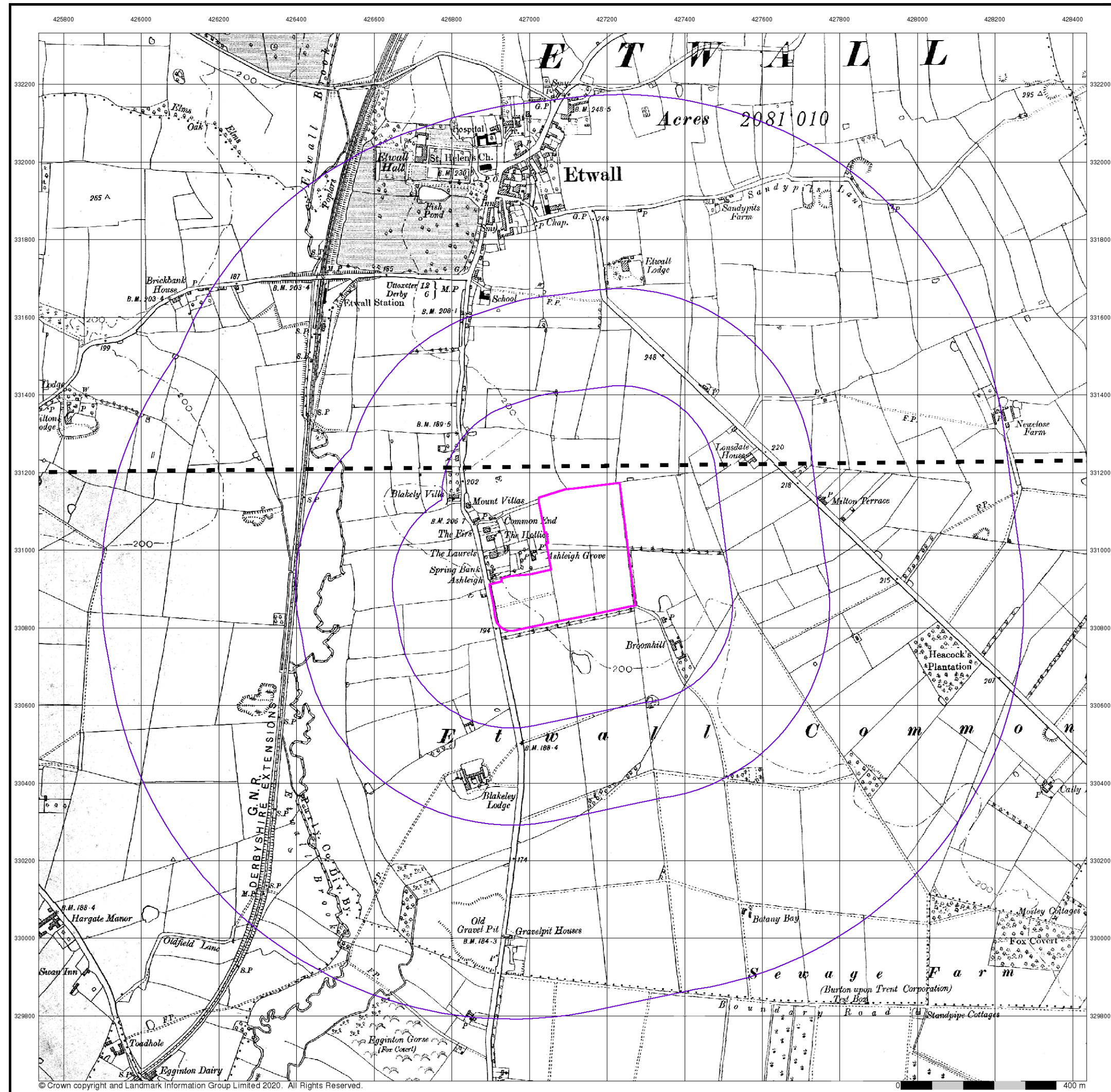


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



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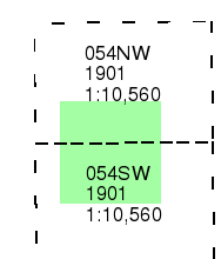
Derbyshire

Published 1901

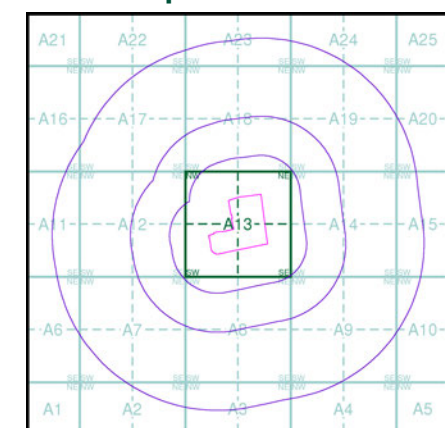
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A

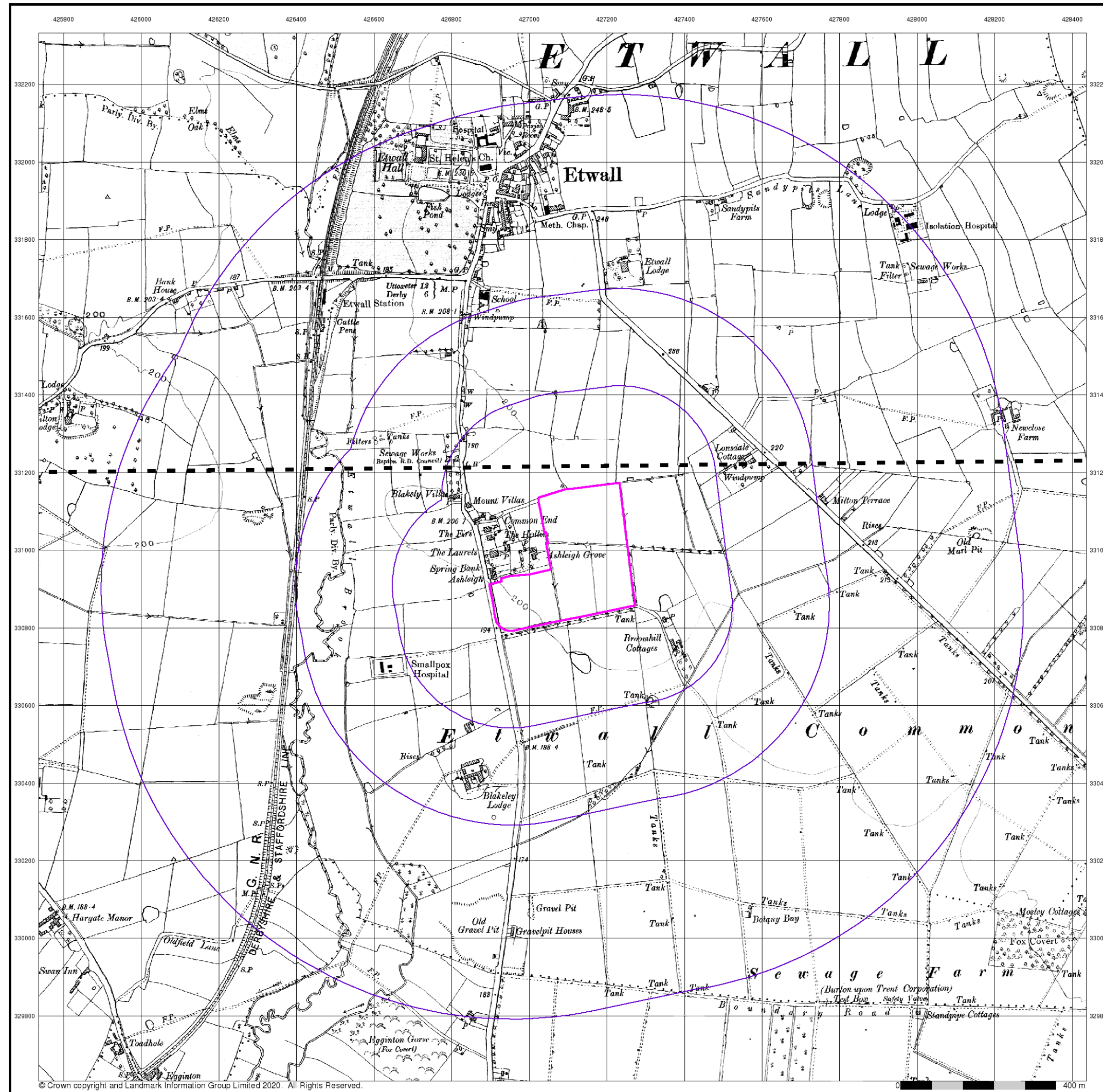


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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Derbyshire

Published 1924

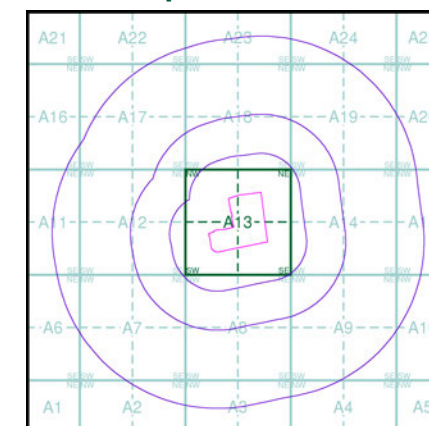
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

054NW
1924
1:10,560
054SW
1924
1:10,560

Historical Map - Slice A

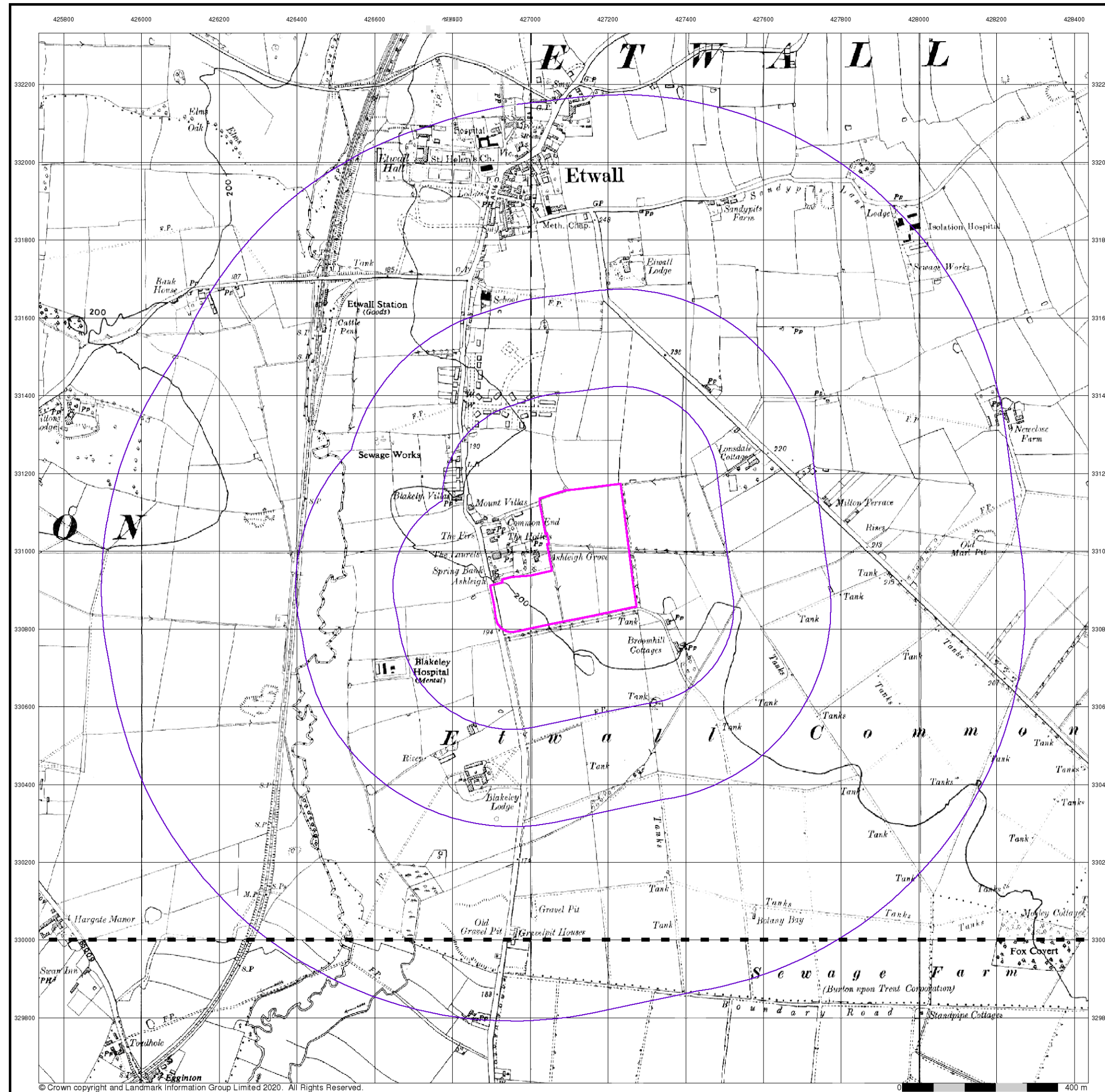


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



Ordnance Survey Plan

Published 1955

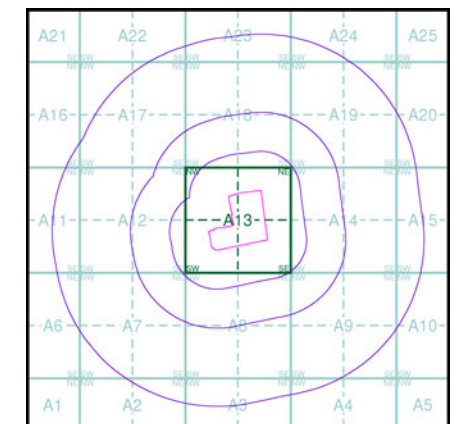
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SK23SE	1955
1:10,560	
SK22NE	1955
1:10,560	

Historical Map - Slice A

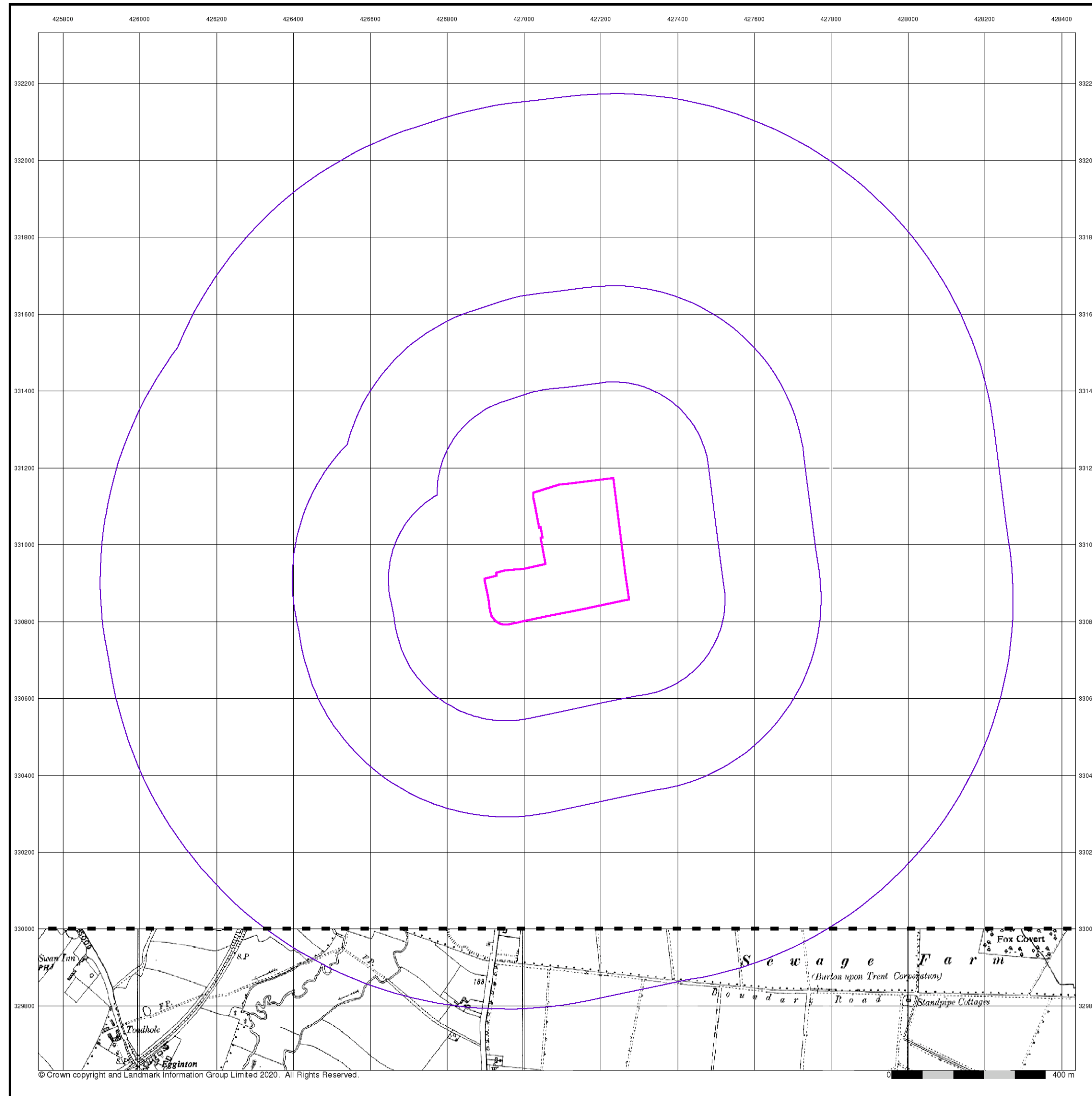


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



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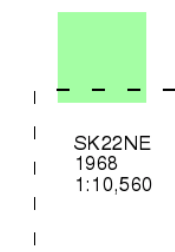
Ordnance Survey Plan

Published 1968

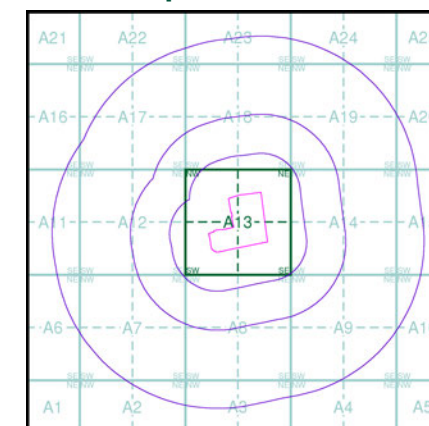
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A

