# Springwell Solar Farm

Environmental Statement Appendix 11.2: Preliminary Risk Assessment Part 1

Volume 3

EN010149/APP/6.3 November 2024 Springwell Energyfarm Ltd APFP Regulation 5(2)(a)
Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



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Figure 4 Site additional zoning plan Figure 5 Site-wide geology plans

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#### **EXECUTIVE SUMMARY**

Commissioning and
purpose of assessmen

RSK Environment Limited (RSK) was commissioned by Springwell Solar Farm Limited to carry out a Preliminary Risk Assessment on numerous parcels of agricultural land located around the villages of Brauncewell, Kirkby Green, Ashby de la Launde, Scopwick and Blankney in Lincolnshire. The overall aim of the project was to assess potential land contamination sources and geotechnical constraints to the proposed development.

#### **DESK-BASED ASSESSMENT**

## Site description and proposed development

The site currently comprises a large number of agricultural fields, interspersed with hedgerows, small woodland blocks and farm access tracks. It occupies an area of approximately 1,775 hectares and is being considered for development with a new solar energy farm, comprising ground mounted photovoltaic panels, a battery energy storage system, and infrastructure to connect the solar energy farm to the national grid.

The site is split into four development parcels denoted A1, A2, B and C (Figure 2). To support this assessment, the site has been subdivided further into 13No zones (A to M), with each zone split even further into a maximum of sixteen subzones (as shown on Figures 3 and 4).

### History of site and surrounding area

The site has largely remained undeveloped throughout its entire history, except for localised construction of minor structures, tracks, paths and access roads. Numerous stone pits, gravel pits and small quarries are shown to be distributed across the site area (notably RSK subzones B10, B14, D4, D12, E7, E10, F13, G4, I10).

The surrounding area is equally agricultural, although residential expansion occurred in surrounding villages. A sewage works was constructed within zone H4 (outside the redline site boundary) and a large RAF Base (RAF Digby) was constructed adjacent to the central part of the site to the west.

Two adjacent quarries (Brauncewell and Longwood) have been historically used as landfill sites and waste treatment facilities.

### Previous site investigation reports

There are no previous site investigation (SI) reports available.

#### Geology

Given its agricultural setting, the site is likely to be primarily covered by a nominal to limited thickness of topsoil, with any made ground anticipated to be localised to distinct previously developed areas, such as former small structures, roads and paths. There may also be made ground 'overspill' from directly adjacent features such as the RAF airfield and sewage works.

As the site is so large, the geological sequence is highly varied. Superficial deposits are localised in the north of the site where a covering of Tidal Flat deposits encroaches upon the northern part of zones L and M. In the central (RSK zone E) and southwestern (RSK zones A, B and D) parts of the site, thin bands of Head Deposits and Sleaford Sand and Gravel are present directly over the bedrock.

The bedrock outcrops in a sequence presenting itself from east (youngest) to west (oldest) and comprises Oxford Clay, Kellaways Formation (clays and mudstones), Cornbrash Formation (limestone), Blisworth Clay (clays and mudstones), Blisworth Limestone, Rutland Formation (mudstone with limestone beds) and the Lincolnshire Limestone Formation. An overall figure showing site-wide geology is presented as Figure 5.

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Hydrogeology and Hydrology	Through reference to historical BGS borehole records, depths to groundwater appear to vary across the site dependent upon the strata. Groundwater in some cases was recorded at shallow depths (2-3 mbgl) within weathered limestones and locally within superficial deposits. Groundwater was generally recorded within limestone units at depths between 12 and 30 mbgl.  The Lincolnshire Limestone and Blisworth Limestone are classed as a Principal aquifer, with other limestone units (Kellaways Formation, Cornbrash Formation, Rutland Formation) classed as Secondary aquifers. The Oxford Clay and Blisworth Clay are classed an Unproductive stratum.  The site is low lying and crossed by a number of drainage ditches and smaller un-named streams, which generally flow towards the east. Some discharge into lesser watercourses such as Springwell Brook and Scopwick Beck, ultimately discharging into the River Witham several kilometres to the east of the site.  The site largely falls outside of any Source Protection Zone, except for the very south of the site, which falls within a Zone 3 SPZ for a public water supply borehole located over 1km to the south. A localised SPZ1 (inner zone) is located within RSK Zone H and I of the site, associated with a private supply borehole. There are no outer catchment zones associated with this SPZ1, which is why it appears very localised.
Site reconnaissance findings	No obvious signs or sources of on-site contamination were identified during the site walkover. Considering the agricultural nature of the site and the sheer size of the site area, there may be small volumes of chemicals and other materials stored on site which were not directly observed during the reconnaissance survey.
Geotechnical constraints assessment	<ul> <li>The following potential geotechnical constraints were identified:</li> <li>Silt rich and shrinkable clay soils associated with all strata except granular superficial soils and unweathered limestone;</li> <li>Potential compressible and low bearing capacity soils associated with superficial Head Deposits and Tidal Flat Deposits;</li> <li>Potential running sand associated with saturated granular deposits;</li> <li>Karstic dissolution features within limestone strata;</li> <li>Potentially waterlogged ground and/or localised high groundwater table;</li> <li>Potential for geological faults within underlying bedrock geology;</li> <li>Infilled ponds, quarries and gravel pits as well as potential for unrecorded extraction pits, shafts and adits;</li> <li>Adverse ground chemistry associated with Oxford Clay, Blisworth Clay and Kellaway Formation; and</li> <li>Lateral variation in ground conditions.</li> </ul>
Unexploded Ordnance (UXO)	The site was considered to be at a potential risk of UXO due to the proximity of RAF Digby, which may have been targeted by enemy aircraft during World War II. In addition, the undeveloped and unoccupied nature of the solar site may have resulted in potential strikes going unrecorded.
Contamination assessment	The PRA has identified no obvious potential sources of on-site contamination, except for perhaps the use of pesticides and herbicides as a result of the site's agricultural history. The presence of made ground in some areas is likely although considered to be limited to minor previously developed areas such as small structures (i.e. wind pumps) and tracks, paths and access roads. There are a number of former stone/gravel pits as well as



ponds that have the potential to be infilled with onerous material, although it is likely that any infill comprised natural and/or inert soils.

Two off-site landfills at Brauncewell and Longwood Quarry were licensed to accept inert and non-biodegradable waste, though their proximity and currently active status means that risks may exist for affected zones, but only if the proposed development in these areas comprises manned structures or un-manned enclosed structures where gases could accumulate.

Identified potential pollutant linkages were identified, associated with:

- Potential impaction of shallow groundwater within SPZ1 via leaching of contaminated soils through the infiltration of rainwater – Zones H and I only;
- Migration of ground gases from adjacent landfill sites and accumulation in enclosed spaces resulting in asphyxiation and/or explosion – Zones A, B, I, L only and only if proposed development comprises manned and/or enclosed structures.

## Recommendations including issues for further assessment

It is recommended that intrusive investigation be carried out across the site to confirm both geology and groundwater conditions and assess for the presence of any localised made ground. Historical quarries, pits and ponds that have been infilled should also be targeted to ascertain the composition of the backfill.

Installation of ground gas monitoring standpipes along boundaries adjacent to off-site landfills (and subsequent monitoring) may be required to assess potential ground gas risks.

Intrusive investigation is also likely to be required to facilitate design of the proposed development and further investigate the identified potential geotechnical constraints.

It is understood that a ground investigation specification is currently being drafted.

The findings of the Unexploded Ordnance (UXO) Preliminary Risk Assessment were that a Detailed UXO Risk Assessment be carried out to assess the risks to the proposed development works.

The information given in this summary is necessarily incomplete and is provided for initial briefing purposes only. The summary must not be used as a substitute for the full text of the report.



#### 1 INTRODUCTION

#### 1.1 Commissioning

RSK Environment Limited (RSK) was commissioned by Springwell Solar Farm Limited ('the client') to carry out a Preliminary Risk Assessment (PRA) on numerous parcels of agricultural land located around the villages of Brauncewell, Kirkby Green, Ashby de la Launde, Scopwick and Blankney in Lincolnshire (hereafter referred to as 'the site'). The project was carried out to an agreed brief as set out in RSK's proposal (Ref. 1922604 T01 (00), dated 5<sup>th</sup> October 2022).

RSK's service constraints are shown in Appendix A.

The Site in question is being considered for development as a solar energy farm.

#### 1.2 Objectives

The objective of the work is:

- to identify any land contamination and/or geotechnical constraints to the proposed development and to support discharge of relevant planning conditions and relevant building control requirements; and
- to identify the need for any additional investigation or remediation works to demonstrate that the site is suitable for its proposed use.

#### 1.3 Scope of works

The scope of this assessment has been developed in accordance with relevant British Standards and authoritative technical guidance as referenced through the report. The assessment of the contamination status of the site is in line with the technical approach presented in Land Contamination Risk Management (LCRM) (Environment Agency, 2021) – which supersedes CLR11 Model Procedures for Land Contamination – and in general accordance with BS 10175: 2011 + A2 2017 (BSI, 2017). It is also compliant with relevant planning policy and guidance.

A brief summary of relevant legislation and policy relating to land contamination is given in Appendix B.

The scope of works for the desk-based assessment has included the following:

- review of the history of development on the site and surroundings;
- assessment of local geology, hydrogeology and hydrology;
- review of relevant information held by appropriate statutory authorities;
- review of any previous site investigation reports made available;
- completion of a site reconnaissance survey to assess the visual condition of the site;

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development of an initial conceptual site model (CSM);



- preliminary consideration of geotechnical constraints and hazards; and
- identification of the need for further action, e.g. intrusive investigations, if any.

#### 1.4 Existing reports

No existing reports relevant to the site assessment have been provided to RSK.

#### 1.5 Limitations

This report is subject to the RSK service constraints given in Appendix A and limitations that may be described through this document.

