Phase 1 (Desk Study) Report

Land off The Hill, Worlaby, North Lincolnshire

Produced for Mrs K Fillingham

September 2022

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Phase 1 (Desktop) Report: Land off The Hill, Worlaby

CONTENTS

Executive Summary

FACTUAL INFORMATION	*Proposed works*	A new 1½ storey dormer bungalow property (North Lincolnshire Council planning application ref. PA/2022/897)
	Site location and size	*Location:* off The Hill, Worlaby, North Lincs, post code DN20 0NP *Size:* about 41m by 23m in plan area.
	Site features and current use	The site is a grassed field which houses a steel container (in the southwest part) that is used as a builder's storage shed. There is also an asphalt/stone track through the north part of the site and some piles of construction materials mainly along the northwest and northeast boundaries. Apart from the site's use as storage by a local builder, no signs of potential contamination are evident at the site
	Topography	The site slopes up towards the northeast at an average gradient of about 1 in 15. Ground levels at the site range between about 32.9m and 35.8m AOD
	Site history	In recent decades, the site has been used for the storage of construction tools and materials. However, no evidence has been found of previous buildings at the site The site seems to have been part of the grounds to Worlaby Hall. Historically, there has been a farmyard and pond only about 6m northwest of the site Nearby, there is a former gravel pit (about 80m east) which was disused by 1973 and a brick yard/clay pit (about 200m south) which became disused by 1956. No evidence has been found of refuse tipping in these pits
	Published geology	*Drift (superficial soils):* Head deposits / Blown Sand *Solid (bedrock):* Kimmeridge Clay Formation - mudstone
	Anticipated ground conditions (subject to confirmation)	*Made ground:* Hardstanding/subbase below the track and possible reworked natural soils elsewhere – possibly up to about 2m depth *Blown sand (BSA):* silty fine sand (in the southwest) – less than 2m *Head deposits:* silts, clays, sands and gravel – less than 3m thick *Kimmeridge Clay Formation (KC)*: clay grading into mudstone
	Hydrogeology	The anticipated near surface Head deposits and blown sands (BSA) could be of moderate permeability and are classed as Secondary Undifferentiated and Secondary A aquifers. On the other hand, the underlying Kimmeridge Clay mudstone is likely to be of very low permeability The nearest groundwater SPZ is in the chalk about 100m north (and uphill) of the site. There are no nearby licensed groundwater abstractions (within 2km)

FACTUAL INFORMATION (continued)	*Hydrology*	There is a pond (6m northwest) in which water levels could be about 2m below site ground levels. There are other ponds and streams further afield as well as the New River Ancholme (about 4km west) at about 2m AOD. The site is in an area with a low probability of flooding
	Landfills	There are no reported landfill sites (BGS Recorded, Historical, Local Authority Recorded or Registered) within at least 500m of the site The former brick yard and clay pit (180m south) is identified by Envirocheck as Potentially Infilled Land (based on 1981 mapping). However, inspection of historical maps shows this area continues to be low-lying marshy ground and suggests no significant infilling has ever taken place The gravel pit (80m east) is not identified as a landfill or potentially infilled land. Anecdotal information indicates it has never been infilled
	Radon	The site is not affected by radon. No protection measures required
	Pollution	No nearby significant pollution data has been identified
	Nearby land use	The site has been used for the storage of construction tools and materials in recent decades. The land 10m to the west is a historical farmyard. Otherwise, no significant on-site or nearby off-site industrial land use has been identified
	Land sensitivity	The site is in a Nitrate Vulnerable Zone (NVZ). Otherwise, there are no identified sensitive land uses at the site
CONTAMINATION ASSESSMENT	*Initial conceptual site model*	The following potential sources of contamination were identified for the site 1. Made ground beneath the site 2. Recent land use: storage of construction tools and materials Contaminants of concern include metals, PAHs, asbestos and petroleum hydrocarbons Various possible pathways have been considered for these contaminants (including inhalation, ingestion, absorption, migration) to reach and affect environmental receptors (including humans, ecology and controlled waters)
	Preliminary risk assessment	A preliminary risk assessment has identified two potential contamination linkages (PCL1 and PCL2) with unacceptable (Low/Moderate) risk which merit further consideration: PCL1: inhalation/absorption/ingestion of contaminants in garden areas by residential users PCL2: inhalation of vapours in houses by residential users

CONTAMINATION ASSESSMENT (continued)	*Remediation & further investigation*	At this stage, no remediation options are recommended but further investigation is needed. Several sample holes (at least three) should be carried out around the site to determine the ground conditions and provide samples of near surface ground material to be tested for contaminants of concern and the results used to complete a revised assessment. It is possible that the findings will indicate the need for clean cover systems (in gardens) and, potentially, even vapour protection for houses For the recommended investigation, several hole locations are suggested including below the proposed house, below the gardens and below the stoned access track While no viable sources have been identified, the LPA has raised concerns about hazardous ground gas. Therefore, it would be prudent to install ground gas monitoring wells and undertake a couple of monitoring visits
	Reuse of site won material	Clean natural soil materials will be suitable for reuse. Any grubbed up hardstanding or excavated contaminated made ground might need removing off site as waste
	Unforeseen contamination	Work shall be halted in the area of any unforeseen contamination (for example, petroleum odours/staining or asbestos containing materials) encountered during the development of the site. The contamination will need to be monitored and investigated and assessed to the satisfaction of the local authority
	Water supply pipework	Potential sources of hydrocarbons (PAHs and petroleum) have been identified. Therefore, at this stage, it would be prudent to make allowance to provide barrier piping for water supply

1 Introduction

The client, Mrs K Fillingham, has engaged Humberside Materials Laboratory Limited (HML) to undertake a Phase 1 (desktop study) report in advance of proposed residential development on land off The Hill, Worlaby, North Lincolnshire. The land will be hereinafter referred to as *the site*.

The site is currently subject to a North Lincolnshire planning application (ref.: PA/2022/897).

1.1 Aims

The aim of the Phase 1 investigation is to assess relevant geo-environmental aspects of the site in relation to the proposed development works. This includes an evaluation of likely ground conditions and potential land contamination issues.

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	06 Sep 2022
	Envirocheck report	Envirocheck report including environmental information (presented as Appendix C) and historical maps (presented as Appendix B), Order Number: 300854367_1_1, Customer reference, RL-2022-09-06	21 Sep 2022
	Location plan	Hyde Architecture drawing number 1334/001, Revision -	09 Nov 2021
	Block plans	Hyde Architecture drawing number 1334/002, Revision -	09 Nov 2021
	Proposed site plan	Hyde Architecture drawing number 1334/003, Revision -	09 Nov 2021
	Proposed plans & elevations	Hyde Architecture drawing number 1334/004, Revision -	09 Nov 2021
	Tree Constraints Plan	Equans Arboricultural Consultancy drawing number TCP_01_060422AH, no revision (incl. Appendix A, Tree Schedule)	06 Apr 2022
Local information	Online maps and photos	www.google.co.uk, www.openstreetmap.org, www.promap.co.uk & www.streetmap.co.uk	Sep 2022
	Geological maps	1:50000 Series, Sheet 89 Brigg, Drift	1982
		1:50000 Series, Sheet 89 Brigg, Solid	1982
	Online BGS data	www.bgs.ac.uk (map data & borehole records)	Sep 2022
	Historic aerial photos	www.britainfromabove.org.uk	Sep 2022
	Historical maps	www.oldmapsonline.org; www.maps.nls.uk	Sep 2022
	Historical information	www.nationalarchives.gov.uk; www.historicengland.org.uk	Sep 2022
	Environmental info	https://magic.defra.gov.uk/magicmap.aspx	Sep 2022
	Mining info	https://mapapps2.bgs.ac.uk/coalauthority/home.html	Sep 2022
	Radon info	https://www.ukradon.org/information/ukmaps	Sep 2022
	Soil info	www.ukso.org (soil observatory website)	Sep 2022
	Flooding info	www.gov.uk (flood maps)	Sep 2022
	Planning info	North Lincolnshire Council planning portal	Sep 2022

3 Site Description and Topography

3.1 Proposed development

The proposed works comprise the construction of a new 1½ storey dormer bungalow (Gatehouse style) dwelling with driveway and soft garden areas. Details of the development can be viewed on the North Lincolnshire Council planning portal (planning application ref. PA/2022/897).

Condition 10 of the above planning application outlines the requirement for a Phase 1 Desk Study (presented herein) to: "*Identify and evaluate all potential sources of contamination and the impacts on land and/or controlled waters, relevant to the site.*"

3.2 Site location and size

The site is located off (and to the north of) The Hill, Worlaby, North Lincolnshire, post code DN20 0NP. The site is centred around grid reference 501670, 413950.

The site occupies a rectangular parcel of land which is about 41m by 23m 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 6th September 2022. Access was available around the whole site. Photos were taken and many site features were noted, as detailed below.

- The site is mostly a grassed field. The ground surface is nearly all covered by short grass although there is some bare earth in places – which, based on close inspection, appears to be clean topsoil with no anthropogenic material
- Nevertheless, there is a steel storage container (about 12m by 2.5m in plan area) in the southwest part of the site which is used as a long shed to store various construction tools
- There is an asphalt and stone driveway through the north part of the site. this provides access to the land to the northwest of the site
- There are some construction materials (e.g. bricks, tiles, pipes and timber) stored along the northwest and northeast boundaries of the site. There are also some adjacent to the steel storage container
- There are no trees or shrubs within the main area of the site, but there are conifers (suspected leylandii) along the southwest and southeast boundaries

3.4 Current site use

Evidently, the site is mainly unused grassed field or garden area (part of the adjacent Worlaby Hall property) but it is partly used for the commercial storage of construction tools and materials.

3.5 Topography

3.5.1 Site topography

The site is relatively level, but there is a substantial slope rising towards the northeast. The average gradient is about 1 in 15.

The site is located on a hillside location at a modest elevation. Ground levels around the site range between about 32.9m and 35.8m above Ordnance Datum (AOD).

3.5.2 Local topography

The site lies on the southwest side of some chalk uplands associated with the nearby Lincolnshire Wolds. The land to the northeast steadily rises up to about 90m AOD within a distance of 600m.

Conversely, the land to the west and southwest of the site is part of the low-lying Ancholme Valley. Ground levels fall to about 10m AOD about 750m southwest of the site.

3.6 Site boundaries and surrounding land use

The site is in a rural residential and agricultural area on the edge of Worlaby – a small village. Site boundaries and nearby land uses are detailed below (in Table 2).

Table 2: Adjacent land use and existing boundaries

Direction:	Northeast	Southeast	Southwest	Northwest
Boundary type:	Unmarked	Conifer hedgerow (possibly leylandii)	Conifer hedgerow (possibly leylandii)	Unmarked
Adjacent land use:	Residential (Gardens to Sherwood House)	The Hill (minor public road)	Farmyard and storage buildings	Pond and residential gardens (to Worlaby Hall)
Nearby land use:	Farm fields	Residential gardens	Residential houses	Farm fields

3.7 Signs of potential contamination

No evidence (visual or olfactory) was identified of potential substantial contamination during the site walkover. No unusual staining, discolouration, or strange odours was noted on the ground surface. Vegetation, where present, appeared to be in excellent

health and bare earth appeared to consist of clean, natural topsoil. No sign of any fuel or chemical storage was recorded.

Notwithstanding the above, the site has clearly been used to store building materials and equipment. This commercial usage could potentially have given rise to some degree of contamination (e.g. of metals, PAHs, asbestos and petroleum hydrocarbons).

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 – continued (from) overleaf

Map details	*Within the site boundary*	*Outside of the site boundary (within 500m)*
Year: 1886-1887 Scale: 1:2500 & 1:10560	The site is empty fields – possibly part of gardens to adjacent Worlaby Hall	Existing pond (3m northwest) Farmyard (10m southwest) Farm buildings (25m southwest) Well (40m northeast) Existing Almshouses (60m northeast) Gravel Pit (80m east) Spring-fed drain (100m north) Worlaby Hall (110m northwest) Existing grave yard (110m west) Possible natural cirque (150m northeast) Brick Yard (200m south) Saw Pit (200m north)
Year: 1907-1908 Scale: 1:2500 & 1:10560	*(No significant change identified)*	*(No significant change identified)*
Year: 1946/1950 Scale: 1:10560	*(No significant change identified)*	*(No significant change identified)*
Year: 1956 Scale: 1:10560	*(No significant change identified)*	The brick yard (200m south) no longer labelled – probably disused
Year: 1960 Scale: 1:10560	*(No significant change identified)*	*(No significant change identified)*
Year: 1964 Scale: 1:10560	*(No significant change identified)*	*(No significant change identified)*
Year: 1973 Scale: 1:2500	*(No significant change identified)*	Existing access track to Sherwood House (0m east) Existing farm building (20m southwest) The gravel pit (80m east) is labelled as disused and part of 'The Park' Pond (70m north) Pond (100m north) Existing Sherwood House (70m northeast)
Year: 1981 Scale: 1:10000	*(No significant change identified)*	*(No significant change identified)*
Year: 1994 Scale: 1:2500	*(No significant change identified)*	*(No significant change identified)*
Year: 1999-2000 Scale: 1:10000 & aerial photo	*(No significant change identified)*	*(No significant change identified)*

Table 3: Historical timeline – continued (from) overleaf		
Map details	*Within the site boundary*	*Outside of the site boundary (within 500m)*
Year: 2003 Aerial photo	Some storage of materials (inside southeast, southwest and northwest boundaries) Asphalted part of existing driveway / access track	*(No significant change identified)*
Year: 2008 Aerial photo	*(No significant change identified)*	*(No significant change identified)*
Year: 2009 Aerial photo	Stoned part of the existing driveway / access track	*(No significant change identified)*
Year: 2017 Aerial photo	Some storage of materials (near the centre of the site)	*(No significant change identified)*
Year: 2019 Aerial photo	Some storage of materials (near the northeast boundary) but not near the centre of the site	Storage of materials (0m northeast)
Year: 2021 Streetview photo	Steel container present on the site	*(No significant change identified)*
Year: 2022 Scale: 1:10000	*(No significant change identified)*	*(No significant change identified)*

4.2 Historical overview

4.2.1 On site

No evidence has been found of previous buildings at the site, but in recent decades, the site has been used for the storage of construction tools and materials. Historical maps show no buildings or features on the site. However, aerial photos from 2003 and more recent show sporadic storage of materials in various parts of the site. No evidence of the existing steel container has been noted before a streetview of 2021, but this could have been present since as early as 2010 (but is obscured by trees in aerial photos). The existing access track across the site was probably built until the 1960s.

4.2.2 Off site

The adjacent land appears to have been mostly used for residential or agricultural use. The existing adjacent pond is at least 150 years old and could have been created as part of the grounds to Worlaby Hall. There is a historical farmyard only about 10m southwest (and downhill) of the site.

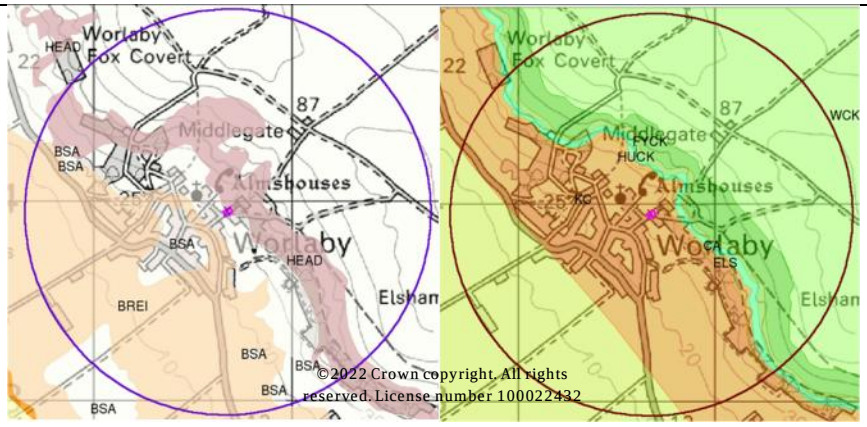
There has been some mineral extraction activity nearby the site, but no clear evidence of infilling. There was a gravel pit (about 80m east) which was disused by 1973. Also, there was a Brick Yard (with a possible clay pit) about 200m south which became disused by 1956. Neither of these pits are ever shown as refuse tips. Anecdotal evidence from the site owner suggests that the nearby gravel pit (80m east) has never been infilled.

5 Geology, Hydrogeology and Hydrology

5.1 Published geology maps

5.1.1 Made ground

No made ground is indicated by local geology maps, for example, as shown below (in Figure 1).

Figure 1: The site geology	
Geology map: (extracts from Envirocheck Report®)	 *drift* *solid*
Superficial / Drift:	<u>HEAD- CLAY, SILT, SAND AND GRAVEL (central/northeast part of the site)</u> According to the BGS: *"Head is poorly sorted and poorly stratified, angular rock debris and/or clayey hillwash and soil creep, mantling a hillslope … comprises gravel, sand and clay depending on upslope source and distance from source. Locally with lenses of silt, clay or peat and organic material"* <u>BLOWN SAND (BSA) – SAND (southwest part of the site)</u> According to the BGS: *"Blown sand is sand that has been transported by wind, or sand consisting predominantly of wind-borne particles."*
Solid / Bedrock:	<u>Kimmeridge Clay Formation (KC) – mudstone</u> According to the BGS: KC is comprised of *"Mudstones (calcareous or kerogen-rich or silty or sandy); thin siltstone and cementstone beds; locally sands and silts."*

There must be some made ground present even if this could be limited to the hardstanding (of asphalt and stone) and any sub-base below the existing access track / driveway. There could also potentially be some reworked natural soils below the site (e.g. from the excavation of the adjacent pond – assuming this to be a manmade feature). The total thickness of the made ground is probably limited to about 2m depth, subject to confirmation.

5.1.2 *Drift deposits*

As detailed above (in Figure 1), the local geology map indicates the superficial (i.e. drift) soil material below the site mainly comprises head deposits of clays, silts, sands and gravels. There could also be some sub-surface blown sands (especially in the southwest part of the site).

The thickness of superficial drift deposits (of head and/or blown sand) is unknown, but is likely to be relative thin (e.g. less than 3m). This is based on the site's hillside location (where bedrock is likely to be shallow).

5.1.3 *Solid geology*

BGS mapping shows the bedrock below the site is the Kimmeridge Clay Formation (KC) of mudstone, as detailed above (in Figure 1). The site is located above the upper units of the formation, and it could be about 20m in thickness below the site (and underlain by thick mudstone of the Ampthill Clay Formation). The KC could be initially encountered as firm silts or clays grading into mudstone with depth.

Just uphill of the site is an outcrop of Elsham Sandstone Member, which is part of the Kimmeridge Clay formation. This is shown to outcrop uphill of the site (and not pass below the site), but it could potentially be (partly) present beneath the site if the local geological maps are not accurate. The Elsham Sandstone Member could be the extraction material in the nearby former gravel pit (80m east).

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*	*Thickness (m)*	*Depth to base (m bgl)*
Made ground	Could include hardstand/sub-base below access track and reworked natural soils	<2	<2
Blown sand (BSA)	Silty fine sand	0 – 1	<2
Head	Clay, silt, sand and gravel	0 – 2	<3
Kimmeridge Clay Formation (KC)	(Silty/sandy) clays grading into mudstone with depth	20	20 – 25
Ampthill Clay Formation	Mudstone	>20	>50

5.2 Mining and quarrying

5.2.1 BGS recorded mineral sites

There are nearby reported BGS recorded mineral workings as detailed below (in order of proximity to the site).

- Worlaby Gravel Pit, opencast workings for the extraction of sand and gravel of the Hunstanton (chalk) Formation (148m east) – identified in historical maps to be about 80m east
- Worlaby Brick Yard, opencast workings for the extraction of common clay and shale of the Kimmeridge Clay Formation (240m south) – identified in historical maps to be about 200m south
- Elsham Hill Quarry, opencast workings for the extraction of chalk of the Welton Chalk Formation (757m east)

5.2.2 Mining

The site is not in an area which could 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 *Very low*, as shown below (in Table 5). These are based on presumed ground conditions only and subject to site confirmation.

Table 5: BGS-rated geological hazards

Hazard	*Hazard potential*
Collapsible ground stability	No hazard or Very low
Compressible ground stability	No hazard
Ground dissolution stability	No hazard
Landslide ground stability	Very Low
Running sand ground stability	Very low or Low
Shrinking & swelling clay	Low

5.4 Hydrogeology (i.e. groundwater)

5.4.1 Groundwater table

The location of the groundwater table is unknown. The site's hillside location suggests it could be moderately deep, but there could be very shallow perched groundwater (in granular ground material underlain by clay).

5.4.2 *Permeability, aquifers and groundwater vulnerability*

The anticipated underlying Kimmeridge Clay Formation is likely to be of very low permeability and is classed as Unproductive Strata. In contrast, the near surface Head deposits (anticipated below most of the site) could be of moderate permeability (being composed of clay, silt, sand and gravel) and are classed as Secondary Aquifer Undifferentiated and the blown sands (BSA) anticipated in the far southwest of the site could be of moderately high permeability and are a Secondary Aquifer – A.

The site is not within a groundwater source protection zone (SPZ), but the chalk formations (uphill and above the site) about 100m north of the site are a Zone III SPZ.

There are no nearby licensed groundwater abstractions. There are none within 2km.

5.5 Hydrology (i.e. surface water)

5.5.1 *Nearby water courses*

There are nearby surface water features detailed as follows.

- Pond (6m northwest) – GWL possibly about 2m below site ground levels
- Lake/pond (69m north) – about 35m AOD, fed by a drain/stream
- Drain/stream (69m north) – probably spring fed and flows into above lake/pond
- Drain/stream (252m south) – Worlaby Catchwater, flows down to southwest
- New River Ancholme (about 4km west) – where ground levels are about 2m AOD

5.5.2 *Surface water abstractions*

There are no nearby reported *surface water abstractions* (within 1km of the site).

5.5.3 *Flooding*

The site is not reported to be in an area at risk of flooding or extreme flooding (from rivers and the sea) and the site appears to be in a Flood Zone 1 – where there is a low probability of flooding. Nevertheless, the site is within an area in which there is potential for groundwater flooding of property situated at the surface.

6 Environmental Data

6.1 Pollution and pollution control

Near to the site, there are no reported:

- Contaminated land register entries and notices (none within 1km)
- Discharge consents (the closest is 898m west)
- Enforcement and prohibition notices (none within 1km)
- Integrated pollution controls (none within 1km)
- Integrated pollution prevention and control (none within 1km)
- Local Authority integrated pollution prevention and control (none within 1km)
- Local Authority pollution prevention and controls (none within 1km)
- Local Authority pollution prevention and control enforcements (none within 1km)
- Pollution incidents to controlled waters (the closest is 382m west)
- Prosecutions relating to authorised processes (none within 1km)
- Registered radioactive substances (within 1km)
- River quality data (none within 1km)
- Substantiated pollution incident registers (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)

6.2 Waste

6.2.1 Landfills

Near to the site, there are no reported:

- BGS Recorded Landfill Sites (none within 1km)
- Historical Landfill Sites (the closest is 556m northwest)
- Local Authority Recorded Landfill Sites (none within 1km)
- Registered Landfill Sites (the closest is 752m east)

6.2.2 Potentially infilled land

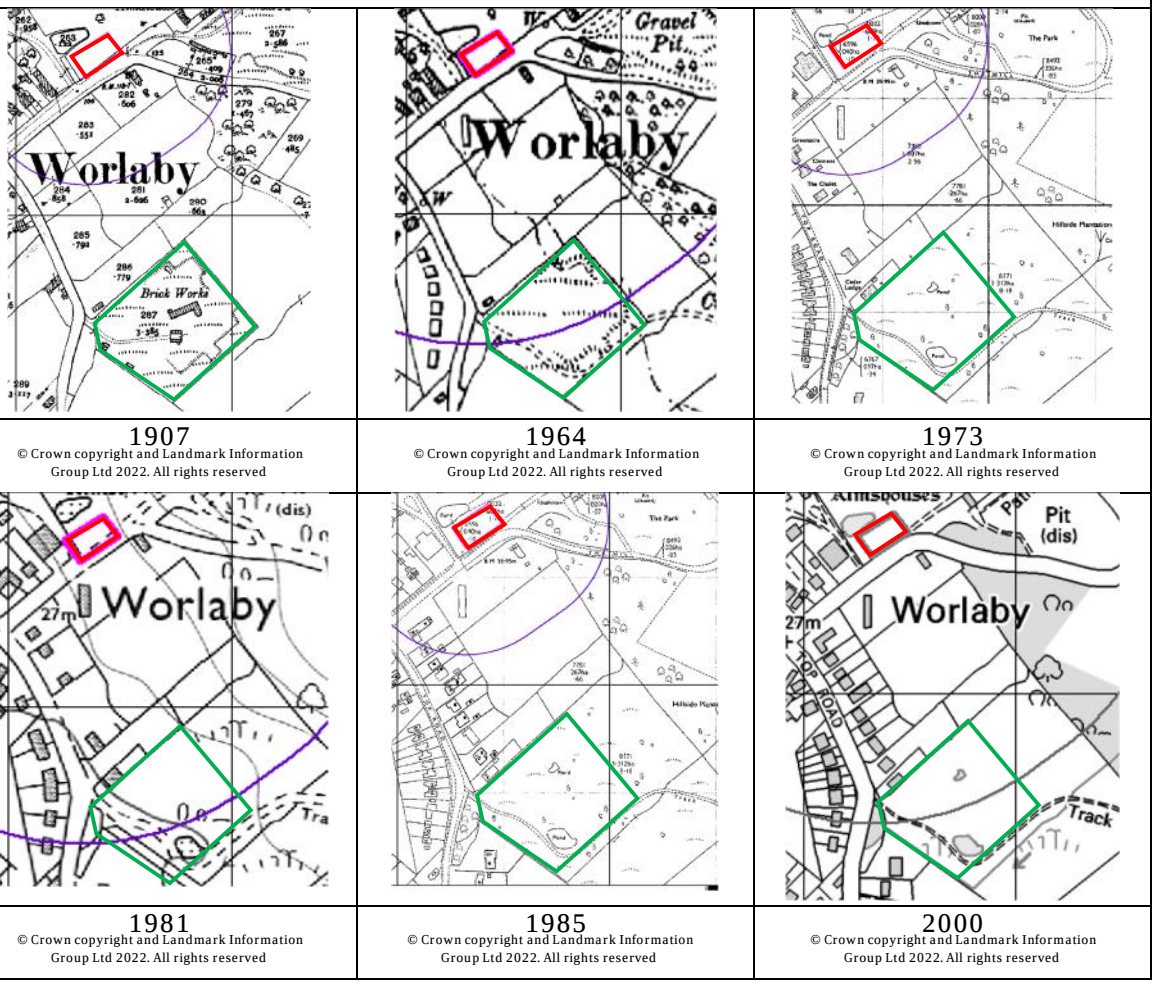
Near to the site there is one reported area of Potentially Infilled Land (Non-Water: pit quarry etc.), detailed as follows.

- From 1981 mapping (180m south) – at the former brick yard and clay pit

However, it is highly unlikely any substantial infilling took place at the former brick yard (180m south) prior to and after 1981 mapping. This area is still low-lying, as evidenced by continued ponds and marshy ground, shown in historical maps before and after 1981, copies of which are presented below (in Figure 2) and later (in Appendix B). Moreover, the site is not designated as any kind of landfill, as detailed above (in Section 6.2.1). Additionally, there is only limited hachuring shown in the earliest mapping suggesting only limited excavations and slopes which could now easily be obscured by existing trees and other vegetation.

Figure 2: Historical maps showing the nearby potentially infilled land (180m south)

Note: red line shows the site boundary and green line potentially infilled land (former clay pits) from Envirocheck® report



1907

1964

1973

1981

1985

2000

There is no identified nearby 'Potentially Infilled Land (Water),' within former ponds, lakes, ditches etc., within 1km of the site.

6.2.3 Other waste sites

Near to the site, there are no reported:

- Integrated Pollution Control Registered Waste Sites (none within 1km)
- Licensed waste management facilities, Landfill boundaries (the closest is 718m east)
- Licensed waste management facilities, Locations (the closest is 802m east)
- Registered waste transfer sites (none within 1km)
- Registered waste treatment or disposal sites (none within 1km)

6.3 Soil chemistry

Estimated soil chemistry data from the BGS indicates element concentrations for rural soil around the site should be as shown below (in Table 6). These levels are not expected to pose a hazard to human health in a residential setting.

Table 6: BGS Estimated Soil Chemistry

Contaminant	*Concentration (mg/kg)*	
	Rural	*Urban*
Arsenic	<15	No data available
Cadmium	<1.8	
Chromium	20 – 60	
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 detailed earlier (in Section 4), historical information suggests that some limited commercial activity has taken place at and near to the site. The site has been used for the storage of construction tools and materials in recent decades. The land 10m to the west is a historical farmyard.

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

- Dickinson A J – waste disposal services (252m southwest); status: Inactive
- Eco Oven Cleaning – overn cleaning (377m south); status: Active

There is a reported *Point of Interest (POI) for commercial services* as detailed below.

- Dart Transport Ltd – distribution and haulage (250m south)

There is a reported *Point of Interest (POI) for manufacturing and production* as detailed below.

- Poultry House (922m southwest)

Near to the site, there are no reported:

- *Fuel Station Entries* (none within 1km)
- *Points of Interest (POI) for public infrastructure* (none within 1km)
- *Points of Interest (POI) for education and health* (none within 1km)
- *Points of Interest (POI) for recreational and environmental (the closest is 182m west)*

6.6 Sensitive land use

There are no identified sensitive land uses at the site except for:

- Nitrate Vulnerable Zone (NVZ) – surface water

There are no nearby identified sensitive land uses.

7 Initial Contaminated Land Assessment

7.1 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 7 to 10).

Table 7: 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 8: 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 9). 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 10).

Table 9: 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 10: 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

7.2 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.

7.2.1 Sources of contamination

Based on the assembled desk study information, the identified potential sources of contamination are shown below (in Table 11). 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 11: Potential sources of contamination							
Location	*Source*	*Potential contaminants of concern*					
		Soil & groundwater					*Gas*
		Metals & metal-loids	*Polycyclic aromatic hydro-carbons (PAHs)*	*Asbestos*	*Petroleum hydro-carbons*	*Other*	*Hazardous ground gases*
On-site	1. Made ground beneath the site	**P**	**P**	**P**			**P**
	2. Recent land use: storage of construction tools and materials	**P**	**P**	**P**	**P**		
Off-site	None identified						

Based on further consideration, the made ground is not considered to be a viable source of hazardous ground gas able to plausibly affect receptors at the site. There is no reason to suspect the anticipated made ground will be of significant thickness or degradability. Therefore, it should not be able to produce any substantial hazardous ground gas (e.g. CO_2 or methane).

Accordingly, no viable sources of hazardous (permanent) ground gas have been identified. No evidence of infilling has been found in the nearby former gravel pit (80m east) since it ceased activity as a gravel pit (probably in the 1960s). The clay pits (180m south) have been shown to have never been substantially infilled, as detailed previously (in Section 6.1.2).

7.2.2 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 (e.g. within soft landscaping and gardens) there might potentially be opportunity for direct exposure to soil contaminants or exposure through ingestion of home grown produce (via plant uptake). 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 hydrocarbons (as well as permanent gases such as carbon dioxide and methane).

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.

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, e.g. methane.

7.2.3 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, residential 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)
- adjacent site users (e.g. humans, ecological systems)

There are nearby controlled waters receptors. At the site, the groundwater within the anticipated blown sands is a 'Superficial Aquifer – A' and is of medium vulnerability. The nearest identified surface water is the pond about 10m north.

7.3 Preliminary risk assessment (PRA)

A preliminary risk assessment s presented below (in Table 12). This shows identified possible potential contamination linkages as well as the findings of the initial conceptual site model.

Risk ratings of very low or low are not considered significant while higher risk ratings (of Moderate / Low or above) are deemed unacceptable. The source-pathway-receptor associated with an unacceptable risk constitutes a potential contamination linkage (PCL) which needs further consideration.

Table 12: 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*
1. Made ground beneath the site 2. Recent land use: storage of construction tools and materials Metals, PAHs, asbestos, petroleum hydrocarbons	Inhalation, ingestion, absorption	Residential site users	Low likelihood	Medium	Moderate / Low	Some made ground is likely to be present below the site (of unknown nature and extent), e.g. in north corner of the site below the existing stoned access track The former site use means site users could be at risk from vapour-producing (e.g. hydrocarbons) contamination as well as non organic and organic toxic contamination (e.g. PAHs, metals and asbestos) across the site It is assumed that buried concrete and water pipework will be designed to meet standard building regulations and requirements since these are subject to compulsory checks (e.g. by building inspectors)
		Ground workers	Low likelihood	Mild	Low	
	Inhalation of vapours	Residential site users	Low likelihood	Medium	Moderate / Low	
		Ground workers	Unlikely	Mild	Very low	
	Migration	Aquifer waters	Unlikely	Medium	Low	
	Migration	Surface waters	Unlikely	Medium	Low	
	Ingestion, absorption	Local flora and fauna	Low likelihood	Mild	Low	
	Aggressive attack	Building materials	Low likelihood	Mild	Low	

7.3.1 Potential contamination linkages (PCLs)

The above preliminary risk assessment has identified two potential contamination linkages (PCL1 and PCL2) with unacceptable (Low/Moderate) risk, as summarised below (in Table 13). These source-pathway-receptor contamination linkages are of unacceptably high risk and require further attention.