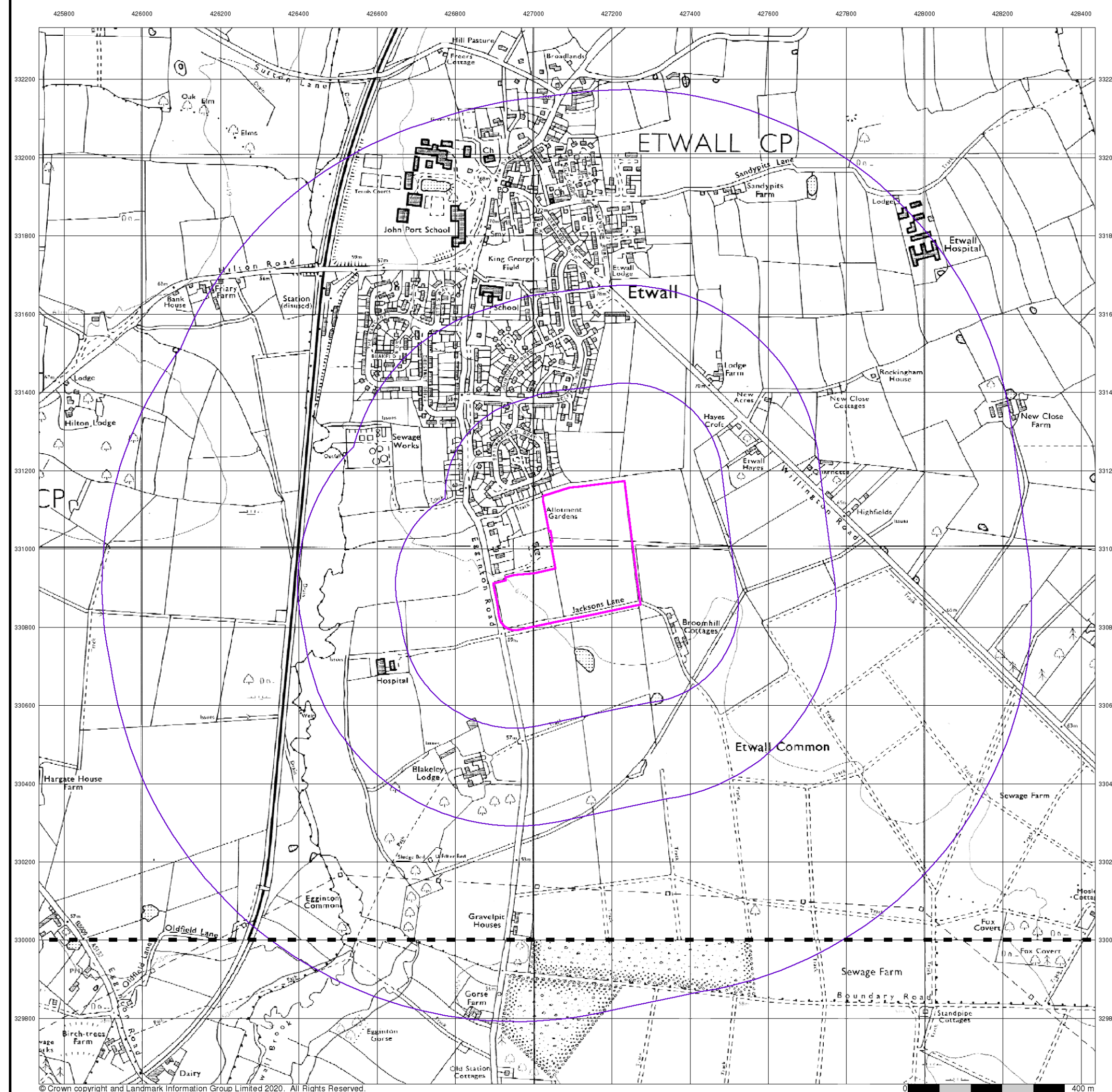


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



Ordnance Survey Plan

Published 1973 - 1976

Source map scale - 1:10,000

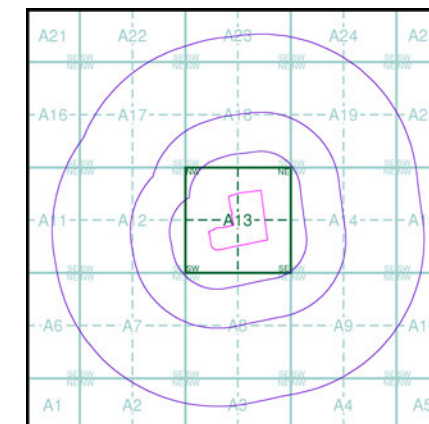
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

Map Name(s) and Date(s)

SK23SE
1973
1:10,000

SK22NE
1976
1:10,000

Historical Map - Slice A

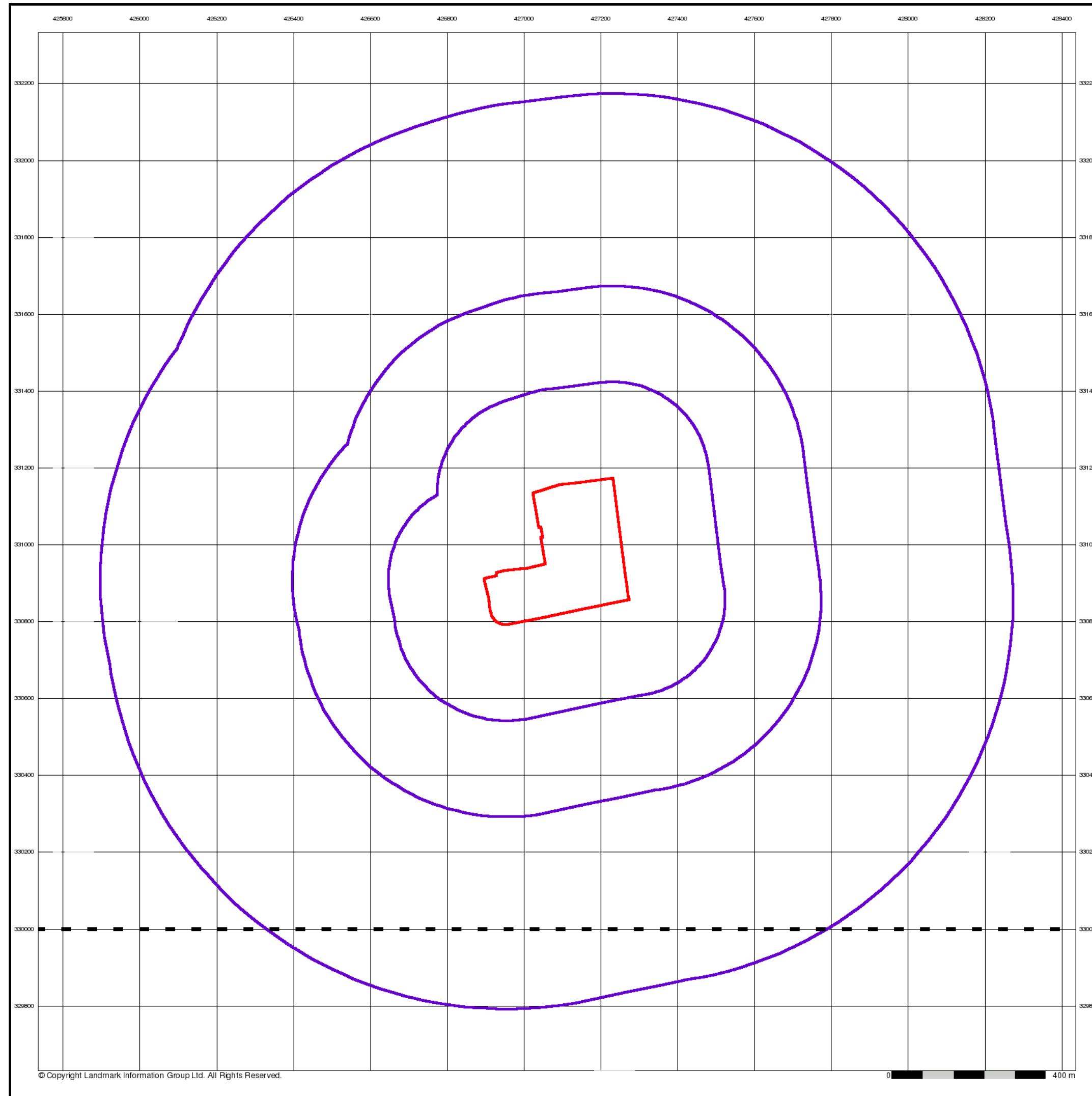


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



Derby

Published 1991

Source map scale - 1:10,000

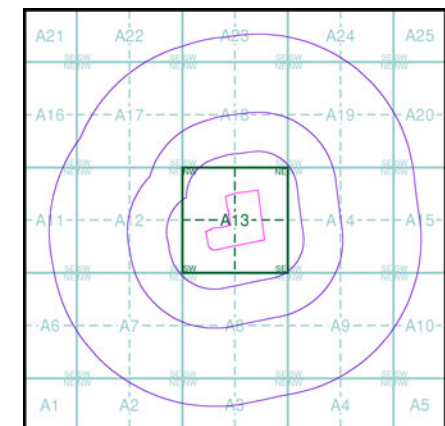
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

SK23SE
1991
1:10,000
SK22NE
1991
1:10,000

Russian Map - Slice A

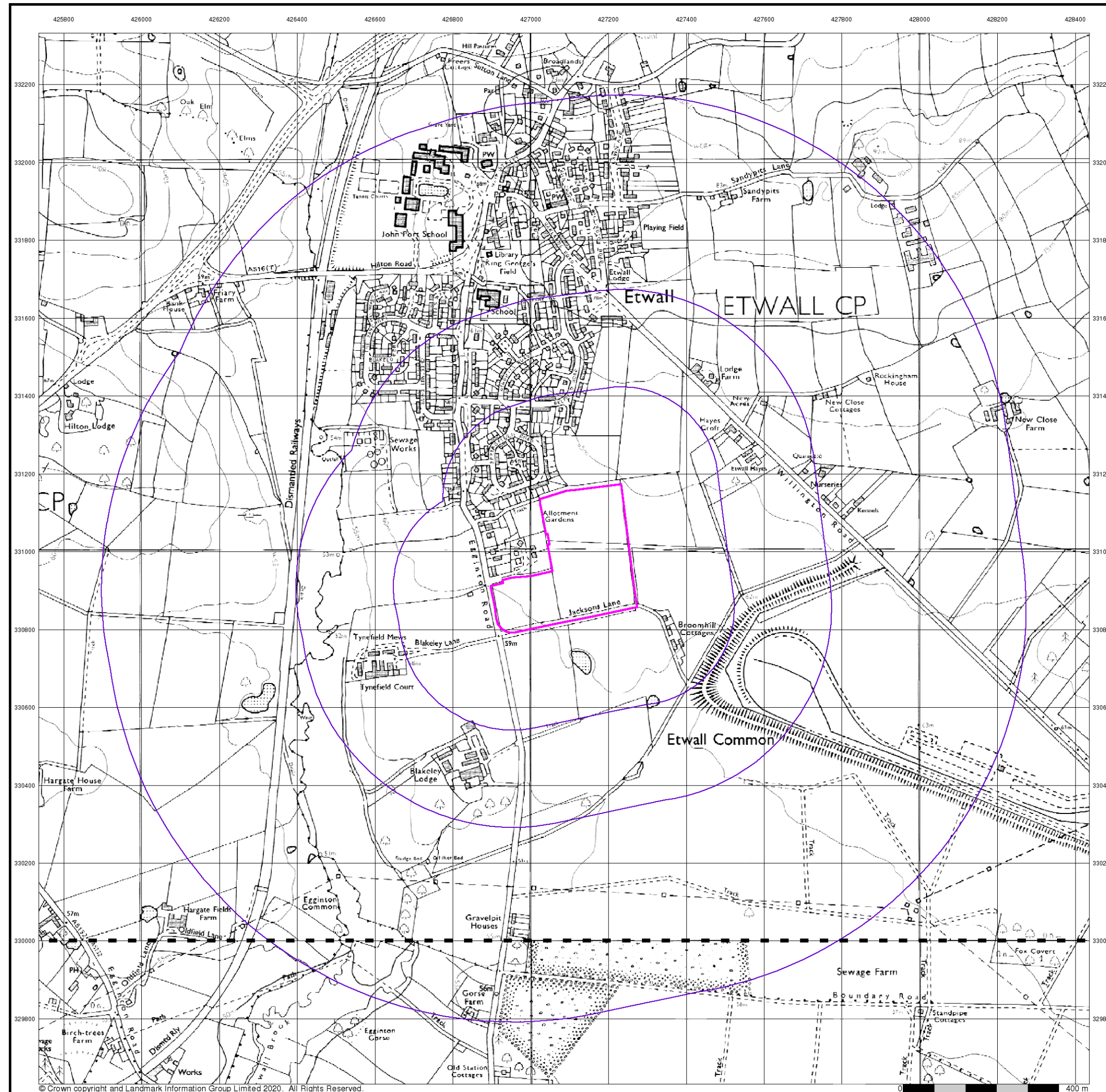


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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Ordnance Survey Plan

Published 1993 - 1996

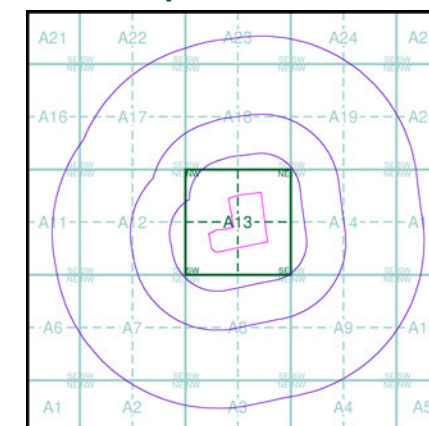
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SK23SE	1993
1:10,000	
SK22NE	1996
1:10,000	

Historical Map - Slice A

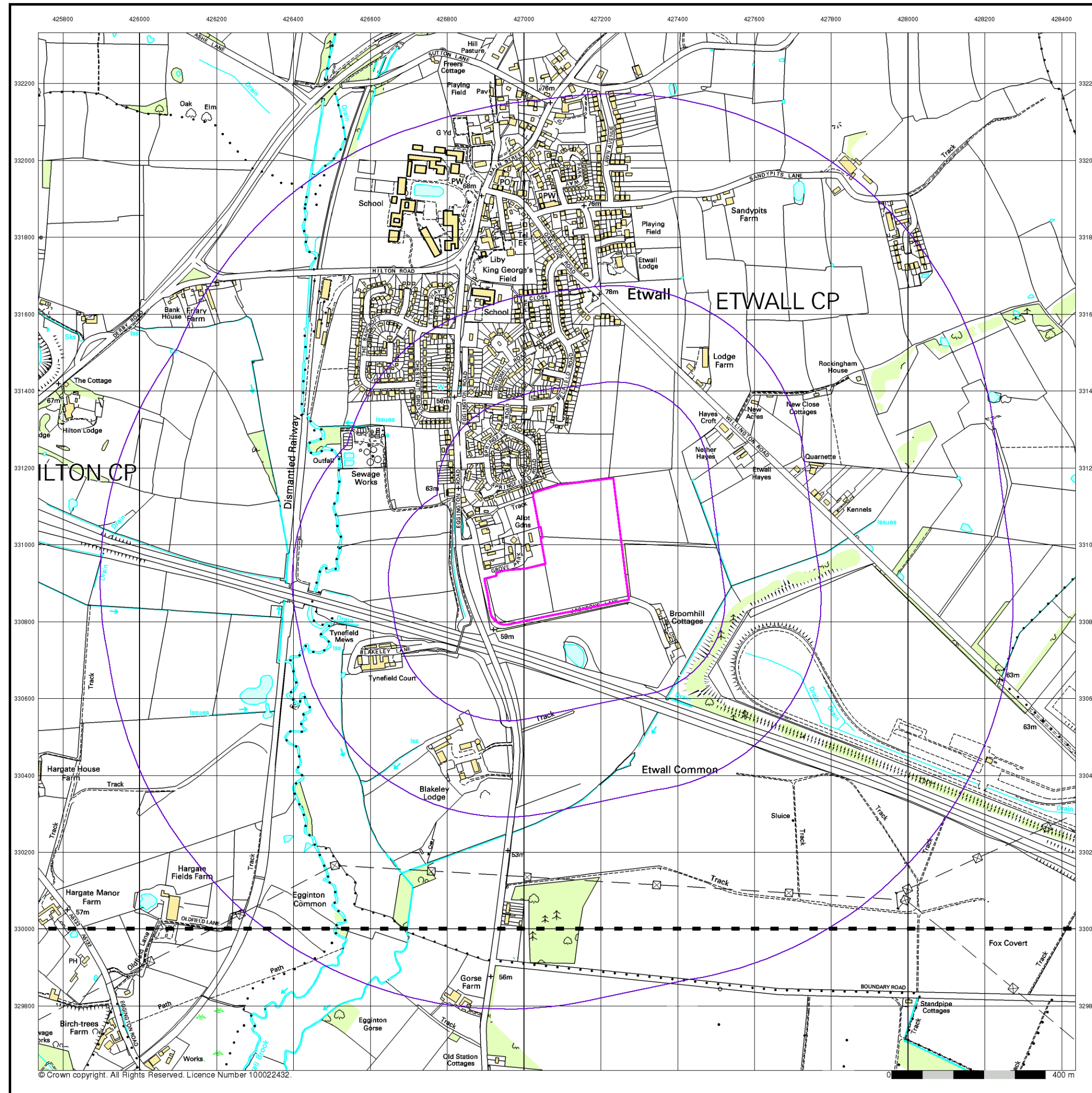


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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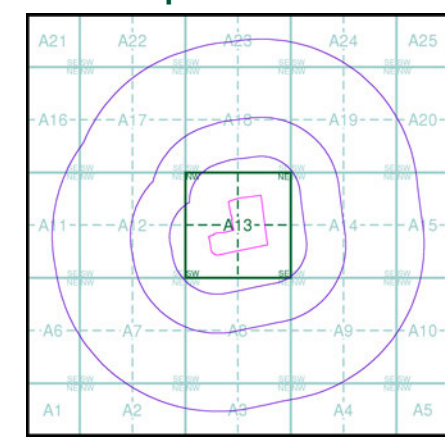
10k Raster Mapping
Published 2000
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SK23SE	2000
1:10,000	
SK22NE	2000
1:10,000	

Historical Map - Slice A

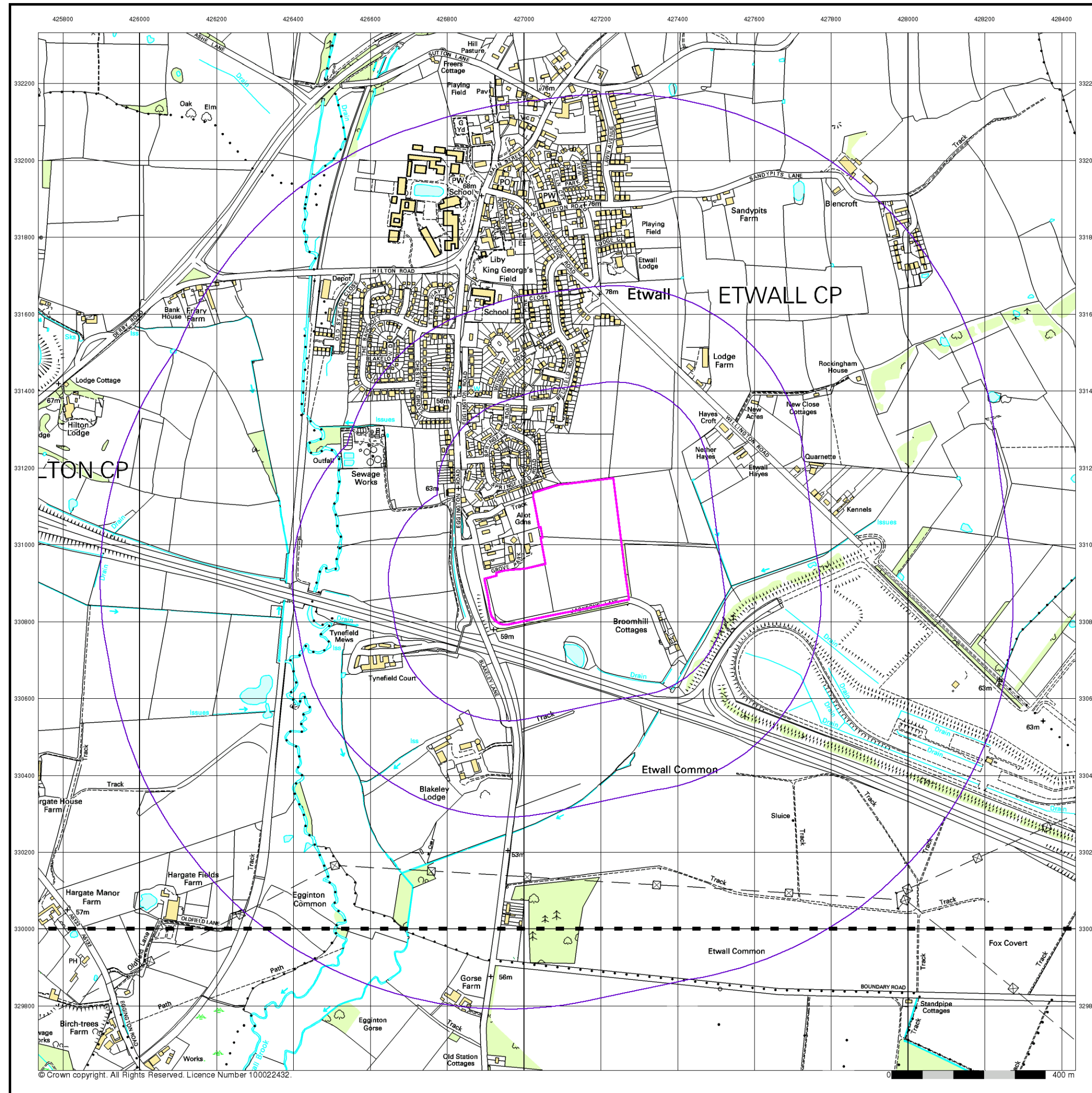


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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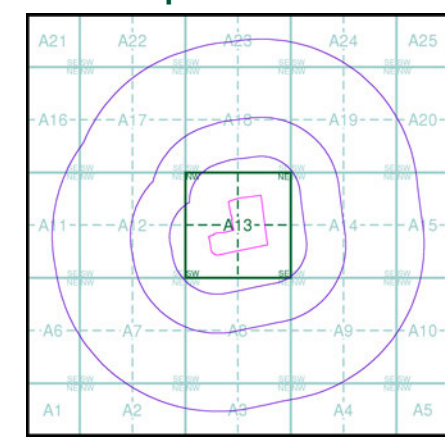
10k Raster Mapping
Published 2006
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SK23SE	2006	1:10,000
SK22NE	2006	1:10,000