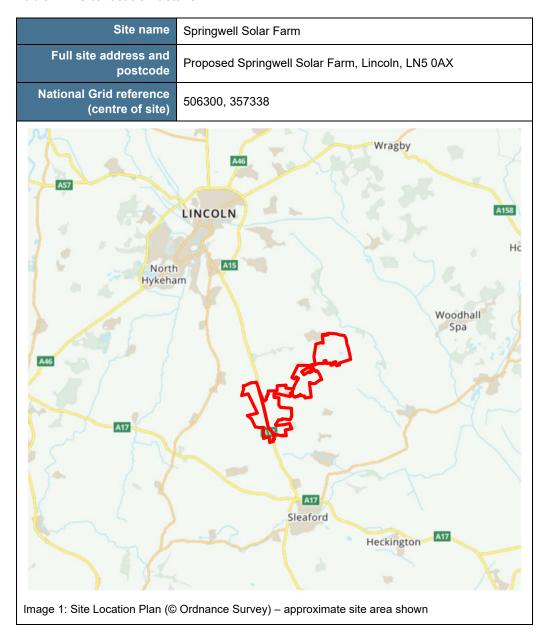


### 2 SITE DETAILS

#### 2.1 Site location

Site location details are presented in **Table 1** and a site location plan is provided on <u>Figure 1</u>.

Table 1 Site location details





#### 2.2 Site description

The site forms an irregular shape and covers an area of c. 1,775 hectares and extends across four distinct parcels (referred to as Parcels A1, A2, B and C). A site parcel plan is included as Figure 2.

The land within the site boundary predominantly consists of agricultural fields, interspersed with hedgerows, small woodland blocks and farm access tracks. The hedgerows within the site range between lengths of dense tall vegetation (shrub and tree species) and thin lines of vegetation with sporadic shrubs and trees present

Any buildings located within the outer site boundary are either residential and or storage facilities associated with the agricultural land use, however the majority of these are not actually included within the site redline boundary and subsequently are not considered as on-site features within this PRA.

The site area is variable in shape, and stretches from Blankney in the north, Ashby de la Launde in the centre and Brauncewell towards to south of the site. The site is accessible via many field entrances around the perimeter, with many of the fields possessing either public footpaths or vehicular tracks between them.

There is variation in the features immediately surrounding each of the distinct land parcels within the Site, as presented below:

- Parcel A1 / A2: Parcel A forms the southernmost part of the site and is intersected by the A15. Parcel A is characterised by relatively open agricultural landscape and lies adjacent to the Bloxham Wood Nature Reserve in the south-east corner of the Site;
- Parcel B: Parcel B is located in the centre of the site, providing connectivity between Parcel A and B. The parcel lies adjacent to RAF Digby and B1191 to the west, Ashby de la Launde to the south and relatively open agricultural fields to the east; and
- Parcel C: Parcel C is bounded by the settlements of Scopwick to the south, Kirkby
  Green to the southeast, Blankney in the north and the B1188 and a railway line to the
  west. The parcel is interspersed with small woodland plantations and hedgerows.

#### 2.3 Surrounding land uses

The site is located between Blankney and Brauncewell, within a predominantly agricultural setting, with some surrounding residential homes and an RAF base in close proximity. Immediate surrounding land uses are described in **Table 2**.

Table 2 Surrounding land uses

North	The site is located in a very rural area and therefore the surrounding land use is primarily agricultural. North of the site there is the village of Metheringham and moving further north there are more villages and numerous agricultural fields.
East	East of the site there are some reservoirs which are used for irrigation purposes, more small villages and primarily agricultural fields.
South	South of the site there is a slightly larger village named Ruskington, but the area is primarily agricultural fields.



West

West of the site runs the A15, and there is Longwood Quarry, RAF Digby and Brauncewell Quarry. Beyond these features there are more small villages and agricultural fields.

#### 2.4 Proposed Development

It is understood that the site is intended for redevelopment as a solar energy farm, and this will comprise ground mounted photovoltaic panels, a battery energy storage system, and infrastructure to connect the solar energy farm to the national grid.

Further details are outlined below:

- Ground mounted solar PV generating station with a gross electrical output capacity to the National Grid network in the region of 800 MW. The generating station will include solar PV modules and mounting structures;
- Balance of Solar System (BoSS) which comprises; inverters, transformers, switchgear, and the use of Collector Compounds;
- An onsite Project Substation compound, which will include; substation, switching and control equipment, office / control / welfare buildings, storage areas, and provisions for vehicular parking and material laydown;
- Battery Energy Storage System (BESS) compound(s) and associated inverters, transformers, switchgear and ancillary equipment and their containers, enclosures, monitoring systems, air conditioning, electrical cables and fire safety infrastructure;
- Works to facilitate vehicular access to the Site;
- Ancillary infrastructure works including; underground cables, boundary treatments, security equipment, lighting, landscaping, access tracks, earthworks, surface water management, and any other works identified as necessary to enable the development;
- Equipment facilitating electrical connection to the proposed National Grid Substation (to be located off-site);
- · New public footpaths and amenity improvements; and
- Areas for habitat management and biodiversity enhancement.

No details of the proposed ground levels have been provided therefore for the purposes of this report it has been assumed that the current levels will remain unchanged.



### 3 DESK-BASED ASSESSMENT

The overall site covers an area of approximately 1,775 hectares and therefore is too large to carry out a single site-wide assessment of historical use, geology, hydrogeology, hydrology and other environmental aspects. For ease of understanding, RSK has subdivided the site into thirteen (13No) smaller areas, consistent with the way in which the historical maps and environmental database reports have been provided from the supplier.

The zones have been categorised as zones A to M as shown below and on <u>Figures 3</u> and <u>4</u>.



Image 2: Site Zoning Plan (1:10,000 historical maps and environmental database reports)

The desktop study was designed generally to meet the objectives of a preliminary (phase 1) investigation, as defined by BS 10175:2011 + A2 2017 (BSI, 2017) and this assessment relates to LCRM Stage 1, Tier 1 preliminary risk assessment. The "vicinity" of the site for the purposes of this report is defined as locations situated within an approximate 250 m radius of the site, although certain sources and/ or sensitive targets further than 250 m may also have been considered.

The study aims principally to identify and assess the potential risks and liabilities associated with contamination of the ground, on and in the vicinity of the site. While this



includes consideration of current operations and housekeeping on the site, the report does not constitute a comprehensive environmental audit of the site, as covered under ISO 14001.

The 1:2,500 historical OS maps each cover an even smaller area and are individually referenced within the historical summary and site reconnaissance chapter to aid locating features within the larger zones. A plan showing the further subdivision of each of the 13No zones is shown below and on Figure 4.



Minor changes to the overall site redline boundary occurred after commissioning of the project and therefore the site boundaries shown on the individual historical maps may differ slightly from those boundaries at the time of reading. These discrepancies have been highlighted in the relevant section where they occur.

To aid digestion of information, site plans and historical maps for the entire site area have been constructed and these are presented in <u>Appendix C</u>.

Geological plans covering the entire site are presented in Figure 5.



### 4 DESK-BASED ASSESSMENT - ZONE A

#### 4.1 Site history

#### 4.1.1 Historical development record

The development history of Zone A and the surrounding area based upon assessment of historical plans and records is detailed in **Table 3**. The historical maps reviewed are shown within the environmental database report in <u>Appendix D1</u>.



Table 3 Summary of historical development - Zone A

Dates	Historical Land Use (on-site)	Area of site
1887	The majority of Zone A is occupied by fields, which are presumably used as farmland. There is a track/road running south-east to north-west across the zone (A16) which is lined with trees, and there is a plantation located at the southern boundary of the zone (A8).	
1906	There are no longer any trees running alongside the track, according to the historic map. No other significant changes.	BRAUNCE.
1907 to Present Day	No significant change	Character (Section 1)



Date from Date to		Historical Land Use (off-site)				
1887 1988		Zone A is primarily surrounded by fields. Approximately 800 m west and 400 m south (A8) of the zone there are some Stone Pits. There is a wooded area named Moor Wood 550 m west of the zone, and some more stone, gravel and clay pits >1 km west. Some structures associated with the village of Brauncewell are located approximately 1.2 km south west of the zone.				
1989	1904	Data Gap				
1905	1906	No significant change				
1907	1946	Data Gap				
1947	1950	There is now a built structure located approximately 900 m south of the zone. No other significant change.				
1951 1955		Data Gap				
1956		No significant change				
1957 1978		Data Gap				
1979 2000		The stone pit located approximately 400 m south of the zone (A8) is now labelled as a stone quarry and has increased in size.				
19	985	No significant change				
1986	1993	Data Gap				
1994	2000	No significant change				
2001 2021		Data Gap				
2022		The stone quarry is no longer labelled on the map. No other significant change.				
	Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □					
Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period pre-dating the first edition and between successive maps.						

There has been a minimal level of development on and around Zone A, and therefore it has not been subject to significant contaminative land use in this respect.

It is not clear whether the land functioned as arable farmland, however if this is the case then there may be some level of contamination associated with agricultural industry and the use of pesticides, herbicides and fertilisers.

#### 4.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D1</u>) are summarised below in **Table 4**.



Table 4 Summary of environmental permits, landfills and incidents – Zone A

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	3	Brauncewell Quarries, Ref YP3238LE, waste landfilling; any other landfill to which the 2002 landfill regulations apply. 555 m SE: Brauncewell Quarries Ltd, Ref PPC/2004/7, 01/01/2005, PG3/8 Quarry processes including roadstone plants and the size reduction of bricks tiles and concrete. 581 m SE: Brauncewell Quarries Ltd, Ref IPPC/2004/7, Quarry processes including roadstone plants and the size reduction of bricks tiles and concrete.
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details	
Discharge consents	0	O	0	648 m NW: R T Mountain Farms, Arable Farming, Temple Farm, Ref. Gwnlf40489, effective 1st April 1999, trade discharge onto land, receiving water - groundwater. 763 m S: AG Reserves Ltd, Arable Farming, Manor Farm, Ref Gwnlf40713, 01/04/1999, trade discharge (agricultural and surface), onto land, receiving water - groundwater. 815 m S: Hallsworth (Farmland Trust) Ltd, domestic property, Ref Pr3lfu5511, 14/12/2011, sewage discharges (final/treated effluent), land/soakaway.	
Registered radioactive substances	0	0	0	N/A	
Landfill and waste					
Active landfills	0	0	0	N/A	
Historic / closed landfills	0	0	0	N/A	



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Other waste management licences	0	1	1	8 m SE: Brauncewell Quarry, license no. 73008, landfills taking non- biodegradable waste (not construction), issued 12 <sup>th</sup> April 2001. 468 m SE: Brauncewell Quarries Ltd, Ref 101884, inert and excavation waste TS and treatment, 30/01/2012.
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A
Hazardous substances/ industri	al land use	s		
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A
Contaminated land Part 2A register entries and notices	0	0	0	N/A
Contemporary trade directory entries	0	0	1	555 m SE: Brauncewell Quarries Ltd, Active.
Fuel station entries	0	0	0	N/A

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

The environmental database report has identified a licensed waste management facility directly adjacent to the southern boundary and southwestern corner of Zone A (Brauncewell Quarry). The report lists a number of different licenses, presumably



associated with different parts or cells of the landfill. The landfill appears to have been licensed to accept non-biodegradable wastes, with these licenses having expired by 2007. Part of the landfill appears to currently be active and licensed to accept "inert and excavation waste TS + treatment".