Table 13: Unacceptable contamination risks (from preliminary risk assessment)				
Ref.	*Source*	*Pathway*	*Receptor*	*Risk rating*
PCL1	1. Made ground beneath the site 2. Recent land use: storage of construction tools and materials Metals, PAHs, asbestos, petroleum hydrocarbons	Inhalation, ingestion, absorption	Residential site users	Low / Moderate
PCL2		Inhalation of vapours		Low / Moderate

7.3.2 Risks to human health (future site users)

Human health of residential users is at Moderate/Low risk from direct exposure to potential ground contamination. Of concern are metals, PAHs, asbestos and petroleum hydrocarbons in soft garden areas where humans could come into contact with soils and could ingest ground material or homegrown produce.

Human health of residential site users is also at potentially significant risk of harm from the inhalation of vapours (e.g. from petroleum hydrocarbons). There could be volatile

hydrocarbons present which could create vapours that migrate into enclosed, indoor areas.

7.3.3 Risks to human health (construction workers)

No significant risk has been identified with respect to the health of construction workers. Any risks to health should be acceptable when they are dealt with by a competent contractor.

Nevertheless, it is noted that a competent contractor is expected to provide adequate training and supervision to groundworkers to mitigate the risks of dealing with made ground. It is expected that suitable personal protective equipment (PPE) and welfare facilities will be provided to groundworkers, and appropriate and safe methods of work will be adopted and maintained.

7.3.4 Risks to controlled waters

The groundwater aquifer within the shallow superficial blown sand should not be at significant risk from potential contamination. There is unlikely to be gross contamination and the site is in a low probability flood area where there is unlikely to be much shallow standing groundwater. Any mobile contaminants are unlikely to be of sufficient quantity to pose a plausible risk to controlled waters.

Surface waters are not at significant risk. The available pathways to any surface waters should attenuate any leachate or contamination down to a negligible level. The nearest surface water feature is the adjacent pond (about 10m north), but anticipated contamination sources are not expected to pose any substantial threat to the pond.

7.4 Remediation options

At this stage, no remediation options are recommended to address the risks posed to the human health of future site users (residential). It is advised that further investigation be carried out to collect more information about the identified potential contamination linkages (PCLs 1 and 2) to determine if relevant contamination linkages do exist and, if so, what remediation is appropriate.

Nevertheless, given the identified potential contamination linkages (PCLs), it might be prudent during project planning to make some allowance to provide some remediation. Clean cover systems in soft garden areas (possibly comprising a 600mm thickness of imported clean soil) might easily be needed if some contamination is present within ground material. Vapour barriers in floors are another (but much less likely) potentially required remediation measure. Such measures might or might not be needed subject to the findings of further investigation.

7.5 Further works

At this stage, proposed further works comprise:

1. An investigation into the existing ground conditions

The objective of the investigation should be to determine the nature and extent of any ground contamination.

Potentially, additional hazards and risks may need to be considered if unforeseen contamination is revealed.

7.5.1 Investigation into the existing ground conditions

It is recommended that several sample holes be carried out around the site to determine the ground conditions – notably the nature and extent of any potentially contaminated made ground or natural soils. Samples of near surface ground material (including soils and, possibly, groundwater) should be subjected to tests for some of the identified contaminants of concern (e.g. PAHs, metals, asbestos and petroleum hydrocarbons). The results should be used to complete a revised conceptual site model and risk assessment.

At this stage, no fewer than three sample hole locations are recommended, including at least one below the proposed houses and one below the gardens. One sample hole below the stoned access track (in the north part of the site) is also recommended. The scope of sampling and testing may need to be increased if indications of substantial contamination are found.

It may be prudent to also investigate the presence of potential hazardous ground gas. No viable sources have been identified herein (within this report), but recent local authority correspondence indicates it to be of potential concern. Ground gas monitoring wells could be installed during site investigation works and some limited monitoring visits carried out to prove (or otherwise) the absence of hazardous ground gas.

Sample holes to collect soil samples could also potentially help determine the suitability of the ground conditions for (a) different foundation types and (b) soakaways. At this stage, it is not known if the anticipated subsoils will be suitable for strip footings or soakaways.

7.6 Site management

7.6.1 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 contaminated made ground or grubbed up hardstanding will only be suitable for re-use at the site if it is covered by a suitable permit or waste exemption (e.g. a U1 or T5 exemption) or protocol (e.g. the WRAP Protocol or the CL:AIRE Code of Practice: Definition of Waste). Accordingly, it would be prudent to make allowance for the disposal of any excavated made ground off-site, potentially as contaminated material.

The results of an intrusive ground investigation should help determine the potential suitability of site won ground material for re-use.

7.6.2 Unforeseen contamination

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

7.7 Water supply pipework

Based on the site's history and proposed future use, there are viable sources of contamination at site that may significantly affect water supply pipework. This includes some PAHs and petroleum hydrocarbons. Further guidance is detailed in UK Water Industry Research publication: *Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites* (UKWIR, 2011) and the local water authority.

At this stage, allowance should be made for the provision of barrier piping for water supply. This typically comprises PE plastic pipework with a coated aluminium core liner. Site investigation works and contamination testing could also help determine if such barrier piping is necessary.

8 Summary & Conclusions

8.1 Desktop information

8.1.1 Proposed development

The proposed works comprise the construction of a new 1½ storey dormer bungalow property (North Lincolnshire Council planning ref. PA/2022/897).

8.1.2 Site location and description

The site is off The Hill, Worlaby, North Lincolnshire, post code DN20 0NP. The site is about 41m by 23m in plan area.

The site is a grassed field which houses a steel container (in the southwest part) which is used as a builder's shed. There is also an asphalt/stone track through the north part of the site and some piles of construction materials mainly along the northwest and northeast boundaries. Apart from the site's use as storage by a local builder, no signs of potential contamination are evident at the site.

The site slopes up towards the northeast at an average gradient of about 1 in 15. Ground levels range at the site range between about 32.9m and 35.8m AOD.

8.1.3 Site history

In recent decades, the site has been used for the storage of construction tools and materials. However, no evidence has been found of previous buildings at the site.

The site seems to have been part of the grounds to Worlaby Hall. Historically, there has been a farmyard and pond only about 10m northwest of the site.

Nearby, there is a former gravel pit (about 80m east) which was disused by 1973 and a brick yard/clay pit (about 200m south) which became disused by 1956. No evidence has been found of refuse tipping in these pits.

8.1.4 Geology

Based on desk study information, the possible ground conditions are as shown below (in Table 14).

Table 14: Summary of anticipated geology (subject to confirmation with site works)		
Strata	*Description*	*Depth to base (m bgl)*
Made ground	Hardstand/sub-base below track & reworked natural soils	<2
Blown sand (BSA)	Silty fine sand (possible in southwest part of the site)	<2
Head	Clay, silt, sand and gravel	<3
Kimmeridge Clay	(Silty/sandy) clays grading into mudstone with depth	20 – 25
Ampthill Clay	Mudstone	>50

8.1.5 Hydrogeology (i.e. groundwater)

The anticipated near surface Head deposits and blown sands (BSA) could be of moderate permeability and are classed as Secondary Undifferentiated and Secondary A aquifers. On the other hand, the underlying Kimmeridge Clay mudstone (Unproductive Strata) is likely to be of very low permeability.

The nearest groundwater SPZ is in the chalk about 100m north (and uphill) of the site. There are no nearby licensed groundwater abstractions (within 2km).

8.1.6 Hydrology (i.e. surface water)

There is a pond (6m northwest) in which water levels could be about 2m below site ground levels. There are other ponds and streams further afield as well as the New River Ancholme (about 4km west) at about 2m AOD. The site is in an area with a low probability of flooding.

8.1.7 Pollution and pollution control

No data has been identified about any nearby potential significant pollution or pollution controls.

8.1.8 Waste and landfills

There are no reported landfill sites (BGS Recorded, Historical, Local Authority Recorded or Registered) within at least 500m of the site.

The former brick yard and clay pit (180m south) is identified by Envirocheck as Potentially Infilled Land (based on 1981 mapping). However, inspection of historical maps shows this area continues to be low-lying marshy ground and suggests no significant infilling has ever taken place.

The gravel pit (80m east) is not identified as a landfill or potentially infilled land. Anecdotal information indicates it has never been infilled.

8.1.9 Radon

The site is not in an area affected by radon. No protection measures are needed.

8.1.10 Industrial land use

The site has been used for the storage of construction tools and materials in recent decades. The land 10m to the west is a historical farmyard. Otherwise, no significant on-site or nearby off-site industrial land use has been identified.

8.1.11 Sensitive land use

The site is in a Nitrate Vulnerable Zone (NVZ) for surface water. Otherwise, there are no nearby identified sensitive land uses.

8.2 Contamination assessment

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

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

1. Made ground beneath the site
2. Recent land use: storage of construction tools and materials

Contaminants of concern include metals, PAHs, asbestos and petroleum hydrocarbons. Considered possible pathways include inhalation, ingestion, absorption and migration while receptors can include humans, ecology and controlled waters.

8.2.2 Preliminary risk assessment (PRA)

A preliminary risk assessment has identified two potential contamination linkages (PCL1 and PCL2) with unacceptable (Low/Moderate) risk, as summarised below (in Table 15). These linkages merit further consideration.

Table 15: Potential contamination linkages (PCLs)

Ref.	*Source*	*Pathway*	*Receptor*	*Risk rating*	*Potential area of risk*
PCL1	1. Made ground beneath the site 2. Recent land use: storage of construction tools and materials Metals, PAHs, asbestos, petroleum hydrocarbons	Inhalation, ingestion, absorption	Residential site users	Low / Moderate	Direct exposure to soil contamination could occur in gardens
PCL2		Inhalation of vapours		Low / Moderate	Could occur in houses

8.2.3 Remediation options and further works

At this stage, no remediation options are recommended but further investigation is needed. Several sample holes (at least three) should be carried out around the site to

determine the ground conditions and provide samples of near surface ground material to be tested for contaminants of concern and the results used to complete a revised assessment. It is possible that the findings will indicate the need for clean cover systems (in gardens) and, potentially, even vapour protection for houses.

For the recommended investigation, several hole locations are suggested including below the proposed house, below the gardens and below the stoned access track.

While no viable sources have been identified, the LPA has raised concern about hazardous ground gas. Therefore, it would be prudent to install ground gas monitoring wells and undertaken a couple of monitoring visits.

8.2.4 Site management

Clean site won natural soil materials should be suitable for reuse on site. Any excavated contaminated made ground or grubbed up hardstanding might need to be removed off site as waste; it will only be suitable for re-use at the site if it is covered by a suitable permit or waste exemption or protocol.

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

8.2.5 Water supply pipework

Potential sources of hydrocarbons (PAHs and petroleum) have been identified. Therefore, at this stage, it would be prudent to make allowance to provide barrier piping for water supply.

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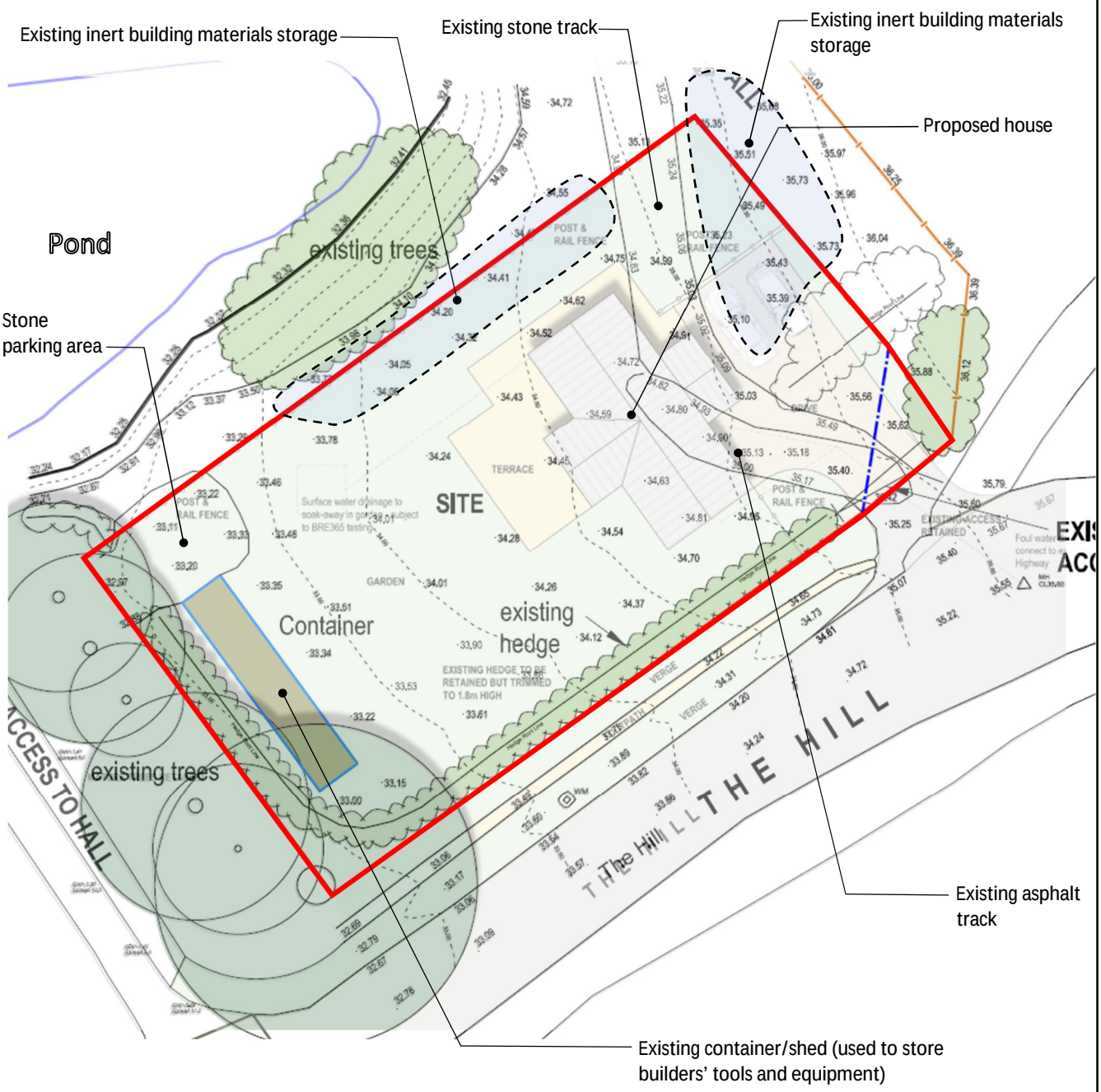
Appendix A

Plans & Photographs

Notes:

1. Do not scale
2. Locations of all features are approximate only
3. Background images show overlay of existing and proposed features taken from Hyde Architecture drawings, with respective drawing numbers 1334/002 (no revision, dated 09 Nov 2021) and 1334/003 (no revision, dated 09 Nov 2021)
4. Site walkover date: 06 Sep 2022



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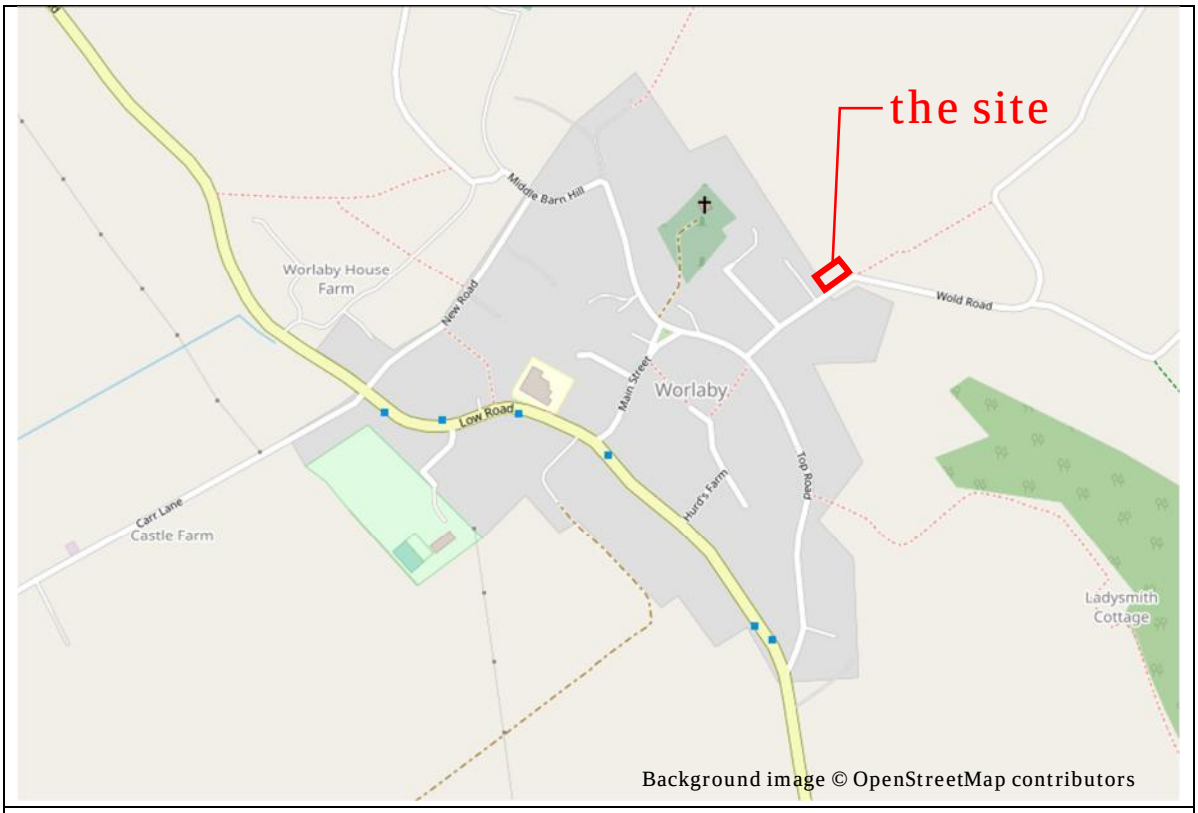
Drawing Title: Hole location plan
Drawing No.: 1505-5919-P1-01 Revision: -
Site: Land off The Hill, Worlaby, N. Lincs
Client: Mrs K Fillingham
Project No.: 1505/5919/P
Date: 21/09/2022



Site location plan *Date copied:* 21 Sep 2022 *Source:* openstreetmap.org

Aerial photograph: 1 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

Aerial photograph: 2 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

Aerial photograph: 3 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

Aerial photograph: 4 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

Aerial photograph: 5 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

Aerial photograph: 6 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

Aerial photograph: 7 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

Aerial photograph: 8 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

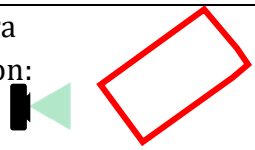
Aerial photograph: 9 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

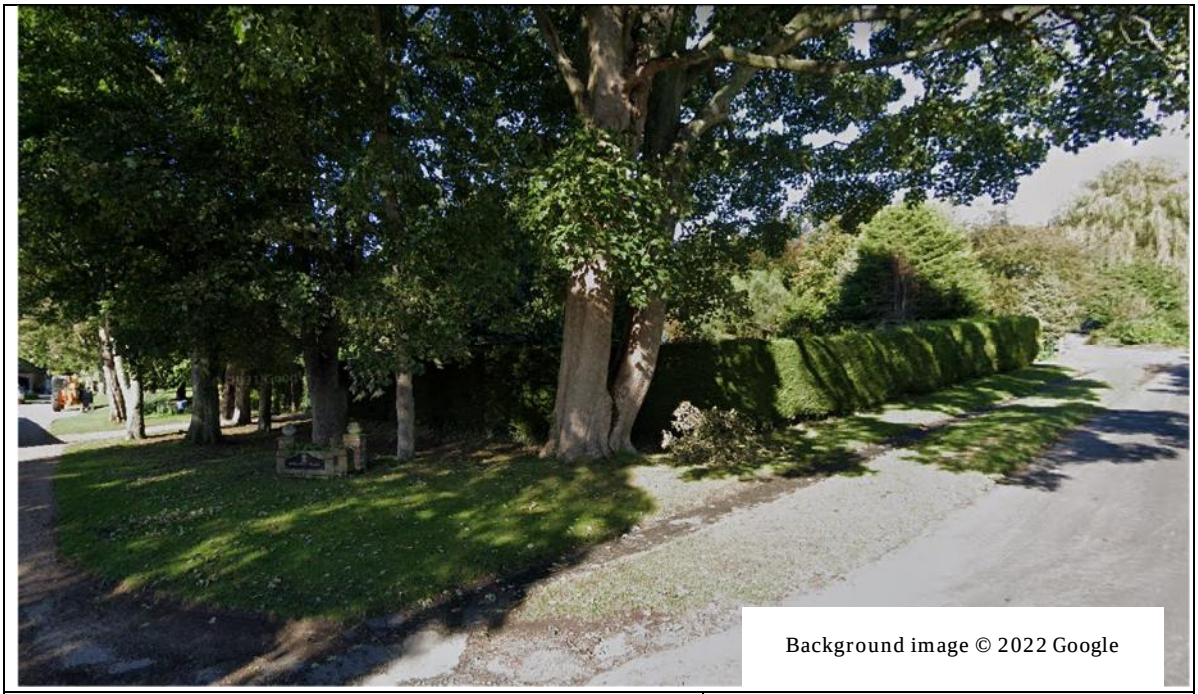
Aerial photograph: 10 *Date copied:* 21 Sep 2022 *Source:* Google Earth Pro®

Aerial photograph: 11 *Date copied:* 21 Sep 2022 *Source:* Envirocheck®

3D view: 1 *Date copied:* 21 Sep 2022
Photo direction: East
Description: Google Earth 3D view of the site

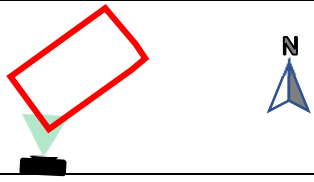
Camera position:

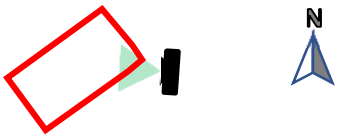


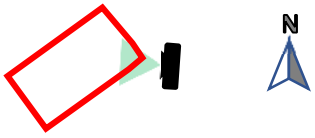


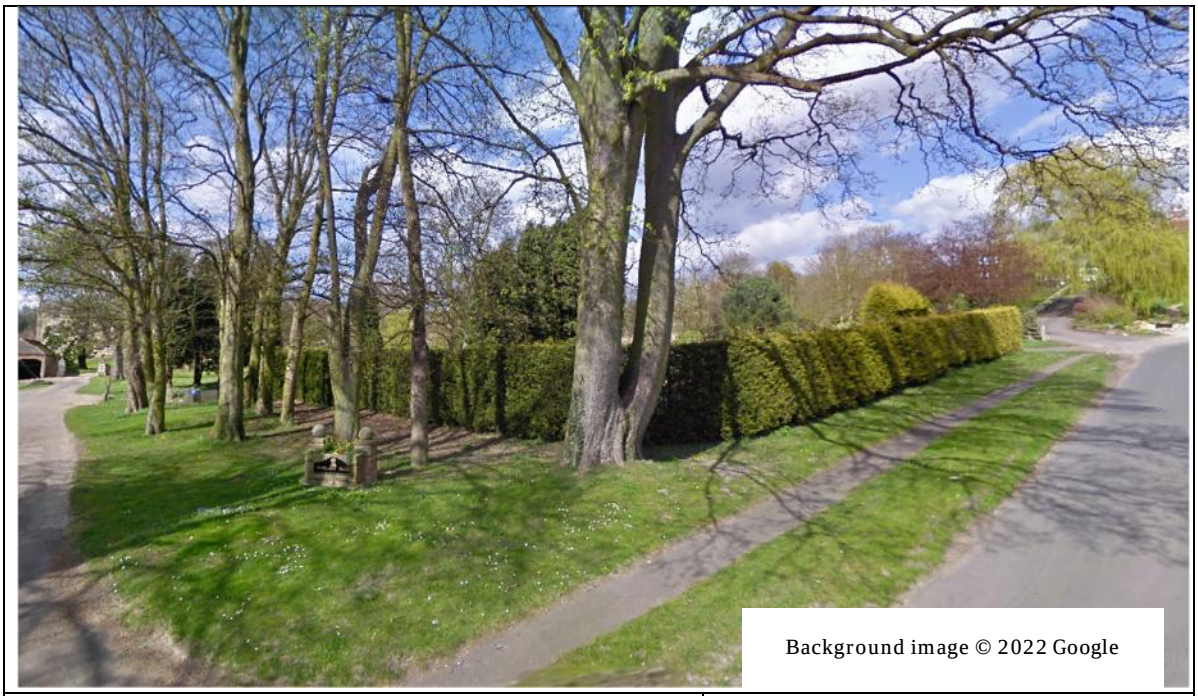
Historical Photo: 1 *Date:* Oct 2021
Photo direction: North
Description: Google Streetview of the site as seen from The Hill

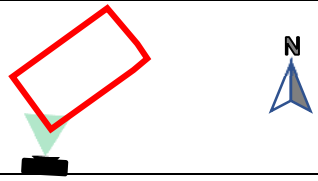
Camera position:

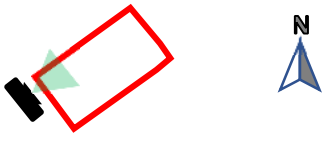


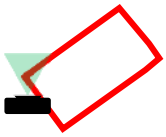
Historical Photo: 2 *Date:* Oct 2021 *Photo direction:* West *Description:* Google Streetview of the site as seen from The Hill	Camera position: 

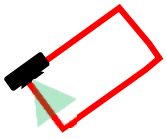
Historical Photo: 3 *Date:* Apr 2009 *Photo direction:* North *Description:* Google Streetview of the site as seen from The Hill	Camera position: 



Historical Photo: 4 *Date:* Apr 2009 *Photo direction:* North *Description:* Google Streetview of the site as seen from The Hill	Camera position: 

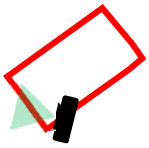
Site Photo: 1 *Date:* 06 Sep 2022 *Photo direction:* Northeast *Description:* Southwest corner of the site and door to existing container	Camera position: 

Site Photo: 2 *Date:* 06 Sep 2022 *Photo direction:* North *Description:* Southwest corner of the site and adjacent pond	Camera position:  

Site Photo: 3 *Date:* 06 Sep 2022 *Photo direction:* Southeast *Description:* Southwest boundary of the site and existing container	Camera position:  

Site Photo: 4 *Date:* 06 Sep 2022
Photo direction: West
Description: Southern corner of the site and existing container/shed

Camera position:

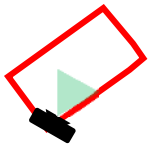


Site Photo: 5 *Date:* 06 Sep 2022
Photo direction: North
Description: Southern part of the site

Camera position:

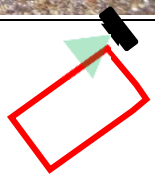
Site Photo: 6 *Date:* 06 Sep 2022
Photo direction: Northeast
Description: Southern part of the site

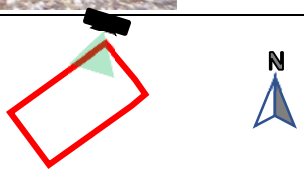
Camera position:

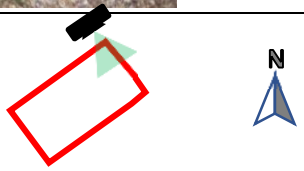


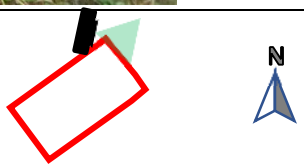
Site Photo: 7 *Date:* 06 Sep 2022
Photo direction: Southwest
Description: Northwest boundary and adjacent pond

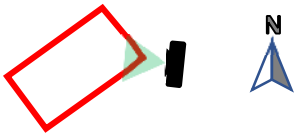
Camera position:



Site Photo: 8 *Date:* 06 Sep 2022 *Photo direction:* South *Description:* North part of the site and existing access track	Camera position: 

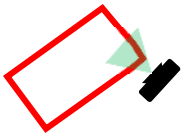
Site Photo: 9 *Date:* 06 Sep 2022 *Photo direction:* Southeast *Description:* Northeast part of the site and existing access track	Camera position: 

Site Photo: 10 *Date:* 06 Sep 2022 *Photo direction:* East *Description:* Northernmost part of the site and adjacent land	Camera position: 

Site Photo: 11 *Date:* 06 Sep 2022 *Photo direction:* West *Description:* Existing entrance to the site as seen from The Hill	Camera position: 

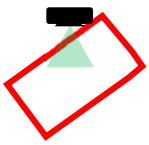
Site Photo: 12 *Date:* 06 Sep 2022
Photo direction: Northwest
Description: Entrance to the site as seen from The Hill

Camera position:



Site Photo: 13 *Date:* 06 Sep 2022
Photo direction: South
Description: Construction materials stored inside the northwest site boundary

Camera position:

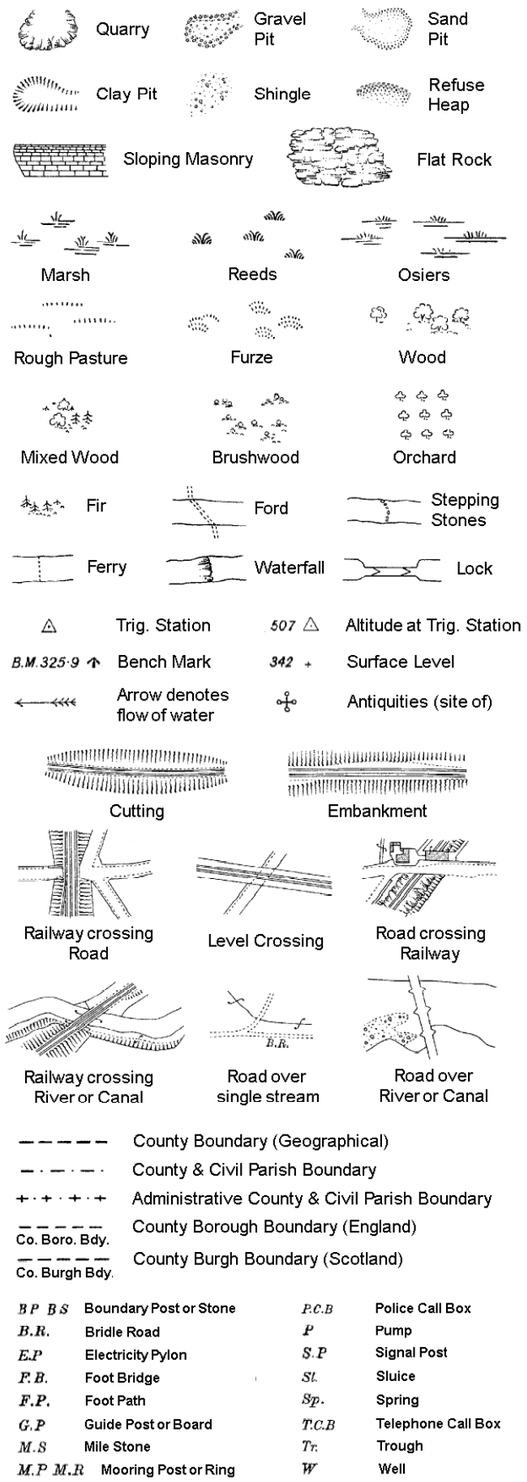


Appendix B

Historical Maps

Historical Mapping Legends

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



County Boundary (Geographical)

County & Civil Parish Boundary

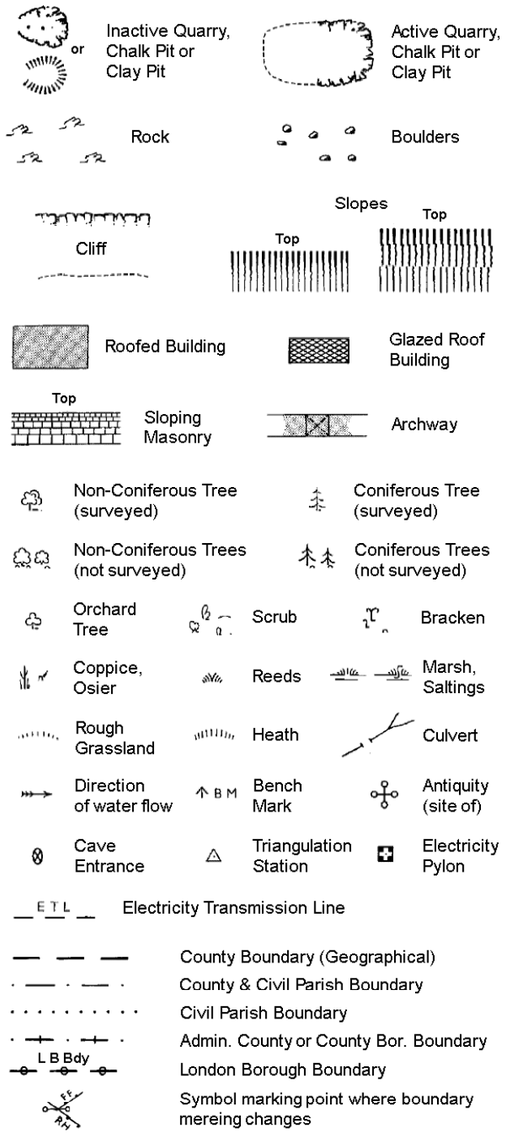
Administrative County & Civil Parish Boundary