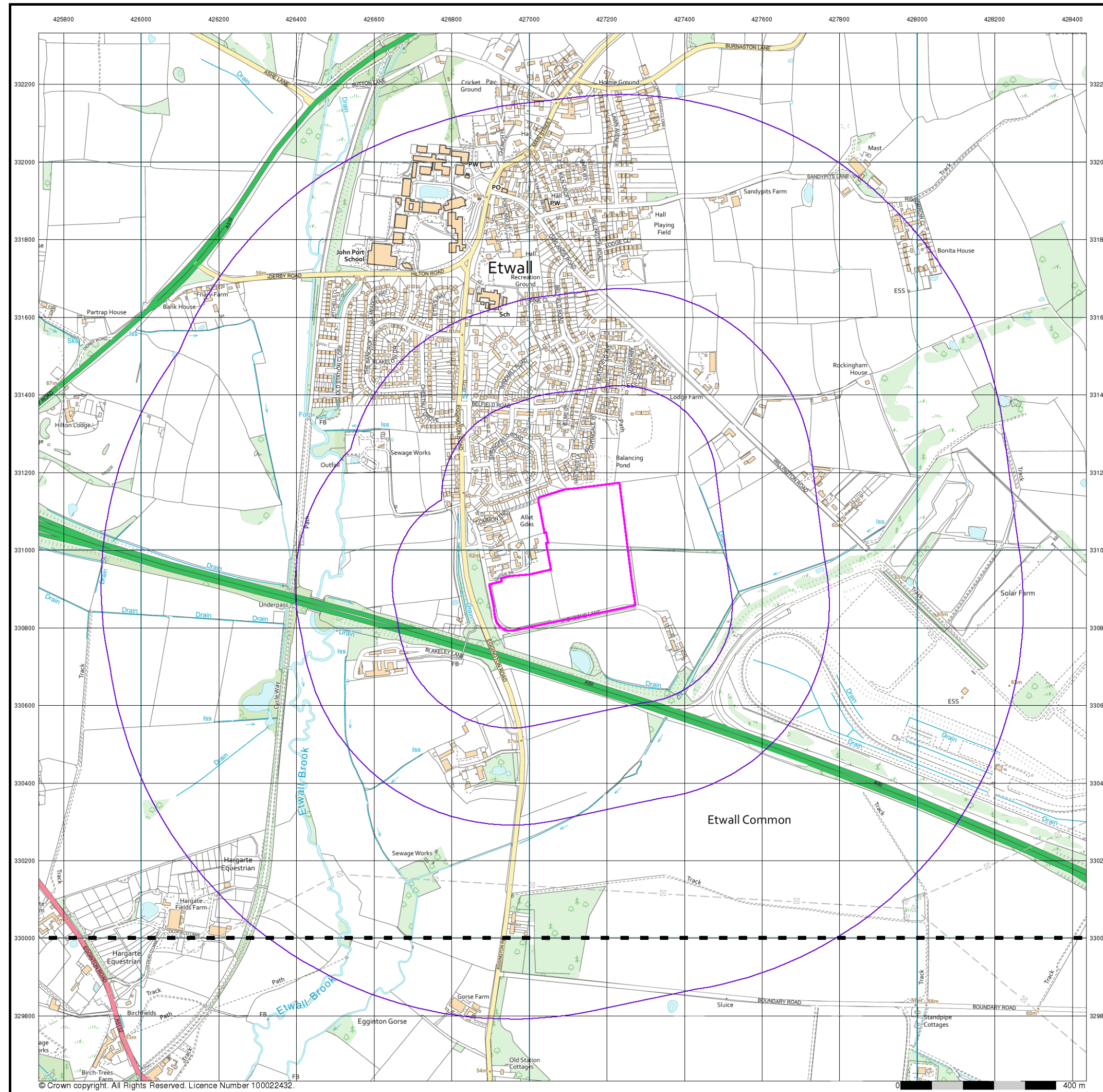
Historical Map - Slice A



Order Details

Order Number:	237420924_1_1
Customer Ref:	GML20127
National Grid Reference:	427100, 330970
Slice:	A
Site Area (Ha):	8.79
Search Buffer (m):	1000

Site Details
Egginton Road, Etwall, DERBY, DE65 6PX



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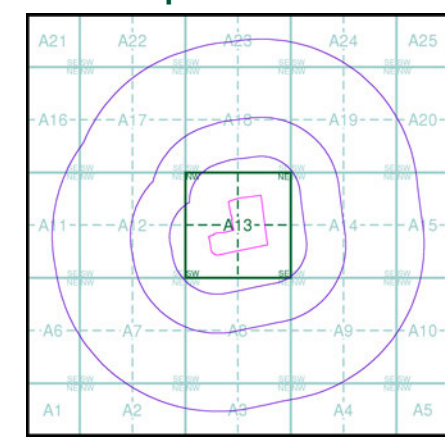
VectorMap Local
Published 2020
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SK23SE
2020
Variable
SK22NE
2020
Variable

Historical Map - Slice A



Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 1000

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX

Historical Mapping Legends

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



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



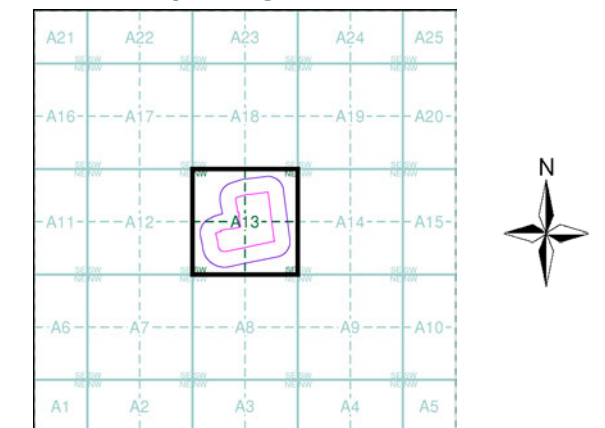
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Derbyshire	1:2,500	1881	2
Derbyshire	1:2,500	1901	3
Derbyshire	1:2,500	1922	4
Ordnance Survey Plan	1:2,500	1970 - 1971	5
Additional SIMs	1:2,500	1980 - 1992	6
Additional SIMs	1:2,500	1991	7
Additional SIMs	1:2,500	1992	8
Large-Scale National Grid Data	1:2,500	1994	9
Large-Scale National Grid Data	1:2,500	1995	10
Historical Aerial Photography	1:2,500	1999	11

Historical Map - Segment A13

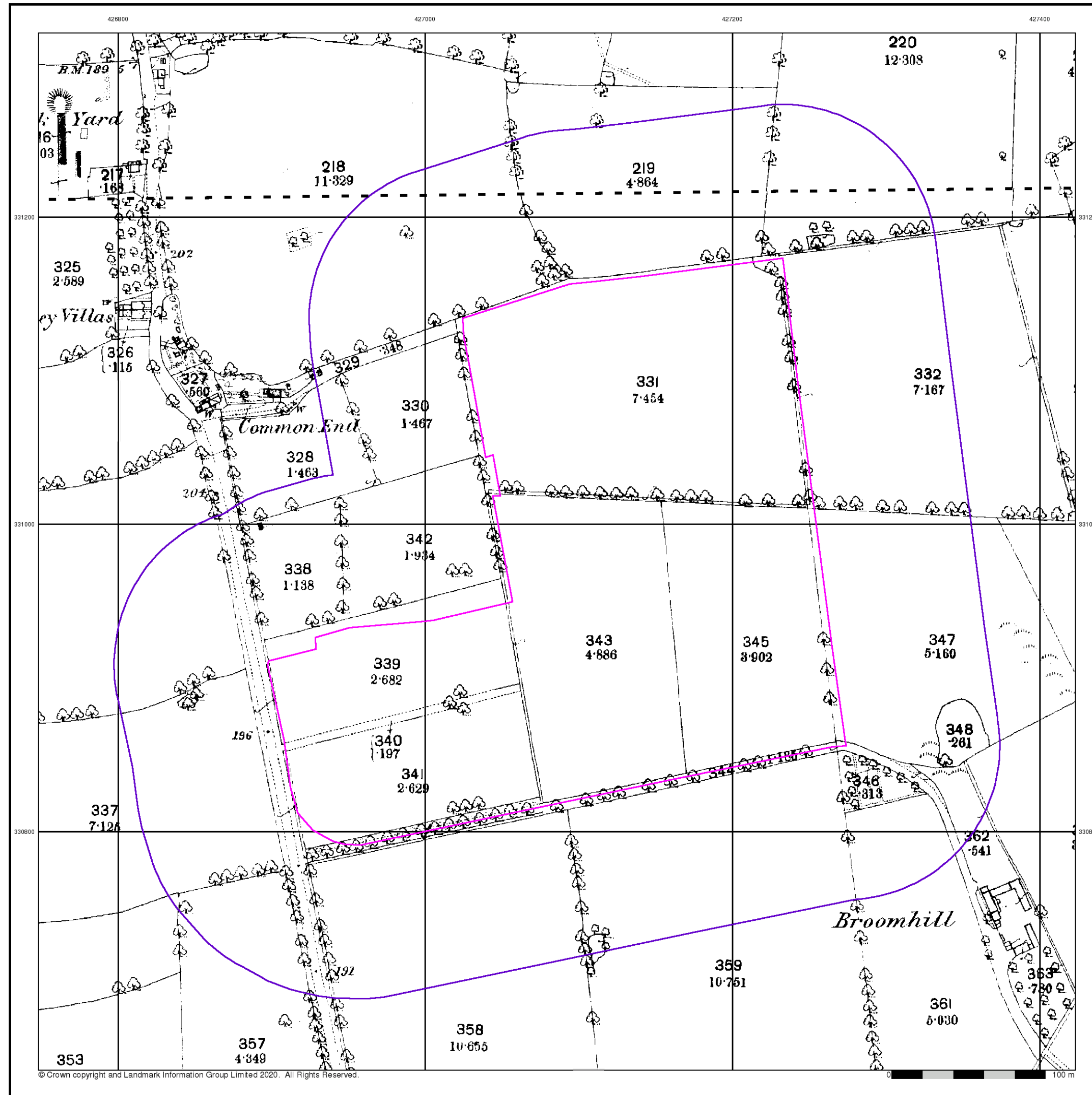


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



Derbyshire

Published 1881

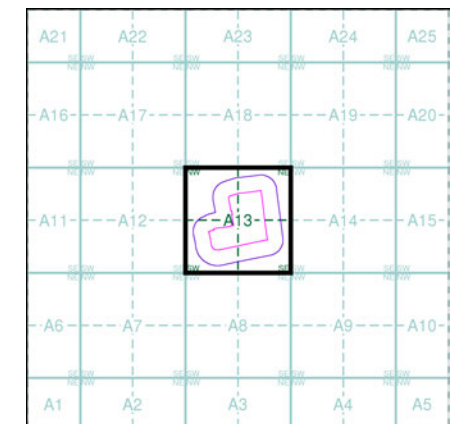
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

054_05
1881
1:2,500
054_09
1881
1:2,500

Historical Map - Segment A13

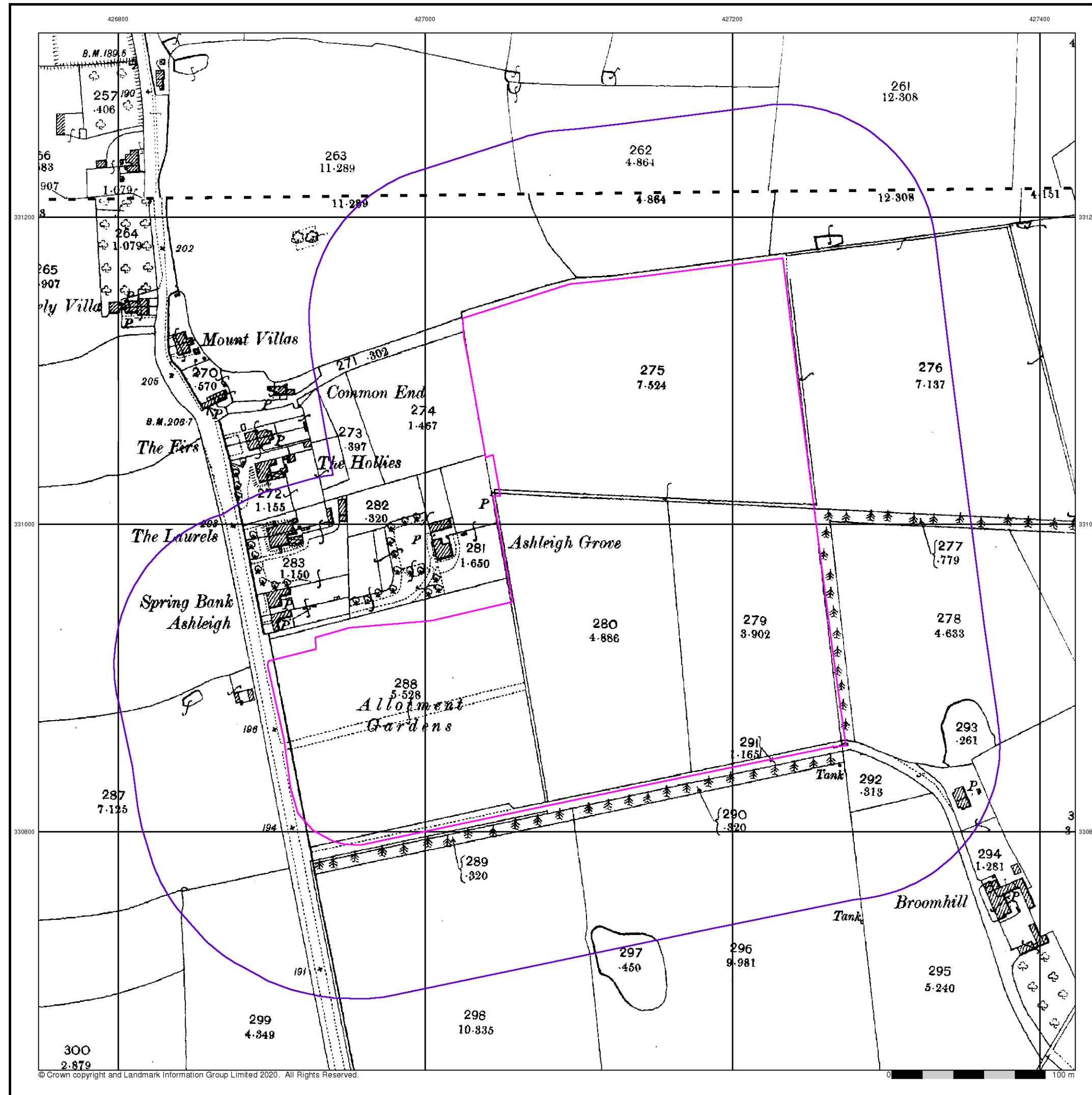


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



Derbyshire

Published 1901

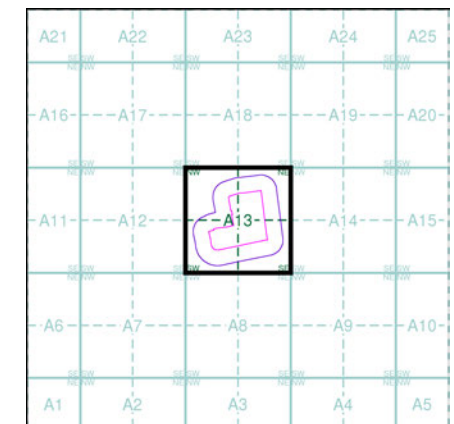
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

054_05
1901
1:2,500
054_09
1901
1:2,500

Historical Map - Segment A13



Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



Derbyshire

Published 1922

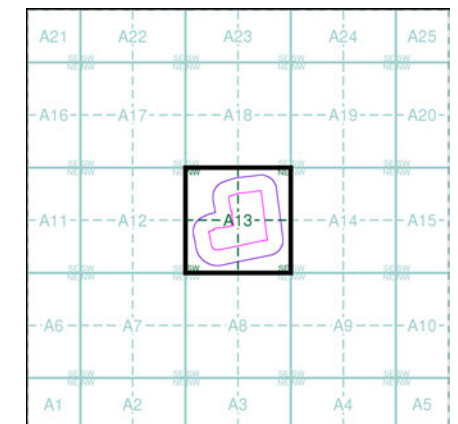
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

054_05
1922
1:2,500
054_09
1922
1:2,500

Historical Map - Segment A13

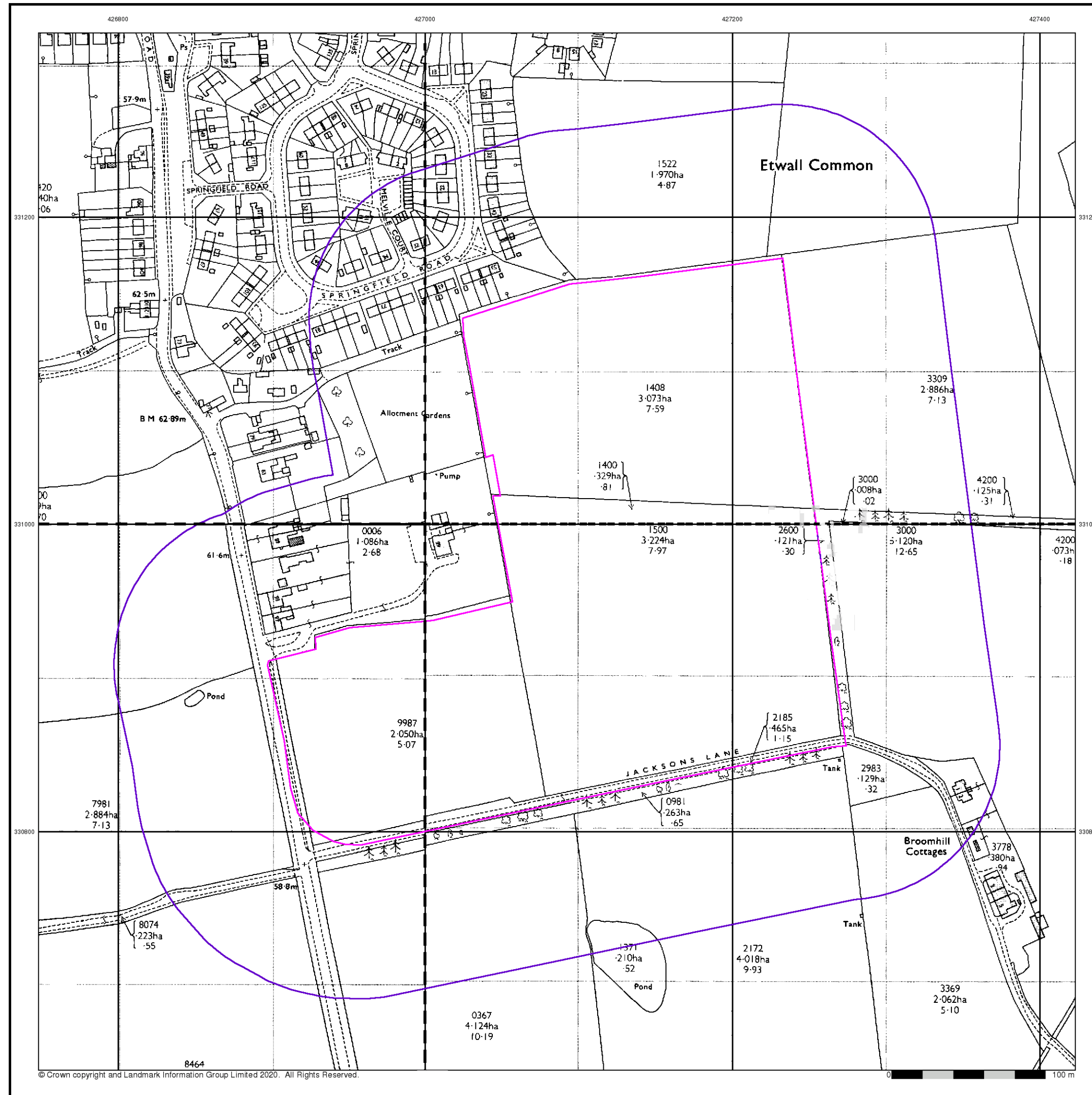


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



Ordnance Survey Plan

Published 1970 - 1971

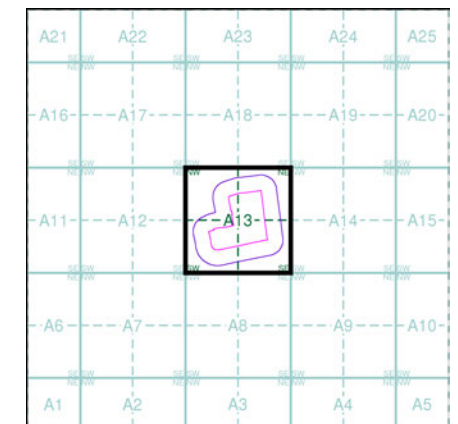
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SK2631 1971 1:2,500	SK2731 1971 1:2,500
SK2630 1970 1:2,500	SK2730 1970 1:2,500

