Phase 1 (Desk Study) Report

Land off Applefields, Wrawby (Second Phase)

Produced for Keigar Homes

August 2025

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Phase 1 (Desktop) Report: **Applefields, Wrawby (Second Phase)**

CONTENTS

Executive Summary

<table>
<tr><td colspan="2"><u>DESK STUDY INFORMATION</u></td></tr>
<tr><td>Proposed works</td><td>• A new low rise residential development (of about 20 to 30 dwellings) with associated infrastructure
• This is the second phase of development by the client (Keigar Homes) at Applefields, Wrawby (the ongoing first phase is immediately east)</td></tr>
<tr><td>Site location and size</td><td>• Location: west of Applefields, Wrawby, North Lincolnshire, DN20 8GB, roughly centred around grid reference 501680, 408780.
• Size: about 150m by 90m in plan area.</td></tr>
<tr><td>Site features and current use</td><td>• The site is existing farm field except for the southeast corner (about 15% of the total site area) which is currently used as a builder’s compound.
• The farm field is split into north and south halves by an east-west oriented line of hedgerow with occasional trees. Both halves are covered by short weeds and the ground surface is a stony, loamy topsoil throughout.
• The builder’s compound, which is used to store construction materials, plant and cabins, is surfaced in imported white chalk fill.</td></tr>
<tr><td>Topography</td><td>• The site is sloped up towards the northeast at an average gradient of about 1 in 25.
• Ground levels range between about 18m and 24m AOD.</td></tr>
<tr><td>Site history</td><td>• The site is farm fields which have never seen any previous significant development. Nonetheless, a former farm track crossed the site during the 19th and early 20th centuries and, for the last year or so, the southeast corner of the site has been a builder’s compound.
• There are no identified nearby historical landfills or mineworkings. The closest former gravel pits (possibly infilled around the 1960s) are about 370m south.</td></tr>
<tr><td>Anticipated geology (subject to confirmation)</td><td>
<table>
<tr><th>Strata</th><th>Description</th><th>Depth to base (m BEGL)</th></tr>
<tr><td>Made ground/Topsoil</td><td>For example, chalk fill in builder’s compound</td><td><1</td></tr>
<tr><td>Glaciofluvial deposits (GFD)</td><td>Sands and gravels, locally clayey and silty. More likely in higher-lying, northeast areas</td><td>0 – 3</td></tr>
<tr><td>Glacial Till</td><td>Boulder clay with layers of sand and gravel. Possible at shallow depth across most of the site and below the GFD.</td><td>2 – 8</td></tr>
<tr><td rowspan="2">Glaciolacustrine deposits (GLLD)</td><td>Sands and gravels. Possible below lower-lying southwest parts of the site – and at depth below GFD and till deposits</td><td>2 – 10</td></tr>
<tr><td>Clays and silts.</td><td>0 – 10</td></tr>
<tr><td>Ancholme Group (AMG)</td><td>Mudstone with occasional nodules/bands of limestone.</td><td>50+</td></tr>
</table>
</td></tr>
<tr><td>Hydrology</td><td>• Adjacent drain (0m south) and balancing pond (0m east)
• River Ancholme (2.5km west)
• No significant flooding issues identified</td></tr>
<tr><td>Hydrogeology (groundwater)</td><td>• Local glacial deposits are Secondary Aquifers
• No nearby groundwater Source Protection Zones (SPZs)
• Nearest recorded (farm-related) groundwater abstraction is 268m south</td></tr>
</table>

Landfills and infilled land	• No nearby Historical Landfill Sites (within 1km) • No nearby potentially infilled land (within 250m)
Radon	• The site is not affected by radon. No protection measures required
UXOs	• The site is in an area with a low historical bombing density • No nearby previous military land use or bombing targets identified
Findings of recent ground investigation works	HML previously carried out a ground investigation at the adjacent site (0m east) in January 2022. The revealed ground conditions consisted of: • **Topsoil:** • 0.15m- to 0.50m-thick layer of natural topsoil – across most of the site • **Made ground:** • Mainly revealed far to east of the site – to a depth of 0.40m to 0.90m • Mainly comprised of sandy, silty and clayey soil with variable amounts of gravel sized particles of stone, brick, concrete and blast furnace slag • **Glacial deposits:** • Mainly comprised of soft (becoming firm/stiff) sandy gravelly silts and clays • Includes some localised shallow sands (e.g. in BH4, TP2 and TP4) • Probably at least 2m in thickness (across most of the site) • **Possible Ampthill Clay Formation - mudstone:** • Only revealed in BH4 (2.1m to 3.0m depth) • Firm dark grey clay Laboratory testing on samples of natural soil and made ground from the adjacent site did not identify any contamination levels of concern in a residential context.
CONTAMINATION ASSESSMENT	
Initial conceptual site model	The following potential sources of contamination were identified for the site. A. Former farm track B. Current land use: builder's compound C. Historical WWII bombing D. Highly organic subsoils However, none of the above sources (A to D) were considered potentially credible based on further analysis. The location of the former farm track is evidently surfaced in natural stone and soil. The existing builder's compound is used to store clean, inert materials and covered in imported clean chalk.
Preliminary risk assessment	• A preliminary risk assessment did not identify any potential contamination linkages with unacceptable risk. All risk ratings are Low (or Very Low). • Therefore, all source-pathway-receptor contamination linkages are of acceptably low risk and are not considered to require further attention.
Risk rating	• Assessed contamination risks: **Low (ACCEPTABLE)**

Required remediation	• No contamination remediation measures should be required subject to relevant regulatory body agreement. There are no identified contamination risks that require specific mitigation.
Ground gas	• No credible source of hazardous ground gas, volatile vapours or radon has been identified. • Therefore, no ground gas, radon or vapour protection measures should be required.
Water pipework	• There are negligible sources of potential contamination that might impact water supply pipework given the site's history as farm field. • Therefore, standard PE plastic pipework is suitable for the below-ground water supply and no requirement for barrier piping is anticipated, subject to agreement with the local water authority (Anglian Water).
Further investigation works / Next steps	• At this stage, no need for further investigation works has been identified. • Nevertheless, the findings of this report will need to be approved by the local planning authority's contaminated land team prior to the start of any building works.
Construction site management	• Risks to members of the public and nearby residents (such as from excessive dust) and the wider environment must be mitigated by the contractor's safe methods of working which must abide by relevant regulations. • Suitable, standard working procedures should be adopted during site construction works to mitigate any unexpected health, safety and environmental risks. This will include dust suppression measures and an emergency strategy in case any suspected buried unexploded ordnance (UXOs) is encountered.
Reuse of site won material	• It is expected that *in situ* clean natural soils will be appropriate for on-site reuse, subject to suitability checks.
Unforeseen contamination	• Work shall be halted in the area of any additional unforeseen contamination (for example, petroleum odours/staining or possible asbestos containing materials) encountered during the development of the site. The contamination will need to be monitored, investigated, and assessed to the satisfaction of the local authority and relevant specialists.

1 Introduction

The client, Keigar Homes, engaged Humberside Materials Laboratory Limited (HML) to undertake a Phase 1 (desktop study) report in advance of the second phase of proposed residential development on land off Applefields, Wrawby, North Lincolnshire. The land will be hereinafter referred to as *the site*.

1.1 Aims

The aim of the Phase 1 investigation is to assess potential geo-environmental risks in relation to the proposed development works. This includes an evaluation of possible ground conditions and potential land contamination issues. This report is intended to provide a Stage 1 Tier 1: preliminary risk assessment (PRA) as defined in the Environment Agency Land Contamination Risk Management (LCRM) guidance.

1.2 Scope

The scope of the investigation includes:

- a site walkover
- the collection and review of suitable desk study information
- the production of an initial conceptual site model and preliminary risk assessment
- recommendations for further investigation or remediation works, where appropriate

1.3 Conditions and Limitations

This report is produced solely for the client and should only be copied in full. When transmitted electronically, the definitive copy of the report is held by Humberside Materials Laboratory Ltd.

This report is prepared on the assumption that all relevant facts have been disclosed.

The comments given in this report and the opinions expressed assume that conditions do not vary beyond the range revealed by this study and the information provided in the production of this report is complete and reliable.

2 Sources of Site Information

Various sources of information, as shown below (in Table 1), were reviewed to investigate and compile this desk study investigation.

Table 1: Sources of site information

Source description		*Details*	*Date*
Site specific	HML site walkover	Photos (in Appendix A) and notes	08 Apr 2025
	Ground investigation report (in adjacent land)	HML Phase 2 (ground investigation) assessment report, Land off Applefields, Wrawby, North Lincolnshire, for Keigar Homes Ltd.	April 2022
	Envirocheck report	Envirocheck report including environmental information (presented as Appendix C) and historical maps (presented as Appendix B), Order Number: 382848583_1_1	06 Aug 2025
	Location plan	Keigar Homes Ltd drawing number AF/175/202, no revision	12 May 2025
	Construction traffic management plan	Keigar Homes Ltd drawing number AF/175/09, Revision A. Shows details of partial site usage as a construction compound for adjacent residential development	07 Oct 2022
Local information	Online maps and photos	www.google.co.uk, www.openstreetmap.org, www.promap.co.uk & www.streetmap.co.uk	Aug 2025
	Geological maps	BGS 1:50000 Series, Brigg, Sheet 89, Drift	1982
		BGS 1:50000 Series, Brigg, Sheet 89, Solid	1982
	Online BGS data	www.bgs.ac.uk (map data & borehole records)	Aug 2025
	Historical photos	www.britainfromabove.org.uk	Aug 2025
	Historical maps	www.oldmapsonline.org; www.maps.nls.uk	Aug 2025
	Historical info	www.nationalarchives.gov.uk; www.historicengland.org.uk;	Aug 2025
	Environmental info	https://magic.defra.gov.uk/magicmap.aspx	Aug 2025
	Mining info	https://mapapps2.bgs.ac.uk/coalauthority/home.html	Aug 2025
	Radon info	https://www.ukradon.org/information/ukmaps	Aug 2025
	Soil info	www.ukso.org (soil observatory website)	Aug 2025
	Flooding info	www.gov.uk (flood maps)	Aug 2025
	Planning info	North Lincolnshire Council (NLC) planning portal	Aug 2025
	UXO info	https://zeticauxo.com/	Aug 2025

3 Site Description and Topography

3.1 Proposed development

The proposals consist of a new low rise residential development with associated infrastructure leading off an existing (currently ongoing) development. Details are not available to the author, but it is expected that about 20 to 30 dwellings will be built.

The proposed works are the second phase of residential development by the client (Keigar Homes) at Applefields, Wrawby. The ongoing first phase is immediately east and uphill of the new proposals.

The one-, two- or three-storey dwellings will include soft landscaped gardens to the rear. Some properties will have small side and front gardens. Some external areas will be hard surfaced and used for driveway, patio or footpaths.

Associated infrastructure is expected to include new access roads leading off an existing road (Applefields). Other telecoms, water supply and drainage services will be required.

Surface water drainage management assets could include swales, ponds and soakaways, subject to feasibility.

Ground levels at the site are expected to remain similar to original or existing ground levels. One exception could be new surface water features such as swales or ponds where ground levels could change slightly. Some localised areas of soft landscaping could potentially be raised slightly.

3.2 Site location and size

The proposed residential development is located immediately west of a current ongoing development off Applefields, Wrawby, North Lincolnshire, DN20 8GB. The site is roughly centred around grid reference 501680, 408780.

The site is accessed through the adjacent residential development off Applefields.

The site is irregular shaped (but roughly rectangular) and occupies about 150m by 90m in plan area.

A site location plan is included in Appendix A.

3.3 Site features

Photographs and a site features plan are presented later (in Appendix A).

A site walkover was undertaken on the 27th June 2025 (at the same time as ground investigation works). Access was available around the whole site and photos were taken. The salient site features are described as follows.

- The site is existing farm field except for the southeast corner (about 15% of the total site area) which is currently used as a builder's compound
- Most of the site is rough grassed farm field largely covered in weeds (such as dandelion). The site is split into north and south farm fields by an east-west oriented hedgerow which is mainly of short thornbush, but includes occasional deciduous trees
- The ground surface of the current builder's compound in the southeast site corner has been covered in stone fill (imported chalk) and is used to store construction materials, plant and cabins. There is an on-site mortar mixing plant inside the southeast site corner which includes an above ground mixing silo. There are some site storage, office and welfare cabins. There are also piles of soil and stone and stacks of bricks and other building materials. There is some staff and visitor parking. Evidently, the builder's compound is used to facilitate works at the adjacent residential building site, immediately east (the first phase of the Applefields, Wrawby development).

3.4 Current site use

The site is mainly farm field (possibly arable) but the southeast corner is part of a construction compound.

3.5 Topography

The site is sloped smoothly upwards towards the northeast, as illustrated below (in Figure 1), at a moderate gradient. The level change across the site is about 6m or 7m over a lateral distance of about 170m. Thus, the average gradient is about 1 in 25 (or about 2.3 degrees above horizontal).

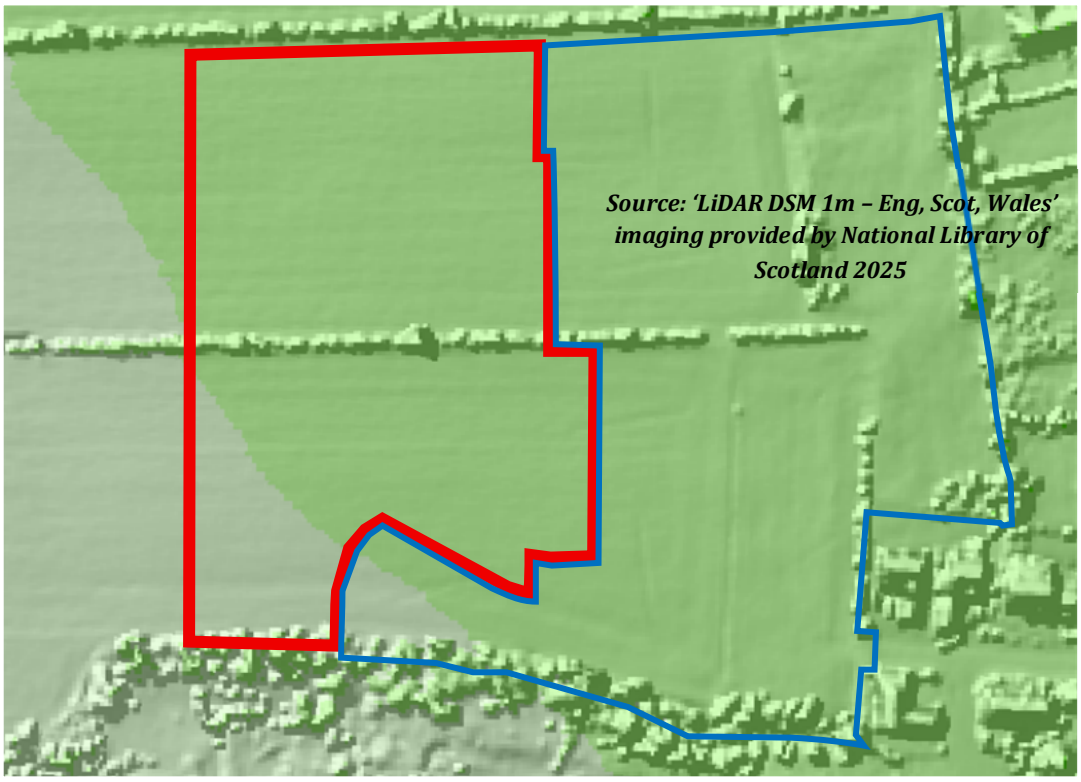
The site is located a modest local elevation – between about 18m (in southwest corner) and 24m (in northeast corner) above Ordnance datum (AOD).

The site and the village of Wragby sit on a relatively isolated round hill (about 1km or 2km in diameter) within the wider, flat, low-lying River Ancholme valley. The site lies on the west side of this hill – with much of the rest of the village situated slightly uphill to the northeast.

3.6 Site boundaries and surrounding land use

The site is within a rural residential area, as detailed below (in Table 2).

***Figure 1*: LiDAR images of the site**



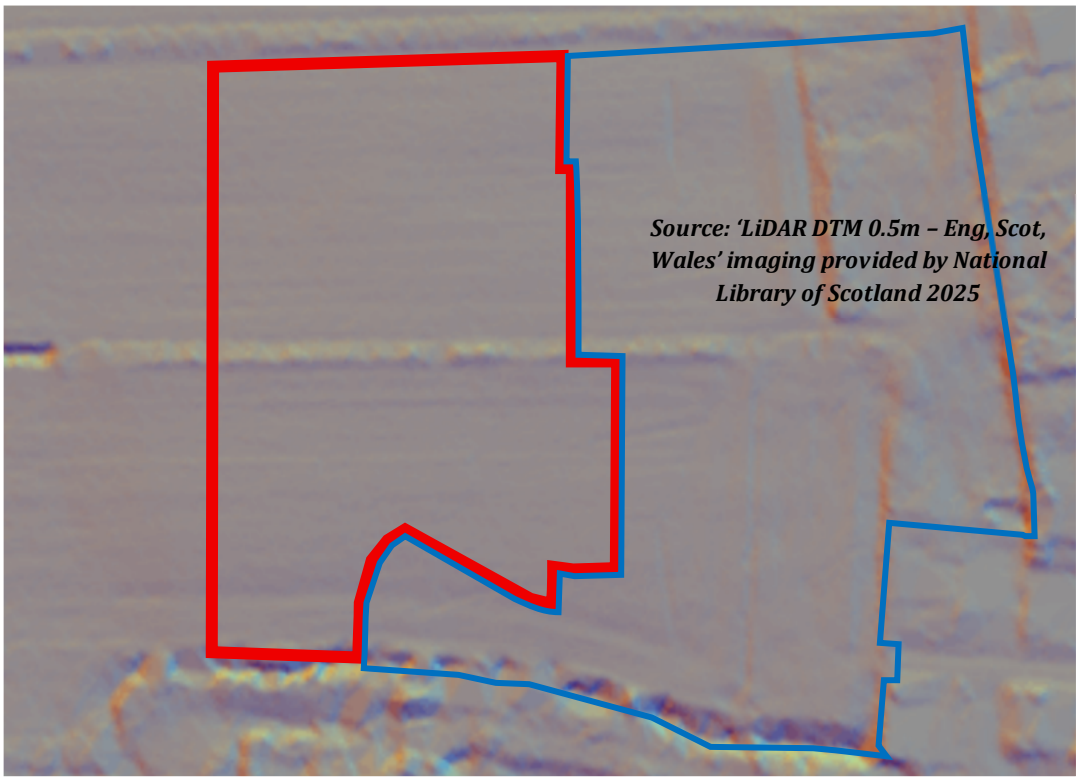


Table 2: Adjacent land use and existing boundaries				
Direction:	**North**	**East**	**South**	**West**
Boundary type:	Hedgerow	Heras Fencing / undefined	Trees / ditch	Undefined
Adjacent land use:	Farm field	Existing new build dwellings	Woodland / rough grassland	Farm fields and road (B1206)
Nearby land use:	Residential dwellings	Residential dwellings	Residential dwellings	Farm fields

3.7 Signs of potential contamination

No evidence (visual or olfactory) was identified of potential ground contamination during the site walkover. No sign of unusual staining, discolouration, or strange odours was noted. No evidence of contaminated ground materials was noted. No ashy or anthropogenic material was noted on the ground surface within areas of bare earth or stone gravel.

The existing builder's compound was noted to include some above ground storage, but there did not appear to be a significant source of contamination. All equipment including an existing above-ground mortar mixing silo appeared to be in good condition and there were no identified possible spillages or leakages. The ground surface had evidently been surfaced exclusively in clean natural stone (chalk). Existing piles of soil and stone appeared to be clean, natural material free from any anthropogenic or contaminative material.

The vegetation around the site appeared to be in excellent health. Also, no evidence of non native invasive plants (such as Japanese Knotweed or Himalayan Balsam) was noted.

4 Site History

4.1 Historical timeline

Historical maps and photos, presented later (in Appendices A and B), have been reviewed. Features considered to be potentially relevant are detailed below (in Table 3).

Table 3: Historical timeline

Map/source details	*Within the site boundary*	*Outside of the site boundary (within 500m)*
Year: **1886-1887** Scale: 1:2500 & 1:10560	• The site is part of farmfields • Existing hedge/tree line shown across the centre of the site (east-west) • Former farm track (immediately north of the existing hedgeline)	• Existing drain (5m south) • Existing small pond (35m south) • Former small pond (40m south) • Possible disused pit (c. 370m south) • Possible disused pit (c. 450m southwest) • Gravel pit (c. 500m southwest)
Year: **1907** Scale: 1:2500 & 1:10560	• *(No significant change identified)*	• Gravel pit (450m south) • *No longer shown:* above gravel pit (c. 500m southwest)
Year: **1938-1950** Scale: 1:2500 & 1:10560	• *(No significant change identified)*	• Above gravel pit (450m south) extended further towards the south
Year: **1956** Scale: 1:10560	• *(No significant change identified)*	• *(No significant change identified)*
Year: **1969-1973** Scale: 1:2500 & 1:10000	• *No longer shown:* Former farm track (immediately north of the existing hedge line)	• *No longer shown, possibly infilled:* above possible disused pit (c. 370m south) • *No longer shown, possibly infilled:* above gravel pit (c. 450m south)
Year: **1984** Scale: 1:2500	• *(No significant change identified)*	• *(No significant change identified)*
Year: **1994** Scale: 1:2500	• *(No significant change identified)*	• *(No significant change identified)*
Year: **1999** Scale: 1:2500	• *(No significant change identified)*	• *(No significant change identified)*
Year: **2006** Scale: 1:10000	• *(No significant change identified)*	• *No longer shown, possibly infilled:* Former small pond (40m south)
Year: **2024, May** Aerial photo	• *(No significant change identified)*	• *(No significant change identified)*
Year: **2025, Mar** Aerial photo	• Southeast corner of the site is part of a buff-coloured stone-surfaced builder's compound, similar to existing	• Adjacent land to the east has begun construction works for new residential development (0m east) – including a balancing pond adjacent to the site's southeast corner

4.2 Historical discussion

The site is farm fields which have never seen any previous significant development. A former farm track crossed the site (immediately north of and parallel to an existing

hedge line) during the 19th and early 20th centuries. For about a year, the southeast corner of the site (about 15% of the total site area) has been used as a temporary builder's compound. However, there are no identified previous buildings or structures.

There has been no identified significant nearby industrial history. There are no noted nearby factories, landfills or mineworks. There are some former gravel pits (possibly infilled around the 1960s), but these were located at least about 370m south of the site. A nearby small pond (40m south) was possibly infilled around the 1990s.

5 Geology, Hydrogeology and Hydrology

5.1 Published geology maps

5.1.1 Made ground

Local geology maps show no anticipated made ground at the site and historical maps do not show any historical pits. Nevertheless, some made ground is expected as follows.

- Former 19th century farm track could include some imported granular fill
- Existing construction compound could include granular fill of possible limestone

Made ground is expected to mainly consist of imported natural stone fill. However, some rubbly material could potentially be present.

5.1.2 Drift deposits

Local geology maps, for example, as shown below (in Figure 3), indicate that the site is underlain by various drift deposits:

- Glaciofluvial deposits (GFD) – mainly of sands and gravels
- Glacial Till (Till) – mainly of boulder clay
- Glaciolacustrine deposits (GLLD) – mainly of sands and gravels

Glaciolacustrine deposits (GLLD) – mainly of silts and clays – may also potentially be present nearby and at depth below the site.

The local distribution of drift deposits is shown to vary around the site. The geology map might not a reliable predictor of ground conditions and deeper drift deposits are difficult to predict (especially given the lack of nearby BGS historical borehole records).

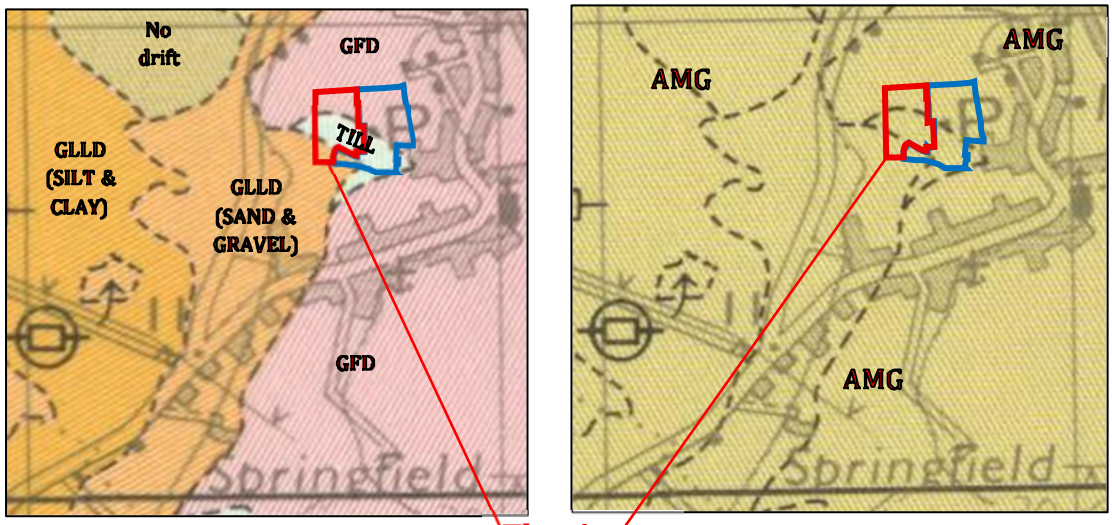
As discussed later (in Section 8), nearby previous boreholes and trial pits indicate varied ground conditions.

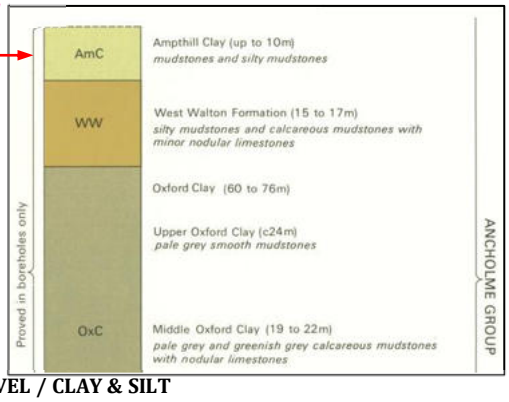
5.1.3 Solid geology

As detailed below (in Figure 2), local BGS maps show the site is underlain by the Ancholme Group (AMG) which is composed mainly of mudstone. Immediately below the site could be the Ampthill Clay Formation (AMC) part of the group, which can include nodules of limestone as well as mainly grey, (silty) mudstone. Such localised nodules of harder limestone could potentially account for the hill that Wrawby sits on.

Figure 2: Extracts from local British Geological Survey (BGS) map

ARTIFICIAL GROUND & DRIFT/SUPERFICIAL **SOLID/BEDROCK**





MADE GROUND:

- **None shown in geology maps**

DRIFT / SUPERFICIAL:

- **GLACIOFLUVIAL DEPOSITS (GFD)**
- GFD are described by the BGS as: "*Glaciofluvial deposits were deposited by meltwater streams. Includes mostly coarse-grained sediments (i.e. sand and gravel) with some finer-grained layers (i.e. clay and silt). Sand and gravel, locally with lenses of silt, clay or organic material.*
- **GLACIAL TILL DEPOSITS (TILL)**
- Till is typically comprised of stiff gravelly clay (known as boulder clay or diamicton) with occasional (water-bearing) bands and lenses of sands and gravels
- **GLACIOLACUSTRINE DEPOSITS (GLLD) – SAND & GRAVEL / CLAY & SILT**
- Glaciolacustrine deposits were laid down in glacial lakes. Composed of coarse-grained bedload and suspended fine-grained material transported by meltwater flowing into lakes bordering the glacier. Deposits include sands, silts and clays of deltaic origin, shoreface sand and gravel and lake bottom varved, fine-grained (fine sand, silt and clay) sediments. Dropstones from floating ice are a common feature.

SOLID / BEDROCK:

- **ANCHOLME GROUP (AMG) – MUDSTONE AND SILTSTONE**
  Predominantly grey, marine mudstone and silty mudstone; beds of argillaceous limestone nodules (or more or less persistent beds) at some levels; units of siltstone and sandstone at some levels, widespread near base (in Kellaways Formation), in middle part (West Walton Formation) and more locally at other levels (notably Kimmeridge Clay Formation of Oxon/Buckinghamshire); shelly marl, limestone and sandy limestone developed locally (notably in the West Walton Formation).

BGS 1:50000 Series, Brigg, Sheet 89, Solid (1982) and Drift (1982) © NERC

5.1.4 Anticipated geology

Based on the inspected geological, historical and topographical information, the provisionally anticipated ground conditions are as shown below (in Table 4).

Table 4: Anticipated geology (subject to confirmation with site works)			
Strata	*Description*	*Anticipated thickness (m)*	*Anticipated depth to base (m bgl)*
Made ground / Topsoil	Granular fill (of stone) present in existing builder's compound. Some traces could be present within former farm track.	<1	<1
Glaciofluvial deposits (GFD)	Sands and gravels, locally clayey and silty. More likely in higher-lying, northeast areas	0 – 3	0 – 3
Glacial Till	Boulder clay with layers of sand and gravel. Possible at shallow depth across most of the site and below the GFD.	2 – 5	2 – 8
Glaciolacustrine deposits (GLLD)	Sands and gravels. Could be present at shallow depth in the lower-lying southwest parts of the site – and possibly at depth below GFD and till deposits	0 – 5	2 – 10
	Clays and silts.	0 – 4	0 – 10
Ancholme Group (AMG)	Mudstone with occasional nodules/bands of limestone. Ampthill Clay Formation (AMC) expected below the site, underlain by the West Walton Formation.	50+	50+

5.2 Mining and quarrying

5.2.1 BGS recorded mineral sites

These are the nearest reported BGS recorded mineral sites (within 1km):

- Wrawby Gravel Pit (489m south) – sand and gravel extraction (status: ceased)

5.2.2 Mining

The site is in an area which might *not* be affected by coal mining.

Also, non-coal mining is not expected to affect the site. No historical recorded mine workings have been identified.

5.3 BGS geological hazards

The British Geological Survey (BGS) rates the geological hazards at the site as *No Hazard* to *Moderate,* as shown below (in Table 5). These are based on presumed ground conditions (glacial deposits) only and are subject to further assessment based on the findings of site works.

Table 5: BGS-rated geological hazards	
Hazard	*Hazard potential*
Collapsible ground stability	Very Low
Compressible ground stability	No hazard
Ground dissolution stability	No hazard
Landslide ground stability	Very Low
Running sand ground stability	Very Low
Shrinking & swelling clay	No hazard – Moderate*
*depends on the location on site and actual revealed geology	

5.4 Hydrogeology (i.e. groundwater)

5.4.1 Groundwater table

As discussed later (in Section 8), previous (upslope) ground investigation works have shown there to be pockets of groundwater at between 1.4m and 2.8m depth BEGL. Levels could be subject to seasonal, climactic and temporal fluctuations. However, groundwater depths at the site could potentially be shallower, given the lower ground levels.

5.4.2 Permeability, aquifers and groundwater vulnerability

The combined groundwater vulnerability at the site is classed as Medium. This reflects the following hydrogeological data:

- The anticipated mudstone bedrock is classed as Unproductive Strata
- The anticipated glacial deposits could include some Secondary Aquifers (A or Undifferentiated)
- The nearest recorded groundwater abstraction (268m south) is for General Farming and Domestic, operated by J F Day
- There are no on-site or nearby groundwater Source Protection Zones (SPZs)

5.4.3 Nearby recorded discharge consents

There is a nearby recorded soakaway discharge consent to ground:

- Discharge to Land/soakaway (220m south) issued in 2000

5.5 Hydrology (i.e. surface water)

5.5.1 Nearby water courses

Nearby identified surface water features are as follows:

- Drain (5m south) – flows westwards into lower-lying parts of the River Ancholme valley
- Balancing pond (5m east) – recently constructed as part of surface water management assets for adjacent residential development
- River Ancholme (2.5km west)

5.5.2 Surface water abstractions

There are no nearby water authority surface water abstractions (none within 0.5km).

5.5.3 Flooding

A flood risk assessment is beyond the scope of this report. Nevertheless, the following factual information is noted.

- The site is in an area reported by the BGS to have only *Limited Potential for Groundwater Flooding to Occur*
- The site is within in area (Flood Zone 1) with only a reported relatively low probability of flooding
- Climate change is not expected to cause future flooding based on gov.uk models
- There are no nearby reported Flood Defences
- The site is not within the Extent of Flooding from Rivers or Sea without Defences based on Fluvial/Tidal Models
- The site is not within the Extent of *Extreme* Flooding from Rivers or Sea without Defences based on Fluvial/Tidal Models
- The site is not identified to be within or near an Area Benefitting from Flood Defences
- There are no nearby identified Flood Storage Areas
- The site is not shown to be at particular risk of surface water flooding

6 Environmental Data

6.1 Landfills and waste

6.1.1 Landfills

There are no nearby reported:

- BGS Recorded Landfill Sites (none within 1km)
- Historical Landfill Sites (none within 1km)
- Local Authority Recorded Landfill Sites (none within 1km)
- Registered Landfill Sites (none within 1km)

6.1.2 Other waste sites

There are no other waste sites considered to be of potentially significant concern to the site. Near to the site, there are no reported:

- Licensed waste management facility, Locations (none within 1km)
- Integrated Pollution Control Registered Waste Sites (none within 1km)
- Registered Waste Treatment or Disposal Sites (none within 1km)
- Registered Waste Transfer Sites (none within 1km)
- Licensed waste management facilities, Landfill boundaries (none within 1km)

6.1.3 Potentially infilled land

There is some identified potential (non-water) infilled land (in order of proximity) near to the site. The nearest is as follows.

- Unknown Filled Ground, such as pit, quarry (355m south) – possibly the former gravel pits identified earlier (in historical maps in Section 4), infilled around the 1960s
- Unknown Filled Ground, such as pit, quarry (609m north)

There is some identified potential (non-water) infilled land (in order of proximity) near to the site. The nearest is as follows.

- Unknown Filled Ground, such as pond, marsh, river, stream, dock, etc. (285m southeast) – possibly small former ditch or pond
- Unknown Filled Ground, such as pond, marsh, river, stream, dock, etc. (625m north) – possibly pond

6.2 Pollution (and pollution control) data

There are no other identified pollution data or pollution control data located nearby. Near to the site, there are no reported:

- Contaminated Land Register Entries And Notices (none within 1km)
- Prosecutions (none within 1km)
- Enforcement And Prohibition Notices (none within 1km)
- Integrated Pollution Controls (none within 1km)
- Integrated Pollution Prevention And Control (none within 1km)
- Local Authority Pollution Prevention And Controls (none within 1km)
- Local Authority Integrated Pollution Prevention And Control (none within 1km)
- Local Authority Pollution Prevention And Control Enforcements (none within 1km)
- Pollution Incidents to Controlled Waters (none within 1km)
- Historical Prosecutions (none within 1km)
- Registered Radioactive Substances (none within 1km)
- Substantiated Pollution Incident Register (none within 1km)
- Historical Prosecutions (none within 1km)
- Water Industry Act Referrals (none within 1km)
- Control Of Major Accident Hazard Sites, COMAH (none within 1km)
- Explosive Sites (none within 1km)
- Notifications of Installations Handling Hazardous Substances, NIHHS (none within 1km)
- Planning Hazardous Substance Consents (none within 1km)
- Planning Hazardous Substance Enforcements (none within 1km)

6.3 Soil chemistry

Estimated soil chemistry data from the BGS indicates element concentrations for rural soil around the site and nearby urban soil could be as shown below (in Table 6).

Table 6: BGS Estimated/Measured Soil Chemistry

Contaminant	*Concentration (mg/kg)*	
	Rural	*Urban*
Arsenic	<15	No data available
Cadmium	<1.8	
Chromium	20 – 90	
Lead	<100	
Nickel	<30	

6.4 Radon

With respect to *radon potential*, the site is in a Lower probability radon *area* in which less than 1% of homes are estimated to be at or above the *Action Level*. BGS and National Geoscience Information Services report that: "No radon protection measures are necessary in the construction of new dwellings or extensions."

6.5 Industrial land use

As discussed previously (in Section 4), historical evidence shows there has been some (industrial) historical land use of potential concern (at or near to the site) including:

- **Former farm track (on-site) – until around the 1960s**
- **Existing builder's compound (on-site) – during the last year**

There are some nearby reported *Contemporary Trade Directory Entries.* The closest are listed below (in order of proximity to the site).

- **Lumb Catering Equipment (170m east) – status: inactive**
- **Vicarage Motors (240m southeast) – garage services; status: active**

The nearest reported *Points of Interest (POIs) for commercial services* are as follows.

- **Vicarage Motors (240m southeast) – vehicle repair, testing and servicing**
- **Hardwick Haulage Ltd (460m east) – distribution and haulage**

The nearest reported *Points of Interest (POIs) for manufacturing and production* are as follows.

- **JF Day & Sons, tongs Farm (236m south)**

The nearest reported *Points of Interest (POI) for public infrastructure* are as follows.

- **Sewage Pumping Station (183m west) – Waste Storage, Processing and Disposal**

The nearest reported *Points of Interest (POI) for recreational and environmental* are as follows.

- **Playground (476m east)**

The nearest reported active *Fuel Station Entries* are as follows.

- **None (within 1km of the site)**

Near to the site, there are no reported:

- Points of Interest (POI) for education and health (none within 1km)
- Points of Interest (POI) for public infrastrucutre (none within 1km)

6.6 Sensitive land use

There are no identified sensitive land uses at or near to the site apart from:

- Nitrate Vulnerable Zone (on-site) – for surface water in (River) Ancholme

7 Unexploded ordnance (UXOs)

7.1 Zetica Bomb Risk Map

A Zetica Unexploded Bomb Risk Map, as presented later (in Appendix E), shows that:

- The site is within an area of LOW historical bombing density (i.e. less than 15 bombs per 1000 acres of area)
- There are no identified nearby *UXO finds* (within 1km)
- There are no identified nearby *Luftwaffe bombing targets* (within 1km)
- There are no identified nearby *docks* (within 1km)
- There are no identified nearby *transport, utilities* or *industry* (within 1km)
- There are no identified nearby *bombing decoys* (within 1km)

7.2 Historical information

No nearby current or historical *military sites* have been identified near to the site. For example, there are no known nearby former WWII airfields.

8 Previous nearby ground investigation

8.1 Scope of previous nearby ground investigation

HML previously carried out a geotechnical ground investigation at the adjacent site in January 2022, which was reported in April 2025, as detailed earlier (in Table 1). The investigation included:

- Six dynamic sampler boreholes (BH1 to BH6) – to about 3m depth – within the former lawn area (below or adjacent to the proposed dwelling)
- Four machine-dug trial pits (TPs 1 to 4) – to depths ranging between 1.50m and 1.90m below existing ground level (BEGL) –
- Soakaway/infiltration testing in the trial pits (TPs 1 to 4)
- Soil contamination tests consisting of:
  - Four tests for metals, PAHs, asbestos and pesticides

Locations of the recent exploratory holes are shown later (in Appendix A).

8.2 Previous nearby revealed ground conditions

Copies of the previous HML exploratory hole logs are shown later (in Appendix F).

As detailed below (in Table 7), previous HML trial pits and boreholes revealed (in descending order):

- **Topsoil:**
- 0.15m- to 0.50m-thick layer of natural topsoil – across most of the site
- **Made ground:**
- Mainly revealed in the east part of the site – to a depth of 0.40m to 0.90m
- Mainly comprises sandy, silty and clayey soil with variable amounts of gravel sized particles of stone, brick, concrete and blast furnace slag
- **Glacial deposits:**
- Mainly comprised of soft (becoming firm/stiff) sandy gravelly silts and clays
- Includes some localised shallow sands (e.g. in BH4, TP2 and TP4)
- Probably at least 2m in thickness (across most of the site)
- **Possible Ampthill Clay Formation - mudstone:**
- Only revealed in BH4 (2.1m to 3.0m depth)
- Firm dark grey clay

Previously revealed ground conditions largely consisted of firm/stiff gravelly clay (possible boulder clay) with localised sands and gravels. This could be glacial till, or possibly glaciofluvial deposits. Suspected mudstone was reported (in the base of BH4).

Table 7: Summary of previously revealed (off-site) nearby ground conditions										
		Exploratory hole								
		BH1	**BH2**	**BH3**	**BH4**	**BH5**	**BH6**	**TP1**	**TP2**	**TP3**	**TP4**
Strata descriptions		*Depth to base of stratum (m BEGL)*									
TOPSOIL	Brown sandy SILT/CLAY with occasional rootlets		0.35	0.40	0.30						0.30
	Brown silty fine SAND with occasional rootlets								0.50	0.15	
MADE GROUND	Firm loamy (sandy SILT/CLAY) TOPSOIL with some / much fine chalk gravel (and brick / blast furnace slag / concrete)	0.45				0.40	0.50	0.90		0.40	
GLACIAL DEPOSITS	Soft to firm light orangish brown slightly sandy to sandy CLAY with occasional/much gravel					1.10				0.80	
	Orangish brown silty fine to medium SAND with much fine to medium gravel of various lithologies, mainly chalk				0.90						
	Buff/grey silty fine SAND with occasional to much chalk gravel. Assessed as loose to medium dense					2.40			1.10		0.90
	Buff/grey silty fine SAND and fine to coarse chalk GRAVEL. Assessed as medium dense								1.90+		
	Soft/Firm low plasticity buff/brown (sandy) SILT/CLAY with some/much fine to coarse gravel (of chalk)	0.90	1.00	1.10	2.10	3.00+	3.00+	1.50+		1.70+	1.60+
	(Firm becoming) stiff low plasticity buff SILT/CLAY with much fine to coarse gravels	3.00+	3.00+	3.00+							
Possible Ampthill Clay Formation	Firm dark grey CLAY				3.00+						

8.3 Previous nearby groundwater observations

Groundwater observations were recorded during nearby site works and monitoring, as detailed below (in Tables 8 and 9), at depths of between 1.4m and 2.8m BEGL.

Groundwater observations in the trial pits were limited to slow or medium groundwater ingresses. These were noted at depths of between 1.50m and 1.90m below ground level.

Table 8: Previous nearby groundwater observations from monitoring			
Borehole	*Hole total depth (m)*	*Ground conditions (in descending order)*	***Standing ground water level (m BEGL)***
			21/04/2022
BH1	3.00	Made ground, Clay	***0.80***
BH3	3.00	Topsoil, clay	***1.43***
BH5	3.00	Made ground, clay, sand, clay	***1.08***

Table 9: Previous groundwater observations from nearby site works					
Exploratory hole	*Hole total depth (m)*	*Ground conditions (in descending order)*	*Depth of ground-water observation (m BEGL)*	*Observation*	*Date (dd/mm/yy)*
BH1	3.00	Made ground, Clay	**2.50**	GWL after drilling	13 Jan 2022
BH2	3.00	Topsoil, clay	**2.80**	GWL after drilling	
BH3	3.00	Topsoil, clay	**-**	Dry after drilling	
BH4	3.00	Topsoil, sand, clay	**1.90**	GWL after drilling	
BH5	3.00	Made ground, clay, sand, clay	**1.85**	GWL after drilling	
BH6	3.00	Made ground, clay	**2.75**	GWL after drilling	
TP1	1.50	Made ground, clay	**-**	None	
TP2	1.90	Topsoil, sand	**1.40**	Medium GW ingress	
TP3	1.70	Topsoil, made ground, clay	**1.70**	Slow GW ingress	
TP4	1.60	Topsoil, sand, clay	**1.50**	Slow GW ingress	
GW – groundwater, GWL groundwater level					

The findings suggest groundwater is probably present in isolated pockets of perched groundwater. The natural groundwater table could be much deeper – especially given the reasonably high local elevation of the site.

8.4 Previous nearby indications of potential contamination

Some localised slightly rubbly made ground was previously noted mainly far to the east of the site, as summarised above. However, some possible localised made ground was noted in BH6 adjacent to the southeast corner of the site.

However, no significant contamination was detected in previous samples of made ground, as detailed below (in Table 10). Measured concentrations of PAHs and metals were acceptable and no pesticides or asbestos were detected.

One detected concentration of beryllium (of 2.6mg/kg) was above the S4UL GAC of 1.7mg/kg, but it is not considered to pose a credible hazard to human health. There is no suspected local source of beryllium and the detected amount is within anticipated natural background levels.