#### 4.3 Site geology

#### 4.3.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of Zone A to be characterised by the succession recorded in **Table 5**. There are no publicly available BGS historical boreholes located within the zone.

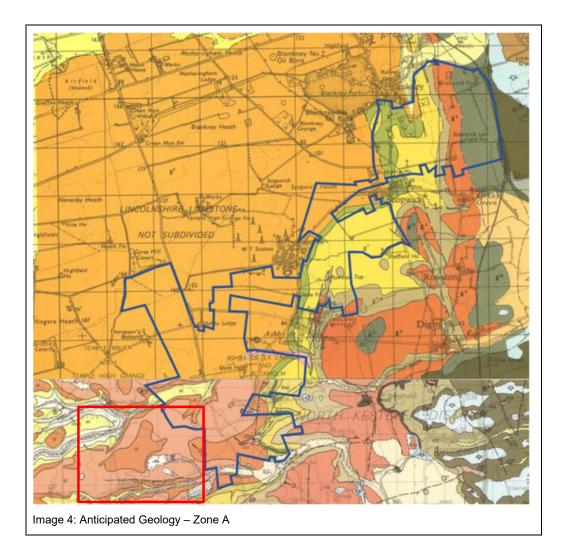
Table 5 Site geology - Zone A

Strata	Description	Estimated thickness	Permeability	Map Legend	
Head (only in the north of the zone)	Poorly sorted and poorly stratified, angular rock debris and/or clayey hillwash and soil creep.	Variable	Variable	Œ	
Upper Lincolnshire Limestone (widespread across the whole site)	Limestone, mainly coarse grained ooidal grainstones (ol), with subsidiary limestones of other types (gl) including fine to medium grained grainstone, recrystallized limestone and possible reef knolls	Up to 15 m	Permeable		
Lower Lincolnshire Limestone (only potentially intruding in the north-east of the site)	Limestones, dominated by low-energy calcilutite and and peloidal wackestone (wl) and packstone. With subsidiary carbonate mudstone (ml).	Up to 20 m	Permeable	mlwl	
Relevant information sources: BGS Geoindex ⊠ BGS borehole logs □ Previous SI reports □					

With reference to the historical data the majority of Zone A has never been developed, and therefore Made Ground would not be anticipated.

The zone would be expected to be directly underlain by a limited thickness of topsoil.





#### 4.3.2 Radon

The environmental database report indicates that Zone A is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 5-10% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the zone is considered for future residential development, further assessment will be required, in



line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

#### 4.4 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500 m of the zone.

#### 4.4.1 Areas of other (rock or mineral) mining

Zone A lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member. While there has been no quarrying within the zone itself, there are stone pits 800 m west and 400 m south of the zone, with more pits being located >1 km away. The quarrying site approximately 400 m south is now the Brauncewell Quarry and appears to currently still be operating.

#### 4.5 Hydrogeology

A summary of the hydrogeological setting of Zone A, with respect to the anticipated geological sequence, is presented below in **Table 6**.

Table 6 Summary of hydrogeological setting - Zone A

Condition	Description
Aquifer characteristics	Zone A is underlain by a principal aquifer relating to the Upper Lincolnshire Limestone Member, and a secondary undifferentiated aquifer relating to the Head Deposits (only in the north of the zone).
Depth to groundwater and flow	The anticipated depth to the groundwater table is in the order of 20 m below ground level estimated from BGS logs advanced through the limestone up to 1 km from the zone. Shallow groundwater in the zone area is anticipated to flow in a south easterly direction, in line with local topography.
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain to ground.
Licensed groundwater abstractions	The environmental database report indicates that there are no current licensed groundwater abstractions located within 1 km of the zone.
Source protection zones	Information available in the Envirocheck report and MAGIC website indicates that the south of the zone lies within Zone 3 of the groundwater Source Protection Zone (SPZ). The public supply borehole to which this SPZ relates is not within the boundary of the maps.

#### 4.6 Hydrology

A summary of the hydrology within the zone area is summarised in **Table 7**.



Table 7 Summary of hydrology in site area – Zone A

Condition	Description
Surface watercourses/ features	There are no ponds, streams or drainage ditches on or directly adjacent to the zone. The nearest identified surface watercourses to the zone are a number of unnamed streams and drains located approximately 2 km to the east.
Surface water abstractions	There are no surface water abstractions identified by the environmental database, within a 1 km radius of the zone.
Site drainage	Surface drainage from the zone appears to be discharged directly to the ground.
Preliminary flood risk assessment	The indicative floodplain map for the area, shows that the zone does not lie within any designated floodplain.

#### 4.7 Sensitive land uses

**Table 8** provides a summary of any environmentally sensitive areas identified within 250 m of the zone based on the environmental database report.

Table 8 Environmentally sensitive areas – Zone A

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	No	N/A	N/A
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	No	N/A	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	No	N/A	N/A
Nearest high sensitivity development, e.g. residential	No	N/A	N/A



### 5 DESK-BASED ASSESSMENT – ZONE B

#### 5.1 Site history

#### 5.1.1 Historical development record

The development history of Zone B and the surrounding area based upon assessment of historical plans and records is detailed in **Table 9**. The historical maps reviewed are shown within the environmental database report in <u>Appendix D2</u>.





Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	Zone B is primarily fields, which are presumably used as agricultural land, as they are in the present day. There is Long Plantation in the north (B14, B15) and Warren Pit Plantation in the centre of the site (B10), which is also labelled as an Old Stone Pit. There is a Stone Pit on the eastern boundary of the zone (B14). The site encroaches onto Ten Acre Plantation on the north-eastern boundary. There are guideposts located in the west of the zone (B13) and there is one road/track running east to west across the centre of the zone and another road located in the west of the zone running north to south, both of which can be seen in zone B13.	
1889	1904	Data Gap	
1905	1906	No significant change	R L L
1907	1949	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site	
1950		Warren Pit Plantation (B10) has increased in size, and the road running east to west is now labelled as the B1191. No other significant changes.		
1951	1955	Data Gap		
1956		No significant change	ELL	
1957	1978	Data Gap		
1979		Pylons have been erected across the western portion of the zone (B10, B13). The stone pit adjacent to Long Plantation in zone B14 is no longer present.		
1980	1984	Data Gap		
1985		No significant change		
1986	1993	Data Gap		
19	ange			



Date from	Date to	Historical Land Use (on-site)	Area of site		
1995	1999	Data Gap			
20	2000 No significant change		nge		
2001	2021	Data Gap			
The road located in the west of the zone, running north to south, is now labell the A15.		g north to south, is now labelled as			

Date	Date	Historical Land Use (off-site)			
from	to	Thistorical Early Use (Un-Site)			
1887	1888	There is an Old Stone Pit located immediately adjacent to the northern boundary of the zone (B14). There is an estate called Manor House (part of the village of Brauncewell) approximately 100 m south of the south-western boundary of the zone (B11), and this includes a rectory called All Saints Church and a small pond. Brauncewell Cottages are located immediately south of the southern boundary of the zone split between B5 and B6, and there is also a school and a stone pit here. There are multiple plantations around the zone, most notably Ten Acre Plantation (B15 and B16), Nine Acre Plantation (B16) and Spruce Covert immediately northeast of the zone (B16). The village of Dunsby is located 750 m south of the zone, Dale Farm is located 1 km south-east of the zone, Hill Farm is located 500 m east with some associated cottages and West Pastures is located 800 m southwest of the zone with an associated Old Stone Pit.			
1889	1904	Data Gap			
1905	1906	There is a well located at the Manor House estate (B11). No other significant change.			
1907	1949	Data Gap			
19	50	A small structure has been built north of All Saints Church and just south of the zone boundary (B11). No other significant change.			
1951	1955	Data Gap			
19	56	A windpump has been erected at the Manor House estate (B11). No other significant change.			
1957	1978	Data Gap			
19	79	Pylons have been constructed running south-east to north-west across the centre of the zone.			
1980	1984	Data Gap			
1985		Brauncewell cottages no longer appear to be present in zones B5 and B6. The area around Manor House is now labelled as the Medieval Village of Brauncewell and seems to have expanded somewhat. There are a lot of drains surrounding the site to the east and southeast and West Pastures is no longer present.			
1986	1993	Data Gap			
19	94	No significant change			
1995	1999	Data Gap			
20	000	No significant change			



Date from	Date to	Historical Land Use (off-site)			
2001	2021	Data Gap			
20	There is now a pond located immediately south-west of the zone (B5).				
	Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □				
Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.					

With the exception of the roads, there has been a minimal level of development on the zone, and therefore it has not been subject to significant contaminative land use in this respect.

It is presumed that the land functioned as arable farmland, and if this is the case then there may be some level of contamination associated with agricultural industry and the use of pesticides, herbicides and fertilisers.

The stone quarries identified in zones B10 and B14 are presumed to have been infilled with inert and/or natural material, however there lies the potential for more onerous material to have been used.

#### 5.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D2</u>) are summarised below in **Table 10**.

Table 10 Summary of environmental permits, landfills and incidents - Zone B

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A
Enforcement and prohibition notices	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	0	N/A
Discharge consents	0	0	1	922 m S: Anglian Water Services Limited, Red Annnf10370, Issued 19/07/1995, sewage discharges – pumping station – water company – receiving water – Trib Ruskington Beck.
Registered radioactive substances	0	0	0	N/A
Landfill and waste				
Active landfills	0	0	0	N/A
Historic / closed landfills	0	0	0	N/A
Other waste management licences	0	0	1	9 m W: Brauncewell Quarry, license number 73008, landfills taking non- biodegradable wastes (not construction), issued 12/04/2001.
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A
Hazardous substances/ industri	al land use	es		
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A
Contaminated land Part 2A register entries and notices	0	0	0	N/A
Contemporary trade directory entries	0	0	0	N/A
Fuel station entries	0	0	0	N/A

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

Similar to Zone A, the environmental database report has identified a licensed waste management facility directly adjacent to the southwestern corner of Zone B (Brauncewell Quarry). The report lists a number of different licenses, presumably associated with different parts or cells of the landfill. The landfill appears to have been licensed to accept non-biodegradable wastes, with these licenses having expired by 2007. Part of the landfill appears to currently be active and licensed to accept "inert and excavation waste TS + treatment".