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	Sl.	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

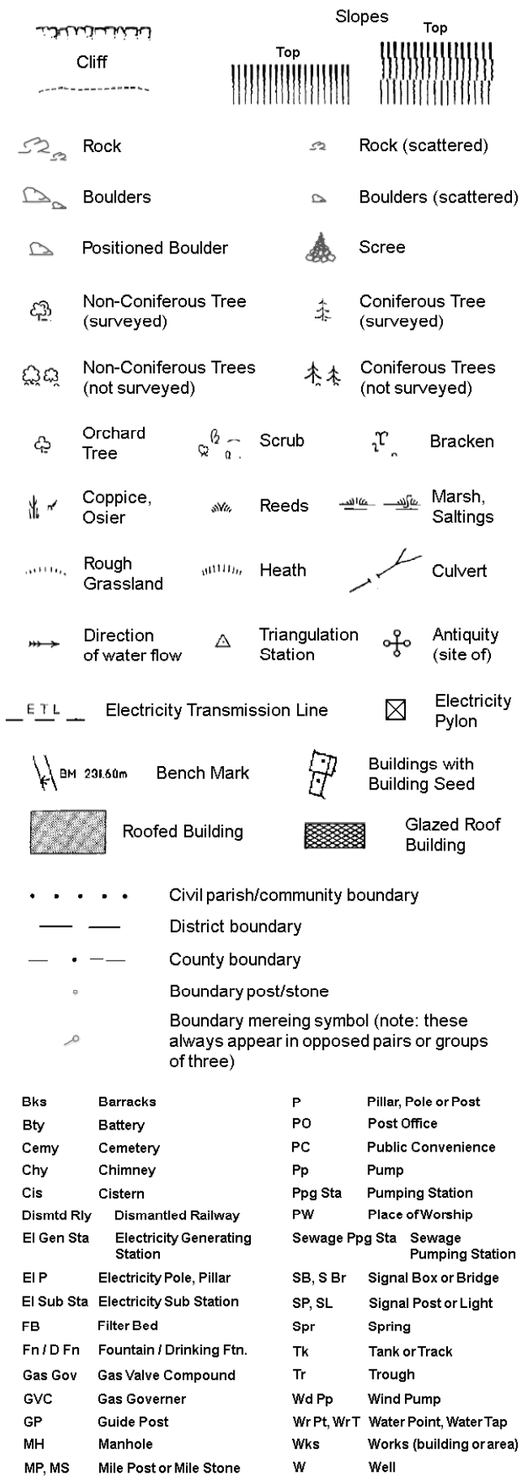
Admin. County or County Bor. Boundary

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

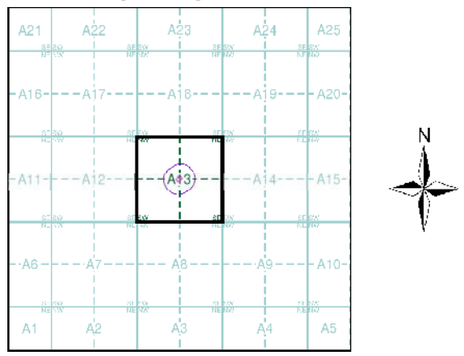
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

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

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	1973	4
Additional SIMs	1:2,500	1985	5
Large-Scale National Grid Data	1:2,500	1994	6
Historical Aerial Photography	1:2,500	1999	7

Historical Map - Segment A13

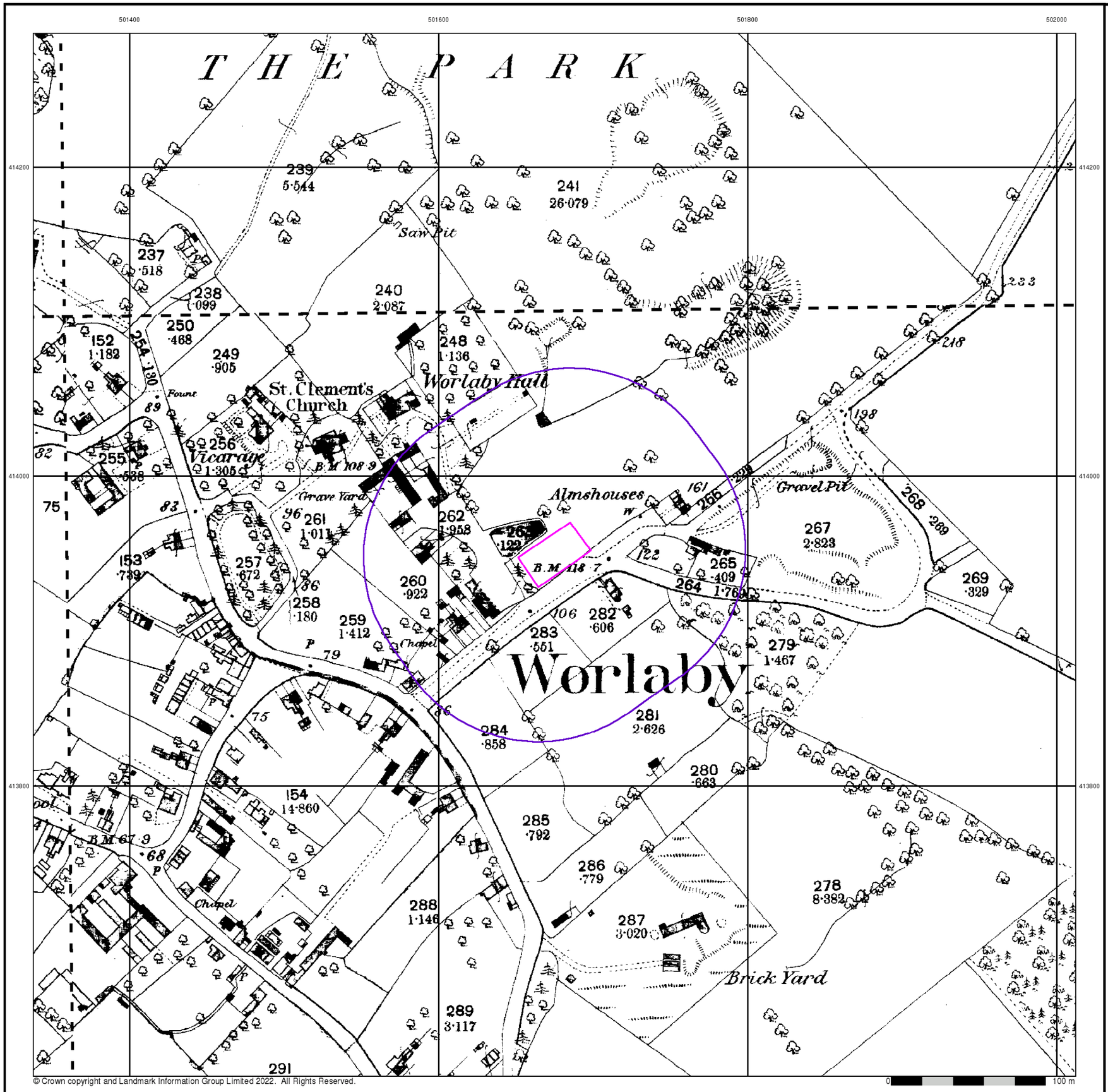


Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	100

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP



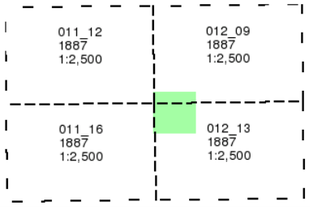
Lincolnshire

Published 1887

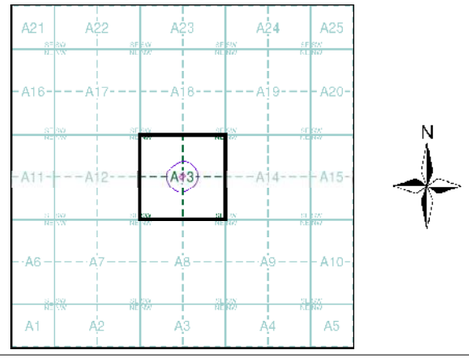
Source map scale - 1:2,500

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



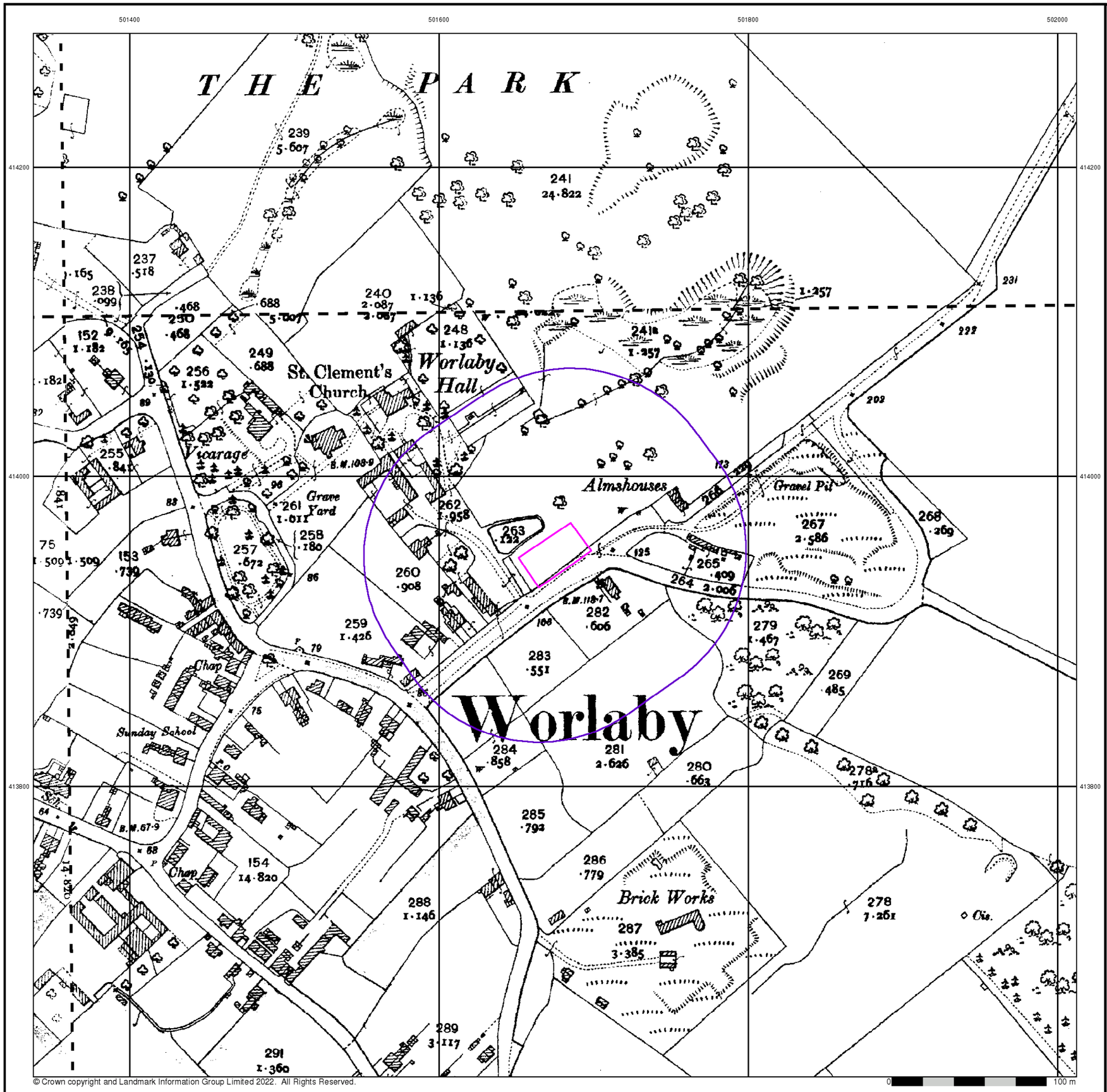
Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	100

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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



Humberside Materials Laboratory Ltd.

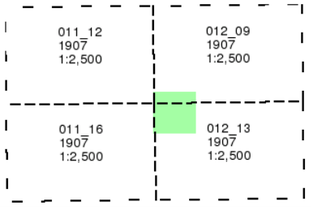
Lincolnshire

Published 1907

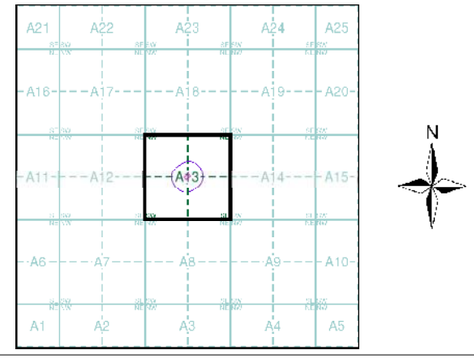
Source map scale - 1:2,500

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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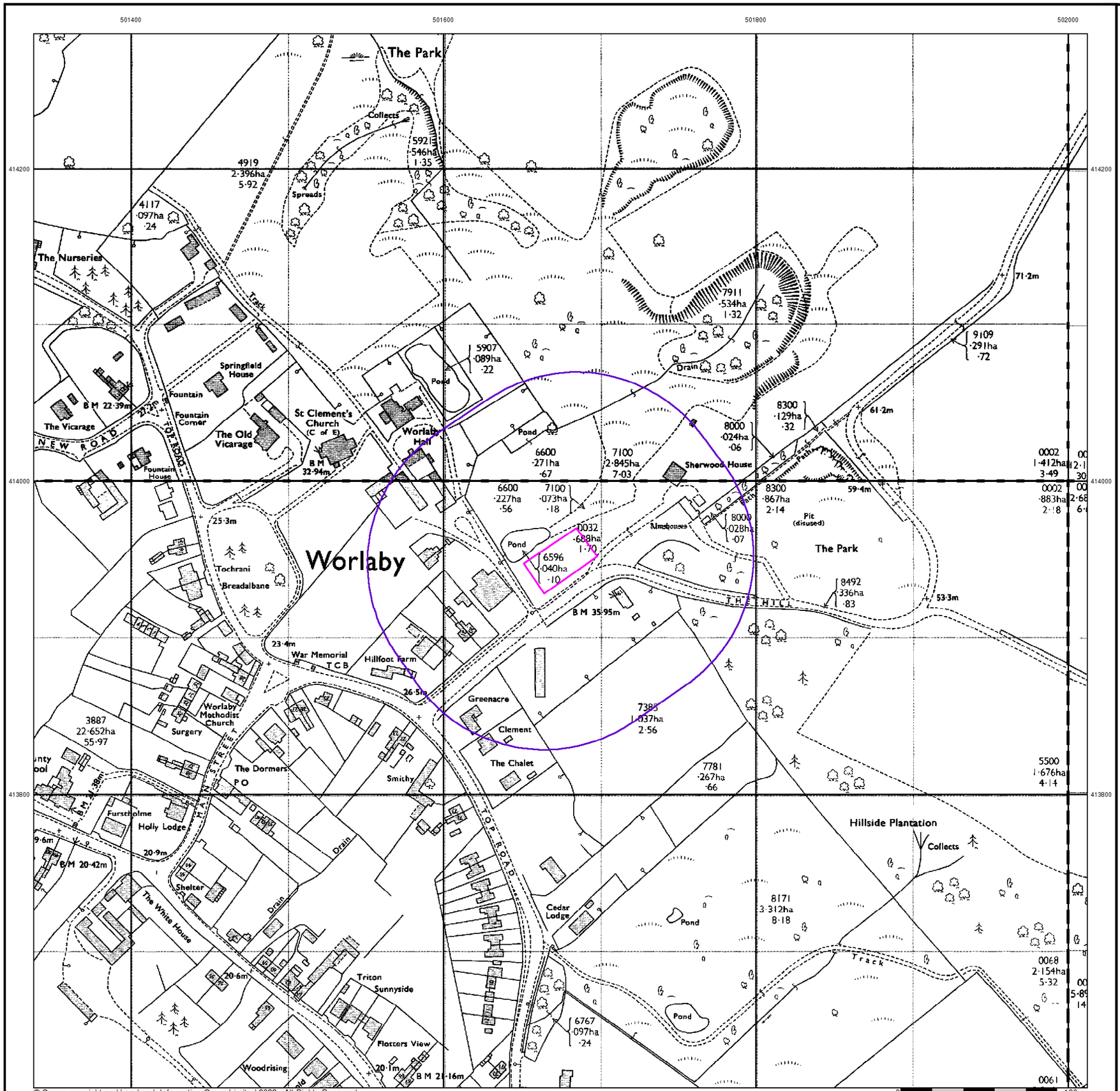
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	100

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP



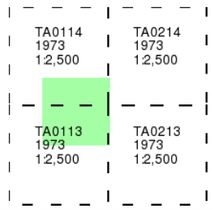
Ordnance Survey Plan

Published 1973

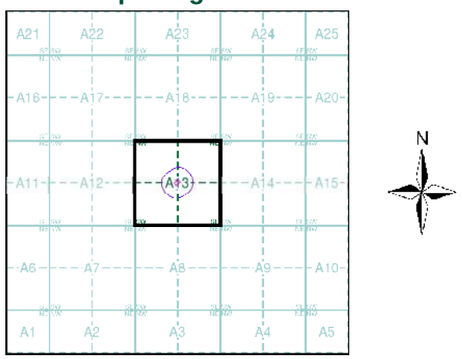
Source map scale - 1:2,500

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

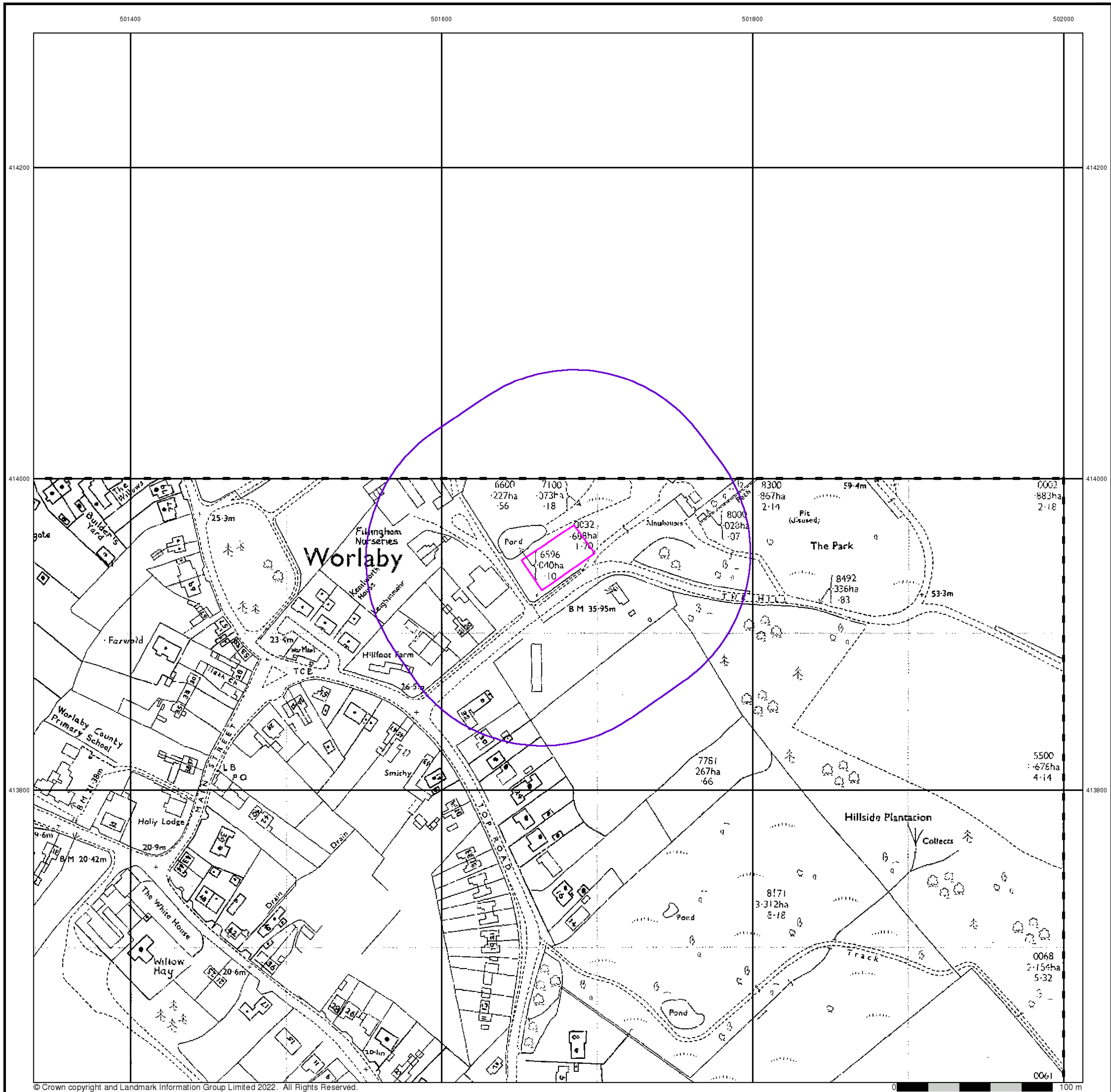


Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	100

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP



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0 100 m

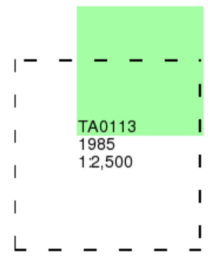
Additional SIMs

Published 1985

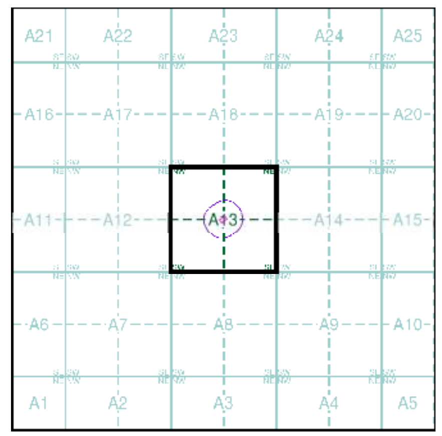
Source map scale - 1:2,500

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



N

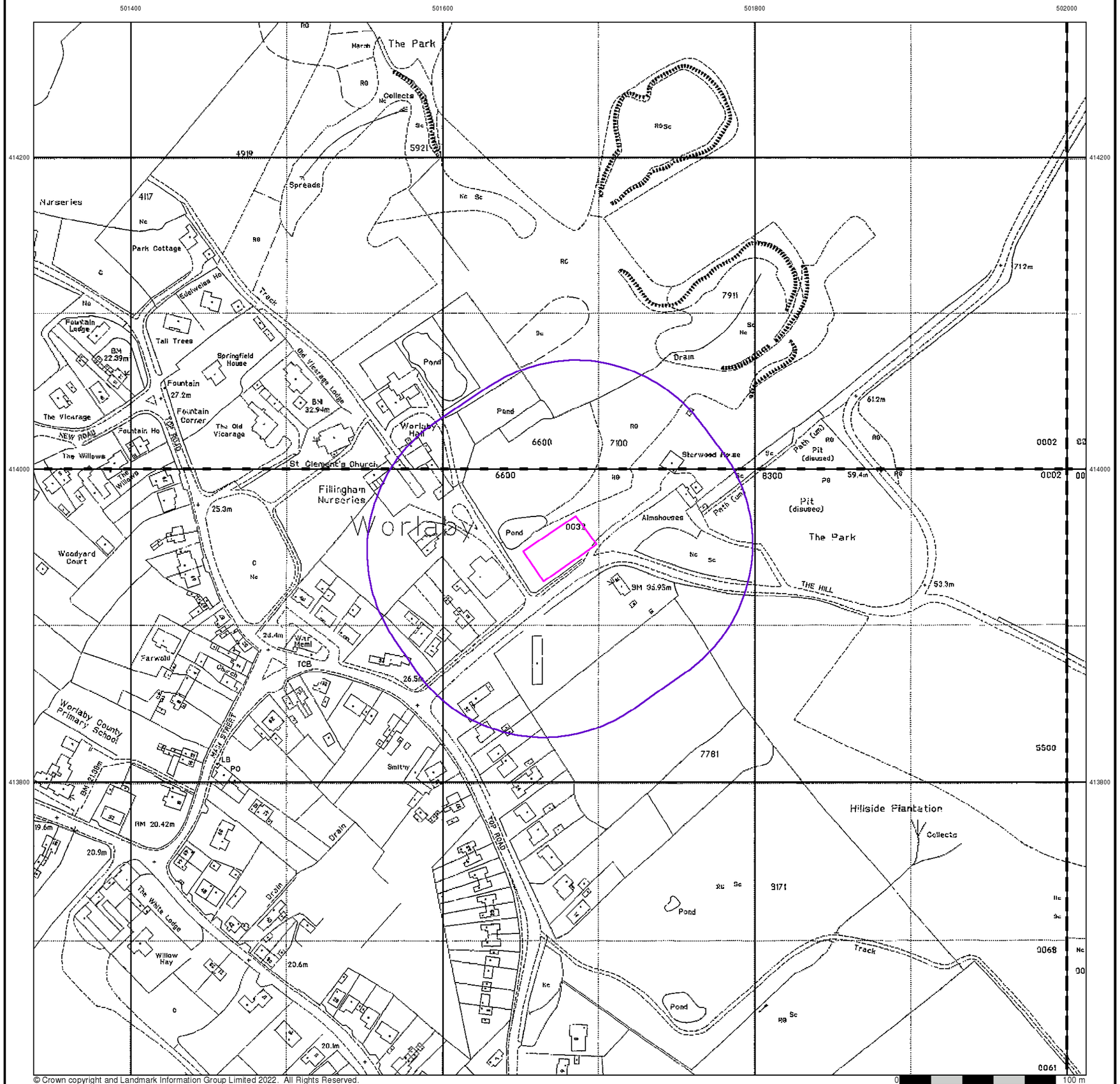
Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	100

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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



Large-Scale National Grid Data

Published 1994

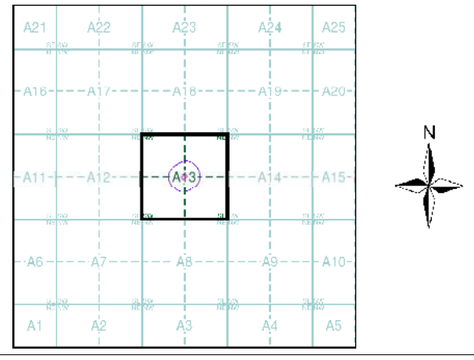
Source map scale - 1:2,500

'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)

TA0114 1994 1:2,500	TA0214 1994 1:2,500
TA0113 1994 1:2,500	TA0213 1994 1:2,500

Historical Map - Segment A13



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	100

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

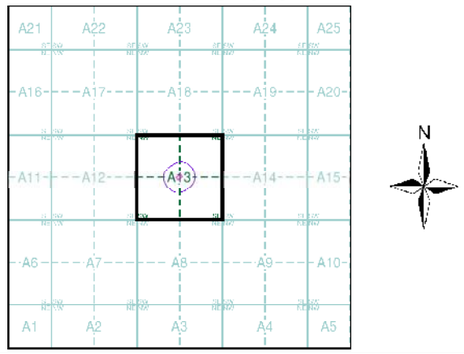
Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Historical Aerial Photography

Published 1999

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

Historical Aerial Photography - Segment A13



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	100

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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
Pylon
Electricity Transmission Line
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

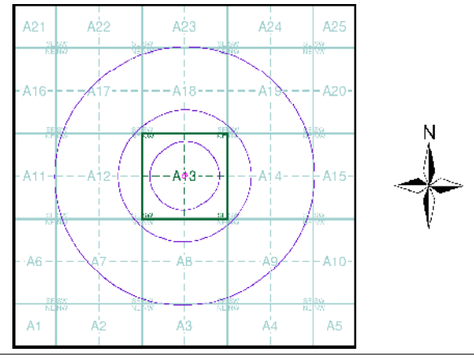
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community 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

HUMBERSIDE MATERIALS LABORATORY LTD.