Historical Map - Segment A13

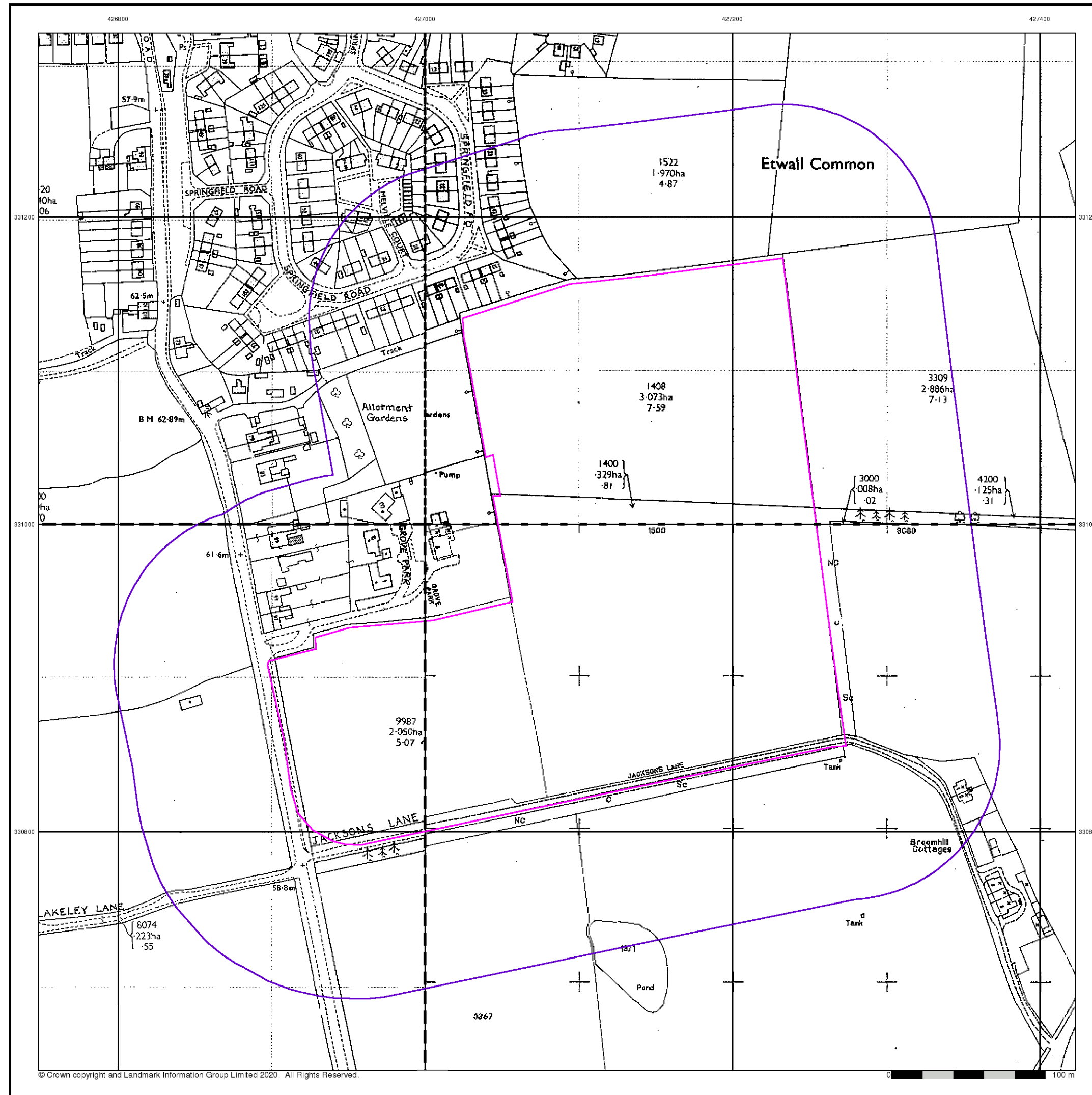


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



Additional SIMs

Published 1980 - 1992

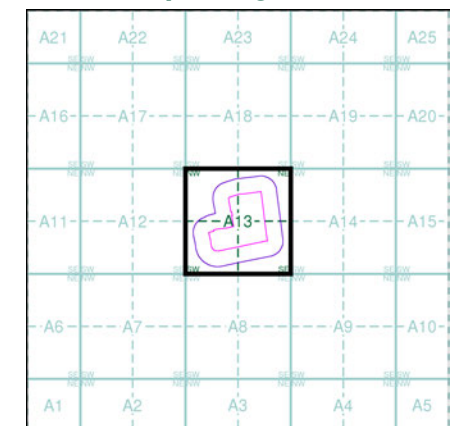
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SK2631 1990 1:2,500	SK2731 1980 1:2,500
SK2630 1991 1:2,500	SK2730 1992 1:2,500

Historical Map - Segment A13

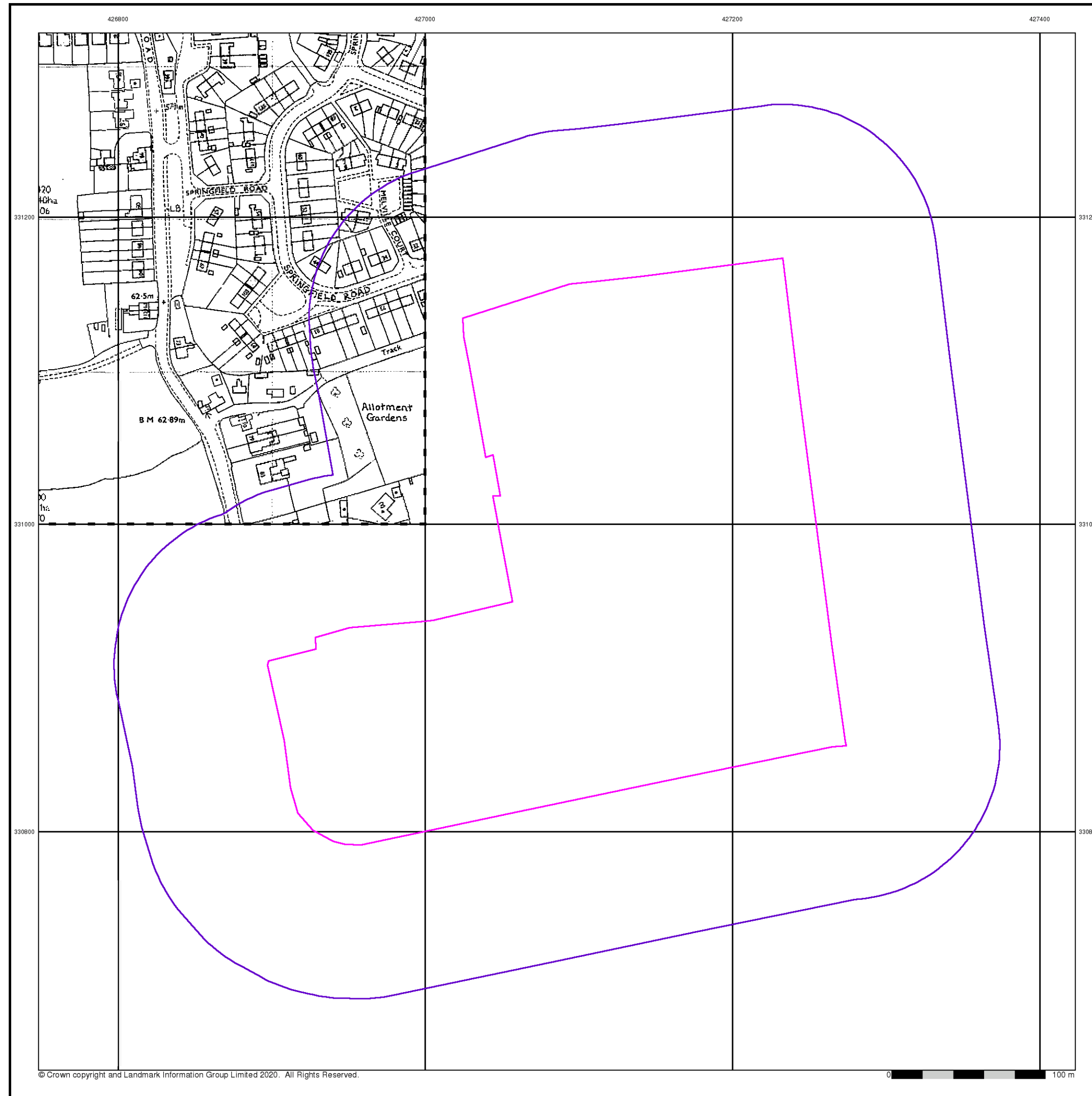


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



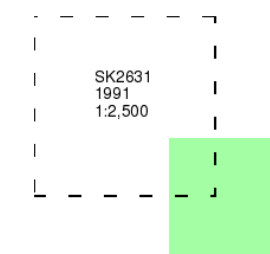
Additional SIMs

Published 1991

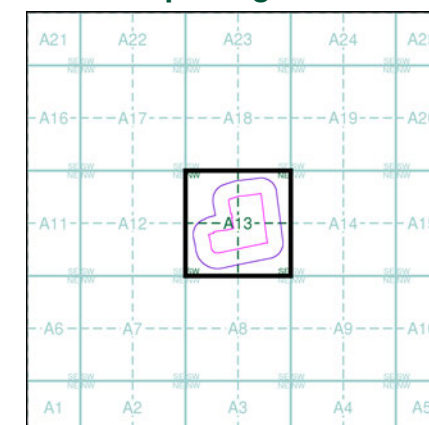
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

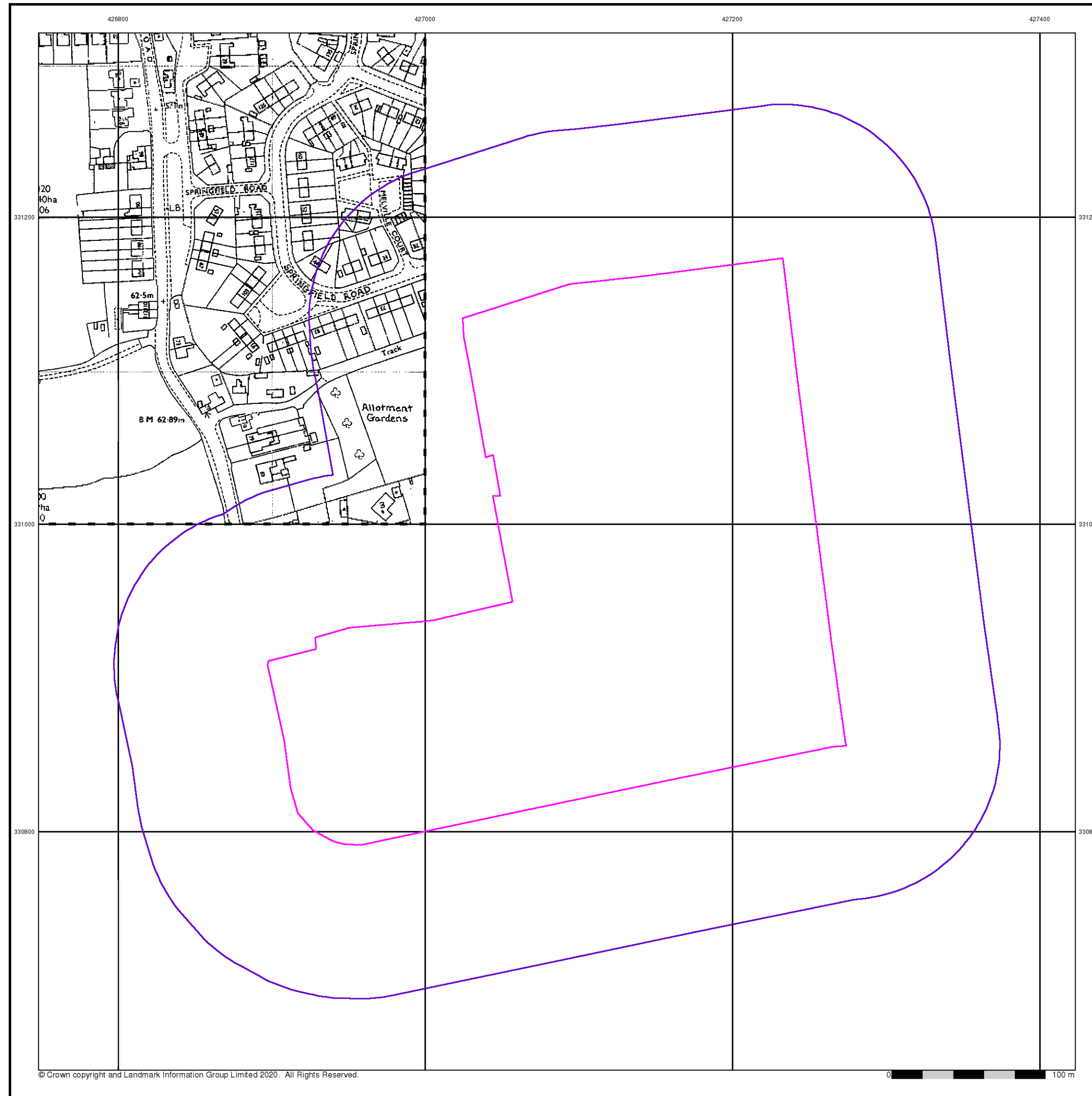


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



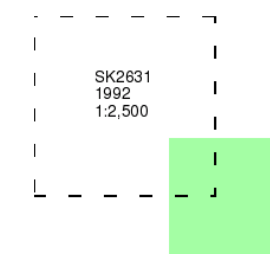
Additional SIMs

Published 1992

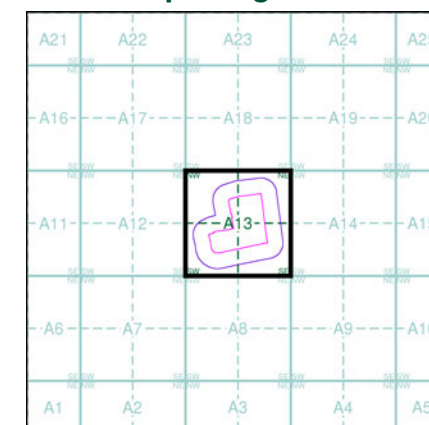
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

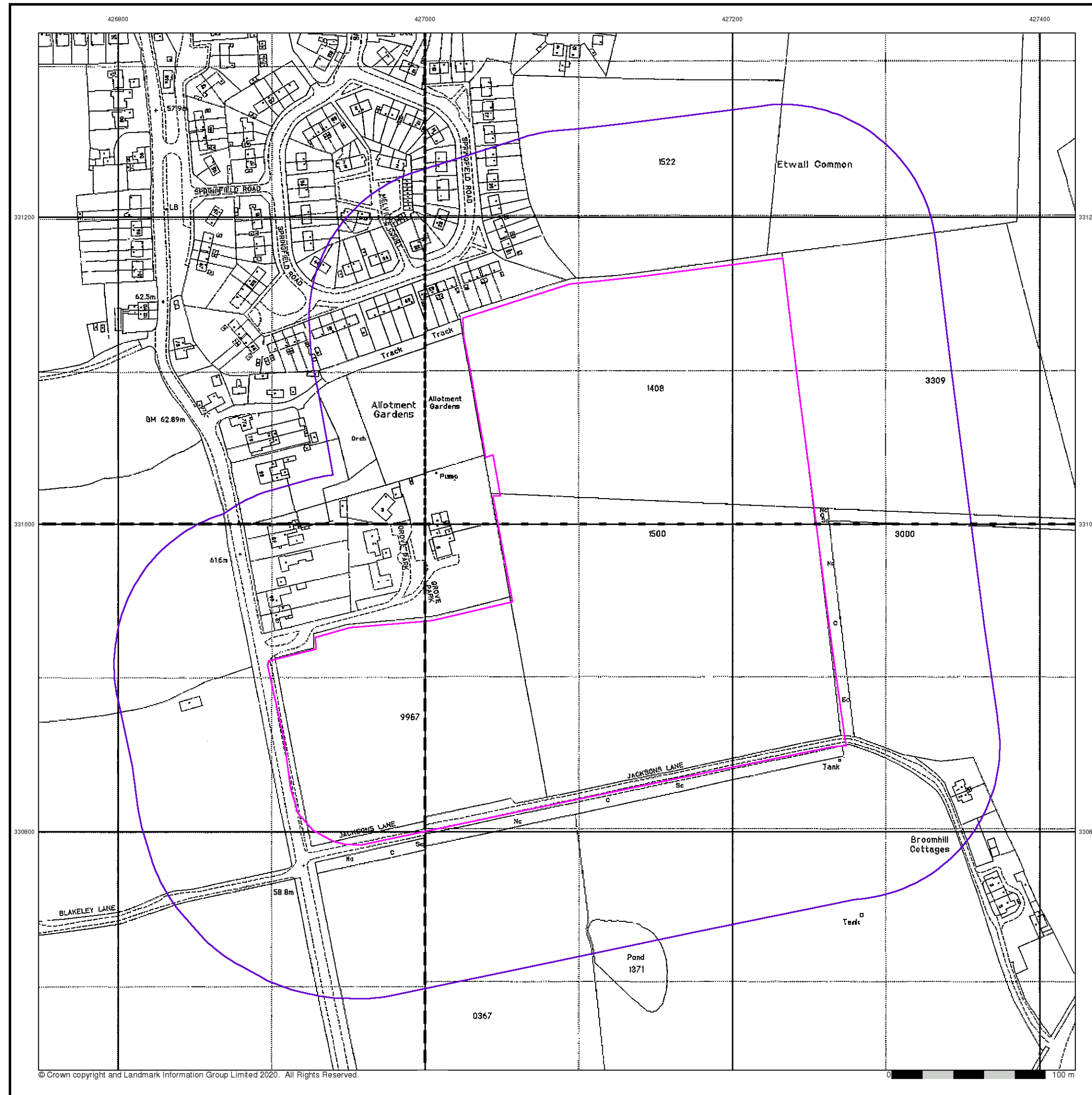


Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwall, DERBY, DE65 6PX



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Large-Scale National Grid Data