#### 5.3 Site geology

#### 5.3.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for Zone B and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 11**.



Table 11 Site geology – Zone B

Strata	Description	Estimated thickness	Permeability	Map Legend
Head (south of the site only)	Poorly sorted and poorly stratified, angular rock debris and/or clayey hillwash and soil creep, mantling a hillslope and deposited by solifluction and gelifluction processes.	Variable	Variable	(9)
Sleaford Sand and Gravel (south of the site only)	Sand and gravel	Variable	Permeable	STD_⊥
Cornbrash Formation (east of the site only)	Limestone, medium to fine grained, predominantly bioclastic wackestone and packstone with sporadic peloids. Thin argillaceous partings or interbeds of argillaceous mudstone may occur	Typically 2 – 4 m	Permeable	Cb
Blisworth Clay Formation (east of the site only)	Silicate-mudstone, grey, commonly variegated purplish red, yellow and green, poorly bedded to blocky. Mudstone weathers to a highly plastic clay.	Typically 2 – 4 m	Impermeable	BwC

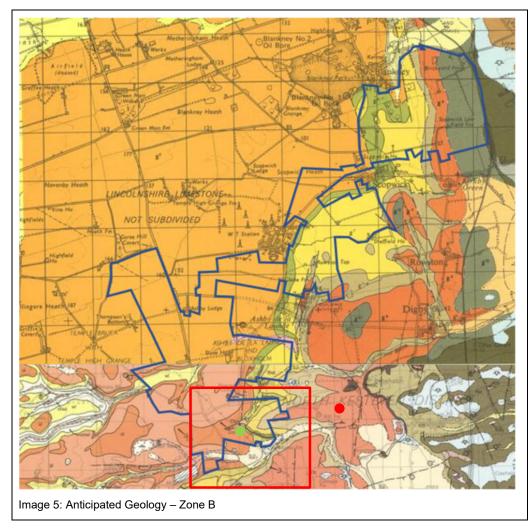


Strata	Description	Estimated thickness	Permeability	Map Legend
Blisworth Limestone Member (east of the site only)	Pale grey to off-white or yellowish limestones with thin marls and mudstones, fossiliferous, bioturbated peloidal, ooidal and shell-fragmental more-or-less argillaceous packstones and wackestones, subordinate crossbedded ooidal shell-fragmented grainstones.	Typically 6 – 7 m	Permeable	BwL
Rutland Formation (east of the site only)	Grey marine mudstone passing up into non-marine mudstone and siltstone, with a greenish-grey rootlet bed at the top. Occasional limestone beds (ls)	Typically 8 – 12 m	Permeable	Rld
Upper Lincolnshire Limestone Member (widespread across the site)	Limestone, mainly coarse grained ooidal grainstones (ol), with subsidiary limestones of other types (gl) including fine to medium grained grainstone, recrystallized limestone and possible reef knolls	Typical ~15 m	Permeable	

With reference to the historical data the majority of the site has never been developed, and therefore widespread Made Ground would not be anticipated. There may be some Made Ground or reworked in the vicinity of the Stone Pit in zones B10 and B14 as well as any roads running through the zone.

The zone would be expected to be directly underlain by a limited thickness of topsoil.





Whilst not located on the site, a historical BGS borehole located approximately 1.2 km to the east of the zone (TF05 SE/30) provides a detailed stratigraphical description to 55 m bgl. A summary of nearby BGS borehole records on and near the zone are provided in **Table 12** below.

Table 12 Summary of BGS borehole records - Zone B

Stratum	Description	Depth to base (m)
TF05 SE/30	55.00	
TF05 SW/05	36.00	

A copy of these borehole logs is presented in Appendix E.



#### 5.3.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 5-10% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the zone is considered for future residential development, further assessment will be required, in line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

#### 5.4 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500 m of the site.

#### 5.4.1 Areas of other (rock or mineral) mining

The site lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member, and there are two known Old Stone Pits on the site (B10 and B14), with multiple pits surrounding the site. The quarrying site adjacent to the south is now the Brauncewell Quarry and appears to currently still be operating.

#### 5.5 Hydrogeology

A summary of the hydrogeological setting of Zone B, with respect to the anticipated geological sequence, is presented below in **Table 13**.

Table 13 Summary of hydrogeological setting - Zone B

Condition	Description
Aquifer characteristics	Zone B is underlain by a principal aquifer relating to the Upper Lincolnshire Limestone Member and the Blisworth Limestone Formation, a secondary B aquifer relating to the Rutland Formation, a secondary A aquifer relating to the Cornbrash Formation, and unproductive strata relating to the Blisworth Clay Formation.
Depth to groundwater and flow	The anticipated depth to the groundwater table is in the order of 30 m below ground level estimated from BGS logs. Shallow groundwater in the zone area is anticipated to flow in a south-easterly direction, in line with local topography.



Condition	Description
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain to ground.
Licensed groundwater abstractions	The environmental database report indicates that there are no current licensed groundwater abstractions located within 1 km of the zone.
Source protection zones	Information available in the Envirocheck report and MAGIC website indicates that the majority of the zone lies within Zone 3 of the groundwater Source Protection Zone (SPZ). The very north of the zone does not lie within a SPZ. The public supply borehole to which this SPZ relates is not within the boundary of the maps.

### 5.6 Hydrology

A summary of the hydrology within the site area is summarised in **Table 14**.

Table 14 Summary of hydrology in site area – Zone B

Condition	Description
Surface watercourses/ features	There is a pond 20 m south of the site in the west, and there are multiple drainage ditches to the east of the site. The nearest identified surface watercourses to the site are unnamed drains adjacent to the eastern boundary that run towards the east, in the direction of the River Witham.
Surface water abstractions	There are no surface water abstractions identified by the environmental database, within a 1 km radius of the zone.
Site drainage	Surface drainage from the zone appears to be discharged directly to the ground.
Preliminary flood risk assessment	The indicative floodplain map for the area, shows that the zone does not lie within any designated floodplain.

#### 5.7 Sensitive land uses

**Table 15** provides a summary of any environmentally sensitive areas identified within 250 m of the zone based on the environmental database report.



Table 15 Environmentally sensitive areas – Zone B

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	No	N/A	N/A
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	No	N/A	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	No	N/A	N/A
Nearest high sensitivity development, e.g. residential	Yes	Residential Housing: Manor House and Church Cottages are located in zone B11, immediately beyond the southern boundary of the zone.	Wind-blown migration of potential contaminants. Leaching.



## 6 DESK-BASED ASSESSMENT – ZONE C

Zone C does not encompass any of the site itself, beginning 800 m to the east of the site boundary and including the remaining 200 m of the 1 km search buffer. Due to this, only the historical development of the land has been deemed relevant to the site assessment.

### 6.1 Site history

#### 6.1.1 Historical development record

The development history of Zone C (technically the 'surrounding area' of the site) based upon assessment of historical plans and records is detailed in **Table 16**. The historical maps reviewed are shown within the environmental database report in <u>Appendix D3</u>.



Table 16 Summary of historical development - Zone C

from	Date to	Historical Land Use (off-site)	Distance (m) and orientation		
1887		The area is predominantly fields. There is a forested area called The Laurels located approximately 750 m north-east of the site, and Brauncewell Plantation is located 900 m south-east of the site. There is a forested area and some built structures present associated with Hill Farm which is 500 m east of the site.			
1888	1905	Data Gap			
19	06	No Change			
1907	1946	Data Gap			
1947	1950	No Change			
1951	1955	Data Gap			
19	56	No Change			
1957	1984	Data Gap			
1985		There are multiple drains labelled east of the site, in what are most likely drainage ditches. There is now a pond associated with Brauncewell Plantation 900 m southeast of the site, and the drains from Hill Farm outfall here.			
1986	1999	Data Gap			
20	000	No Change	No Change		
2001	2021	Data Gap			
20	)22	No Change			
Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □					

Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.



It is presumed that the land functioned as arable farmland, and if this is the case then there may be some level of contamination associated with agricultural industry and the use of pesticides, herbicides and fertilisers which could subsequently impact the site itself.

### 6.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D3</u>) are summarised below in **Table 17**.

Table 17 Summary of environmental permits, landfills and incidents – Zone C

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	0	N/A
Discharge consents	0	0	0	N/A
Registered radioactive substances	0	0	0	N/A
Landfill and waste				
Active landfills	0	0	0	N/A
Historic / closed landfills	0	0	0	N/A
Other waste management licences	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A
Hazardous substances/ industri	al land use	es		
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A
Contaminated land Part 2A register entries and notices	0	0	0	N/A
Contemporary trade directory entries	0	0	0	N/A
Fuel station entries	0	0	0	N/A

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

No potential sources of contamination have been identified from the environmental database report for Zone C.



# 7 DESK-BASED ASSESSMENT – ZONE D

## 7.1 Site history

#### 7.1.1 Historical development record

The development history of Zone D and the surrounding area based upon assessment of historical plans and records is detailed in **Table 18**. The historical maps reviewed are shown within the environmental database report in <u>Appendix D4</u>.