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lincolnshire	1:10,560	1886	2
Lincolnshire	1:10,560	1908	3
Lincolnshire	1:10,560	1908	4
Lincolnshire	1:10,560	1946 - 1950	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	1981	9
10K Raster Mapping	1:10,000	2000	10
10K Raster Mapping	1:10,000	2006	11
VectorMap Local	1:10,000	2021	12

Historical Map - Slice A



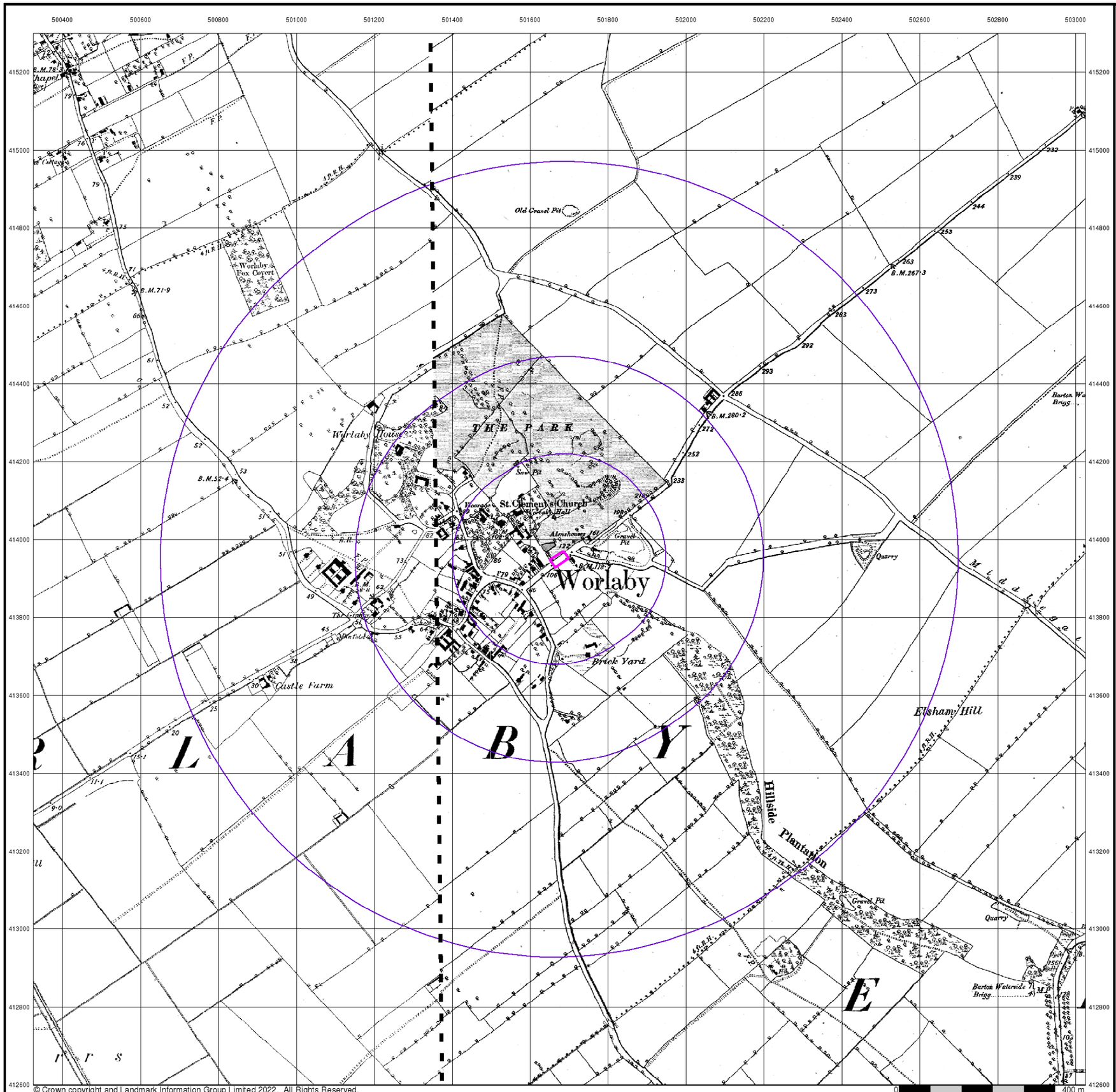
Order Details

Order Number: 301478401_1_1
Customer Ref: RL-2022-09-21
National Grid Reference: 501670, 413950
Slice: A
Site Area (Ha): 0.1
Search Buffer (m): 1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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



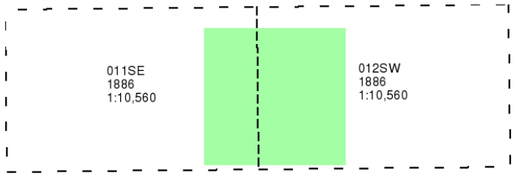
Lincolnshire

Published 1886

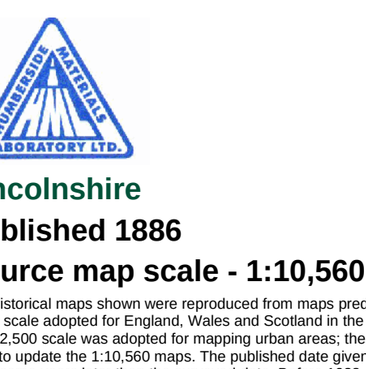
Source map scale - 1:10,560

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:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
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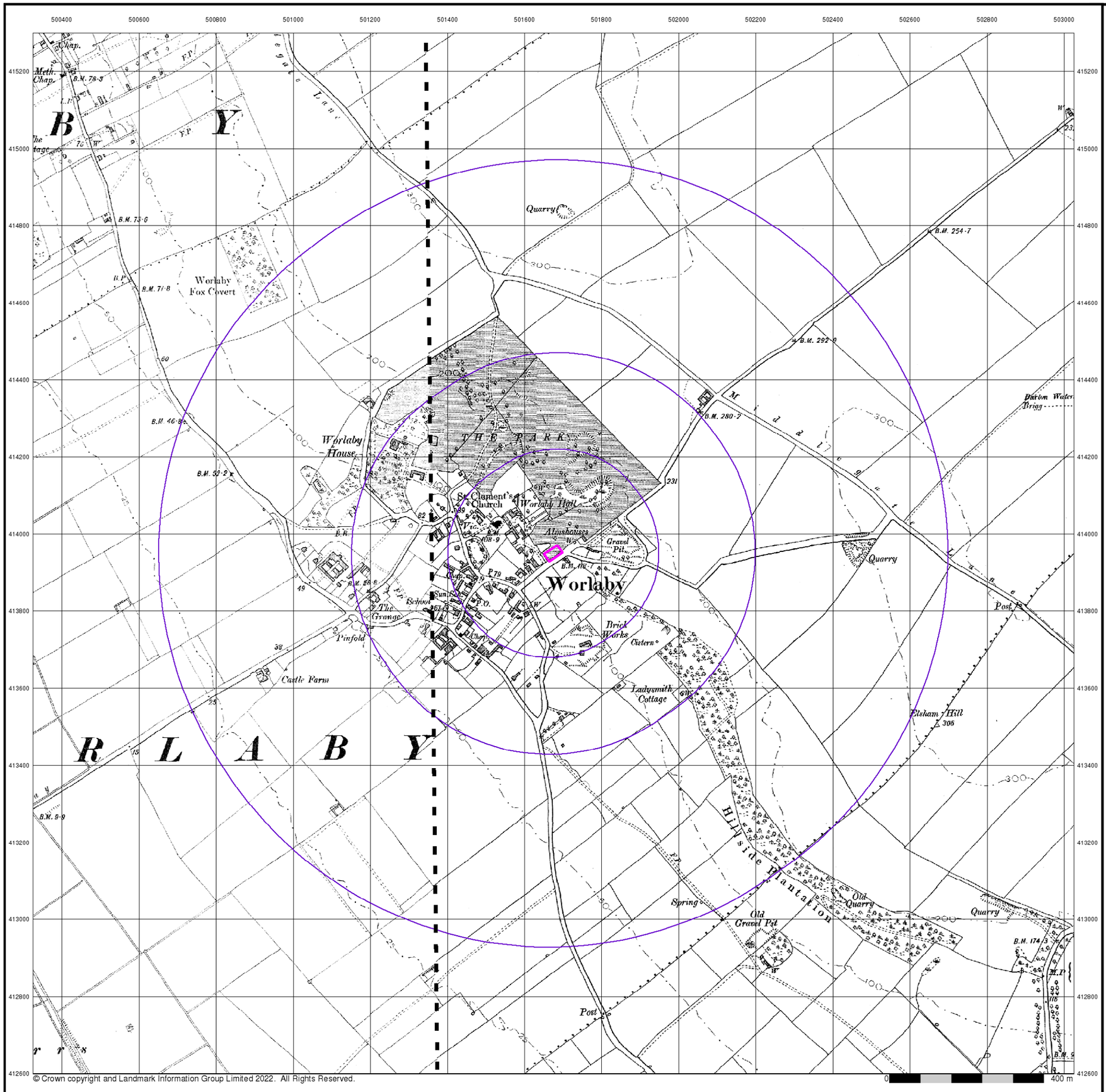


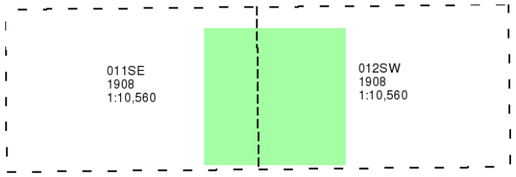
Lincolnshire

Published 1908

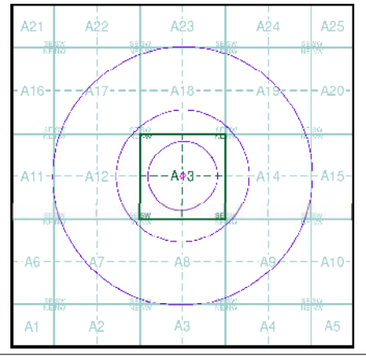
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

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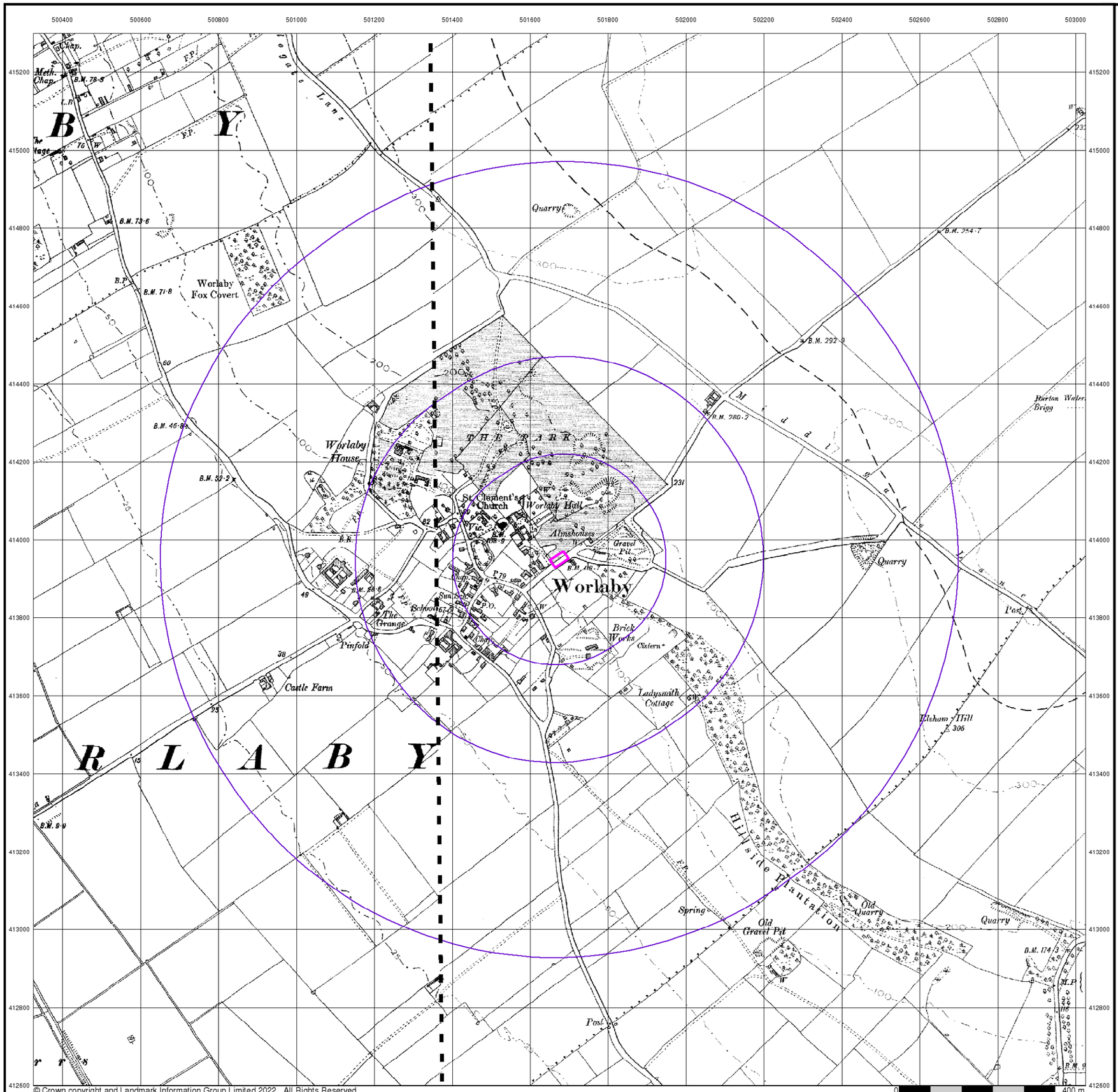

Lincolnshire

Published 1908

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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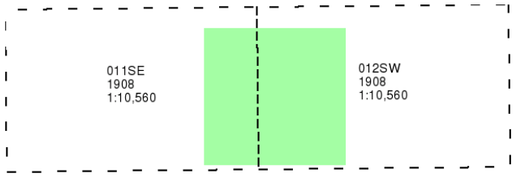
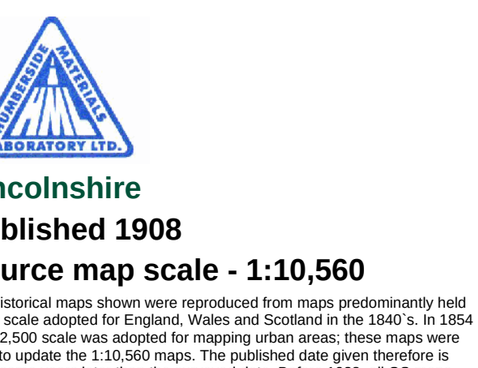


Historical Map - Slice A



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

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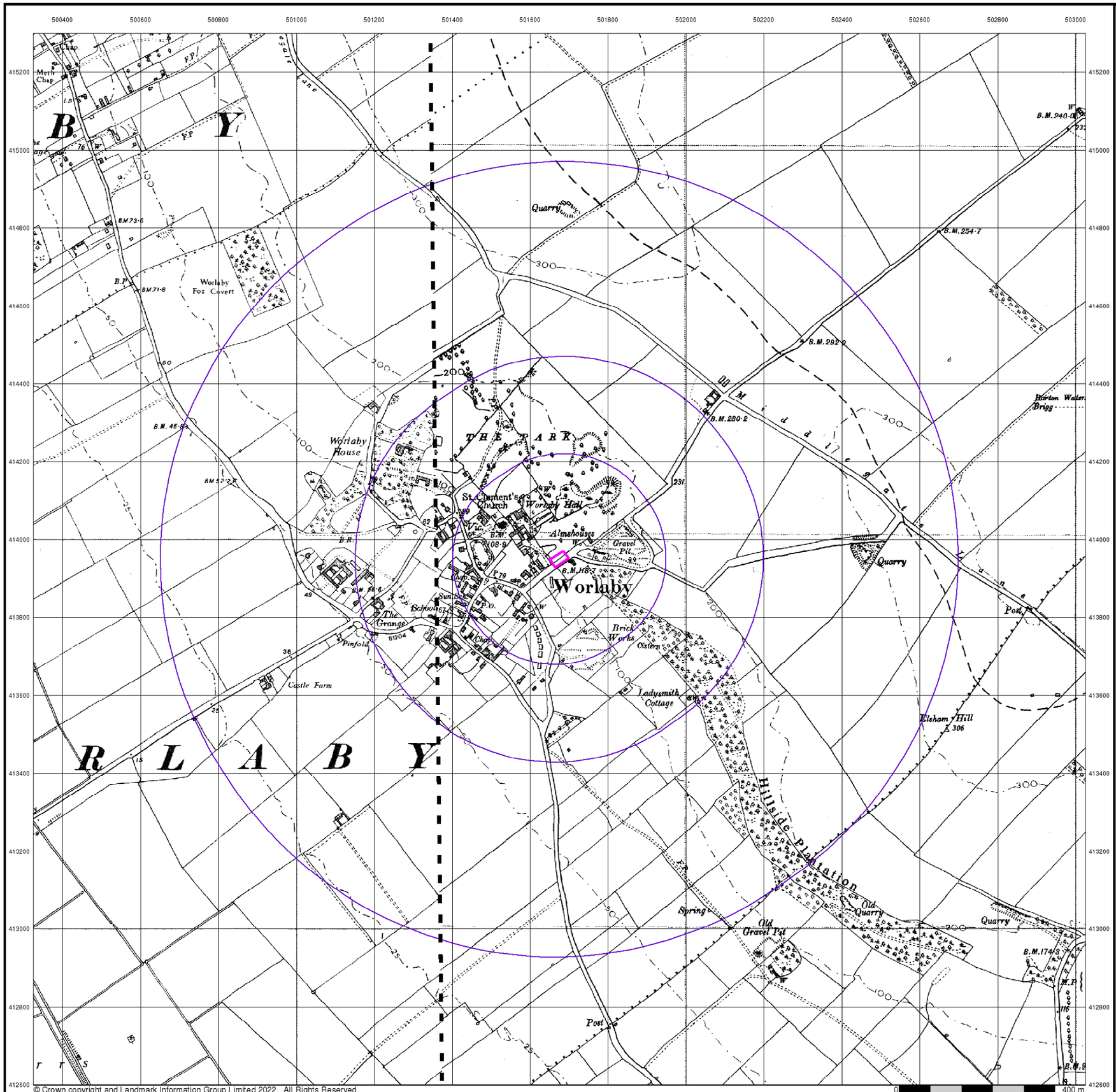


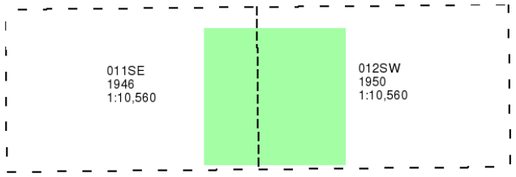
Lincolnshire

Published 1946 - 1950

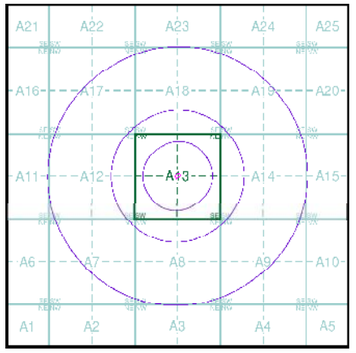
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

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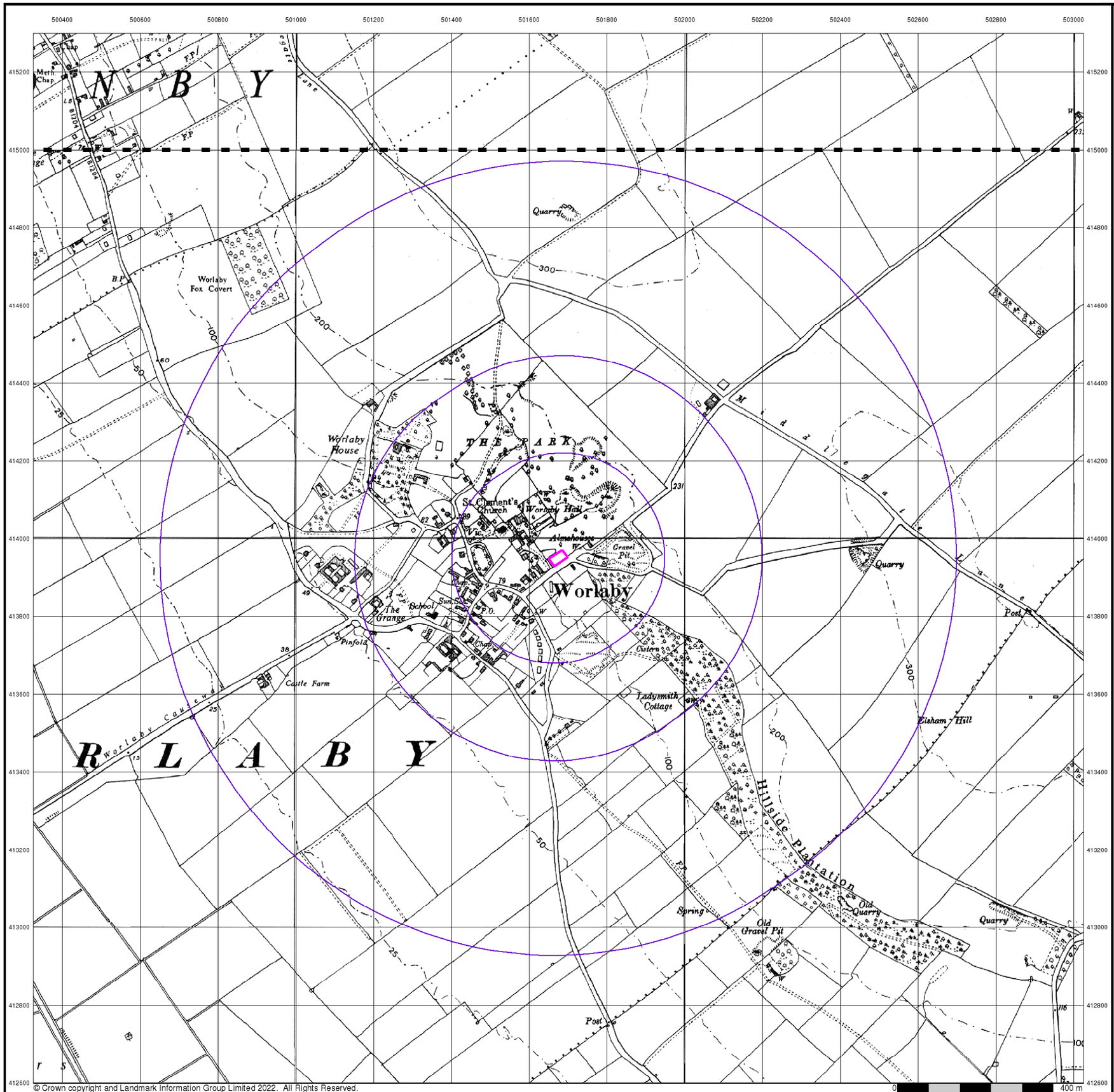

Ordnance Survey Plan

Published 1956

Source map scale - 1:10,000

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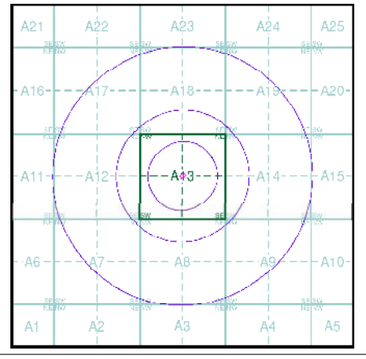
Map Name(s) and Date(s)

TA01NW
1956
1:10,560

TA01SW
1956
1:10,560

Historical Map - Slice A



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

Landmark INFORMATION GROUP
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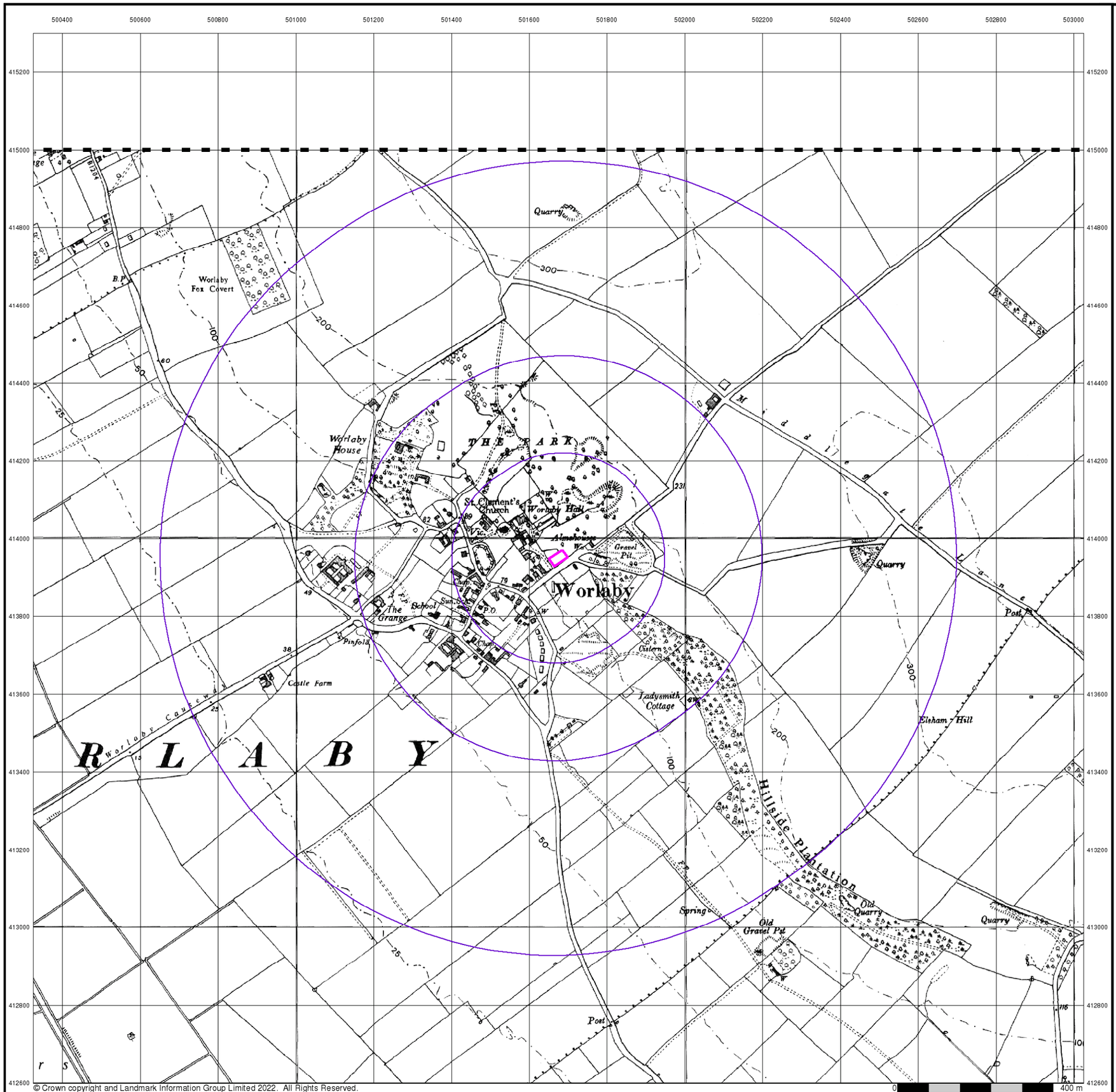


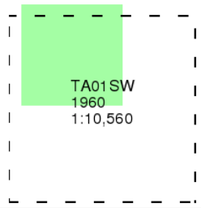
Ordnance Survey Plan

Published 1960

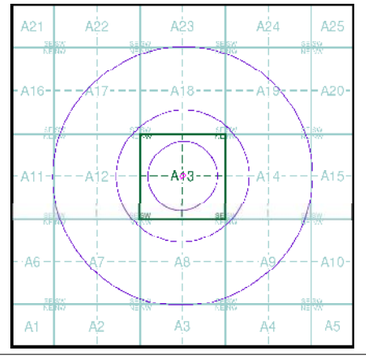
Source map scale - 1:10,000

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:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

Landmark INFORMATION GROUP
Tel: 0844 844 9952
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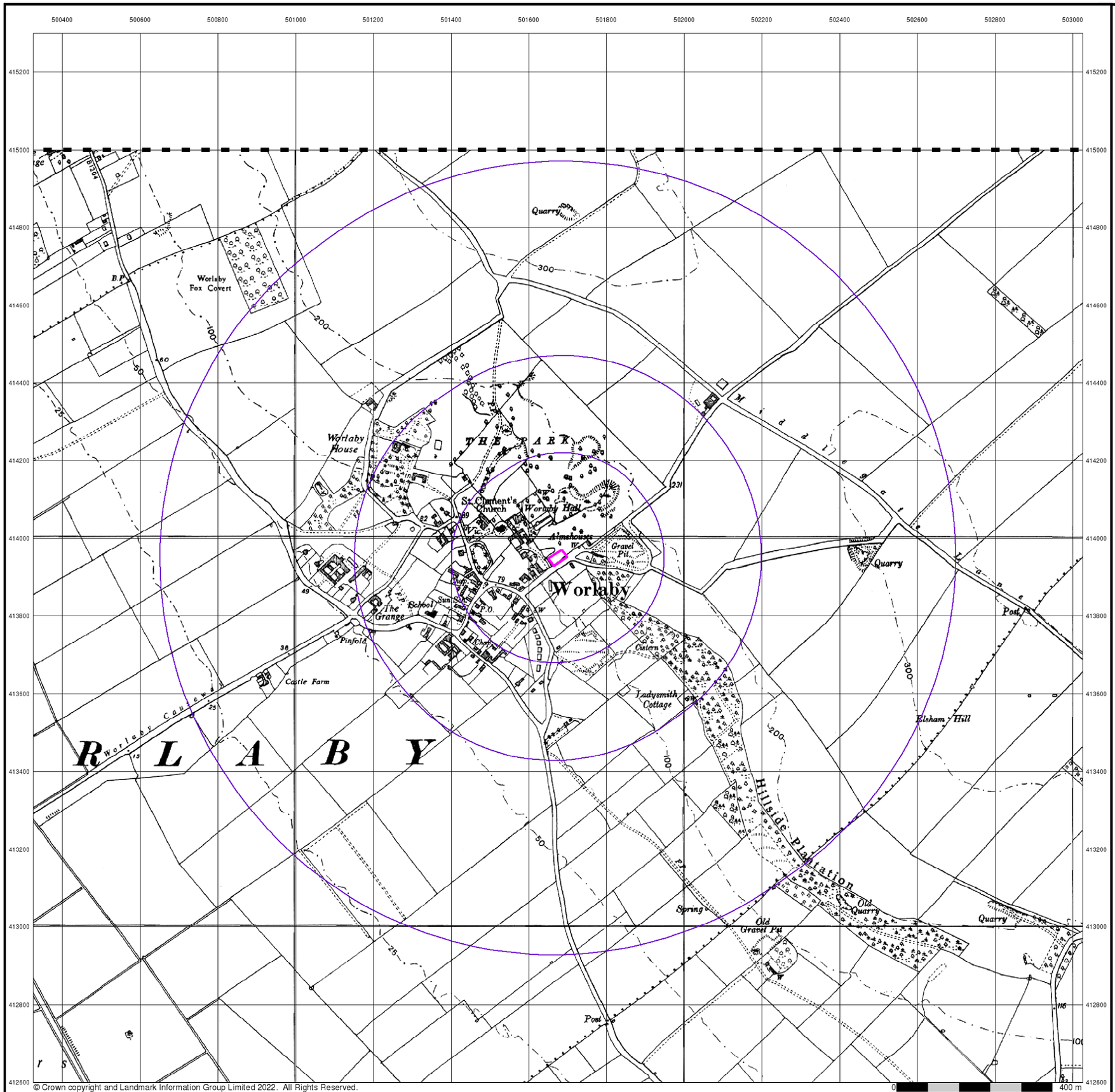

Ordnance Survey Plan

Published 1964

Source map scale - 1:10,000

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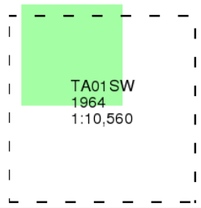
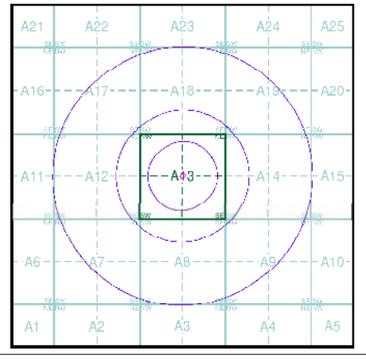


Historical Map - Slice A



Order Details

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National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

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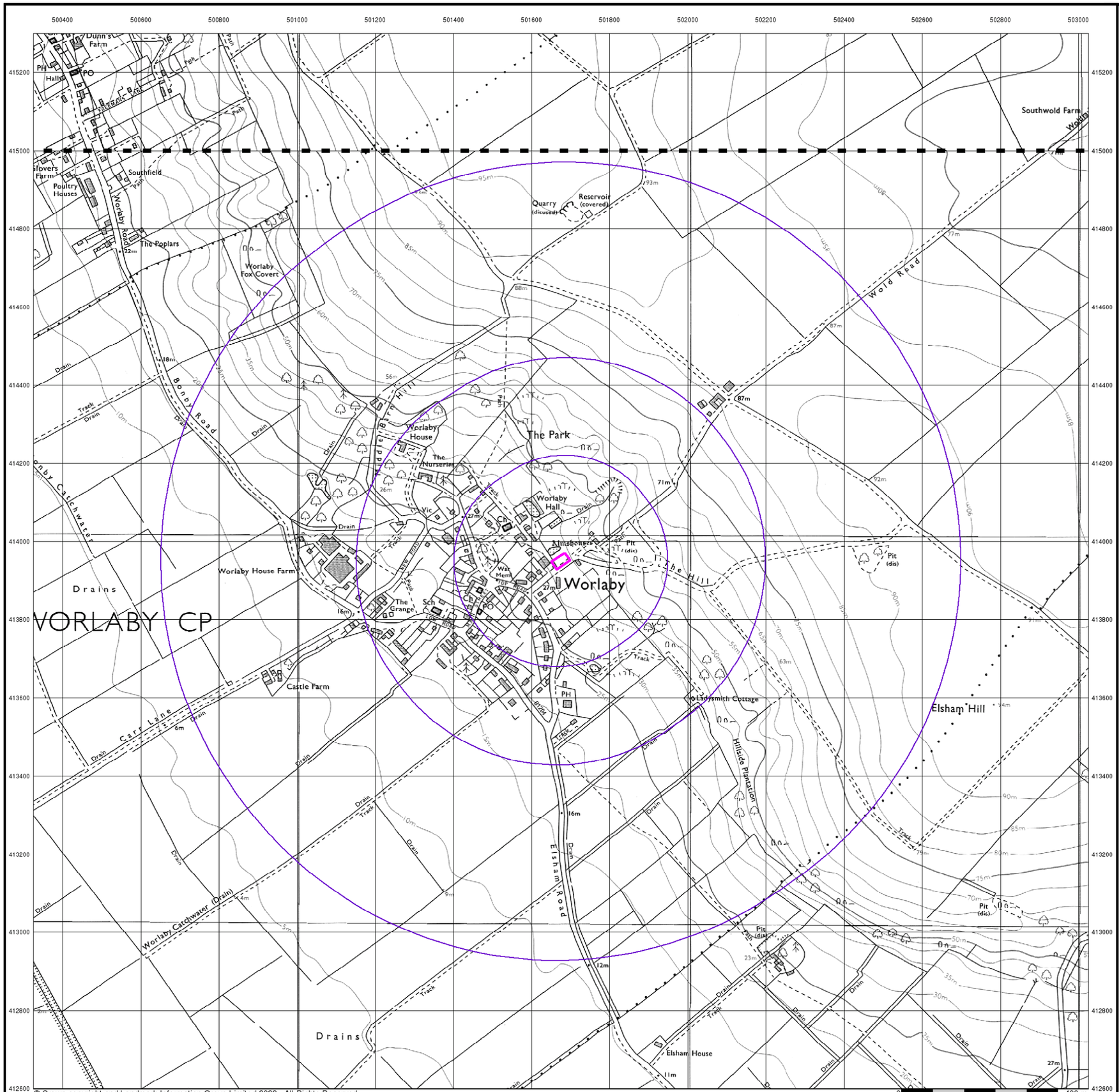

Ordnance Survey Plan

Published 1981

Source map scale - 1:10,000

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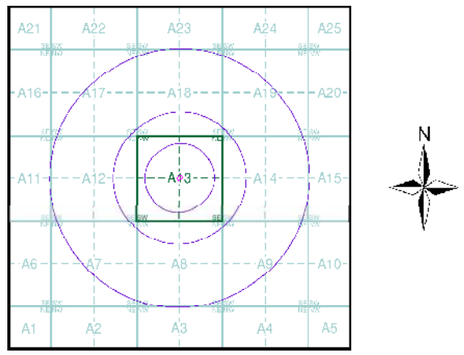
Map Name(s) and Date(s)