Table 10: Previous nearby soil contamination results and acceptance criteria

	Location:	BH1	BH2	BH5	BH6	HP1	HP2	HP3
	Depth (m BGL):	0.1-0.4	0.0-0.3	0.1-0.4	0.0-0.5	0.1-0.5	0.1-0.5	0.1-0.5
	Date sampled:	13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022
	Soil type:	**Made ground**	**Topsoil**	**Made ground**	**Made ground**	**Made ground**	**Made ground**	**Made ground**
	HML sample ref.:	S/62017	S/62020	S/62026	S/62030	S/62230	S/62231	S/62232
	Chemtech sample ref.:	105029-1	105029-2	105029-3	105029-4	105911-1	105911-2	105911-3
Element	*GAC* (mg/kg)*	*Concentration detected (mg/kg)*						
Metals								
Arsenic	***37***	7.7	**4.4**	**9.3**	**9.1**	**8.0**	**6.7**	**6.7**
Beryllium	***1.7***	<1	<1	**2.6**	**1.4**	<1	<1	**1.2**
Boron	***3#***	**0.9**	**1.2**	**2.2**	**1.3**	**1.6**	**1.9**	**1.3**
Cadmium	***11***	**0.3**	**0.2**	<0.2	**0.2**	**0.3**	<0.2	<0.2
Copper	***100/135/200#***	**17**	**11**	**7.2**	**12**	**12**	**9.1**	**33**
Lead	***200&***	**29**	**55**	**12**	**32**	**30**	**19**	**68**
Mercury	***1.2***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	***60/75/110 #***	**16**	**9.3**	**9.8**	**15**	**13**	**13**	**29**
Zinc	***200/200/300 #***	**63**	**51**	**25**	**45**	**71**	**45**	**84**
Other metals	***-***							
pH	***-***							
PAHs								
Naphthalene	***2.3***	<0.02	<0.02	<0.02	0.04			
Benzo(a)pyrene	***5&***	0.04	0.06	0.15	1.07			
Total PAHs	***-***	0.39	0.42	1.55	12.7			
Asbestos								
Asbestos	***-***	*NAD*	*NAD*	*NAD*	*NAD*			
Pesticides								
Individual organochlorines	-	<0.01	<0.01	<0.01	<0.01			
Individual organophosphates	-	<0.01	<0.01	<0.01	<0.01			

* based on LQM/CIEH (2015) Suitable for Use Level (S4UL) for residential with potential for consumption of home grown produce with soil organic matter (SOM) of 1%, unless otherwise indicated

& based on CL:AIRE-published Category Four Screening Levels (C4SLs) based on an SOM of 6% or, for naphthalene, 1%/2.5%/6%, respectively

ecological GAC shown respectively for pHs of (a) less than 6, (b) between 6 and 7 and (c) greater than 7

^ - no units. Sum of detected TPH fractions divided by relevant GAC should be less than 1.0 to ensure no cumulative hazard

£ - GAC taken from "The EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment," published by CL:AIRE (2010)

$ - GAC taken from US EPA Regional Screening Level (RSL) for Resident Soil, based on a Target Hazard Quotient (THQ) of 1.0

Note: potential GAC exceedances shown in red

Abbreviations: k – 1000; M – million; **MGR** – made ground; Poss. - possible; NGED – no GAC exceedances detected, NAD – no asbestos detected; ND – not detected; Nat. – natural; SA – sand; GR – gravel; CL – clay; SI – silt; + also includes natural soil; LI/S – limestone

9 Initial Contaminated Land Assessment

9.1 Assessment principles

Current legislation and best practice, such as Part IIA of the Environmental Protection Act (1990) and the Land Contamination Risk Management (LCRM) guidance, available online (from the EA via the UK government website), recommend that potentially contaminated land is managed using a risk-based approach. Model procedures to assess the risks from contaminated land involve the development of a conceptual site model (CSM) and the identification and assessment of possible contamination linkages.

A contamination linkage comprises a source (i.e. a contaminant capable of causing pollution or harm), a receptor and a viable pathway by which one can be transmitted to the other. If one of these three elements are missing, there is no significant risk.

The risk from a potential contamination linkage can be assessed as a product of the severity of the consequences that might arise from the contamination hazard and the probability of the hazard occurring, as outlined in CIRIA C552 (Rudland et al.*, 2001). The definitions used to perform the risk assessment for the subject site are shown below (in Tables 11 to 14).*

Table 11: Severity of contamination hazard being realised

Classification	*Category/Definition*			
	Human	*Controlled waters*	*Property*	*Eco system*
Severe	Short term acute risk	Short term risk	Catastrophic damage	Short term risk
Medium	Chronic damage	Pollution to sensitive water resources		Significant change
Mild		Pollution to non-sensitive water resources	Significant damage	Significant damage
Minor	Non-permanent health effects		Repairable damage	

Table 12: Probability of hazard being realised

Classification	*Definition*
Highly likely	There is a pollution linkage and an event that appears very likely in the short term and or almost inevitable over a long term, or evidence at the receptor of harm or pollution
Likely	There is a pollution linkage and all elements are present which means that it is probable that an event will occur.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event will occur. However, it is not certain that even over a long period such an event would occur and is less likely in the short term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the long term.

A matrix can be used to determine a suitable risk classification, as shown below (in Table 13). The largest risks are where the severity of the contaminant is great and the probability of the contaminant linkage occurring is highly likely. The definitions of the different classifications used in this assessment, based on CIRIA C552 (Rudland et al.*, 2001), are also shown below (in Table 14).*

Table 13: Risk classification matrix					
		Consequence			
		Severe	*Medium*	*Mild*	*Minor*
Probability	*Highly likely*	**Very high**	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	**Very low**
	Unlikely	Moderate/low	Low	**Very low**	**Very low**

Table 14: Risk classification definition	
Classification	*Definition*
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard or there is evidence that severe harm to a designated receptor is currently occurring. This risk if realised is likely to result in a substantial liability. Investigation and or remediation is required.
High	Harm is likely to a designated receptor from an identified hazard or there is evidence that severe harm to a designated receptor is currently occurring. This risk if realised is likely to result in a substantial liability. Investigation and or remediation may be necessary in the short term and likely over the long term.
Moderate	It is possible that harm could arise to a designated receptor from the identified hazard. However, it is relatively unlikely that such a hazard would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation is normally required to clarify and determine the potential risk. Some remedial works may be required in the long term.
Low	It is possible that harm could arise to a designated receptor from the hazard identified but is likely that this hazard if realised would at worst normally be mild.
Very low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe

9.2 Initial conceptual site model (CSM)

The following conceptual site model considers all plausible sources, pathways and receptors of potential contamination. This is based on the proposed development which is residential.

9.2.1 Potential sources of contamination

Based on the assembled desk study information, the identified potential sources of contamination are shown below (in Table 15). At this stage, some sources are considered even where there might potentially be no plausible pathway to the site or where the associated contamination might not be a viable hazard to receptors.

Table 15: Potential sources of contamination												
Location	*Potential source*	*Potential contaminants of concern*										*Potentially credible source?*
		Soil and/or groundwater									*Gas*	
		Metals	*PAHs*	*Asbestos*	*Petroleum hydrocarbons*	*UXOs*	*Other petrochemicals (such as MTBE)*	*Pesticides*	-	-	*Hazardous ground gases*	
On-site	A. Former farm track	✓	✓	✓								N
	B. Current land use: builder's compound	✓	✓	✓	✓							N
	C. Historical WWII bombing					✓						N
	D. Highly organic subsoils										✓	N
Off-site	None identified										✓	N

While many potential sources were considered, further assessment found that all the sources (Sources A to D above) were dismissed as not credible. This is explained as follows:

- Source A. The former farm track became arable farm field many decades previously and no made ground around the same location has been identified from inspection of bare earth, suggesting that the former track was only a dirt track or was removed
- Source B. No evidence of any leaks/spills has been noted at the builder's compound, there is no apparent storage of contaminated materials and the ground is protected by a thick layer of imported natural chalk as is the adjacent first phase of the Applefields Wrawby residential development
- Source C. The likelihood of buried UXOs is considered to be negligibly low given the site's location in an area of low historical WWII bombing in a relatively rural location with no identified nearby military use
- Source D. There are no anticipated substantial amounts of highly organic natural soils (or deep made ground) to produce harmful ground gas

9.2.2 Pathways

There are many potential pathways to receptors considered. For the proposed site, these may potentially include:

- Inhalation (i.e., indoor or outdoor dust or vapour)
- Ingestion (i.e. swallowing ground material or dust)
- Absorption (i.e. dermal contact with ground material or aggressive chemical attack)
- Migration (i.e. vertical/lateral movement through soil, rock, groundwater, building materials, voids and along services)

In outdoor areas, the pathways for soil contaminants to reach humans tend to be inhalation of dust, ingestion and absorption. In some outdoor areas (such as within soft landscaping) there might potentially be opportunity for direct exposure to soil contaminants and consumption of home grown produce. However, where the proposed development involves a substantial layer of permanent hardstanding, this should generally prevent direct exposure to contamination.

Within any indoor areas, the main pathway from pollutants to people is typically through the inhalation of vapours and gases. Generally, this could potentially include some of the more volatile organic compounds including lighter fraction petroleum hydrocarbons (as well as permanent gases such as carbon dioxide and methane). Of course, more direct pathways (absorption, ingestion, etc.) might also occur indoors if soil materials are physically transported indoors (such as by wind or on footwear).

Migration of fluid contamination can occur through permeable soil and rock sub-strata, often along preferential pathways. Liquid leachate contamination will typically tend to flow down vertically through unsaturated permeable strata and spread out more laterally when it reaches impermeable strata or saturated ground. Preferential pathways can also occur through artificial features such as pipes and granular bedding or old wells and boreholes.

Migration can occur to facilitate other pathways. For example, inhalation of vapours may occur after migration through soil strata. Also, migration may result in the build-up and combustion of some ground gases, such as methane.

In some circumstances, installed foundation piles may provide a vertical pathway for contamination. Some pile types are more likely to provide a pathway than others.

9.2.3 Receptors

Receptors comprise those material items or living beings that may be impacted by contaminants. For the site, these may include:

- human site users (i.e. site workers, future site users, visitors, trespassers)

- controlled waters (i.e. bodies of groundwater and surface water)
- building materials and services (e.g. clean water pipework and buried concrete)
- ecological systems (e.g. local wildlife and fauna)
- adjacent site users (e.g. humans, ecological systems)

9.3 Preliminary risk assessment (PRA)

A preliminary risk assessment is presented below (in Table 16). This shows identified possible potential contamination linkages as well as the findings of the initial conceptual site model.

Table 16: Initial conceptual site model and preliminary risk assessment

Initial conceptual site model			*Preliminary risk assessment*			
Potential source	*Potential pathway*	*Potential receptor*	*Probability*	*Severity*	*Risk rating*	*Comments / Rationale*
No credible source identified	Inhalation, ingestion, absorption	Future site users	Unlikely	Medium	Low	No credible source of significant toxic contamination
		Ground workers	Unlikely	Medium	Low	
	UXO explosion	Ground workers	Negligible	Severe	Low	Likelihood of buried UXOs considered to be negligibly low
	Inhalation of vapours	Future site users	Unlikely	Medium	Low	No credible source of significant vapour-producing contamination
		Ground workers	Unlikely	Medium	Low	
	Migration	Aquifer waters (such as in glacial deposits)	Unlikely	Medium	Low	Negligible contamination anticipated. There are no nearby groundwater Source Protection Zones (SPZs)
	Migration	Surface waters	Unlikely	Medium	Low	Negligible contamination anticipated. Nearest surface waters could be a drain adjacent to the south
	Absorption	Local flora and fauna	Unlikely	Medium	Low	No elevated levels of phytotoxic contamination (such as copper, nickel or zinc) are anticipated
	Aggressive attack (by absorption)	Water supply pipework	Unlikely	Medium	Low	No suspected potential hydrocarbon contamination that might permeate standard (PE) plastic water supply pipe
		Buried concrete	Unlikely	Medium	Low	Ground expected to be low in sulphates and not aggressive to buried concrete

The above preliminary risk assessment has not identified any potential contamination linkages with unacceptable risk. All risk ratings are Low (or Very Low). Therefore, the considered source-pathway-receptor contamination linkages are of acceptably low risk and are not considered to require further attention.

9.3.1 Risks to human health (of future site users)

No significant risk to the health of future site users (such as house residents or maintenance workers) has been identified. No significant amount of toxic or volatile contamination is anticipated.

9.3.2 Risks to human health (construction workers)

The human health of construction workers is not considered to be at significant risk from any ground contamination.

Notwithstanding the above, it is expected that a suitable emergency strategy will be in place during groundworks for encountering buried unexploded bombs (UXBs) or other unexploded ordnance (UXOs). This is expected to include suitable instruction and training to groundworkers to ensure that works are halted and specialist advice obtained if any suspected buried UXOs are encountered.

9.3.3 Risks to controlled waters

There is no identified possible unacceptable risk to surface waters. No significant contamination is suspected that might affect nearby surface water features, such as the existing drain (adjacent to the south).

There is no identified credible risk to groundwaters. No significant contamination is suspected. There are no nearby groundwater Source Protection Zones (SPZs).

9.3.4 Risks to ecology

No significant levels of contamination are anticipated that might affect wildlife (such as heavy metals). Local ecology appears to be in excellent health and no elevated phytotoxic contamination, for example, is suspected.

9.3.5 Risk to building materials

The anticipated revealed ground conditions do not appear to contain any contaminants that might be aggressive to either water supply pipe or buried concrete. No hydrocarbons are suspected or expected that might potentially permeate water supply pipework. Ground conditions are not expected to contain significant sulphates or acidity that might harm buried concrete.

9.4 Required remediation measures

At this stage, no requirement for contamination related remediation is anticipated. However, this is subject to agreement with the local planning authority and other regulatory body and no encountered unforeseen contamination.

9.5 Proposed further investigation

At this stage, no requirement for significant further contamination investigation works is anticipated. This is subject to local planning authority and other regulatory body agreement and the absence of any unexpected contamination.

9.6 Site management

9.6.1 Minimising risks to groundworkers and nearby (human) receptors

As discussed, groundworkers are not expected to face potentially significant health risks from dealing with potential contaminants of concern within the ground. Nevertheless, there are always safety risks when carrying out groundworks (such as trench collapse). Contractors need to address these risks in their construction risk assessments and method statements, for example, by providing suitable PPE, welfare facilities, supervision and training.

It is recommended that a suitable watching brief and emergency strategy be put in place during groundworks for encountering any suspected buried unexploded bombs (UXBs) or other UXOs as well as any other kind of unforeseen contamination (such as odours or staining or buried rubble). Should unforeseen conditions be encountered, suitable steps need to be taken, including immediate consultation with relevant specialists and local planning authority notification.

Risks to members of the public and nearby residents (for example, from dust inhalation) and the wider environment must also be mitigated by the contractor's safe methods of working which must abide by relevant regulations such as the Control of Asbestos Regulations (2012). To satisfy local planning conditions, it might be necessary to produce and implement a Construction Management Plan (CMP) which should detail suitable construction procedures (for example, dust suppression measures and silt management) which will mitigate contamination and environmental risks.

9.6.2 Reuse of site won material

Only *in-situ* clean natural soil materials should be automatically deemed suitable for reuse on site and only provided no elevated contamination is found or suspected.

Any excavated (unforeseen) made ground will NOT be suitable for re-use at the site UNLESS it is covered by a suitable permit or waste exemption (such as a U1 or T5 exemption) or protocol (such as the WRAP Protocol or the CL:AIRE Code of Practice: Definition of Waste).

9.6.3 Unforeseen contamination

Any unforeseen contamination (for example, petroleum odours/staining, building rubble or asbestos containing materials) encountered during the development of the site will need to be monitored and reported to the local planning authority. Work must be halted in any area of the revealed potential contamination and the contamination investigated and assessed to the satisfaction of the local planning authority.

If unforeseen contamination is encountered, contamination remediation measures may be required.

9.7 Water supply pipework

Based on available information, no requirement for barrier piping is anticipated. There are negligible sources of potential contamination given the site's history as farm field.

Accordingly, standard PE plastic pipework is suitable for the below-ground water supply. This will need to be agreed with the local water authority (Anglian Water) – who should be consulted at the earliest opportunity – prior to any new connection or pipework installation.

9.8 Gas protection measures

No credible source of hazardous ground gas or radon has been identified. Therefore, no ground gas or vapour protection measures should be required.

10 Summary & Conclusions

10.1 Desktop information

10.1.1 Proposed development

The proposals consist of a new low rise residential development (of about 20 to 30 dwellings) with associated infrastructure. This is the second phase of development by the client (Keigar Homes) at Applefields, Wrawby (the ongoing first phase is immediately east).

10.1.2 Site description

The proposed residential development is located west of Applefields, Wrawby, North Lincolnshire, DN20 8GB, roughly centred around grid reference 501680, 408780.

The site is about 150m by 90m in plan area.

The site is existing farm field except for the southeast corner (about 15% of the total site area) which is currently used as a builder's compound. The farm field is split into north and south halves by an east-west oriented line of hedge and tree. Both halves are covered by short weeds and the ground surface is a stony loamy topsoil throughout. The builder's compound, which is used to store construction materials, plant and cabins, is surfaced in imported chalk fill.

The site is sloped up towards the northeast at an average gradient of about 1 in 25. Ground levels range between about 18m and 24m AOD.

10.1.3 Site History

The site is farm fields which have never seen any previous significant development. Nonetheless, a former farm track crossed the site during the 19th and early 20th centuries and, for the last year or so, the southeast corner of the site has been a builder's compound.

There are no identified nearby historical landfills or mineworkings. The closest former gravel pits (possibly infilled around the 1960s) are about 370m south.

10.1.4 Geology, hydrology and hydrogeology

Based on published local geology and hydrogeology information, the provisionally anticipated ground conditions are as shown below (in Table 17).

Table 17: Published geology and hydrogeology (based on local mapping)

Strata	*Description*	*Anticipated depth to base (m BEGL)*	*Aquifer classification*
Made ground / Topsoil	For example, chalk fill in builder's compound	<1	-
Glaciofluvial deposits (GFD)	Sands and gravels, locally clayey and silty. More likely in higher-lying, northeast areas	0 – 3	Secondary Aquifer – A
Glacial Till	Boulder clay with layers of sand and gravel. Possible at shallow depth across most of the site and below the GFD.	2 – 8	Secondary Aquifer – Undifferentiated
Glaciolacustrine deposits (GLLD)	Sands and gravels. Could be present at shallow depth in the lower-lying southwest parts of the site – and possibly at depth below GFD and till deposits	2 – 10	Secondary Aquifer – A
	Clays and silts.	0 – 10	Unproductive Strata
Ancholme Group (AMG)	Mudstone with occasional nodules/bands of limestone. Ampthill Clay Formation (AMC) expected below the site, underlain by the West Walton Formation.	50+	Unproductive Strata
• No nearby groundwater Source Protection Zones (SPZs) • Nearest recorded (farm-related) groundwater abstraction is 268m south			

Hydrology:

- Adjacent drain (0m south) and balancing pond (0m east)
- River Ancholme (2.5km west)
- No significant flooding issues identified

10.1.5 Other environmental information

- No historical landfill sites have been identified near the site (from Defra online mapping), within 500m.
- No nearby potentially infilled land (within 250m)
- No identified nearby industry or commercial activity (within 150m)
- The site is not in a radon-affected area; no protection measures needed
- No significant hazard is anticipated from buried UXOs

10.1.6 Findings of previous nearby ground investigation works

HML previously carried out a ground investigation at the adjacent site (0m east) in January 2022. The revealed ground conditions consisted of:

- **Topsoil:**
- 0.15m- to 0.50m-thick layer of natural topsoil – across most of the site
- **Made ground:**
- Mainly revealed far to east of the site – to a depth of 0.40m to 0.90m

- Mainly comprised of sandy, silty and clayey soil with variable amounts of gravel sized particles of stone, brick, concrete and blast furnace slag
- **Glacial deposits:**
- Mainly comprised of soft (becoming firm/stiff) sandy gravelly silts and clays
- Includes some localised shallow sands (e.g. in BH4, TP2 and TP4)
- Probably at least 2m in thickness (across most of the site)
- **Possible Ampthill Clay Formation - mudstone:**
- Only revealed in BH4 (2.1m to 3.0m depth)
- Firm dark grey clay

Laboratory testing on samples of natural soil and made ground from the adjacent site did not identify any contamination levels of concern in a residential context.

10.2 Contamination assessment

10.2.1 Initial conceptual site model (sources, pathways and receptors)

The following potential sources of contamination were identified for the site.

A. Former farm track
B. Current land use: builder's compound
C. Historical WWII bombing
D. Highly organic subsoils

However, none of the above sources (A to D) were considered potentially credible based on further analysis. The location of the former farm track is evidently surfaced in natural stone and soil. The existing builder's compound is used to store clean, inert materials and covered in imported clean chalk.

10.2.2 Preliminary risk assessment (PRA)

A preliminary risk assessment did not identify any potential contamination linkages with unacceptable risk. All risk ratings are Low (or Very Low). Therefore, all source-pathway-receptor contamination linkages are of acceptably low risk and are not considered to require further attention.

10.2.3 Risk mitigation and required remediation measures

No contamination remediation measures should be required subject to relevant regulatory body agreement. There are no identified contamination risks that require specific mitigation.

10.2.4 Site management

Risks to members of the public and nearby residents (such as from excessive dust) and the wider environment must be mitigated by the contractor's safe methods of working which must abide by relevant regulations.

Suitable, standard working procedures should be adopted during site construction works to mitigate any unexpected health, safety and environmental risks. This will include dust suppression measures and an emergency strategy in case any suspected buried unexploded ordnance (UXOs) is encountered.

Work shall be halted in the area of any additional unforeseen contamination (for example, petroleum odours/staining or possible asbestos containing materials) encountered during the development of the site. The contamination will need to be monitored, investigated, and assessed to the satisfaction of the local authority and relevant specialists.

It is expected that *in situ* clean natural topsoil and subsoils will be appropriate for on-site reuse, subject to suitability checks.

10.2.5 Water supply pipework

There are negligible sources of potential contamination that might impact water supply pipework given the site's history as farm field. Therefore, standard PE plastic pipework is suitable for the below-ground water supply and no requirement for barrier piping is anticipated, subject to agreement with the local water authority (Anglian Water).

10.2.6 Ground gas protection

No credible source of hazardous ground gas, volatile vapours or radon has been identified. Therefore, no ground gas, radon or vapour protection measures should be required.

10.2.7 Further investigation / next steps

At this stage, no need for further investigation works has been identified.

Nevertheless, the findings of this report will need to be approved by the local planning authority's contaminated land team prior to the start of any building works.

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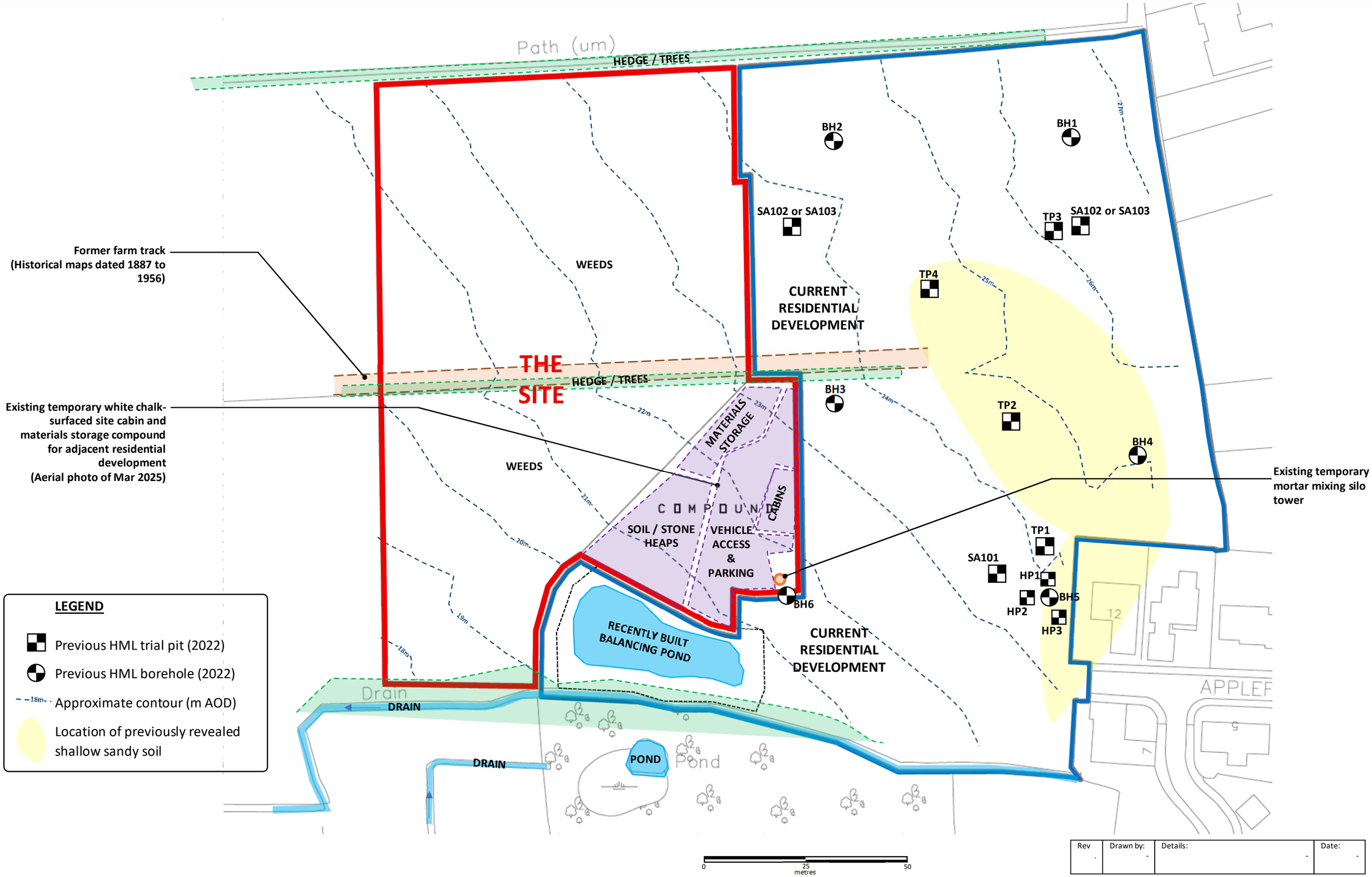
Appendix A

Plans & Photographs



Former farm track (Historical maps dated 1887 to 1956)

Existing temporary white chalk-surfaced site cabin and materials storage compound for adjacent residential development (Aerial photo of Mar 2025)

Existing temporary mortar mixing silo tower

LEGEND

- Previous HML trial pit (2022)
- Previous HML borehole (2022)
- 18m Approximate contour (m AOD)
- Location of previously revealed shallow sandy soil

Rev	Drawn by:	Details:	Date:
.	-	-	-

HUMBERSIDE MATERIALS LABORATORY LIMITED
Atherton Way
Brigg
North Lincolnshire
DN20 8AR
Telephone: 01652 652753
www.humbersidematerialslab.co.uk

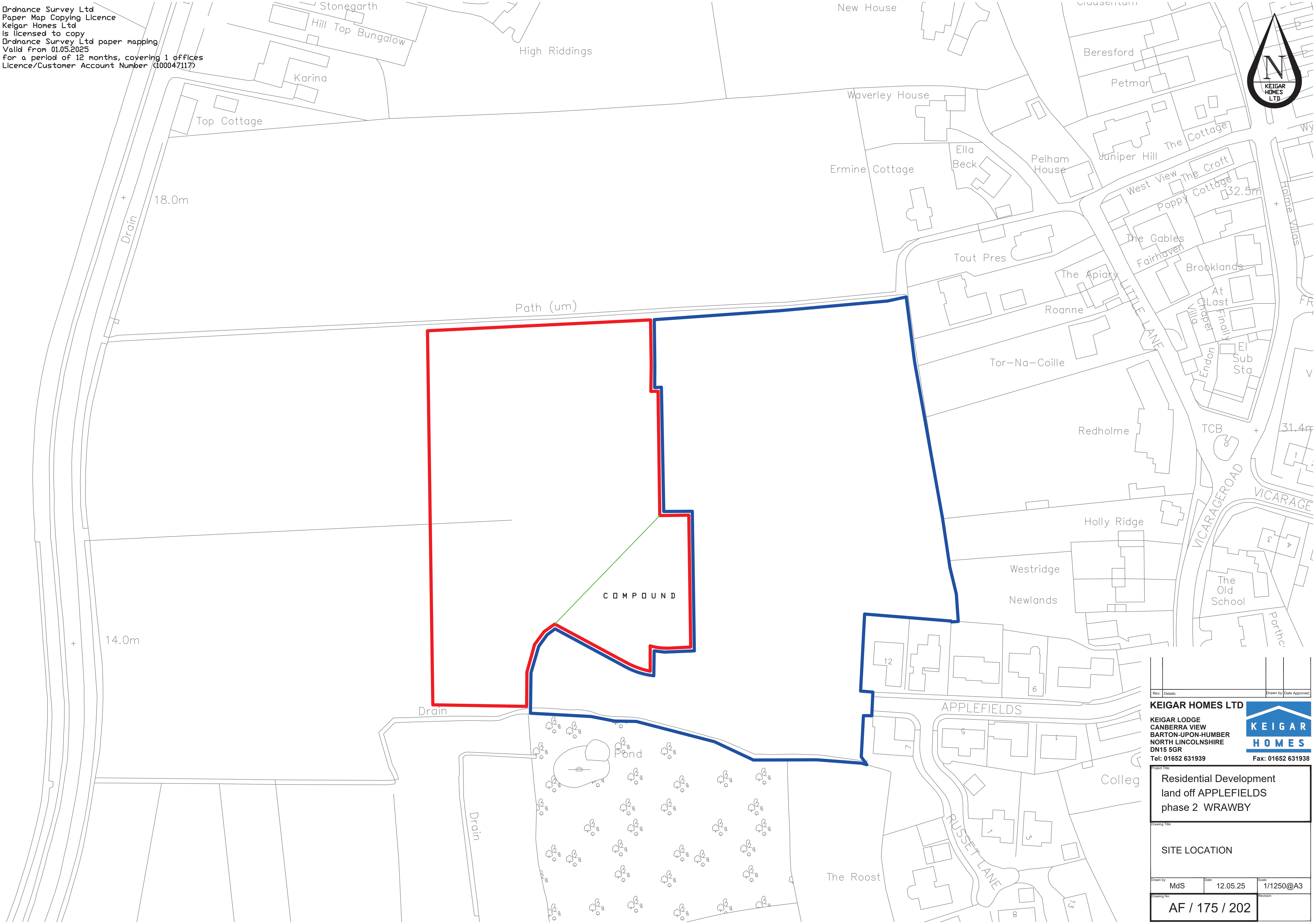
Notes:
1. Do not scale
2. All locations are approximate only
3. This drawing must be read in conjunction with HML Phase 1 (desk study) report, report ref: 0126/5708(2)/P/P1
4. SA101 to SA103 were carried out by others (not HML) c. 2017

N

Drawing Title: **Site features plan**
Site: Land off Applefields, Wrawby (Second Phase)
Client: Keigar Homes
Project No.: 0126/5708(2)/P

Drawn by: **RL**
Checked by: **DD**
Scale: **As shown**
Size: **A3**
Date: **15 Aug 2025**

Drawing number: **0126-5708(2)-P1-01**
Revision: **-**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Hill Top Bungalow
High Riddings
New House
Beresford
Petmar
Karina
Top Cottage
Waverley House
The Cottage
Juniper Hill
Ella
Beck
Pelham
House
Ermine Cottage
West View
The Croft
Poppy Cottage
32.5m
18.0m
Drain
The Gables
Fairhaven
Tout Pres
Brooklands
The Apiary
At
Last
Finally
Chapel
Villa
Roanne
LITTLE LANE
Path (um)
El
Sub
Sta
Endon
Tor-Na-Coille
Holme Villas
Redholme
TCB
31.4m
VICARAGE ROAD
VICARAGE
Holly Ridge
COMPOUND
Westridge
Newlands
The
Old
School
14.0m
12
6
APPLEFIELDS
Drain
Pond
Drain
Colleg
RUSSET LANE
The Roost
N
KEIGAR
HOMES
LTD

Rev:	Details:	Drawn by:	Date Approved:

KEIGAR HOMES LTD

KEIGAR LODGE
CANBERRA VIEW
BARTON-UPON-HUMBER
NORTH LINCOLNSHIRE
DN15 5GR
Tel: 01652 631939
Fax: 01652 631938

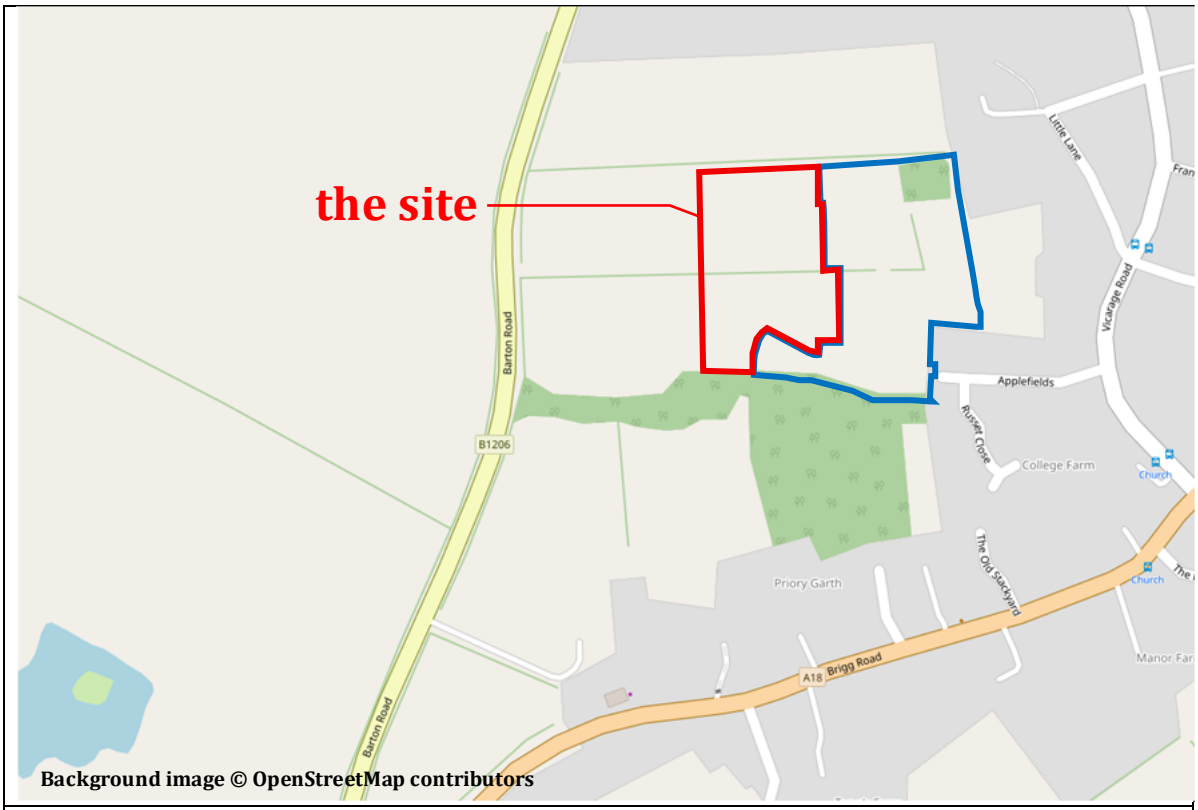
KEIGAR HOMES

Project Title:
Residential Development
land off APPLEFIELDS
phase 2 WRAWBY

Drawing Title:
SITE LOCATION

Drawn by:	Date:	Scale:
MdS	12.05.25	1/1250@A3

Drawing No:	Revision:
AF / 175 / 202	



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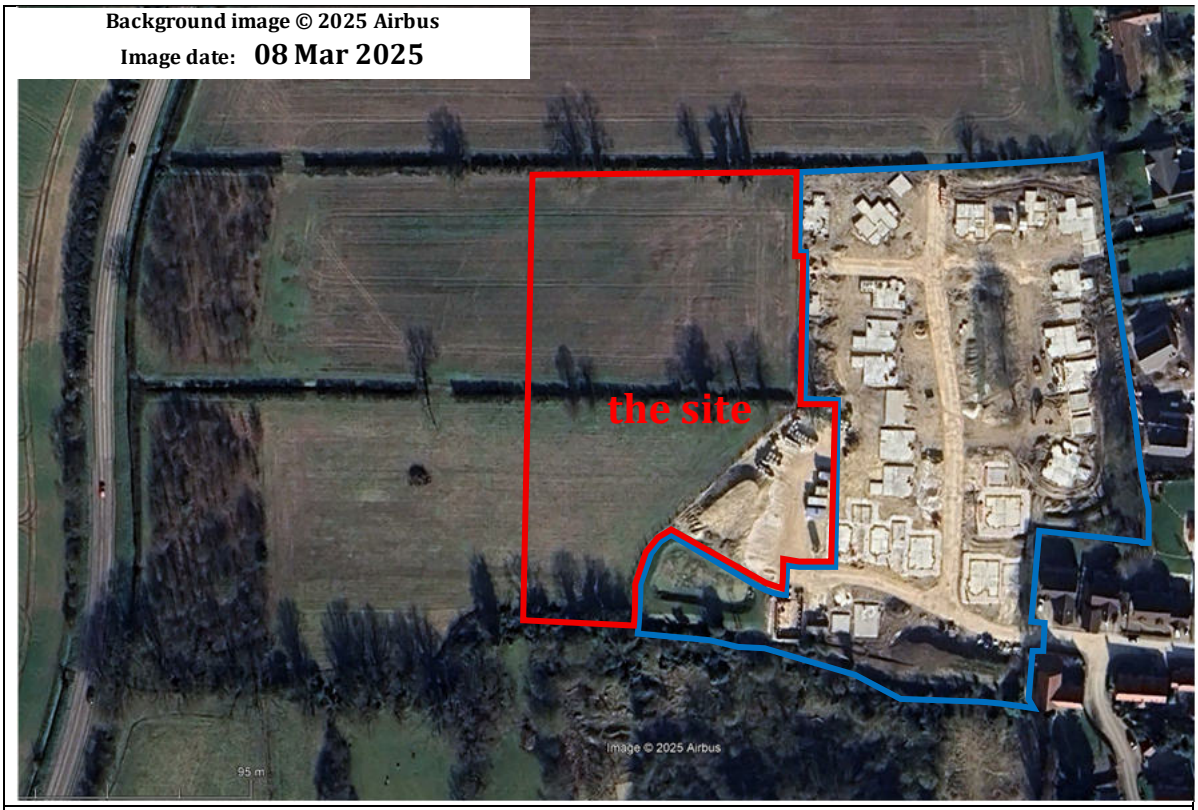

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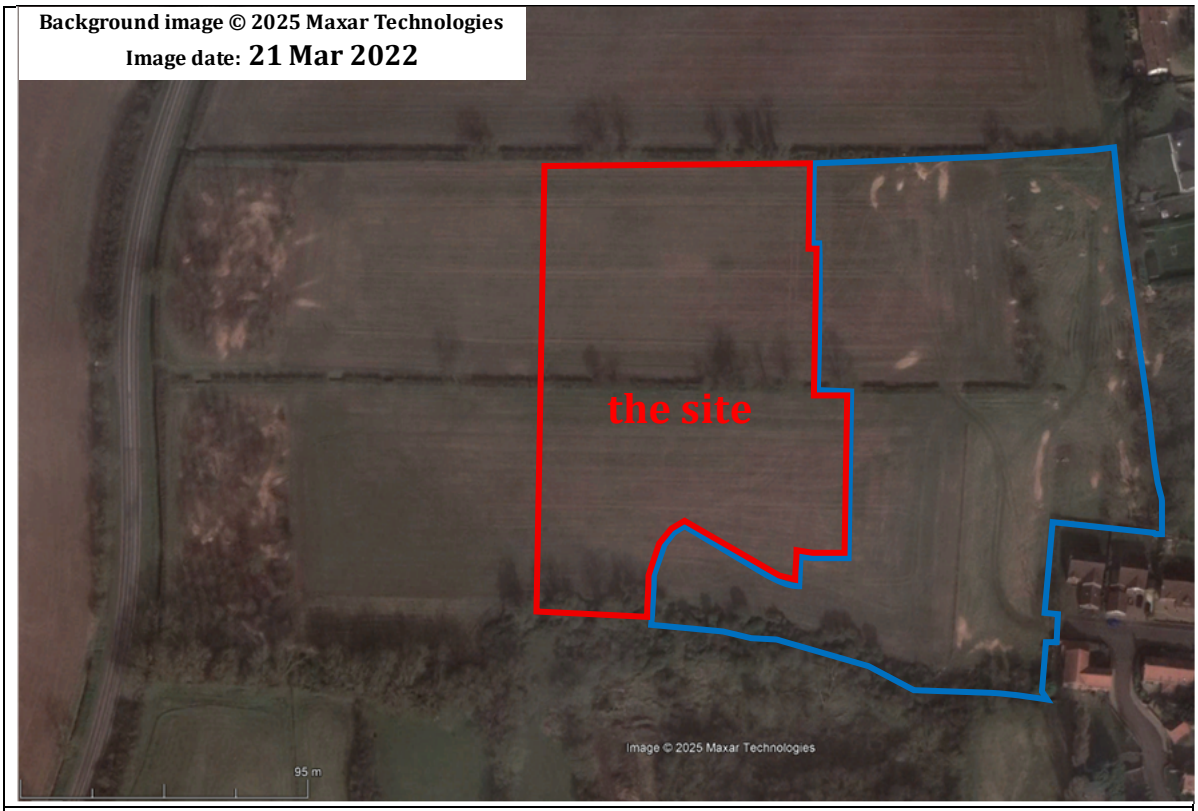

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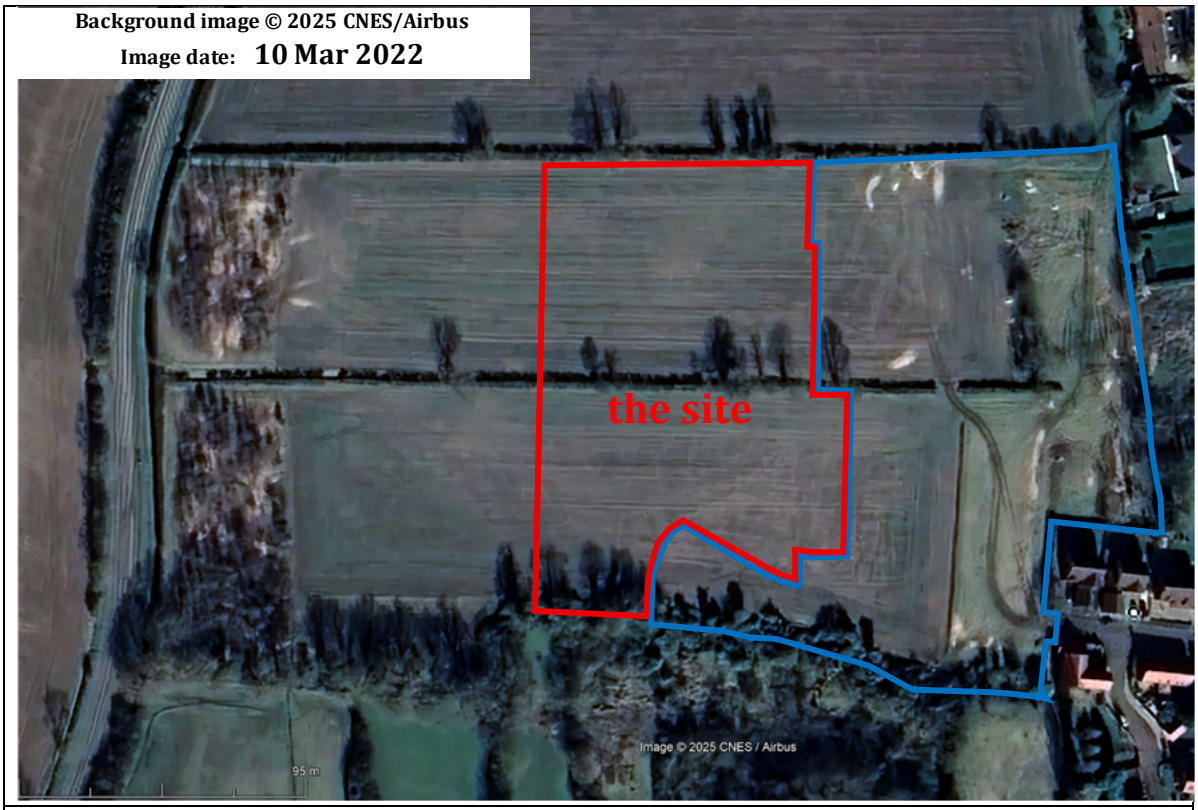

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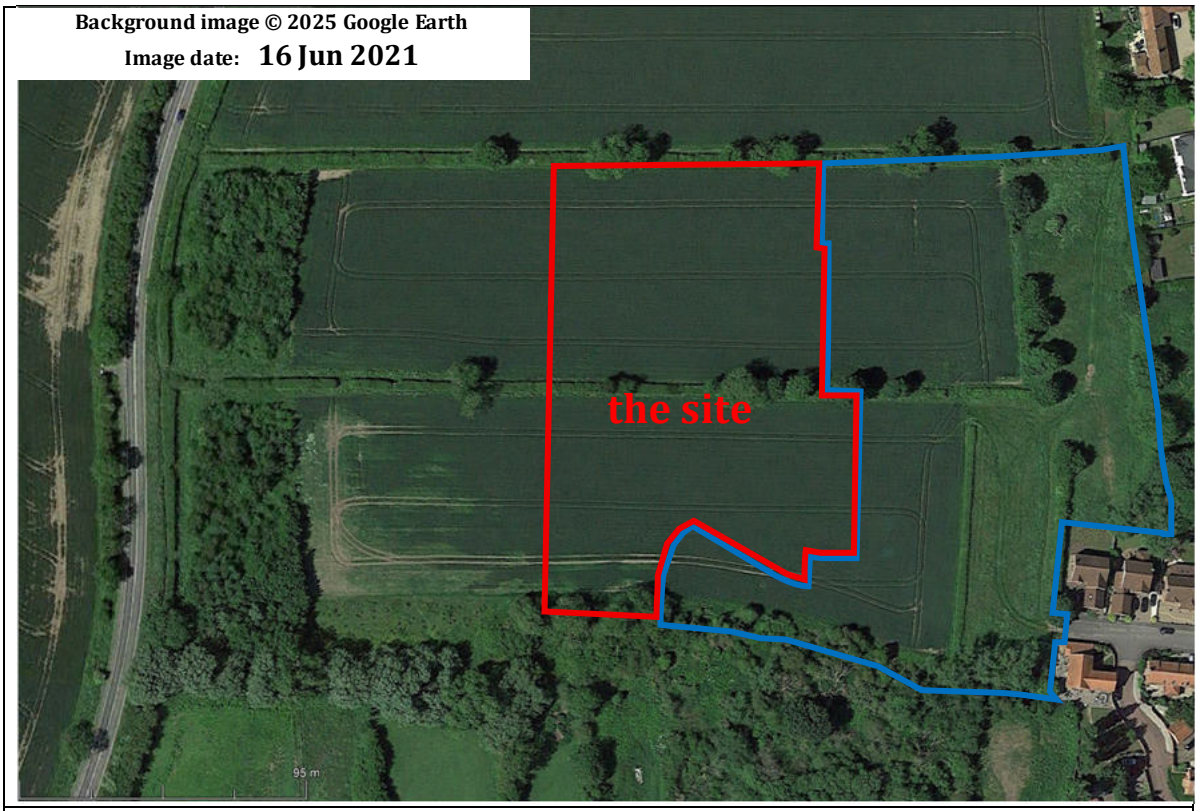