Published 1994

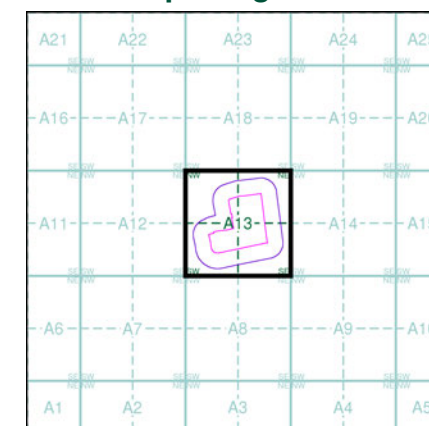
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

SK2631	SK2731
1994	1994
12,500	12,500
SK2630	SK2730
1994	1994
12,500	12,500

Historical Map - Segment A13



Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX



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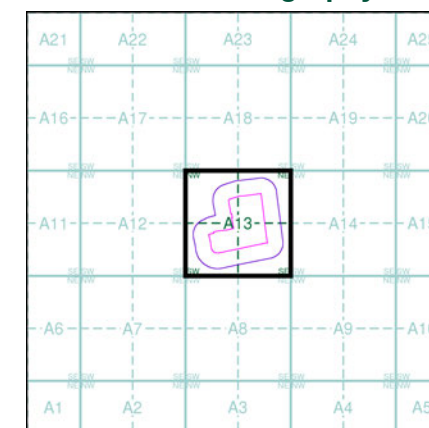
0 100 m

Historical Aerial Photography

Published 1999

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

Historical Aerial Photography - Segment A13



Order Details

Order Number: 237420924_1_1
Customer Ref: GML20127
National Grid Reference: 427100, 330970
Slice: A
Site Area (Ha): 8.79
Search Buffer (m): 100

Site Details

Egginton Road, Etwell, DERBY, DE65 6PX

APPENDIX VII

Site Investigation Layout Plan



DO NOT SCALE

NOTES:

Sheet 1 of 2



Approx. Site Boundary



Approx. Location of Boreholes



Approx. Location of Monitoring Wells



Approx. Location of Trial Pits



Approx. Location of Hand Dug Trial Pits



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CLIENT:



PROJECT:

Site off Egginton Rd., Etwell

TITLE:

Exploratory Hole Layout Plan

SCALE@SIZE :

NTS

SSUE:

FINAL

DESIGN/DRAWN :

AT

DATE:

April 2020

PROJECT No:

GML20127

DRAWING No:

005a

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DO NOT SCALE

NOTES:

Sheet 2 of 2

- Approx. Site Boundary
- Approx. Location of Boreholes
- Approx. Location of Monitoring Wells
- Approx. Location of Trial Pits
- Approx. Location of Hand Dug Trial Pits

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CLIENT:

REDROW

PROJECT:

Site off Egginton Rd., Etwell

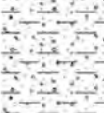
TITLE:

Exploratory Hole Layout Plan

SCALE@SIZE :	SSUE:
NTS	FINAL
DESIGN/DRAWN :	DATE:
AT	April 2020
PROJECT No:	DRAWING No:
GML20127	005b

APPENDIX VIII

Exploratory Hole Logs

		Site: Site off Egginton Road, Etwall, Derbyshire Client: Redrow Homes Ltd		WS01	
Contractor: RP Drilling		Project No: GML20127		Sheet: 1 of 1	
Equipment: Window Sampler Rig		Logged by: MC		Date: 13th March 2020	
Field Monitoring and Sampling		Strata		Legend	Well
Depth (m)	Type	Result (SPT)	depth (m)	Description	
0.20	JT	N = 26	0.50	TOPSOIL comprising dark brown slightly gravelly clay with rootlets. Gravel is fine to coarse and subrounded to subangular of mixed lithologies including sandstone.	   
0.80	JT		1.10	Firm orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse and subrounded to angular of mixed lithologies including sandstone. ... becoming very stiff from 1.00m depth.	
1.20	B		N = +50	2.00	
1.50	JT	Exploratory location completed at 2.00m depth.			
			3m		
			4m		
			5m		
Sheet 1 of 1		Groundwater:		Date : 13/03/2020	
Logged by: MC		No groundwater encountered during drilling.		Drilled by: RP	
				Logged by: MC	
EXPLORATORY RECORD		Remarks: 1) Borehole terminated on SPT refusal on hard dig conditions / hard ground at 2.00m depth. 2) Borehole completed as a monitoring well. 3) Borehole cased to 1.00m depth.			
		HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)			

		Site: Site off Egginton Road, Etwall, Derbyshire		WS02
		Client: Redrow Homes Ltd		
Contractor: RP Drilling		Project No: GML20127		Sheet: 1 of 1
Equipment: Window Sampler Rig		Logged by: MC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (SPT)	depth (m)	Description
0.15	JT	N = +50	0.50	TOPSOIL comprising dark brown slightly gravelly clay. Gravel is fine to medium and subrounded to subangular of mudstone and sandstone.
0.80	JT		1.00	Medium dense orangish brown slightly clayey slightly gravelly fine to coarse SAND. Gravel is fine to coarse and subangular of mudstone and sandstone. (ETWALL SAND AND GRAVEL MEMBER) ... becoming very dense from 0.90m depth.
				Exploratory location completed at 1.00m depth.
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: MC		No groundwater encountered during drilling.		Drilled by: RP
				Logged by: MC
EXPLORATORY RECORD		Remarks: 1) Borehole terminated on SPT refusal on hard dig conditions / hard ground at 1.00m depth. 2) Borehole cased to 1.00m depth.		
		HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		WS03
		Client: Redrow Homes Ltd		
Contractor: RP Drilling		Project No: GML20127		Sheet: 1 of 1
Equipment: Window Sampler Rig		Logged by: MC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (SPT)	depth (m)	Description
0.20	JT	N = +50	0.50	TOPSOIL comprising dark brown slightly gravelly clay. Gravel is fine to medium and subrounded to subangular of mudstone and sandstone.
0.70	JT		1.00	Medium dense greyish brown sandy fine to coarse and subrounded to subangular GRAVEL of mudstone and sandstone including cobbles. (ETWALL SAND AND GRAVEL MEMBER)
				... becoming very dense from 0.90m depth. Exploratory location completed at 1.00m depth.
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: MC		No groundwater encountered during drilling.		Drilled by: RP
				Logged by: MC
EXPLORATORY RECORD		Remarks: 1) Borehole terminated on SPT refusal on hard dig conditions / hard ground at 1.00m depth. 2) Borehole completed as a monitoring well. 3) Borehole cased to 1.00m depth.		
		HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		WS04
		Client: Redrow Homes Ltd		
Contractor: RP Drilling		Project No: GML20127		Sheet: 1 of 1
Equipment: Window Sampler Rig		Logged by: MC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (SPT)	depth (m)	Description
0.20	JT	N = 26	0.40	TOPSOIL comprising dark brown slightly gravelly clay. Gravel is fine to medium and subrounded to subangular of sandstone.
1.50	JT		1m	Loose orangish brown slightly silty gravelly fine to coarse SAND. Gravel is fine to coarse and subrounded to angular of mudstone and sandstone. (ETWALL SAND AND GRAVEL MEMBER) ... becoming medium dense from 1.00m depth.
1.60	B	N = 44	2.00	... becoming dense with frequent 0.05m to 0.10m sand pockets encountered between 1.70m and 1.90m depth.
			3m	Exploratory location completed at 2.00m depth.
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: MC		No groundwater encountered during drilling.		Drilled by: RP
				Logged by: MC
EXPLORATORY RECORD		Remarks: 1) Borehole terminated on completion of testing. 2) Borehole cased to 1.00m depth.		
		HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		WS05
		Client: Redrow Homes Ltd		
Contractor: RP Drilling		Project No: GML20127		Sheet: 1 of 1
Equipment: Window Sampler Rig		Logged by: MC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (SPT)	depth (m)	Description
0.15	JT	N = 13	0.35	TOPSOIL comprising dark brown slightly gravelly clay. Gravel is fine to medium and subrounded to subangular of mudstone and sandstone.
0.90	JT		1m	Loose orangish brown slightly clayey gravelly fine to coarse SAND. Gravel is fine to medium and subrounded of mudstone and sandstone. (ETWALL SAND AND GRAVEL MEMBER) ... becoming medium dense from 1.00m depth.
1.30			1.50	
1.80	JT	N = 30	2.00	Stiff orangish brown slightly gravelly sandy CLAY. Gravel is fine to medium and subangular of sandstone. ... becoming very stiff and very gravelly from 1.90m depth.
				Exploratory location completed at 2.00m depth.
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: MC		No groundwater encountered during drilling.		Drilled by: RP
				Logged by: MC
EXPLORATORY RECORD		Remarks: 1) Borehole terminated on completion of testing at 2.00m depth. 2) Borehole cased to 1.00m depth.		
		HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

Contractor: RP Drilling				Project No: GML20127		Sheet: 1 of 1		
Equipment: Window Sampler Rig				Logged by: MC		Date: 13th March 2020		
Field Monitoring and Sampling				Strata			Legend	Well
Depth (m)	Type	Result (SPT)	depth (m)	Description				
0.25	JT	N = 44	0.55	TOPSOIL comprising dark brown slightly gravelly clay. Gravel is fine to medium and subrounded to subangular of mudstone and sandstone.				
0.90	JT		1.00	Medium dense light brown slightly clayey gravelly fine to coarse SAND. Gravel is medium to coarse and subangular to subrounded of mudstone and sandstone. (ETWALL SAND AND GRAVEL MEMBER)				
1.20	B		1.30	Dense light brown slightly sandy slightly clayey fine to coarse and subrounded to subangular GRAVEL of mudstone and sandstone. (ETWALL SAND AND GRAVEL MEMBER)				
1.90	JT		2.00	Dense orangish brown slightly clayey gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to subangular of mudstone and sandstone. (ETWALL SAND AND GRAVEL MEMBER)				
		N = 41		Exploratory location completed at 2.00m depth.				
			3m					
			4m					
			5m					

Sheet 1 of 1

Logged by: MC

Groundwater:

No groundwater encountered during drilling.

Date : 13/03/2020

Drilled by: RP

Logged by: MC

EXPLORATORY RECORD

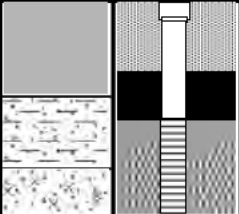
Remarks:

1) Borehole terminated on completion of testing at 2.00m depth.
2) Borehole completed as a monitoring well.
3) Borehole cased to 1.00m depth.

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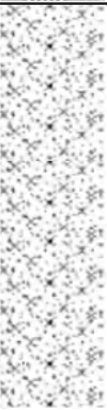
HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm²)

		Site: Site off Egginton Road, Etwall, Derbyshire Client: Redrow Homes Ltd		WS08	
Contractor: RP Drilling		Project No: GML20127		Sheet: 1 of 1	
Equipment: Window Sampler Rig		Logged by: MC		Date: 13th March 2020	
Field Monitoring and Sampling		Strata		Legend	Well
Depth (m)	Type	Result (SPT)	depth (m)	Description	
0.20	JT	N = +50	0.40	TOPSOIL comprising dark brown slightly gravelly clay. Gravel is fine to medium and subrounded to subangular of mudstone and sandstone.	
0.75	JT		0.70	Soft orangish brown slightly gravelly sandy CLAY. Gravel is medium to coarse and subrounded of sandstone.	
			0.90	Very dense orangish brown sandy fine to medium and subrounded GRAVEL of mudstone and sandstone. (ETWALL SAND AND GRAVEL MEMBER)	
			Exploratory location completed at 0.90m depth.		
			1m		
			2m		
			3m		
			4m		
			5m		
Sheet 1 of 1		Groundwater:		Date : 13/03/2020	
Logged by: MC		No groundwater encountered during drilling.		Drilled by: RP	
				Logged by: MC	
EXPLORATORY RECORD		Remarks: 1) Borehole terminated on SPT refusal on hard dig conditions / hard ground at 0.90m depth. 2) Borehole completed as a monitoring well.			
		HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)			

		Site: Site off Egginton Road, Etwall, Derbyshire		TP01
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.30	JT		0.40	TOPSOIL comprising dark brown slightly silty gravelly clay. Gravel is fine to coarse and subrounded of mudstone.
			1m	Medium dense orangish brown slightly silty gravelly fine to coarse SAND. Gravel is fine to coarse and subrounded of mudstone including rare cobbles. (ETWALL SAND AND GRAVEL MEMBER)
			2m	
2.20	JT			
2.50	B		2.50	... with rare subrounded to subangular cobbles and boulders of sandstone and mudstone encountered from 2.50m depth.
				Exploratory location completed at 2.50m depth.
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		Frequent seepages of perched water encountered between 0.40m and 2.40m depth.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on completion of testing at 2.50m depth. 2) Collapse of side walls noted between 0.80m and 2.40m depth.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP02
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.60	JT		0.40	TOPSOIL comprising dark brown slightly sandy gravelly clay. Gravel is fine to coarse and subrounded of mudstone including rare cobbles.
1.00	B		1.70	Medium dense orangish brown sandy fine to coarse and subrounded GRAVEL of mudstone and sandstone including cobbles and rare boulders. (ETWALL SAND AND GRAVEL MEMBER)
			2m	Exploratory location completed at 1.70m depth.
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		Seepages of perched water encountered between 1.00m and 1.50m depth.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on collapse of side walls at 1.70m depth. 2) Slight collapse of trial pit side walls noted from 0.50m depth.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP03
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.30	JT		0.40	TOPSOIL comprising dark brown slightly sandy clayey fine to coarse and subrounded gravel of mudstone.
1.50	JT		1m	Medium dense orangish brown sandy fine to coarse and subrounded to subangular GRAVEL of mudstone, quartzite and sandstone. (ETWALL SAND AND GRAVEL MEMBER)
1.70	B		2.00	... becoming damp from 1.60m depth. ... becoming slightly silty from 1.70m depth.
			3m	Exploratory location completed at 2.00m depth.
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		No groundwater encountered during excavation.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on collapse of side walls at 2.00m depth.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP04
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.15	JT		0.60	TOPSOIL comprising dark brown slightly clayey sandy fine to medium and subrounded to subangular gravel of mudstone and quartzite. 
1.20	B		1m 2m	Medium dense orangish brown slightly silty slightly sandy fine to medium and subrounded to subangular GRAVEL of mudstone, sandstone and quartzite including cobbles. (ETWALL SAND AND GRAVEL MEMBER) ... becoming very sandy and damp from 1.00m depth. ... becoming slightly silty from 1.20m depth. 
2.20	JT		2.30	Exploratory location completed at 2.30m depth.
			3m 4m 5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		Perched water encountered at 1.60m depth.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on collapse of side walls at 2.30m depth. 2) Slight collapse of trial pit side walls noted from 1.60m depth.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP05
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.60	JT		0.40	TOPSOIL comprising dark brown slightly clayey gravelly fine to coarse sand. Gravel is fine to medium and subrounded to subangular of mudstone and quartzite.
			1.10	Medium dense light yellowish brown slightly sandy fine to medium and subrounded GRAVEL of mudstone and sandstone. (ETWALL SAND AND GRAVEL MEMBER)
			2.20	Medium dense orangish brown slightly silty gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to subangular of mudstone and quartzite. (ETWALL SAND AND GRAVEL MEMBER) ... with frequent subrounded cobbles of sandstone and mudstone encountered from 1.70m depth.
			Exploratory location completed at 2.20m depth.	
2.00	B			
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		Groundwater encountered from 1.90m depth.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on collapse of side walls at 2.20m depth. 2) Collapse of trial pit side walls noted from between 0.00m and 0.60m depth.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP06
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.60	JT		0.45	TOPSOIL comprising dark brown slightly clayey gravelly fine to coarse sand. Gravel is fine to medium and subrounded to subangular of mudstone and quartzite.
			0.70	Loose light yellowish brown slightly silty gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to subangular of mudstone and sandstone. (ETWALL SAND AND GRAVEL MEMBER)
1.40	B		1m	Medium dense orangish brown slightly silty sandy fine to coarse and angular to subangular GRAVEL of mudstone, sandstone, flint and quartzite. (ETWALL SAND AND GRAVEL MEMBER)
1.80	JT			... becoming damp from 1.00m depth.
			2m	
			2.50	Exploratory location completed at 2.50m depth.
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		Perched groundwater encountered from between 1.30m and 2.50m depth.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on collapse of side walls at 2.50m depth.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP07
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
		HSV @ 1.00m = 50, 60, 50	0.40	TOPSOIL comprising dark brown slightly silty gravelly fine to medium sand. Gravel is fine to coarse and subrounded to subangular of mudstone and quartzite.
			1.00	Firm to stiff light grey and yellowish brown slightly silty slightly gravelly sandy CLAY. Gravel is medium to coarse and angular of weak mudstone, flint and sandstone.
				Exploratory location completed at 1.00m depth.
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		No groundwater encountered during excavation.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on encountering a field drain.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP07a
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.60 0.70	JT B	HSV @ 2.50m = 90, 90, 100	0.45	TOPSOIL comprising dark brown slightly silty gravelly fine to medium sand. Gravel is fine to coarse and subrounded to subangular of mudstone and quartzite.
			0.90	Dense yellowish brown slightly gravelly very clayey fine to medium SAND. Gravel is fine to coarse and angular to subangular of weak mudstone and quartzite including cobbles. (ETWALL SAND AND GRAVEL MEMBER)
1.50	JT		1m 1.80	Medium dense orangish brown slightly clayey gravelly fine to medium SAND. Gravel is fine to coarse and subrounded to subangular of mudstone, flint and sandstone. (ETWALL SAND AND GRAVEL MEMBER) ... becoming very clayey from 1.00m depth.
2.10	B		2m 3m 3.90	Stiff reddish brown slightly gravelly sandy CLAY. Gravel is fine to medium and subrounded of mudstone and quartzite including cobbles. (GUNTORPE MEMBER) ... with frequent 0.03m to 0.30m diameter sandy pockets encountered from between 2.20m and 3.00m depth. ... becoming friable from 3.00m depth. ... becoming very gravelly with fine to coarse weak angular mudstone including cobbles from 3.50m depth.
			4m 5m	Exploratory location completed at 3.90m depth.
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		No groundwater encountered during excavation.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on limit of excavator reach at 3.90m Depth. 2) Trial pit sides remained stable for the duration of excavation.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP08
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.30	JT		0.35	TOPSOIL comprising dark brown slightly silty gravelly fine to medium sand. Gravel is fine to coarse and subrounded of mudstone, sandstone and quartzite.
0.80	B		0.50	Firm light yellowish brown and grey slightly silty sandy very gravelly CLAY. Gravel is fine to coarse and subrounded to subangular of mudstone, sandstone, flint and quartzite including cobbles
1.20	JT		1m	Stiff reddish brown and yellowish brown mottled slightly sandy slightly gravelly CLAY. Gravel is fine to medium and subrounded of mudstone and quartzite. (GUNTHORPE MEMBER)
1.80	B		2m	... becoming very gravelly with medium to coarse and subrounded sandstone including cobbles from 1.80m depth.
2.40	JT		3m	... with frequent 0.10m to 0.40m diameter sand pockets encountered between 2.00m and 2.80m depth.
			3.90	... becoming friable from 3.00m depth. ... with rare orangish brown mottling noted from 3.00m to 3.50m depth. ... with orangish brown mottling absent from 3.50m depth. ... becoming slightly gravelly with medium to coarse and angular weak mudstone from 3.50m depth.
			4m	Exploratory location completed at 3.90m depth.
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		No groundwater encountered during excavation.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on completion of testing at 3.90m depth. 2) Trial pit sides remained stable for the duration of excavation.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP09
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.50	JT	HSV @ 1.50m = 80, 80, 80	0.60	TOPSOIL comprising dark brown slightly silty very gravelly fine to medium sand. Gravel is fine to coarse and subrounded of sandstone including cobbles.
			1.00	Firm to stiff light yellowish brown and grey sandy very gravelly CLAY. Gravel is fine to coarse and subrounded to subangular of mudstone, flint and quartzite.
1.40 1.50	JT B	HSV @ 2.00m = 60, 70, 70		Stiff reddish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium and subangular of sandstone. (GUNTHORPE MEMBER) ... with rare orangish brown mottling encountered between 1.00m and 1.50m depth. ... becoming very gravelly from 1.50m depth.
2.00	JT		2m	... becoming very gravelly with rare 0.10m to 0.40m diameter sandy pockets encountered from 2.00m depth.
2.60	B		3m	... becoming friable from 2.50m depth.
3.80	B		3.80	
			4m	Extremely weak reddish brown weathered MUDSTONE recovered as a clayey fine to coarse and angular gravel of weak mudstone including cobbles and boulders. (GUNTHORPE MEMBER)
			4.10	Exploratory location completed at 4.10m depth.
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		No groundwater encountered during excavation.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on completion of testing at 4.10m depth. 2) Trial pit sides remained stable for the duration of excavation.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP10
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.20	JT	HSV @ 0.80m = 50, 60, 60	0.35	TOPSOIL comprising slightly silty gravelly fine to medium sand. Gravel is fine to coarse and subangular of sandstone.
0.70	B		1.10	Firm light grey and yellowish brown slightly silty sandy CLAY. ... becoming slightly gravelly from 0.50m depth.
			1.50	Medium dense reddish brown silty sandy fine to medium and subrounded to subangular GRAVEL of mudstone and quartzite including cobbles. (GUNTHORPE MEMBER)
1.80	JT	HSV @ 1.90m = 70, 80, 70 HSV @ 2.50m = 70, 100, 90	3.00	Firm reddish brown and occasionally light grey mottled slightly silty slightly gravelly sandy CLAY. Gravel is fine to medium and subrounded of mudstone. (GUNTHORPE MEMBER) ... with rare orangish brown mottling encountered between 1.50m and 2.50m depth.
			3.90	Stiff reddish brown gravelly CLAY. Gravel is fine to medium and angular of weak mudstone. (GUNTHORPE MEMBER) ... becoming friable from 3.50m depth.
			4m	Exploratory location completed at 3.90m depth.
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		No groundwater encountered during excavation.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on completion of testing at 3.90m depth. 2) Trial pit sides remained stable for the duration of excavation.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP11
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.25	JT		0.30	TOPSOIL comprising dark brown slightly silty very gravelly sand. Gravel is medium to coarse and subrounded to subangular of mudstone and sandstone.
0.70	JT		0.80	Medium dense light grey and light orangish brown slightly gravelly clayey fine to medium SAND. Gravel is fine to medium and angular to subangular of mudstone and sandstone including cobbles. (ETWALL SAND AND GRAVEL MEMBER)
1.50	B		1m 2.00	Medium dense reddish brown and orangish brown mottled slight silty sandy fine to coarse and subrounded to subangular GRAVEL of mudstone, sandstone and quartzite including cobbles. (ETWALL SAND AND GRAVEL MEMBER)
				Exploratory location completed at 2.00m depth.
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		Groundwater encountered from between 1.60m and 2.00m depth.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on collapse of side walls at 2.00m depth.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		TP12
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.60	JT	HSV @ 1.20m = 80, 60, 60	0.40	TOPSOIL comprising dark brown slightly silty very gravelly fine to coarse sand. Gravel is medium to coarse and subrounded to subangular of mudstone and sandstone including cobbles.
			1.00	Medium dense light yellowish brown and grey slightly silty gravelly fine to coarse SAND. Gravel is medium to coarse and subrounded to subangular of mudstone and sandstone including cobbles. (ETWALL SAND AND GRAVEL MEMBER)
1.10 1.20	JT B	HSV @ 2.50m = 70, 100, 110	1.50	Stiff reddish brown and yellowish brown mottled slightly sandy slightly gravelly CLAY. Gravel is fine to medium and subrounded of mudstone and quartzite. (GUNTHORPE MEMBER)
2.20	B		2.20	Medium dense orangish brown slightly silty gravelly fine to coarse SAND. Gravel is fine to coarse and subrounded to subangular of mudstone and quartzite including cobbles. (GUNTHORPE MEMBER)
3.80	JT		3.60	Stiff reddish brown slightly sandy gravelly CLAY. Gravel is medium to coarse and subrounded of mudstone including cobbles. (GUNTHORPE MEMBER) ... becoming very gravelly and friable from 3.00m depth.
			3.90	Reddish brown weathered MUDSTONE recovered as a clayey fine to coarse and angular gravel of weak platy mudstone including cobbles and boulders. (GUNTHORPE MEMBER)
				Exploratory location completed at 3.90m depth.
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		No groundwater encountered during excavation.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on completion of testing at 3.90m depth. 2) Trial pit sides remained stable for the duration of excavation.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