TA01NW
1981
1:10,000

TA01SW
1981
1:10,000

Historical Map - Slice A



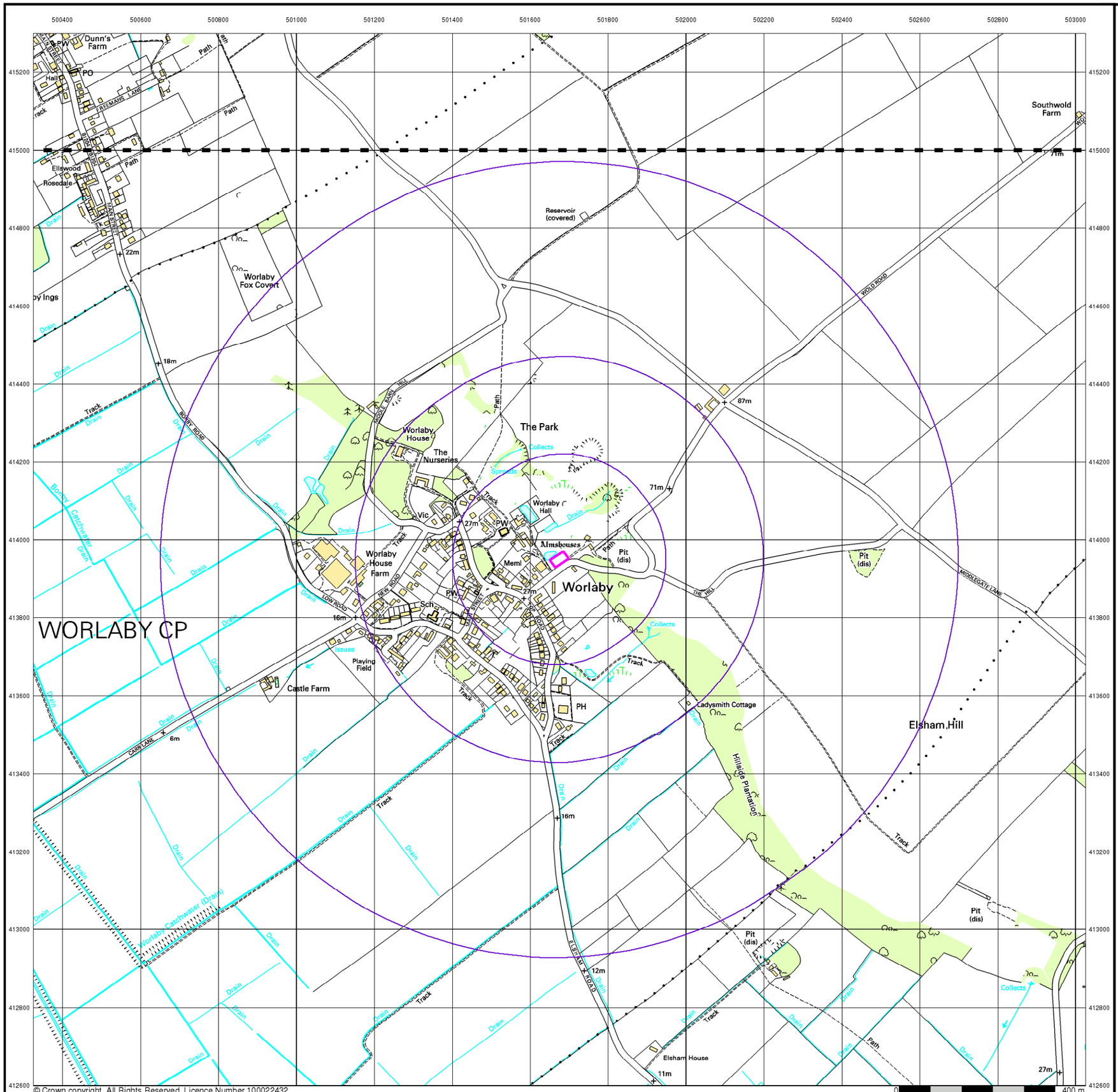
Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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



10k Raster Mapping

Published 2000

Source map scale - 1:10,000

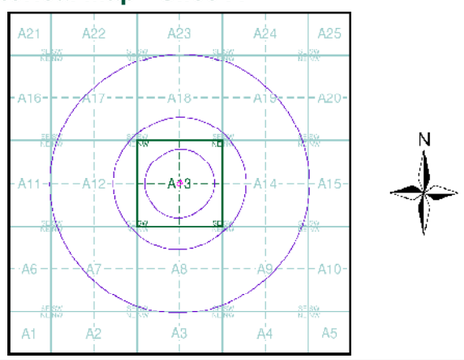
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks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

TA01NW 2000 1:10,000

TA01SW 2000 1:10,000

Historical Map - Slice A



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

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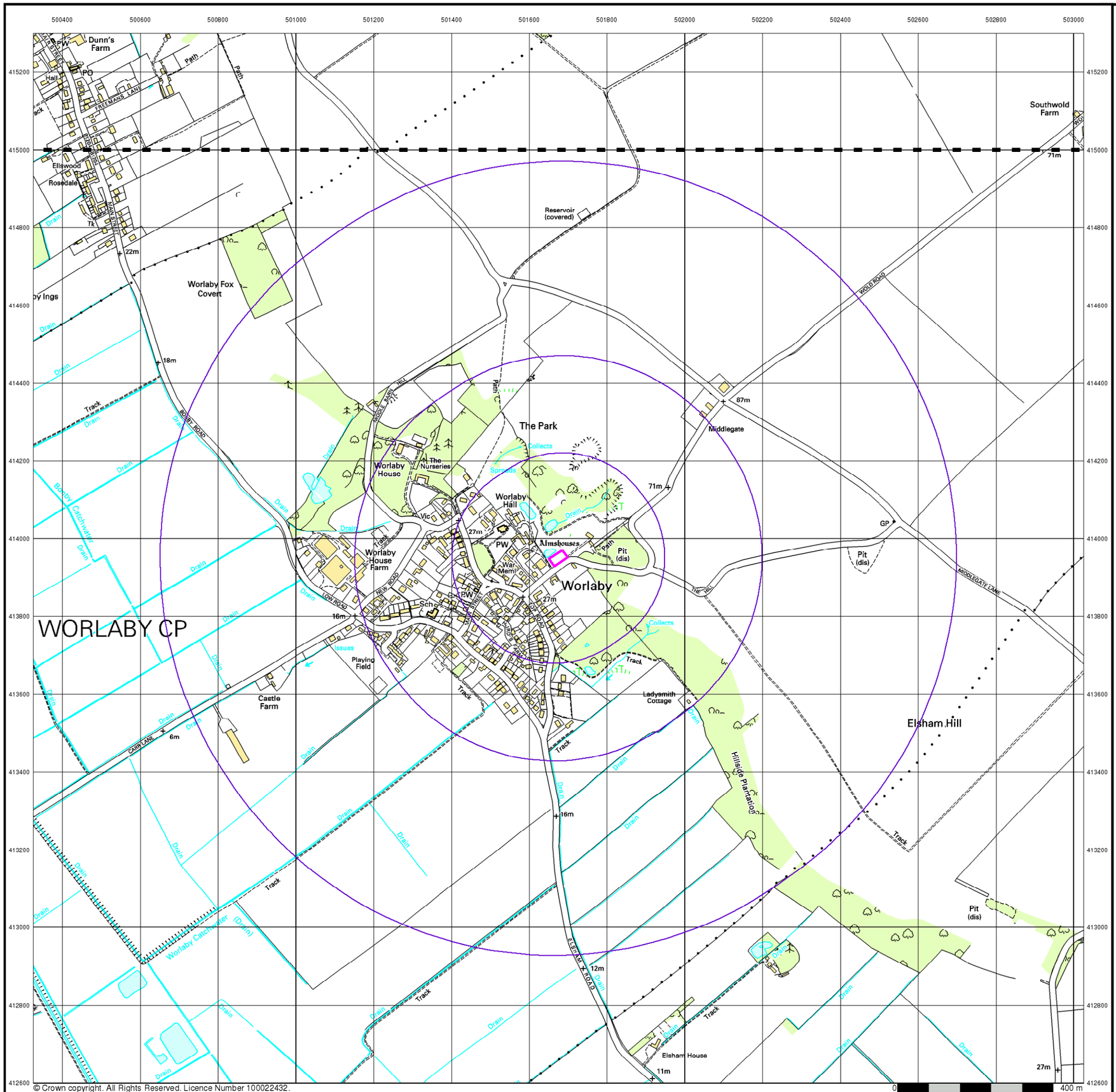


10k Raster Mapping

Published 2006

Source map scale - 1:10,000

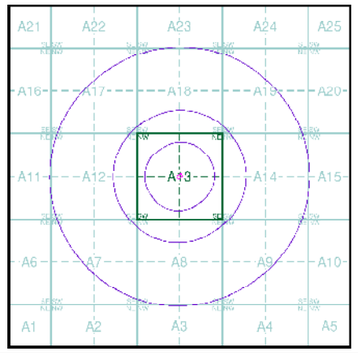
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks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

Map Name(s) and Date(s)

TA01NW
2006
1:10,000

TA01SW
2006
1:10,000

Historical Map - Slice A



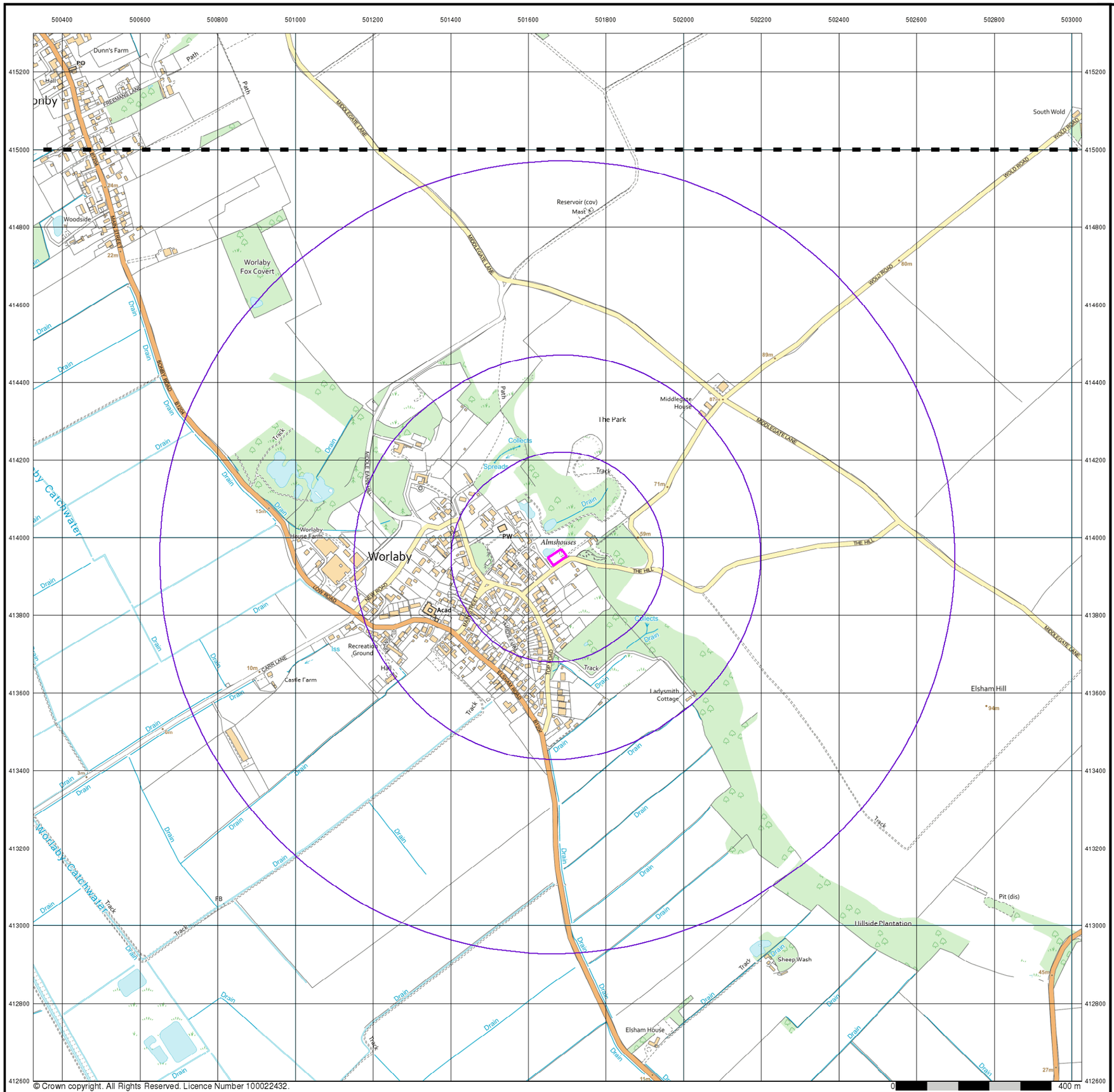
Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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



VectorMap Local

Published 2021

Source map scale - 1:10,000

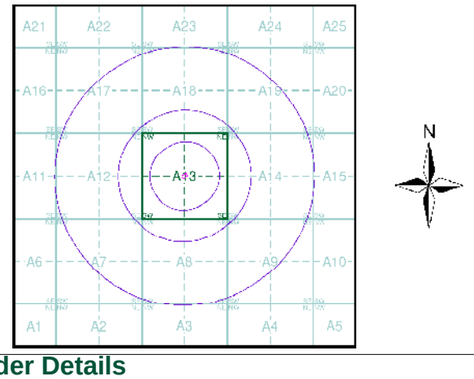
VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap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

TA01NW
2021
Variable

TA01SW
2021
Variable

Historical Map - Slice A



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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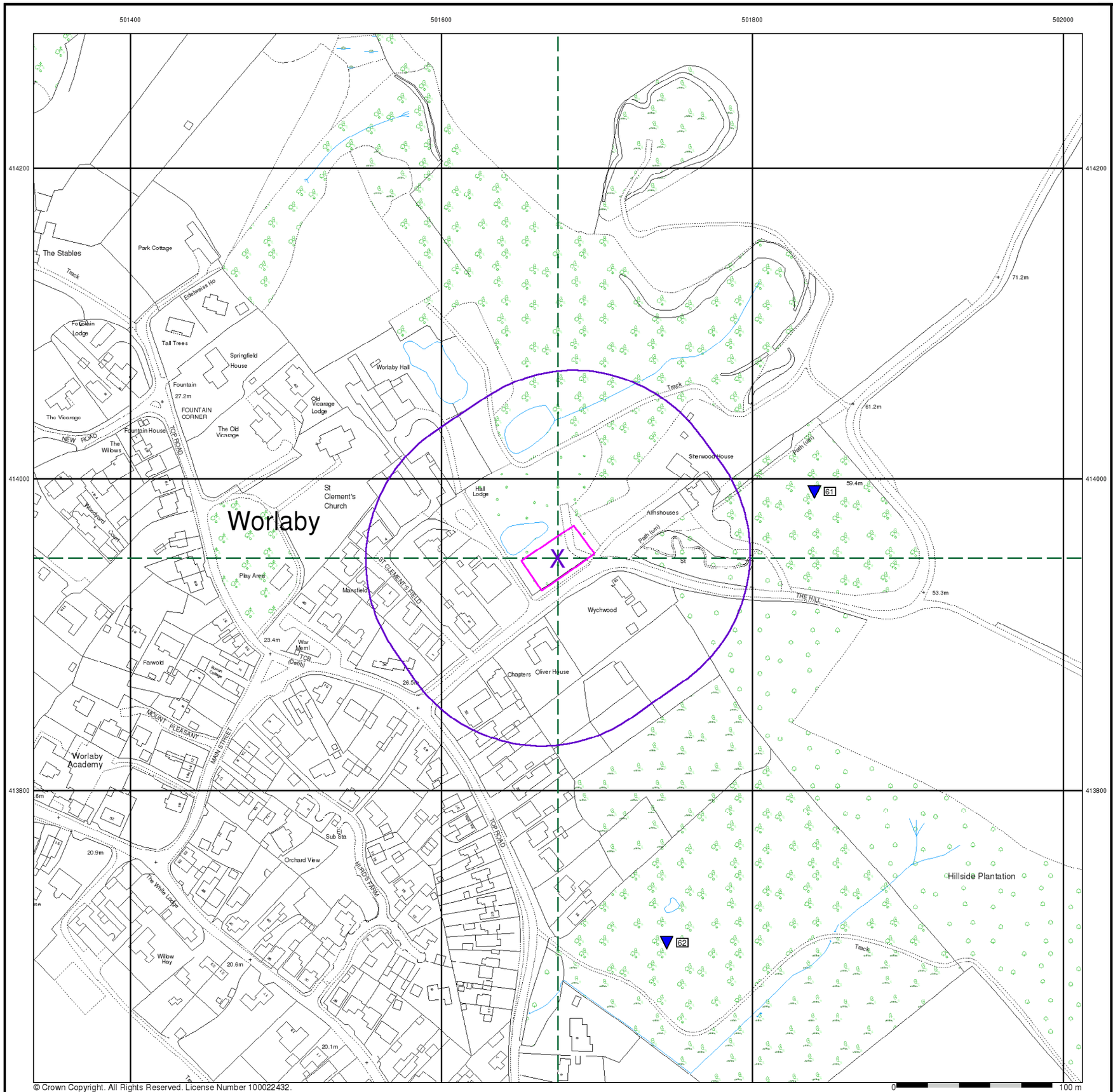
Appendix C

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
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

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

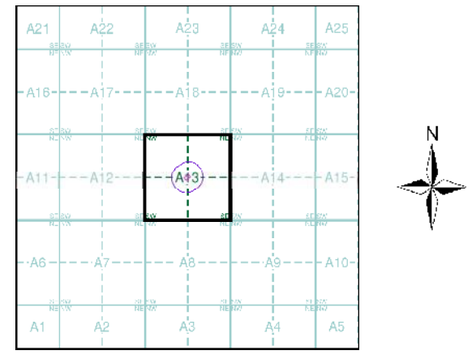
Geological

- BGS Recorded Mineral Site

Waste

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

Site Sensitivity Map - Segment A13



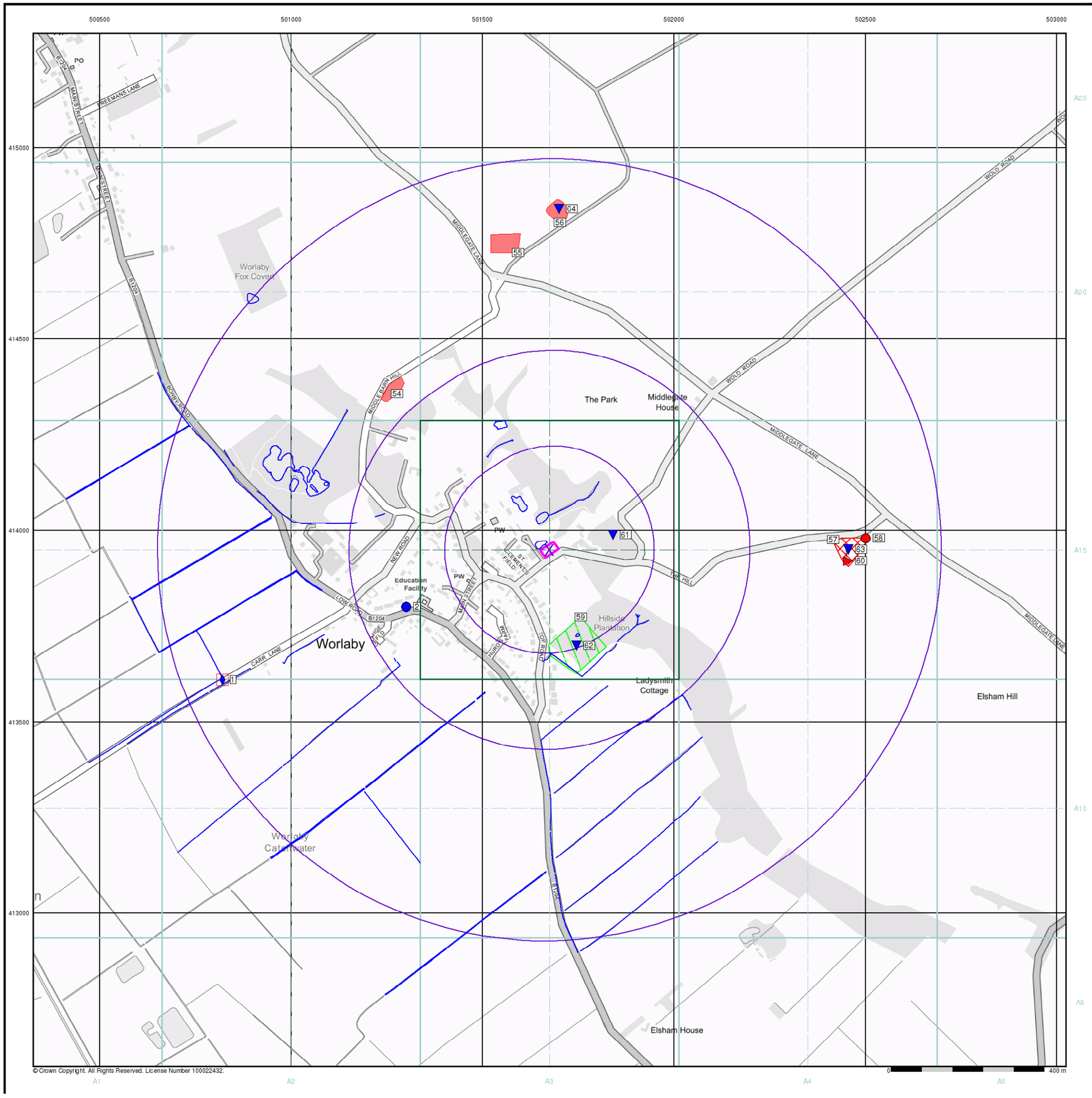
Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Plot Buffer (m):	100

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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
- Prosecution Relating to Authorised Processes
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- Water Industry Act Referral

Hazardous Substances

COMAH Site | Explosive Site

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- BGS Recorded Mineral Site

Waste

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- EA Historic Landfill (Buffered Point)
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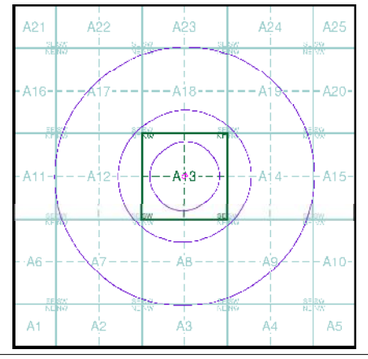
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially 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 - Slice A



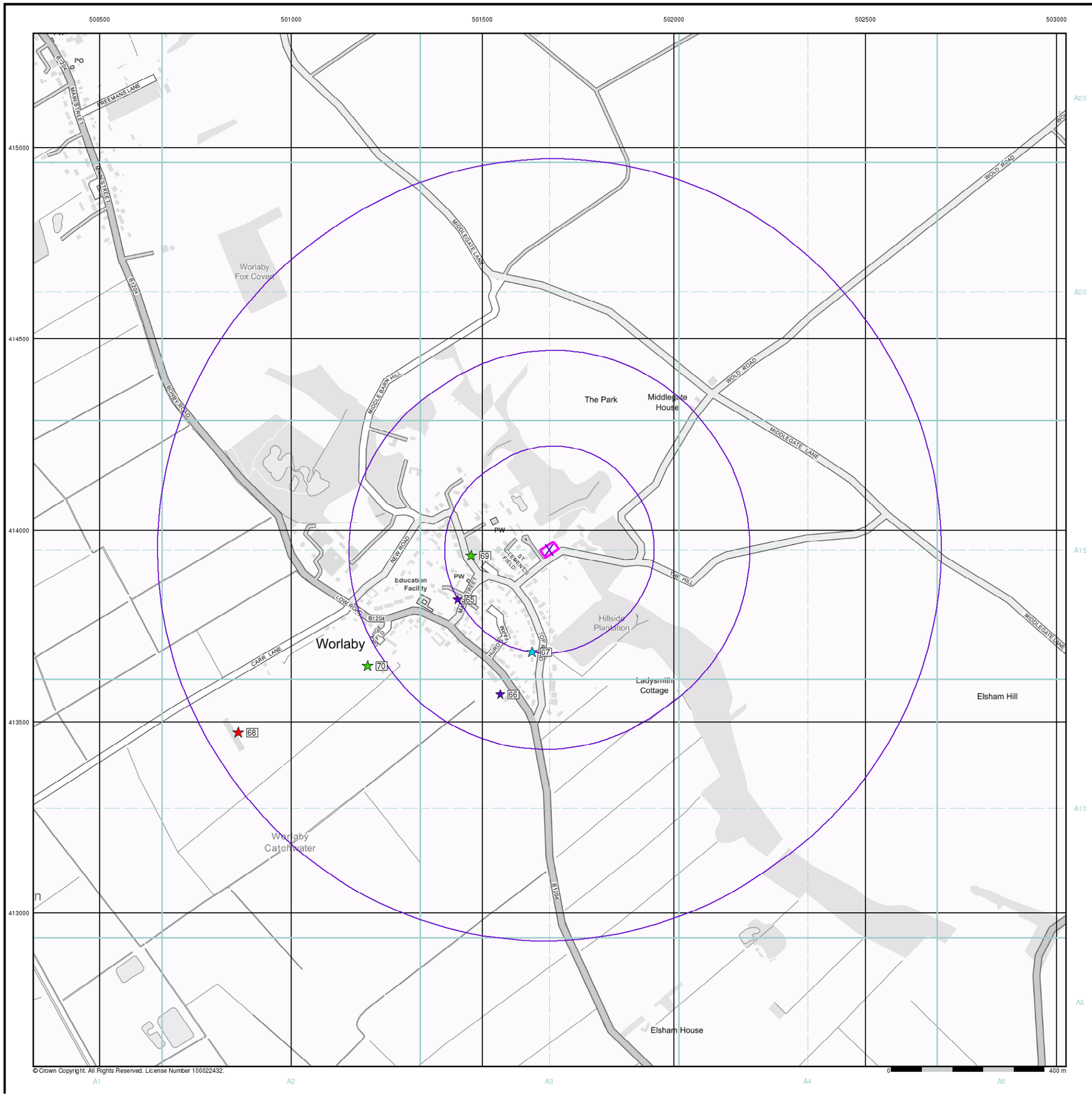
Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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



Industrial Land Use Map

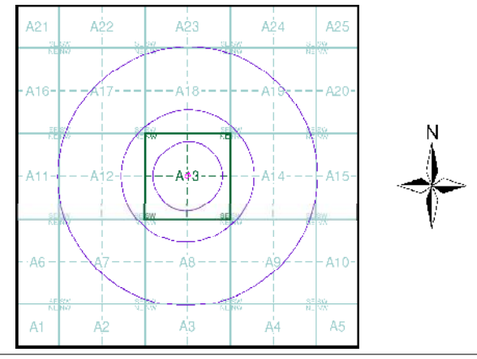
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

Landmark INFORMATION GROUP
Tel: 0844 844 9952
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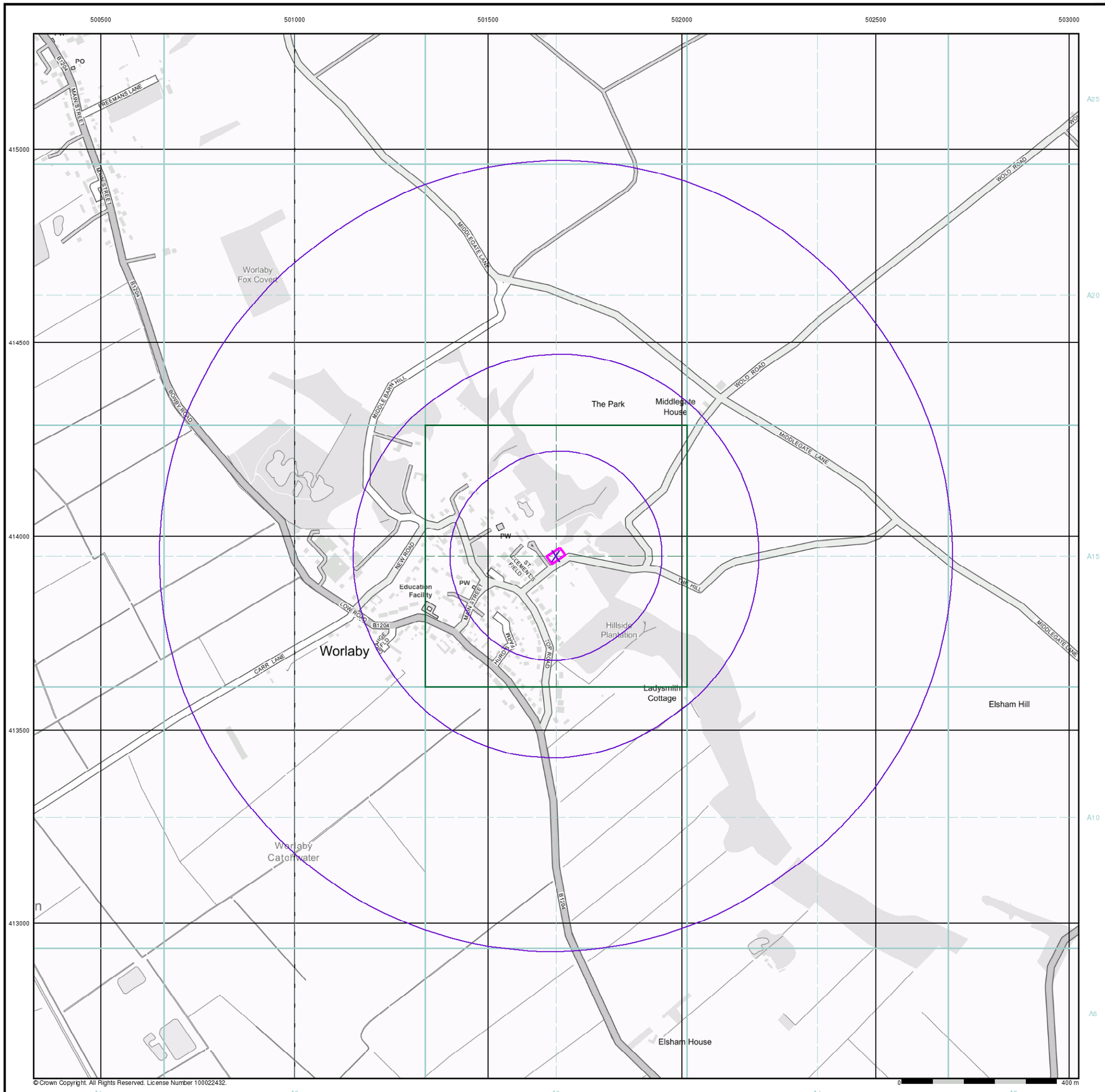


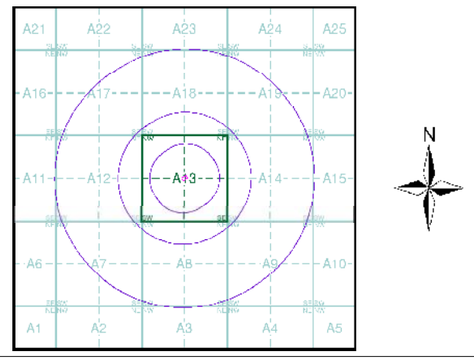
General

- 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:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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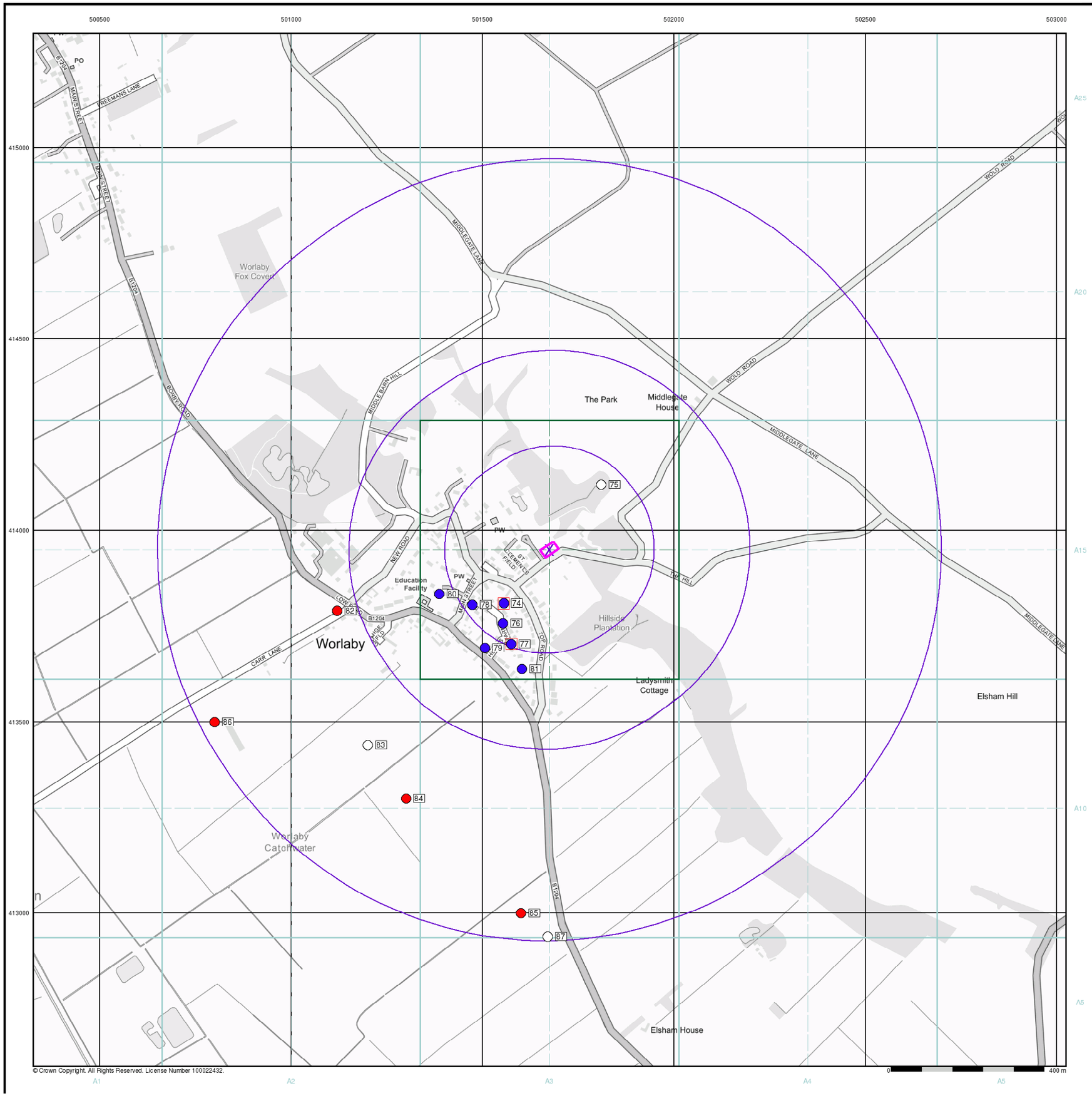