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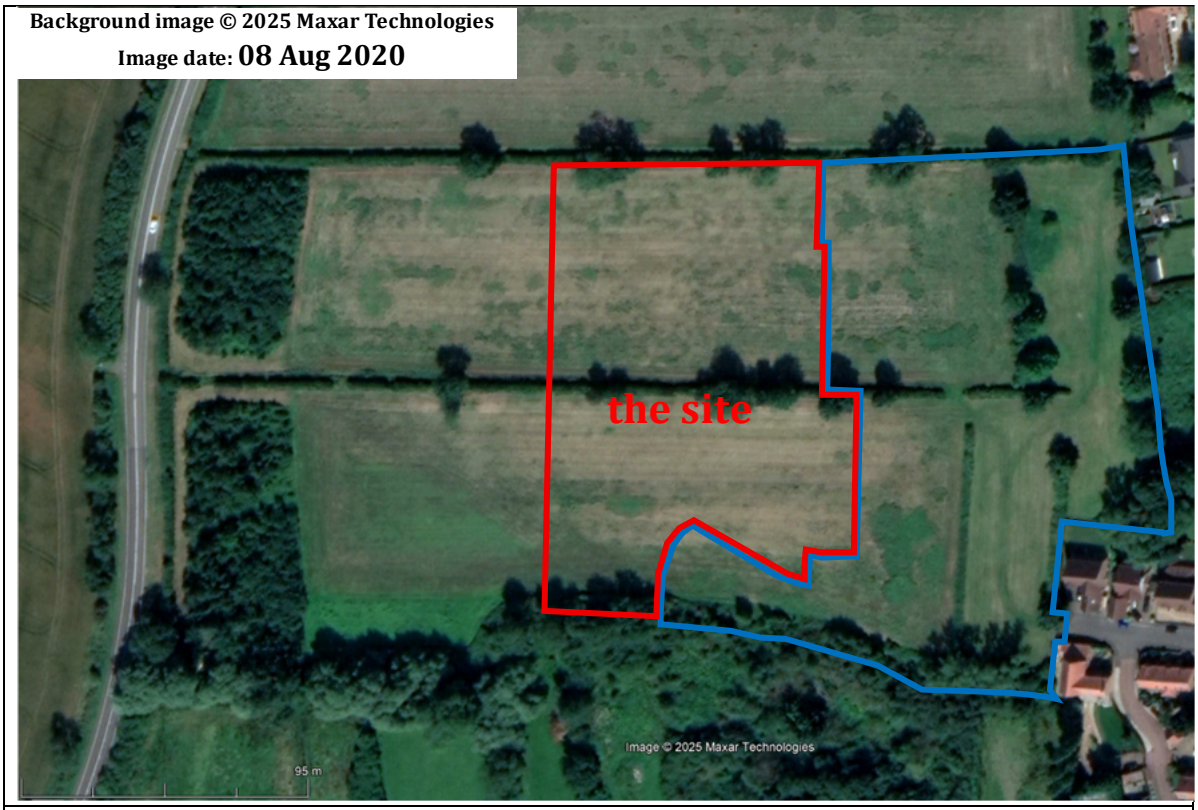

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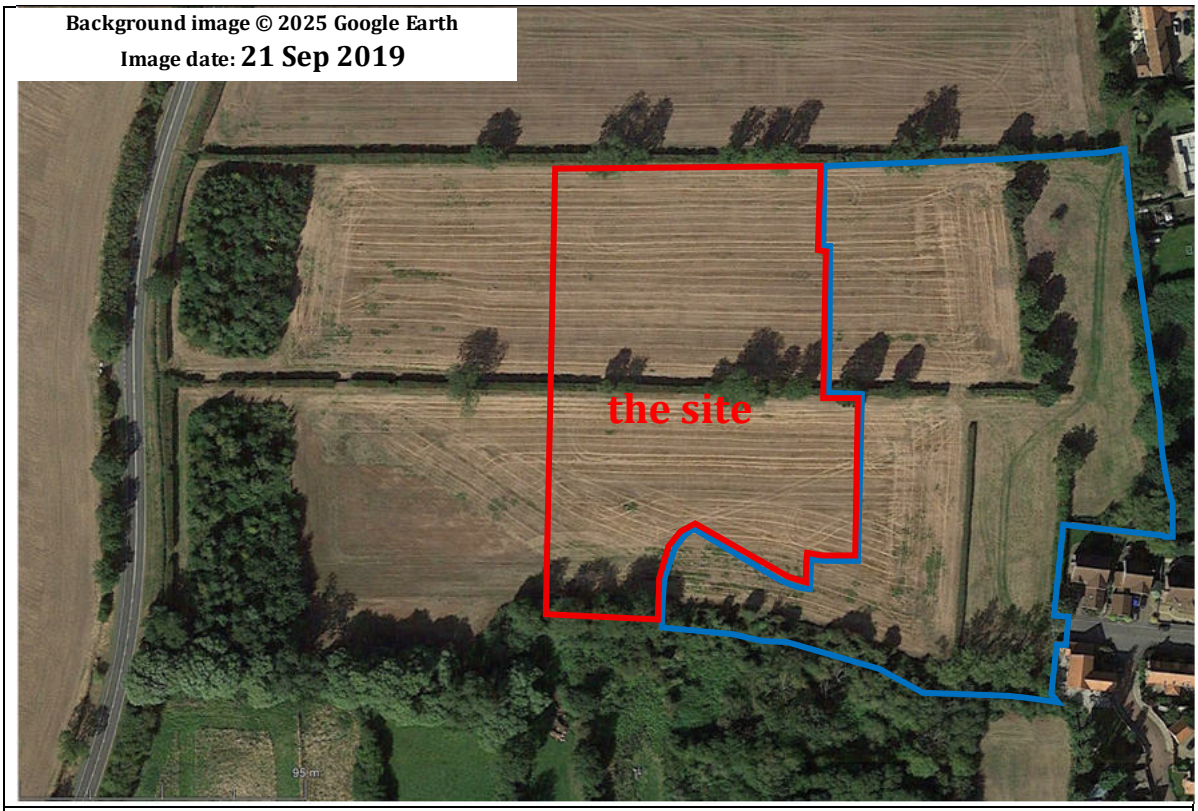

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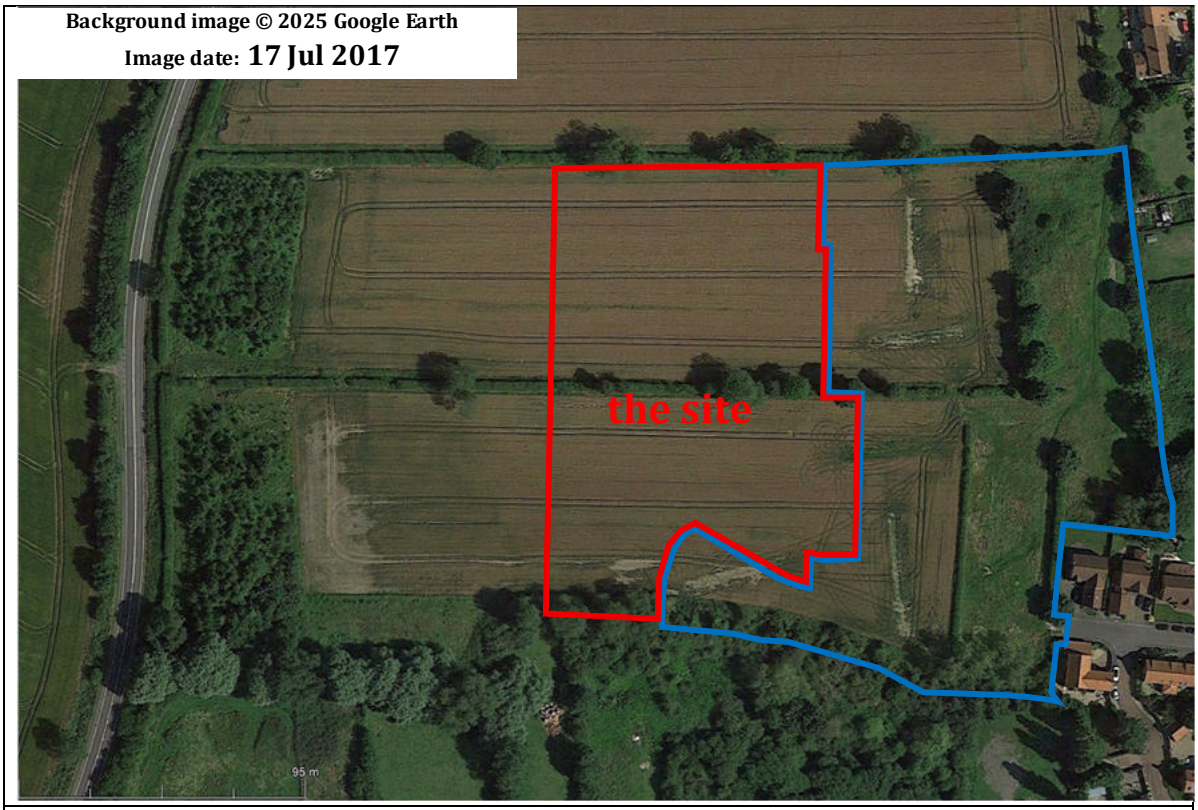

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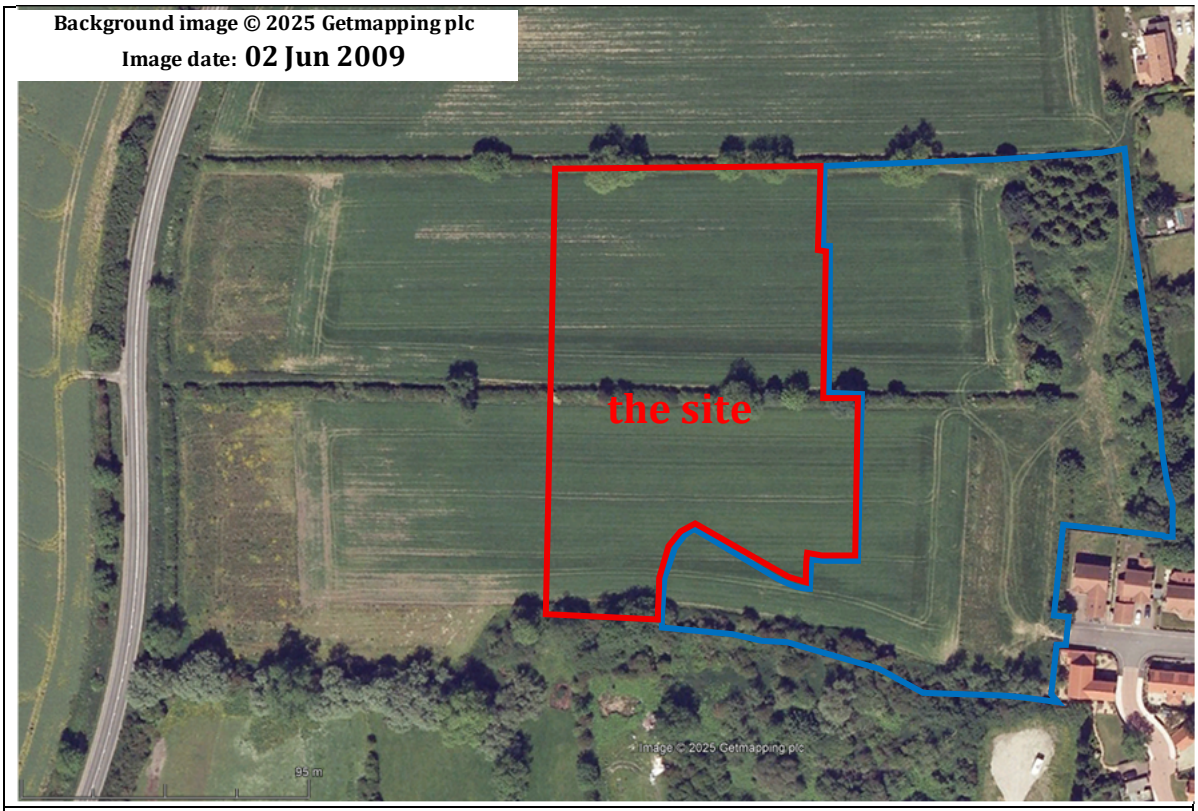

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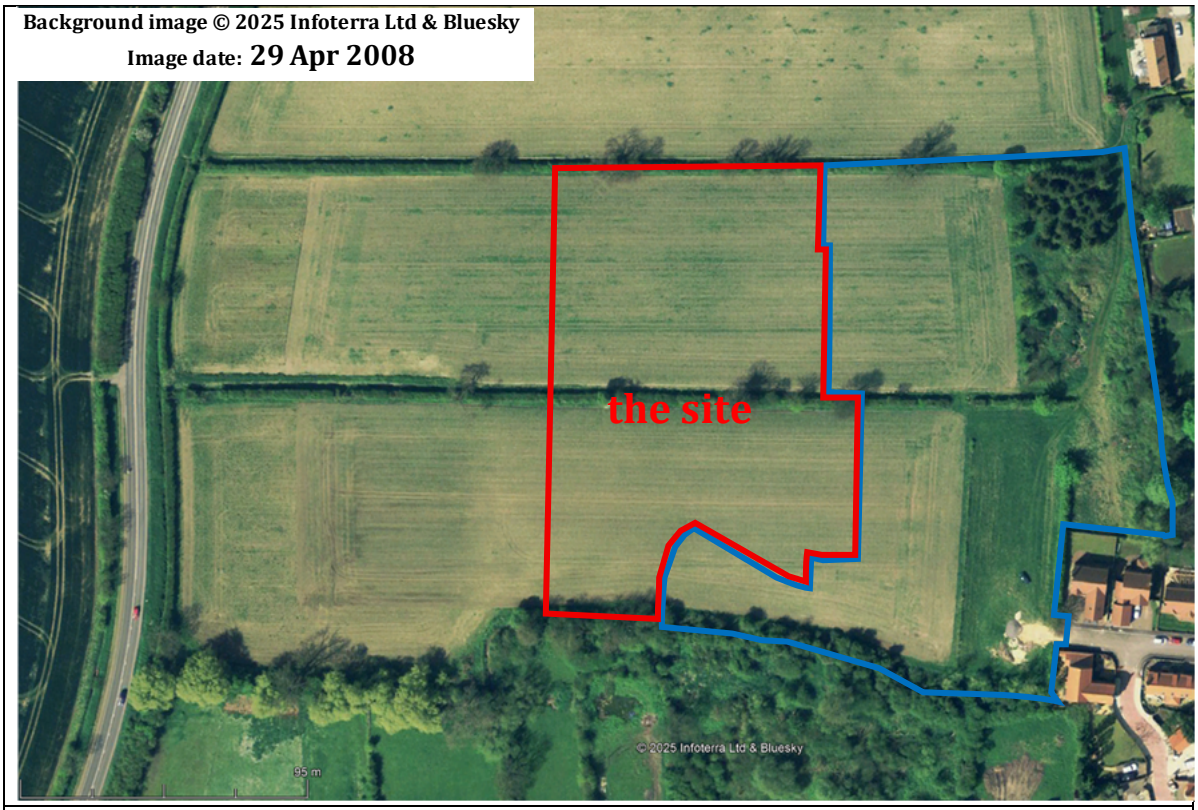

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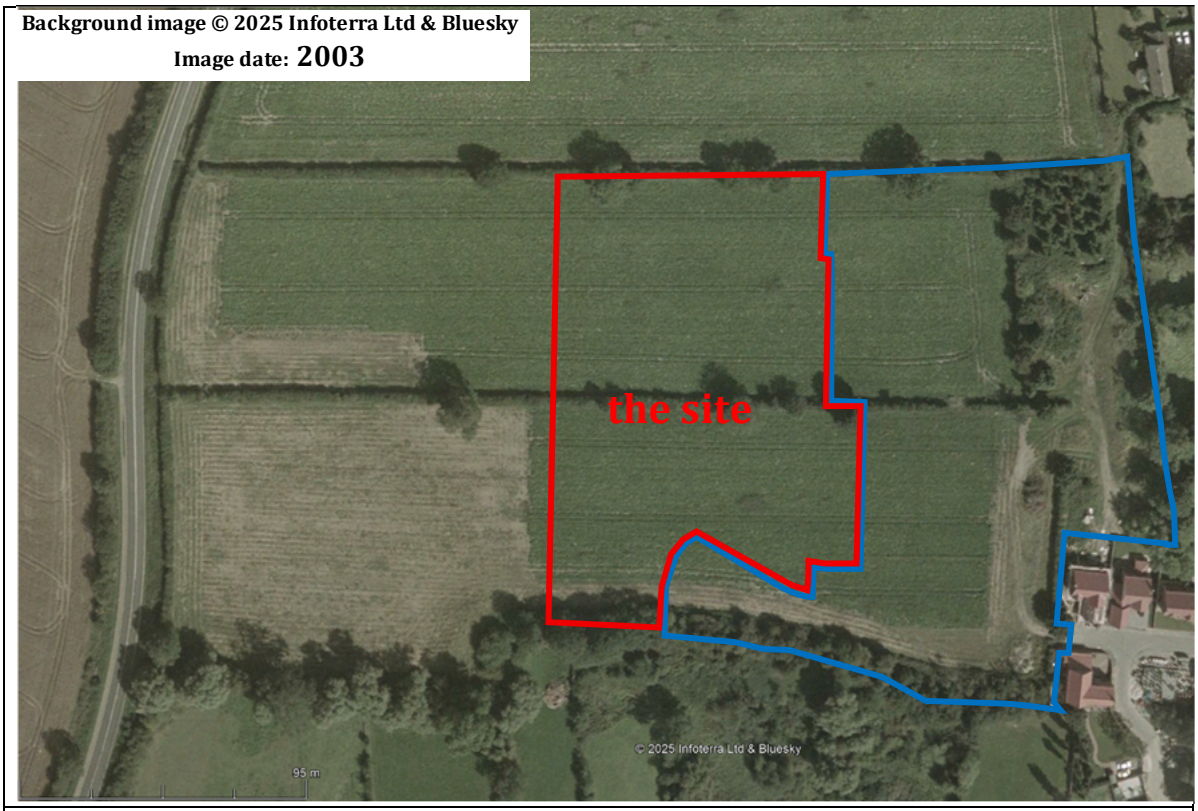

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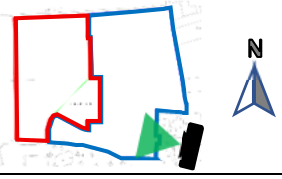
Background image © 2025 Google

Historical photo: 1 *Date:* Mar 2025
Photo direction: West
Description: Google Streetview image of the site showing (centre) on-site mound and concrete silo

Camera position:



Background image © 2025 Google

Historical photo: 2 *Date:* Mar 2025
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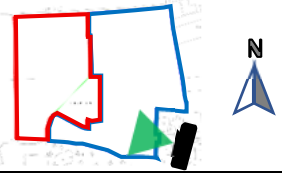

Site photo: 1 *Date:* 20 Aug 2025
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Description: North half of the site

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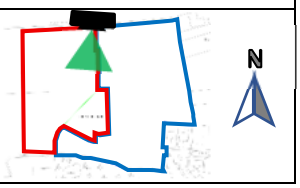

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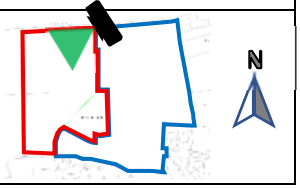

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Photo direction: -
Description: North half of the site – close up of stony topsoil ground surface

Camera position:

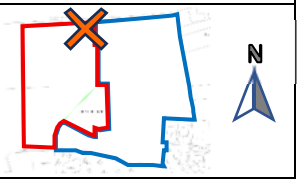

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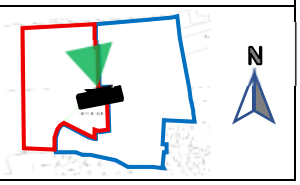
Photo direction: North
Description: North half of the site

Camera position:



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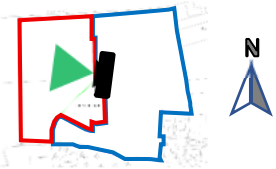
Description: North half of the site – and location of former farm track

Camera position:



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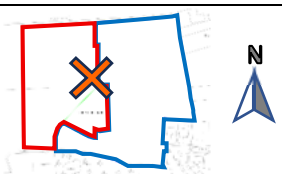

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Description: North half of the site – close up of location of former farm track

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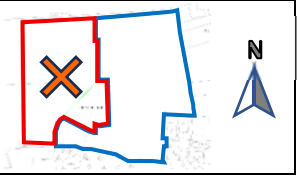

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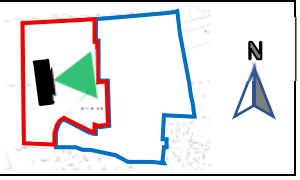

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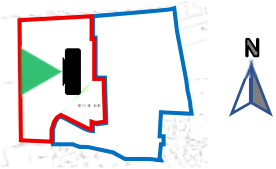
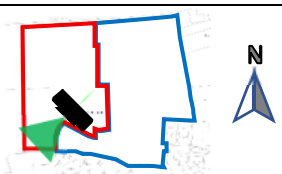
Photo direction: West
Description: North half of the site – location of former farm track

Camera position:



Site photo: 10 *Date:* 20 Aug 2025
Photo direction: Southwest
Description: South half of the site

Camera position:



Site photo: 11 *Date:* 20 Aug 2025
Photo direction: East
Description: Current on-site builder's compound – and existing pile of site-won soil and stone

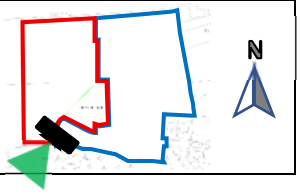
Camera position:

Site photo: 12 *Date:* 20 Aug 2025
Photo direction: Northeast
Description: Current on-site builder's compound

Camera position:

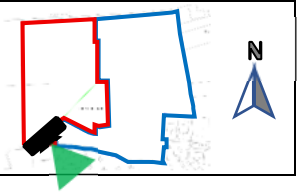
Site photo: 13 *Date:* 20 Aug 2025
Photo direction: Southwest
Description: Drain / stream adjacent to the south of the site where banks are c. 1.5m-high

Camera position:



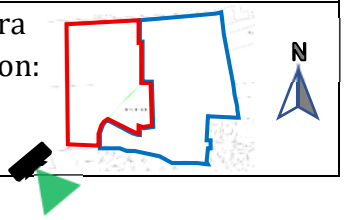
Site photo: 14 *Date:* 20 Aug 2025
Photo direction: Southeast
Description: Drain / stream adjacent to the south of the site where banks are c. 1.5m-high

Camera position:



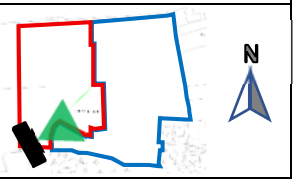
Site photo: 15 *Date:* 20 Aug 2025
Photo direction: Southeast
Description: Drain / stream off-site, downstream where banks are c. 0.4m-high

Camera position:



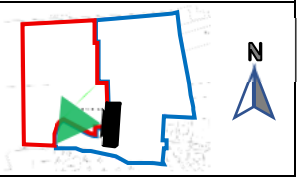
Site photo: 16 *Date:* 20 Aug 2025
Photo direction: Northeast
Description: Edge of adjacent balancing pond and builder's compound

Camera position:



Site photo: 17 *Date:* 20 Aug 2025
Photo direction: West
Description: Current on-site builder's compound

Camera position:



Site photo: 18 *Date:* 20 Aug 2025
Photo direction: North
Description: Current on-site builder's compound

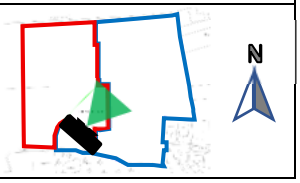
Camera position:

Site photo: 19 *Date:* 20 Aug 2025
Photo direction: Southeast
Description: Current on-site builder's compound – mortar mixing tower silo

Camera position:

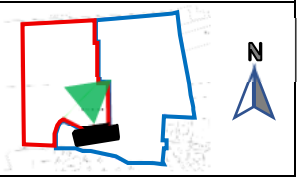
Site photo: 20 *Date:* 20 Aug 2025
Photo direction: Northeast
Description: Current on-site builder's compound – welfare cabins

Camera position:



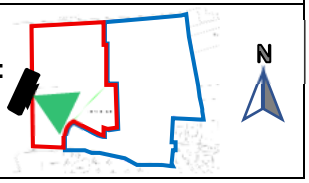
Site photo: 21 *Date:* 20 Aug 2025
Photo direction: Northeast
Description: Current on-site builder's compound – soil heap (left) and building material storage

Camera position:



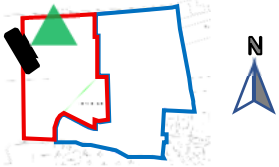
Site photo: 22 *Date:* 20 Jun 2025
Photo direction: East
Description: South half of the site

Camera position:



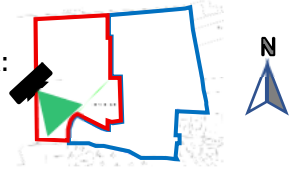
Site photo: 23 *Date:* 20 Jun 2025
Photo direction: Northeast
Description: North half of the site

Camera position:



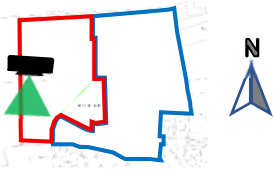
Site photo: 24 *Date:* 20 Jun 2025
Photo direction: Southeast
Description: South half of the site

Camera position:



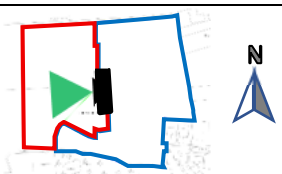
Site photo: 25 *Date:* 20 Jun 2025
Photo direction: South
Description: South half of the site

Camera position:



Site photo: 26 *Date:* 20 Jun 2025
Photo direction: West
Description: South half of the site and adjacent land to the west

Camera position:

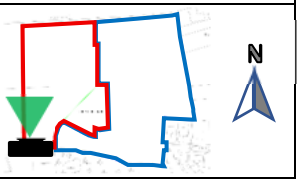


Site photo: 27 *Date:* 20 Jun 2025
Photo direction: North/northeast
Description: South half of the site with central dividing tree/hedge line in rear

Camera position:

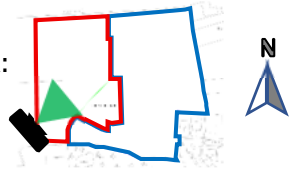
Site photo: 28 *Date:* 20 Jun 2025
Photo direction: North
Description: South half of the site with dividing hedge/tree line in rear

Camera position:



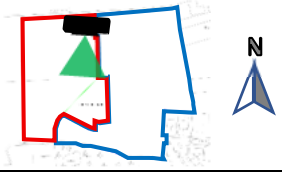
Site photo: 29 *Date:* 20 Jun 2025
Photo direction: Northeast
Description: South half of the site and dividing tree/hedge line

Camera position:



Site photo: 30 *Date:* 20 Jun 2025
Photo direction: South
Description: North half of site with dividing tree/hedge line shown to rear

Camera position:

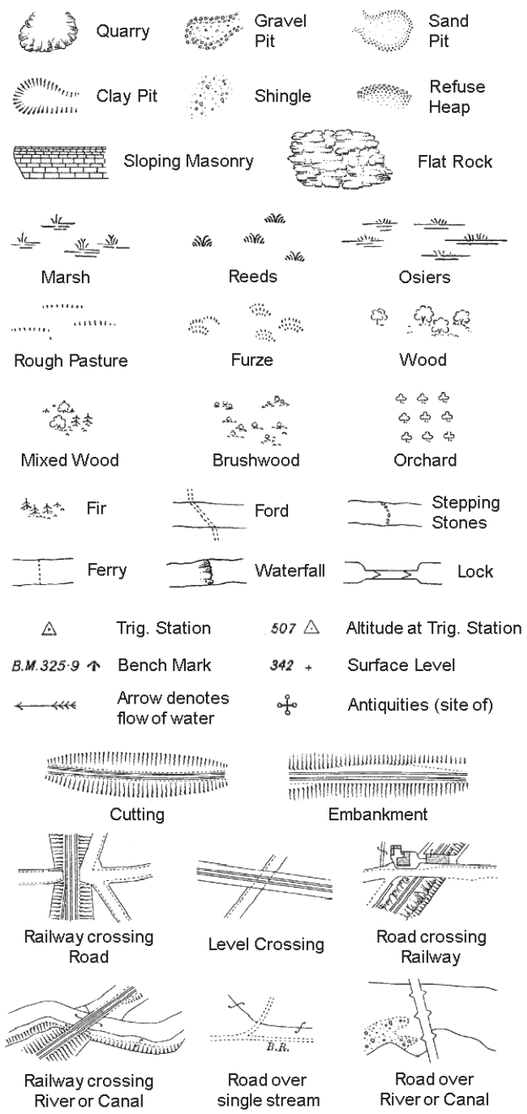


Appendix B

Historical Maps

Historical Mapping Legends

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



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

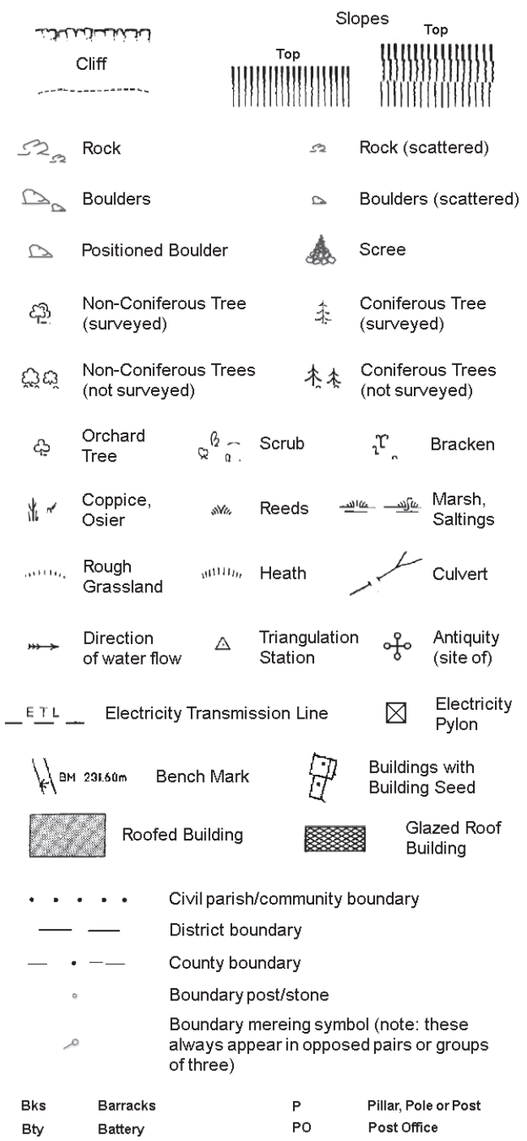
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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

County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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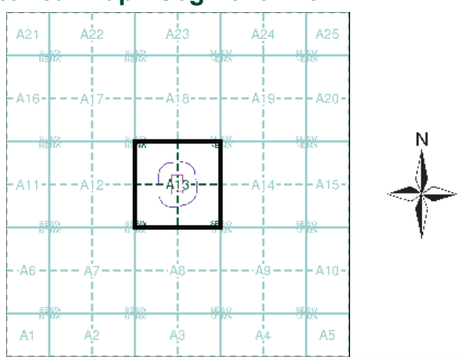
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1887	2
Lincolnshire	1:2,500	1907	3
Ordnance Survey Plan	1:2,500	1969 - 1970	4
Additional SIMs	1:2,500	1978 - 1989	5
Ordnance Survey Plan	1:2,500	1984 - 1985	6
Additional SIMs	1:2,500	1989	7
Large-Scale National Grid Data	1:2,500	1994	8
Large-Scale National Grid Data	1:2,500	1995	9
Historical Aerial Photography	1:2,500	1999	10

Historical Map - Segment A13



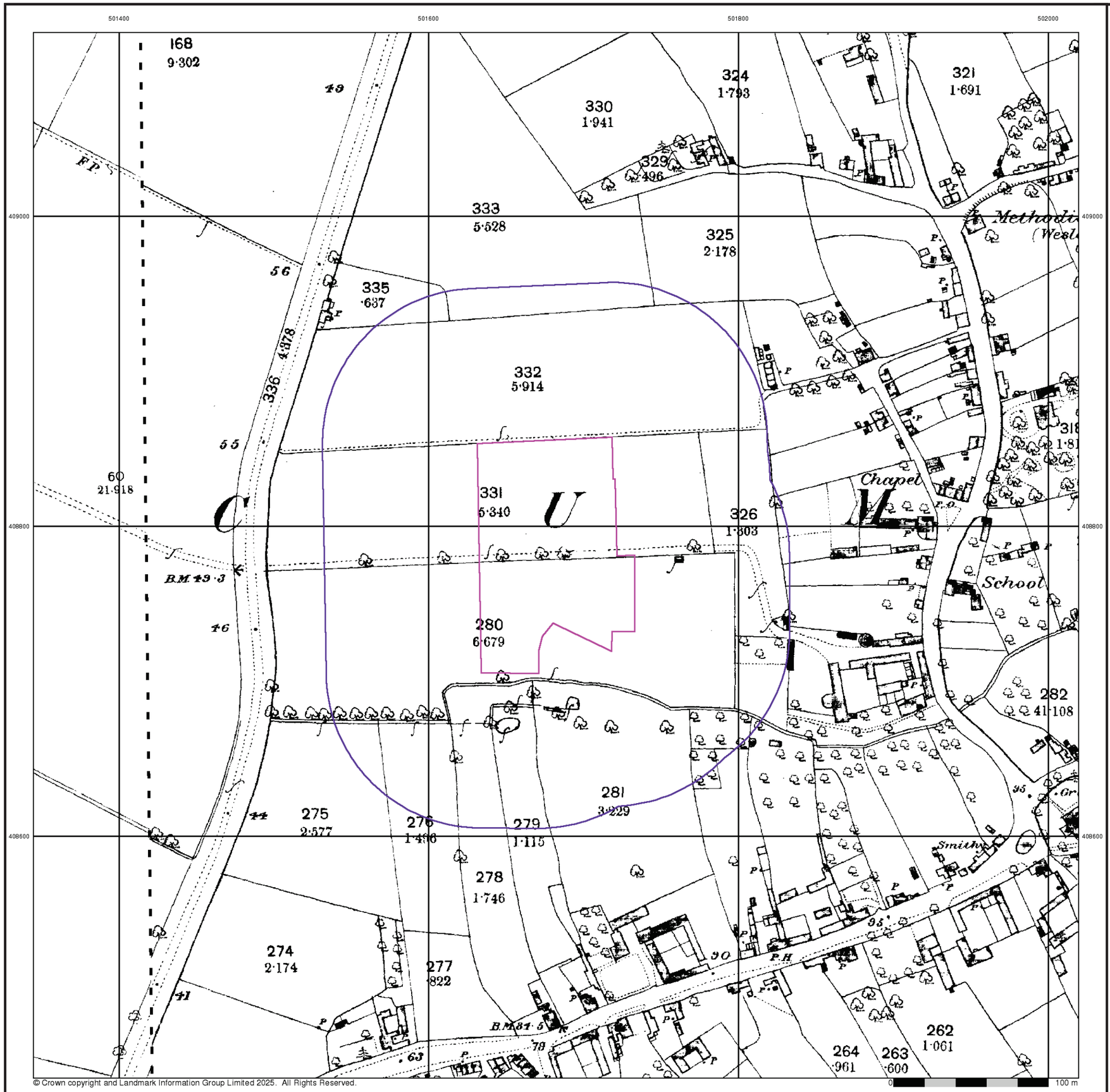
Order Details

Order Number: 382848583_1_1
Customer Ref: RL2025-08-06
National Grid Reference: 501680, 408780
Slice: A
Site Area (Ha): 1.27
Search Buffer (m): 100

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



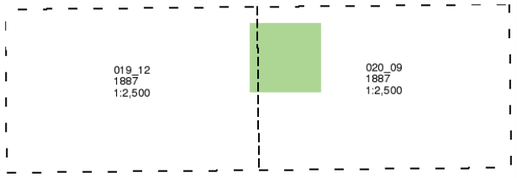
Lincolnshire

Published 1887

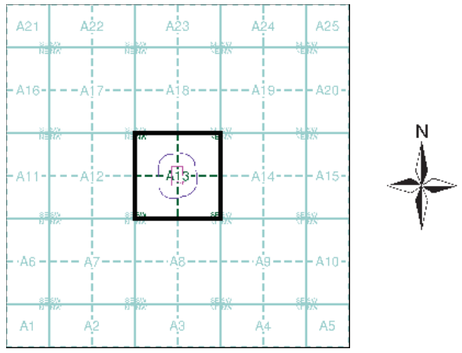
Source map scale - 1:2,500

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)



Historical Map - Segment A13



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	100

Site Details

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Landmark INFORMATION GROUP
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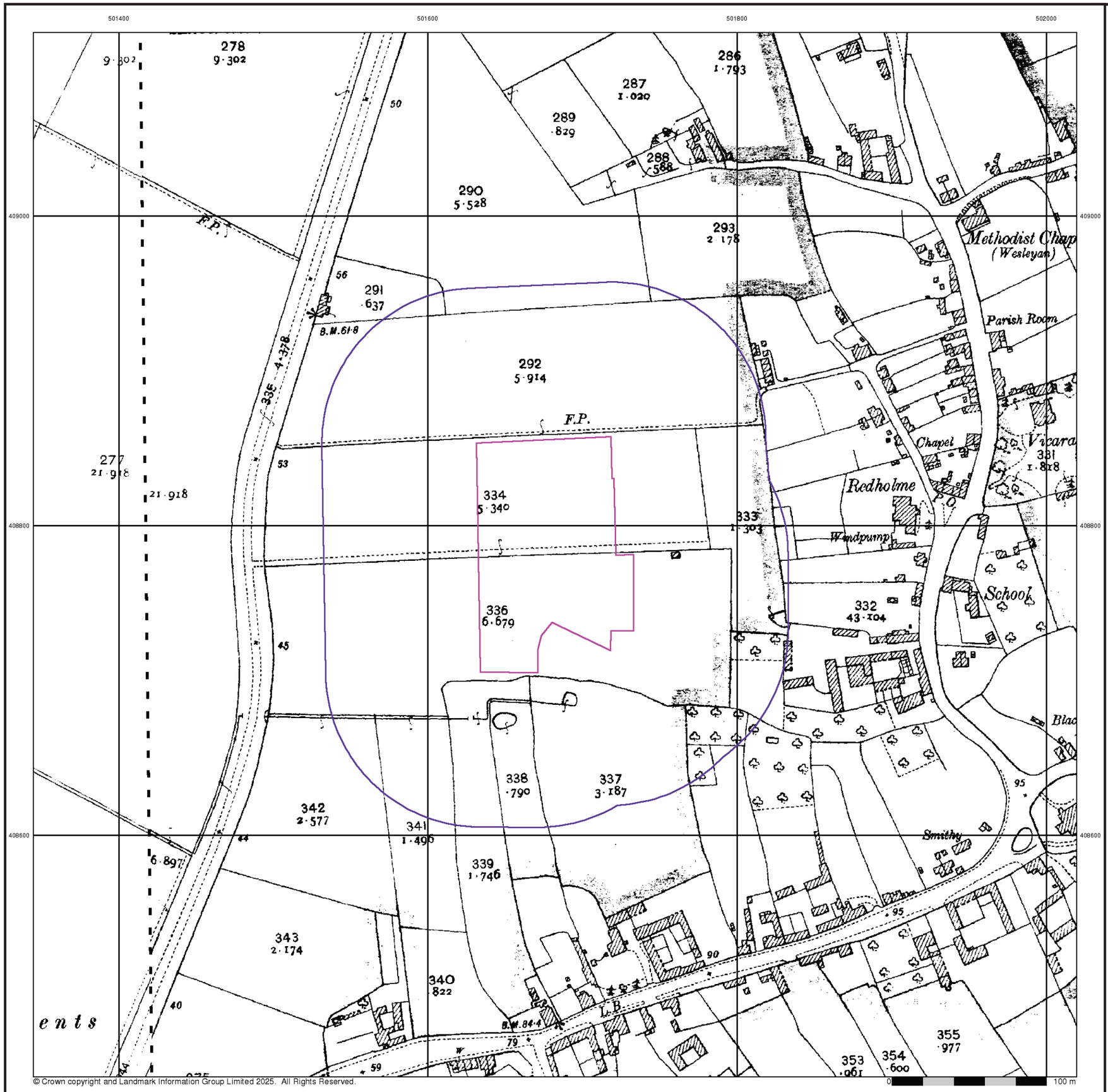


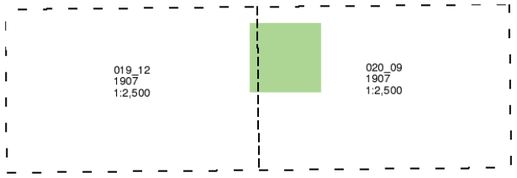
Lincolnshire

Published 1907

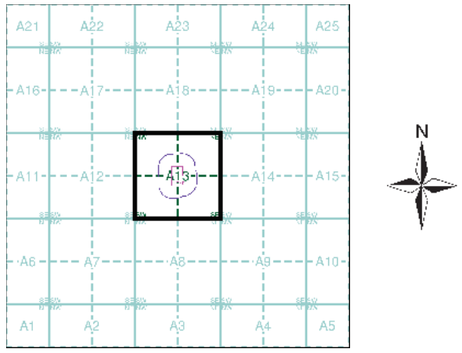
Source map scale - 1:2,500

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)



Historical Map - Segment A13



Order Details

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Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	100

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

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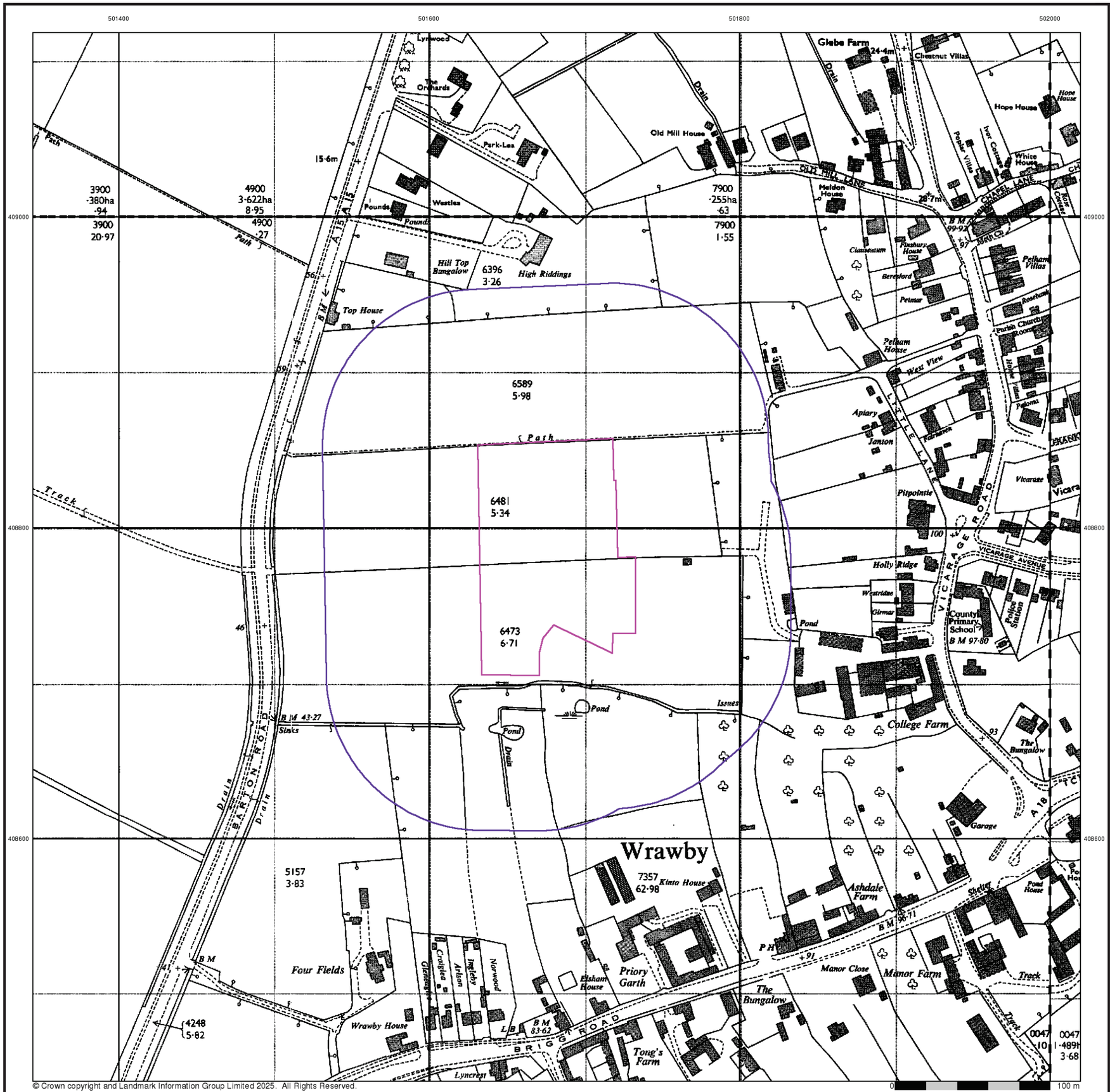
Web: www.envirocheck.co.uk



HUMBERSIDE MATERIALS LABORATORY LTD.