Table 18Summary of historical development - Zone D

Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	Zone D is predominantly fields. At the southwestern boundary of the zone (D3) there are some terraced buildings named Warren Houses, which are presumably residential homes, and there is a well immediately south of the buildings. There is an Old Stone Pit, located in zone D4 within a forested area, and a Stone Pit located in D12 adjacent to Toll Bar Plantation. There are multiple roads around the site, one is called Warren Lane running southeast to northwest in zone D3, one is unnamed and is running east to west across D11 and D12, and another is running north-to-south through the east of the zone through zones D16 and D12. Toll Bar Cottages (D16) and Toll Bar Plantation (D12) are located on the north-eastern boundary of the zone.	UER wijn TEMPLE INGE GRANGE
1889	1904	Data Gap	
1905	1906	There is well located at Toll Bar Cottages (D16). No other significant change.	HRUR VIIN TENFIL - ILIGH GRANGE
1907	1946	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1947 1951		No Change	THE BACES WITH TOTAL PROPERTIES OF
1952	1955	Data Gap	
1956		Multiple windpumps have been constructed across the zone, one in zone D14, one located in the south of the zone near the Old Stone Pit in D4, and another one at Warren Houses in D3. The road running south to north going in the east of the zone is now labelled as the A15.	TENTILE BEYER TENTILE THERE GRANGE
1957	1978	Data Gap	
19	79	The windpumps at Warren Houses (D3) and along the north western boundary of the zone (D14) are now disused, and pylons have been constructed on the zone along the western boundary. Some houses have been built on the eastern boundary of the zone in the north, associated with Ashby Lodge.	
1980	1984	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site		
1985		The stone pit associated with Toll Bar Cottages is now disused (D12). No other significant change.	YINE BRUEN, WATH TENNIE PROH-GRANCE CP		
1986	1993	Data Gap			
19	994	No Change			
1995	1999	Data Gap			
2000		No Change	MAYE BRAIN VOTH TEMPLE HIDE CRANGE CO		
2001	2021	Data Gap			



Date from	Date to	Historical Land Use (on-site)	Area of site
2022		No Change	

Date from	Date to	Historical Land Use (off-site)
1887	1888	Thompsons Bottom is an estate located 200 m west of the western zone boundary in zone D11. Temple Farm is located approximately 750 m west of the western boundary in the south of the zone, and it includes the remains of a preceptory and a church. There also appears to be a tank on the site of Temple Farm. Warren Plantation is located just off the northern boundary of the site in the south running through zone D3 and D7, and there is a gravel pit located 800 m west of the western boundary, as well as St John the Baptists Church and a school. Adjacent to the school and gravel pit is a convergence of roads/tracks, and approximately 350 m northwest of this crossroads is another small gravel pit. Cat Plantation is located immediately west of the western boundary in zone D10, and there is another gravel pit located 900 m west of here. There is a road running east to west just beyond the northern boundary of the zone called Gorse Hill Lane (D14), and there are some structures built immediately east of the eastern site boundary in zone D12.
1889	1904	Data Gap
1905	1906	The gravel pit that was located 900 m west of the western boundary beyond Cat Plantation is gone, and there is now a built structure in its place. The gravel pit that is located 350 m north of the crossroads is now disused. Thompsons Bottom (D11) has a smithy forming part of the area. There is a small pond located 500 m west of the site, approximately 250 m past Thompsons Bottom.
1907	1946	Data Gap
1947	1951	There are some structures which have been built 200 m west of the western boundary in the north of the site, just south of Gorse Hill Lane in zone D14.
1952	1955	Data Gap
1956		Some more structures have been built at the site of what was the gravel pit located 900 m west of the western boundary, and a windpump has also been built. There is another built structure immediately east of the eastern boundary in the north of the site, in zone D12.
1957	1978	Data Gap
19	979	There are pylons constructed along the western boundary of the site. Cat Plantation is no longer present west of the site, and some structures have been added to



Date from	Date to	Historical Land Use (off-site)				
		Thompsons Bottom (D11). The structures that were built just south of Gorse Hill Lane to the west of the site are now labelled as Gorse Hill Farm (D14).				
1980	1984	Data Gap				
1985		There appears to have been a small amount of construction at the remains of the old preceptory, with some residential homes named The White Cottages being present. The structures present 900 m west of the western boundary in the north of the site are now named New England Farm, and some more buildings have been added. There is no longer a school located at the crossroads, but a Hall is now present.				
1986	1993	Data Gap				
19	994	No Change				
1995	1999	Data Gap				
20	000	No Change				
2001	2021	Data Gap				
20	)22	No Change				
	Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □					
land u	Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.					

With reference to the historical data, the majority of the site has never been developed, therefore widespread Made Ground would not be anticipated. There may be some Made Ground in the vicinity of the Old Stone Pits in zones D4 and D12 and the roads running

The stone quarries identified in zones D4 and D12 are presumed to have been infilled with inert and/or natural material, however there lies the potential for more onerous material to have been used.

## 7.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D4</u>) are summarised below in **Table 19**.

through the site.



Table 19 Summary of environmental permits, landfills and incidents – Zone D

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	0	N/A
Discharge consents	0	0	0	N/A
Registered radioactive substances	0	0	0	N/A
Landfill and waste				
Active landfills	0	0	0	N/A
Historic / closed landfills	0	0	0	N/A
Other waste management licences	0	0	0	N/A
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A
Hazardous substances/ industri	al land use	es		
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A
Contaminated land Part 2A register entries and notices	0	0	0	N/A
Contemporary trade directory entries	0	2	0	12 m E: Timmart Electrical Services, Ashby Lodge Cottages, Electrical Engineers, Inactive 224 m NW: D F Bell Haulage, Gorse Hill Lane, Road Haulage Services, Inactive
Fuel station entries	0	0	0	N/A

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

No potential sources of contamination have been identified from the environmental database report for Zone D.

## 7.3 Information from regulatory authorities

#### 7.3.1 Site services

Buried utility services and their backfill can provide preferential pathways for gas, vapour or groundwater to migrate along to another part of the site or to a receptor. They can also represent significant constraints to development.

Obtaining a full set of service plans was outside the scope of this report. Services identified on-site during the walkover are detailed in section 17.

## 7.4 Site geology

#### 7.4.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 20**.



Table 20 Site geology - Zone D

Strata	Description	Estimated thickness	Permeability	Map Legend
Head (south west of the site only)	Poorly sorted and poorly stratified, angular rock debris and/or clayey hillwash and soil creep, mantling a hillslope and deposited by solifluction and gelifluction processes.	Variable	Variable	(9)
Upper Lincolnshire Limestone Member	Limestone, mainly coarse grained ooidal grainstones (ol), with subsidiary limestones of other types (gl) including fine to medium grained grainstone, recrystallized limestone and possible reef knolls	Up to 15 m	Permeable	S S S S S S S S S S S S S S S S S S S
Lower Lincolnshire Limestone Member	Limestones, dominated by low- energy calcilutite and and peloidal wackestone (wl) and packstone. With subsidiary carbonate mudstone (ml).	Up to 20 m	Permeable	<b>g</b> <sup>5</sup>
Relevant info	rmation sources: BGS Geoindex D	BGS boreh	ole logs  Previou	us SI reports □

With reference to the historical data the majority of the site has never been developed, therefore minimal Made Ground would be anticipated.

The site would be expected to be directly underlain by a limited thickness of topsoil.

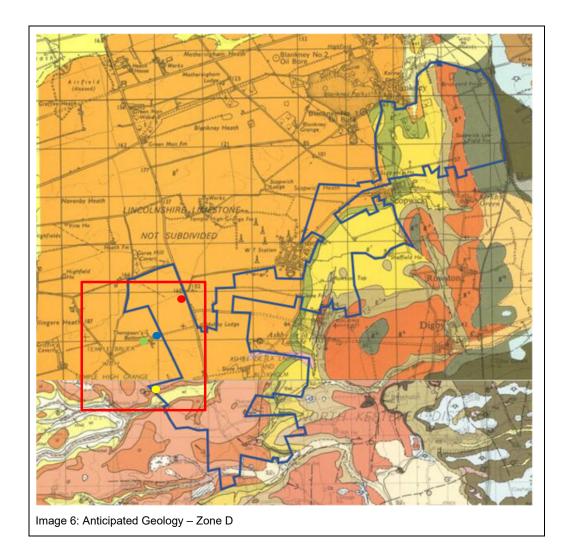
A summary of historical BGS borehole records within and near the zone are provided in **Table 21** below.

Table 21 Summary of BGS borehole records - Zone D

Borehole ref	Depth (m)	Map Legend
TF05 NW/14	26.00	
TF05 NW/17	28.00	
TF05 SW/8	23.00	
TF05 NW/38	28.71	

A copy of these borehole logs is presented in Appendix E.





## 7.4.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 10-30% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the zone is considered for future residential development, further assessment will be required, in



line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

### 7.5 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500m of the zone.

#### 7.5.1 Areas of other (rock or mineral) mining

Zone D lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member, and historically there were two stone pits within the zone, one in the southeast in zone D4 and another in the northeast in zone D12, although they are both now disused.

### 7.6 Hydrogeology

A summary of the hydrogeological setting of the zone, with respect to the anticipated geological sequence, is presented below in **Table 22**.

Table 22 Summary of hydrogeological setting - Zone D

Condition	Description
Aquifer characteristics	Zone D is underlain by a secondary undifferentiated aquifer relating to the superficial Head Deposits in the southwest of the site only, and a principal aquifer relating to the Upper Lincolnshire Limestone Member.
Depth to groundwater and flow	The anticipated depth to the groundwater table is in the order of 25 m below ground level estimated from historic borehole logs in the area. Shallow groundwater in the zone is anticipated to flow in a south-easterly direction, i.e. in line with the local topography.
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain directly to ground.
Historical implications for hydrogeology	Historically there was a well present at Warren Houses, and there are historic boreholes located at Warren Houses, Thompsons Bottom, and another in the centre of the zone.
Licensed groundwater abstractions	The environmental database report indicates that there are 5No current licensed groundwater abstractions, of which none are public water supply boreholes within a 1km radius of the zone.
Source protection zones	Information available in the Envirocheck report indicates that the zone does not lie within a currently designated groundwater Source Protection Zone (SPZ).

## 7.7 Hydrology

A summary of the hydrology within the zone area is summarised in **Table 23**.



Table 23 Summary of hydrology in site area – Zone D

Condition	Description
Surface watercourses/ features	There are no surface watercourses/features on the zone, however there is a small pond approx. 200 m west of Thompsons Bottom.
Surface water abstractions	There are no surface water abstractions identified by the environmental database, within a 1 km radius of the zone.
Site drainage	There is no visible surface drainage within the zone, and water will drain to the ground.
Preliminary flood risk assessment	The floodplain map for the area shows that the zonedoes not lie within any designated floodplain.

### 7.8 Sensitive land uses

**Table 24** provides a summary of any environmentally sensitive areas identified within 250 m of the zone based on the environmental database report.