General

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

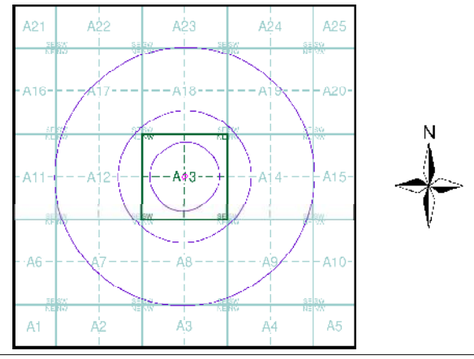
Agency and Hydrological (Boreholes)

- 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:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

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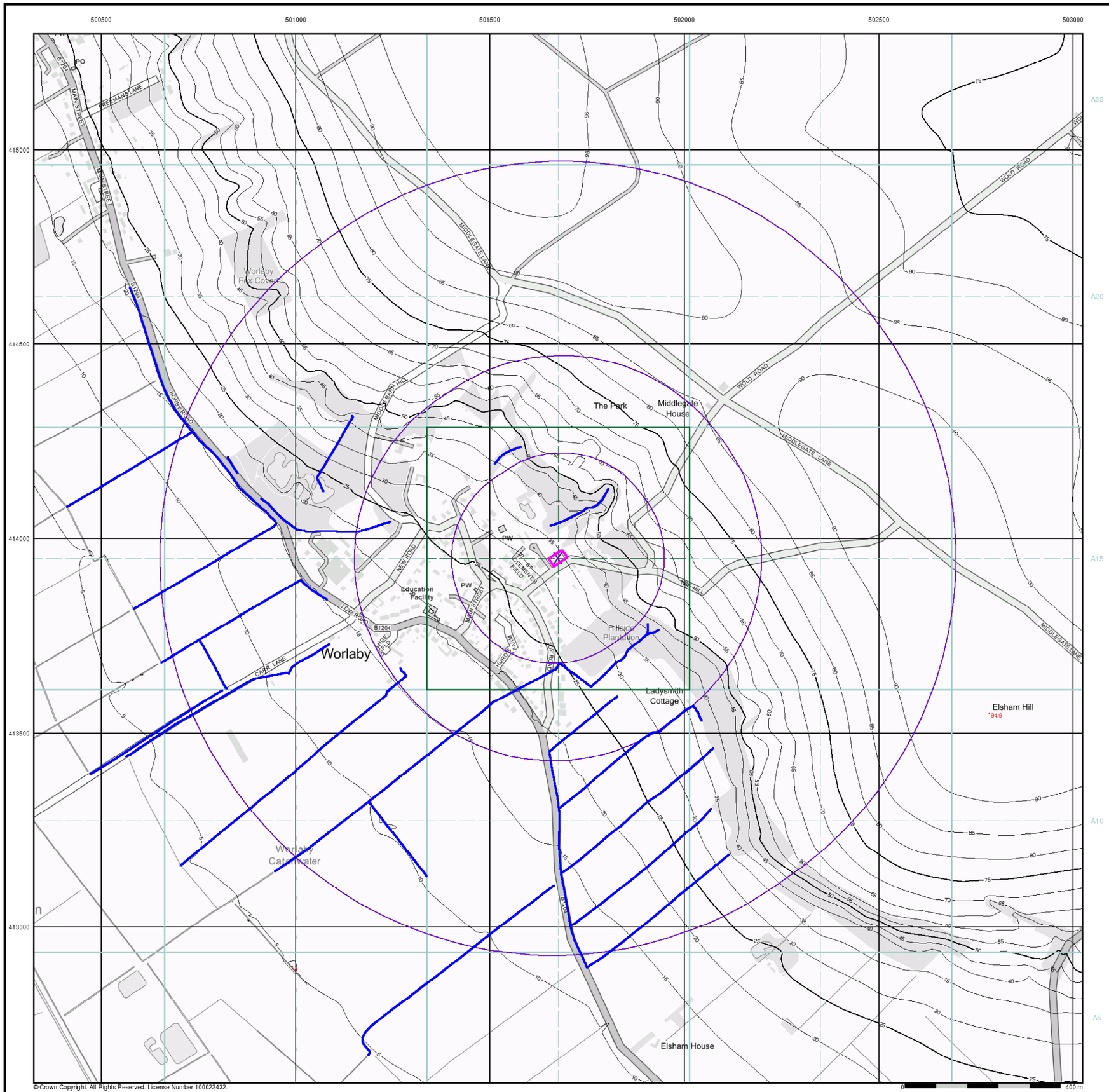


General

- Specified Site
- Specified Buffer(s)
- 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)

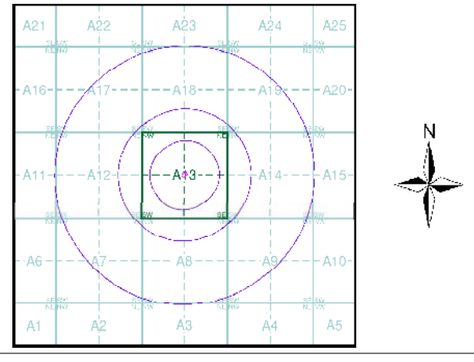
Standard Contour 105 100 95

Master Contour

Spot Height *167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



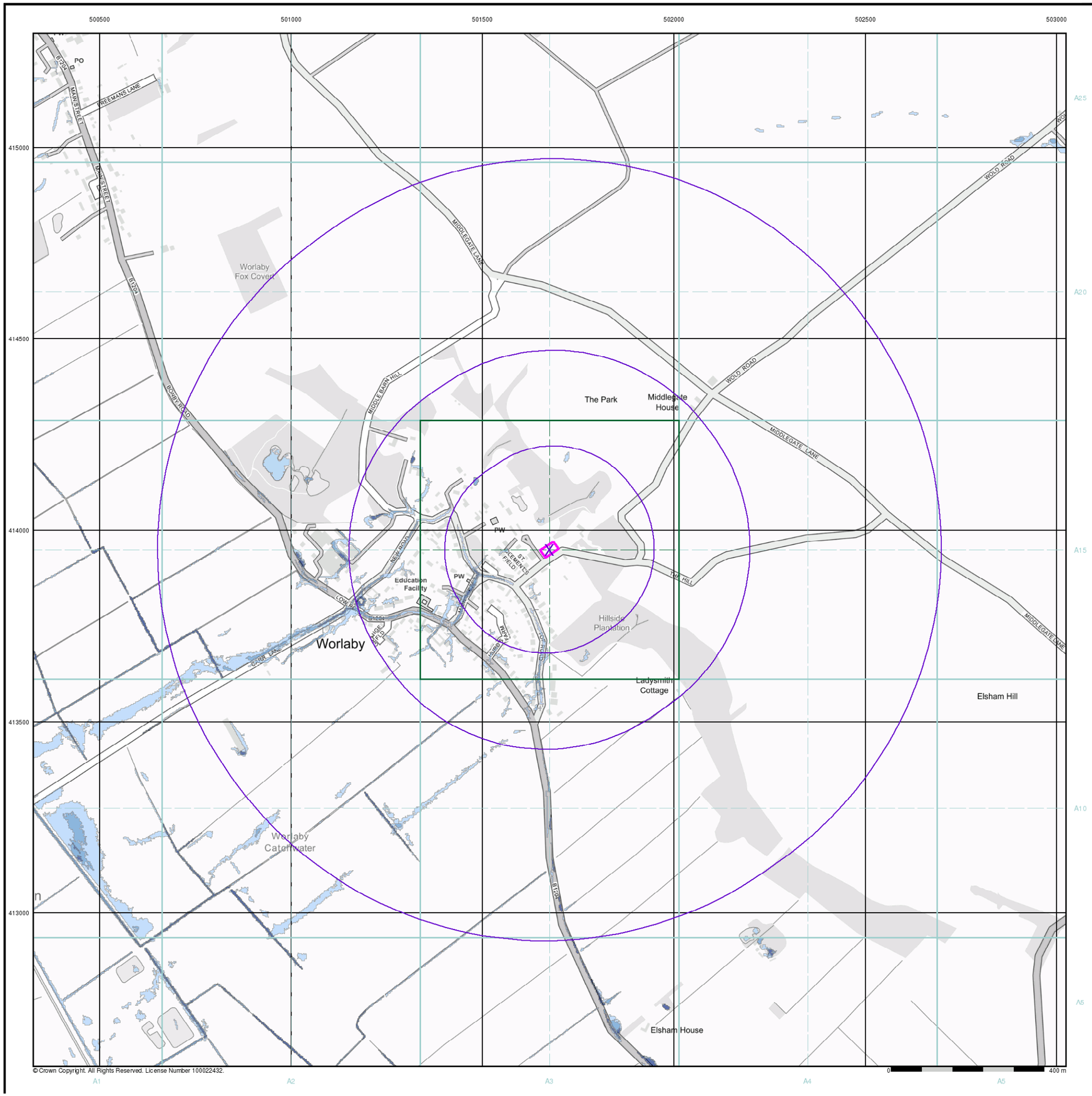
Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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

Risk of Flooding from Surface Water

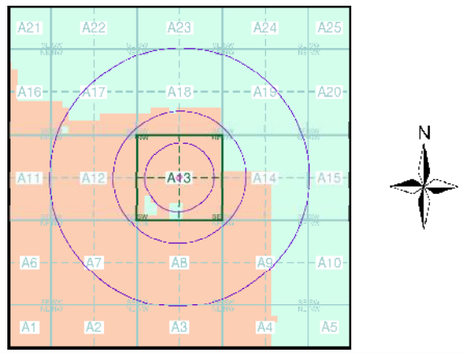
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
301478401_1_1

Customer Reference:
RL-2022-09-21

National Grid Reference:
501670, 413950

Slice:
A

Site Area (Ha):
0.1

Search Buffer (m):
1000

Site Details:

Land off the Hill
Worlaby
North Lincolnshire
DN20 0NP

Client Details:

MR M Gree
Humberside Materials Laboratory Ltd
Atherton Way
Brigg
North Lincolnshire
DN20 8AR

Prepared For:

Mrs K Fillingham

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 2				2
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 2		Yes		
Pollution Incidents to Controlled Waters	pg 2			1	
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 2				(*11)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 5	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 5	1	n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 5	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 5	Yes	n/a	n/a	n/a
Source Protection Zones	pg 6		1		
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 6		2	14	34

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	pg 12				3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 12				1
Licensed Waste Management Facilities (Locations)	pg 12				1
Local Authority Landfill Coverage	pg 13	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 13		1		
Potentially Infilled Land (Water)					
Registered Landfill Sites	pg 13				1
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 14	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 14	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 16		2		2
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	pg 16				1
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 16	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 17		Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 17	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 17	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 17	Yes	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 19			2	
Fuel Station Entries					
Points of Interest - Commercial Services	pg 19		1		
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 19				1
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental	pg 19		1		1
Gas Pipelines					
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 20	1	1		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 to Occur at Surface	A13NW (NW)	0	1	501675 413949
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	2	1	501700 413950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	52	1	501750 413949
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	102	1	501800 413950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	104	1	501750 414050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	115	1	501800 413900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	130	1	501675 414100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	144	1	501800 413850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	183	1	501850 413850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	184	1	501650 414150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	200	1	501600 414150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	215	1	501850 413800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	253	1	501900 413800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	267	1	501550 414200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	286	1	501900 413750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	323	1	501950 413750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	336	1	501500 414250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	357	1	501950 413700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	379	1	501500 414300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	393	1	502000 413700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	405	1	501450 414300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	427	1	502000 413650

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	A8NE (SE)	464	1	502000 413600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (SE)	464	1	502050 413650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A9NW (SE)	498	1	502050 413600
1	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Carr Lane Pumping Station, Worlaby, Brigg, Lincolnshire, Dn20 0nb Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Awnnf13445 Permit Version: 1 Effective Date: 19th July 1999 Issued Date: 6th September 1999 Revocation Date: Not Supplied 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 100m	A7NW (W)	898	2	500820 413610
1	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Carr Lane Pumping Station, Worlaby, Brigg, Lincolnshire, Dn20 0nb Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Awnnf13445 Permit Version: 1 Effective Date: 19th July 1999 Issued Date: 6th September 1999 Revocation Date: Not Supplied 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	A7NW (W)	898	2	500820 413610
	Nearest Surface Water Feature	A13NW (NW)	6	-	501664 413964
2	**Pollution Incidents to Controlled Waters** Property Type: Domestic/Residential Location: Manby District Authority: Environment Agency, Anglian Region Pollutant: Oils - Gas Oil Note: Soakaway Incident Date: 10th January 1994 Incident Reference: 1591 Catchment Area: Not Given Receiving Water: Groundwater Cause of Incident: Overfilling During Delivery Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SE (W)	382	2	501300 413800
	Water Abstractions Operator: T A Robinson Licence Number: 4/29/08/*S/0018 Permit Version: 100 Location: Un-Named Drain At Worlaby 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: Temporary Authorised Start: 01 January Authorised End: 31 March Permit Start Date: 1st April 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3NE (S)	1189	2	501820 412750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Truelove Property & Construction Ltd Licence Number: 4/29/05/*S/0021 Permit Version: 100 Location: Land Drain - Worlaby B 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 October 1994 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1695	2	500400 412800
	Water Abstractions Operator: Truelove Property And Licence Number: 4/29/05/*s/021 Permit Version: Not Supplied Location: Land Drain Worlaby B Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 120 Yearly Rate (m3): 5000000 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	A1NE (SW)	1695	2	500400 412800
	Water Abstractions Operator: Truelove Property & Construction Ltd Licence Number: 4/29/05/*S/0021 Permit Version: 101 Location: Land Drain B - Worlaby 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	A1NE (SW)	1726	2	500350 412810
	Water Abstractions Operator: Truelove Property & Construction Ltd Licence Number: An/029/0005/003 Permit Version: 1 Location: Land Drain A - Worlaby 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 November Authorised End: 31 March Permit Start Date: 8th April 2019 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1734	2	499981 413483

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Truelove Property & Construction Ltd Licence Number: 4/29/05/*S/0021 Permit Version: 101 Location: Land Drain A - Worlaby 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	(W)	1752	2	499950 413530
	Water Abstractions Operator: Truelove Property & Construction Ltd Licence Number: 4/29/05/*S/0021 Permit Version: 100 Location: Land Drain - Worlaby A 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 October 1994 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1808	2	499900 413500
	Water Abstractions Operator: Truelove Property And Licence Number: 4/29/05/*s/021 Permit Version: Not Supplied Location: Land Drain Worlaby A Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 120 Yearly Rate (m3): 5000000 Details: Not Supplied 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 100m	(W)	1808	2	499900 413500
	Water Abstractions Operator: Truelove Property & Construction Ltd Licence Number: An/029/0005/003 Permit Version: 1 Location: Land Drain B - Worlaby 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 November Authorised End: 31 March Permit Start Date: 8th April 2019 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1SE (SW)	1819	2	500507 412526

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Hallington Holdings Ltd Licence Number: 4/29/08/*S/0011 Permit Version: 101 Location: Trib. Of Land Drain Elsham 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 November Authorised End: 31 March Permit Start Date: 28th December 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1990	2	501450 411950
	Water Abstractions Operator: Lawrence Kirkby (Farms) Ltd Licence Number: 4/29/08/*S/0011 Permit Version: 100 Location: Trib. Of Land Drain Elsham 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 November Authorised End: 31 March Permit Start Date: 1st April 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1990	2	501450 411950
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Unproductive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NW (NW)	0	3	501675 413949
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Unproductive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: <3m Superficial Recharge: No Data	A13SW (SW)	0	3	501670 413944
	Groundwater Vulnerability - Soluble Rock Risk Classification: Significant Risk - Problems Unlikely	A13NW (NW)	0	3	501675 413949
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A13NW (NW)	0	3	501675 413949
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NW (NW)	0	3	501675 413949
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SW (SW)	0	3	501670 413944

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Source Protection Zones** Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A13NE (N)	219	2	501714 414187
	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				
4	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 17.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A13NW (N)	69	4	501656 414033
5	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 165.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A13NW (N)	69	4	501673 414037
6	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 329.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Worlaby Catchwater Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A13SE (S)	252	4	501679 413678
7	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A13SE (SE)	269	4	501906 413781
8	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 170.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Worlaby Catchwater Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A13SW (S)	272	4	501657 413657
9	**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	A13NW (NW)	280	4	501513 414192
10	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A13SE (SE)	286	4	501902 413752

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 372.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NE (SE)	373	4	501827 413594
12	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Worlaby Catchwater Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NW (SW)	386	4	501507 413577
13	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.6 Watercourse Level: Underground Permanent: True Watercourse Name: Worlaby Catchwater Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NW (SW)	410	4	501486 413559
14	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 362.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Worlaby Catchwater Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NW (SW)	418	4	501479 413554
15	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A12NE (W)	418	4	501245 414043
16	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A12NE (W)	440	4	501220 414035
17	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 783.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12SE (SW)	473	4	501285 413646
18	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 126.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A12NE (W)	485	4	501172 414020
19	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 469.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NE (SE)	498	4	501996 413553

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 384.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12SE (W)	581	4	501080 413843
21	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 27.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NE (W)	606	4	501071 414121
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 136.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12SE (W)	607	4	501087 413727
23	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 69.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A12NE (W)	610	4	501046 414018
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NE (S)	615	4	501687 413314
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 196.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NE (NW)	619	4	501118 414261
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 494.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9NW (SE)	619	4	502073 413460
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 168.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8NE (S)	623	4	501677 413306
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 95.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A12NW (W)	676	4	500982 414039

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NW (W)	708	4	500949 414038
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 319.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NW (W)	709	4	500949 414042
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 423.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NW (W)	710	4	500947 414034
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 86.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12SW (SW)	734	4	500979 413655
33	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 471.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9NW (SE)	743	4	502068 413305
34	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.0 Watercourse Level: Underground Permanent: True Watercourse Name: Worlaby Catchwater Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	761	4	501195 413330
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Worlaby Catchwater Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	766	4	501191 413327
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 300.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Worlaby Catchwater Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NE (SW)	771	4	501187 413324
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A7NE (SW)	771	4	501187 413324

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 236.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A7NE (SW)	773	4	501192 413317
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8SE (S)	785	4	501693 413145
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8SE (S)	791	4	501683 413138
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 386.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12SW (W)	818	4	500894 413640
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 683.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8SW (S)	822	4	501665 413107
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8SE (S)	823	4	501689 413107
44	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 98.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8SE (S)	828	4	501690 413101
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A12NW (W)	832	4	500850 414168
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 467.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A9SW (SE)	868	4	502114 413187

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 144.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 2	A12SW (W)	894	4	500822 413614
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 401.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A7NW (W)	906	4	500812 413609
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12SW (W)	921	4	500755 413740
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 114.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A8SE (S)	926	4	501707 413004
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 407.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NW (W)	974	4	500734 414274
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NW (W)	974	4	500734 414274
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 374.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Louth Grimsby and Ancholme Primacy: 1	A12NW (W)	975	4	500733 414273

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Worlaby Name: Worlaby House Farm Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD00915 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Industrial and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 2000/0192 BGS Ref: Not Supplied Other Ref: 55/23/0596	A17SE (NW)	556	2	501276 414357
55	**Historical Landfill Sites** Licence Holder: Not Supplied Location: North Lincolnshire Name: North Worlaby Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD00392 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 2000/0193 BGS Ref: Not Supplied Other Ref: 55/23/0629	A18NW (N)	761	2	501593 414725
56	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Worlaby, North Lincolnshire Name: Worlaby Top Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD00914 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 2000/0194 BGS Ref: Not Supplied Other Ref: 55/23/0595	A18NE (N)	835	2	501702 414805
57	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Worlaby Landfill Site Licence Number: 72090 Location: Stoneledge (South Bank) Ltd, The Hill, Off Middlegate Lane, Worlaby, N Lincolnshire, DN20 0NT Licence Holder: Stoneledge (South Bank) Ltd Authority: Environment Agency - Anglian Region, Northern Area Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) Max Input Rate: Not Supplied **Licence Status: Closure** Issued: 9th March 1995 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A14NE (E)	718	2	502415 413976
58	**Licensed Waste Management Facilities (Locations)** Licence Number: 72090 Location: The Hill, Off Middlegate Lane, Worlaby, N Lincolnshire, DN20 0NT Operator Name: Stoneledge (South Bank) Ltd Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Northern Area Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) **Licence Status: Closed** Issued: 9th March 1995 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14NE (E)	802	2	502500 413980

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	5	501675 413949
59	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A13SE (SE)	180	-	501756 413774
60	**Registered Landfill Sites** Licence Holder: Stoneledge (South Bank) Ltd Licence Reference: A 940 Site Location: The Hill, Off Middlegate Lane, Worlaby, Brigg, Lincolnshire Licence Easting: 502450 Licence Northing: 413950 Operator Location: Estate Road 4, South Humberside Industrial Estate, GRIMSBY, Lincolnshire, DN31 2TB Authority: Environment Agency - Anglian Region, Northern Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Site Closed Dated: 9th March 1995 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Max.Waste Permitted By Licence Uncontam. Brick,Stone,Concrete,B'Block Uncontam. Build'Sand/Gravel,Tile,Fired Uncontam. Earth & Excav'N Mat'L Prohibited Waste: Poisonous, Noxious, Polluting Wastes Waste N.O.S.	A14NE (E)	752	2	502450 413950

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	501675 413949
	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	A13SW (SW)	0	1	501670 413944
	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 (NW)	0	1	501675 413949
	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 - 30 mg/kg	A13NE (E)	132	1	501822 413997
	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)	149	1	501741 414108
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 60 - 120 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 45 - 60 mg/kg	A13NE (N)	172	1	501742 414132
	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	A13SE (SE)	202	1	501780 413762

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 - 30 mg/kg	A13NE (NE)	314	1	501928 414168
	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 (W)	332	1	501342 414066
	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	A8SE (S)	752	1	501968 413241
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 60 - 120 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 45 - 60 mg/kg	A17SE (NW)	761	1	501067 414435
	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	A17SE (NW)	762	1	501056 414423
	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	A9SW (SE)	825	1	502154 413265

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	**BGS Recorded Mineral Sites** Site Name: Worlaby Gravel Pit Location: Worlaby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132934 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Hunstanton Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A13NE (E)	148	1	501840 413993
62	**BGS Recorded Mineral Sites** Site Name: Worlaby Brick Yard Location: Worlaby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132931 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Jurassic Geology: Kimmeridge Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13SE (S)	240	1	501745 413703
63	**BGS Recorded Mineral Sites** Site Name: Elsham Hill Quarry Location: Elsham, Brigg, Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 12626 Type: Opencast **Status: Ceased** Operator: Appleby-Frodingham Steel Co. Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Welton Chalk Formation Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A14NE (E)	757	1	502455 413955
64	**BGS Recorded Mineral Sites** Site Name: Bonby Wold Farm Location: Bonby, Barton-Upon-Humber, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 121641 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Welton Chalk Formation Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18NE (N)	875	1	501699 414844
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Man-Made Mining Cavities Easting: 501000 Northing: 414500 Distance: 855 Quadrant Reference: A17 Quadrant Reference: SE Bearing Ref: NW Cavity Type: Ironstone Mining-Details Unknown Commodity: Iron Solid Geology Detail: Carstone, Elsham Sandstone, Ancholme Clay Group, Redbourne Group Superficial Geology Detail: No Details	A17SE (NW)	855	6	501000 414500
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	1	501670 413944

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	158	1	501557 413813
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	132	1	501822 413997
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	192	1	501738 414154
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	28	1	501726 413952
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	149	1	501741 414108
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	159	1	501854 413983
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	216	1	501751 414175
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	247	1	501656 414215
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	1	501670 413944
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	149	1	501741 414108
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	158	1	501557 413813
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	202	1	501780 413762
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	67	1	501760 413978
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	149	1	501741 414108
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	154	1	501729 414117

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	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	501675 413949
	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	501675 413949

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
65	**Contemporary Trade Directory Entries** Name: Dickinson A J Location: 12, Main Street, Worlaby, Brigg, South Humberside, DN20 0NW Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	252	-	501435 413819
66	**Contemporary Trade Directory Entries** Name: Eco Oven Cleaning Location: 3, Low Road, Worlaby, Brigg, DN20 0LY Classification: Oven cleaning **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	377	-	501547 413571
67	**Points of Interest - Commercial Services** Name: Dart Transport Ltd Location: 15 Top Road, Worlaby, Brigg, DN20 0NL Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13SW (S)	250	7	501629 413681
68	**Points of Interest - Manufacturing and Production** Name: Poultry House Location: DN20 Category: Farming Class Code: Poultry Farming, Equipment and Supplies Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	922	7	500862 413471
69	**Points of Interest - Recreational and Environmental** Name: Play Area Location: DN20 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13SW (W)	182	7	501470 413934
70	**Points of Interest - Recreational and Environmental** Name: Play Area Location: DN20 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	543	7	501200 413646

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	**Nitrate Vulnerable Zones** Name: Ancholme From Bishopbridge To The Humber Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NW (NW)	0	3	501675 413949
72	**Nitrate Vulnerable Zones** Name: Lincolnshire Chalk Description: Groundwater Source: Environment Agency, Head Office	A13NE (E)	68	3	501761 413978
73	**Nitrate Vulnerable Zones** Name: Barrow Beck Nvz Description: Surface Water Source: Environment Agency, Head Office	A19SW (NE)	565	3	502038 414410

Data Currency

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	June 2020	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 22	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	July 2022	Quarterly
Local Authority Integrated Pollution Prevention And Control		
North Lincolnshire Council - Environmental Protection Team	March 2015	Variable
West Lindsey District Council - Environmental Health Department	November 2014	Variable
Local Authority Pollution Prevention and Controls		
North Lincolnshire Council - Environmental Protection Team	March 2015	Annual Rolling Update
West Lindsey District Council - Environmental Health Department	November 2014	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	June 2022	
Pollution Incidents to Controlled Waters		
Environment Agency - Anglian Region	September 1999	
Prosecutions Relating to Authorised Processes		
Environment Agency - Anglian Region	July 2015	
Prosecutions Relating to Controlled Waters		
Environment Agency - Anglian Region	March 2013	
Registered Radioactive Substances		
Environment Agency - Anglian Region	June 2016	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register		
Environment Agency - Anglian Region - Northern Area	July 2022	Quarterly
Water Abstractions		
Environment Agency - Anglian Region	July 2022	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	Annually
Superficial Aquifer Designations		
Environment Agency - Head Office	January 2018	Annually

Data Currency

Agency & Hydrological	Version	Update Cycle
Source Protection Zones Environment Agency - Head Office	July 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2022	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2022	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2022	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2022	Quarterly
Flood Defences Environment Agency - Head Office	August 2022	Quarterly
OS Water Network Lines Ordnance Survey	July 2022	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

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 2022	Quarterly
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	April 2022	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Northern Area	April 2022	Quarterly
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	Not Applicable
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	January 2022	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
Lincolnshire County Council - Highways and Planning Department	August 2010	Variable
West Lindsey District Council	February 2016	Variable
North Lincolnshire Council - Planning Department	October 2015	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	May 2022	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	March 2014	Annual Rolling Update
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	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually

Data Currency

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	July 2022	Quarterly
Fuel Station Entries Catalist Ltd - Experian	June 2022	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	September 2022	Quarterly
Points of Interest - Education and Health PointX	September 2022	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2022	Quarterly
Points of Interest - Public Infrastructure PointX	September 2022	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2022	Quarterly
Underground Electrical Cables National Grid	May 2021	Bi-Annually

Data Currency

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt		
North Lincolnshire Council	July 2022	Quarterly
West Lindsey District Council	July 2022	Quarterly
Areas of Unadopted Green Belt		
North Lincolnshire Council	July 2022	Quarterly
West Lindsey District Council	July 2022	Quarterly
Areas of Outstanding Natural Beauty		
Natural England	August 2022	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	February 2021	Bi-Annually
Marine Nature Reserves		
Natural England	July 2019	Bi-Annually
National Nature Reserves		
Natural England	January 2021	Bi-Annually
National Parks		
Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas		
Natural England	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	
Environment Agency - Head Office	June 2017	Bi-Annually
Ramsar Sites		
Natural England	August 2020	Bi-Annually
Sites of Special Scientific Interest		
Natural England	February 2021	Bi-Annually
Special Areas of Conservation		
Natural England	July 2020	Bi-Annually
Special Protection Areas		
Natural England	February 2021	Bi-Annually

Data Suppliers

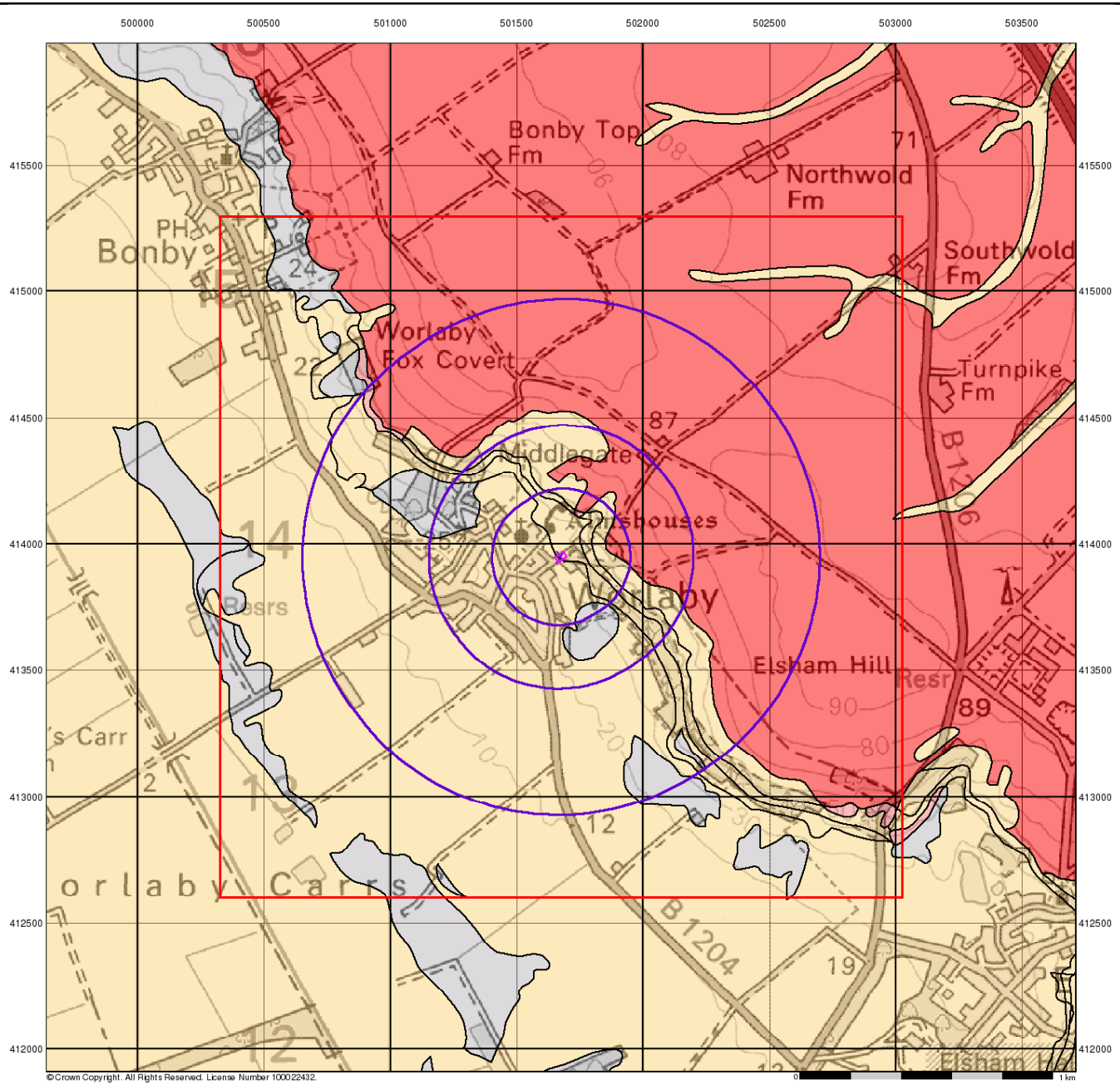
A selection of organisations who provide data within this report