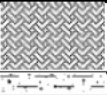
		Site: Site off Egginton Road, Etwall, Derbyshire Client: Redrow Homes Ltd		TP13	
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1	
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020	
Field Monitoring and Sampling		Strata		Legend	
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description	
0.10	JT		0.40	TOPSOIL comprising dark brown slightly silty gravelly fine to coarse sand. Gravel is medium to coarse and angular to subangular of mudstone and sandstone.	
0.50	JT		0.60	Firm light yellowish brown and grey sandy gravelly CLAY with rare 0.10m to 0.50m pockets of sand. Gravel is medium to coarse and subrounded of mudstone, sandstone and quartzite including cobbles	
1.00	B	HSV @ 0.90m = 80, 70, 90	1m	Firm to stiff reddish brown and yellowish brown mottled slightly sandy slightly gravelly CLAY. Gravel is fine to medium and subrounded of mudstone and quartzite including cobbles. (GUNTORPE MEMBER)	
1.50	JT	HSV @ 1.50m = 100, 100, 90	2m	... becoming very stiff from 1.50m depth.	
2.70	B	HSV @ 2.20m = 100, 90, 80	3m	... becoming very gravelly and friable from 2.50m depth.	
			3.90		
			4m	Stiff reddish brown very gravelly CLAY. Gravel is fine to medium and angular of weak mudstone including rare angular cobbles. (GUNTORPE MEMBER)	
			4.20	Exploratory location completed at 4.20m depth.	
			5m		
Sheet 1 of 1		Groundwater:		Date : 13/03/2020	
Logged by: AT		Groundwater encountered between 0.60m and 0.65m depth.		Logged by: AT	
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on completion of testing at 4.20m depth. 2) Trial pit sides remained stable for the duration of excavation.			
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)			

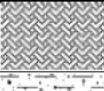
		Site: Site off Egginton Road, Etwall, Derbyshire		TP14
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.00	JT		0.40	TOPSOIL comprising dark brown slightly silty gravelly fine to coarse sand. Gravel is medium to coarse and angular to subangular of mudstone and sandstone. ... with rare cement fragments noted at 0.00m depth. Exploratory location completed at 0.40m depth.
			1m	
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		No groundwater encountered during excavation.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated at 0.40m depth. 2) Trial pit completed at shallow depth on waterlogged ground causing difficulties in manoeuvring JCB. Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		
				

		Site: Site off Egginton Road, Etwall, Derbyshire		TP15
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: JCB 3CX Excavator		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.10	JT		0.40	TOPSOIL comprising dark brown slightly silty gravelly fine to coarse sand. Gravel is medium to coarse and angular to subangular of mudstone and sandstone.
0.50	JT		0.60	Firm light yellowish brown and grey sandy gravelly CLAY with rare 0.10m to 0.50m pockets of sand. Gravel is medium to coarse and subrounded of mudstone, sandstone, flint and quartzite including cobbles
			1m	Firm to stiff reddish brown and yellowish brown mottled slightly sandy gravelly CLAY. Gravel is fine to medium and subrounded of mudstone and quartzite including cobbles. (GUNTHORPE MEMBER)
			1.20	Exploratory location completed at 1.20m depth.
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AT		No groundwater encountered during excavation.		Logged by: AT
EXPLORATORY RECORD		Remarks: 1) Trial pit terminated on completion of testing at 1.20m depth. 2) Trial pit completed at shallow depth on encountering field drains at 0.50m depth.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		HTP01
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: Hand Dug Pit		Logged by: AC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
			0.35	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite.
			0.50	Firm light brownish grey very sandy very gravelly CLAY. Gravel is fine to medium and subrounded to rounded of mixed lithologies including quartzite. Exploratory location completed at 0.50m depth.
			1m	
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AC		Slight seepages of groundwater encountered from 0.45m depth.		Logged by: AC
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		HTP02
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: Hand Dug Pit		Logged by: AT		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.10	JT		0.20 0.30	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite. Medium dense yellow slightly clayey very gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to rounded of mixed lithologies including quartzite. (ETWALL SAND AND GRAVEL MEMBER) Exploratory location completed at 0.30m depth.
			1m	
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AC		Slight seepages of perched water encountered at 0.15m depth.		Logged by: AC
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire Client: Redrow Homes Ltd		HTP03	
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1	
Equipment: Hand Dug Pit		Logged by: AC		Date: 13th March 2020	
Field Monitoring and Sampling		Strata		Legend	
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description	
			0.25	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite.	
			0.35	Medium dense yellow slightly clayey very gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to rounded of mixed lithologies including quartzite. (ETWALL SAND AND GRAVEL MEMBER) Exploratory location completed at 0.35m depth.	
			1m		
			2m		
			3m		
			4m		
			5m		
Sheet 1 of 1		Groundwater:		Date : 13/03/2020	
Logged by: AC		Slight seepages of groundwater encountered from 0.30m depth.		Logged by: AC	
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.			
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)			

		Site: Site off Egginton Road, Etwall, Derbyshire Client: Redrow Homes Ltd		HTP04	
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1	
Equipment: Hand Dug Pit		Logged by: AT		Date: 13th March 2020	
Field Monitoring and Sampling		Strata		Legend	
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description	
			0.30	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite.	
			0.40	Medium dense yellow slightly clayey very gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to rounded of mixed lithologies including quartzite. (ETWALL SAND AND GRAVEL MEMBER) Exploratory location completed at 0.40m depth.	
			1m		
			2m		
			3m		
			4m		
			5m		
Sheet 1 of 1		Groundwater:		Date : 13/03/2020	
Logged by: AT		Slight seepages of groundwater encountered from 0.35m depth.		Logged by: AT	
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.			
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)			

		Site: Site off Egginton Road, Etwall, Derbyshire		HTP05
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: Hand Dug Pit		Logged by: AC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
			0.30	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite.
			0.40	Medium dense yellow slightly clayey very gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to rounded of mixed lithologies including quartzite. (ETWALL SAND AND GRAVEL MEMBER)
				Exploratory location completed at 0.40m depth.
			1m	
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AC		No groundwater encountered during excavation.		Logged by: AC
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		HTP06
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: Hand Dug Pit		Logged by: AC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
			0.30	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite.
			0.40	Medium dense yellow slightly clayey very gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to rounded of mixed lithologies including quartzite. (ETWALL SAND AND GRAVEL MEMBER)
				Exploratory location completed at 0.40m depth.
			1m	
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AC		No groundwater encountered during excavation.		Logged by: AC
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		HTP07
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: Hand Dug Pit		Logged by: AC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
			0.30	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite.
			0.35	Medium dense yellow slightly clayey very gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to rounded of mixed lithologies including quartzite. (ETWALL SAND AND GRAVEL MEMBER)
				Exploratory location completed at 0.35m depth.
			1m	
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AC		No groundwater encountered during excavation.		Logged by: AC
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		HTP08
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: Hand Dug Pit		Logged by: AC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.20	JT 		0.35 0.40	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite. Medium dense orangish brown clayey very gravelly fine to coarse SAND. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite. (ETWALL SAND AND GRAVEL MEMBER) Exploratory location completed at 0.40m depth.
			1m	
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AC		Seepage of groundwater encountered from 0.20m depth.		Logged by: AC
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		HTP09
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: Hand Dug Pit		Logged by: AC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.30	JT		0.35	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite.
			0.40	Firm light brownish grey very sandy very gravelly CLAY. Gravel is fine to medium and subrounded to rounded of mixed lithologies including quartzite. Exploratory location completed at 0.40m depth.
			1m	
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AC		No groundwater encountered during excavation.		Logged by: AC
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		HTP10
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: Hand Dug Pit		Logged by: AC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
			0.45	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite.
			0.60	Medium dense orangish brown clayey very gravelly fine to coarse SAND. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite. (ETWALL SAND AND GRAVEL MEMBER)
			1m	Exploratory location completed at 0.60m depth.
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AC		No groundwater encountered during excavation.		Logged by: AC
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

		Site: Site off Egginton Road, Etwall, Derbyshire		HTP11
		Client: Redrow Homes Ltd		
Contractor: N/A		Project No: GML20127		Sheet: 1 of 1
Equipment: Hand Dug Pit		Logged by: AC		Date: 13th March 2020
Field Monitoring and Sampling		Strata		Legend
Depth (m)	Type	Result (HSV/PP)	depth (m)	Description
0.10	JT		0.25	TOPSOIL comprising brown slightly gravelly sandy clay. Gravel is fine to coarse and subrounded to rounded of mixed lithologies including quartzite. Medium dense yellow slightly clayey very gravelly fine to coarse SAND. Gravel is fine to medium and subrounded to rounded of mixed lithologies including quartzite. (ETWALL SAND AND GRAVEL MEMBER) Exploratory location completed at 0.35m depth.
			0.35	
			1m	
			2m	
			3m	
			4m	
			5m	
Sheet 1 of 1		Groundwater:		Date : 13/03/2020
Logged by: AC		No groundwater encountered during excavation.		Logged by: AC
EXPLORATORY RECORD		Remarks: 1) Hole completed as a hand dug pit to investigate shallow ground conditions.		
		Strength descriptions of granular soils are based on Engineer's field description(s) HSV = Hand Shear Vane (kPa), PP = Pocket Penetrometer (daN/cm ²)		

APPENDIX IX

Laboratory Testing Data



Alex Thornber
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Analytical Report Number : 20-93239

Project / Site name:	Land off Egginton Road, Etwall	Samples received on:	17/03/2020
Your job number:	GML20127	Samples instructed on:	17/03/2020
Your order number:	GML20127-AT-011	Analysis completed by:	25/03/2020
Report Issue Number:	1	Report issued on:	25/03/2020
Samples Analysed:	19 soil samples		

Signed:

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475646	1475647	1475648	1475649	1475650
Sample Reference				HTP08	WS01	WS01	WS02	WS04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.20	0.80	0.15	0.20
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	20	17	17	16	20
Total mass of sample received	kg	0.001	NONE	1.1	1.2	0.90	1.2	1.4

Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	-	-	-
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	6.9	7.6	-	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-	590	230	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	0.014	0.022	-	-
Total Organic Carbon (TOC)	%	0.1	MCERTS	-	2.5	0.6	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	< 0.80	< 0.80	-	-
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	9.5	12	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	0.3	< 0.2	-	-
Chromium (hexavalent)	mg/kg	4	MCERTS	-	< 4.0	< 4.0	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	32	49	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	16	14	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	45	20	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	23	28	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	83	54	-	-

Petroleum Hydrocarbons

Petroleum Range Organics (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	< 0.1	< 0.1
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TPH (C10 - C25)	mg/kg	10	MCERTS	-	-	-	< 10	< 10
TPH (C25 - C40)	mg/kg	10	MCERTS	-	-	-	< 10	< 10



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475646	1475647	1475648	1475649	1475650
Sample Reference				HTP08	WS01	WS01	WS02	WS04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.20	0.80	0.15	0.20
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

SVOCs

Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
1 4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
2 4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
2 4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2 4 6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2 4 5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2 6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Indeno(1 2 3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475646	1475647	1475648	1475649	1475650
Sample Reference				HTP08	WS01	WS01	WS02	WS04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.20	0.80	0.15	0.20
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	-	-	-	-
SVOC % Match	%	N/A	NONE	0	-	-	-	-



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475651	1475652	1475653	1475654	1475655
Sample Reference				WS05	WS07	TP01	TP02	TP03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	0.25	0.30	0.60	0.20
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	19	18	22	4.6	20
Total mass of sample received	kg	0.001	NONE	1.2	0.97	0.97	1.4	0.98

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	-
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.7	-	6.7	7.2	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	700	-	600	220	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.015	-	0.012	0.013	-
Total Organic Carbon (TOC)	%	0.1	MCERTS	3.1	-	3.0	0.6	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	-	< 0.80	< 0.80	-
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.8	-	7.7	5.8	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	-	0.3	< 0.2	-
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	-	< 4.0	< 4.0	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	-	30	20	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14	-	17	8.9	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	56	-	44	15	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-	< 0.3	< 0.3	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16	-	24	22	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	70	-	99	38	-

Petroleum Hydrocarbons

Petroleum Range Organics (C6 - C10)	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
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TPH (C10 - C25)	mg/kg	10	MCERTS	-	< 10	-	-	-
TPH (C25 - C40)	mg/kg	10	MCERTS	-	< 10	-	-	-



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475651	1475652	1475653	1475654	1475655
Sample Reference				WS05	WS07	TP01	TP02	TP03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	0.25	0.30	0.60	0.20
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
1 4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
2 4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
2 4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	< 0.1
2 4 6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2 4 5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2 6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Indeno(1 2 3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475651	1475652	1475653	1475654	1475655
Sample Reference				WS05	WS07	TP01	TP02	TP03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	0.25	0.30	0.60	0.20
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	ND
SVOC % Match	%	N/A	NONE	-	-	-	-	0



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475656	1475657	1475658	1475659	1475660
Sample Reference				TP04	TP06	TP07	TP08	TP08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.80	0.60	0.30	1.20
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	26	6.6	7.0	22	13
Total mass of sample received	kg	0.001	NONE	1.1	1.3	1.2	1.0	0.83

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	-	-	-
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.7	7.2	7.6	-	7.7
Total Sulphate as SO ₄	mg/kg	50	MCERTS	490	170	180	-	130
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.015	0.016	0.013	-	0.037
Total Organic Carbon (TOC)	%	0.1	MCERTS	3.4	0.3	2.9	-	0.2

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	-	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.6	7.1	9.9	-	6.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	< 0.2	< 0.2	-	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	-	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	22	21	23	-	66
Copper (aqua regia extractable)	mg/kg	1	MCERTS	12	10	14	-	12
Lead (aqua regia extractable)	mg/kg	1	MCERTS	34	16	23	-	12
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	22	13	-	61
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	65	46	34	-	100

Petroleum Hydrocarbons

Petroleum Range Organics (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
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TPH (C10 - C25)	mg/kg	10	MCERTS	-	-	-	16	-
TPH (C25 - C40)	mg/kg	10	MCERTS	-	-	-	42	-



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475656	1475657	1475658	1475659	1475660
Sample Reference				TP04	TP06	TP07	TP08	TP08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.80	0.60	0.30	1.20
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	-
1 4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
2 4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
2 4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2 4 6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
2 4 5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	-
2 6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Indeno(1 2 3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475656	1475657	1475658	1475659	1475660
Sample Reference				TP04	TP06	TP07	TP08	TP08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.80	0.60	0.30	1.20
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475661	1475662	1475663	1475664
Sample Reference				TP10	TP10	TP11	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	1.80	0.25	0.10
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	9.4	9.1	16	18
Total mass of sample received	kg	0.001	NONE	1.0	0.93	0.99	1.1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	-	Not-detected
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.9	6.5	-	7.3
Total Sulphate as SO ₄	mg/kg	50	MCERTS	580	320	-	700
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.017	0.056	-	0.025
Total Organic Carbon (TOC)	%	0.1	MCERTS	2.5	0.4	-	3.9

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	-	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.8	14	-	15
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	< 0.2	-	0.9
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	-	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	29	-	35
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	25	-	83
Lead (aqua regia extractable)	mg/kg	1	MCERTS	38	27	-	190
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	0.9
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	26	-	33
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	68	68	-	230

Petroleum Hydrocarbons

Petroleum Range Organics (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
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TPH (C10 - C25)	mg/kg	10	MCERTS	-	-	-	-
TPH (C25 - C40)	mg/kg	10	MCERTS	-	-	-	-



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475661	1475662	1475663	1475664
Sample Reference				TP10	TP10	TP11	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	1.80	0.25	0.10
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	< 0.1	-
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	-
1 4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	-
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-
2 4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
2 4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	-
2 4 6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-
2 4 5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	< 0.2	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	< 0.1	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	-
2 6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	< 0.1	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	< 0.2	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	< 0.3	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Carbazole	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	< 0.3	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Indeno(1 2 3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-



Analytical Report Number: 20-93239

Project / Site name: Land off Egginton Road, Etwall

Your Order No: GML20127-AT-011

Lab Sample Number				1475661	1475662	1475663	1475664	
Sample Reference				TP10	TP10	TP11	TP13	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				0.20	1.80	0.25	0.10	
Date Sampled				13/03/2020	13/03/2020	13/03/2020	13/03/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	ND	-	
SVOC % Match	%	N/A	NONE	-	-	0	-	



Analytical Report Number : 20-93239

Project / Site name: Land off Egginton Road, Etwall

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1475646	HTP08	None Supplied	0.20	Brown loam and clay with gravel and vegetation.
1475647	WS01	None Supplied	0.20	Brown loam and clay with gravel and vegetation.
1475648	WS01	None Supplied	0.80	Brown clay and sand.
1475649	WS02	None Supplied	0.15	Brown loam and clay with gravel and vegetation.
1475650	WS04	None Supplied	0.20	Brown loam and clay with gravel and vegetation.
1475651	WS05	None Supplied	0.15	Brown loam and clay with gravel and vegetation.
1475652	WS07	None Supplied	0.25	Brown loam and clay with gravel and vegetation.
1475653	TP01	None Supplied	0.30	Brown loam and clay with gravel and vegetation.
1475654	TP02	None Supplied	0.60	Brown clay and sand with gravel.
1475655	TP03	None Supplied	0.20	Brown loam and clay with gravel and vegetation.
1475656	TP04	None Supplied	0.15	Brown loam and clay with gravel and vegetation.
1475657	TP06	None Supplied	1.80	Brown clay and sand with gravel and vegetation.
1475658	TP07	None Supplied	0.60	Brown clay and sand with gravel and vegetation.
1475659	TP08	None Supplied	0.30	Brown loam and clay with gravel and vegetation.
1475660	TP08	None Supplied	1.20	Brown clay and sand with gravel and vegetation.
1475661	TP10	None Supplied	0.20	Brown loam and clay with gravel and vegetation.
1475662	TP10	None Supplied	1.80	Brown clay and sand with gravel and vegetation.
1475663	TP11	None Supplied	0.25	Brown loam and clay with gravel and vegetation.
1475664	TP13	None Supplied	0.10	Brown loam and clay with gravel and vegetation.