Table 24 Environmentally sensitive areas – Zone D

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	0	0	N/A
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	0	0	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	0	0	N/A



Feature	Present within 250 m of site?	Details	Likely pathways from site?
Nearest high sensitivity development, e.g. residential	Yes	Toll Bar Cottages located on the eastern boundary of the site, and Thompsons Bottom located 200m west of the site.	Direct contact, migration of contaminants.



# 8 DESK-BASED ASSESSMENT – ZONE E

## 8.1 Site history

#### 8.1.1 Historical development record

The development history of Zone E and the surrounding area based upon assessment of historical plans and records is detailed in **Table 25**. The historical maps reviewed are shown within the environmental database report in Appendix D5.



Table 25 Summary of historical development – Zone E

Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	Zone E is predominantly fields. Glebe Farm is partially on the zone, located in the northeast and adjacent to the boundary in zones E15 and E16. A forested area named Keepers Covert is located in the southeast of the zone (E6), and Sixty Acre Plantation is located in the southwest in zone E1. There is a gravel pit located in the southern portion of the zone (E7), and an Old Stone Pit is located in the northern portion of the zone adjacent to an eastern boundary in zone E10. There is a road running north-to-south in the southwest of the zone (E2, E6), and another road called Navenby Lane running east-to-west in the north of the zone (E9). Some of the grounds associated with Ashby Lodge to the west (E9) encroach onto the site. A watercourse called Springwell Brooke is located in the southern portion of the zone along a northern boundary, adjacent to the east of Springwell Plantation and running through zone E7.	
1889	1904	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1905	1906	Keepers Covert (E6) is now labelled as a Pheasantry. There is a windpump located approximately 300 m east of Ashby Lodge in zone E9. There is a small pond located within a forested area, north of Hall Farm in zone E3.	ASHBY DE LA LAUNDE
1907	1949	Data Gap	
1950	1951	There is a small pond to the south of Springwell Plantation in zone E7.	BLOXHOLM
1952	1955	Data Gap	
19	56	There is a windpump in the northeastern corner of the site in E16, and there are now some buildings present here.	HBY DE LA LAUNDE AND BLOXHOLM
1957	1978	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
19	779	Pylons are now present in the southwest corner of the site.	
1980	1984	Data Gap	
19	985	There are some drains labelled in the southeast portion of the site (E3 and E7), which appear to drain into Springwell Brook. There is a sewage works located 310 m east of the site (E11).	NORTH KESTEVEN DISTRICT
1986	1993	Data Gap	
	994	No Change	
19	995	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
19	996	No Change	
1997	1999	Data Gap	
20	000	No Change	NCORTH MISTEVEN DISTRICT  ASPENDE LA JAINGE AND BLODGOLM OF
2001	2021	Data Gap	
2022		No Change	

Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation
1887	1888	Whilst Slate House is located within the footprint included within the official redline site boundary a site' in this report. The village of Ashby de la Lau 500 m east of the zone. There are numerous fore and Sod Wall Plantation which are both located in E7, and The Mount approximately 150m east of the pond located in the centre of Ashby de la Launde	and does not form a part of 'the onde is located approximately ested areas, namely Ashby Thorns on E8, and Flaxen Wood located on the site in zone E4. There is a fish



Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation	
		is located 500 m east of the zone, just beyond As Stone Pit located 250 m east of the zone along N the southern portion of the zone, along the norther Plantation. Top Farm is located 20 m south of the property has a Dovecot. Peacock Lodge is lo	village and a school and a smithy in the west of the village. St Hybald's Church cated 500 m east of the zone, just beyond Ashby Thorns. There is an Old ne Pit located 250 m east of the zone along Navenby Lane, and a Gravel Pit in southern portion of the zone, along the northern boundary at Springwell ntation. Top Farm is located 20 m south of the zone in the southeast corner, and property has a Dovecot. Peacock Lodge is located immediately east of the zone ie south, and there is also an Old Stone Pit here. Peacock Lodge is located in south-east corner of the zone.	
1889	1904	Data Gap		
1905	1906	There has been some construction next to the so and Top Farm (E3) is now named Hall Farm. The (E6), and a small structure has been added to so	ere is now a pump at Slate House	
1907	1949	Data Gap		
1950	1951	A structure has been built just south of the Slate House estate. No other significant change.		
1952	1955	Data Gap		
19	56	Some houses have been built approximately 50m north of Hybald's Church in zone E8. There is a windpump on the Slate House Estate in zone E6.		
1957	1978	Data Gap		
Hall Farm in zone E3 is now called Mount Farm, and the zone has been redeveloped/reconfigured. There is a pump house located approx. 100 m wes Mount Farm. There has been some development within the village, more stru are present and there is now a Water Tower and two pumps are labelled in zone E12, and there is a sewage works located in zone E11 approximately 300 m of the south portion of the site. There has been some residential development east of the zone immediately above the northern boundary in zone E15. The structures south of the original Slate House buildings are labelled as Slate House itself.		e located approx. 100 m west of t within the village, more structures two pumps are labelled in zone e E11 approximately 300 m north ome residential development north boundary in zone E15. The ings are labelled as Slate House		
1980	1984	Data Gap		
19	85	Drains are now labelled in the south east of the	site. No other significant changes.	
1986	1993	Data Gap		
19	94	No Change		
1995	1999	Data Gap		
20	00	Another building has been constructed at Mount Farm in zone E3, and it appears as though some more houses have been built in the village just north of St Hybald Church.		
2001	2021	Data Gap		
20	22	No Change		
		nation sources: Historical OS maps $oxtimes$ Town plans $oxtimes$ rity $oxtimes$ Aerial photography $oxtimes$ Previous reports $oxtimes$	☐ Information from the Local	



from to Thistorical Early 350 (Shr-She)	Date from		Historical Land Use (off-site)	Distance (m) and orientation
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Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.

There has never been any significant development on the site with the exception of the road construction. The most likely source of any potential contamination would be associated with the agricultural land use of the site, and the use of herbicides, pesticides and fertilisers. The most significant off-site source of potential contamination would be the sewage works located in zone E11, as well as the farms around the site boundary.

The gravel pit and stone quarry identified in zones E7 and E10 respectively are presumed to have been infilled with inert and/or natural material, however there lies the potential for more onerous material to have been used.

### 8.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D5</u>) are summarised below in **Table 26**.

Table 26 Summary of environmental permits, landfills and incidents – Zone E

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Discharge consents	1	1	1	On site NE: Mr D H Cutmore, Proposed Annex Glebe Farm, Ref. Pr3lf928, 26/10/1988 – 16/05/1997, Land/Soakaway, Into Land. 24 m SE: North Kesteven District Council, Domestic Property, Ref. Pr3lfu31, 10/02/1966 – 01/10/1996, Onto Land. 310 m E: Anglian Water Services Limited, Sewage Treatment Works, Ref. Aw3nff671, 14/12/1984, Sewage Discharges, Freshwater Stream/River, Springwell Brook River Witham. 489 m E: Anglian Water Services Limited, Pumping Station on Sewerage Network, Aw3nff700, 30/05/1968, Freshwater Stream/River, Springwell Beck.
Registered radioactive substances	0	0	0	N/A
Landfill and waste				
Active landfills	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Historic / closed landfills	0	0	0	N/A
Other waste management licences	0	0	0	N/A
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A
Hazardous substances/ industri	al land use	es		
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A
Contaminated land Part 2A register entries and notices	0	0	0	N/A
Contemporary trade directory entries	0	2	0	42 m S: Ray Wright (Feeds) Ltd, Pet Foods & Animal Feeds, Inactive 45 m NE: Wrinkle Free Laundry, Ironing & Home Laundry Services, Inactive
Fuel station entries	0	0	0	N/A

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

No potential sources of contamination have been identified from the environmental database report for Zone E.



### 8.3 Site geology

#### 8.3.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of Zone E to be characterised by the succession recorded in **Table 27**.

Table 27 Site geology - Zone E

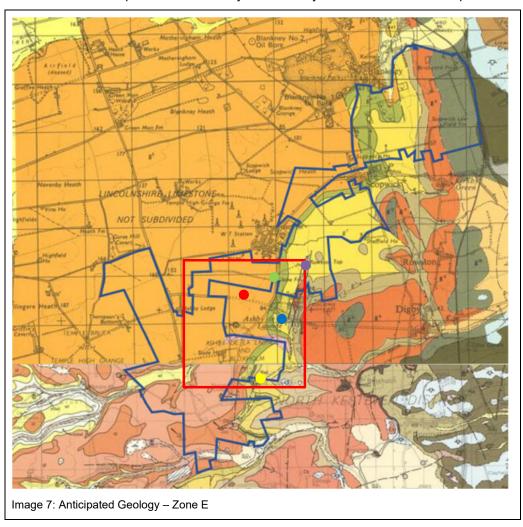
Strata	Description	Estimated thickness	Permeability	Map Legend
Sleaford Sand and Gravel (central west portion of the site)	Sand and Gravel	Variable	Permeable	ф
Blisworth Limestone Member	Pale grey to off-white or yellowish limestones with thin marls and mudstones, fossiliferous, bioturbated peloidal, ooidal and shell-fragmental more-or-less argillaceous packstones and	Typically 6 – 7 m	Permeable	BwL
	wackestones, subordinate cross-bedded ooidal shell-fragmented grainstones.			g <sup>7</sup>
Rutland Formation	Grey marine mudstone passing up into non-marine mudstone and siltstone, with a greenish-grey rootlet bed at the top. Occasional limestone beds (Is)	Typically 8 – 12 m	Permeable	Rld Is
Upper Lincolnshire Limestone Member	Limestone, mainly coarse grained ooidal grainstones (ol), with subsidiary limestones of other types (gl) including fine to medium grained grainstone, recrystallized limestone and possible reef knolls	Up to 15 m	Permeable	STATE OF THE STATE
Lower Lincolnshire Limestone Member	Limestones, dominated by low-energy calcilutite and peloidal wackestone (wl) and packstone. With subsidiary carbonate mudstone (ml).	Up to 20 m	Permeable	g <sup>5</sup>
Relevant information sources: BGS Geoindex ⊠ BGS borehole logs □ Previous SI reports □				

With reference to the historical data the majority of the site has never been developed, and therefore widespread Made Ground would not be anticipated. There may be some



Made Ground in the vicinity of the Old Stone Pit in E10 and the Gravel Pit in E7, as well as around the roads.

The site would be expected to be directly underlain by a limited thickness of topsoil.