Ordnance Survey Plan

Published 1969 - 1970

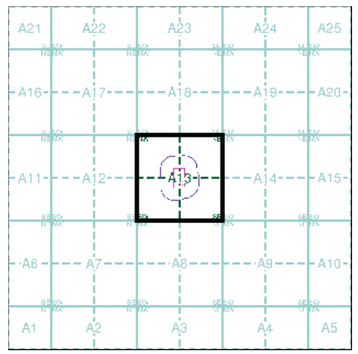
Source map scale - 1:2,500

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)

TA0109 1970 1:2,500	TA0209 1969 1:2,500
TA0108 1969 1:2,500	TA0208 1970 1:2,500

Historical Map - Segment A13



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
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Site Details

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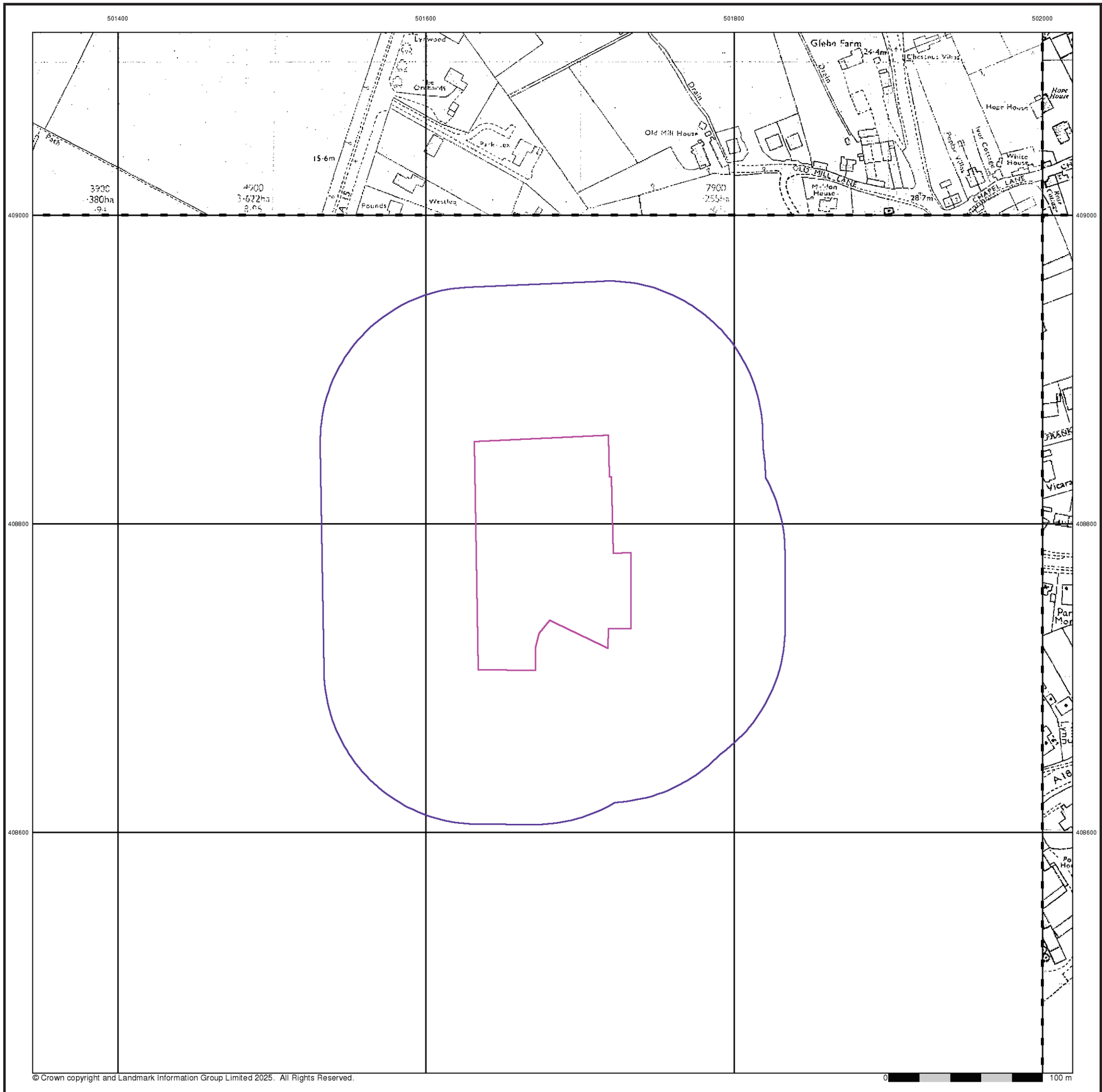


0 100 m

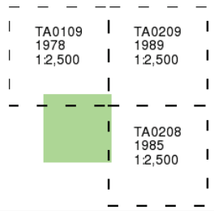
Additional SIMs

Published 1978 - 1989

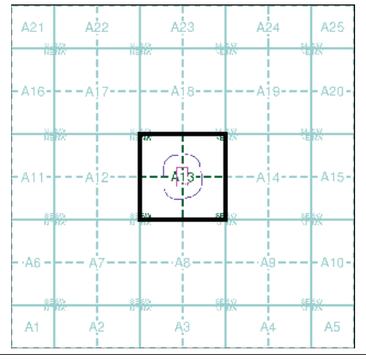
Source map scale - 1:2,500

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:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	100

Site Details

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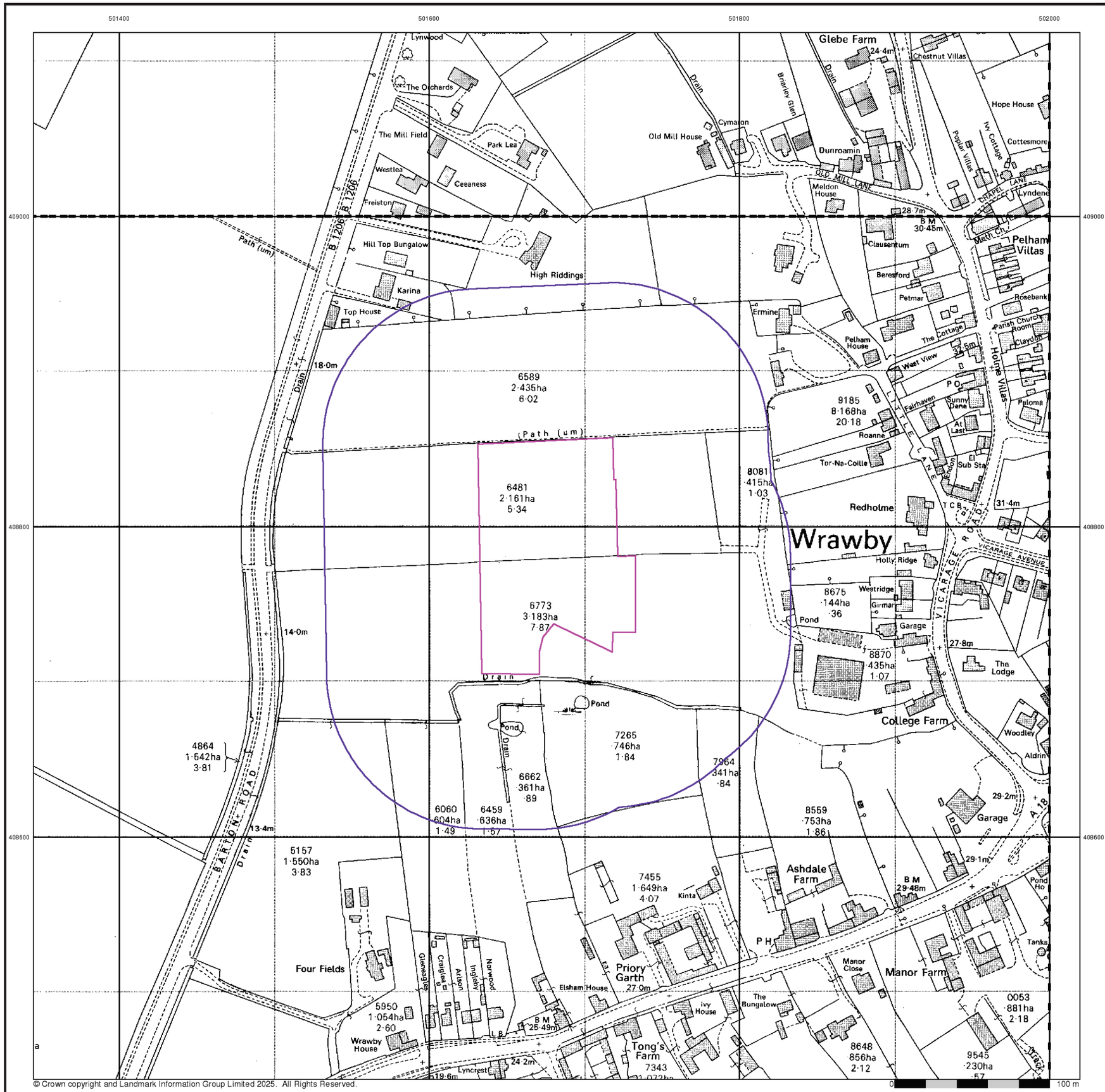


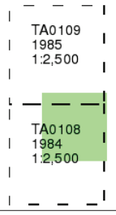
Ordnance Survey Plan

Published 1984 - 1985

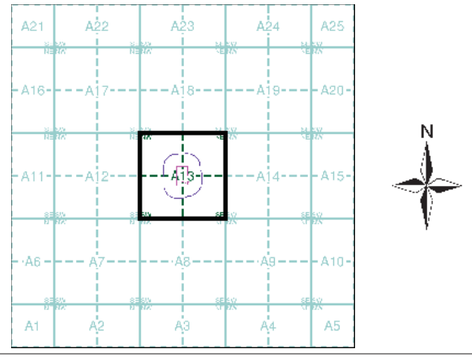
Source map scale - 1:2,500

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)



Historical Map - Segment A13



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	100

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

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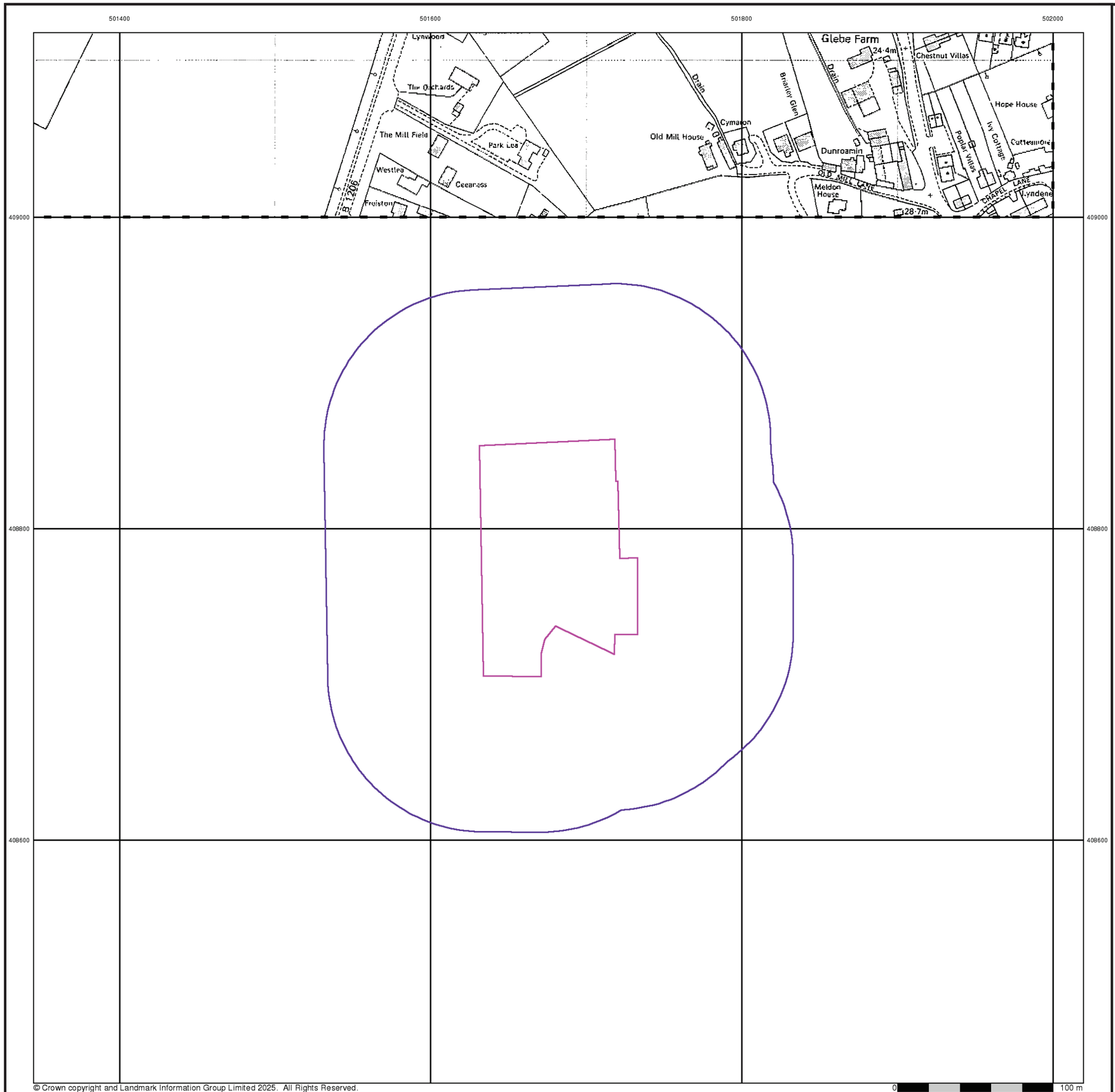


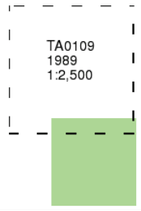
Additional SIMs

Published 1989

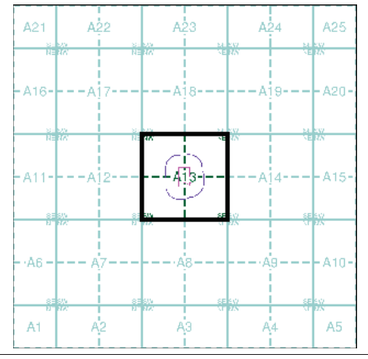
Source map scale - 1:2,500

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



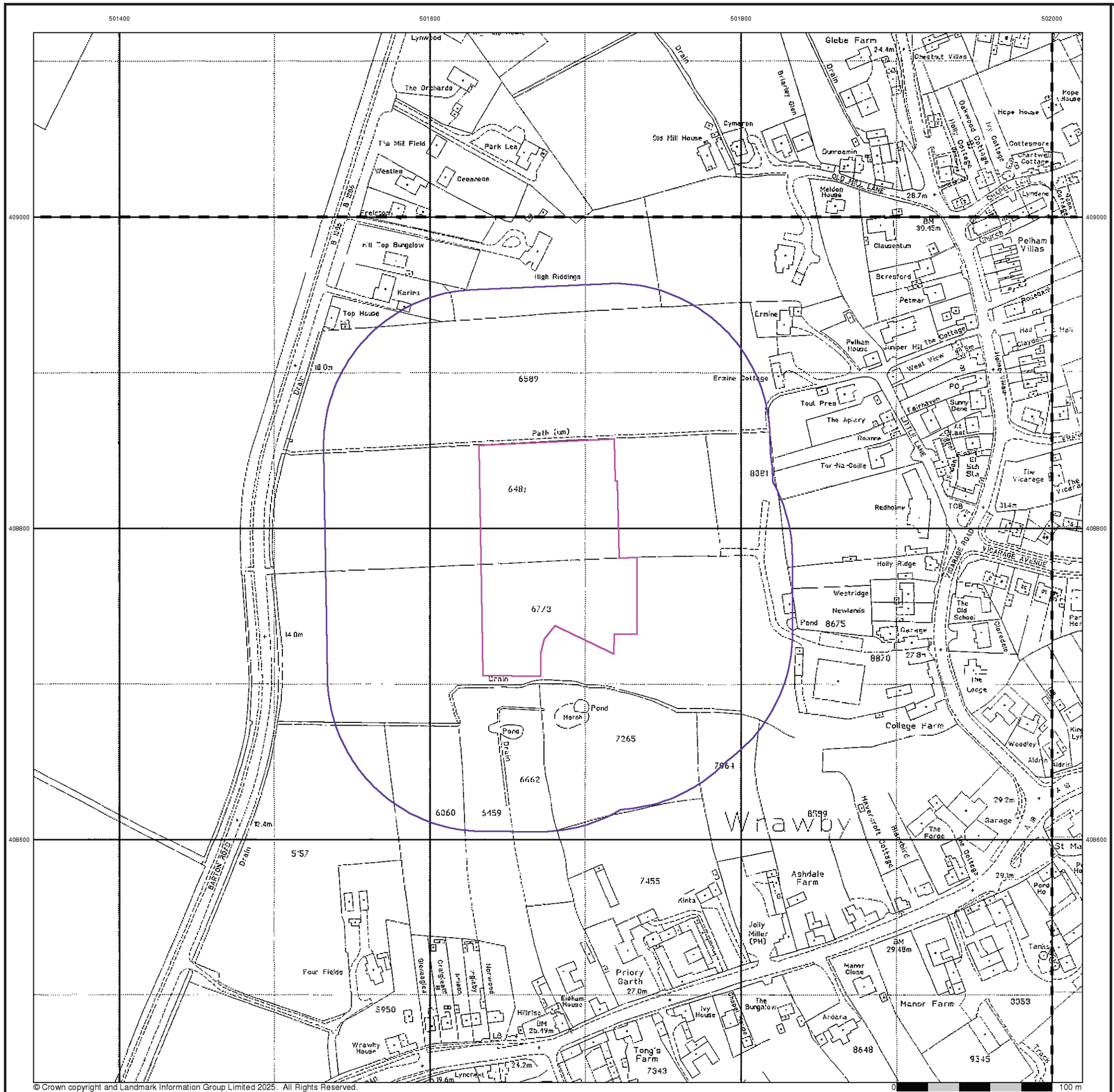
Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	100

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Large-Scale National Grid Data

Published 1994

Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM 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)

TA0109 1994 1:2,500
TA0209 1994 1:2,500
TA0108 1994 1:2,500
TA0208 1994 1:2,500

Historical Map - Segment A13

Order Details

Order Number:	382848583_1_1
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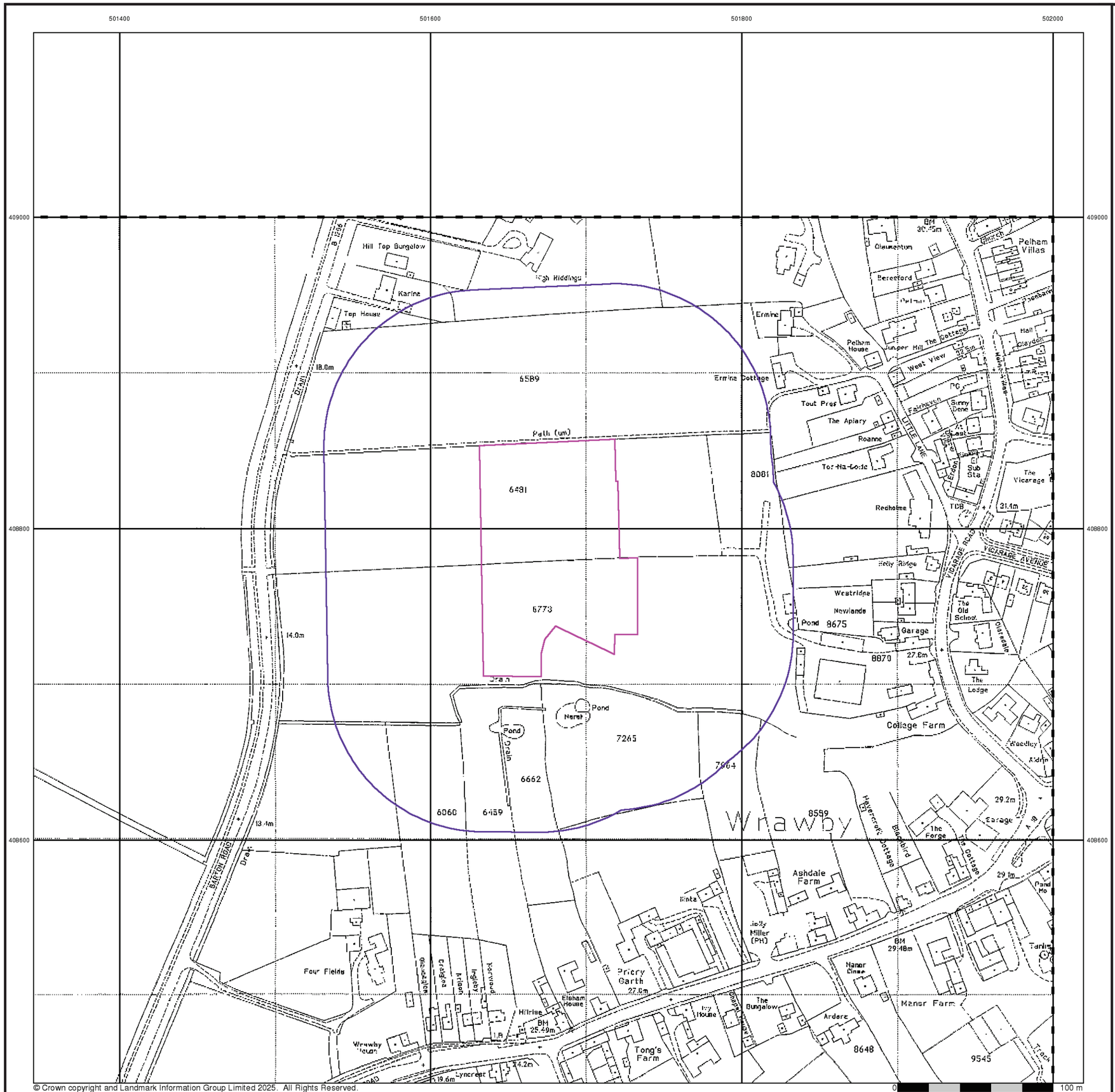


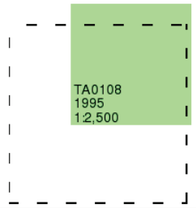
Large-Scale National Grid Data

Published 1995

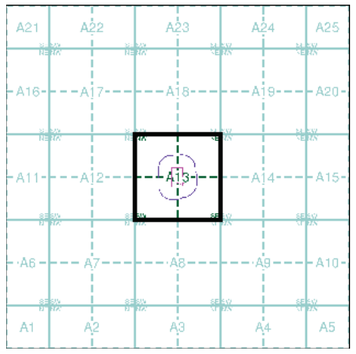
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM 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)



Historical Map - Segment A13



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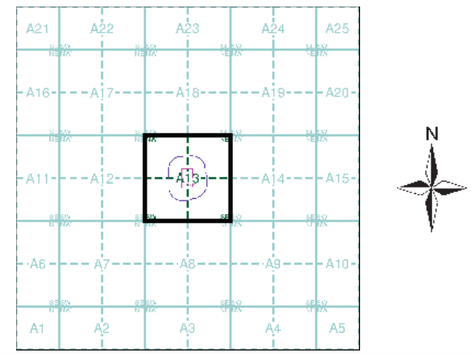
Historical Aerial Photography

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



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Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

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
Un-Fenced
Minor Roads
Fenced
Un-Fenced
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
Co. Boro. Bdy.
County Borough Boundary (England)
Co. Burgh Bdy.
County Burgh Boundary (Scotland)
R.D. Bdy.
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
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
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
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

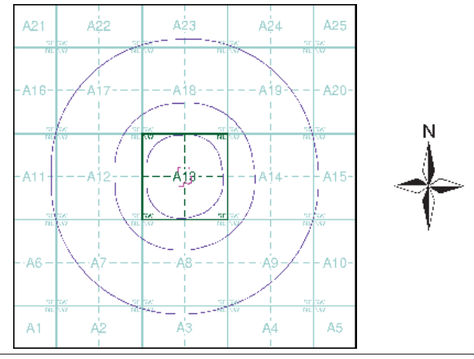
1:10,000 Raster Mapping

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
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m 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
Lincolnshire	1:10,560	1886	2
Lincolnshire	1:10,560	1908 - 1909	3
Lincolnshire	1:10,560	1938 - 1950	4
Lincolnshire	1:10,560	1946	5
Ordnance Survey Plan	1:10,000	1956	6
Ordnance Survey Plan	1:10,000	1960	7
Ordnance Survey Plan	1:10,000	1964	8
Ordnance Survey Plan	1:10,000	1973	9
Ordnance Survey Plan	1:10,000	1981 - 1988	10
10K Raster Mapping	1:10,000	2000	11
10K Raster Mapping	1:10,000	2006	12
VectorMap Local	1:10,000	2025	13

Historical Map - Slice A



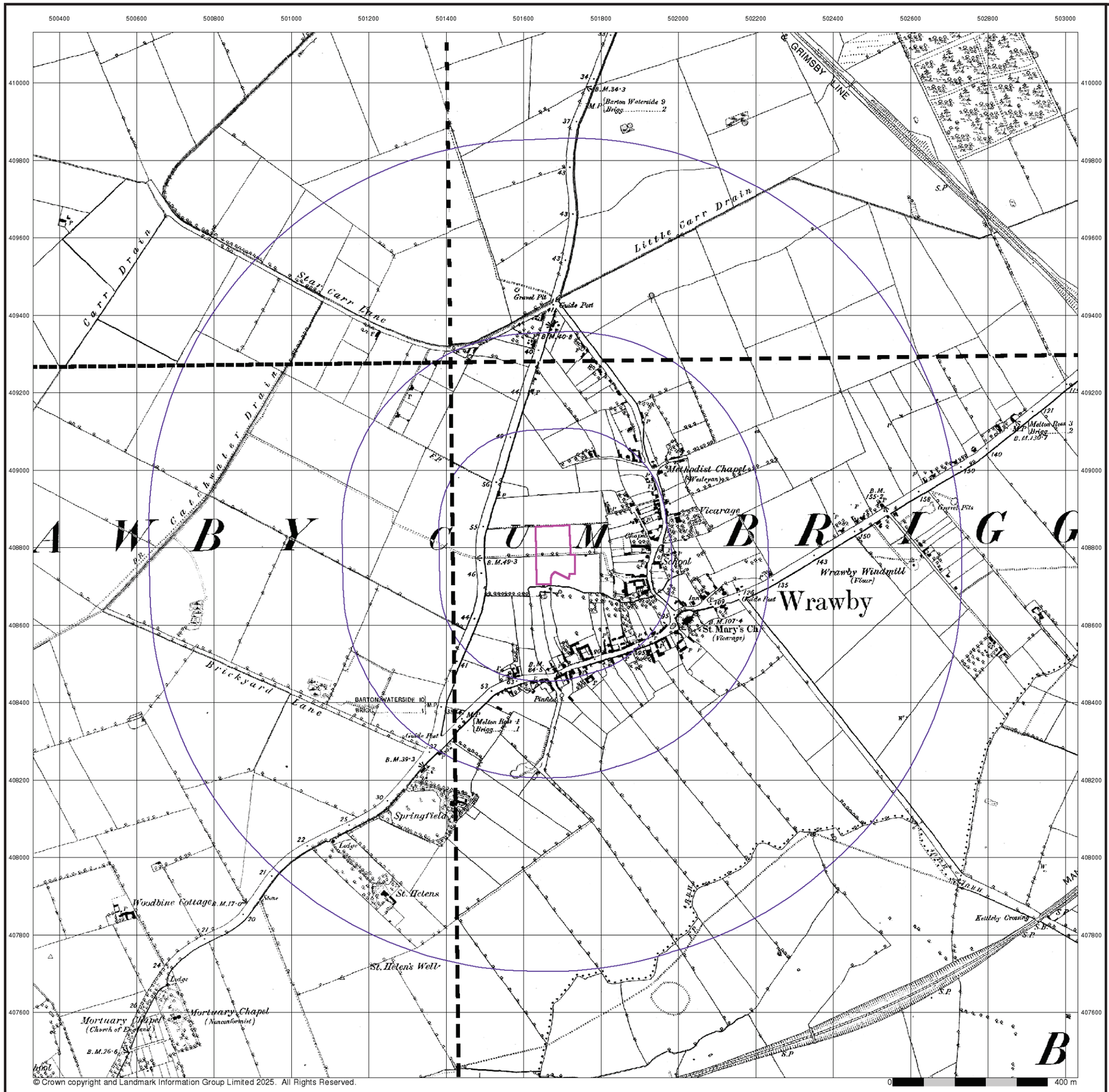
Order Details

Order Number: 382848583_1_1
Customer Ref: RL2025-08-06
National Grid Reference: 501680, 408780
Slice: A
Site Area (Ha): 1.27
Search Buffer (m): 1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Lincolnshire

Published 1886

Source map scale - 1:10,560

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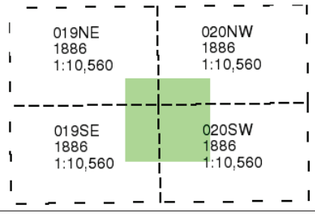
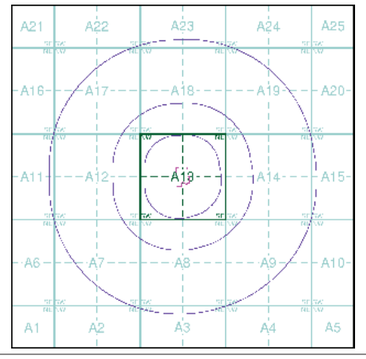
Map Name(s) and Date(s)



Historical Map - Slice A



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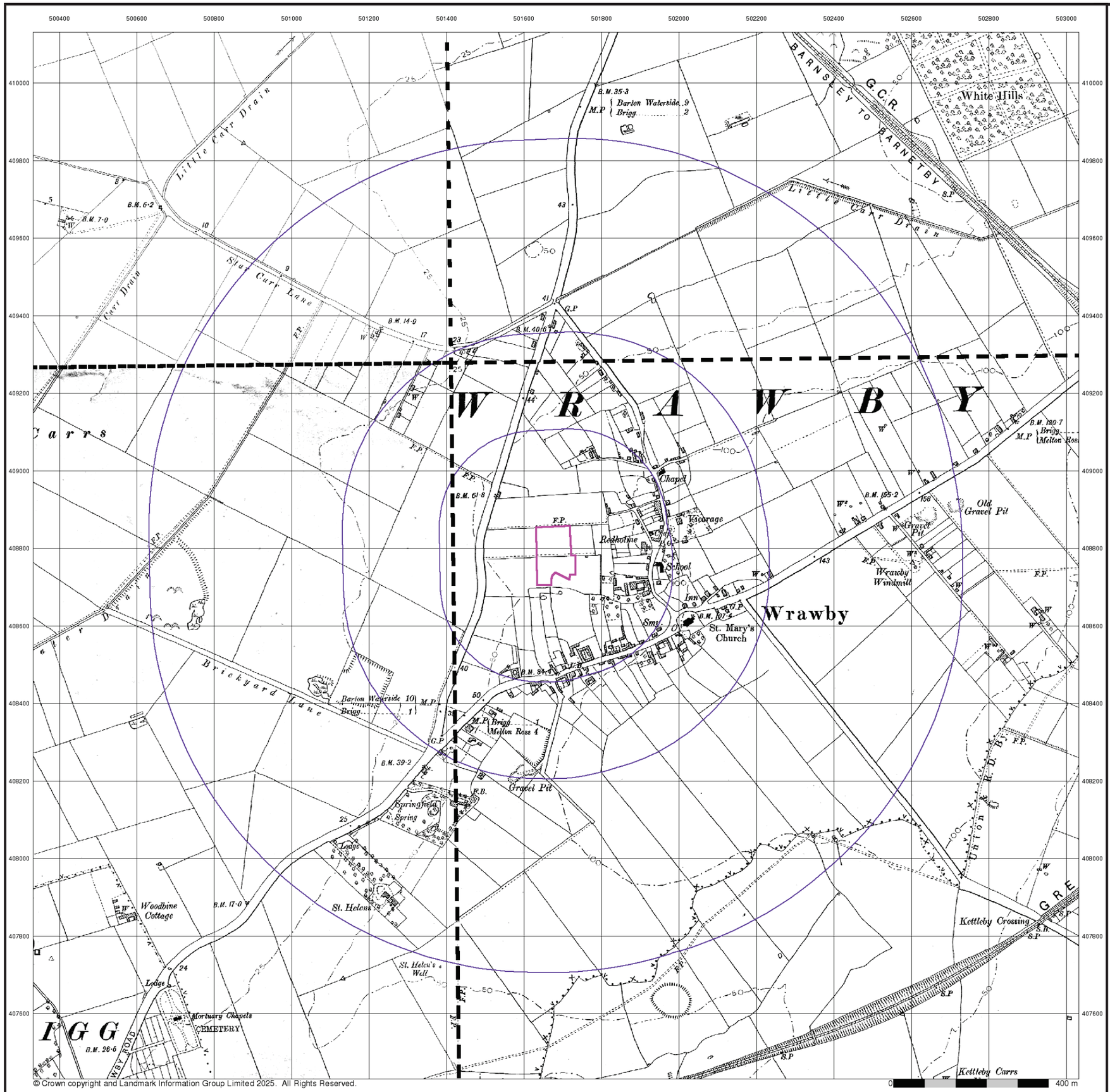

Lincolnshire

Published 1908 - 1909

Source map scale - 1:10,560

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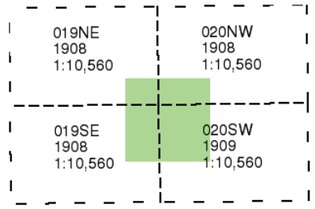
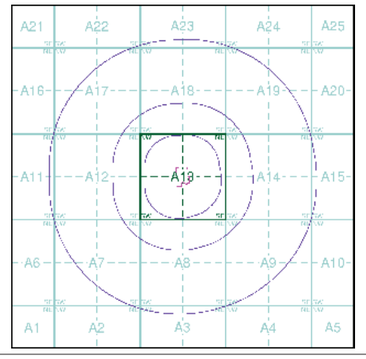


Historical Map - Slice A



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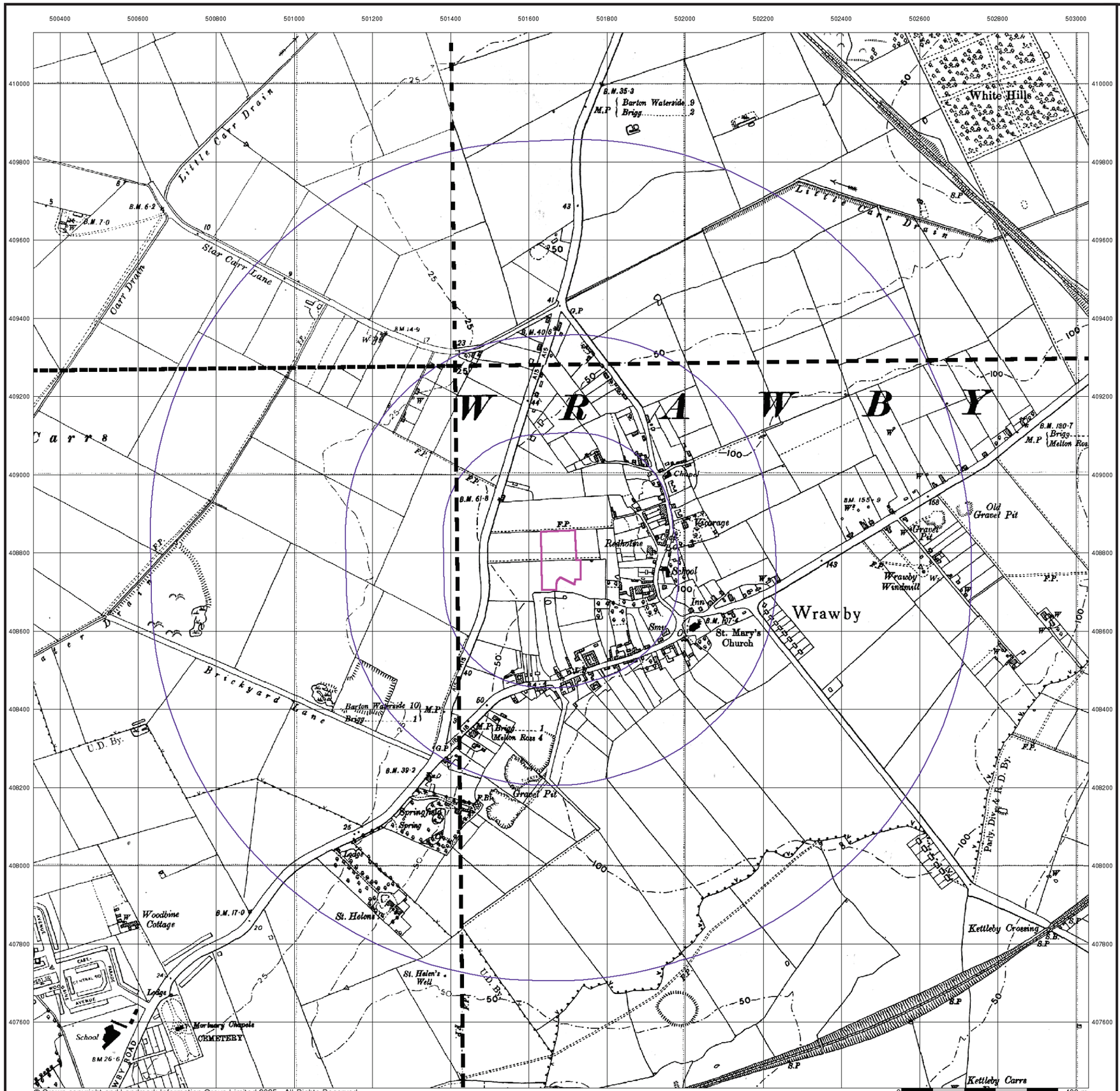

0 400 m

Lincolnshire

Published 1938 - 1950

Source map scale - 1:10,560

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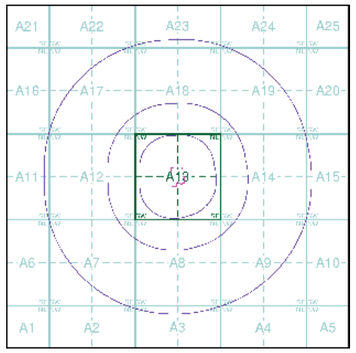
Map Name(s) and Date(s)

019NE 1946 1:10,560	020NW 1950 1:10,560
019SE 1938 1:10,560	020SW 1950 1:10,560

Historical Map - Slice A



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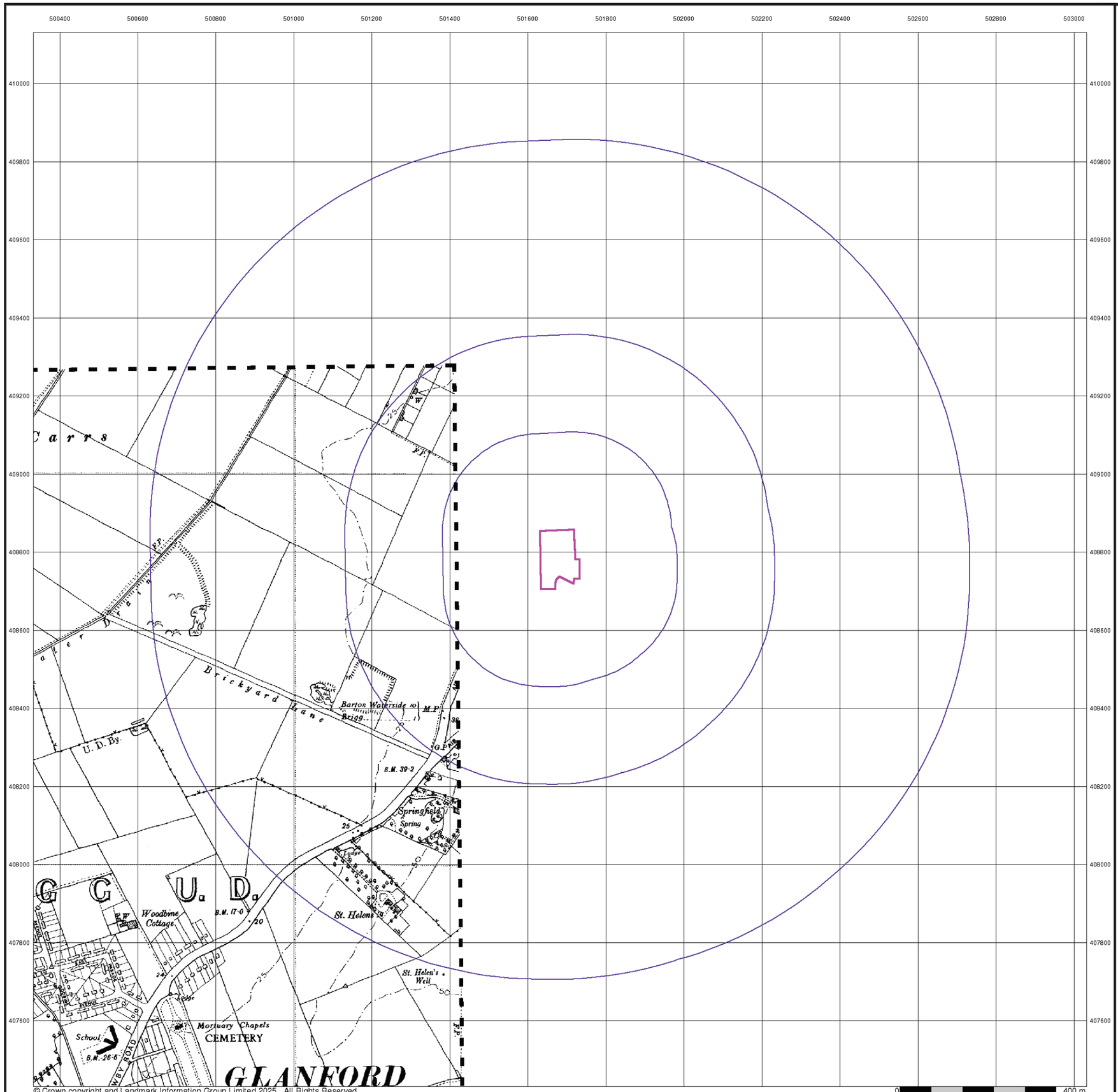

Lincolnshire

Published 1946

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.