Analytical Report Number : 20-93239

Project / Site name: Land off Egginton Road, Etwall

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
PRO (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
TPH Oils (Soils)	Determination of extractable hydrocarbons in soil by GC-MS/FID.	In-house method with silica gel split/clean up.	L076-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Sample D	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
TP08		S	20-93239	1475659	b	PRO (Soil)	L088-PL	b
WS02		S	20-93239	1475649	b	PRO (Soil)	L088-PL	b
WS04		S	20-93239	1475650	b	PRO (Soil)	L088-PL	b
WS07		S	20-93239	1475652	b	PRO (Soil)	L088-PL	b



TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Geo-Matters Limited
Client Address: 104 Bondgate, Castle Donington,
DE74 2NR

Client Reference: GML20127
Job Number: 20-93487
Date Sampled: 13/03/2020
Date Received: 17/03/2020
Date Tested: 24/03/2020
Sampled By: AT

Contact: Alex Thorber
Site Address: Land off Egginton Road, Etwell

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

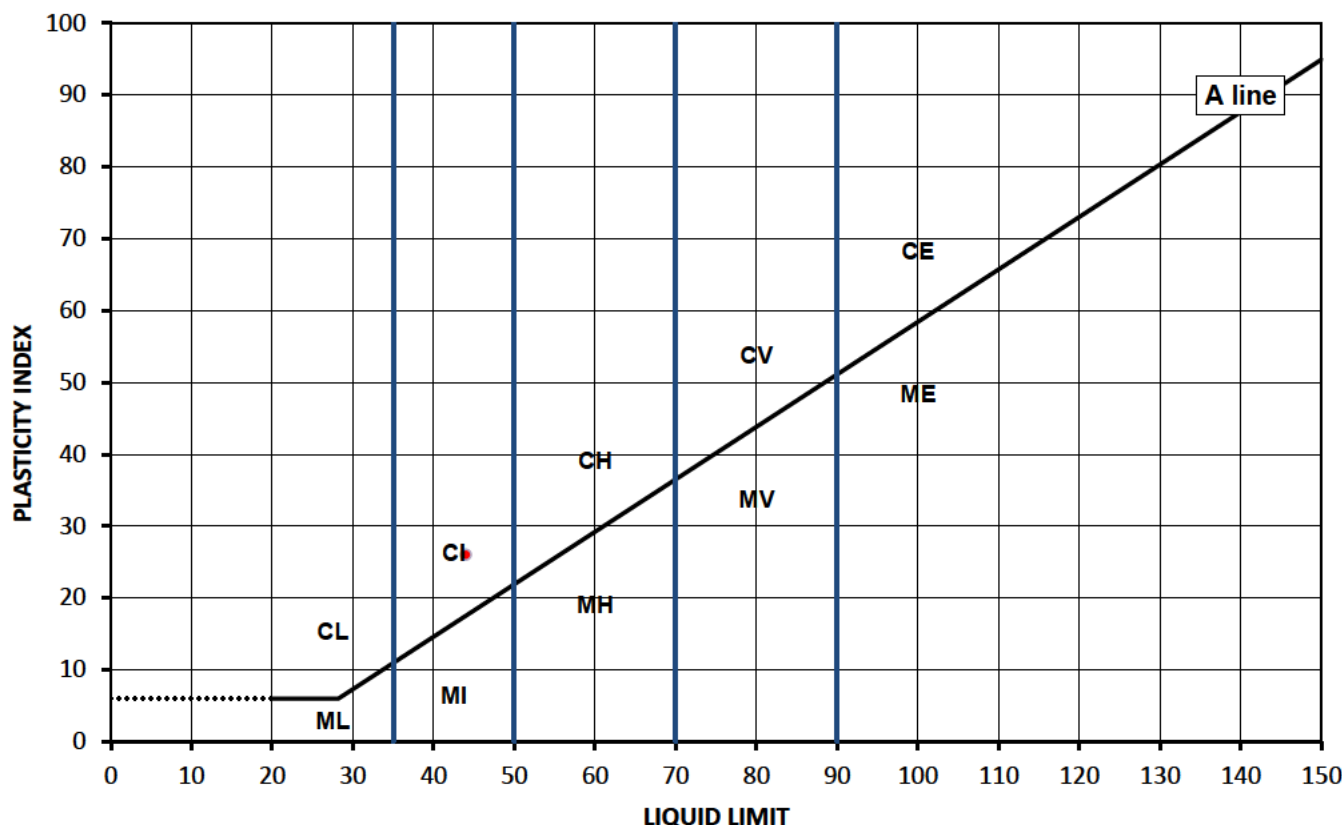
Test Results:

Laboratory Reference: 1476959
Hole No.: TP07
Sample Reference: Not Given
Soil Description: Brown mottled grey very gravelly sandy CLAY

Depth Top [m]: 0.70
Depth Base [m]: Not Given
Sample Type: B

Sample Preparation: Tested after washing to remove >425um

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425um BS Test Sieve
13	44	18	26	43



Legend, based on BS 5930:2015 Code of practice for site investigations

C	Clay	Plasticity	L	Low	Liquid Limit	below 35
M	Silt		I	Medium		35 to 50
			H	High		50 to 70
			V	Very high		70 to 90
			E	Extremely high		exceeding 90
	Organic	O		append to classification for organic material (eg CHO)		

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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Signed:

Aleksandra Jurochn k
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

Date Reported: 02/04/2020

GF 232.8



TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

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DE74 2NR

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Sampled By: AT

Contact: Alex Thorber
Site Address: Land off Egginton Road, Etwell

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

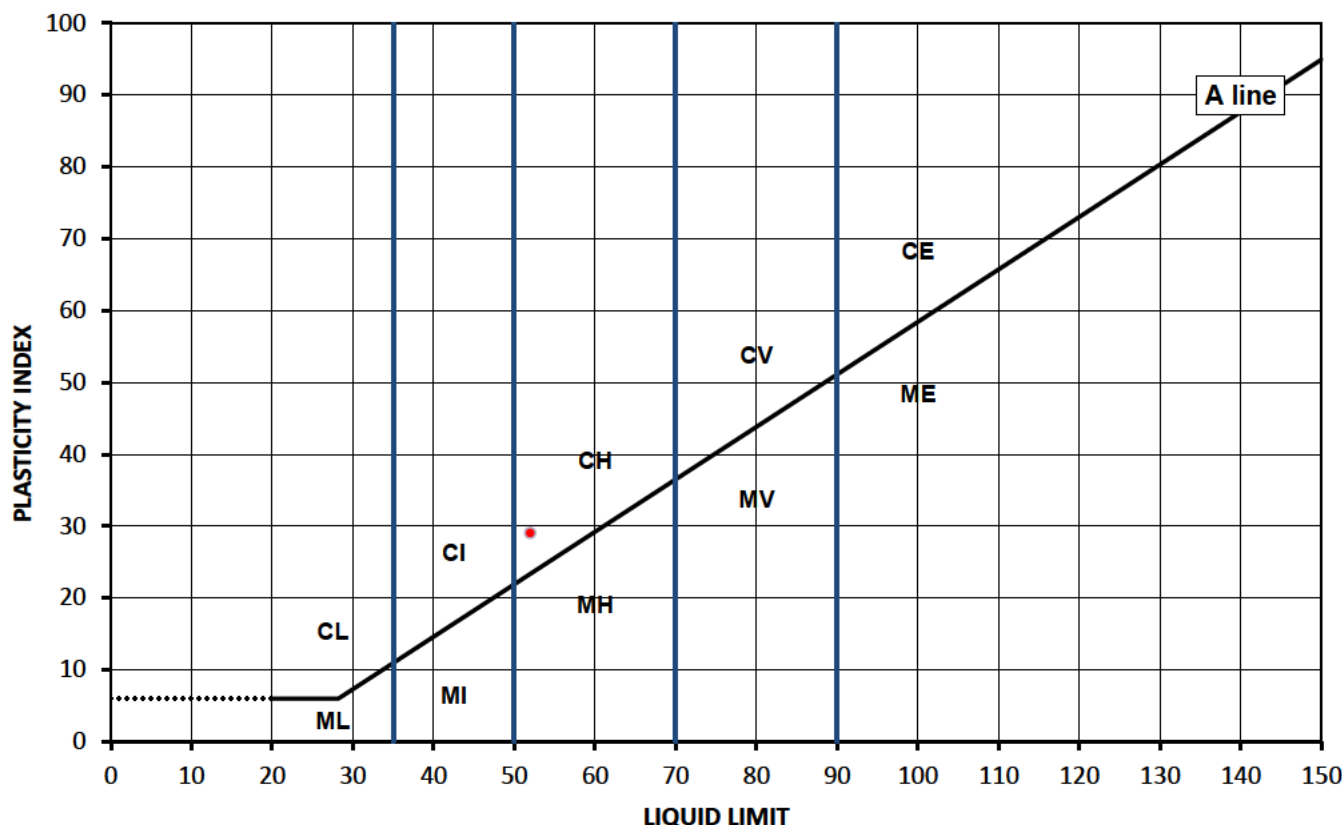
Test Results:

Laboratory Reference: 1476960
Hole No.: TP08
Sample Reference: Not Given
Soil Description: Reddish brown slightly gravelly slightly sandy CLAY

Depth Top [m]: 0.80
Depth Base [m]: Not Given
Sample Type: B

Sample Preparation: Tested after washing to remove >425um

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
19	52	23	29	87



Legend, based on BS 5930:2015 Code of practice for site investigations

C	Clay	L	Low	Liquid Limit	below 35
M	Silt	I	Medium		35 to 50
		H	High		50 to 70
		V	Very high		70 to 90
		E	Extremely high		exceeding 90
	Organic	O	append to classification for organic material (eg CHO)		

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Aleksandra Jurochn k
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 02/04/2020

GF 232.8



TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Geo-Matters Limited
Client Address: 104 Bondgate, Castle Donington,
DE74 2NR

Client Reference: GML20127
Job Number: 20-93487
Date Sampled: 13/03/2020
Date Received: 17/03/2020
Date Tested: 24/03/2020
Sampled By: AT

Contact: Alex Thorber
Site Address: Land off Egginton Road, Etwell

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

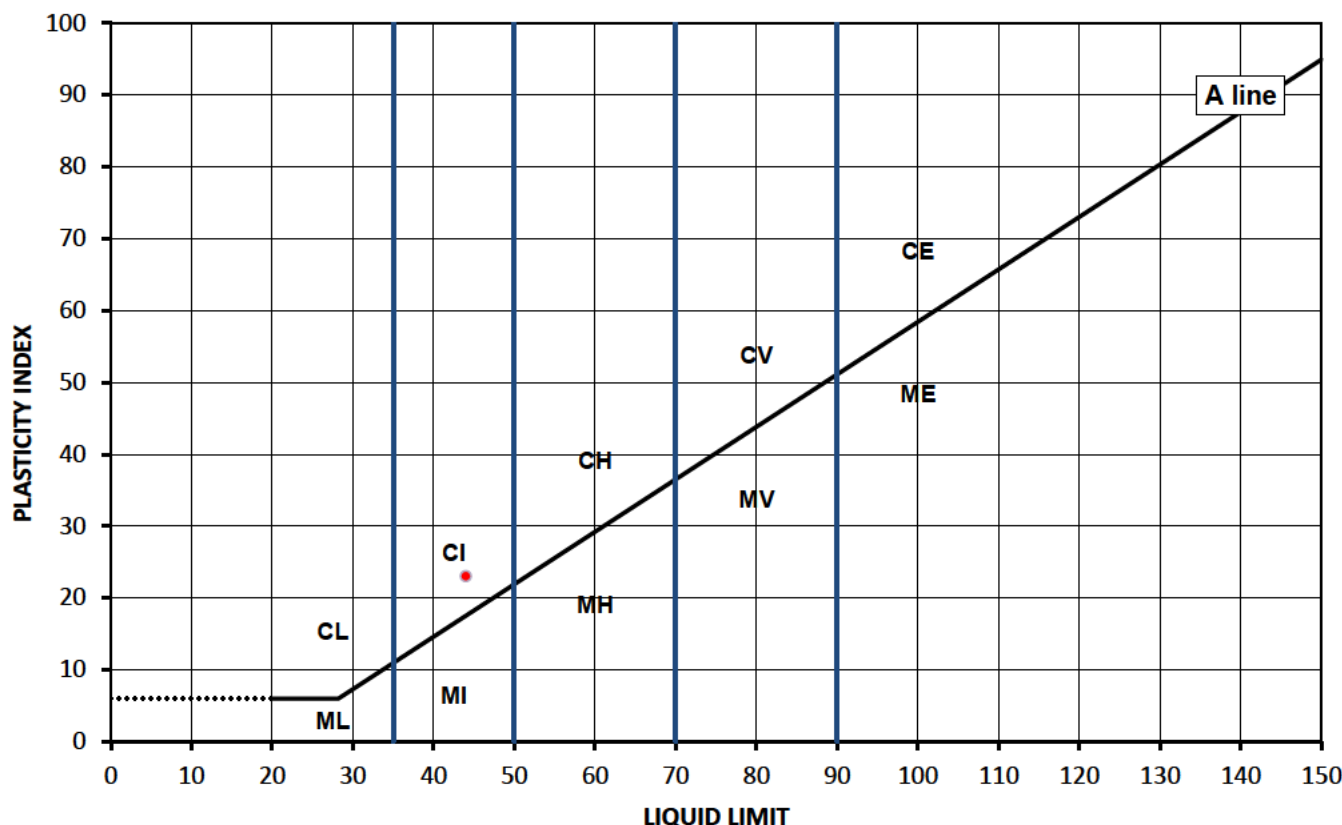
Test Results:

Laboratory Reference: 1476961
Hole No.: TP09
Sample Reference: Not Given
Soil Description: Mottled brown slightly gravelly sandy CLAY

Depth Top [m]: 1.50
Depth Base [m]: Not Given
Sample Type: B

Sample Preparation: Tested after washing to remove >425um

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
17	44	21	23	80



Legend, based on BS 5930:2015 Code of practice for site investigations

C	Clay	Plasticity	L	Low	Liquid Limit	below 35
M	Silt		I	Medium		35 to 50
			H	High		50 to 70
			V	Very high		70 to 90
			E	Extremely high		exceeding 90
	Organic	O		append to classification for organic material (eg CHO)		

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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Signed:

Aleksandra Jurochn k
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

Date Reported: 02/04/2020

GF 232.8



SUMMARY REPORT

Summary of Classification Test Results

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Tested in Accordance with:

MC by BS 1377-2: 1990: Clause 3.2; WC by BS EN 17892-1: 2014; Atterberg
by BS 1377-2: 1990: Clause 4.3, Clause 4.4 and 5; PD by BS 1377-2: 1990:
Clause 8.2

Client Reference: GML20127

Job Number: 20-93487

Date Sampled: 13/03/2020

Date Received: 17/03/2020

Date Tested: 24/03/2020

Sampled By: AT

Client: Geo-Matters Limited
Client Address: 104 Bondgate, Castle Donington,
DE74 2NR

Contact: Alex Thornber
Site Address: Land off Egginton Road, Etwell

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	MC	WC	Atterberg				Density			Total Porosity#		
		Reference	Depth Top m	Depth Base m	Type					% Passing 425um	LL	PL	PI	bulk Mg/m3	dry Mg/m3	PD Mg/m3			
1476959	TP07	Not Given	0.70	Not Given	B	Brown mottled grey very gravelly sandy CLAY	Atterberg 1 Point	13		43	44	18	26						
1476960	TP08	Not Given	0.80	Not Given	B	Reddish brown slightly gravelly slightly sandy CLAY	Atterberg 1 Point	19		87	52	23	29						
1476961	TP09	Not Given	1.50	Not Given	B	Mottled brown slightly gravelly sandy CLAY	Atterberg 1 Point	17		80	44	21	23						
1476962	TP11	Not Given	1.50	Not Given	B	Greyish brown sandy GRAVEL		7.9											
1476963	TP12	Not Given	2.20	Not Given	B	Reddish brown sandy GRAVEL		4.9											

Note: # Non accredited; NP - Non plastic

Comments:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

Particle Size Distribution

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Tested in Accordance with: BS 1377-2: 1990

Client: Geo-Matters Limited
Client Address: 104 Bondgate, Castle Donington,
DE74 2NR

Contact: Alex Thornber
Site Address: Land off Egginton Road, Etwell

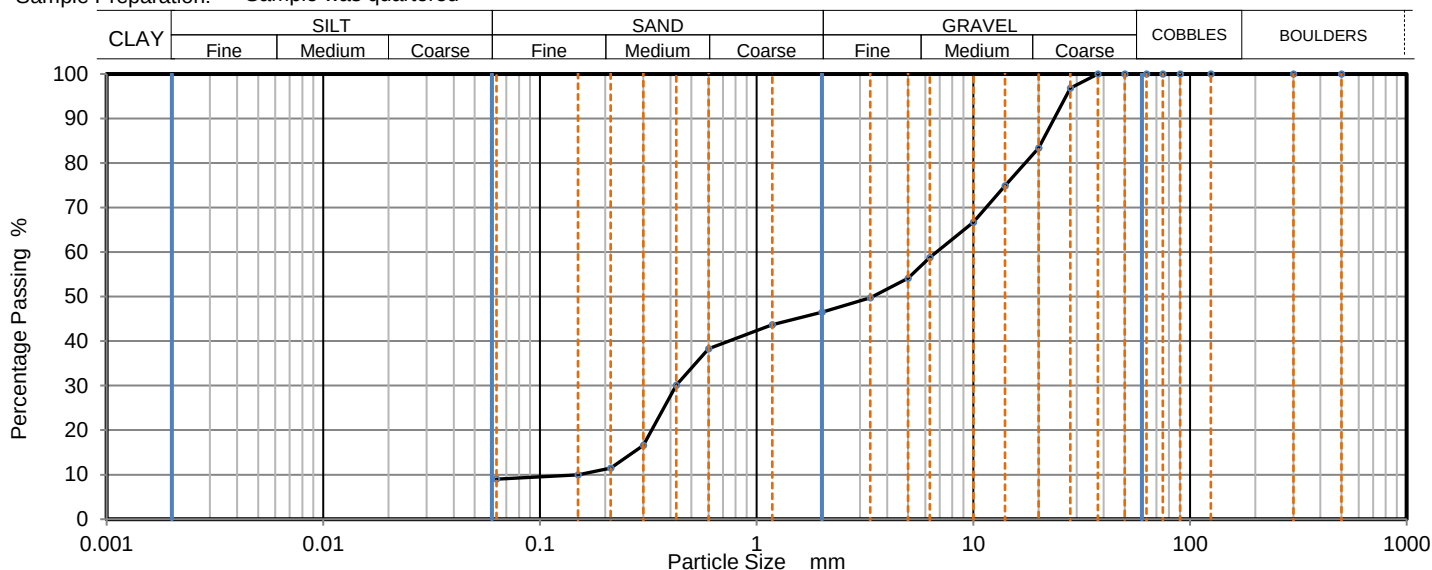
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Client Reference: GML20127
Job Number: 20-93487
Date Sampled: 13/03/2020
Date Received: 17/03/2020
Date Tested: 24/03/2020
Sampled By: AT