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	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
4	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	**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
6	**Stantec UK Ltd** Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
7	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



Groundwater Vulnerability

General

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

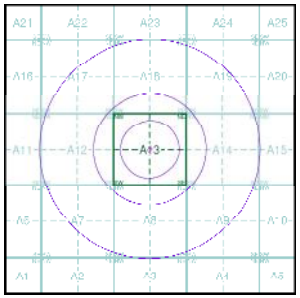
Agency and Hydrological

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:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

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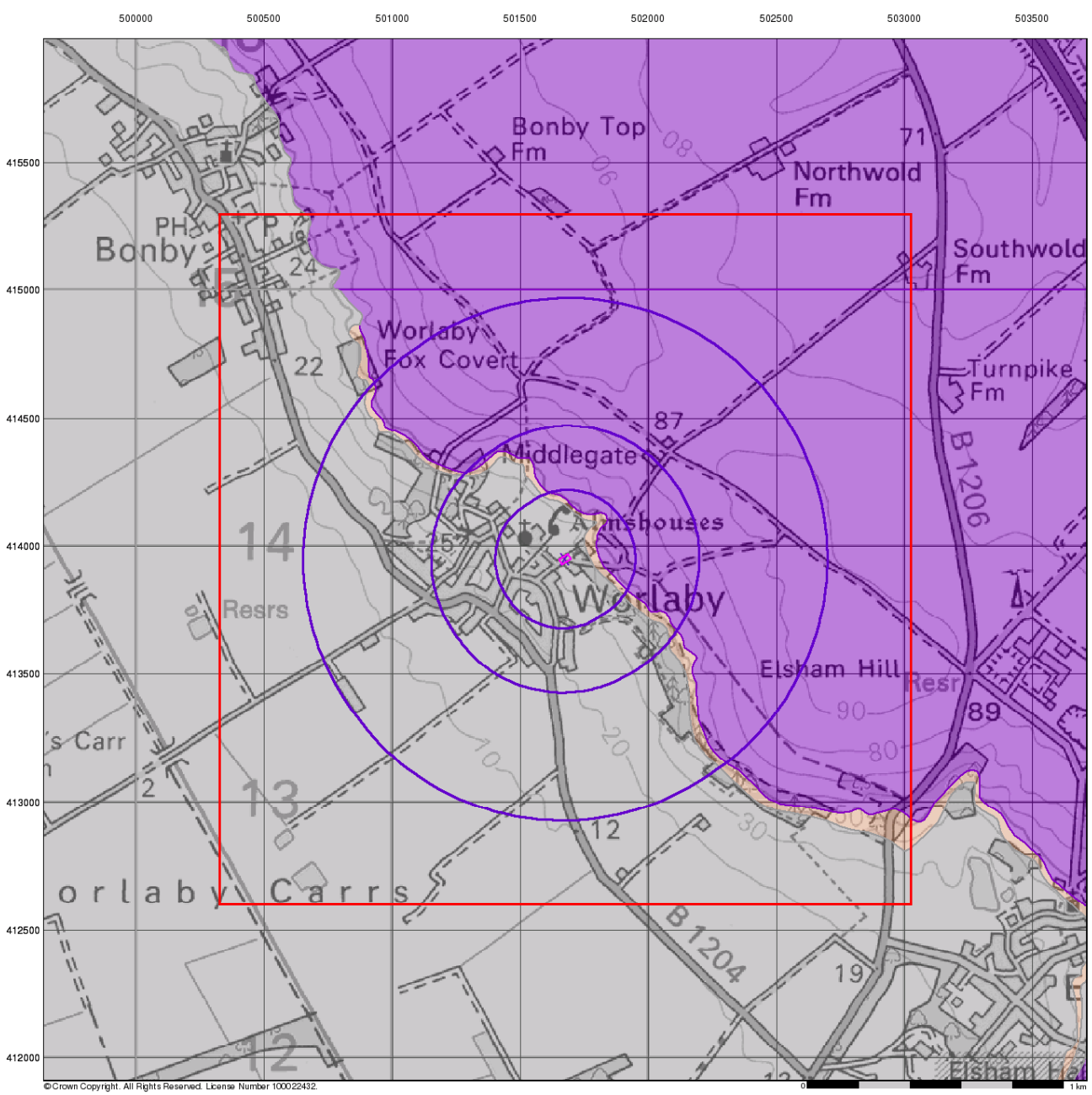
Web: www.envirocheck.co.uk



Bedrock Aquifer Designation

General

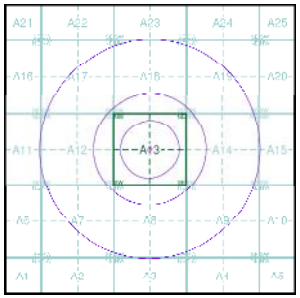
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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



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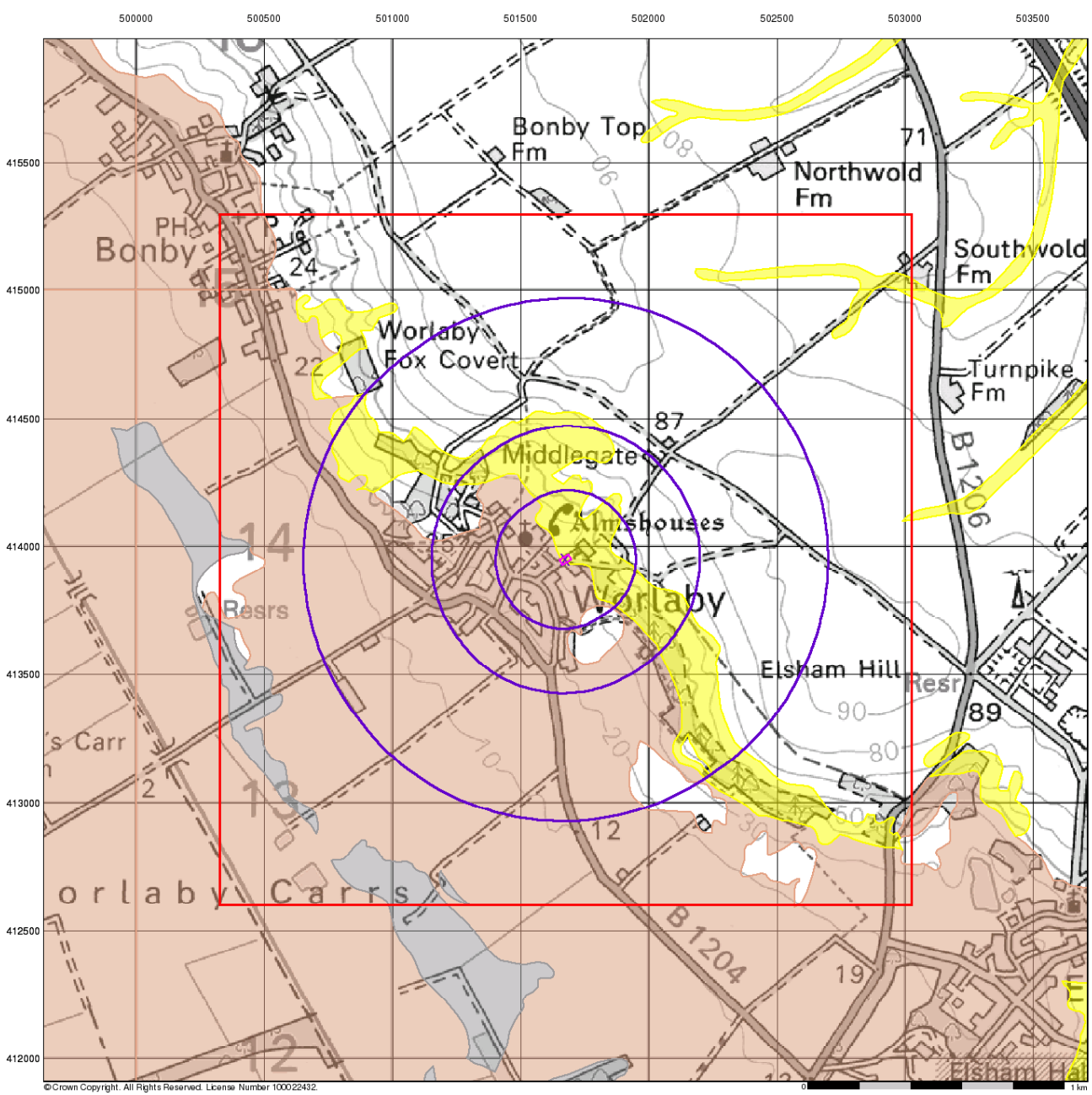


Superficial Aquifer Designation

General

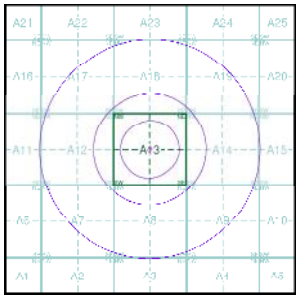
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

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



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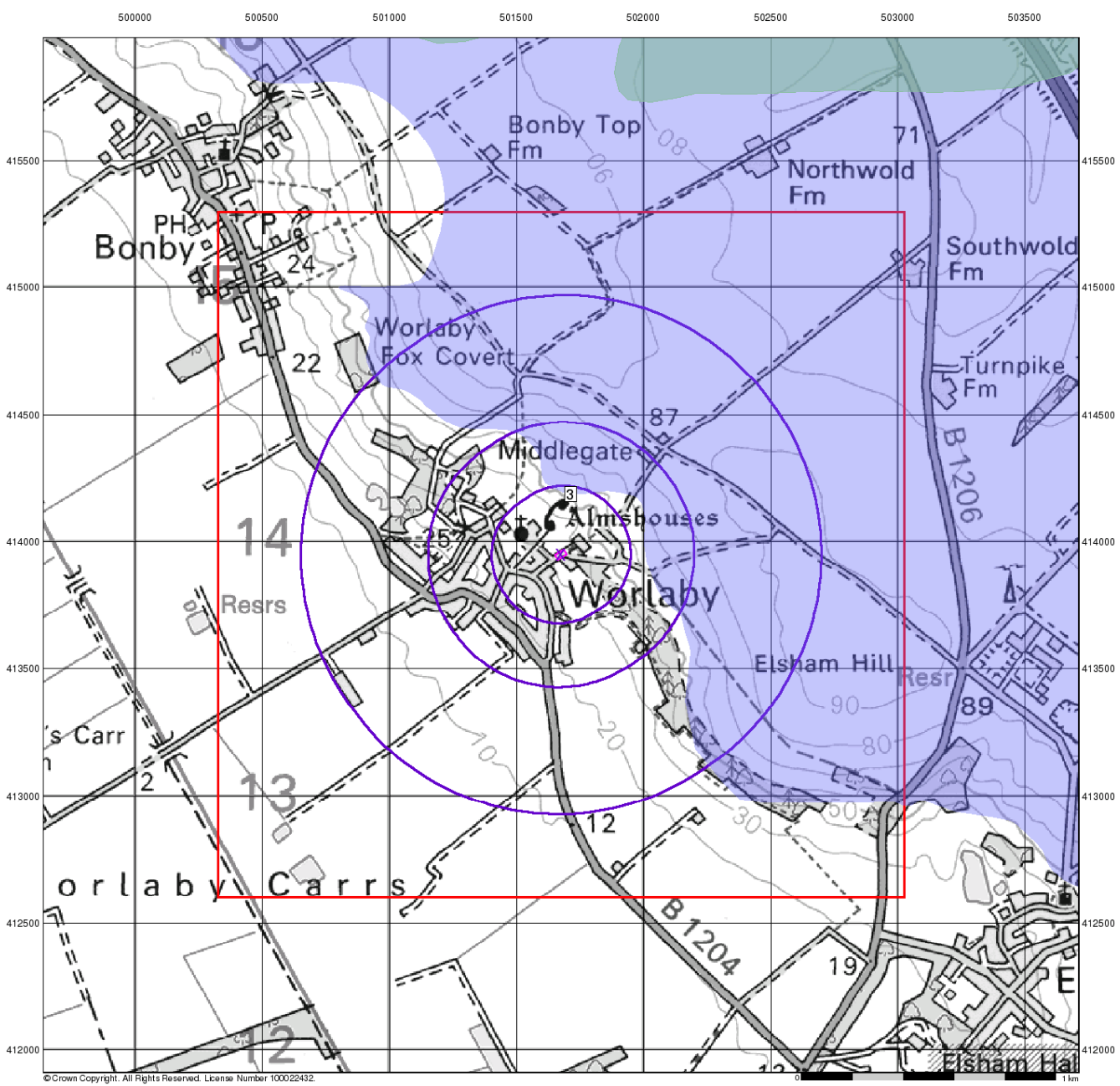


Source Protection Zones

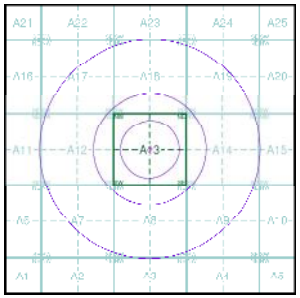
General

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



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Site Details

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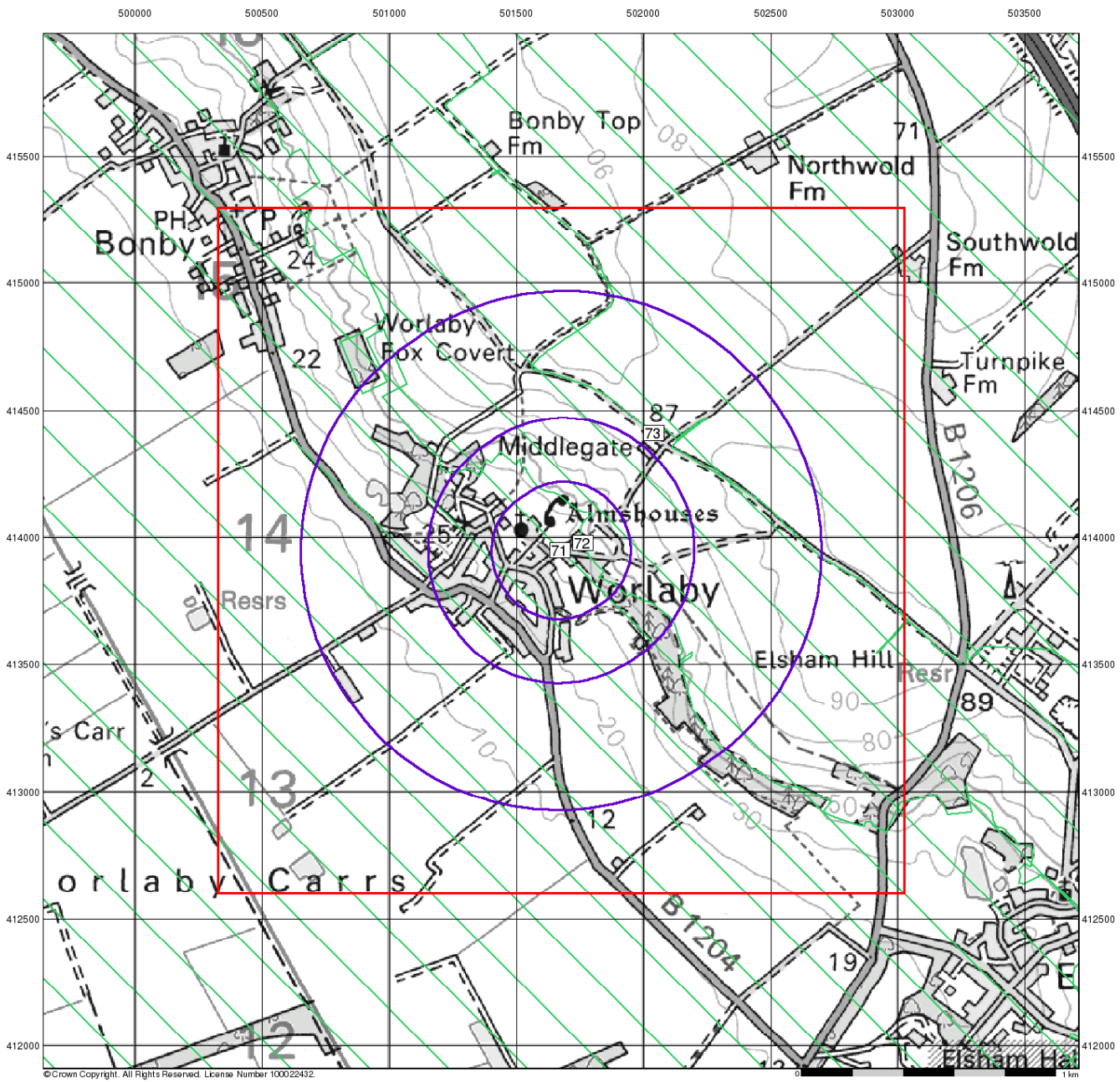


Sensitive Land Uses

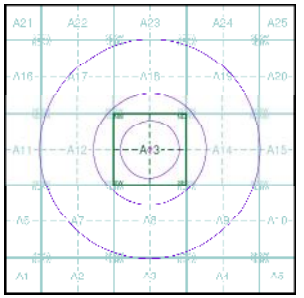
General

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

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of 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



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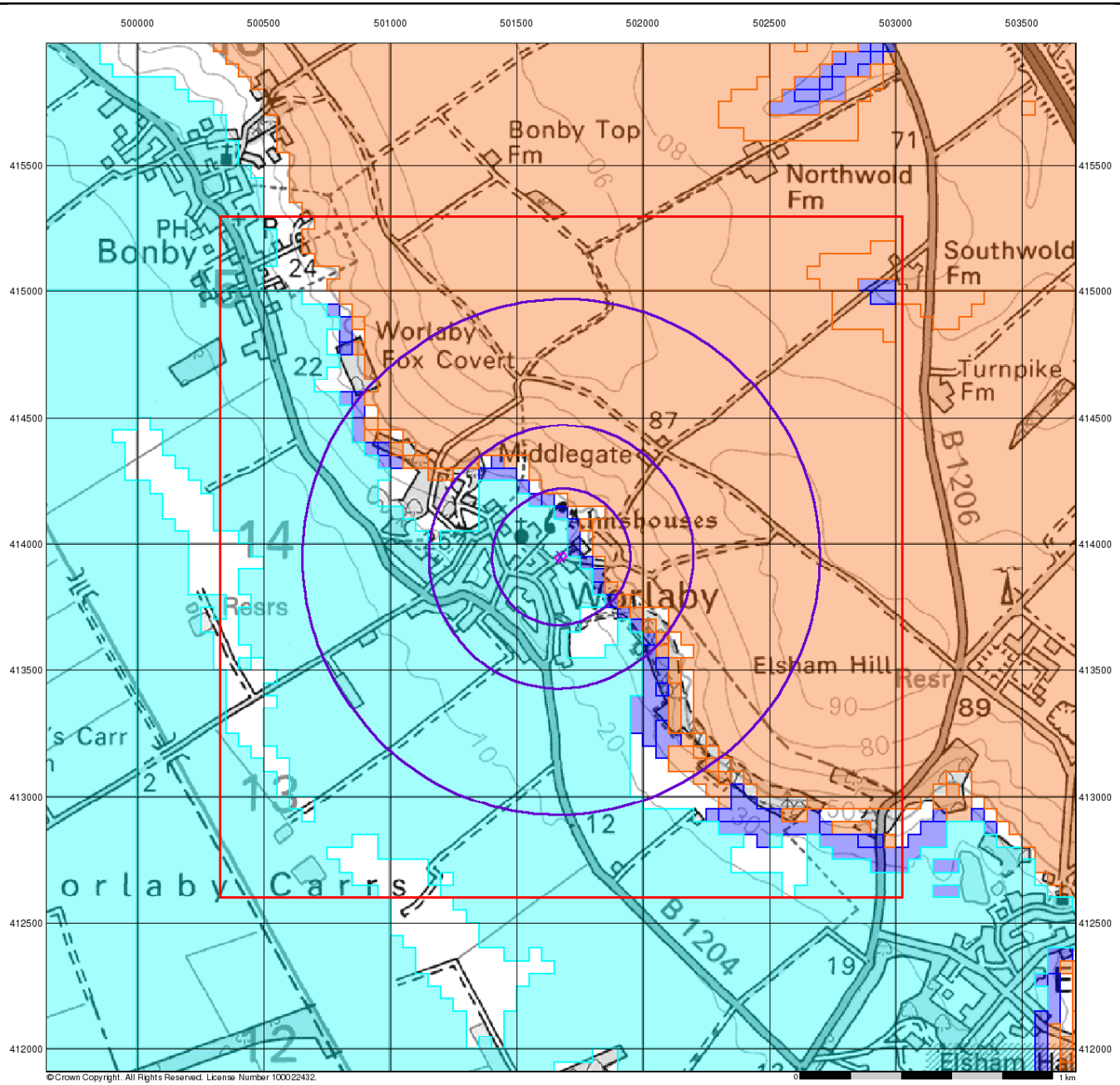


BGS Flood GFS Data

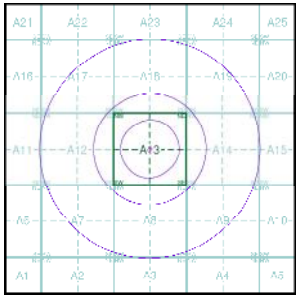
General

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



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Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Not Supplied - Quaternary

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	BREI	Breighton Sand Formation	Sand, Silty	Not Supplied - Devensian
	HEM	Hemingbrough Glaciolacustrine Formation	Clay, Silty	Not Supplied - Devensian
	SUTN	Sutton Sand Formation	Sand	Not Supplied - Devensian
	GLLD	Glaciolacustrine Deposits	Sand and Gravel	Not Supplied - Pleistocene
	GLLD	Glaciolacustrine Deposits	Clay and Silt	Not Supplied - Pleistocene
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary
	BSA	Blown Sand	Sand	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	FYCK	Ferriby Chalk Formation	Chalk	Not Supplied - Cenomanian
	WCK	Welton Chalk Formation	Chalk	Not Supplied - Cenomanian
	CA	Carstone Formation	Sandstone	Not Supplied - Albian
	HUCK	Hunstanton Formation	Chalk	Not Supplied - Albian
	KC	Kimmeridge Clay Formation	Mudstone	Not Supplied - Kimmeridgian
	ELS	Elsham Sandstone Member	Sandstone	Not Supplied - Kimmeridgian
	AMC	Ampthill Clay Formation	Mudstone	Not Supplied - Oxfordian
	WWB	West Walton Formation	Mudstone and Siltstone	Not Supplied - Oxfordian

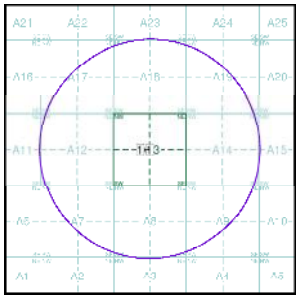
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	080
Map Name:	Kingston upon H
Map Date:	1983
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A



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Search Buffer (m):	1000

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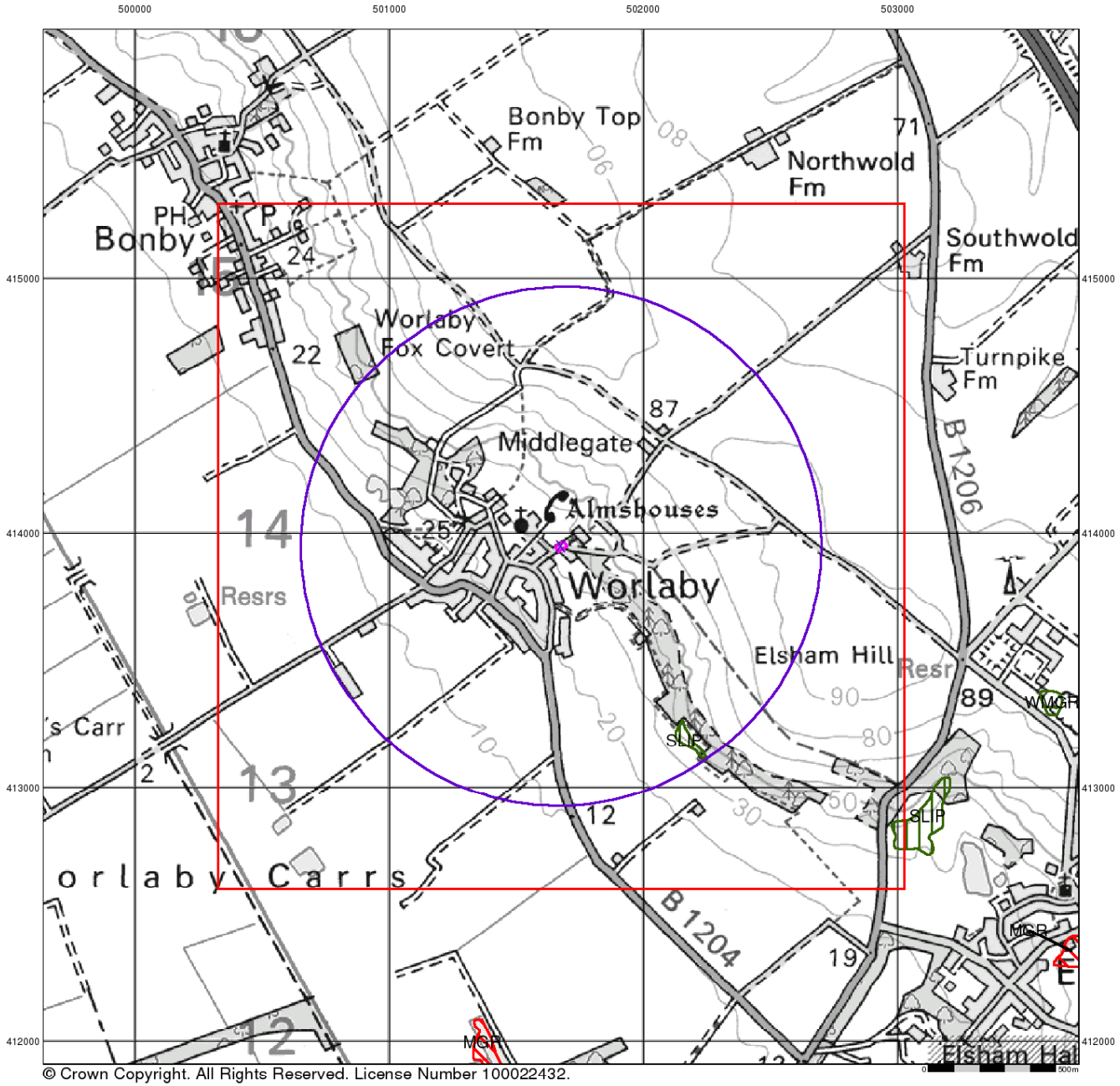
Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP



Artificial Ground and Landslip

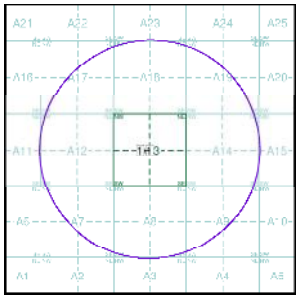
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



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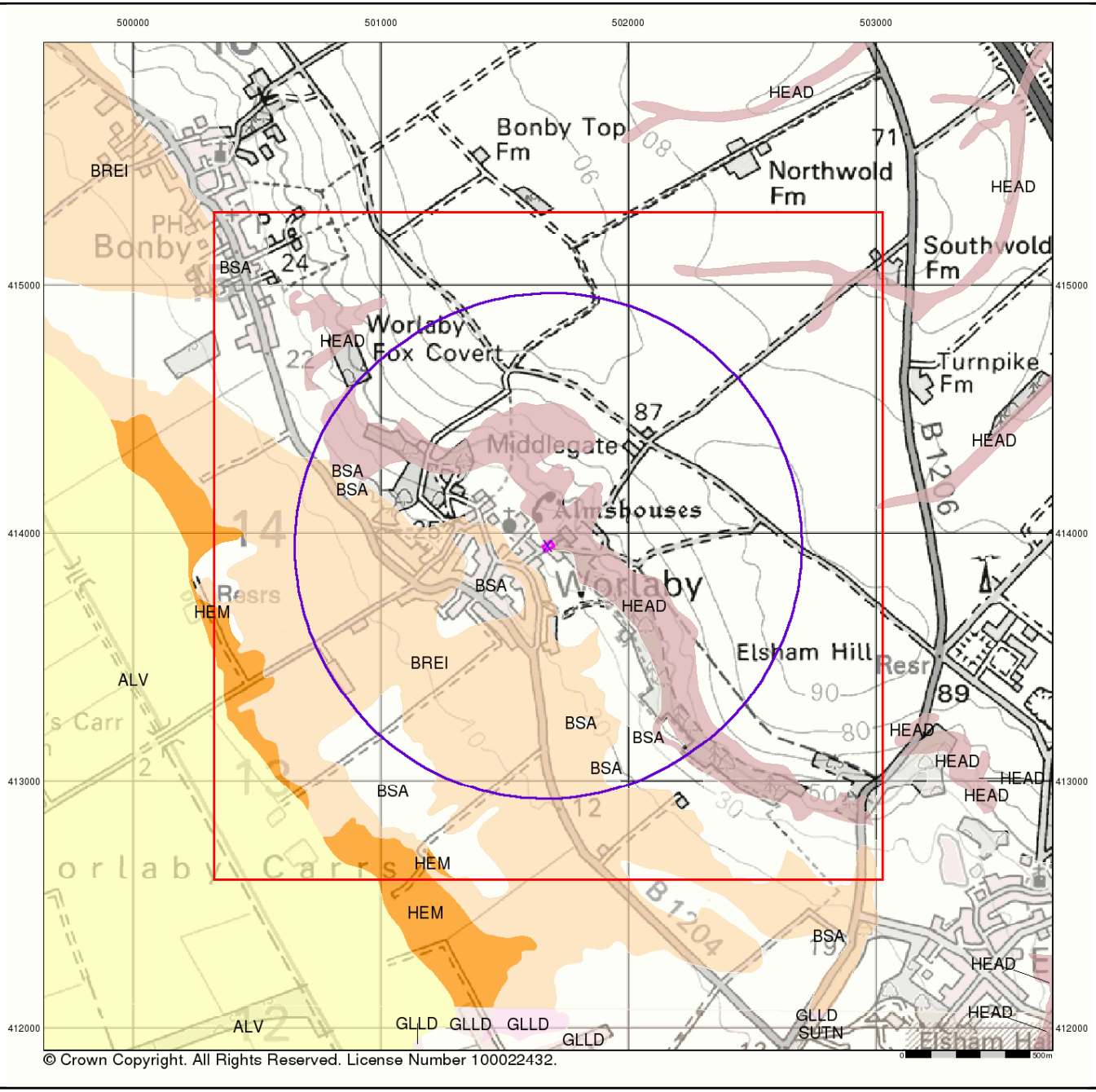


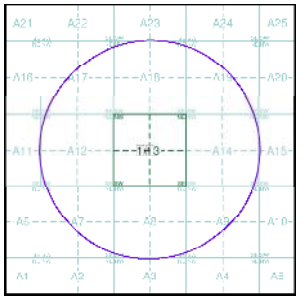
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