A summary of historical BGS borehole records within and near the zone are provided in **Table 28** below.

Table 28 Summary of BGS borehole records - Zone E

Borehole ref	Depth (m)	Map Legend
TF05 NW19	11.00	
TF05 NE10/A	38.00	
TF05 SW2	27.43	-
TF05 NW40	25.12	



Borehole ref	Depth (m)	Map Legend
TF05 NE4	34.00	

A copy of these borehole logs is presented in Appendix E.

#### 8.3.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 5-10% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the zone is considered for future residential development, further assessment will be required, in line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

### 8.4 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500 m of the zone.

#### 8.4.1 Areas of other (rock or mineral) mining

The site lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member, and historically there were two pits within the zone, one Gravel Pit in the southeast of the zone (E7) and one Old Stone Pit in the northeast of the zone (E10).

## 8.5 Hydrogeology

A summary of the hydrogeological setting of the zone, with respect to the anticipated geological sequence set out in Section 4.3 is presented below in **Table 29**.

Table 29 Summary of hydrogeological setting – Zone E

Condition	Description
Aquifer characteristics	Zone E is underlain by a Secondary A Aquifer relating to the Sleaford Sand and Gravel, and a Principal Aquifer relating to the Lincolnshire Limestone Member.



Condition	Description
Depth to groundwater and flow	The anticipated depth to the groundwater table is in the order of 14 m below ground level estimated from historic borehole logs in the area. Shallow groundwater in the site area is anticipated to flow in a south-easterly direction, i.e. in line with the local topography. Localised shallow groundwater may be present within superficial granular deposits such as the Sleaford Sand and Gravel.
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain directly to ground.
Licensed groundwater abstractions	The environmental database report indicates that there are no current licensed groundwater abstractions within a 1 km radius of the zone.
Source protection zones	Information available in the Envirocheck report indicates that the zone does not lie within a currently designated groundwater Source Protection Zone (SPZ).

## 8.6 Hydrology

A summary of the hydrology within the zone is summarised in **Table 30**.

Table 30 Summary of hydrology in site area – Zone E

Condition	Description
Surface watercourses/ features	The nearest surface watercourse to the zone is Springwell Brook located within the zone in the east, along the northern boundary and adjacent to Springwell Plantation. This seems to form part of a drainage network.
Surface water abstractions	There are no surface water abstractions identified by the environmental database, within a 1 km radius of the zone.
Site drainage	Some drainage ditches around the zone connect to Springwell Brook.
Preliminary flood risk assessment	The floodplain map for the area shows that the southeastern portion of the zone, east of the B1191, lies within flood zones 2 and 3. This indicates that the zone may be subject to flooding and extreme flooding from rivers without defences.

### 8.7 Sensitive land uses

**Table 31** provides a summary of any environmentally sensitive areas identified within 250 m of the zone based on the environmental database report.



Table 31 Environmentally sensitive areas – Zone E

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	0	0	N/A
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	0	0	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	0	0	N/A
Nearest high sensitivity development, e.g. residential	Yes	Slate House, Mount Farm, Ashby Lodge and Glebe Farm.	Direct contact, migration of contaminants.



# 9 DESK-BASED ASSESSMENT – ZONE F

## 9.1 Site history

#### 9.1.1 Historical development record

The development history of Zone F and the surrounding area based upon assessment of historical plans and records is detailed in **Table 32**. The historical maps reviewed are shown within the environmental database report in <u>Appendix D6</u>.



Table 32Summary of historical development - Zone F

Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	Zone F is predominantly fields. There is an Old Stone Pit in the centre of the zone (F13), and a forested area called The Gorse located west of the Old Stone Pit but also within zone F13. There is an estate called Rowston Top in the northwest of the site (which is not included within the site redline boundary and will be considered as off-site moving forward). There is a small forested area in the north east of the zone, and there is a small pond located adjacent to it, all also within zone F13.	
1889	1904	Data Gap	
1905	1906	No Change	
1907	1946	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1947	1951	No Change	
1952	1955	Data Gap	
19	56	The Gorse is no longer present as a forested area.	
1957	1978	Data Gap	
19	79	There is track leading to/from Rowston Top, and there is a drain running alongside it. There is a pond in the centre of the zone where the Old Stone Pit used to be.	
1980	1984	Data Gap	<b>1</b>



Date from	Date to	Historical Land Use (on-site)	Area of site
1985		No Change	
1986	1993	Data Gap	
1994		The forested area in the east of the site is gone.	
1995	1999	Data Gap	
2000		No Change	
2001	2021	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
20	022	Rowston Top has been renamed The Maltings.	

Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation		
1887 1888		The surrounding area is predominantly fields and plantations. There is a road running east to west approximately 600 m south of the zone, and there is a vicarage located 650 m southwest of the zone with some buildings. There is another road running north to south approximately 1 km east of the zone, named Lincoln Road. The hamlet of Bloxholm is located approximately 1.5 km south of the zone and the village of Digby is located approximately 1.5 km southeast. There is a small forested area located immediately adjacent to the south eastern boundary of the zone, and within this area there is a small pond. There is another small pond located 500 m east of the zone. Marshall Hill Plantation is located approximately 750 m northeast of the zone.			
1889	1904	Data Gap			
1905	1906	No Change			
1907	1949	Data Gap			
1950	1951	No Change			
1952 1955		Data Gap			
19	956	The site of a Roman Building is located approximately 350 m south of the zone. No other significant change.			
1957	1978	Data Gap			
19	79	No Change			
1980	1984	Data Gap	Data Gap		
1985		There are drains labelled on the maps east of the zone, 900 m southeast, and also running parallel alongside the road located 600 m south of the zone.			
1986	1993	Data Gap			
1994		No Change			
1995	1999	Data Gap			
2000		A track is running from the south east corner of the zone boundary running in a north to south direction.			



Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation		
2001	2021	Data Gap			
20	2022 No Change				
Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □					
Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.					

There has been no historical development within the zone, and therefore the primary source of any potential contamination would be associated with the agricultural land use of the site, although there is also a small Old Stone Pit on the site which represents some level of historic quarrying.

The stone quarry identified in zone F13 is presumed to have been infilled with inert and/or natural material, however there lies the potential for more onerous material to have been used.

### 9.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D6</u>) are summarised below in **Table 33**.

Table 33 Summary of environmental permits, landfills and incidents – Zone F

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details	
Discharge consents	1	0	0	On Site: Miss L Pickett & Mr S Purdie, Domestic Property, The Maltings & The Granary & The Hayloft, Ref. Prnnf18151, 16/06/2004, Sewage Discharges (final treated effluent), into freshwater stream.	
Registered radioactive substances	0	0	0	N/A	
Landfill and waste					
Active landfills	0	0	0	N/A	
Historic / closed landfills	0	0	0	N/A	
Other waste management licences	0	0	0	N/A	
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A	
Hazardous substances/ industri	lazardous substances/ industrial land uses				
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A	
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A	
Contaminated land Part 2A register entries and notices	0	0	0	N/A	



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Contemporary trade directory entries	0	0	0	N/A
Fuel station entries	0	0	0	N/A

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

No potential sources of contamination have been identified from the environmental database report for Zone F.

### 9.3 Information from regulatory authorities

#### 9.3.1 Site services

Buried utility services and their backfill can provide preferential pathways for gas, vapour or groundwater to migrate along to another part of the site or to a receptor. They can also represent significant constraints to development.

Obtaining a full set of service plans was outside the scope of this report. Services identified on-site during the walkover are detailed in section 17.

## 9.4 Site geology

#### 9.4.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 34**.

Table 34 Site geology - Zone F

Strata	Description	Estimated thickness	Permeability	Map Legend		
No Superficial Deposits						

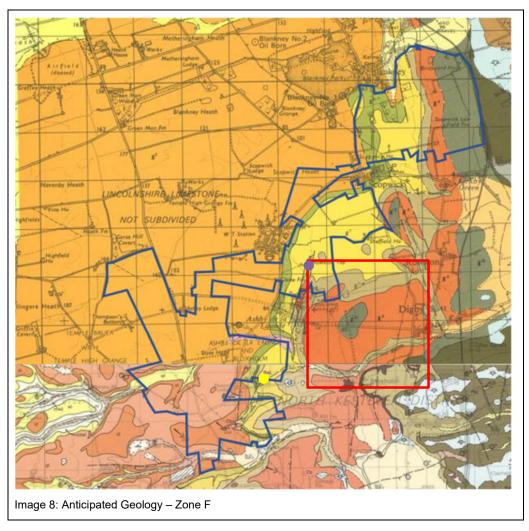


Strata	Description	Estimated thickness	Permeability	Map Legend
Cornbrash Formation (south of the site only)	Limestone, medium to fine grained, predominantly bioclastic wackestone and packstone with sporadic peloids. Thin argillaceous partings or interbeds of argillaceous mudstone may occur.	2 m – 4 m	Permeable	g <sup>9</sup>
Blisworth Clay Formation	Silicate-mudstone, grey, commonly variegated purplish red, yellow and green, poorly bedded to blocky. Mudstone weathers to a highly plastic clay.	2 m – 4 m	Impermeable	g <sup>7-8</sup>
Blisworth Limestone Member	Pale grey to off-white or yellowish limestones with thin marls and mudstones, fossiliferous, bioturbated peloidal, ooidal and shell-fragmental more-or-less argillaceous packstones and wackestones, subordinate cross-bedded ooidal shell-fragmented grainstones.	Typically 6 – 7 m	Permeable	g <sup>7</sup>
Rutland Formation	Grey marine mudstone passing up into non-marine mudstone and siltstone, with a greenish-grey rootlet bed at the top.	Typically 8 – 12 m	Permeable	g <sup>6-7</sup>
Upper Lincolnshire Limestone Member	Limestone, mainly coarse grained ooidal grainstones, with subsidiary limestones of other types including fine to medium grained grainstone, recrystallized limestone and possible reef knolls	Up to 15 m	Permeable	g <sup>5</sup>
Lower Lincolnshire Limestone Member	Limestones, dominated by low-energy calcilutite and peloidal wackestone and packstone. With subsidiary carbonate mudstone.	Up to 20 m	Permeable	
Relevant information sources: BGS Geoindex ⊠ BGS borehole logs □ Previous SI reports □				

With reference to the historical data the majority of the site has never been developed, and therefore widespread Made Ground would not be anticipated. There may be some Made Ground in the vicinity of the Old Stone Pit located in zone F13.