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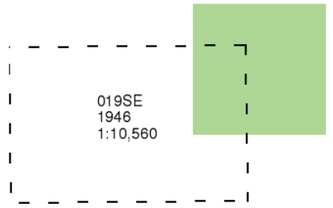
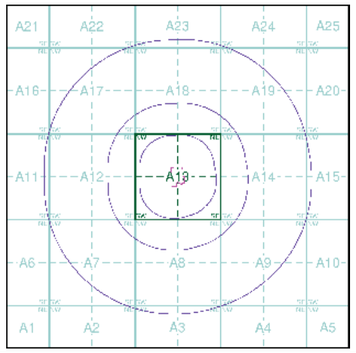


Historical Map - Slice A



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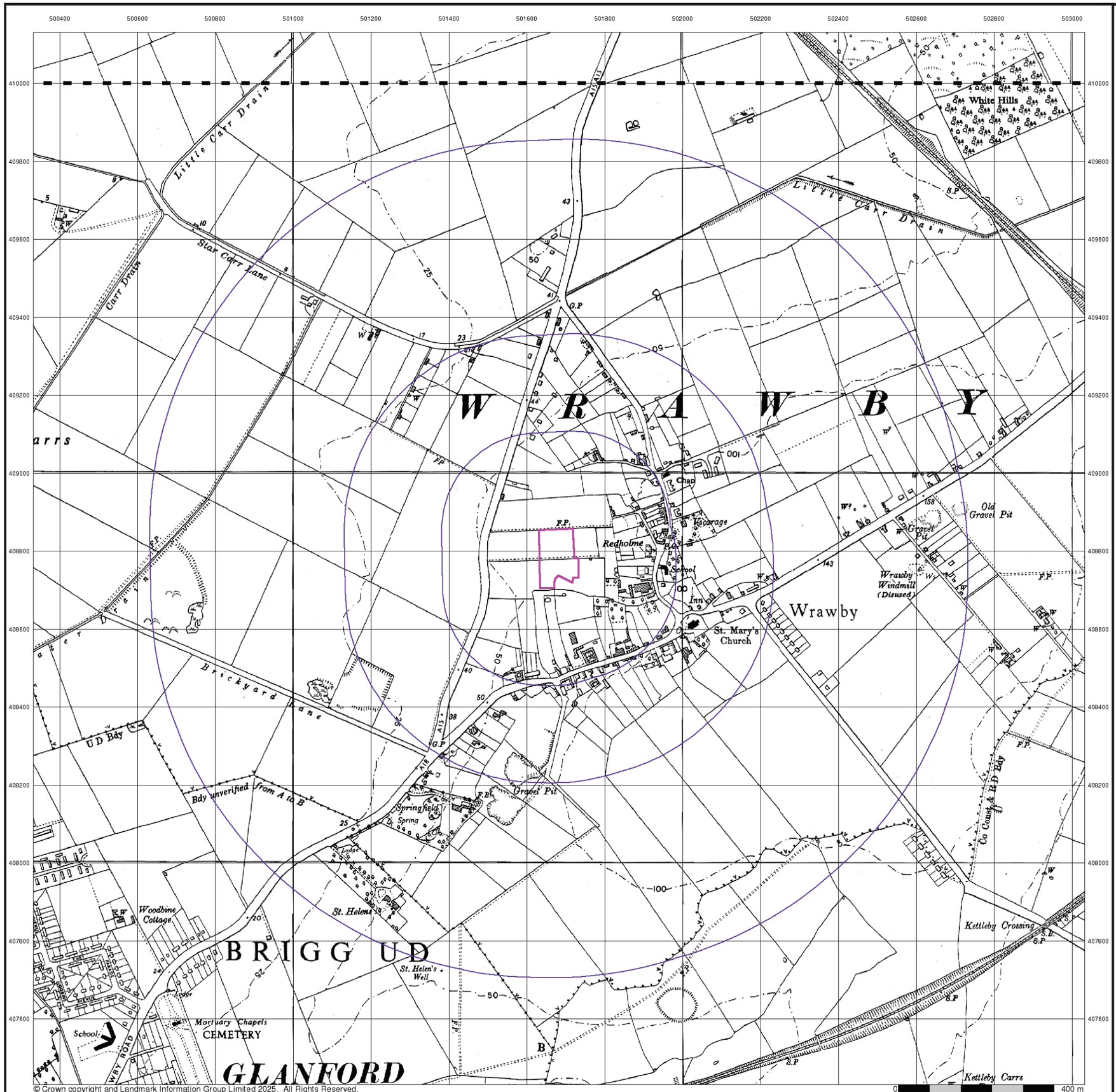

Ordnance Survey Plan

Published 1956

Source map scale - 1:10,000

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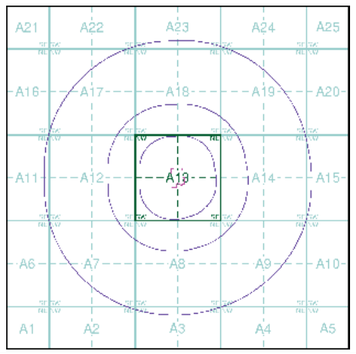
Map Name(s) and Date(s)

TA01SW
1956
1:10,560

TA00NW
1956
1:10,560

Historical Map - Slice A



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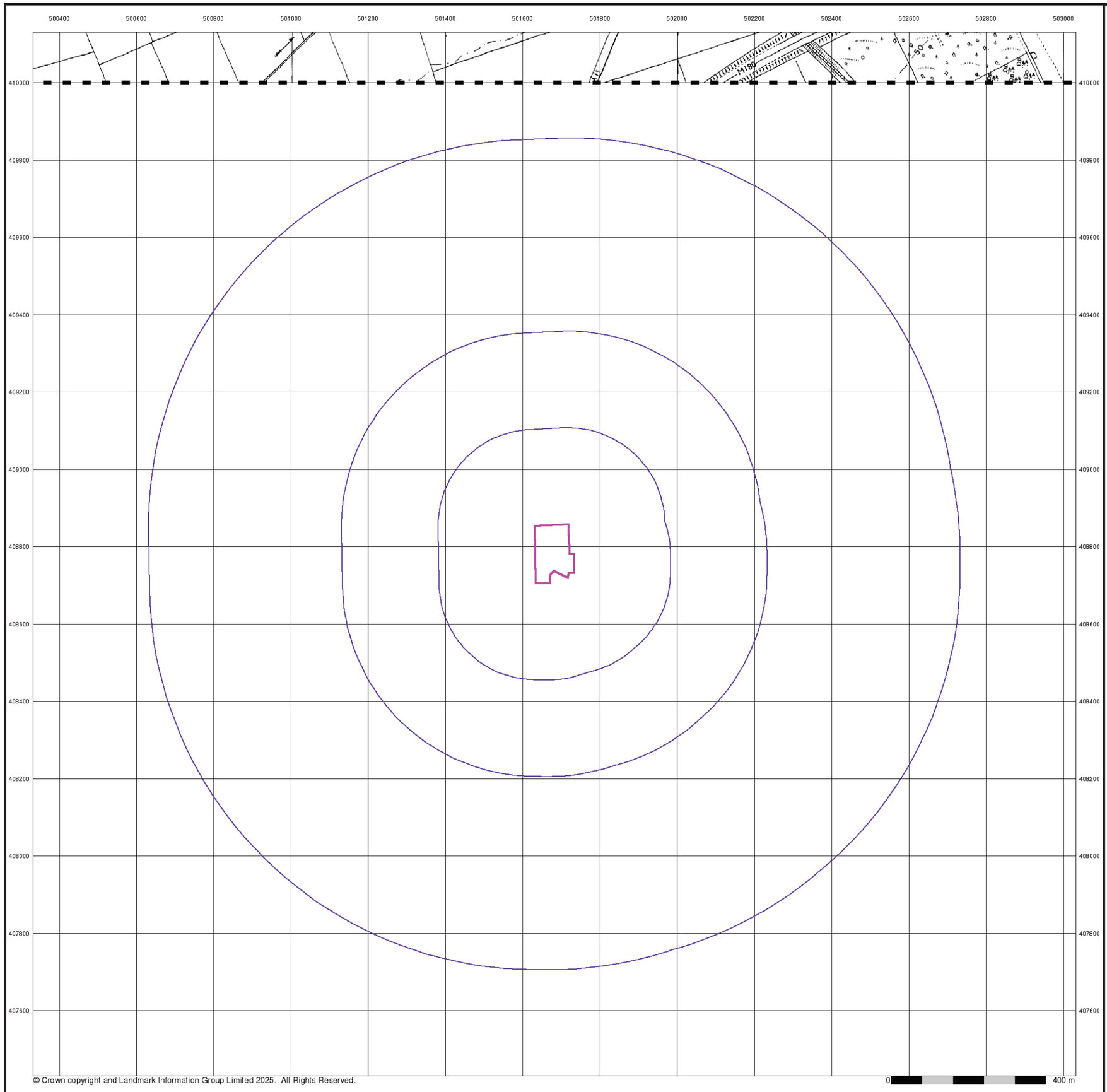

Ordnance Survey Plan
Published 1960
Source map scale - 1:10,000

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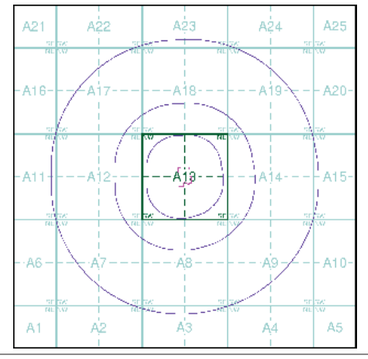
Map Name(s) and Date(s)

TA01SW
1960
1:10,560

Historical Map - Slice A



Order Details

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Site Details

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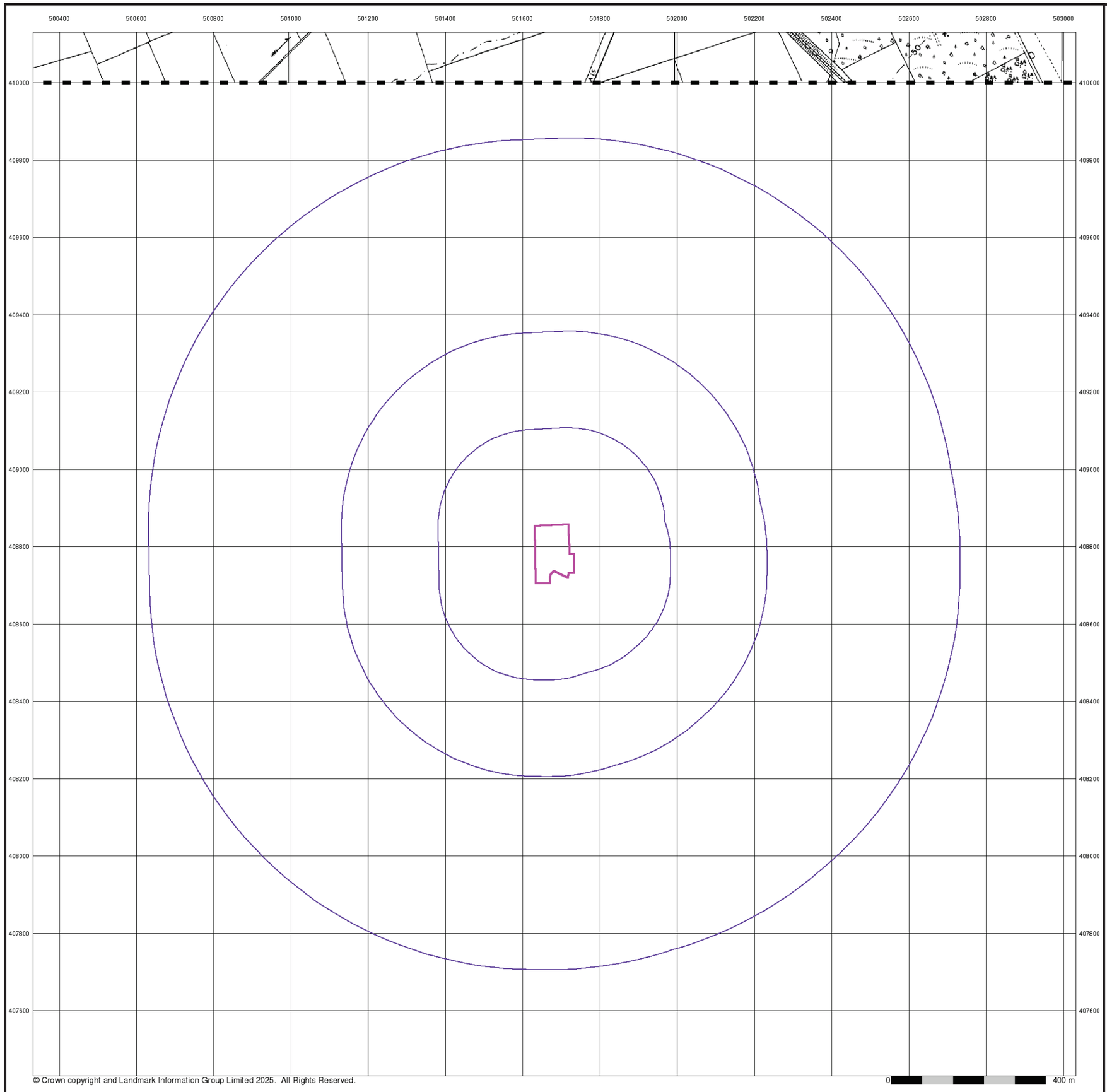

Ordnance Survey Plan
Published 1964
Source map scale - 1:10,000

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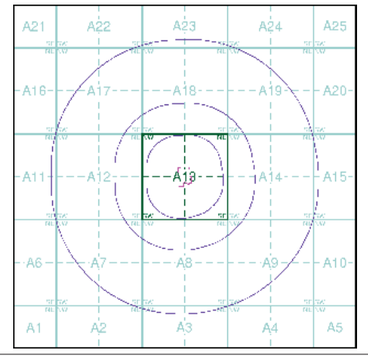
Map Name(s) and Date(s)

TA01SW
1964
1:10,560

Historical Map - Slice A



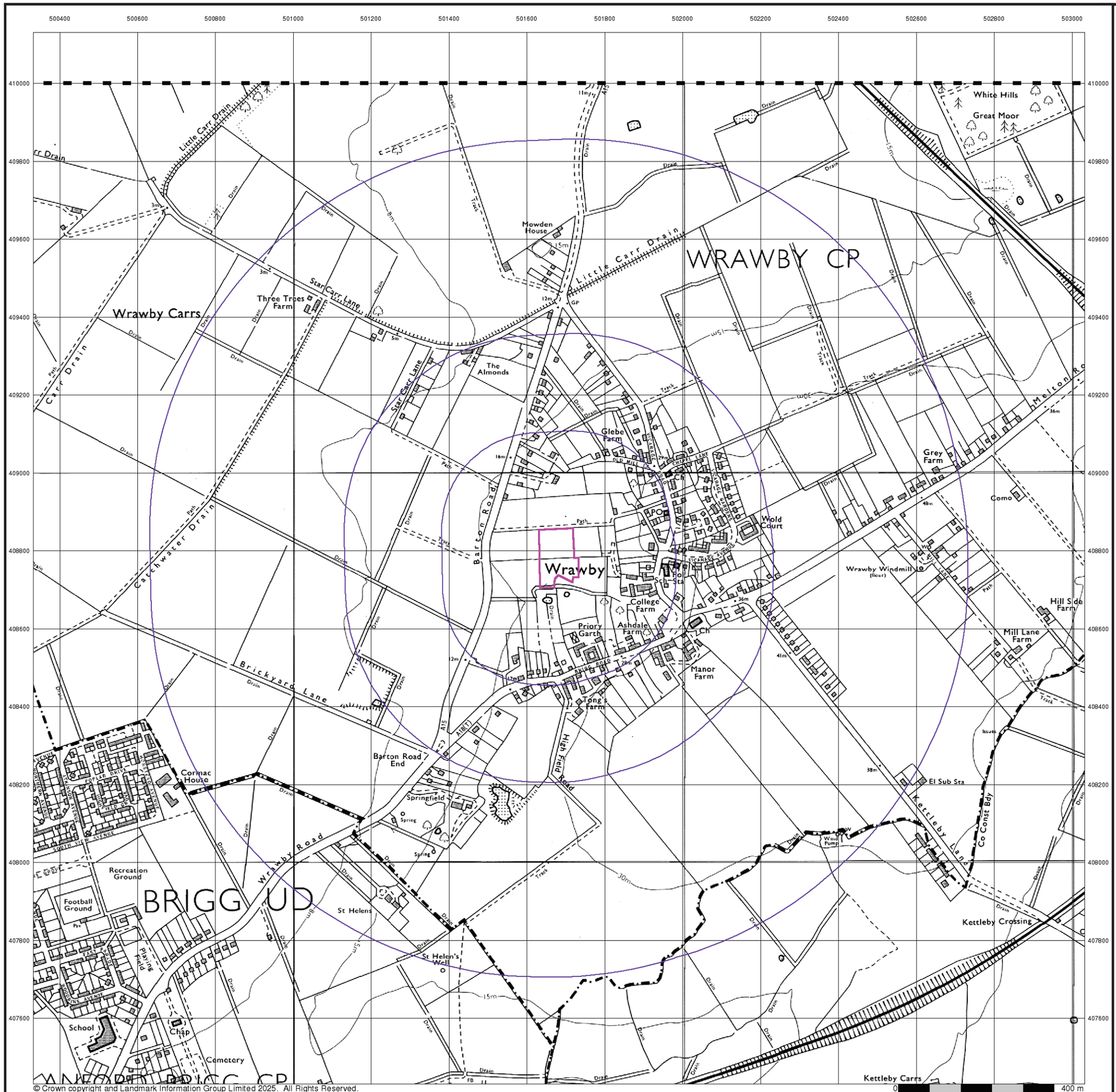
Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

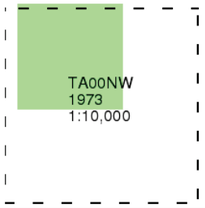
Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



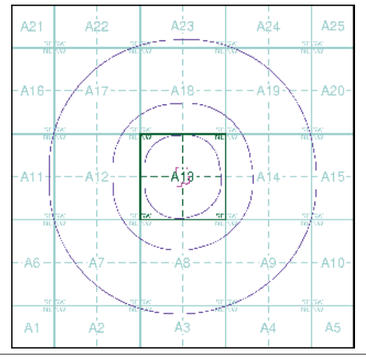
Ordnance Survey Plan
Published 1973
Source map scale - 1:10,000

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:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

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Landmark INFORMATION GROUP
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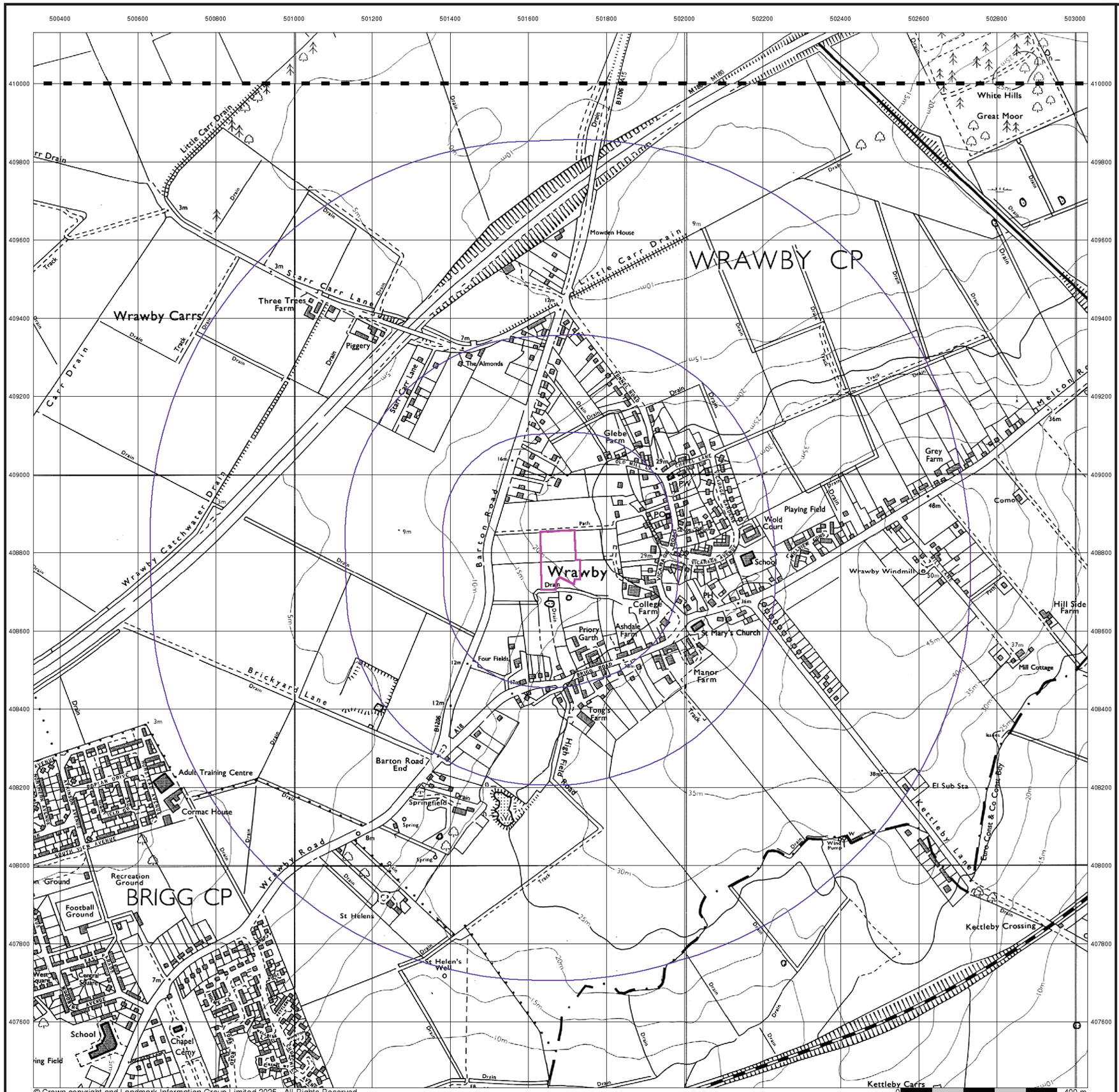


Ordnance Survey Plan

Published 1981 - 1988

Source map scale - 1:10,000

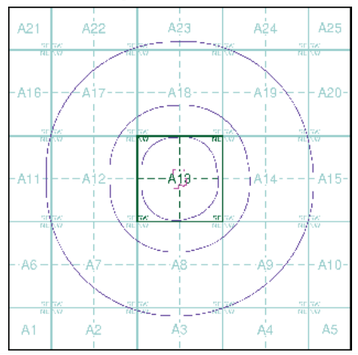
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some 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)

TA01SW
1981
1:10,000

TA00NW
1988
1:10,000

Historical Map - Slice A



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

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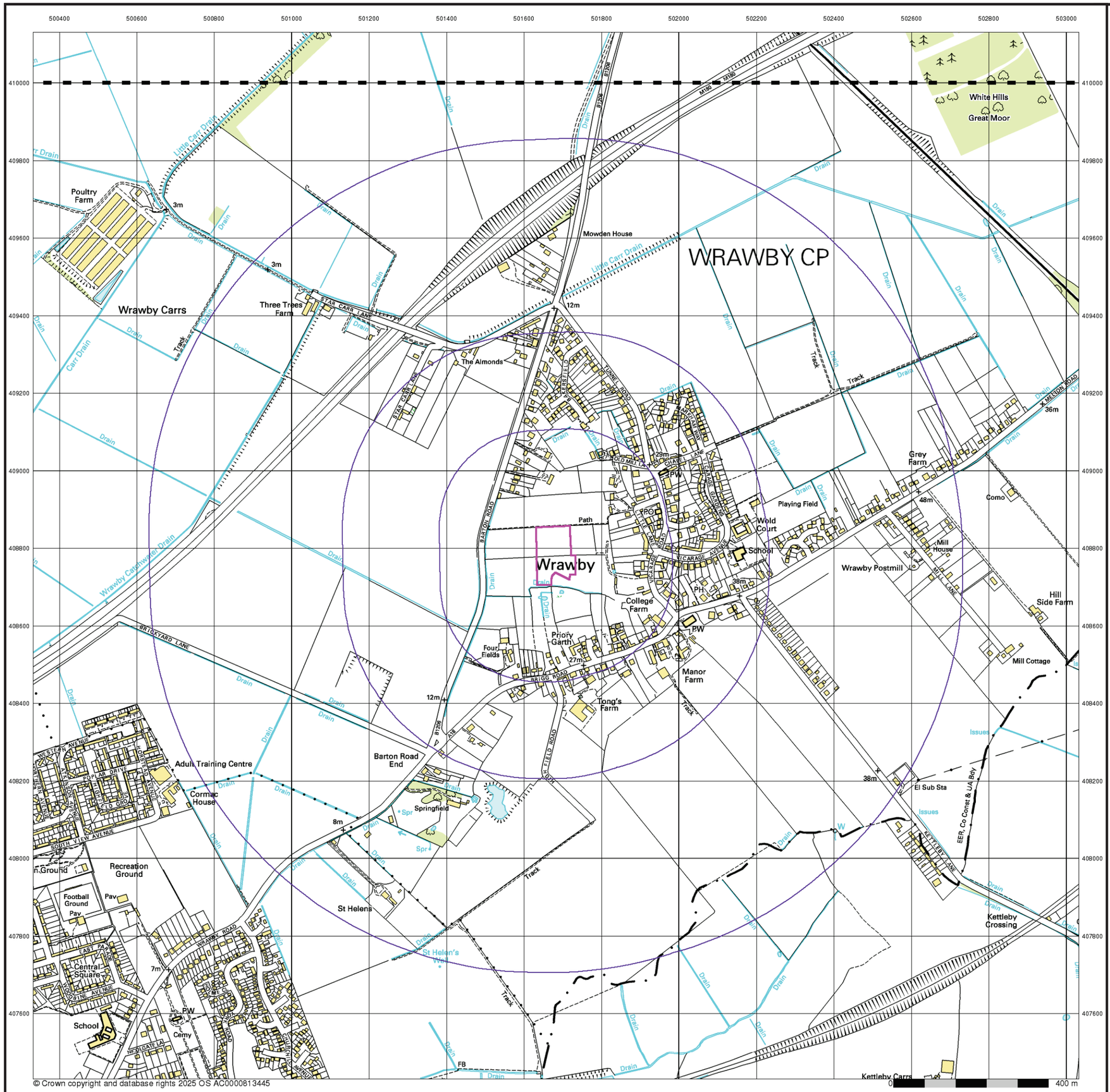
Web: www.envirocheck.co.uk



10k Raster Mapping

Published 2000

Source map scale - 1:10,000

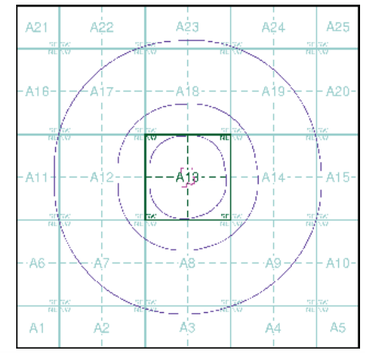
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks 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)

TA01SW
2000
1:10,000

TA00NW
2000
1:10,000

Historical Map - Slice A



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

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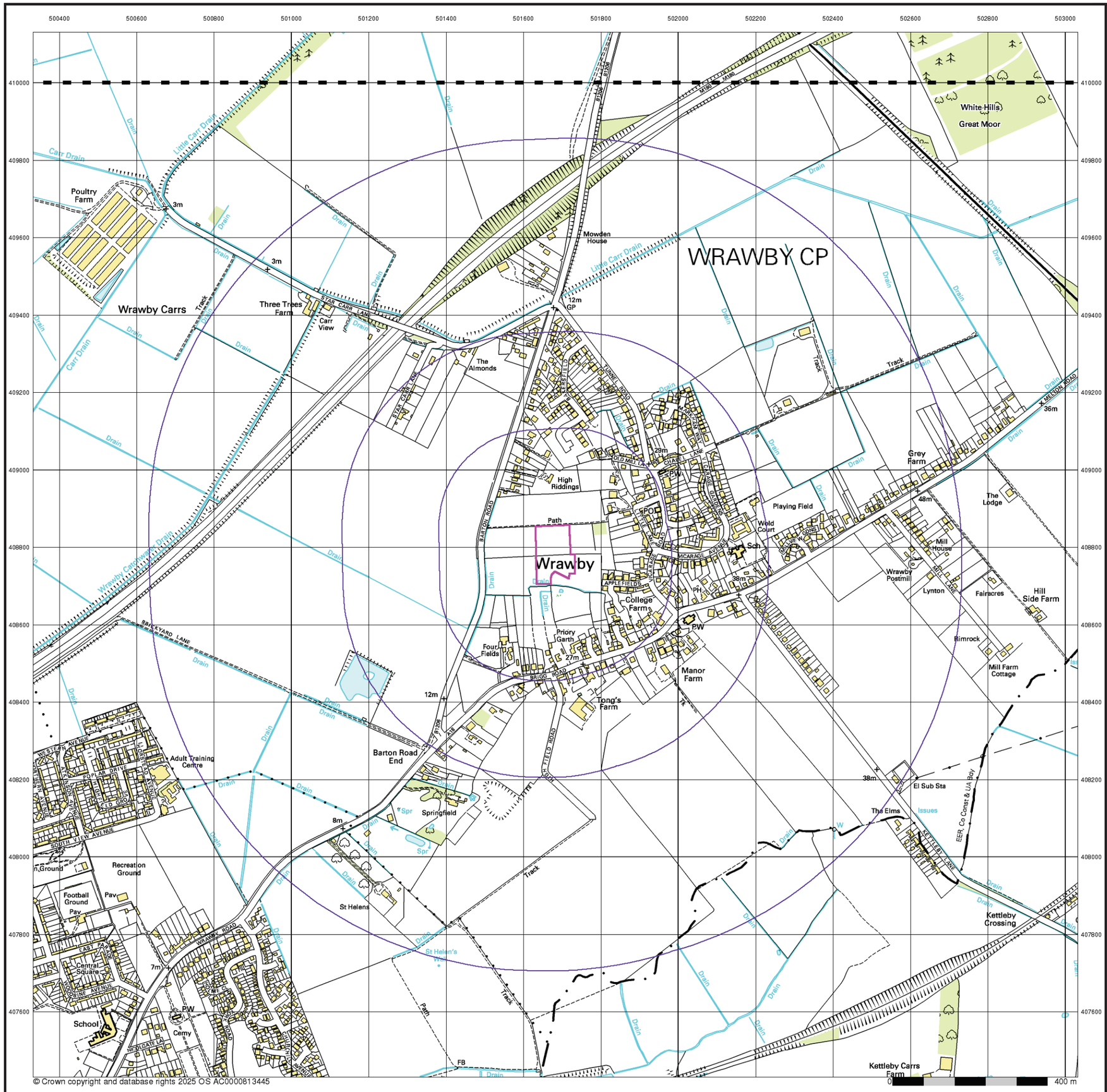
Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



10k Raster Mapping

Published 2006

Source map scale - 1:10,000

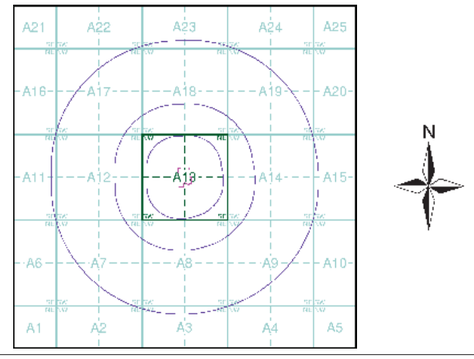
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks 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)

TA01SW
2006
1:10,000

TA00NW
2006
1:10,000

Historical Map - Slice A



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

VectorMap Local

Published 2025

Source map scale - 1:10,000

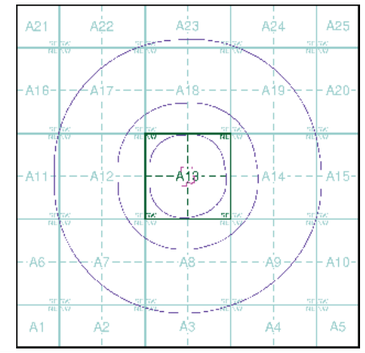
VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap 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)

TA01SW
2025
Variable

TA00NW
2025
Variable

Historical Map - Slice A



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

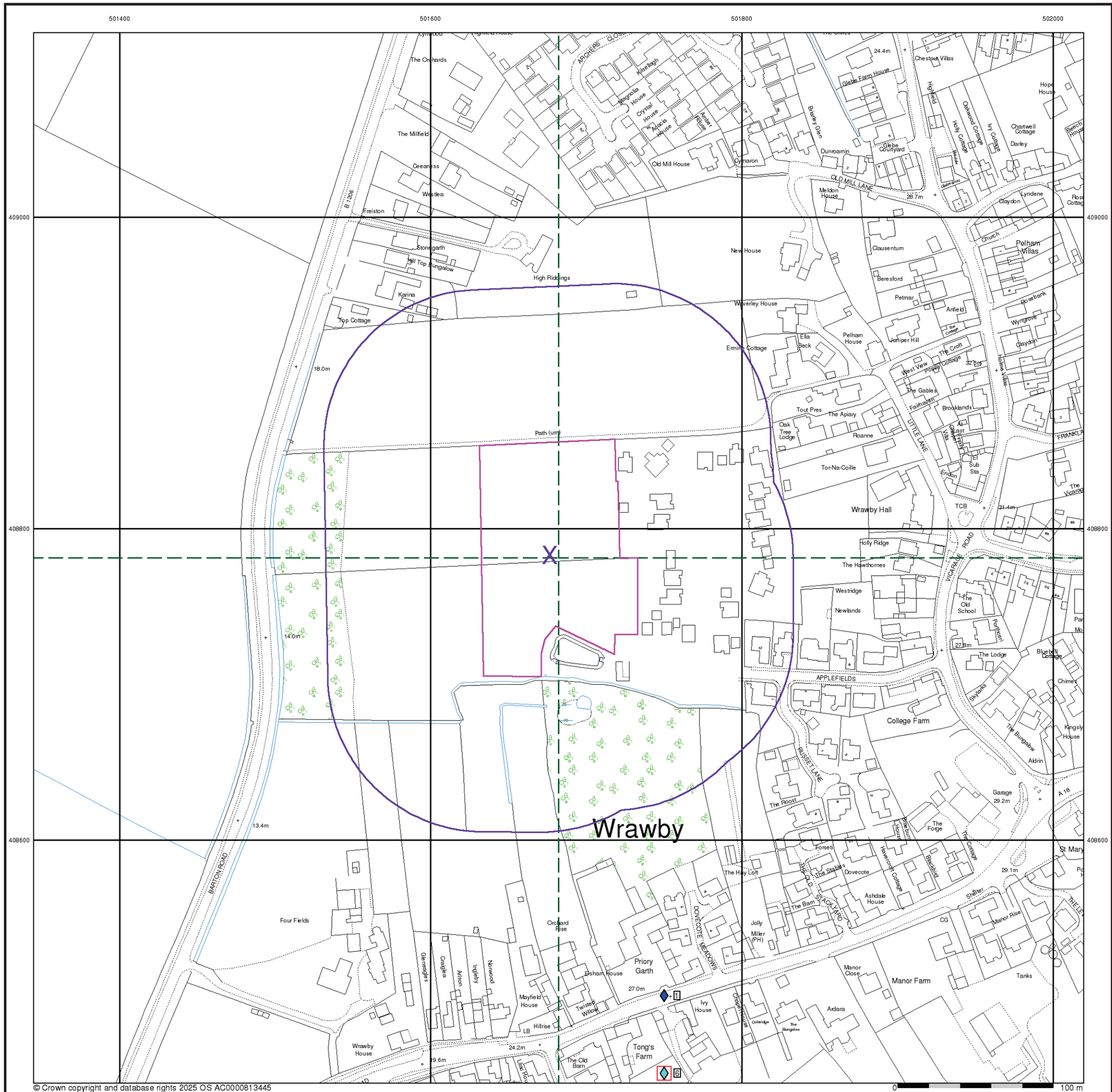
Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Appendix C

Environmental Data



General

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

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
- Historical Prosecutions
- Prosecutions
- Registered Radioactive Substance
- River Network or Water Feature
- 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

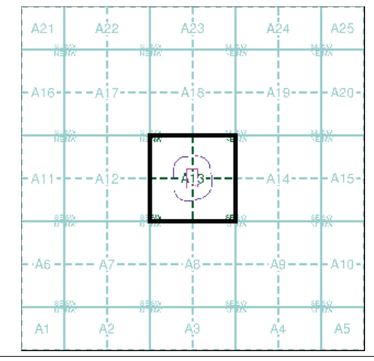
Geological

- 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



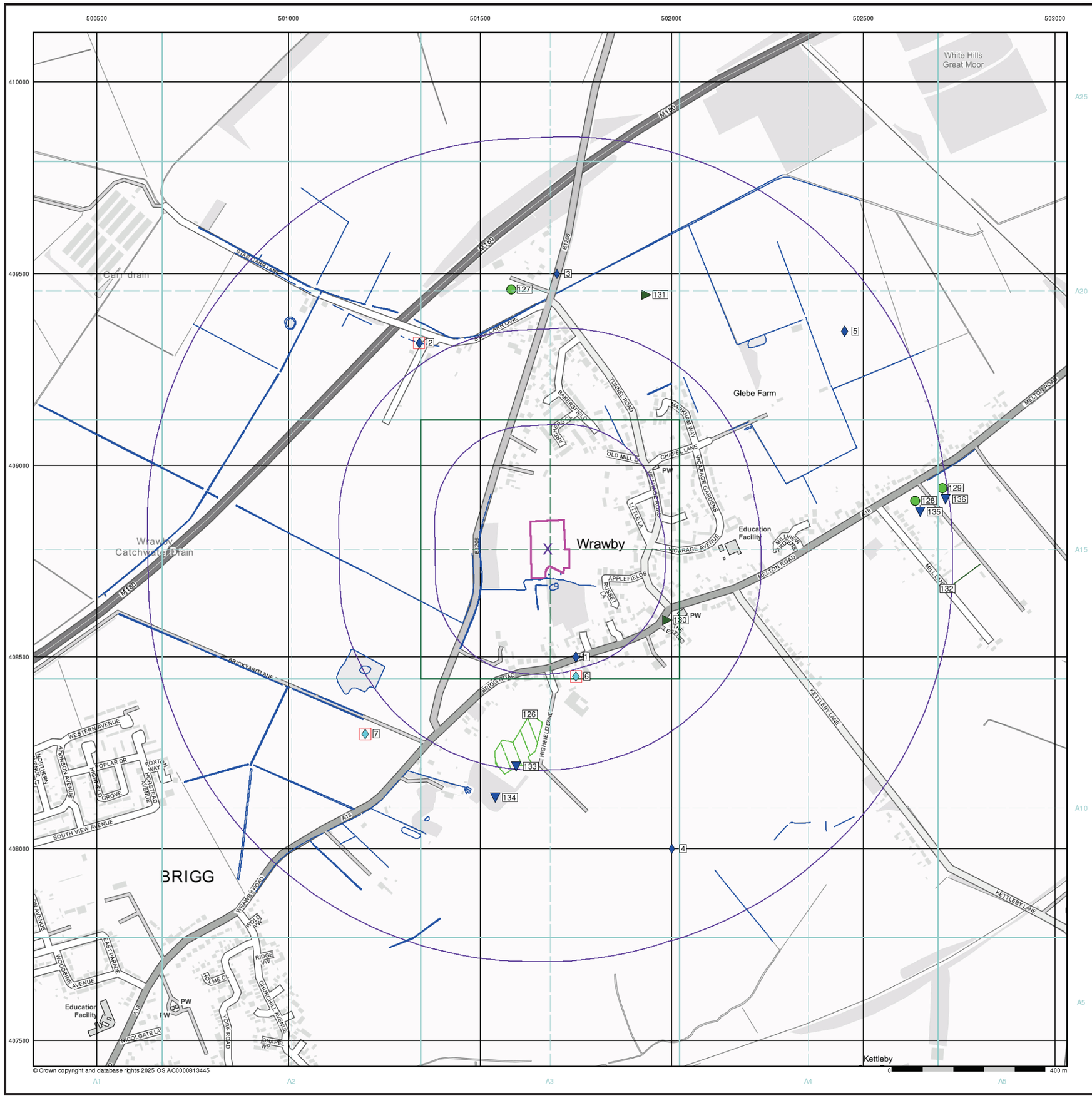
Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Plot Buffer (m):	100

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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
- Historical Prosecutions
- Prosecutions
- Registered Radioactive Substance
- River Network or Water Feature
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

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

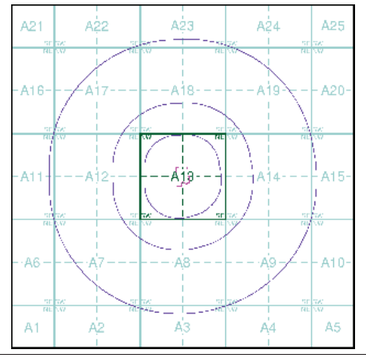
Hazardous Substances

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

Geological

BGS Recorded Mineral Site

Site Sensitivity Map - Slice A



Order Details

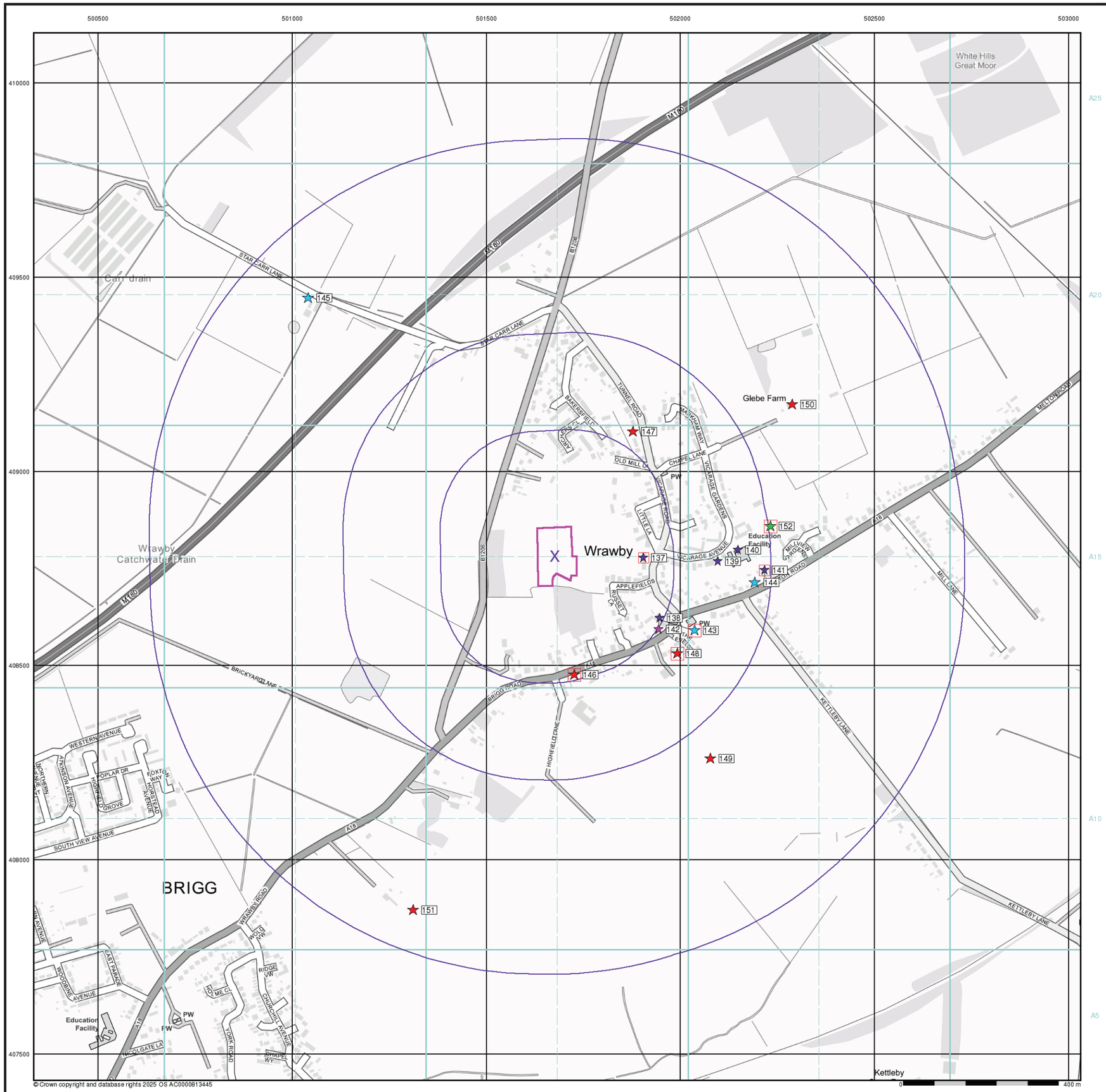
Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Industrial Land Use Map

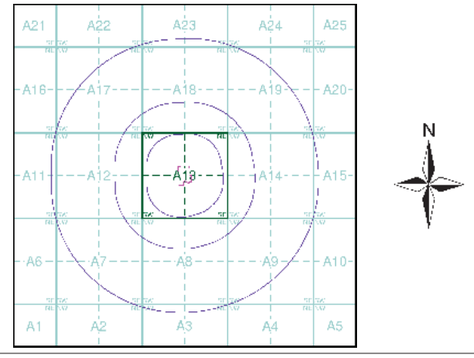
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- 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:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
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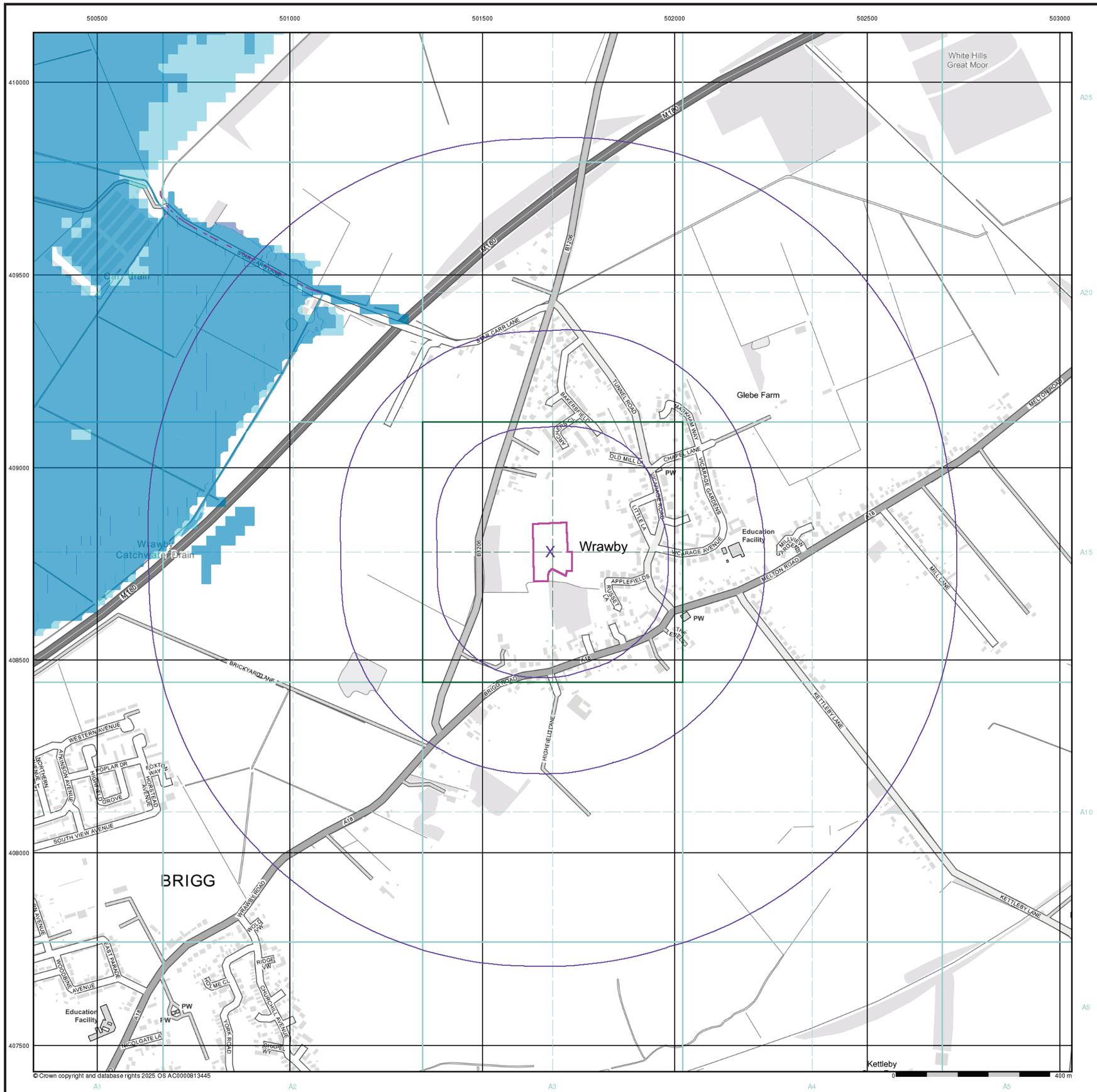


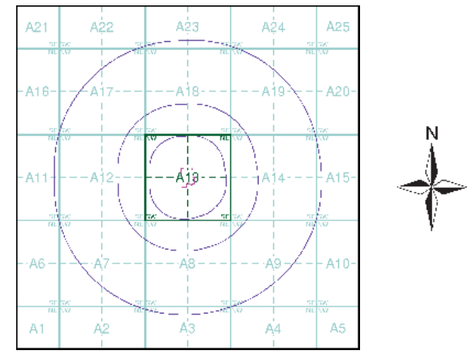
General

- 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:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