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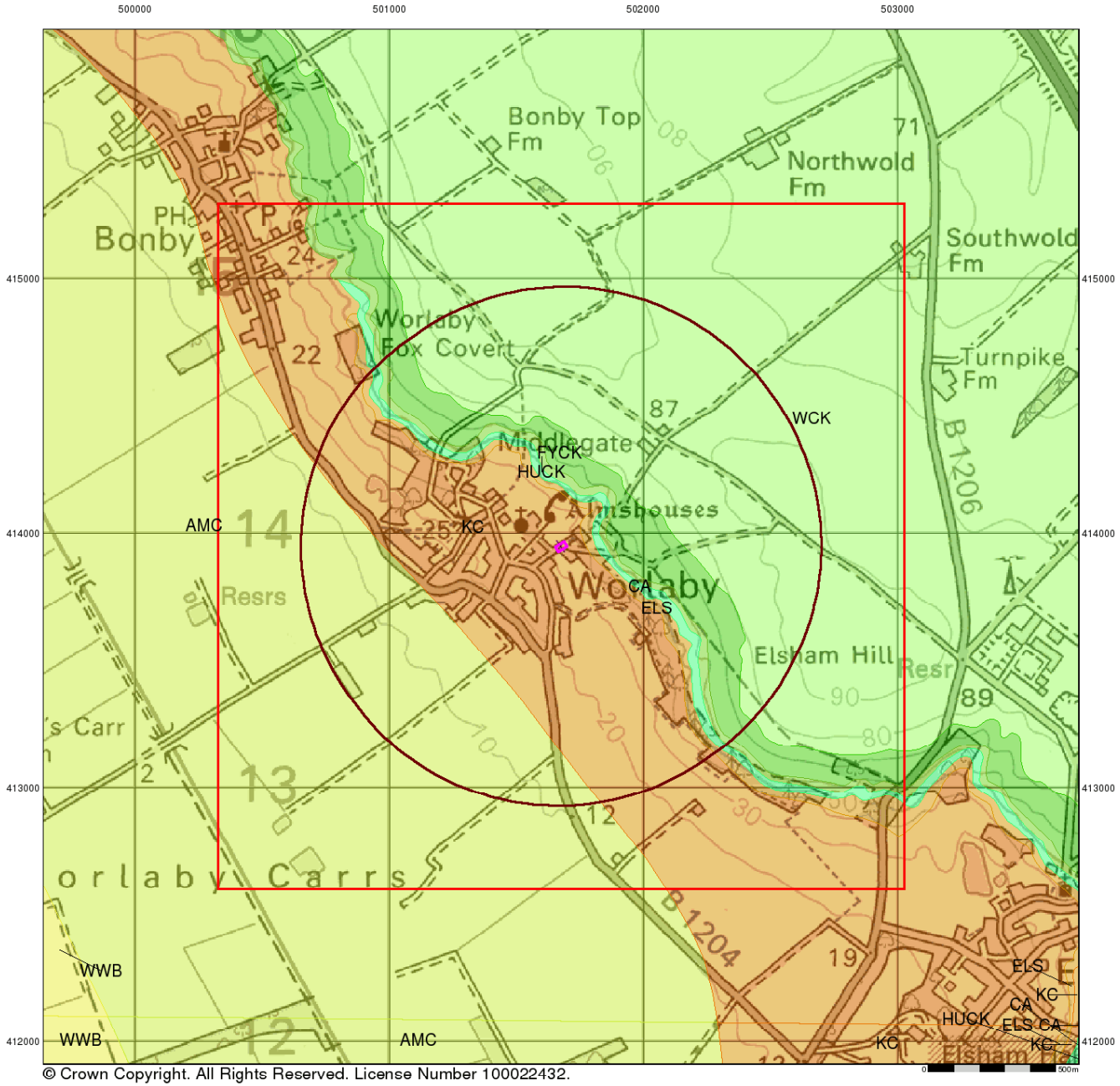


Bedrock and Faults

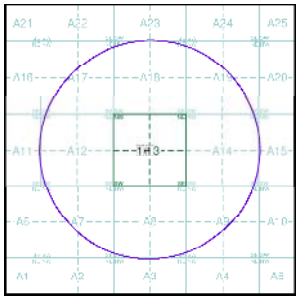
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



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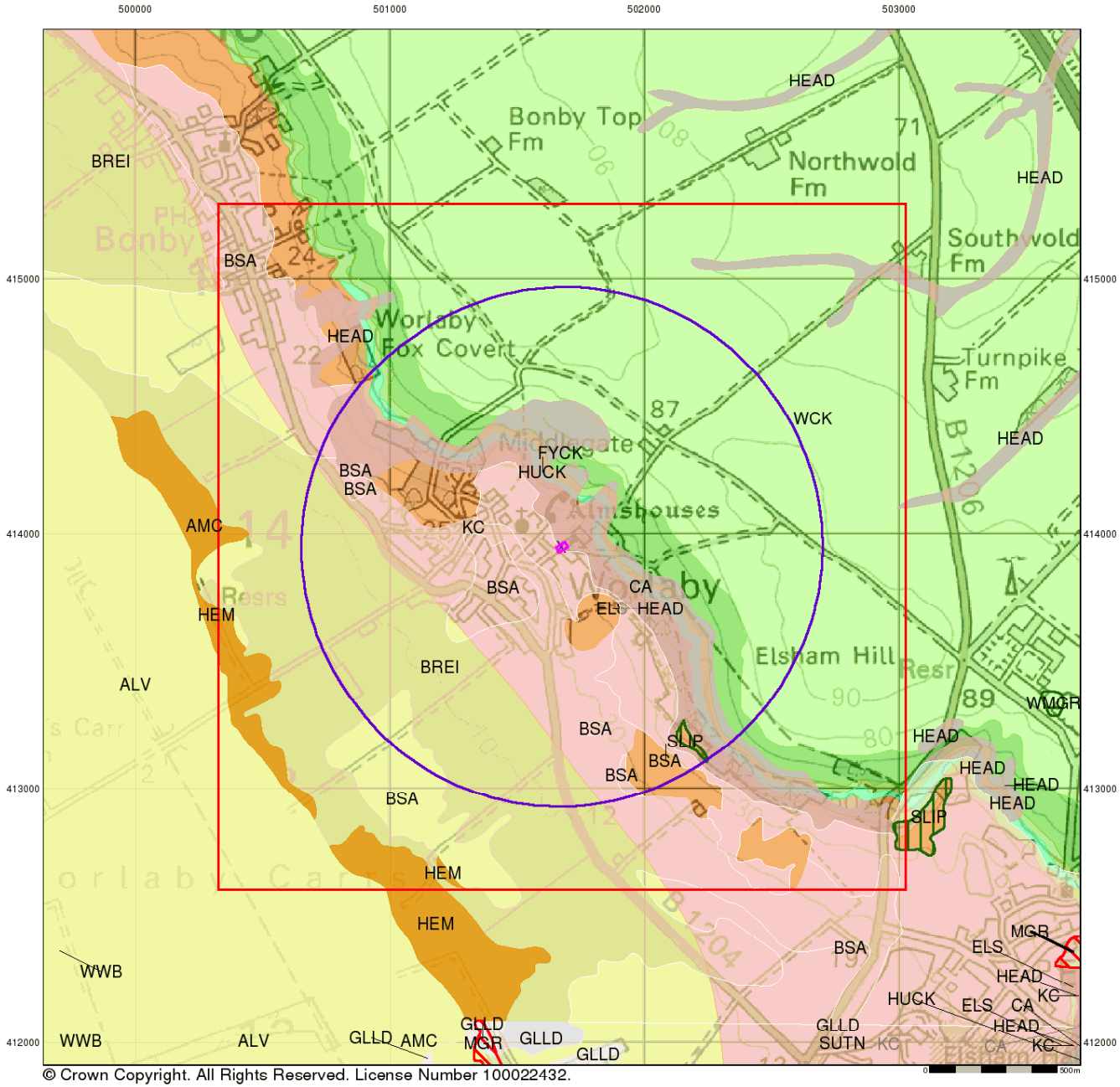


Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

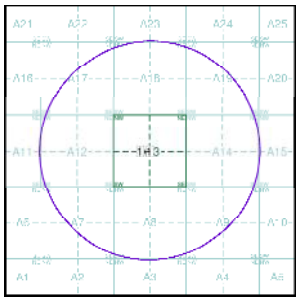
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



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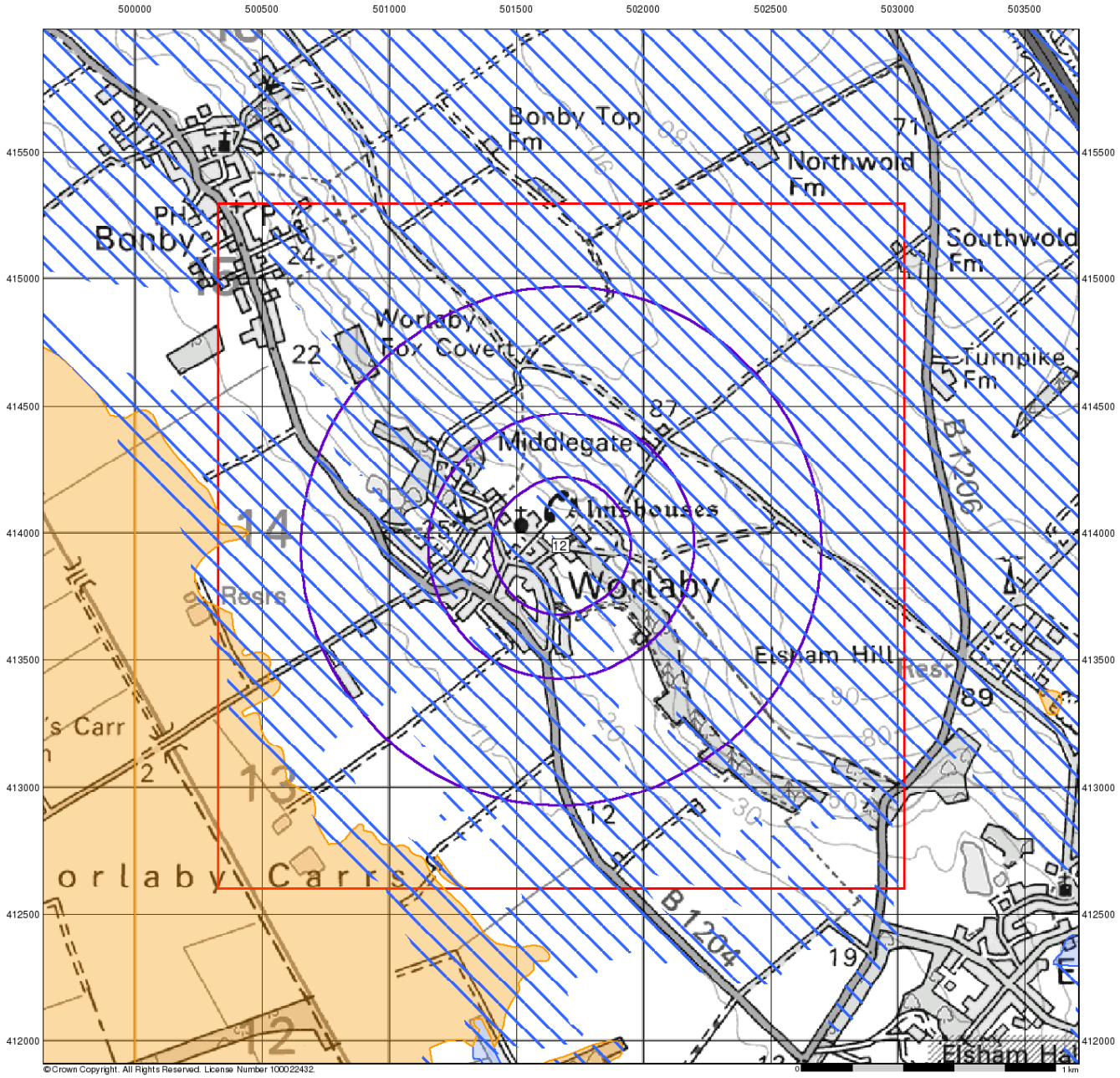


Ground Stability Data (1:50,000)

General

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

Potential for Compressible Ground Stability Hazards

High | Low
Moderate | Very Low

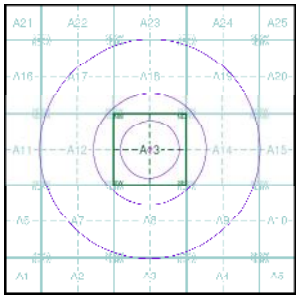
Potential for Collapsible Ground Stability Hazards

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



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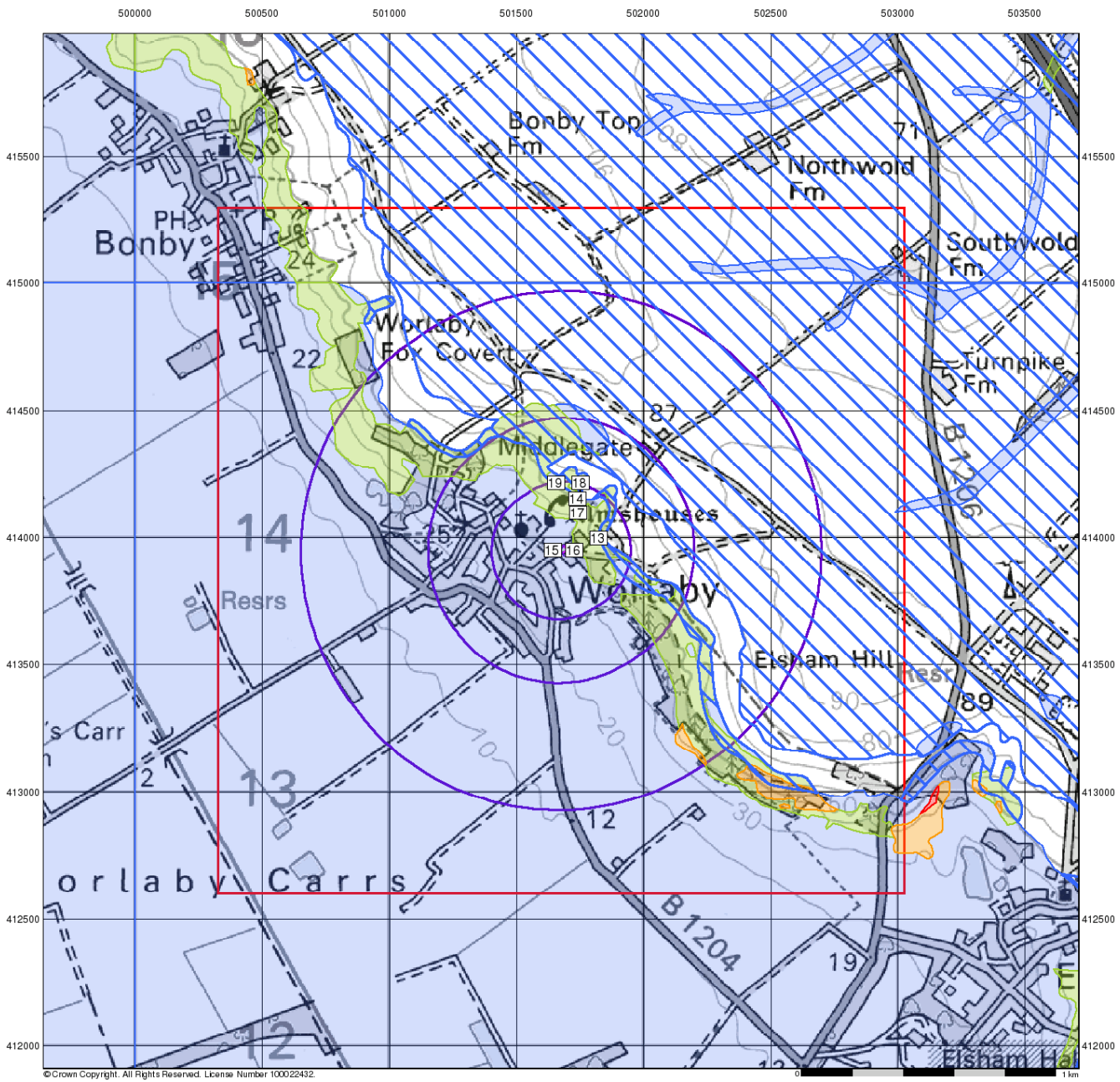


Ground Stability Data (1:50,000)

General

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

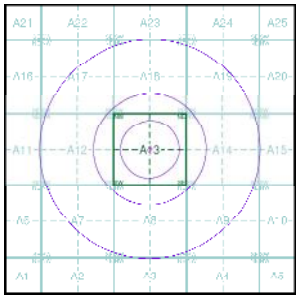
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A



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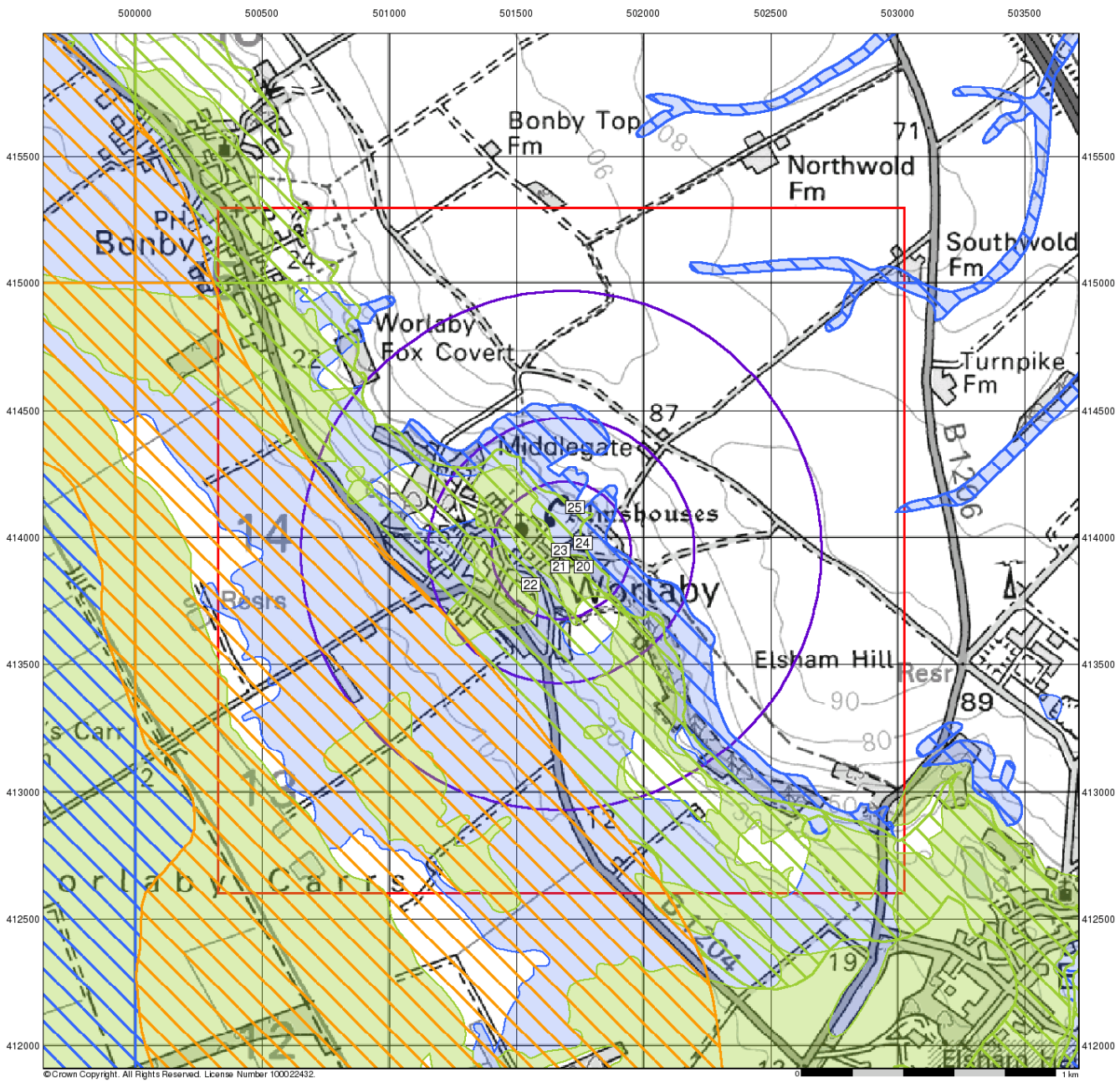


Ground Stability Data (1:50,000)

General

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

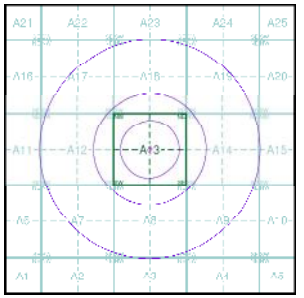
Potential for Running Sand Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A

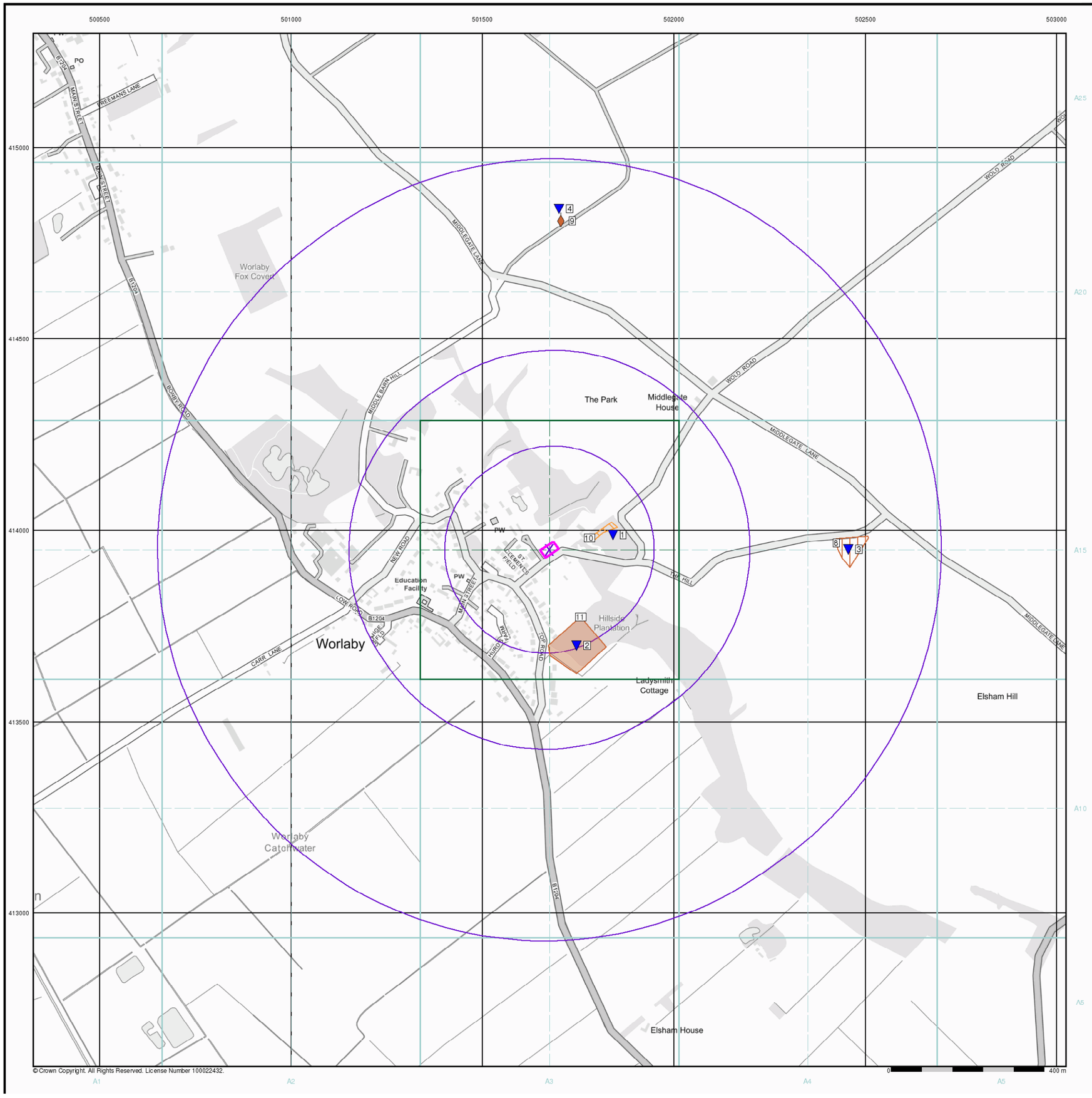


Order Details

Order Number:	301478401_1_1
Customer Ref:	RL-2022-09-21
National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP



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

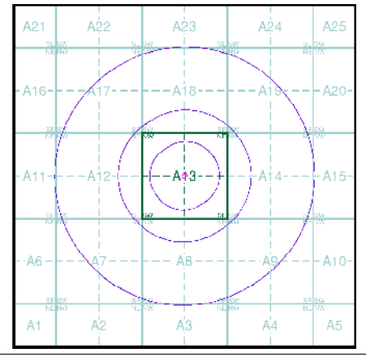
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)	●	- - -	■
Potentially Infilled Land (Water)	●	- - -	■
Former Marsh	✠		

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice A



Order Details

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National Grid Reference:	501670, 413950
Slice:	A
Site Area (Ha):	0.1
Search Buffer (m):	1000

Site Details

Land off the Hill, Worlaby, North Lincolnshire, DN20 0NP

Landmark INFORMATION GROUP

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

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
301478401_1_1

Customer Reference:
RL-2022-09-21

National Grid Reference:
501670, 413950

Slice:
A

Site Area (Ha):
0.1

Search Buffer (m):
1000

Site Details:

Land off the Hill
Worlaby
North Lincolnshire
DN20 0NP

Client Details:

MR M Gree
Humberside Materials Laboratory Ltd
Atherton Way
Brigg
North Lincolnshire
DN20 8AR

Prepared For:

Mrs K Fillingham

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					
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Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities	pg 1				1
Mining Instability			n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)	pg 2		3	n/a	n/a
Subterranean Features (100m)				n/a	n/a
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Disturbed Ground					
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Heap, unknown constituents					
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
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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	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 4	Yes	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	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: Worlaby Gravel Pit Location: Worlaby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132934 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Hunstanton Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A13NE (E)	148	1	501840 413993
2	**BGS Recorded Mineral Sites** Site Name: Worlaby Brick Yard Location: Worlaby, Brigg, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 132931 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Jurassic Geology: Kimmeridge Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13SE (S)	240	1	501745 413703
3	**BGS Recorded Mineral Sites** Site Name: Elsham Hill Quarry Location: Elsham, Brigg, Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 12626 Type: Opencast **Status: Ceased** Operator: Appleby-Frodingham Steel Co. Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Welton Chalk Formation Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A14NE (E)	757	1	502455 413955
4	**BGS Recorded Mineral Sites** Site Name: Bonby Wold Farm Location: Bonby, Barton-Upon-Humber, North Lincolnshire Source: British Geological Survey, National Geoscience Information Service Reference: 121641 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Welton Chalk Formation Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18NE (N)	875	1	501699 414844
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Man Made Mining Cavities Cavity Type: Ironstone Mining-Details Unknown Commodity: Iron Solid Geology Detail: Carstone, Elsham Sandstone, Ancholme Clay Group, Redbourne Group Superficial Geology Detail: No Details	A17SE (NW)	855	2	501000 414500
	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: 1973 Last Map Published Date: N/A	A13NW (NW)	4	-	501666 413962
6	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1973 Last Map Published Date: N/A	A13NW (NW)	64	-	501643 414018
7	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pit (Disused) First Map Published Date: 1973 Last Map Published Date: Not Applicable	A13NE (E)	71	-	501767 413971

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**General Quarrying** Use: Not Supplied Date of Mapping: 1890 - 1956	A14NE (E)	727	-	502425 413967
9	**General Quarrying** Use: Not Supplied Date of Mapping: 1890 - 1956	A18NE (N)	860	-	501704 414829
10	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1890 - 1956	A13NE (E)	86	-	501779 413979
11	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1981	A13SE (SE)	180	-	501756 413774

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.				
12	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	1	501670 413944
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	158	1	501557 413813
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
13	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	132	1	501822 413997
14	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	192	1	501738 414154
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
15	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
16	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	28	1	501726 413952
17	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	149	1	501741 414108
18	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	216	1	501751 414175
19	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	247	1	501656 414215
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	159	1	501854 413983
20	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949
21	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	1	501670 413944
22	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	158	1	501557 413813
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	149	1	501741 414108
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	202	1	501780 413762
23	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	501675 413949

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	67	1	501760 413978
25	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	154	1	501729 414117
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	149	1	501741 414108

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	TA0113	1973
Ordnance Survey Plan	TA0114	1973
Ordnance Survey Plan	TA0213	1973
Ordnance Survey Plan	TA0214	1973

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

1:10,560	Mapsheet	Published Date
Lincolnshire	011_SE	1891
Lincolnshire	012_SW	1891
Lincolnshire	011_SE	1908
Lincolnshire	012_SW	1908
Lincolnshire	011_SE	1946
Lincolnshire	012_SW	1950
Ordnance Survey Plan	TA01NW	1956
Ordnance Survey Plan	TA01SW	1956
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	TA01NW	1981
Ordnance Survey Plan	TA01SW	1981

Data Currency

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2022	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Man Made Mining Cavities Stantec UK Ltd	December 2021	Bi-Annually
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Natural Cavities Stantec UK Ltd	December 2021	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	June 2022	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	Annual Rolling Update

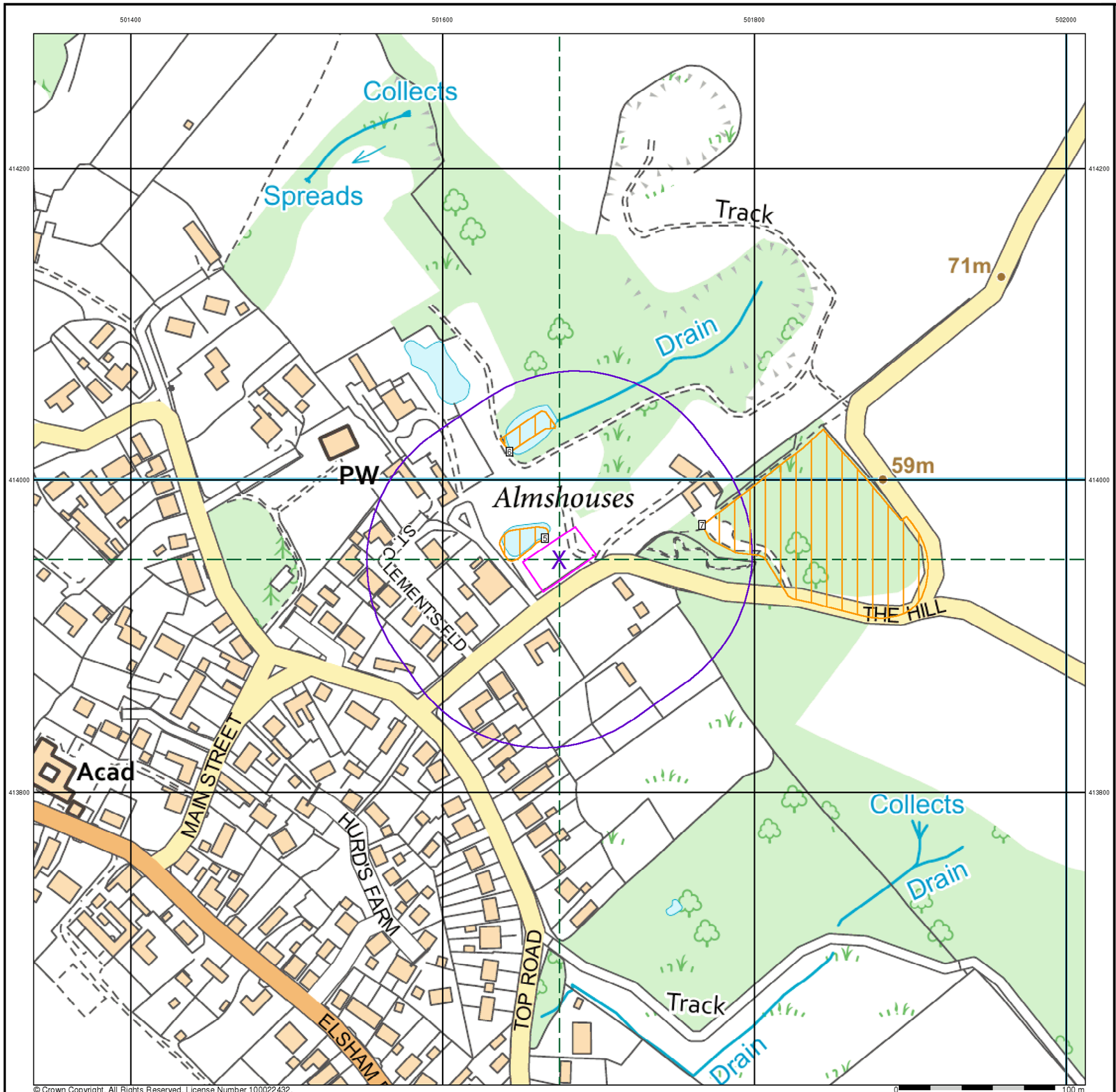
Data Suppliers

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
2	**Stantec UK Ltd** Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk



Historical Land Use Information (1:2,500)

General

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

Several of Type at Location

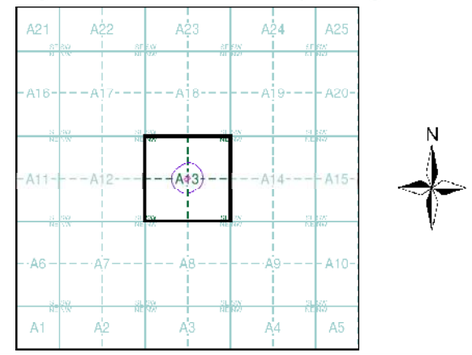
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	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:	301478401_1_1
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Plot Buffer (m):	100

Site Details

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