Test Results:

Laboratory Reference: 1476956
Hole No.: TP01
Sample Reference: Not Given
Sample Description: Reddish brown clayey very sandy GRAVEL
Sample Preparation: Sample was quartered

Depth Top [m]: 2.50
Depth Base [m]: Not Given
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	97		
20	83		
14	75		
10	67		
6.3	59		
5	54		
3.35	50		
2	47		
1.18	44		
0.6	38		
0.425	30		
0.3	17		
0.212	12		
0.15	10		
0.063	10		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	53.50
Sand	36.90
Fines <0.063mm	9.60

Grading Analysis	
D100	mm 37.5
D60	mm 6.75
D30	mm 0.424
D10	mm 0.139
Uniformity Coefficient	49
Curvature Coefficient	0.19

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

Aleksandra Jurochn k
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 02/04/2020

GF 100.17



TEST CERTIFICATE

Particle Size Distribution

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Tested in Accordance with: BS 1377-2: 1990

Client: Geo-Matters Limited
Client Address: 104 Bondgate, Castle Donington,
DE74 2NR

Client Reference: GML20127
Job Number: 20-93487
Date Sampled: 13/03/2020
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Sampled By: AT

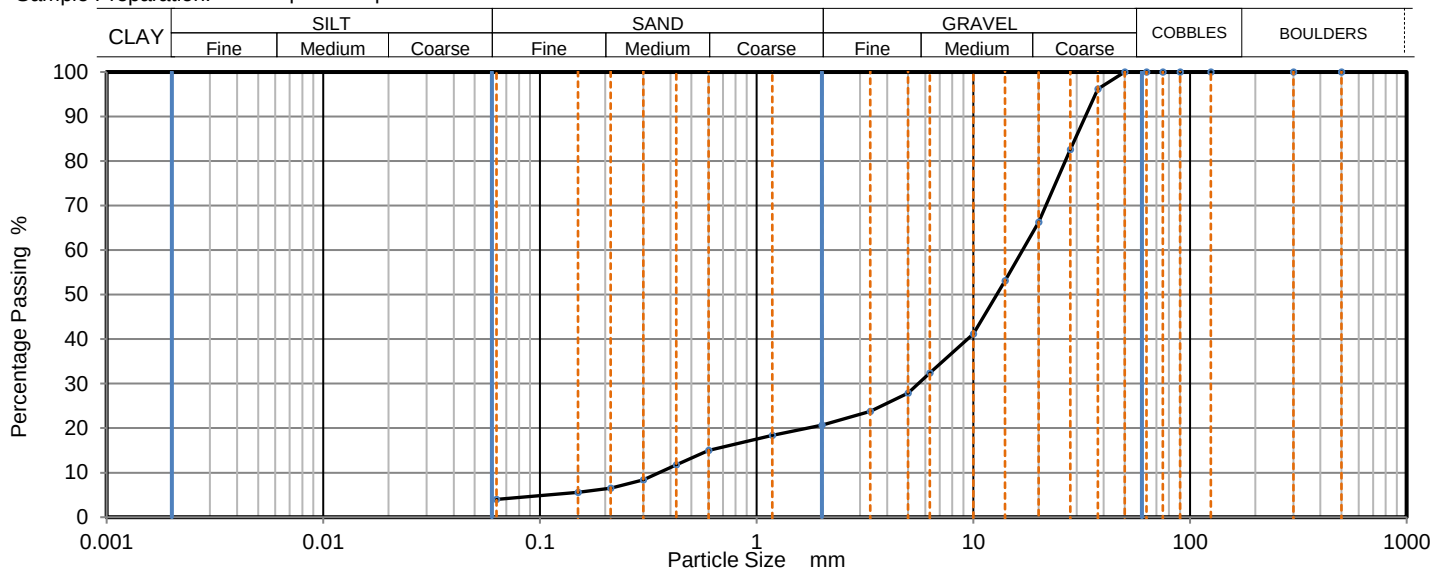
Contact: Alex Thornber
Site Address: Land off Egginton Road, Etwell

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1476957
Hole No.: TP03
Sample Reference: Not Given
Sample Description: Reddish brown slightly clayey sandy GRAVEL
Sample Preparation: Sample was quartered

Depth Top [m]: 1.70
Depth Base [m]: Not Given
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	96		
28	83		
20	66		
14	53		
10	41		
6.3	32		
5	28		
3.35	24		
2	21		
1.18	18		
0.6	15		
0.425	12		
0.3	8		
0.212	7		
0.15	6		
0.063	5		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	79.30
Sand	15.80
Fines <0.063mm	4.90

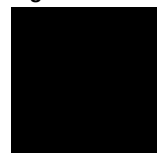
Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	48
Curvature Coefficient	5.2

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

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Signed:



Aleksandra Jurochn k
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

Date Reported: 02/04/2020

GF 100.17



TEST CERTIFICATE

Particle Size Distribution

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Tested in Accordance with: BS 1377-2: 1990

Client: Geo-Matters Limited
Client Address: 104 Bondgate, Castle Donington,
DE74 2NR

Client Reference: GML20127
Job Number: 20-93487
Date Sampled: 13/03/2020
Date Received: 17/03/2020
Date Tested: 24/03/2020
Sampled By: AT

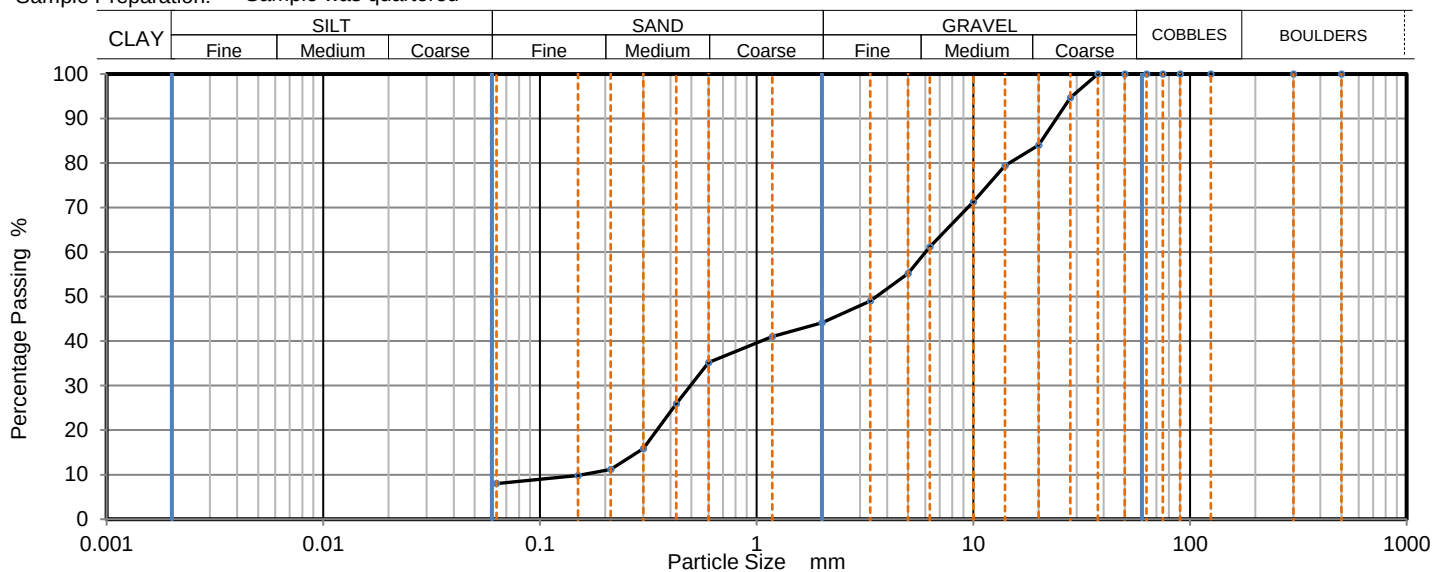
Contact: Alex Thornber
Site Address: Land off Egginton Road, Etwell

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1476958
Hole No.: TP04
Sample Reference: Not Given
Sample Description: Reddish brown clayey very sandy GRAVEL
Sample Preparation: Sample was quartered

Depth Top [m]: 1.20
Depth Base [m]: Not Given
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	95		
20	84		
14	79		
10	71		
6.3	61		
5	55		
3.35	49		
2	44		
1.18	41		
0.6	35		
0.425	26		
0.3	16		
0.212	11		
0.15	10		
0.063	9		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	55.90
Sand	35.40
Fines <0.063mm	8.70

Grading Analysis	
D100	mm 37.5
D60	mm 6.02
D30	mm 0.494
D10	mm 0.159
Uniformity Coefficient	38
Curvature Coefficient	0.25

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

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Signed:

Aleksandra Jurochn k
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

Date Reported: 02/04/2020

GF 100.17



TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Geo-Matters Limited
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Contact: Alex Thorber
Site Address: Land Off Egginton Road, Etwell

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Client Reference: GML20127
Job Number: 20-95075
Date Sampled: 13/03/2020
Date Received: 27/03/2020
Date Tested: 06/04/2020
Sampled By: AT

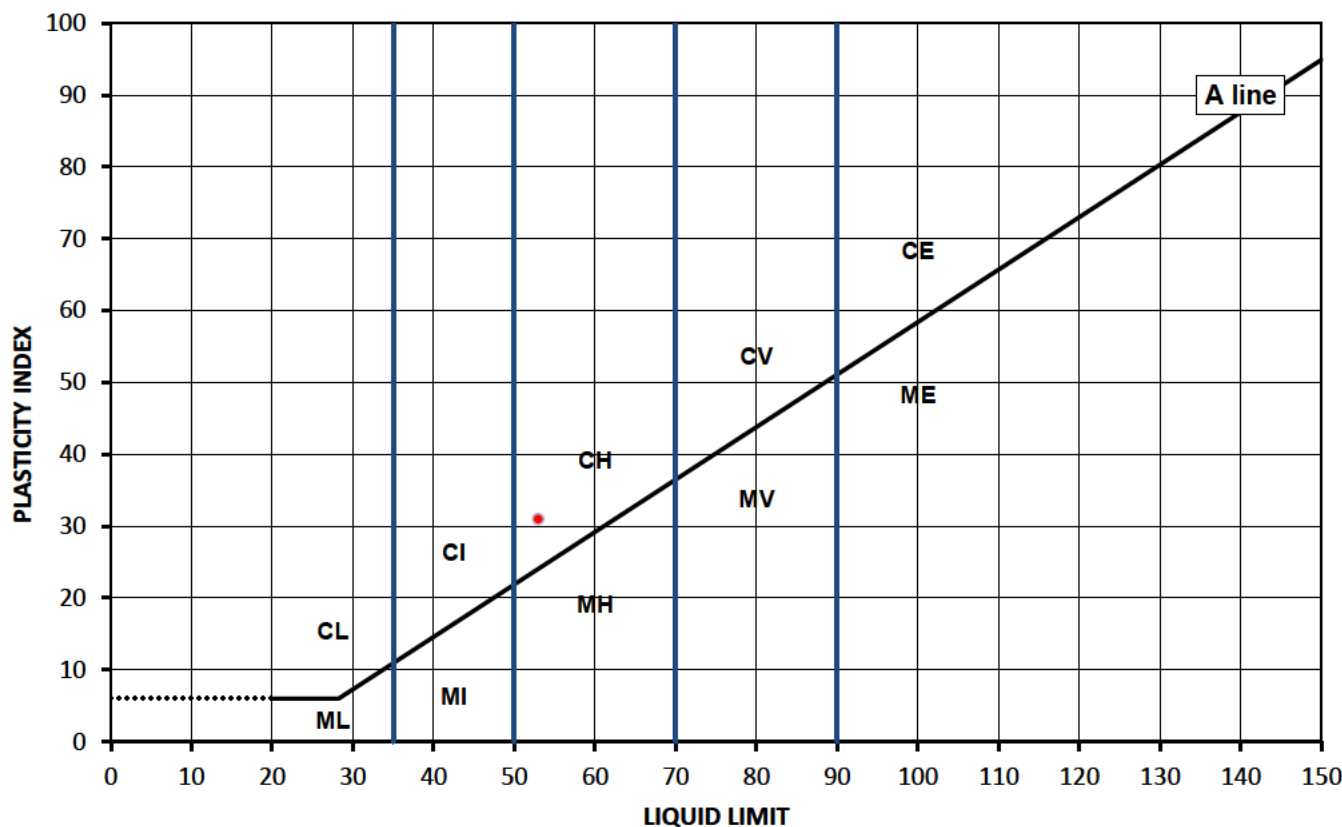
Test Results:

Laboratory Reference: 1485886
Hole No.: TP10
Sample Reference: Not Given
Soil Description: Mottled brown very gravelly slightly sandy CLAY

Depth Top [m]: 1.20
Depth Base [m]: Not Given
Sample Type: B

Sample Preparation: Tested after washing to remove >425um

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425um BS Test Sieve
12	53	22	31	36



Legend, based on BS 5930:2015 Code of practice for site investigations

C	Clay	Plasticity	L	Low	Liquid Limit	below 35
M	Silt		I	Medium		35 to 50
			H	High		50 to 70
			V	Very high		70 to 90
			E	Extremely high		exceeding 90
	Organic	O		append to classification for organic material (eg CHO)		

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report are representative of the samples submitted for analysis.

Signed:

Mon ka Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

Date Reported: 14/04/2020

GF 232.8



TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Geo-Matters Limited
Client Address: 104 Bondgate, Castle Donington,
DE74 2NR

Contact: Alex Thorber
Site Address: Land Off Egginton Road, Etwell

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Client Reference: GML20127
Job Number: 20-95075
Date Sampled: 13/03/2020
Date Received: 27/03/2020
Date Tested: 06/04/2020
Sampled By: AT

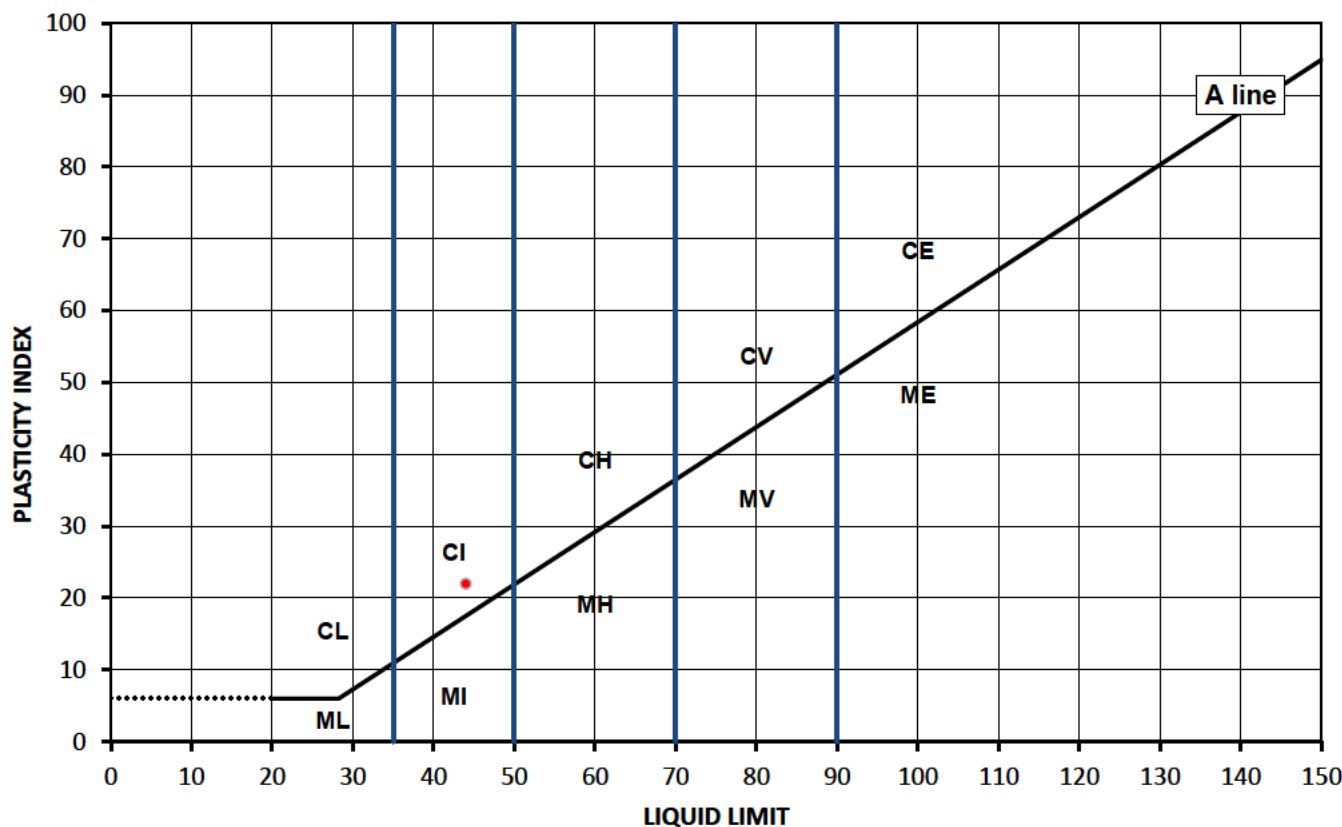
Test Results:

Laboratory Reference: 1485887
Hole No.: TP13
Sample Reference: Not Given
Soil Description: Reddish brown slightly gravelly sandy CLAY

Depth Top [m]: 2.20
Depth Base [m]: Not Given
Sample Type: B

Sample Preparation: Tested after washing to remove >425um

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
14	44	22	22	91



Legend, based on BS 5930:2015 Code of practice for site investigations

	Plasticity	Liquid Limit
C Clay	L Low	below 35
M Silt	I Medium	35 to 50
	H High	50 to 70
	V Very high	70 to 90
	E Extremely high	exceeding 90
Organic	O	append to classification for organic material (eg CHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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Signed:

Mon ka Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

Date Reported: 14/04/2020

GF 232.8



SUMMARY REPORT

Summary of Classification Test Results

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Tested in Accordance with:

MC by BS 1377-2: 1990: Clause 3.2; WC by BS EN 17892-1: 2014; Atterberg
by BS 1377-2: 1990: Clause 4.3, Clause 4.4 and 5; PD by BS 1377-2: 1990:
Clause 8.2

Client Reference: GML20127

Job Number: 20-95075

Date Sampled: 13/03/2020

Date Received: 27/03/2020

Date Tested: 06/04/2020

Sampled By: AT

Client: Geo-Matters Limited
Client Address: 104 Bondgate, Castle Donington,
DE74 2NR

Contact: Alex Thornber
Site Address: Land Off Egginton Road, Etwall

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	MC	WC	Atterberg				Density			Total Porosity#		
		Reference	Depth Top m	Depth Base m	Type					% Passing 425um	LL	PL	PI	bulk Mg/m3	dry Mg/m3	PD Mg/m3			
1485886	TP10	Not Given	1 20	Not Given	B	Mottled brown very gravelly slightly sandy CLAY	Atterberg 1 Point	12		36	53	22	31						
1485887	TP13	Not Given	2 20	Not Given	B	Reddish brown slightly gravelly sandy CLAY	Atterberg 1 Point	14		91	44	22	22						

Note: # Non accredited; NP - Non plastic

Comments:

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Signed:

Mon ka Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

Pag

Date Reported: 14/04/2020

GF 234.10