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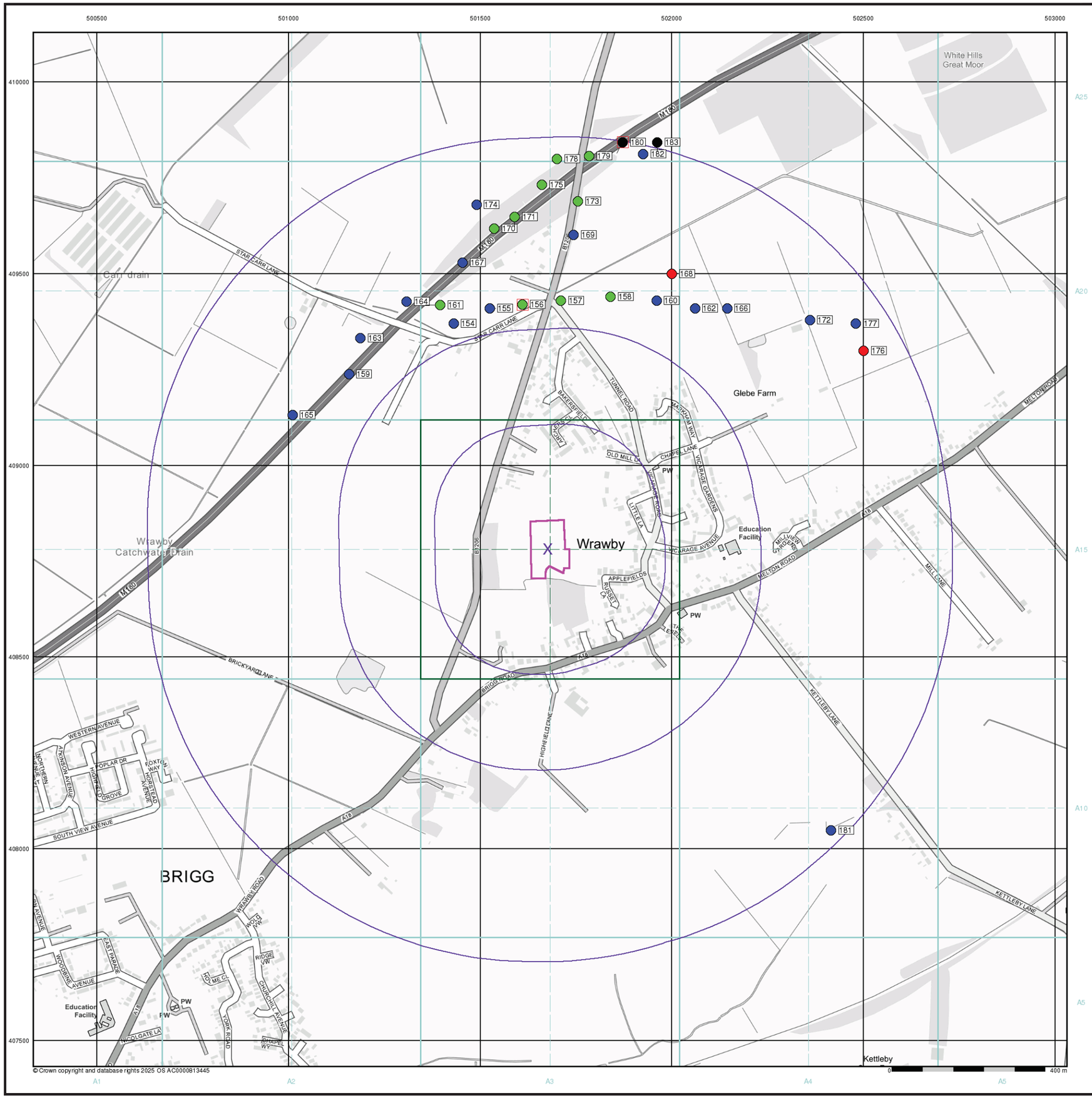


General

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

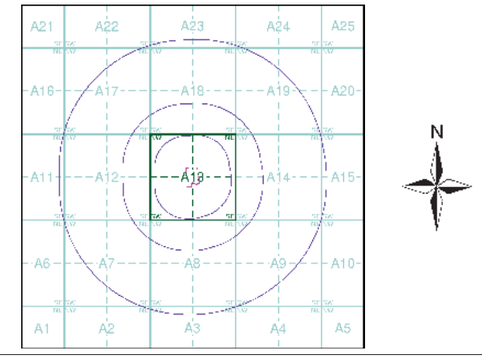
Agency and Hydrological (Boreholes)

- 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:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
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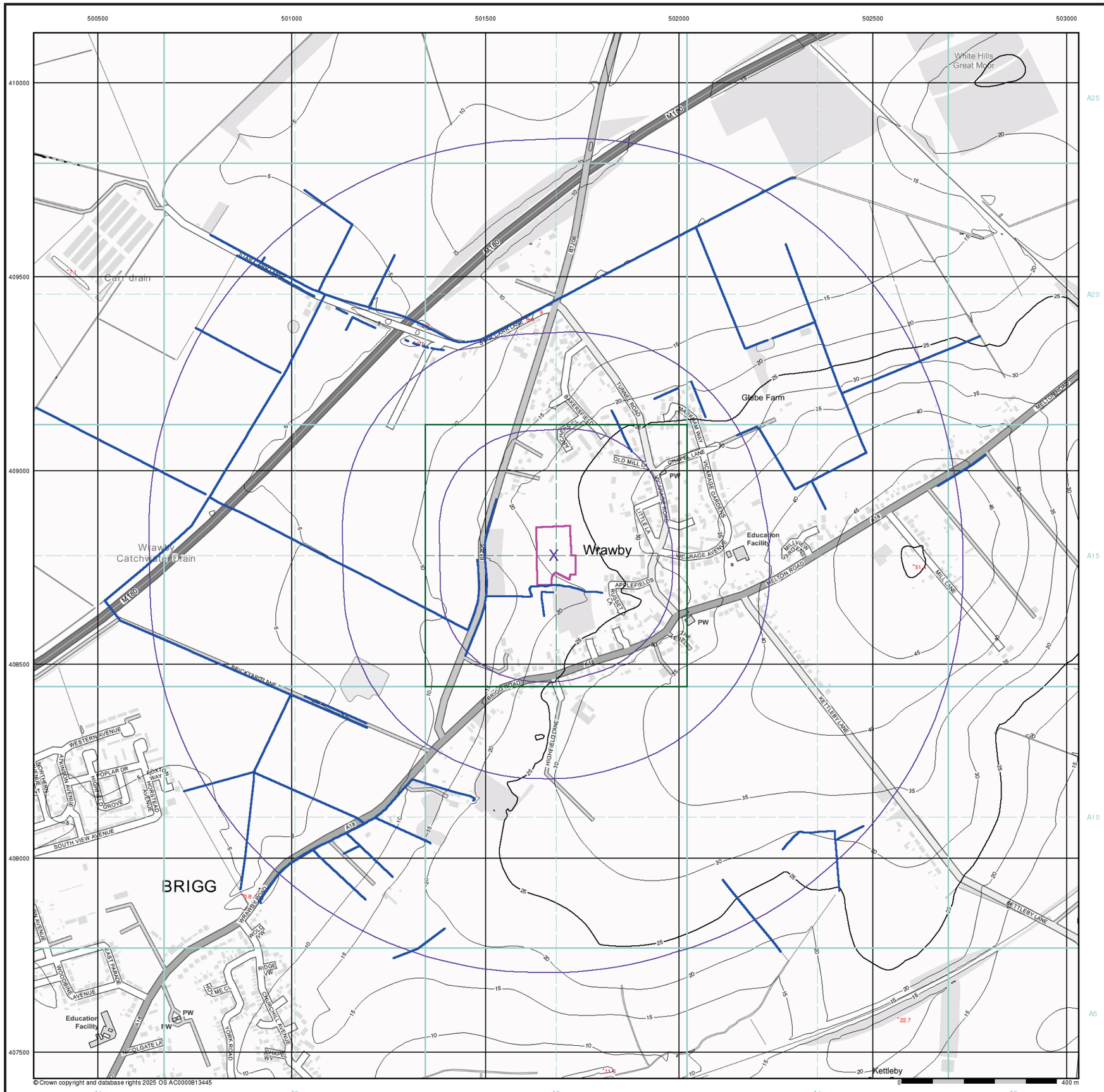


HUMBERSIDE MATERIALS LABORATORY LTD.

General

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

OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

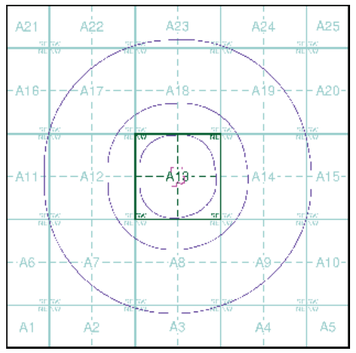
Standard Contour 105 100 95

Master Contour

Spot Height 167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

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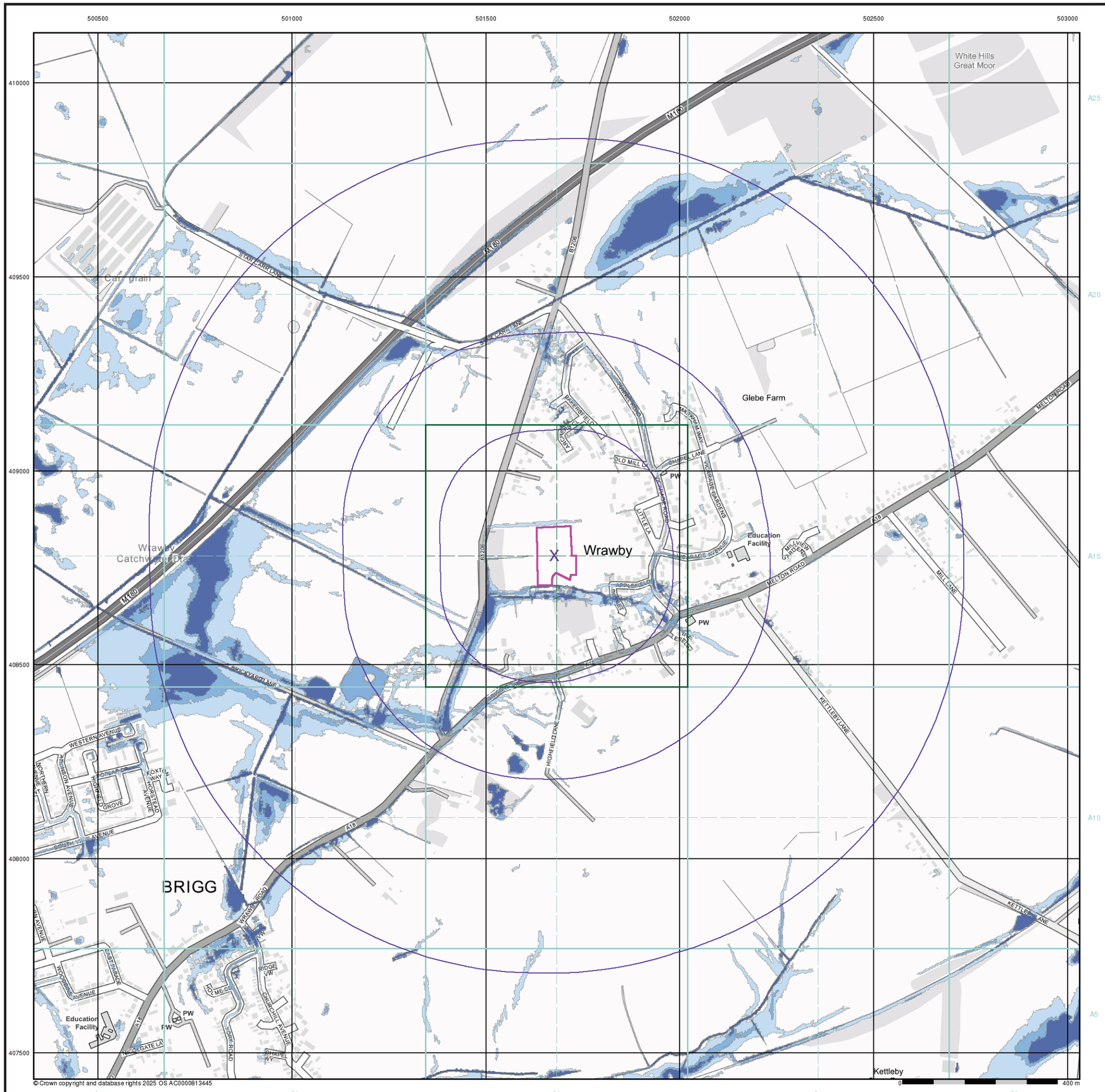


General

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

Risk of Flooding from Surface Water

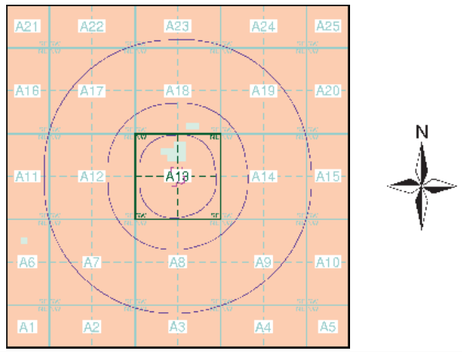
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

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

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National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

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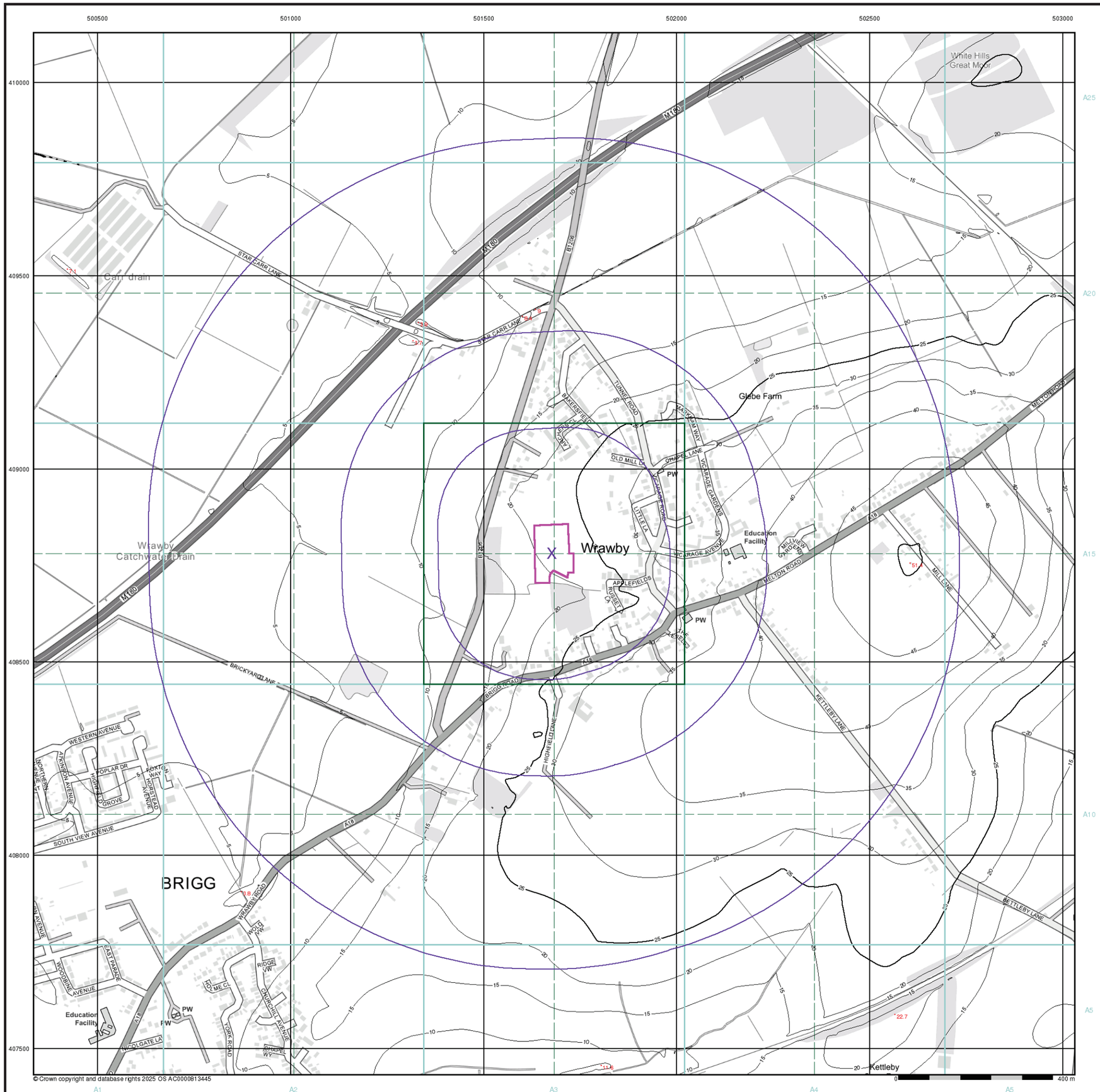


WFD Surface Waters Map

General

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

Water Framework Directive - Surface Water Quality

- High
- Good
- Moderate
- Poor
- Bad

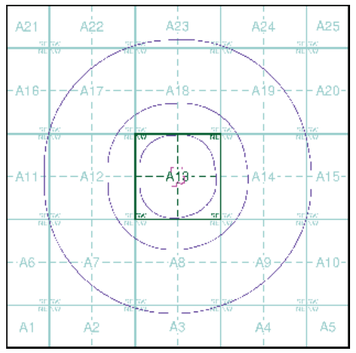
Contours (height in meters)

Standard Contour 105 100 95 — MLW Mean Low Water

Master Contour — MHW Mean High Water

Spot Height * 167.3

WFD Surface Waters Map - Slice A



Order Details

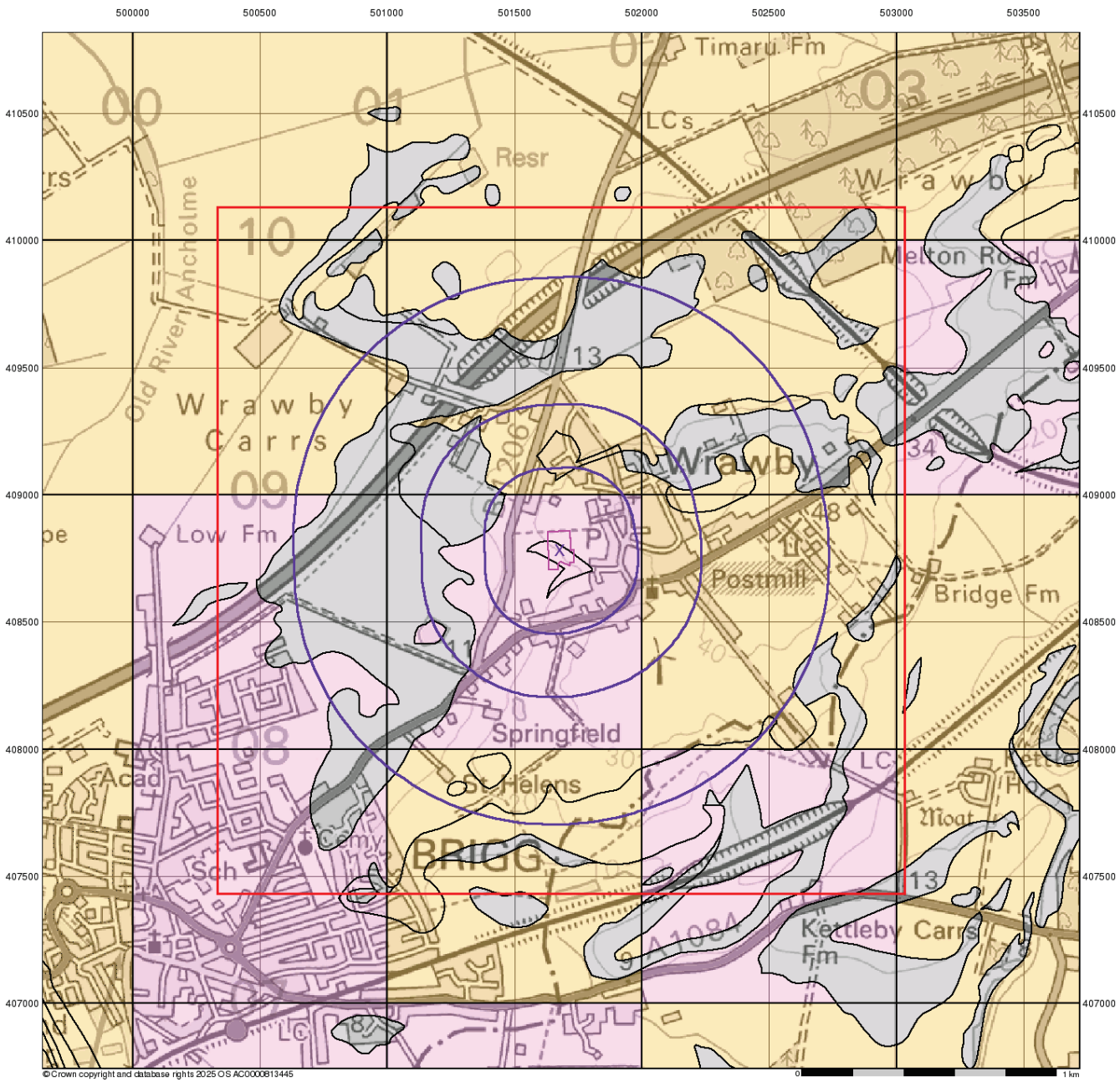
Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Groundwater Vulnerability

General

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

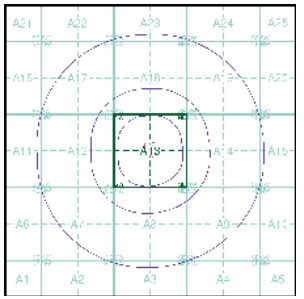
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Bedrock Aquifer Designation

General

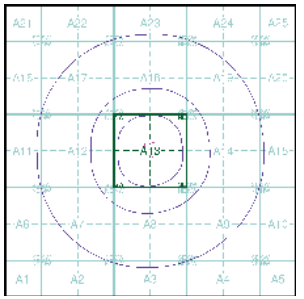
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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

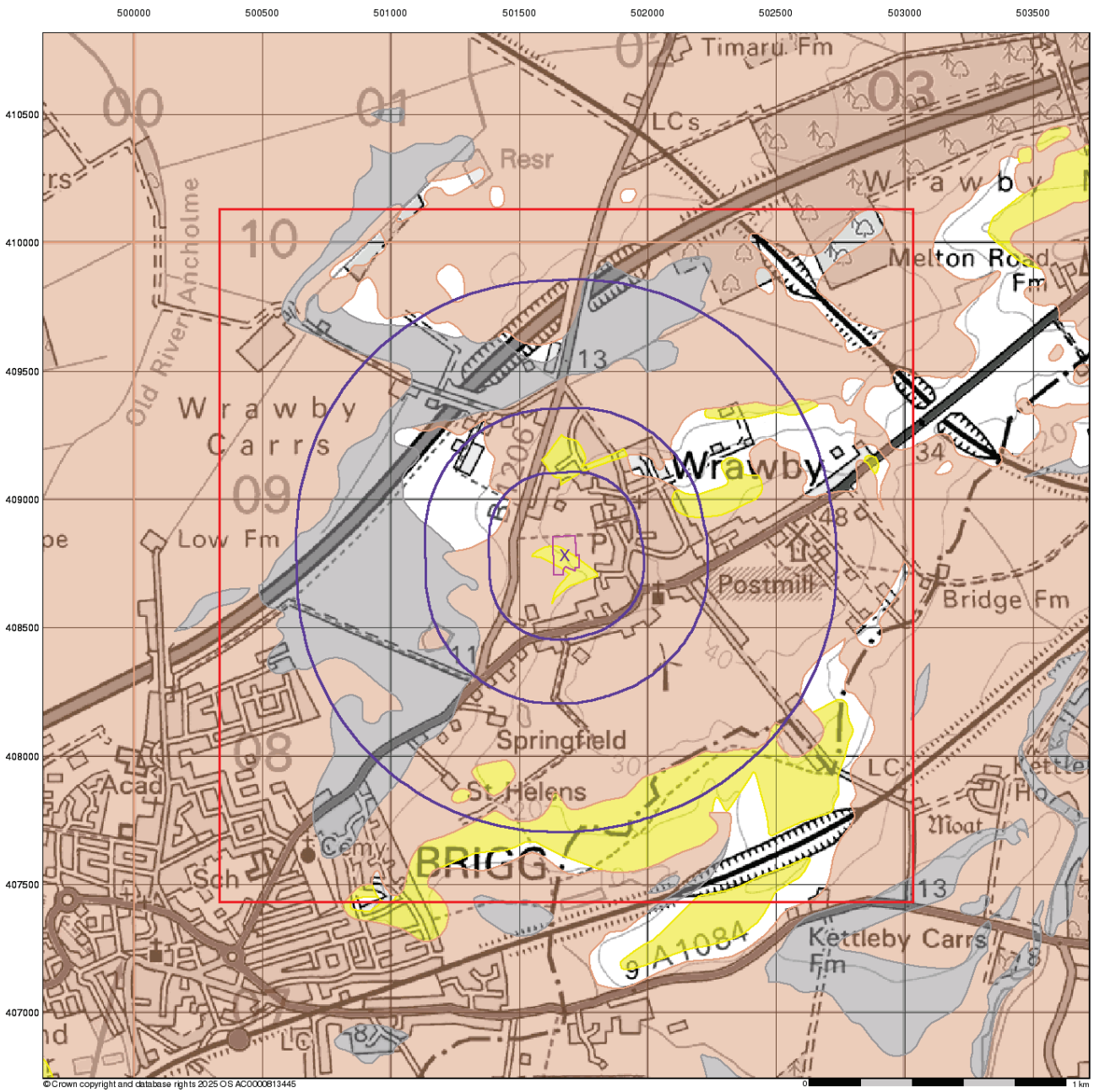


Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB



Superficial Aquifer Designation

General

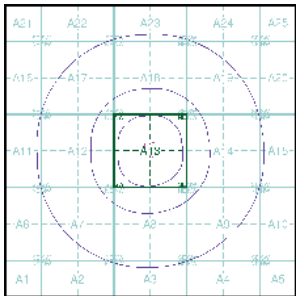
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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

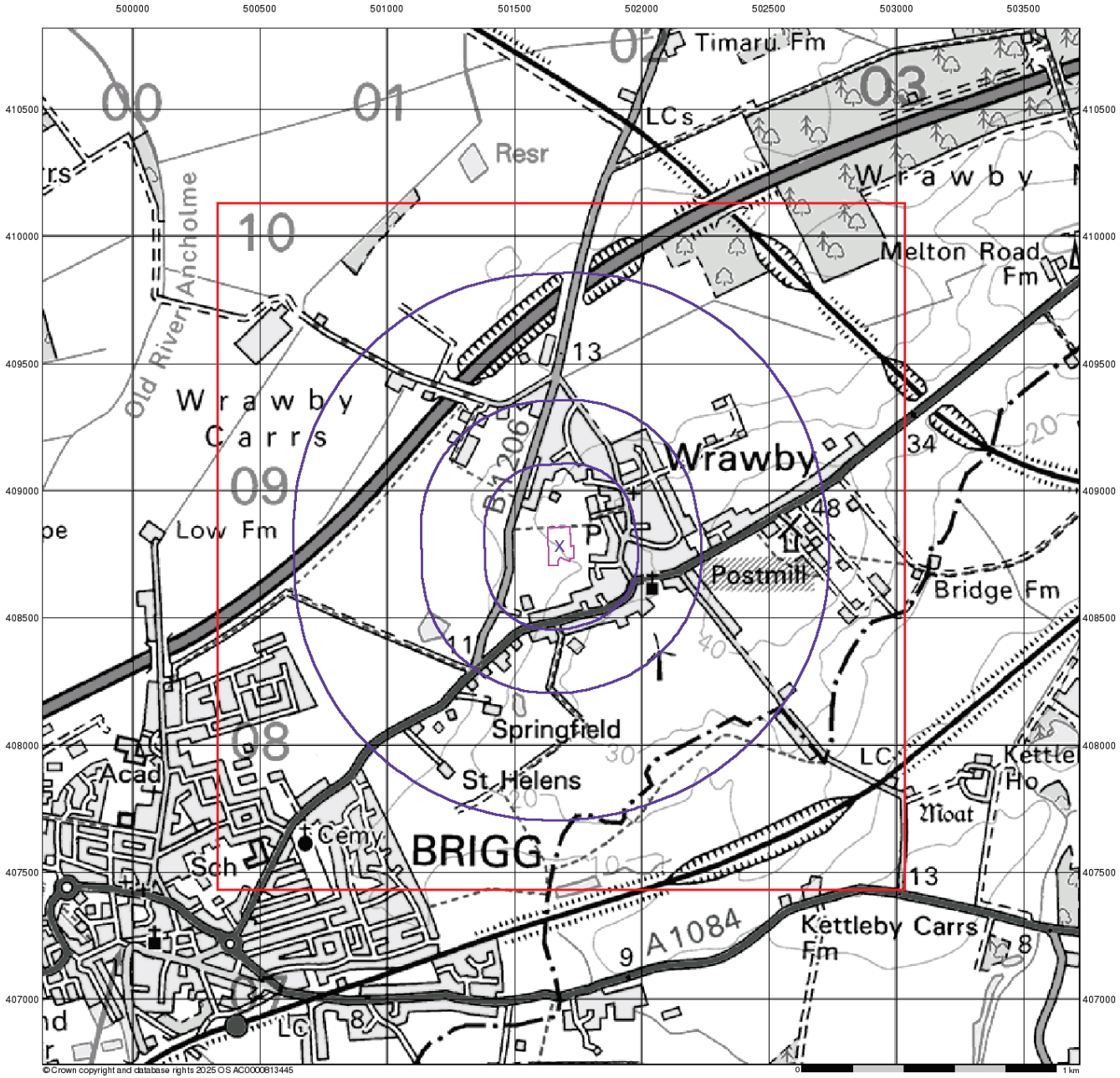


Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB



Source Protection Zones

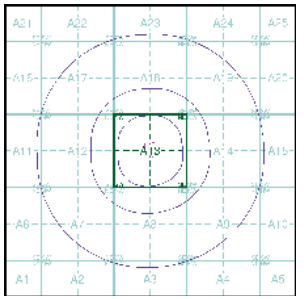
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | 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

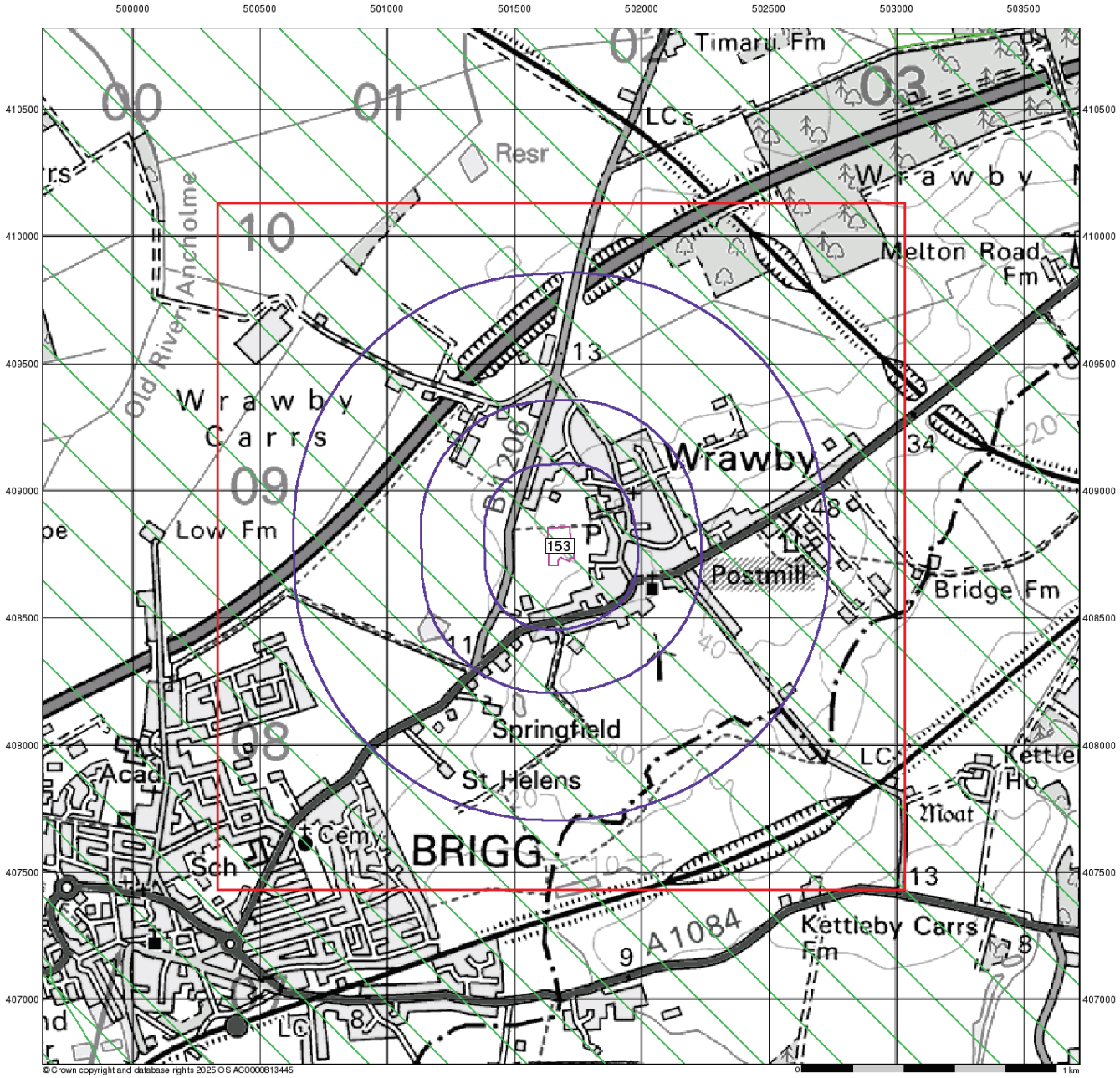


Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB



Sensitive Land Uses

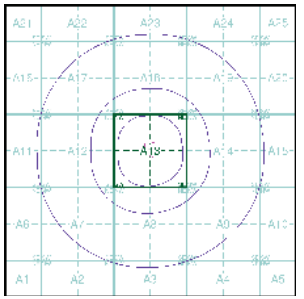
General

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

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted 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:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
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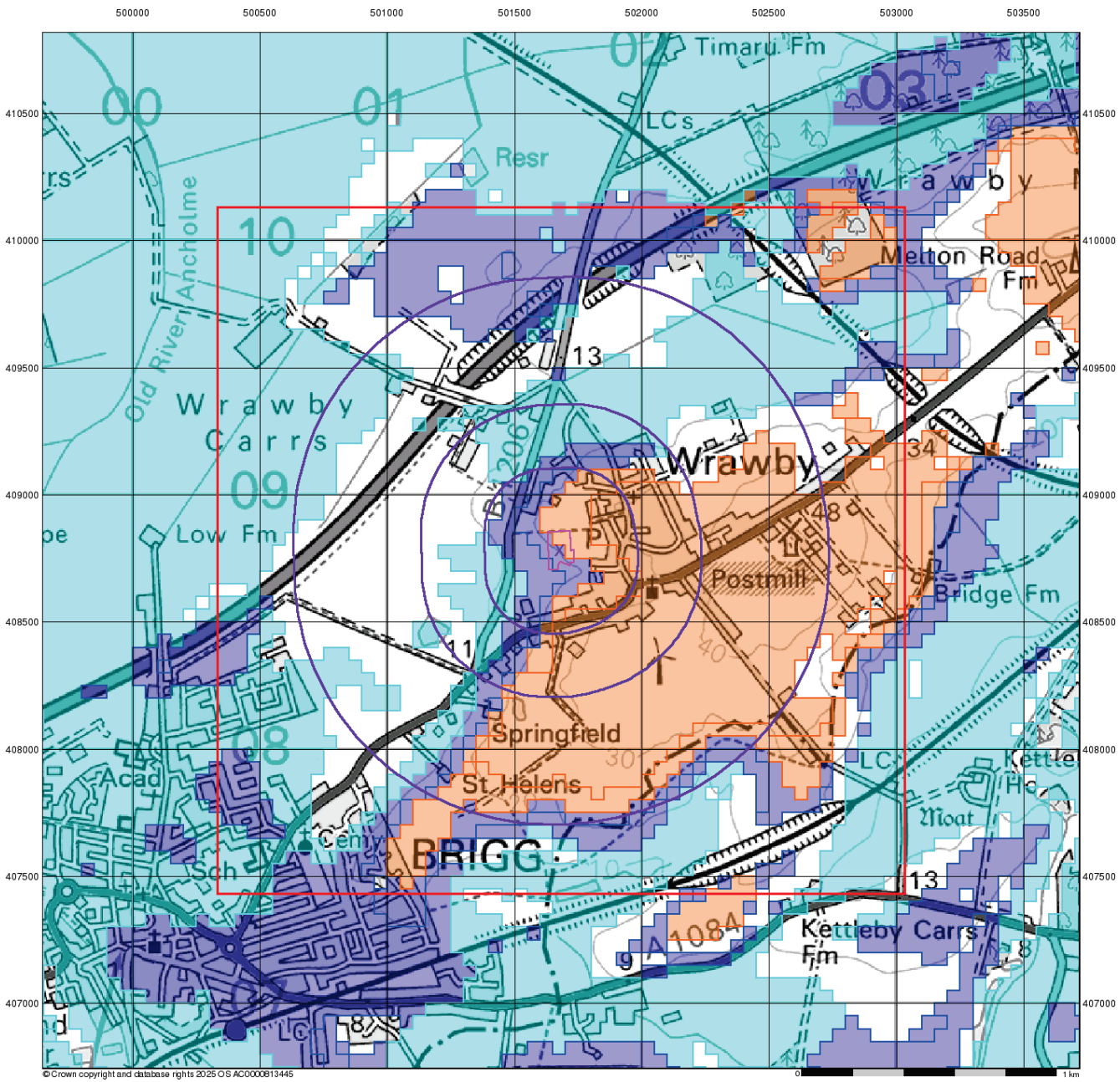


BGS Flood GFS Data

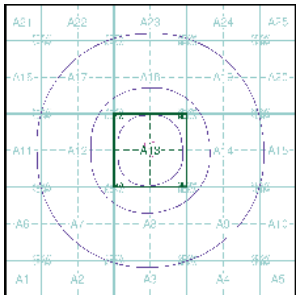
General

Specified Site | Specified Buffer(s) | 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

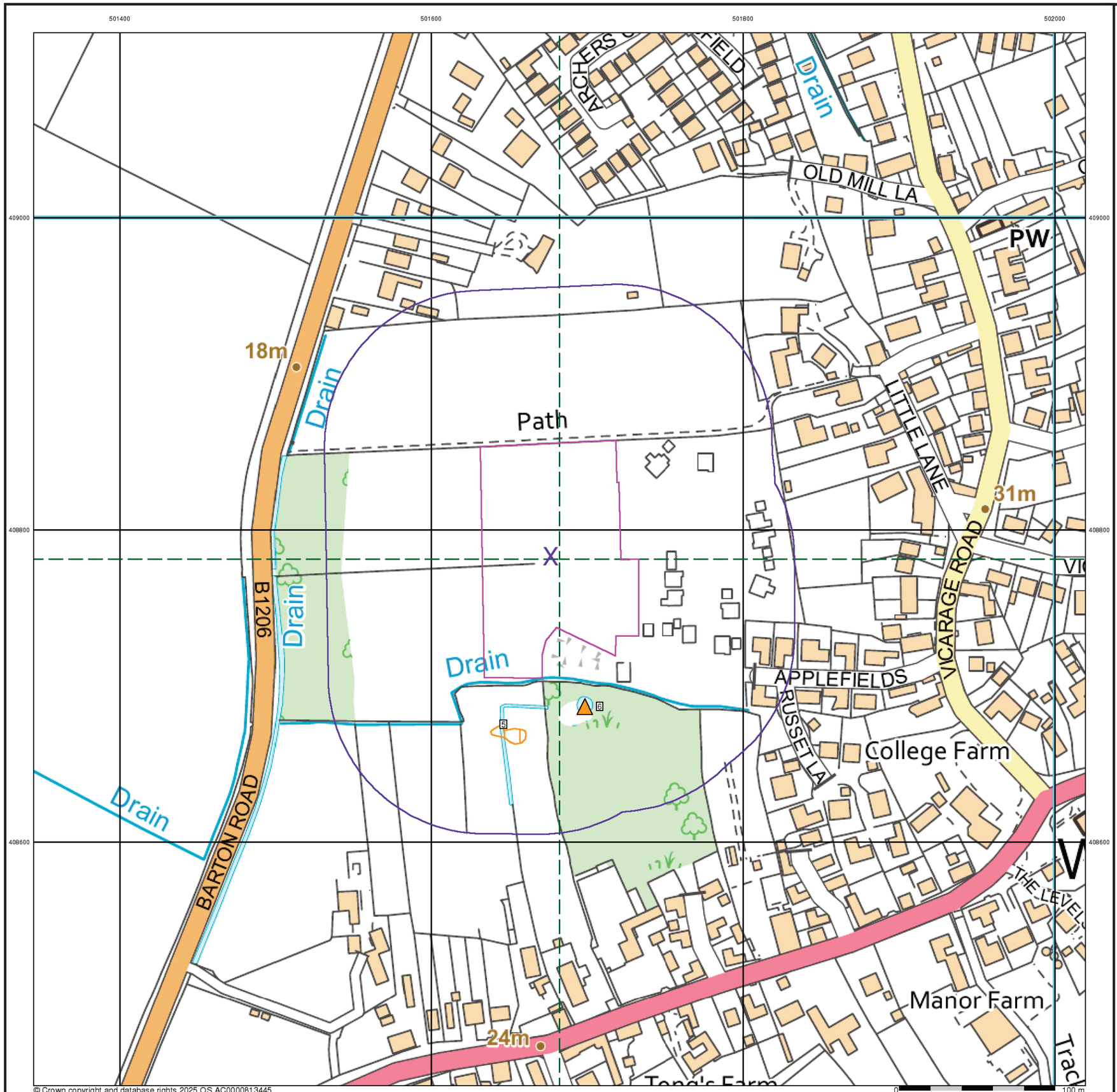


Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB



Historical Land Use Information (1:2,500)

General

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

Several of Type at Location

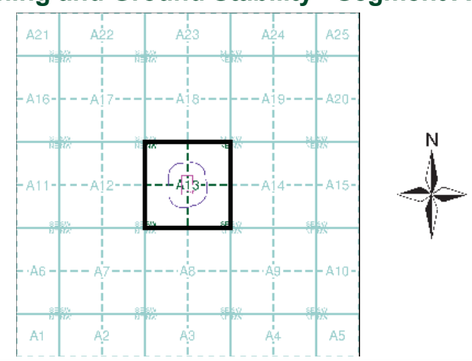
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	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



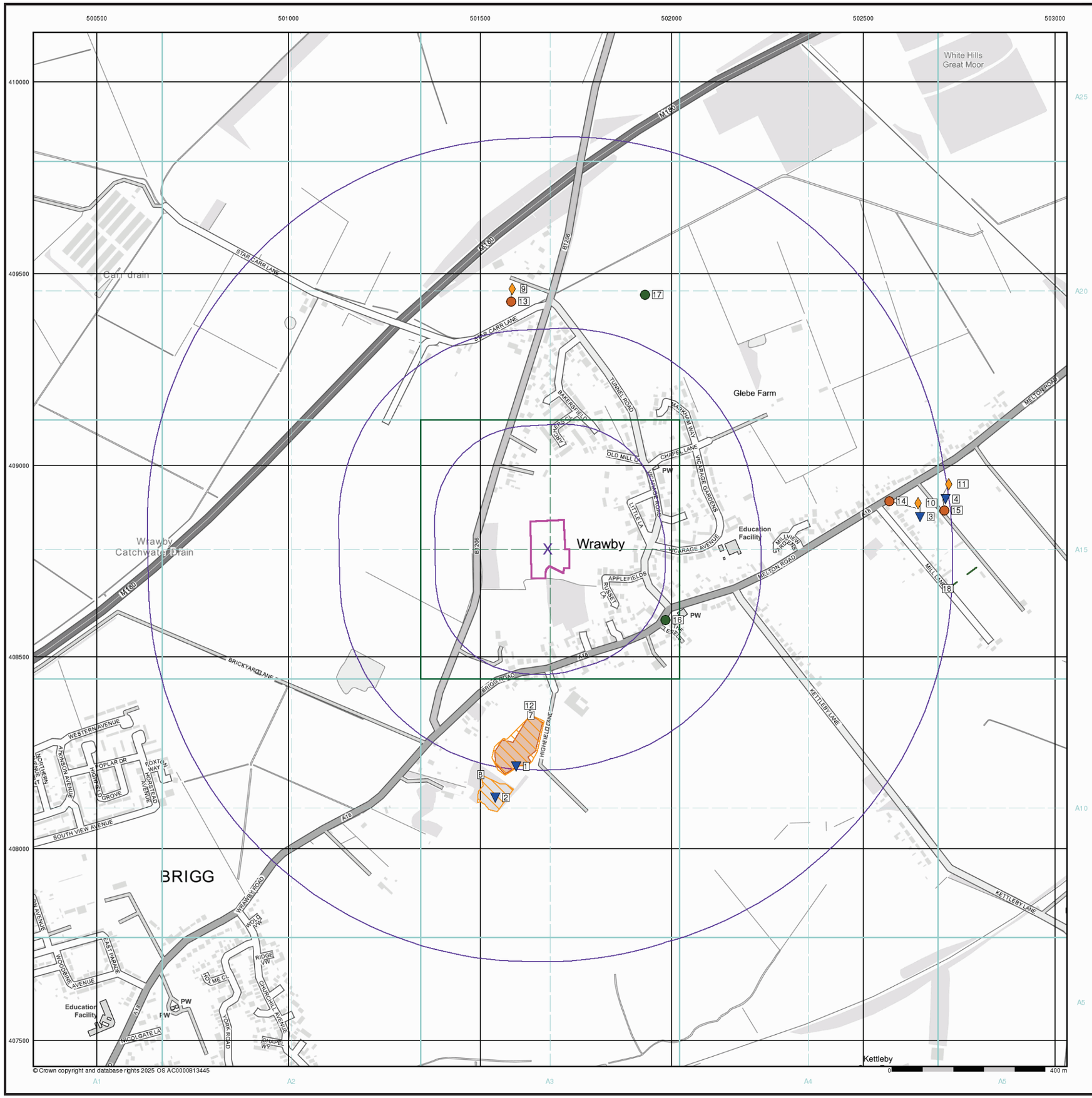
Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Plot Buffer (m):	100

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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

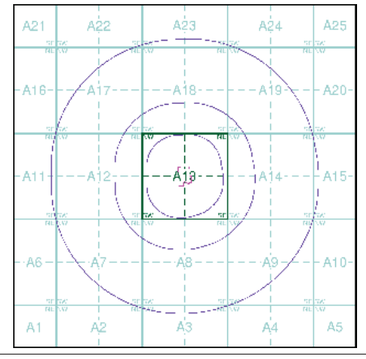
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)	●		
Potentially Infilled Land (Water)	●		
Former Marsh	✠		

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice A



Order Details

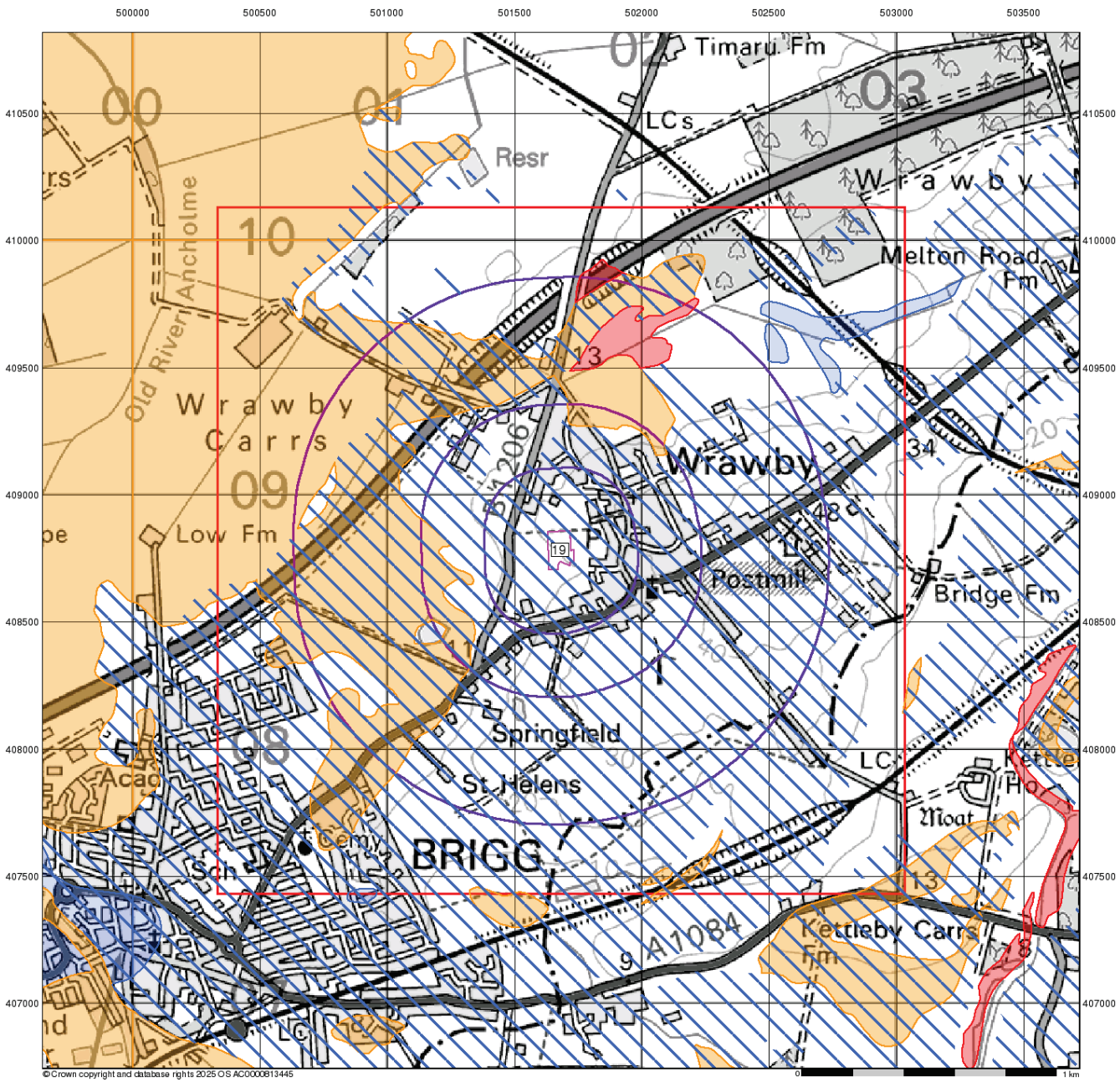
Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Ground Stability Data (1:50,000)

General

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

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

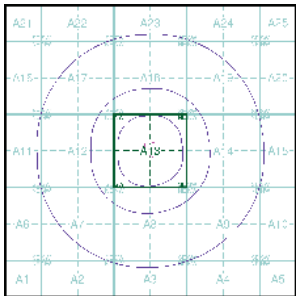
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice A



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Ground Stability Data (1:50,000)

General

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

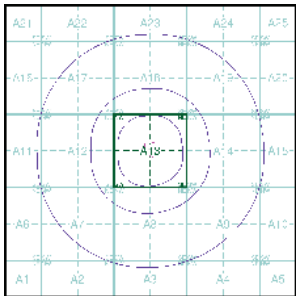
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A

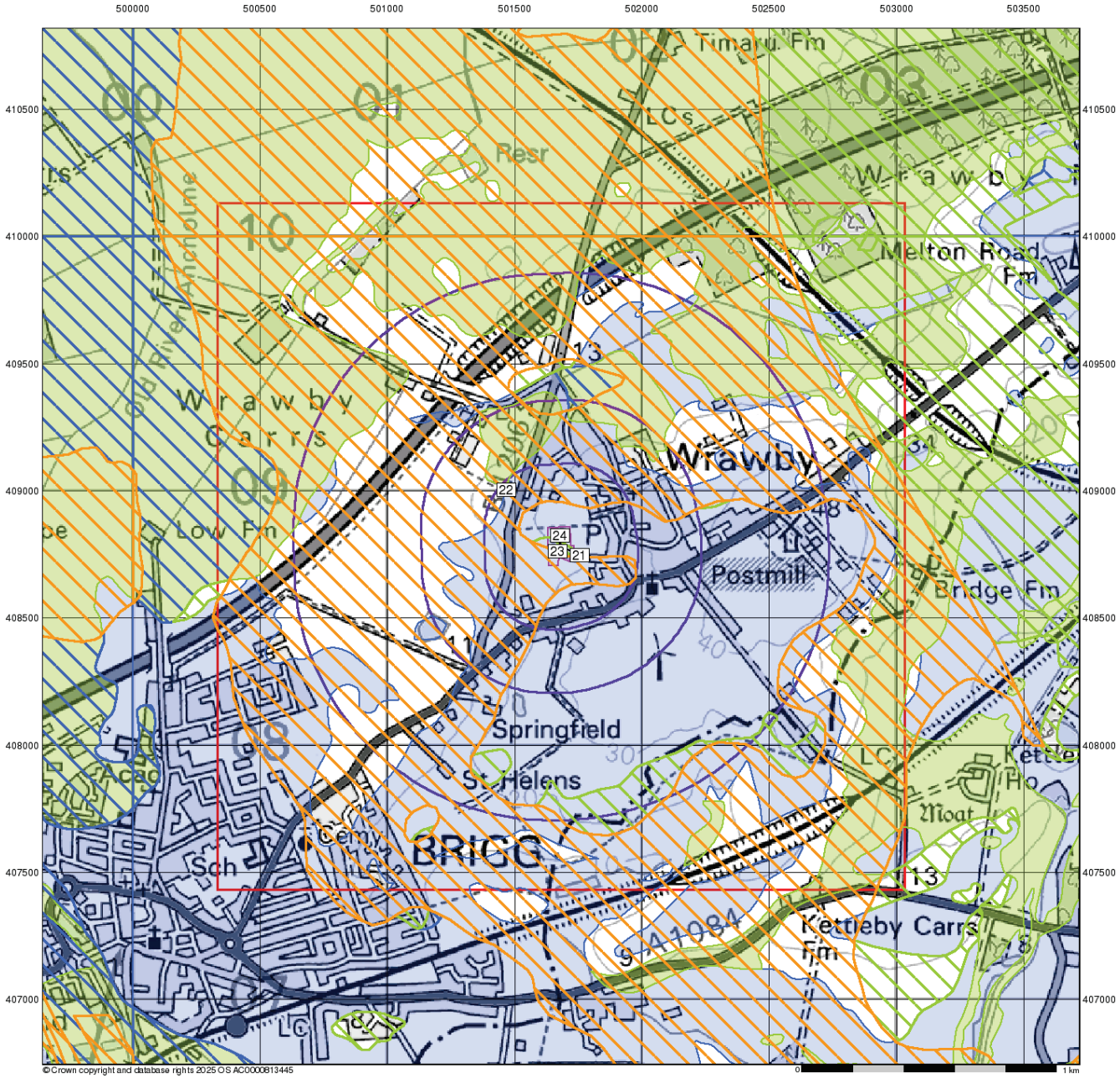


Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB



Ground Stability Data (1:50,000)

General

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

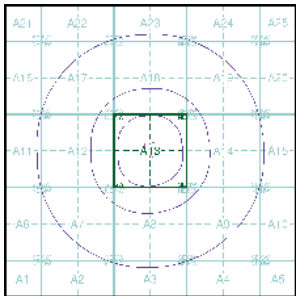
Potential for Running Sand Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number:	382848583_1_1
Customer Ref:	RL2025-08-06
National Grid Reference:	501680, 408780
Slice:	A
Site Area (Ha):	1.27
Search Buffer (m):	1000

Site Details

Applefields (Stage 2), Wrawby, Brigg, North Lincolnshire, DN20 8GB

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
382848583_1_1

Customer Reference:
RL2025-08-06

National Grid Reference:
501680, 408780

Slice:
A

Site Area (Ha):
1.27

Search Buffer (m):
1000

Site Details:

Applefields (Stage 2)
Wrawby
Brigg
North Lincolnshire
DN20 8GB

Client Details:

MR D Driver
Humberside Materials Laboratory Ltd
Atherton Way
Brigg
North Lincolnshire
DN20 8AR

Prepared For:

Keigar Homes

Contents

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.

Report Version v53.0

Summary

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 1		1		8
Prosecutions					
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 3		Yes		
Pollution Incidents to Controlled Waters					
Historical Prosecutions					
Registered Radioactive Substances					
Substantiated Pollution Incident Register					
Water Abstractions	pg 4			2	2 (*6)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 6	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 6	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 6	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 7		9	4	105
Water Framework Directive - Catchment	pg 20	Yes			Yes
Water Framework Directive - Groundwater					
Water Framework Directive - Surface Waters					

Summary

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					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 21	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 21			1	3
Potentially Infilled Land (Water)	pg 21			1	2
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					

Summary

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 22	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 22	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 25			1	3
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 26	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 26	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 26	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 26	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 27		3	4	
Fuel Station Entries	pg 27		1		
Points of Interest - Commercial Services	pg 27		3	1	1
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 28		1	7	3
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental	pg 29			1	1
Underground Electrical Cables					

Summary

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 30	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	A13NW (NW)	0	1	501677 408783
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	0	1	501650 408750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (N)	0	1	501677 408800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	70	1	501800 408800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (SW)	85	1	501550 408700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	106	1	501650 408600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (S)	206	1	501650 408500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	209	1	501600 408500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (NW)	213	1	501550 409050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	245	1	501750 409100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	317	1	501550 408400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	427	1	501500 408300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (SW)	436	1	501250 408500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	475	1	501500 408250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (SW)	495	1	501350 408300
1	**Discharge Consents** Operator: J F Day & Son Property Type: Arable Farming Location: Tongs Farm Wrawby, Brigg, N Lincs, Dn21 8rl Authority: Environment Agency, Anglian Region Catchment Area: Catchment 29 Unknown Detail Reference: Gwnlf40733 Permit Version: 1 Effective Date: 1st April 1999 Issued Date: 19th July 2000 Revocation Date: Not Supplied Discharge Type: Trade Discharge - Agricultural And Surface Discharge Environment: Onto Land Receiving Water: Groundwater **Status:** **Deemed Groundwater Regulations Authorisation** Positional Accuracy: Located by supplier to within 10m	A13SE (S)	220	2	501750 408500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Wrawby - Star Carr Lane Ps, Star Carr Lane, Wrawby, North Lincolnshire, Dn20 8sg Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Awnnf13443 Permit Version: 2 Effective Date: 28th June 2022 Issued Date: 28th June 2022 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Trib Of Carr Drain **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	550	2	501340 409320
2	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Wrawby - Star Carr Lane Ps, Star Carr Lane, Wrawby, North Lincolnshire, Dn20 8sg Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Awnnf13443 Permit Version: 2 Effective Date: 28th June 2022 Issued Date: 28th June 2022 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Trib Of Carr Drain **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	550	2	501340 409320
2	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Wrawby - Star Carr Lane Ps, Star Carr Lane, Wrawby, North Lincolnshire, Dn20 8sg Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Awnnf13443 Permit Version: 1 Effective Date: 19th July 1999 Issued Date: 6th September 1999 Revocation Date: 27th June 2022 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Drain **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	A17SE (NW)	550	2	501340 409320
2	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Wrawby - Star Carr Lane Ps, Star Carr Lane, Wrawby, North Lincolnshire, Dn20 8sg Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Awnnf13443 Permit Version: 1 Effective Date: 19th July 1999 Issued Date: 6th September 1999 Revocation Date: 27th June 2022 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Drain **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	A17SE (NW)	550	2	501340 409320

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Starr Carr Lane Brigg Star Carr Lane, Wrawby, Brigg, Dn20 8sg Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Annnf2613 Permit Version: 1 Effective Date: 2nd January 1990 Issued Date: 2nd January 1990 Revocation Date: 19th July 1999 Discharge Type: Storm /emergency overflow Discharge Environment: Land/Soakaway Receiving Water: Un-Named Dyke To Land Drain **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	550	2	501340 409320
3	**Discharge Consents** Operator: Dale Brothers Ltd Property Type: Not Supplied Location: Residential Development At Vicarage, Wrawby, Brigg, Dn20 Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr3nf609 Permit Version: 1 Effective Date: 22nd March 1988 Issued Date: 22nd March 1988 Revocation Date: 20th February 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Little Carr Drain **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A18NE (N)	643	2	501700 409500
4	**Discharge Consents** Operator: Frank Everard Stephenson Property Type: Not Supplied Location: The Manor, Wrawby Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr3nfa1191 Permit Version: 1 Effective Date: 8th June 1963 Issued Date: 8th June 1963 Revocation Date: 14th February 1991 Discharge Type: Unknown Discharge Environment: Not Supplied Receiving Water: Not Supplied **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Approximate location provided by supplier	A8SE (S)	773	2	502000 408000
5	**Discharge Consents** Operator: T H Rowson & Sons Property Type: Arable Farming Location: Glebe Farm Chapel Lane East, Wrawby, Brigg, N Lincs Authority: Environment Agency, Anglian Region Catchment Area: Catchment 29 Unknown Detail Reference: Gwnlf40714 Permit Version: 1 Effective Date: 1st April 1999 Issued Date: 19th July 2000 Revocation Date: Not Supplied Discharge Type: Trade Discharge - Agricultural And Surface Discharge Environment: Onto Land Receiving Water: Groundwater **Status: Deemed Groundwater Regulations Authorisation** Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	882	2	502450 409350
	Nearest Surface Water Feature	A13SW (S)	1	-	501677 408705

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Water Abstractions** Operator: J F Day Licence Number: 4/29/08/*G/0004 Permit Version: 100 Location: J.F.Day Well 2 Wrawby Authority: Environment Agency, Anglian 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: Glacial Sand and Gravel; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st August 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SE (S)	268	2	501750 408450
6	**Water Abstractions** Operator: J F Day Licence Number: 4/29/08/*G/0004 Permit Version: 100 Location: J.F.Day Well 1 Wrawby Authority: Environment Agency, Anglian 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: Glacial Sand and Gravel; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st August 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SE (S)	272	2	501750 408445
7	**Water Abstractions** Operator: J F Day & Sons Licence Number: 4/29/08/*S/0016 Permit Version: 100 Location: Un-Named Drain - Wrawby Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 December Authorised End: 31 March Permit Start Date: 1st April 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	594	2	501200 408300
7	**Water Abstractions** Operator: J F Day & Sons Licence Number: 4/29/08/*s/016 Permit Version: Not Supplied Location: WRAWBY Authority: Environment Agency, Anglian Region Abstraction: Fill Etc Reservoir Transfer Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 9 Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	594	2	501200 408300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: J F Day & Sons Licence Number: 4/29/04/*S/0075 Permit Version: 100 Location: Stream Lead To Kettleby Beck Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 December Authorised End: 31 March Permit Start Date: 1st April 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A3NE (S)	1213	2	501800 407500
	Water Abstractions Operator: J F Day & Sons Licence Number: 4/29/04/*s/075 Permit Version: Not Supplied Location: Stream Lead To Kettleby Beck Authority: Environment Agency, Anglian Region Abstraction: Fill Etc Reservoir Transfer Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 16 Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A3NE (S)	1213	2	501800 407500
	Water Abstractions Operator: Timaru Farming Co Licence Number: 4/29/05/*S/0023 Permit Version: 100 Location: Little Carr Drain At Wrawby Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 December Authorised End: 31 March Permit Start Date: 1st April 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NW (N)	1564	2	501400 410400
	Water Abstractions Operator: Timaru Farming Company Licence Number: 4/29/05/*s/023 Permit Version: Not Supplied Location: 1 Little Carr Drain, WRAWBY Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 34 Yearly Rate (m3): 1620000 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NW (N)	1564	2	501400 410400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Timaru Farming Co Licence Number: 4/29/05/*S/0023 Permit Version: 101 Location: Little Carr Drain At Wrawby Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 December Authorised End: 31 March Permit Start Date: 25th July 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NE (N)	1569	2	501321 410391
	Water Abstractions Operator: Norman Jackson (Farmers) Ltd Licence Number: 4/29/05/*S/0009 Permit Version: 100 Location: Old River Ancholme Broughton Authority: Environment Agency, Anglian 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: Status: Perpetuity Authorised Start: 01 March Authorised End: 30 September Permit Start Date: 1st January 1967 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A21SW (NW)	1716	2	500200 409800
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Unproductive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: >90% Superficial Thickness: <3m Superficial Recharge: Low	A13NW (NW)	0	2	501677 408783
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Unproductive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: >90% Superficial Thickness: <3m Superficial Recharge: Low	A13NE (NE)	0	2	501686 408798
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A13NW (NW)	0	2	501677 408783
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NW (NW)	0	2	501677 408783
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (NE)	0	2	501686 408798

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	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				
8	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 333.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A13SW (S)	1	3	501677 408705
9	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 91.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A13SW (S)	18	3	501673 408686
10	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A13NW (W)	120	3	501506 408850
11	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 172.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A13SW (W)	126	3	501500 408768
12	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A13NW (W)	126	3	501506 408847
13	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 163.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A13SW (SW)	136	3	501501 408676
14	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 186.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A13SW (W)	150	3	501479 408767

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 286.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A13SW (SW)	214	3	501455 408589
16	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A13NE (NE)	250	3	501878 409049
17	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 68.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A18SE (NE)	394	3	501936 409185
18	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 463.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12SE (W)	433	3	501201 408722
19	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 99.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A19SW (NE)	449	3	502069 409138
20	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 295.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A14NW (NE)	491	3	502150 409091
21	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 233.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A18SW (N)	505	3	501495 409340
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.0 Watercourse Level: Underground Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A18SW (N)	509	3	501460 409333
23	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 243.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A18SW (NW)	513	3	501447 409331

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A18SW (NW)	517	3	501392 409311
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A18SW (NW)	542	3	501353 409318
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17SE (NW)	560	3	501329 409324
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 124.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A7NE (SW)	568	3	501193 408348
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 158.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NW (S)	572	3	501463 408160
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NW (S)	572	3	501464 408159
30	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 18.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NW (S)	572	3	501464 408159
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 201.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	573	3	501195 408337
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.2 Watercourse Level: Underground Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A18SW (N)	577	3	501670 409432

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17SE (NW)	584	3	501301 409334
34	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 388.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A18SE (N)	592	3	501700 409448
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	595	3	501312 408205
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	598	3	501311 408203
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	619	3	501296 408187
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 59.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	630	3	501288 408179
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 324.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A14NW (E)	635	3	502342 408974
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A14NW (E)	635	3	502342 408974
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A7NE (SW)	640	3	501071 408402

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 373.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A19SW (NE)	644	3	502171 409314
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 102.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17SE (NW)	662	3	501216 409368
44	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 40.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A19SW (NE)	676	3	502204 409327
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	688	3	501010 408417
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	689	3	501249 408134
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NW (SW)	694	3	501001 408421
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	695	3	501246 408129
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.1 Watercourse Level: Underground Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17SE (NW)	697	3	501220 409415
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 221.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NW (SW)	697	3	500998 408422

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 269.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NW (SW)	697	3	500998 408422
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	704	3	501239 408123
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	707	3	501236 408122
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 106.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A19SW (NE)	713	3	502241 409341
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 151.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17SE (NW)	714	3	501199 409421
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 117.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17SE (NW)	714	3	501199 409421
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 156.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	720	3	501344 408046
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	733	3	501216 408104
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	733	3	501214 408105

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17SE (NW)	737	3	501143 409405
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	756	3	501193 408092
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	761	3	501188 408089
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	761	3	501170 408103
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 286.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	761	3	501168 408104
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 170.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Wrawby Catchwater Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17SW (NW)	762	3	500962 409218
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.0 Watercourse Level: Underground Permanent: True Watercourse Name: Wrawby Catchwater Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17SW (NW)	762	3	500975 409239
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 221.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Wrawby Catchwater Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17SW (NW)	762	3	500978 409245
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 247.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17SW (NW)	772	3	500971 409252

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A19SE (NE)	781	3	502416 409207
70	**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: Louth Grimsby and Ancholme Primacy: 1	A19SE (NE)	781	3	502416 409207
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 385.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A19SE (NE)	781	3	502420 409200
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 179.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A19SE (NE)	782	3	502414 409212
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: Underground Permanent: True Watercourse Name: Wrawby Catchwater Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NW (W)	783	3	500886 409094
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 185.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Wrawby Catchwater Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NW (W)	784	3	500884 409090
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.4 Watercourse Level: Underground Permanent: True Watercourse Name: Wrawby Catchwater Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17SE (NW)	807	3	501079 409441
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	808	3	501141 408065
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 45.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	808	3	501141 408065

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Wrawby Catchwater Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17SE (NW)	809	3	501083 409447
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17SE (NW)	812	3	501086 409455
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A19SW (NE)	813	3	502341 409379
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 45.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	815	3	501176 408032
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	815	3	501176 408032
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A19SW (NE)	822	3	502352 409381
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A19SW (NE)	823	3	502351 409383
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A19SW (NE)	824	3	502350 409386
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17SE (NW)	826	3	501059 409449

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 201.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A19SW (NE)	827	3	502347 409395
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.0 Watercourse Level: Underground Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17NE (NW)	828	3	501069 409461
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.0 Watercourse Level: Underground Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17NE (NW)	829	3	501069 409462
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17NE (NW)	829	3	501069 409462
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 335.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17NE (NW)	833	3	501073 409472
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 285.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A19NW (NE)	837	3	502044 409628
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 154.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17NE (NW)	839	3	501058 409465
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 382.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Wrawby Catchwater Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NW (W)	847	3	500788 408931
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	850	3	501100 408045

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17NE (NW)	858	3	501030 409465
97	**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: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	858	3	501091 408041
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 491.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A12NW (W)	859	3	500777 408939
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 238.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9SW (SE)	870	3	502112 407944
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17NE (NW)	872	3	501018 409472
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NW (SW)	874	3	500909 408218
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 304.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A7NW (SW)	877	3	500903 408222
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 187.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A7NW (SW)	877	3	500903 408222
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9SW (SE)	880	3	502308 408066

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9SW (SE)	880	3	502308 408066
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9SW (SE)	881	3	502303 408062
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	897	3	501053 408022
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	897	3	501053 408022
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 171.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	898	3	501065 408011
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12SW (W)	901	3	500751 408529
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	905	3	501045 408018
112	**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: Louth Grimsby and Ancholme Primacy: 1	A7SE (SW)	909	3	501042 408016
113	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 262.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12SW (W)	912	3	500738 408534

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9SE (SE)	915	3	502362 408068
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 87.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A8SW (S)	919	3	501396 407818
116	**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: Louth Grimsby and Ancholme Primacy: 1	A9SE (SE)	942	3	502403 408070
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17NW (NW)	948	3	500948 409510
118	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 95.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17NW (NW)	952	3	500944 409512
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 146.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A14NE (E)	952	3	502667 408961
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9SE (SE)	960	3	502404 408046
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 129.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9SE (SE)	960	3	502404 408046
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9SE (SE)	967	3	502424 408057

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A17NW (NW)	986	3	500922 409538
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 148.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Little Carr Drain Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A17NW (NW)	986	3	500921 409537
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 66.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A2NE (S)	989	3	501325 407766
	Water Framework Directive - Catchment Class Code: River Catchment WaterBody Name: Ancholme from Bishopbridge to the Humber WaterBody ID: GB104029067520 Operational Catchment: Ancholme Management Catchment: Louth Grimsby and Ancholme Catchment Name: Ancholme	A13NW (NW)	0	2	501677 408783
	Water Framework Directive - Catchment Class Code: River Catchment WaterBody Name: Kettleby Beck WaterBody ID: GB104029067510 Operational Catchment: Ancholme Management Catchment: Louth Grimsby and Ancholme Catchment Name: Ancholme	A9NE (SE)	692	2	502360 408440

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: North Lincolnshire Unitary Council - Has no landfill data to supply		0	4	501677 408783
	Local Authority Landfill Coverage Name: West Lindsey District Council - Has no landfill data to supply		842	5	502209 408036
	Local Authority Landfill Coverage Name: Lincolnshire County Council - Had landfill data but passed it to the relevant environment agency		842	6	502209 408036
126	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A8NW (S)	355	-	501630 408351
127	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A18NW (N)	609	-	501580 409459
128	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A14NE (E)	910	-	502636 408889
129	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A15NW (E)	983	-	502705 408921
130	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1950	A13SE (SE)	285	-	501984 408597
131	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1950	A18SE (N)	625	-	501929 409445
132	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1950	A15SW (E)	989	-	502720 408678

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: West Walton Formation, Ampthill Clay Formation And Kimmeridge Clay Formation (Undifferentiated)	A13NW (NW)	0	1	501677 408783
	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: 20 - 40 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A13NE (NE)	0	1	501686 408798
	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	A13NW (NW)	0	1	501677 408783
	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	A13NW (N)	202	1	501661 409057
	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 mg/kg	A13NW (NW)	204	1	501430 408902
	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 (N)	228	1	501662 409083
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12SE (W)	299	1	501336 408670

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 Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A13NE (NE)	329	1	501942 409098
	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	A14NW (NE)	400	1	502099 408980
	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: 20 - 40 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A12SE (SW)	464	1	501231 408476
	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 mg/kg	A18NW (N)	682	1	501619 409536
	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 mg/kg	A18NE (NE)	700	1	502000 409498
	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 mg/kg	A8SW (S)	706	1	501677 408000

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 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	A8SW (S)	746	1	501452 407982
	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: 20 - 40 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A7NE (SW)	775	1	501022 408231
	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	A8SE (S)	845	1	501996 407922
	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: 20 - 40 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A12NW (W)	853	1	500800 409043
	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 mg/kg	A17NE (NW)	854	1	501286 409634
	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	A7SE (S)	901	1	501297 407870

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 Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A18NE (N)	910	1	502000 409722
	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 mg/kg	A17NE (N)	985	1	501275 409771
133	**BGS Recorded Mineral Sites** Site Name: Wrawby Gravel Pit Location: Wrawby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132970 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8NW (S)	489	1	501593 408219
134	**BGS Recorded Mineral Sites** Site Name: Wrawby Gravel Pit Location: Wrawby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132971 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8NW (S)	576	1	501539 408138
135	**BGS Recorded Mineral Sites** Site Name: Wrawby Gravel Pits Location: Wrawby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132966 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14NE (E)	922	1	502647 408897
136	**BGS Recorded Mineral Sites** Site Name: Wrawby Gravel Pits Location: Wrawby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132967 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A15NW (E)	991	1	502714 408916
	BGS Measured Urban Soil Chemistry No data available				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	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	A13NW (NW)	0	1	501677 408783
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	224	1	501466 409004
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	204	1	501430 408902
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	224	1	501466 409004
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	1	501667 408761
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	501686 408798
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
	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	A13NW (NW)	0	1	501677 408783
	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	A13NW (NW)	0	1	501677 408783

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
137	**Contemporary Trade Directory Entries** Name: Lumb Catering Equipment Ltd Location: The Hawthorns, Vicarage Road, Wrawby, Brigg, South Humberside, DN20 8RP Classification: Catering Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	170	-	501902 408778
137	**Contemporary Trade Directory Entries** Name: Lumbs Catering Equipment Location: The Hawthorns, Vicarage Road, Wrawby, Brigg, DN20 8RP Classification: Catering Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	173	-	501905 408778
138	**Contemporary Trade Directory Entries** Name: Vicarage Motors Location: Corner Garage, Brigg Road, Wrawby, Brigg, DN20 8RH Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	240	-	501946 408623
139	**Contemporary Trade Directory Entries** Name: E Mastin & Son Location: 36, Vicarage Avenue, Wrawby, Brigg, DN20 8RY Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	364	-	502096 408769
140	**Contemporary Trade Directory Entries** Name: E Mastin & Son Location: Vicarage Avenue, Wrawby, Brigg, South Humberside, DN20 8RY Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	416	-	502148 408788
141	**Contemporary Trade Directory Entries** Name: Hardwick Haulage Ltd Location: The Hollies, Melton Road, Wrawby, Brigg, DN20 8SP Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	460	-	502192 408714
141	**Contemporary Trade Directory Entries** Name: E J Parry Location: Grafton, Melton Road, Wrawby, Brigg, South Humberside, DN20 8SP Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	484	-	502216 408730
142	**Fuel Station Entries** Name: Vicarage Motors Location: Brigg Road , Wrawby , Brigg, North Lincolnshire, DN20 8RH Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	241	-	501944 408618
143	**Points of Interest - Commercial Services** Name: Vicarage Motors Location: Brigg Road, Wrawby, DN20 8RH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (SE)	240	7	501946 408623
143	**Points of Interest - Commercial Services** Name: Vicarage Motors Location: Brigg Road, Wrawby, Brigg, DN20 8RH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (SE)	241	7	501945 408619
143	**Points of Interest - Commercial Services** Name: Vicarage Motors Location: Corner Garage, Brigg Road, Wrawby, Brigg, DN20 8RH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (SE)	241	7	501945 408619

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
144	**Points of Interest - Commercial Services** Name: Hardwick Haulage Ltd Location: The Hollies, Melton Road, Wrawby, DN20 8SP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A14SW (E)	460	7	502192 408714
145	**Points of Interest - Commercial Services** Name: Cliff Thompson & Company Ltd Location: Three Tree Farm, Star Carr Lane, Wrawby, Brigg, DN20 8SG Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A17SE (NW)	838	7	501040 409446
146	**Points of Interest - Manufacturing and Production** Name: J F Day & Sons Location: Tongs Farm, Brigg Road, Wrawby, Brigg, DN20 8RL Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A13SE (S)	236	7	501727 408476
146	**Points of Interest - Manufacturing and Production** Name: J F Day & Sons Location: Tongs Farm, Brigg Road, Wrawby, DN20 8RL Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A8NE (S)	319	7	501748 408396
147	**Points of Interest - Manufacturing and Production** Name: N Rowson Location: Glebe Farmhouse, Tunnel Road, Wrawby, Brigg, DN20 8SF Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A13NE (NE)	293	7	501877 409102
148	**Points of Interest - Manufacturing and Production** Name: Tanks Location: DN20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	329	7	501992 408531
148	**Points of Interest - Manufacturing and Production** Name: Tank Location: DN20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (SE)	332	7	501995 408530
148	**Points of Interest - Manufacturing and Production** Name: Tank Location: DN20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (SE)	335	7	502000 408531
148	**Points of Interest - Manufacturing and Production** Name: Tank Location: DN20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (SE)	338	7	502000 408526
148	**Points of Interest - Manufacturing and Production** Name: Tank Location: DN20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (SE)	343	7	502003 408521
149	**Points of Interest - Manufacturing and Production** Name: Wind Turbine Location: DN20 Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	583	7	502077 408261
150	**Points of Interest - Manufacturing and Production** Name: N T Rowson Location: 2, Glebe Farm, Chapel Lane, Wrawby, DN20 8SB Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A19SW (NE)	652	7	502288 409173

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
151	**Points of Interest - Manufacturing and Production** Name: Solar Panels Location: DN20 Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to an adjacent address or location	A7SE (S)	896	7	501311 407870
152	**Points of Interest - Recreational and Environmental** Name: Playground Location: Millview Gardens, DN20 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14NW (E)	476	7	502203 408855
152	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	506	7	502232 408859

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	**Nitrate Vulnerable Zones** Name: Ancholme From Bishopbridge To The Humber Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NW (NW)	0	2	501677 408783

Data Currency

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	November 2023	Annually
North Lincolnshire Council - Environmental Protection Team	September 2017	Annual Rolling Update
West Lindsey District Council - Environmental Health Department	September 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - Anglian Region	July 2025	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Anglian Region	March 2013	
Integrated Pollution Controls		
Environment Agency - Anglian Region	January 2009	
Integrated Pollution Prevention And Control		
Environment Agency - Anglian Region	October 2024	Bi-Annually
Local Authority Integrated Pollution Prevention And Control		
North Lincolnshire Council - Environmental Protection Team	December 2020	Variable
West Lindsey District Council - Environmental Health Department	November 2014	Variable
Local Authority Pollution Prevention and Controls		
North Lincolnshire Council - Environmental Protection Team	December 2020	Annual Rolling Update
West Lindsey District Council - Environmental Health Department	December 2020	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
North Lincolnshire Council - Environmental Protection Team	March 2015	Variable
West Lindsey District Council - Environmental Health Department	November 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	May 2025	
Pollution Incidents to Controlled Waters		
Environment Agency - Anglian Region	September 1999	
Historical Prosecutions		
Environment Agency, Anglian Region	March 2013	Not Applicable
Registered Radioactive Substances		
Environment Agency - Anglian Region	May 2023	
Environment Agency - Head Office	May 2023	
Substantiated Pollution Incident Register		
Environment Agency - Anglian Region - Northern Area	July 2025	Quarterly
Water Abstractions		
Environment Agency - Anglian Region	July 2025	Quarterly
Water Industry Act Referrals		
Environment Agency - Anglian Region	October 2017	
Groundwater Vulnerability Map		
Environment Agency - Head Office	June 2018	As notified
Groundwater Vulnerability - Soluble Rock Risk		
Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations		
Environment Agency - Head Office	January 2018	As notified
Superficial Aquifer Designations		
Environment Agency - Head Office	January 2018	As notified
Source Protection Zones		
Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	December 2023	As notified
Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	December 2023	As notified

Data Currency

Agency & Hydrological	Version	Update Cycle
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2023	
Flood Water Storage Areas Environment Agency - Head Office	June 2025	Quarterly
Flood Defences Environment Agency - Head Office	August 2022	
OS Water Network Lines Ordnance Survey	April 2025	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified
Water Framework Directive - Catchment Environment Agency - Head Office	July 2025	Annually
Water Framework Directive - Groundwater Environment Agency - Head Office	July 2025	Annually

Data Currency

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites		
Environment Agency - Head Office	April 2025	Bi-Annually
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Anglian Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Anglian Region - Northern Area	July 2025	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Northern Area	April 2025	Bi-Annually
Local Authority Landfill Coverage		
Lincolnshire County Council	February 2003	Not Applicable
North Lincolnshire Council - Environmental Protection Team	February 2003	Not Applicable
West Lindsey District Council - Environmental Health Department	February 2003	Not Applicable
Local Authority Recorded Landfill Sites		
Lincolnshire County Council	October 2018	
North Lincolnshire Council - Environmental Protection Team	October 2018	
West Lindsey District Council - Environmental Health Department	October 2018	
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	
Registered Landfill Sites		
Environment Agency - Anglian Region - Northern Area	March 2006	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Anglian Region - Northern Area	April 2018	
Registered Waste Treatment or Disposal Sites		
Environment Agency - Anglian Region - Northern Area	June 2015	
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	June 2025	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
West Lindsey District Council	February 2023	Variable
Lincolnshire County Council - Highways and Planning Department	January 2023	Variable
North Lincolnshire Council - Planning Department	July 2023	Variable
Planning Hazardous Substance Consents		
Lincolnshire County Council - Highways and Planning Department	August 2007	Variable
West Lindsey District Council	February 2016	Variable
North Lincolnshire Council - Planning Department	October 2015	Variable

Data Currency

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	April 2025	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	
Mining Instability Ove Arup & Partners	June 1998	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	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	November 2024	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	November 2024	Annually
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	June 2025	Quarterly
Fuel Station Entries Green Street Advisor (UK) Ltd	May 2025	Quarterly
Points of Interest - Commercial Services PointX	June 2025	Quarterly
Points of Interest - Education and Health PointX	June 2025	Quarterly
Points of Interest - Manufacturing and Production PointX	June 2025	Quarterly
Points of Interest - Public Infrastructure PointX	June 2025	Quarterly
Points of Interest - Recreational and Environmental PointX	June 2025	Quarterly
Underground Electrical Cables National Grid	January 2024	

Data Currency

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	March 2025	Bi-Annually
Areas of Adopted Green Belt North Lincolnshire Council West Lindsey District Council	July 2025 July 2025	Quarterly Quarterly
Areas of Unadopted Green Belt North Lincolnshire Council West Lindsey District Council	July 2025 July 2025	Quarterly Quarterly
Areas of Outstanding Natural Beauty Natural England	May 2025	Bi-Annually
Environmentally Sensitive Areas Natural England	August 2023	
Forest Parks Forestry Commission	May 2023	Not Applicable
Local Nature Reserves Natural England	March 2025	Bi-Annually
Marine Nature Reserves Natural England	February 2025	Bi-Annually
National Nature Reserves Natural England	July 2025	Bi-Annually
National Parks Natural England	September 2024	Bi-Annually
Nitrate Sensitive Areas Natural England	April 2023	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 November 2024	Annually
Ramsar Sites Natural England	February 2025	Bi-Annually
Sites of Special Scientific Interest Natural England	May 2025	Bi-Annually
Special Areas of Conservation Natural England	July 2025	Bi-Annually
Special Protection Areas Natural England	May 2025	Bi-Annually

Data Suppliers

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	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Useful Contacts

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	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.co.uk
4	**North Lincolnshire Council - Environmental Protection Team** Church Square House, PO Box 42, Scunthorpe, Lincolnshire, DN15 6XQ	Telephone: 01724 296296 Fax: 01724 280271 Website: www.northlincs.gov.uk
5	**West Lindsey District Council - Environmental Health Department** The Guildhall, Caskgate Street, Gainsborough, Lincolnshire, DN21 2DH	Telephone: 01427 676676 Fax: 01427 810623 Website: www.west-lindsey.gov.uk
6	**Lincolnshire County Council** 4th Floor, City Hall, Lincoln, Lincolnshire, LN1 1DN	Telephone: 01522 552222 Fax: 01522 552288 Email: PublicRelations@lincolnshire.gov.uk Website: www.lincolnshire.gov.uk
7	**PointX** 5-6 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** Landmark Information Group, Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0330 036 6618 Fax: 0844 844 9951 Email: helpdesk@landmark.co.uk Website: www.landmark.co.uk

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

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
382848583_1_1

Customer Reference:
RL2025-08-06

National Grid Reference:
501680, 408780

Slice:
A

Site Area (Ha):
1.27

Search Buffer (m):
1000

Site Details:

Applefields (Stage 2)
Wrawby
Brigg
North Lincolnshire
DN20 8GB

Client Details:

MR D Driver
Humberside Materials Laboratory Ltd
Atherton Way
Brigg
North Lincolnshire
DN20 8AR

Prepared For:

Keigar Homes

Contents

Report Version v53.0

Summary

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	3
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		2	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			1	4
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 3			1	3
Potentially Infilled Land (Water)	pg 3			1	2
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 4	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 4	Yes		n/a	n/a
Salt Mining Related Features					

Summary

Report Version v53.0

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**BGS Recorded Mineral Sites** Site Name: Wrawby Gravel Pit Location: Wrawby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132970 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8NW (S)	489	1	501593 408219
2	**BGS Recorded Mineral Sites** Site Name: Wrawby Gravel Pit Location: Wrawby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132971 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A8NW (S)	576	1	501539 408138
3	**BGS Recorded Mineral Sites** Site Name: Wrawby Gravel Pits Location: Wrawby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132966 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14NE (E)	922	1	502647 408897
4	**BGS Recorded Mineral Sites** Site Name: Wrawby Gravel Pits Location: Wrawby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132967 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A15NW (E)	991	1	502714 408916
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1969 Last Map Published Date: N/A	A13SW (S)	30	-	501646 408675
6	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1969 Last Map Published Date: N/A	A13SE (S)	35	-	501699 408685

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1891 - 1950	A8NW (S)	358	-	501633 408348
8	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1948	A8NW (S)	529	-	501502 408194
9	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1891	A18NW (N)	610	-	501583 409461
10	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1891 - 1948	A14NE (E)	918	-	502642 408902
11	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1891 - 1909	A15NW (E)	983	-	502706 408922
12	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A8NW (S)	355	-	501630 408351
13	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A18NW (N)	609	-	501580 409459
14	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A14NE (E)	910	-	502636 408889
15	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A15NW (E)	983	-	502705 408921
16	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1950	A13SE (SE)	285	-	501984 408597
17	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1950	A18SE (N)	625	-	501929 409445
18	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1950	A15SW (E)	989	-	502720 408678

Ground Stability Data (1:50,000)

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.				
19	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	224	1	501466 409004
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
20	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
21	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
22	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	224	1	501466 409004
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	204	1	501430 408902
23	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	1	501667 408761
24	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501677 408783
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	501686 408798

Historical Map List

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

1:2,500	Mapsheet	Published Date
Ordnance Survey Plan	TA0108	1969
Ordnance Survey Plan	TA0209	1969
Ordnance Survey Plan	TA0109	1970
Ordnance Survey Plan	TA0208	1970

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

1:10,560	Mapsheet	Published Date
Lincolnshire	019_NE	1889
Lincolnshire	019_SE	1889
Lincolnshire	020_NW	1891
Lincolnshire	020_SW	1891
Lincolnshire	019_NE	1908
Lincolnshire	019_SE	1908
Lincolnshire	020_NW	1908
Lincolnshire	020_SW	1909
Lincolnshire	019_NE	1946
Lincolnshire	019_SE	1946
Lincolnshire	020_NW	1950
Lincolnshire	020_SW	1950
Ordnance Survey Plan	TA01SW	1956
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	TA01SW	1981
Ordnance Survey Plan	TA00NW	1988

Data Currency

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	April 2025	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	
Man Made Mining Cavities Stantec UK Ltd	December 2023	Bi-Annually
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Natural Cavities Stantec UK Ltd	December 2023	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	July 2023	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	 As notified
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Brine Subsidence Solution Area Johnson Poole & Bloomer	December 2020	

Data Suppliers

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	
Stantec UK Ltd	
Wardell Armstrong	
Johnson Poole & Bloomer	

Useful Contacts

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** Landmark Information Group, Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0330 036 6618 Fax: 0844 844 9951 Email: helpdesk@landmark.co.uk Website: www.landmark.co.uk

Appendix D

Historical BGS borehole logs

TA 00 NW/86.

Form No. HY.ML.705

LINDSEY COUNTY COUNCIL – HIGHWAYS DEPARTMENT
MATERIALS LABORATORY

TA/43/01610942

BORE HOLE RECORD

Site: Brigg Bypass. Field No 143.

Chainage | Bore Hole No. 49 | Hand/Rig/Trial Hole | 6"/6"/8" dia. | Weather Cold & Windy

Water table below surface | Water seeping in hole at 5'-6" | Dates bored 14/15 > 11-68.

Remarks

Description of Strata Field Identification	Depth below surface Ft.	Depth below surface ins.	PL	LL	Final Class.	Vane C.B.R. % lbs/sq.in.	Ø S.P.T	Cohesion lbs.sq.in.	Density lbs./cu. ft. Wet	Density lbs./cu. ft. Dry	Natural M/C %
Top Soil	0	0									
Firm Brown Clay with Chalk Gravel (1" max size) 1.22 @4'-0"	3	1·07 6			See Remarks						21·0
Soft Brown Clay with very slight Sand Flint Gravel (max size 1") & Chalk Gravel (½" max size) 1.83 @6'-0"	5	1·68 6			See Remarks						17·5
Brown Grey Clay. 2.74 @9'-0"	7	2·13 0	21	47		8	Nil	6	123·8	96·2	27·7
Slightly Cohesive Dark Grey Sand 6.71 @15'-6"	15	4·72 6.			See Remarks						17·7
Firm Dark Grey Clay with very slight Chalk Gravel (½" max size)	19	5·79 0									
6.10 @20'-0"			23	49							25·3
Soft Dark Grey Silty Clay 6.48 @21'-0"	21	6·40 0	28	55			Nil	5	116·3	84·9	37·3
	25	7·77 3.									
TOTAL DEPTH											

Symbols: Reconstituted (r) Undisturbed (u) Angle of internal friction Ø Standard penetration (No. of blows) S.P.T.

Site Technician .....

Form No. HY.ML.705

LINDSEY COUNTY COUNCIL – HIGHWAYS DEPARTMENT
MATERIALS LABORATORY

BORE HOLE RECORD

Site: Brigg By Pass. TA00NW/86

Chainage | Bore Hole No. 49 | Hand/Rig/Trial Hole 4"/6"/8" dia. | Weather

Water table below surface | Water seeping in hole at | Date bored

Remarks

Description of Strata Field Identification	Depth below surface Ft.	Depth below surface ins.	PL	LL	Final Class.	Yane C.B.R. %	Ø / S.P.T	Cohesion lbs.sq.in.	Density lbs./cu. ft. Wet	Density lbs./cu. ft. Dry	Natural M/C %
FIRM GREY CLAY WITH DERY SLIGHT											
SHELL TRACES. @26'-6" 8.08			28	65		13.5	NIL	8	123.6	96.3	28.4
@30'-6" 9.30			28	58		12.5	NIL	6	124.6	97.6	27.6
@32'-6" 9.91							51				
TOTAL DEPTH	33 (10)	6 (21)									

Symbols: Reconstituted (r) Undisturbed (u) Angle of internal friction Ø Standard penetration (No. of blows) S.P.T.

Site Technician .....

Form No. HY.ML.705

LINDSEY COUNTY COUNCIL – HIGHWAYS DEPARTMENT
MATERIALS LABORATORY
BORE HOLE RECORD

TA 00 NW 89

TA 48/ 01840944

Site BRIGG BY PASS FIELD NO 104

Chainage | Bore Hole No. 36 | Hand/Rig/Trial Hole 4"/6"/8" dia. | Weather 21 FOG + SUN 22 FOG - -

Water table below surface | Water seeping in hole at 4'3" | Date bored 21 22 / 10 / 68

Remarks

Description of Strata Field Identification	Depth below surface Ft.	Depth below surface ins.	PL	LL	Final Class.	Vane C.B.R. % tsf	ø / S.P.T	Cohesion lbs.sq.in.	Density lbs./cu. ft. Wet	Density lbs./cu. ft. Dry	Natural M/C %
TOPSOIL	0	0									
SOFT BROWN CLAY WITH SLIGHT FLINT GRAVEL @ 1'0"	0	9									
LIGHT BROWN MEDIUM SAND & FLINT GRAVEL WITH SOME CLAY. @ 2'6"	1	4	36	60							36.4
SOFT BROWN GREY CLAY WITH SLIGHT FLINT & CHALK GRAVEL @ 4'0"	3	0	NP	NP	SOIL CRUMBLE						18.1
SOFT BROWN GREY CLAY @ 6'6"	6	0	19	36							18.0
SOFT BROWN CLAY @ 12'0"	11	0	23	46.		8.5	17	NIL	125.3	97.3	29.2
SOFT GREY BLUE CLAY @ 13'6"	13	0	28	58.							32.4
	15	0	29	61		7.5	see chart			-	33.5
TOTAL DEPTH											

Symbols: Reconstituted (r) Angle of internal friction ø
Undisturbed (u) Standard penetration (No. of blows) S.P.T.

Site Technician .....

Form No. HY.ML.705

LINDSEY COUNTY COUNCIL – HIGHWAYS DEPARTMENT
MATERIALS LABORATORY
BORE HOLE RECORD

Site: BRIGG BYPASS. FIELD No 104 — TA00NW 89

Chainage: | Bore Hole No. 36 | Hand/Rig/Trial Hole 4"/6"/8" dia. | Weather: 21 FOG + SUN, 22 FOG

Water table below surface | Water seeping in hole at 4'·3" | Date bored 21/22/10/68.

Remarks:

Description of Strata Field Identification	Depth below surface Ft.	ins.	PL	LL	Final Class.	Vane ~~C.B.R.~~ lbs	Ø / S.P.T	Cohesion lbs.sq.in.	Density lbs./cu. ft. Wet	Dry	Natural M/C %
SOFT BROWN GREY CLAY WITH A BAND	15 (4.57)	0									
OF SILTY SAND @ 15'-0".											
FIRM BLUE CLAY WITH A BAND OF	20 (6.10)	0	28	46							25.1
GREY SAND AND SLIGHT CHALK GRAVEL (6.86) @22'-6"			35	57		12	1 / –	5	118.5	86.9	36.6
FIRM LAMINATED BLUE CLAY WITH	24 (7.32)	0									
SHELL (9.91) @32'-6"			34	61		17.5+	2 / –	6	124.4	96.4	29.1
(10.32) @34'-6"							– / 32				
TOTAL DEPTH	34 (10.52)	6									

Symbols: Reconstituted (r) Undisturbed (u) Angle of internal friction Ø Standard penetration (No. of blows) S.P.T.

Site Technician ....

Appendix E

Zetica® UXO Bomb Risk Map

UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 501747,408780

This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

Miltary | **Industry** | **UXO find** | **Other**
Transport | **Docks** | **Luftwaffe targets**
Utilities | **Bombing decoy** | **Airfields**

How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density.
Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then additional detailed research is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our pre-desk study assessments (PDSA) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 **email:** uxo@zetica.com **web:** www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the accompanying notes on our website.

Appendix F

Previous nearby HML trial pit and borehole logs

HUMBERSIDE MATERIALS LABORATORY Ltd.
Atherton Way, Brigg
North Lincs DN20 8AR
Tel & Fax 01652 652753

email info@humbersidematerialslab.co.uk

BOREHOLE LOG

Borehole No
BH1

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Dando Terrier
Drilled by :- HML

Depth (m)	Lithology / Description / Depth (m)	Elevation	Thickness (m)	Samples	Water level & well	SPT / SH DCP	Notes
0	MADE GROUND: Firm loamy clayey silts and sands with occasional fine chalk and brick gravel. (TOPSOIL)	0	0.45	1 D			
0.45							
0.5	Soft/Firm low plasticity buff/brown sandy silty CLAY with much fine to coarse chalk and flint gravels.	0.5	0.45	2 D			
0.90							
1	Firm becoming stiff low plasticity buff silty CLAY with much fine to coarse gravels.	1	2.10	3 D		33	SPT at 1.00m: 8,8,8,8,8,9
1.5		1.5					
2		2				30	SPT at 2.00m: 7,7,7,7,8,8
2.5		2.5			2.50m GWL after drilling		
3.00							
3		3				26	SPT at 3.00m: 8,8,8,8,7,8
3.5		3.5					
4		4					

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
U undisturbed
DCP SHDCP
HV Hand Vane

Notes :-

Depth drilled :-3
Casing depth :-

File Ref :- 126/ 5708
Logged by :- M Driver

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email info@humbersidematerialslab.co.uk

BOREHOLE LOG

Borehole No **BH2**

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Dando Terrier
Drilled by :- HML

Depth (m)	Lithology / Description / Depth (m)	Elevation	Thickness (m)	Samples	Water level & well	SPT / SH DCP	Notes
0	Brown sandy SILT/CLAY with occasional rootlets. (TOPSOIL)	0	0.35	1 D			
0.35	Soft/Firm low plasticity buff silty CLAY with much fine to coarse chalk gravels.	0.5	0.65				
1.00	Stiff low plasticity buff silty CLAY with much fine to coarse chalk gravels.	1		2 D		32	SPT at 1.00m: 6,8,8,7,9,8
		1.5					
		2	2.00			24	SPT at 2.00m: 4,5,4,6,7,7
		2.5			2.80m: GWL after drilling		
3.00		3				31	SPT at 3.00m: 7,7,7,8,8,8
		3.5					
4		4					

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
U undisturbed
DCP SHDCP
HV Hand Vane

Notes :-

Depth drilled :-3
Casing depth :-

File Ref :- 126/ 5708
Logged by :- M Driver

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email info@humbersidematerialslab.co.uk

BOREHOLE LOG

Borehole No
BH3

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Dando Terrier
Drilled by :- HML

Depth (m)	Lithology / Description / Depth (m)	Elevation	Thickness (m)	Samples	Water level & well	SPT / SH DCP	Notes
0	Brown sandy SILT/CLAY with occasional rootlets. (TOPSOIL)	0	0.40	1 D			
0.40							
0.5	Firm low plasticity light brown silty CLAY with occasional fine to coarse chalk gravels	0.5	0.70	2 D			
1		1				31	SPT at 1.00m: 4,4,6,8,8,9
1.10							
1.5	Stiff low plasticity buff silty CLAY with much fine to coarse chalk and flint gravel	1.5		3 D			
2		2	1.90			20	SPT at 2.00m: 7,6,4,4,5,7
2.5		2.5					
3		3					
3.00							
3.5		3.5					
4		4					

SPT 0 10 20 30 40 | SH DCP 0 10 20 30 40

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
U undisturbed
DCP SHDCP
HV Hand Vane

Notes :-

Depth drilled :-3
Casing depth :-

File Ref :- 126/ 5708
Logged by :- M Driver

HUMBERSIDE MATERIALS LABORATORY Ltd.
Atherton Way, Brigg
North Lincs DN20 8AR
Tel & Fax 01652 652753

email info@humbersidematerialslab.co.uk

BOREHOLE LOG

Borehole No
BH4

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Dando Terrier
Drilled by :- HML

Depth (m)	Lithology / Description / Depth (m)	Elevation	Thickness (m)	Samples	Water level & well	SPT / SH DCP	Notes
0	Brown sandy SILT/CLAY with occasional rootlets. (TOPSOIL)	0	0.30	1 D			
0.30							
0.5	Orangish brown silty fine to medium SAND with much fine to medium gravel of various lithologies, mainly chalk.	0.5	0.60	2 D			
0.90							
1	Firm low plasticity light brown mottled grey silty CLAY with much stone gravel.	1	0.50	3 D		17	SPT at 1.00m: 4,5,5,5,4,3
1.40							
1.5	Soft low plasticity brown and grey sandy silty CLAY with occasional fine to coarse gravel	1.5	0.70		1.90m: GWL after drilling		
2		2				9	SPT at 2.00m: 2,1,2,2,2,3
2.10							
2.5	Firm dark grey CLAY.	2.5	0.90	4 D			
3		3				26	SPT at 3.00m: 6,6,6,7,6,7
3.00							
3.5		3.5					
4		4					

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
U undisturbed
DCP SHDCP
HV Hand Vane

Notes :-

Depth drilled :-3
Casing depth :-

File Ref :- 126/ 5708
Logged by :- M Driver

HUMBERSIDE MATERIALS LABORATORY Ltd.
Atherton Way, Brigg
North Lincs DN20 8AR
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email info@humbersidematerialslab.co.uk

BOREHOLE LOG

Borehole No
BH5

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Dando Terrier
Drilled by :- HML

Depth (m)	Lithology / Description / Depth (m)	Elevation	Thickness (m)	Samples		Water level & well	SPT / SH DCP	Notes
0	MADE GROUND: Brown sandy SILT/CLAY with occasional rootlets and some to much gravel of blastfurnace slag, stone and concrete. (TOPSOIL)	0	0.40	1	D			
0.40								
0.5	Soft/Firm low plasticity buff/grey sandy silty CLAY with much fine to coarse gravels	0.5	0.70	2	D			
1.10								
1		1					21	SPT at 1.00m: 3,5,4,5,6,6
1.5	Medium dense light grey very silty fine SAND with occasional chalk gravel. Wet.	1.5	1.30	3	D	1.85m: GWL after drilling		
2		2					22	SPT at 2.00m: 7,7,4,5,6,7
2.40								
2.5	Firm low plasticity light brown/grey silty CLAY with much fine to coarse chalk gravels.	2.5	0.60	4	D			
3.00								
3		3					34	SPT at 3.00m: 8,8,8,7,8,9
3.5		3.5						
4		4						

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
U undisturbed
DCP SHDCP
HV Hand Vane

Notes :-

Depth drilled :-3
Casing depth :-

File Ref :- 126/ 5708
Logged by :- M Driver

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Atherton Way, Brigg
North Lincs DN20 8AR
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email info@humbersidematerialslab.co.uk

BOREHOLE LOG

Borehole No
BH6

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Dando Terrier
Drilled by :- HML

Depth (m)	Lithology / Description / Depth (m)	Elevation	Thickness (m)	Samples		Water level & well	SPT / SH DCP	Notes
0	MADE GROUND: Firm loamy clayey silts and sands with occasional brick, stone and blast furnace slag gravel. (TOPSOIL)	0	0.50	1	D			
0.5	0.50 Firm low plasticity buff silty CLAY with much fine to coarse gravels.	0.5						
1		1					17	SPT at 1.00m: 3,3,3,4,5,5
1.5		1.5	2.50					
2		2		2	D		30	SPT at 2.00m: 6,6,8,8,8,6
2.5		2.5				2.75m: GWL after drilling		
3	3.00	3					23	SPT at 3.00m: 6,6,5,6,6,6
3.5		3.5						
4		4						

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
U undisturbed
DCP SHDCP
HV Hand Vane

Notes :-

Depth drilled :-3
Casing depth :-

File Ref :- 126/ 5708
Logged by :- M Driver

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TRIAL PIT LOG

Trial pit No **TP1**

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Wheeled digger

Depth (m)	Lithology / Description / Depth / (thickness)	Elevation	Samples	Water level	Mackintosh Probe (0 5 10 15 20)	Notes
0	Brown sandy clayey SILT with occasional rootlets and some to much gravel of brick, concrete and stone. (MADE GROUND)	0	1 B			
0.4	(0.9)	0.5				
0.8	0.90					
	Soft low plasticity light brown/buff slightly sandy SILT/CLAY with much fine to coarse chalk and flint gravel.	1	2 B			
1.2	(0.6)					
	1.50	1.5				
1.6						
2		2				
2.4		2.5				
2.8						
		3				
3.2						
		3.5				
3.6						
4		4				

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
C Cone

Notes :-

File Ref :- 126 / 5708
Logged by :- D Driver

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TRIAL PIT LOG

Trial pit No **TP2**

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Wheeled digger

Depth (m)	Lithology / Description / Depth / (thickness)	Elevation	Samples	Water level	Mackintosh Probe 0 5 10 15 20	Notes
0	Brown silty fine SAND with occasional rootlets. (TOPSOIL) (0.5)	0				
0.4	0.50	0.5				
	Buff/grey silty fine SAND with some chalk gravel. Assessed as loose using a spade. (0.6)		1 B			
0.8						
	1.10	1				
1.2	Buff very silty fine SAND and fine to coarse chalk gravel. Assessed as loose to medium dense using a spade. (0.8)			**1.4m: medium ingress of GW**		
1.6		1.5				
	1.90					
2		2				
2.4		2.5				
2.8						
		3				
3.2						
		3.5				
3.6						
4		4				

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
C Cone

Notes :-

File Ref :- 126 / 5708
Logged by :- D Driver

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TRIAL PIT LOG

Trial pit No **TP3**

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Wheeled digger

Depth (m)	Lithology / Description / Depth / (thickness)	Elevation	Samples	Water level	Mackintosh Probe 0 5 10 15 20	Notes
0	Brown silty fine SAND with occasional rootlets. (TOPSOIL) 0.15 (0.15)	0				
0.4	Brown sandy SILT/CLAY with occasional rootlets and occasional gravel of blastfurnace slag, brick and concrete. (MADE GROUND) 0.40 (0.25)	0.5	1 B			
0.8	Soft/Firm light orangish brown slightly sandy to sandy CLAY with occasional fine to coarse gravel 0.80 (0.4)	1				
1.2	Firm low plasticity yellowish white slightly sandy CLAY with some fine to coarse gravel. (0.9)	1.5				
1.6	1.70	2		1.7m: slow GW ingress		
2		2.5				
2.4		3				
2.8		3.5				
3.2		4				
3.6						
4						

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
C Cone

Notes :-

File Ref :- 126 / 5708
Logged by :- D Driver

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TRIAL PIT LOG

Trial pit No **TP4**

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 13 Jan 2022

Coordinates E: N:
Elevation :-
Excavated by :- Wheeled digger

Depth (m)	Lithology / Description / Depth / (thickness)	Elevation	Samples	Water level	Mackintosh Probe 0 5 10 15 20	Notes
0	Brown sandy SILT/CLAY with occasional rootlets. (TOPSOIL) (0.3)	0				
0.30						
0.4	Light brown/buff very silty fine SAND with occasional to some fine to coarse gravel, mainly of chalk. Assessed as loose using a spade. (0.6)	0.5	1 B			
0.90						
0.8	Soft/firm light brown/buff and grey sandy SILT/CLAY with much fine to coarse chalk and flint gravel. (0.7)	1				
1.2						
1.60		1.5		1.5m: slow GW ingress		
1.6						
2		2				
2.4		2.5				
2.8		3				
3.2						
3.6		3.5				
4		4				

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
C Cone

Notes :-

File Ref :- 126 / 5708
Logged by :- D Driver

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TRIAL PIT LOG

Trial pit No **HP1**

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 10 Feb 2022

Coordinates E: N:
Elevation :-
Excavated by :- Hand tools

Depth (m)	Lithology / Description / Depth / (thickness)	Elevation	Samples	Water level	Mackintosh Probe (0 5 10 15 20)	Notes
0	MADE GROUND: Brown sandy SILT/CLAY with occasional rootlets and some gravel of blastfurnace slag, stone and concrete. (TOPSOIL)	0	1 D			
0.4	(0.5)	0.5				
	0.50					
0.8		1				
1.2						
1.6		1.5				
2		2				
2.4		2.5				
2.8		3				
3.2						
3.6		3.5				
4		4				

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
C Cone

Notes :-

File Ref :- 126 / 5708
Logged by :- R Lester

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TRIAL PIT LOG

Trial pit No **HP2**

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 10 Feb 2022

Coordinates E: N:
Elevation :-
Excavated by :- Hand tools

Depth (m)	Lithology / Description / Depth / (thickness)	Elevation	Samples	Water level	Mackintosh Probe (0 5 10 15 20)	Notes
0	MADE GROUND: Firm loamy clayey silts and sands with occasional brick, stone and blast furnace slag gravel. (TOPSOIL)	0	1 D			
0.4	(0.5)	0.5				
	0.50					
0.8		1				
1.2						
1.6		1.5				
2		2				
2.4		2.5				
2.8		3				
3.2						
3.6		3.5				
4		4				

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
C Cone

Notes :-

File Ref :- 126 / 5708
Logged by :- R Lester

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TRIAL PIT LOG

Trial pit No **HP3**

Client :- Keigar Homes
Site :- Applefields, Wrawby
Project No :- 5708

Location :- see site plan
Date :- 10 Feb 2022

Coordinates E: N:
Elevation :-
Excavated by :- Hand tools

Depth (m)	Lithology / Description / Depth / (thickness)	Elevation	Samples	Water level	Mackintosh Probe 0 5 10 15 20	Notes
0	MADE GROUND: Brown sandy SILT/CLAY with occasional rootlets and some gravel of blastfurnace slag, stone and concrete. (TOPSOIL)	0	1 D			
0.4	(0.5)	0.5				
	0.50					
0.8		1				
1.2						
1.6		1.5				
2		2				
2.4		2.5				
2.8		3				
3.2						
3.6		3.5				
4		4				

Sample Key
B Bulk
D Disturbed
W Water
SS Split spoon
C Cone

Notes :-

File Ref :- 126 / 5708
Logged by :- R Lester

Appendix G

Previous nearby contamination test results

ANALYTICAL TEST REPORT

Contract no: 105029

Contract name: Land Off Applefields, Wrawby

Client reference: 0123/5708

Clients name: Humberside Materials Laboratory

Clients address: Atherton Way
Brigg
North Lincolnshire
DN20 8AR

Samples received: 26 January 2022

Analysis started: 26 January 2022

Analysis completed: 02 February 2022

Report issued: 02 February 2022

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by: [redacted]

Rachael Burton

Reporting Team Lead

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
105029-1	S/62017	0.10-0.40	Sandy Clayey Loam with Gravel & Roots	-	-	16.1
105029-2	S/62020	0.00-0.30	Sandy Loamy Clay with Gravel & Roots	-	-	23.6
105029-3	S/62026	0.10-0.40	Sandy Loamy Clay with Gravel & Roots	-	-	13.0
105029-4	S/62030	0.00-0.50	Sandy Loam with Gravel	-	-	10.6
105029-5	S/62022	0.40-1.10	Sandy Clayey Loam with Gravel & Roots	-	-	13.4
105029-6	S/62024	0.40-0.90	Sandy Clay with Gravel	-	-	11.4
105029-7	S/62027	0.50-1.00	Sandy Clay with Gravel	-	-	13.1

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SOILS

Lab number			105029-1	105029-2	105029-3	105029-4	105029-5	105029-6
Sample id			S/62017	S/62020	S/62026	S/62030	S/62022	S/62024
Depth (m)			0.10-0.40	0.00-0.30	0.10-0.40	0.00-0.50	0.40-1.10	0.40-0.90
Date sampled			13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022
Test	**Method**	**Units**						
Arsenic (total)	CE127 M	mg/kg As	7.7	4.4	9.3	9.1	-	-
Beryllium (total)	CE127 U	mg/kg Be	<1	<1	2.6	1.4	-	-
Boron (water soluble)	CE063 M	mg/kg B	0.9	1.1	2.2	1.3	-	-
Cadmium (total)	CE127 M	mg/kg Cd	0.3	0.2	<0.2	0.2	-	-
Chromium (total)	CE127 M	mg/kg Cr	51	79	70	53	-	-
Chromium (III)	CE208	mg/kg CrIII	51	79	70	53	-	-
Chromium (VI)	CE146	mg/kg CrVI	<1	<1	<1	<1	-	-
Copper (total)	CE127 M	mg/kg Cu	17	11	7.2	12	-	-
Lead (total)	CE127 M	mg/kg Pb	29	55	12	32	-	-
Mercury (total)	CE127 M	mg/kg Hg	<0.5	<0.5	<0.5	<0.5	-	-
Nickel (total)	CE127 M	mg/kg Ni	16	9.3	9.8	15	-	-
Selenium (total)	CE127 M	mg/kg Se	0.4	<0.3	2.0	0.8	-	-
Vanadium (total)	CE127 M	mg/kg V	21	13	55	35	-	-
Zinc (total)	CE127 M	mg/kg Zn	63	51	25	45	-	-
pH	CE004 M	units	-	-	-	-	8.4	8.6
Magnesium (2:1 water soluble)	CE061	mg/l Mg	-	-	-	-	2	<1
Chloride (2:1 water soluble)	CE049 U	mg/l Cl	-	-	-	-	5.2	4.5
Nitrate (2:1 water soluble)	CE049 U	mg/l NO_3	-	-	-	-	8.0	5.3
Nitrite (2:1 water soluble)	CE049	mg/l NO_2	-	-	-	-	<1	<1
Sulphate (2:1 water soluble)	CE061 U	mg/l SO_4	-	-	-	-	20	<10
Sulphate (total)	CE062 M	mg/kg SO_4	-	-	-	-	409	190
Sulphur (total)	CE119	mg/kg S	-	-	-	-	203	<100
PAH								
Naphthalene	CE087 M	mg/kg	<0.02	<0.02	<0.02	0.04	-	-
Acenaphthylene	CE087 M	mg/kg	<0.02	<0.02	<0.02	0.16	-	-
Acenaphthene	CE087 M	mg/kg	<0.02	<0.02	<0.02	0.16	-	-
Fluorene	CE087 U	mg/kg	<0.02	<0.02	<0.02	0.13	-	-
Phenanthrene	CE087 M	mg/kg	0.02	0.02	0.10	1.27	-	-
Anthracene	CE087 U	mg/kg	<0.02	<0.02	0.02	0.30	-	-
Fluoranthene	CE087 M	mg/kg	0.07	0.07	0.24	2.02	-	-
Pyrene	CE087 M	mg/kg	0.06	0.06	0.20	1.74	-	-
Benzo(a)anthracene	CE087 U	mg/kg	0.05	0.05	0.16	1.15	-	-
Chrysene	CE087 M	mg/kg	0.04	0.04	0.15	1.01	-	-
Benzo(b)fluoranthene	CE087 M	mg/kg	0.04	0.06	0.20	1.24	-	-
Benzo(k)fluoranthene	CE087 M	mg/kg	<0.03	<0.03	0.09	0.54	-	-
Benzo(a)pyrene	CE087 U	mg/kg	0.04	0.06	0.15	1.07	-	-
Indeno(123cd)pyrene	CE087 M	mg/kg	0.03	0.03	0.11	0.87	-	-
Dibenz(ah)anthracene	CE087 M	mg/kg	<0.02	<0.02	0.03	0.20	-	-
Benzo(ghi)perylene	CE087 M	mg/kg	0.03	0.03	0.09	0.82	-	-
PAH (total of USEPA 16)	CE087	mg/kg	0.39	0.42	1.55	12.7	-	-

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SOILS

Lab number			105029-1	105029-2	105029-3	105029-4	105029-5	105029-6
Sample id			S/62017	S/62020	S/62026	S/62030	S/62022	S/62024
Depth (m)			0.10-0.40	0.00-0.30	0.10-0.40	0.00-0.50	0.40-1.10	0.40-0.90
Date sampled			13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022
Test	**Method**	**Units**						
Organochlorine Pesticides								
2,4'-DDD (O,P'-DDD)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
4,4'-DDD (P,P'-DDD)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
2,4'-DDE (O,P'-DDE)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
4,4'-DDE (P,P'-DDE)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
2,4'-DDT (O,P'-DDT)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
4,4'-DDT (P,P'-DDT)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
2,6-Dichlorobenzonitrile	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
4,4'-Dichlorobenzophenone	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Aldrin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Alpha-HCH	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Benfluralin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Beta-HCH	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Biphenyl	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Chlorfenson	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Chloroneb	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Chlorothalonil	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
cis-Chlordane	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
cis-Nonachlor	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Delta-HCH	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Dichlofluanid	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Dicloran	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Dicofol	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Dieldrin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Diphenylamine	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Endosulphan A	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Endosulphan B	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Endosulphan ether	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Endosulphan sulphate	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Endrin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Endrin aldehyde	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Endrin ketone	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Ethalfluralin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Fenson	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Gamma-HCH (Lindane)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
HCB	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Heptachlor	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Heptachlor epoxide	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Isodrin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Isopropalin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Methoxychlor	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Methoxychlor olefin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-

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SOILS

Lab number			105029-1	105029-2	105029-3	105029-4	105029-5	105029-6
Sample id			S/62017	S/62020	S/62026	S/62030	S/62022	S/62024
Depth (m)			0.10-0.40	0.00-0.30	0.10-0.40	0.00-0.50	0.40-1.10	0.40-0.90
Date sampled			13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022
Test	**Method**	**Units**						
Mirex	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Nitralin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Nitrofen	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Oxyfluorfen	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pendimethalin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pentachloroaniline	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pentachloroanisole	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pentachlorobenzene	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pentachlorobenzonitrile	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pentachloronitrobenzene (Quintozene)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pentachlorothioanisole	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Prodiamine	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Profluralin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Tetrachloronitrobenzene (Tecnazene)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Tetradifon	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
THPI (Tetrahydrophthalimide)	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Tolyfluanid	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
trans-Chlordane	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
trans-Nonachlor	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Trifluralin	CE112	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Organophosphate Pesticides								
Acephate	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Azinphos ethyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Azinphos methyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Bromophos ethyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Chlorpyriphos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Chlorpyriphos methyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Coumaphos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Demeton-S-methyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Diazinon	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Dichlorvos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Dimethoate	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Disulfoton	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
EPN	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Ethion	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Ethoprophos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Famphur	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Fenchlorphos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Fenitrothion	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Fensulfothion	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Isazophos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Malathion	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-

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SOILS

Lab number			105029-1	105029-2	105029-3	105029-4	105029-5	105029-6
Sample id			S/62017	S/62020	S/62026	S/62030	S/62022	S/62024
Depth (m)			0.10-0.40	0.00-0.30	0.10-0.40	0.00-0.50	0.40-1.10	0.40-0.90
Date sampled			13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022	13/01/2022
Test	**Method**	**Units**						
Merphos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Methamidophos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Methidathion	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Methomyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Monocrotophos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Naled	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Omethoate	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Parathion	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Parathion methyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Phorate	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Phosalone	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Phosmet	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pirimiphos ethyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pirimiphos methyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Profenofos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Prothiophos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pyraclofos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pyrazophos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Pyridaphention	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Quinalphos	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Sulfotep	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Thiofanox	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Thionazin	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Tolclofos-methyl	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Trichlorfon	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Triethyl thiophosphate	CE113	mg/kg	<0.01	<0.01	<0.01	<0.01	-	-
Subcontracted analysis								
Asbestos (qualitative)	$	-	NAD	NAD	NAD	NAD	-	-

Chemtech Environmental Limited

SOILS

Lab number			105029-7
Sample id			S/62027
Depth (m)			0.50-1.00
Date sampled			13/01/2022
Test	**Method**	**Units**	
Arsenic (total)	CE127 M	mg/kg As	-
Beryllium (total)	CE127 U	mg/kg Be	-
Boron (water soluble)	CE063 M	mg/kg B	-
Cadmium (total)	CE127 M	mg/kg Cd	-
Chromium (total)	CE127 M	mg/kg Cr	-
Chromium (III)	CE208	mg/kg CrIII	-
Chromium (VI)	CE146	mg/kg CrVI	-
Copper (total)	CE127 M	mg/kg Cu	-
Lead (total)	CE127 M	mg/kg Pb	-
Mercury (total)	CE127 M	mg/kg Hg	-
Nickel (total)	CE127 M	mg/kg Ni	-
Selenium (total)	CE127 M	mg/kg Se	-
Vanadium (total)	CE127 M	mg/kg V	-
Zinc (total)	CE127 M	mg/kg Zn	-
pH	CE004 M	units	8.5
Magnesium (2:1 water soluble)	CE061	mg/l Mg	1.1
Chloride (2:1 water soluble)	CE049 U	mg/l Cl	2.0
Nitrate (2:1 water soluble)	CE049 U	mg/l NO_3	1.1
Nitrite (2:1 water soluble)	CE049	mg/l NO_2	<1
Sulphate (2:1 water soluble)	CE061 U	mg/l SO_4	<10
Sulphate (total)	CE062 M	mg/kg SO_4	356
Sulphur (total)	CE119	mg/kg S	210
PAH			
Naphthalene	CE087 M	mg/kg	-
Acenaphthylene	CE087 M	mg/kg	-
Acenaphthene	CE087 M	mg/kg	-
Fluorene	CE087 U	mg/kg	-
Phenanthrene	CE087 M	mg/kg	-
Anthracene	CE087 U	mg/kg	-
Fluoranthene	CE087 M	mg/kg	-
Pyrene	CE087 M	mg/kg	-
Benzo(a)anthracene	CE087 U	mg/kg	-
Chrysene	CE087 M	mg/kg	-
Benzo(b)fluoranthene	CE087 M	mg/kg	-
Benzo(k)fluoranthene	CE087 M	mg/kg	-
Benzo(a)pyrene	CE087 U	mg/kg	-
Indeno(123cd)pyrene	CE087 M	mg/kg	-
Dibenz(ah)anthracene	CE087 M	mg/kg	-
Benzo(ghi)perylene	CE087 M	mg/kg	-
PAH (total of USEPA 16)	CE087	mg/kg	-

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SOILS

Lab number			105029-7
Sample id			S/62027
Depth (m)			0.50-1.00
Date sampled			13/01/2022
Test	**Method**	**Units**	
Organochlorine Pesticides			
2,4'-DDD (O,P'-DDD)	CE112	mg/kg	-
4,4'-DDD (P,P'-DDD)	CE112	mg/kg	-
2,4'-DDE (O,P'-DDE)	CE112	mg/kg	-
4,4'-DDE (P,P'-DDE)	CE112	mg/kg	-
2,4'-DDT (O,P'-DDT)	CE112	mg/kg	-
4,4'-DDT (P,P'-DDT)	CE112	mg/kg	-
2,6-Dichlorobenzonitrile	CE112	mg/kg	-
4,4'-Dichlorobenzophenone	CE112	mg/kg	-
Aldrin	CE112	mg/kg	-
Alpha-HCH	CE112	mg/kg	-
Benfluralin	CE112	mg/kg	-
Beta-HCH	CE112	mg/kg	-
Biphenyl	CE112	mg/kg	-
Chlorfenson	CE112	mg/kg	-
Chloroneb	CE112	mg/kg	-
Chlorothalonil	CE112	mg/kg	-
cis-Chlordane	CE112	mg/kg	-
cis-Nonachlor	CE112	mg/kg	-
Delta-HCH	CE112	mg/kg	-
Dichlofluanid	CE112	mg/kg	-
Dicloran	CE112	mg/kg	-
Dicofol	CE112	mg/kg	-
Dieldrin	CE112	mg/kg	-
Diphenylamine	CE112	mg/kg	-
Endosulphan A	CE112	mg/kg	-
Endosulphan B	CE112	mg/kg	-
Endosulphan ether	CE112	mg/kg	-
Endosulphan sulphate	CE112	mg/kg	-
Endrin	CE112	mg/kg	-
Endrin aldehyde	CE112	mg/kg	-
Endrin ketone	CE112	mg/kg	-
Ethalfluralin	CE112	mg/kg	-
Fenson	CE112	mg/kg	-
Gamma-HCH (Lindane)	CE112	mg/kg	-
HCB	CE112	mg/kg	-
Heptachlor	CE112	mg/kg	-
Heptachlor epoxide	CE112	mg/kg	-
Isodrin	CE112	mg/kg	-
Isopropalin	CE112	mg/kg	-
Methoxychlor	CE112	mg/kg	-
Methoxychlor olefin	CE112	mg/kg	-

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SOILS

Lab number			105029-7
Sample id			S/62027
Depth (m)			0.50-1.00
Date sampled			13/01/2022
Test	**Method**	**Units**	
Mirex	CE112	mg/kg	-
Nitralin	CE112	mg/kg	-
Nitrofen	CE112	mg/kg	-
Oxyfluorfen	CE112	mg/kg	-
Pendimethalin	CE112	mg/kg	-
Pentachloroaniline	CE112	mg/kg	-
Pentachloroanisole	CE112	mg/kg	-
Pentachlorobenzene	CE112	mg/kg	-
Pentachlorobenzonitrile	CE112	mg/kg	-
Pentachloronitrobenzene (Quintozene)	CE112	mg/kg	-
Pentachlorothioanisole	CE112	mg/kg	-
Prodiamine	CE112	mg/kg	-
Profluralin	CE112	mg/kg	-
Tetrachloronitrobenzene (Tecnazene)	CE112	mg/kg	-
Tetradifon	CE112	mg/kg	-
THPI (Tetrahydrophthalimide)	CE112	mg/kg	-
Tolyfluanid	CE112	mg/kg	-
trans-Chlordane	CE112	mg/kg	-
trans-Nonachlor	CE112	mg/kg	-
Trifluralin	CE112	mg/kg	-
Organophosphate Pesticides			
Acephate	CE113	mg/kg	-
Azinphos ethyl	CE113	mg/kg	-
Azinphos methyl	CE113	mg/kg	-
Bromophos ethyl	CE113	mg/kg	-
Chlorpyriphos	CE113	mg/kg	-
Chlorpyriphos methyl	CE113	mg/kg	-
Coumaphos	CE113	mg/kg	-
Demeton-S-methyl	CE113	mg/kg	-
Diazinon	CE113	mg/kg	-
Dichlorvos	CE113	mg/kg	-
Dimethoate	CE113	mg/kg	-
Disulfoton	CE113	mg/kg	-
EPN	CE113	mg/kg	-
Ethion	CE113	mg/kg	-
Ethoprophos	CE113	mg/kg	-
Famphur	CE113	mg/kg	-
Fenchlorphos	CE113	mg/kg	-
Fenitrothion	CE113	mg/kg	-
Fensulfothion	CE113	mg/kg	-
Isazophos	CE113	mg/kg	-
Malathion	CE113	mg/kg	-

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SOILS

Lab number			105029-7
Sample id			S/62027
Depth (m)			0.50-1.00
Date sampled			13/01/2022
Test	**Method**	**Units**	
Merphos	CE113	mg/kg	-
Methamidophos	CE113	mg/kg	-
Methidathion	CE113	mg/kg	-
Methomyl	CE113	mg/kg	-
Monocrotophos	CE113	mg/kg	-
Naled	CE113	mg/kg	-
Omethoate	CE113	mg/kg	-
Parathion	CE113	mg/kg	-
Parathion methyl	CE113	mg/kg	-
Phorate	CE113	mg/kg	-
Phosalone	CE113	mg/kg	-
Phosmet	CE113	mg/kg	-
Pirimiphos ethyl	CE113	mg/kg	-
Pirimiphos methyl	CE113	mg/kg	-
Profenofos	CE113	mg/kg	-
Prothiophos	CE113	mg/kg	-
Pyraclofos	CE113	mg/kg	-
Pyrazophos	CE113	mg/kg	-
Pyridaphention	CE113	mg/kg	-
Quinalphos	CE113	mg/kg	-
Sulfotep	CE113	mg/kg	-
Thiofanox	CE113	mg/kg	-
Thionazin	CE113	mg/kg	-
Tolclofos-methyl	CE113	mg/kg	-
Trichlorfon	CE113	mg/kg	-
Triethyl thiophosphate	CE113	mg/kg	-
Subcontracted analysis			
Asbestos (qualitative)	$	-	-

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE127	Arsenic (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg As
CE127	Beryllium (total)	Aqua regia digest, ICP-MS	Dry	U	1	mg/kg Be
CE063	Boron (water soluble)	Hot water extract, ICP-OES	Dry	M	0.5	mg/kg B
CE127	Cadmium (total)	Aqua regia digest, ICP-MS	Dry	M	0.2	mg/kg Cd
CE127	Chromium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cr
CE208	Chromium (III)	Calculation: Cr (total) - Cr (VI)	Dry		1	mg/kg CrIII
CE146	Chromium (VI)	Acid extraction, Colorimetry	Dry		1	mg/kg CrVI
CE127	Copper (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cu
CE127	Lead (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Pb
CE127	Mercury (total)	Aqua regia digest, ICP-MS	Dry	M	0.5	mg/kg Hg
CE127	Nickel (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Ni
CE127	Selenium (total)	Aqua regia digest, ICP-MS	Dry	M	0.3	mg/kg Se
CE127	Vanadium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg V
CE127	Zinc (total)	Aqua regia digest, ICP-MS	Dry	M	5	mg/kg Zn
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
CE061	Magnesium (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry		1	mg/l Mg
CE049	Chloride (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	1	mg/l Cl
CE049	Nitrate (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	1	mg/l NO_3
CE049	Nitrite (2:1 water soluble)	Aqueous extraction, IC-COND	Dry		1	mg/l NO_2
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO_4
CE062	Sulphate (total)	Acid extraction, ICP-OES	Dry	M	100	mg/kg SO_4
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		100	mg/kg S
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.34	mg/kg
CE112	2,4'-DDD (O,P'-DDD)	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	4,4'-DDD (P,P'-DDD)	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	2,4'-DDE (O,P'-DDE)	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	4,4'-DDE (P,P'-DDE)	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	2,4'-DDT (O,P'-DDT)	Solvent extraction, GC-MS	As received		0.01	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE112	4,4'-DDT (P,P'-DDT)	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	2,6-Dichlorobenzonitrile	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	4,4'-Dichlorobenzophenone	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Aldrin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Alpha-HCH	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Benfluralin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Beta-HCH	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Biphenyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Chlorfenson	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Chloroneb	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Chlorothalonil	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	cis-Chlordane	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	cis-Nonachlor	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Delta-HCH	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Dichlofluanid	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Dicloran	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Dicofol	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Dieldrin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Diphenylamine	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Endosulphan A	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Endosulphan B	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Endosulphan ether	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Endosulphan sulphate	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Endrin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Endrin aldehyde	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Endrin ketone	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Ethalfluralin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Fenson	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Gamma-HCH (Lindane)	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	HCB	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Heptachlor	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Heptachlor epoxide	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Isodrin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Isopropalin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Methoxychlor	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Methoxychlor olefin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Mirex	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Nitralin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Nitrofen	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Oxyfluorfen	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Pendimethalin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Pentachloroaniline	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Pentachloroanisole	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Pentachlorobenzene	Solvent extraction, GC-MS	As received		0.01	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE112	Pentachlorobenzonitrile	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Pentachloronitrobenzene (Quintozene)	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Pentachlorothioanisole	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Prodiamine	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Profluralin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Tetrachloronitrobenzene (Tecnazene)	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Tetradifon	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	THPI (Tetrahydrophthalimide)	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Tolyfluanid	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	trans-Chlordane	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	trans-Nonachlor	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE112	Trifluralin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Acephate	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Azinphos ethyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Azinphos methyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Bromophos ethyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Chlorpyriphos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Chlorpyriphos methyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Coumaphos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Demeton-S-methyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Diazinon	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Dichlorvos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Dimethoate	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Disulfoton	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	EPN	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Ethion	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Ethoprophos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Famphur	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Fenchlorphos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Fenitrothion	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Fensulfothion	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Isazophos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Malathion	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Merphos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Methamidophos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Methidathion	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Methomyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Monocrotophos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Naled	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Omethoate	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Parathion	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Parathion methyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Phorate	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Phosalone	Solvent extraction, GC-MS	As received		0.01	mg/kg

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE113	Phosmet	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Pirimiphos ethyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Pirimiphos methyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Profenofos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Prothiophos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Pyraclofos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Pyrazophos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Pyridaphention	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Quinalphos	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Sulfotep	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Thiofanox	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Thionazin	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Tolclofos-methyl	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Trichlorfon	Solvent extraction, GC-MS	As received		0.01	mg/kg
CE113	Triethyl thiophosphate	Solvent extraction, GC-MS	As received		0.01	mg/kg
$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments
Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
105029-1	S/62017	0.10-0.40	N	
105029-2	S/62020	0.00-0.30	N	
105029-3	S/62026	0.10-0.40	N	
105029-4	S/62030	0.00-0.50	N	
105029-5	S/62022	0.40-1.10	N	
105029-6	S/62024	0.40-0.90	N	
105029-7	S/62027	0.50-1.00	N	

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

For soils and solids, analytical results are inclusive of stones, where applicable.

ANALYTICAL TEST REPORT

Contract no: 105911(1)

Contract name: Applefields, Wrawby

Client reference: 0126/5708

Clients name: Humberside Materials Laboratory

Clients address: Atherton Way
Brigg
North Lincolnshire
DN20 8AR

Samples received: 14 February 2022

Analysis started: 14 February 2022

Analysis completed: 21 February 2022

Report issued: 12 April 2022

This is a supplementary report to report number 105911 issued 21 February 2022.

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing

Approved by: [redacted]

Megan Harris

Senior Reporting Administrator

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
105911-1	S/62230	0.10-0.50	Sandy Loam with Gravel & Roots	-	-	17.9
105911-2	S/62231	0.10-0.50	Sandy Clayey Loam with Gravel & Roots	-	-	20.7
105911-3	S/62232	0.10-0.50	Sandy Clayey Loam with Gravel & Roots	-	-	17.4

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SOILS

Lab number			105911-1	105911-2	105911-3
Sample id			S/62230 HP1-1	S/62231 HP2-1	S/62232 HP3-1
Depth (m)			0.10-0.50	0.10-0.50	0.10-0.50
Date sampled			10/02/2022	10/02/2022	10/02/2022
Test	**Method**	**Units**			
Arsenic (total)	CE127 M	mg/kg As	8.0	6.7	6.7
Beryllium (total)	CE127 U	mg/kg Be	<1	<1	1.2
Boron (water soluble)	CE063 M	mg/kg B	1.6	1.9	1.3
Cadmium (total)	CE127 M	mg/kg Cd	0.3	<0.2	<0.2
Chromium (total)	CE127 M	mg/kg Cr	65	46	44
Chromium (III)	CE208	mg/kg CrIII	65	46	44
Chromium (VI)	CE146	mg/kg CrVI	<1	<1	<1
Copper (total)	CE127 M	mg/kg Cu	12	9.1	33
Lead (total)	CE127 M	mg/kg Pb	30	19	68
Mercury (total)	CE127 M	mg/kg Hg	<0.5	<0.5	<0.5
Nickel (total)	CE127 M	mg/kg Ni	13	13	29
Selenium (total)	CE127 M	mg/kg Se	1.2	1.1	1.6
Vanadium (total)	CE127 M	mg/kg V	29	24	41
Zinc (total)	CE127 M	mg/kg Zn	71	45	84

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE127	Arsenic (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg As
CE127	Beryllium (total)	Aqua regia digest, ICP-MS	Dry	U	1	mg/kg Be
CE063	Boron (water soluble)	Hot water extract, ICP-OES	Dry	M	0.5	mg/kg B
CE127	Cadmium (total)	Aqua regia digest, ICP-MS	Dry	M	0.2	mg/kg Cd
CE127	Chromium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cr
CE208	Chromium (III)	Calculation: Cr (total) - Cr (VI)	Dry		1	mg/kg CrIII
CE146	Chromium (VI)	Acid extraction, Colorimetry	Dry		1	mg/kg CrVI
CE127	Copper (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cu
CE127	Lead (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Pb
CE127	Mercury (total)	Aqua regia digest, ICP-MS	Dry	M	0.5	mg/kg Hg
CE127	Nickel (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Ni
CE127	Selenium (total)	Aqua regia digest, ICP-MS	Dry	M	0.3	mg/kg Se
CE127	Vanadium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg V
CE127	Zinc (total)	Aqua regia digest, ICP-MS	Dry	M	5	mg/kg Zn

Chemtech Environmental Limited

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OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
105911-1	S/62230	0.10-0.50	N	
105911-2	S/62231	0.10-0.50	N	
105911-3	S/62232	0.10-0.50	N	

Chemtech Environmental Limited

ADDITIONAL INFORMATION

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Chemtech Environmental Limited

TEST REPORT REVISIONS

The table below identifies ammendments that have been made to this test report for each revision.

Test Report Reference	Details of amendments to test report	Issue Date
105911	Original report issued	21 February 2022
105911(1)	Beryllium added to report	12 April 2022