The site would be expected to be directly underlain by a limited thickness of topsoil.





A summary of pertinent historical BGS borehole records within and near the zone are provided in **Table 35** below.

Table 35 Summary of BGS borehole records - Zone F

Borehole ref	Depth (m)	Map Legend
TF05 NE4	34.00	

A copy of this borehole log is presented in Appendix E.

### 9.4.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 3-5% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.



In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the zone is considered for future residential development, further assessment will be required, in line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

## 9.5 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500m of the zone.

#### 9.5.1 Areas of other (rock or mineral) mining

The zone lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member and the Blisworth Limestone Member, and historically there was an Old Stone Pit in the centre of the zone (F13).

## 9.6 Hydrogeology

A summary of the hydrogeological setting of the zone, with respect to the anticipated geological sequence, is presented below in **Table 36**.

Table 36 Summary of hydrogeological setting - Zone F

Condition	Description
Aquifer characteristics	Zone F is underlain by a Secondary A Aquifer relating to the Cornbrash Formation, a Principal aquifer relating to the Blisworth Limestone Formation, and unproductive strata relating to the Blisworth Clay Formation.  The potential presence of low permeability clay at relatively shallow depths beneath the zone, while restricting downwards migration, may increase the potential for lateral migration of shallow groundwater (and therefore mobile
	contamination, if present).
Depth to groundwater and flow	The anticipated depth to groundwater is in the order of 13m below ground level estimated from BGS Logs. Shallow groundwater in the zone area is anticipated to flow in an easterly direction, i.e. in line with local topography and in the direction of the River Witham.
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain directly to ground.
Historical implications	There are multiple small ponds on and around the zone (two within the zone and two off site), and there are two historic boreholes which are located within the zone at The Maltings.



Condition	Description
for hydrogeology	
Licensed groundwater abstractions	The environmental database report indicates that there are no groundwater abstractions within a 1 km radius of the zone.
Source protection zones	Information available in the Envirocheck report indicates that the zone does not lie within a currently designated source protection zone (SPZ).

## 9.7 Hydrology

A summary of the hydrology within the zone area is summarised in **Table 37**.

Table 37 Summary of hydrology in site area – Zone F

Condition	Description	
Surface watercourses/ features	There are two ponds within the zone and another two ponds located 10 m southeast and 500 m east of the zone respectively. There are drainage ditches located within the zone and to the east of the zone.	
Surface water abstractions	The environmental database report indicates that there are no surface water abstractions within a 1 km radius of the zone.	
Site drainage	Evidence from the Envirocheck report indicated that drainage ditches/streams are present on the zone and in the surrounding area.	
Preliminary flood risk assessment	The indicative floodplain map for the area shows that the zone does not lie within any designated floodplains.	

### 9.8 Sensitive land uses

**Table 38** provides a summary of any environmentally sensitive areas identified within 250 m of the zone based on the environmental database report.

Table 38 Environmentally sensitive areas – Zone F

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	0	0	N/A



Feature	Present within 250 m of site?	Details	Likely pathways from site?
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	0	0	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	0	0	N/A
Nearest high sensitivity development, e.g. residential	1	The Maltings, located on site in the north west.	Direct contact, migration of potential contaminants.



# 10 DESK-BASED ASSESSMENT - ZONE G

## 10.1 Site history

### 10.1.1 Historical development record

The development history of Zone G and the surrounding area based upon assessment of historical plans and records is detailed in **Table 39**. The historical maps reviewed are shown within the environmental database report in <u>Appendix D7</u>.



Table 39Summary of historical development – Zone G

Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	Zone G is predominantly fields. There is an old quarry located in the northeast corner of the site in zone G4, as well as a guidepost.	
1889	1904	Data Gap	
1905	1906	No Change	
1907	1946	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1947	1951	No Change	
1952	1955	Data Gap	
19	56	No Change	
1957	1979	Data Gap	
19	80	The quarry located in the northeast corner of the site in zone G4 is no longer present.	
1980	1984	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
19	985	No Change	
1986	1993	Data Gap	
19	994	No Change	
1995	1999	Data Gap	
20	000	No Change	
2001	2021	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
20	)22	No Change	

Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation
1887	1888	The surrounding land is predominantly fields. Gorse Hill Covert is located immediately adjacent to the zone to the north in zones G2 and G3, and there is one road located immediately adjacent to the zone to the east (G4), running in a north-to-south direction (G4), one running east-to-west called Gorse Hill Lane immediately beyond the northern boundary of the zone, and another also running in a north to south direction immediately to the west of the zone called Gorse Lane (G2). There is a small quarry located approximately 100 m northeast of the zone (G4). Another Glebe Farm (not the same as mentioned in Zone E) is located 800 m northwest of the zone, and there is also a Gravel Pit located here, immediately south of the buildings. There is a farm called Temple High Grange Farm located 1 km northeast of the zone, which constitutes multiple buildings and associated landscaping.	
1889	1904	Data Gap	
1905	1906	No Change	
1907	1946	Data Gap	
1947	1951	No Change	
1952	1955	Data Gap	
19	56	No Change	
1957	1978	Data Gap	
1979	1980	There are now pylons running in a north to south	direction northwest of the zone.
1981	1984	Data Gap	
Glebe Farm is now called Heath Farm and has been reconfigured/redevelop other significant changes.		een reconfigured/redeveloped. No	
1986	1993	Data Gap	
19	94	No Change	
1995	1999	Data Gap	
2000 No Change			



2001	2021	Data Gap	
20	2022 No Change		
Relevant information sources: Historical OS maps 🗵 Town plans 🗆 Information from the Local Planning Authority 🗆 Aerial photography 🗆 Previous reports 🗆			
land u	Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.		

There has been no historical development on site, and any potential contamination on this site would likely be associated with its agricultural land use, or perhaps with the Old Quarry in zone G4.

The stone quarry identified in zone G4 is presumed to have been infilled with inert and/or natural material, however there lies the potential for more onerous material to have been used.

## 10.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D7</u>) are summarised below in **Table 40**.

Table 40 Summary of environmental permits, landfills and incidents – Zone G

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	0	N/A
Discharge consents	0	0	0	N/A
Registered radioactive substances	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details		
Landfill and waste						
Active landfills	0	0	0	N/A		
Historic / closed landfills	0	0	0	N/A		
Other waste management licences	0	0	0	N/A		
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A		
Hazardous substances/ industri	dous substances/ industrial land uses					
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A		
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A		
Contaminated land Part 2A register entries and notices	0	0	0	N/A		
Contemporary trade directory entries	0	2	0	N/A		
Fuel station entries	0	0	0	N/A		

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

No potential sources of contamination have been identified from the environmental database report for Zone G.



### 10.3 Information from regulatory authorities

#### 10.3.1 Site services

Buried utility services and their backfill can provide preferential pathways for gas, vapour or groundwater to migrate along to another part of the site or to a receptor. They can also represent significant constraints to development.

Obtaining a full set of service plans was outside the scope of this report. Services identified on-site during the walkover are detailed in section 17.

## 10.4 Site geology

### 10.4.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 41**.

Table 41 Site geology - Zone G

Strata	Description	Estimated thickness	Permeability	Map Legend
	No Superfic	ial Deposits		
Upper Lincolnshire Limestone Member	Limestone, overwhelmingly dominated by high-energy ooidal and shell fragmental grainstones, but includes secondarily recrystallised and micritized lithologies.	Up to 15 m	Permeable	o <sup>5</sup>
Lower Lincolnshire Limestone Member	Limestones, dominated by low- energy calcilutite and and peloidal wackestone and packstone. With subsidiary carbonate mudstone.	Up to 20 m	Permeable	5
Relevant info	rmation sources: BGS Geoindex D	BGS borehol	e logs □ Previou	us SI reports □

With reference to the historical data the site has never been developed, and therefore widespread Made Ground would not be anticipated. There may be some Made Ground in the vicinity of the Old Quarry located in zone G4.

The site would be expected to be directly underlain by a limited thickness of topsoil.

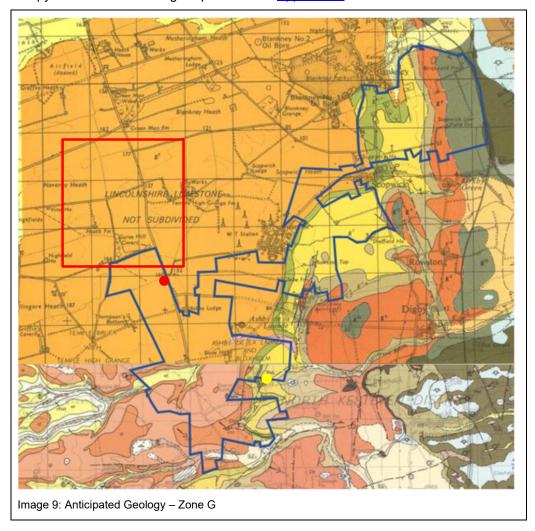
A summary of historical BGS borehole records within and near the zone are provided in **Table 42** below.



Table 42 Summary of BGS borehole records - Zone G

Borehole ref	Depth (m)	Map Legend
TF05 NW38	28.71	

A copy of these borehole logs is presented in Appendix E.



#### 10.4.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 10-30% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces,



such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the zone is considered for future residential development, further assessment will be required, in line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

### 10.5 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500 m of the zone.

### 10.5.1 Areas of other (rock or mineral) mining

Zone G lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member and the Blisworth Limestone Formation, and historically there was an Old Quarry within zone G4, as well as an Old Quarry 100 m northeast of the zone.

## 10.6 Hydrogeology

A summary of the hydrogeological setting of the zone, with respect to the anticipated geological sequence, is presented below in **Table 43**.

Table 43 Summary of hydrogeological setting – Zone G

Condition	Description
	Zone G is underlain by a Principal Aquifer relating to the Upper Lincolnshire Limestone Member.
Aquifer characteristics	The potential presence of low permeability clay at relatively shallow depths beneath the zone, while restricting downwards migration, may increase the potential for lateral migration of shallow groundwater (and therefore mobile contamination, if present).
Depth to groundwater and flow	The anticipated depth to groundwater is in the order of 26 m below ground level estimated from BGS Logs. Shallow groundwater in the zone area is anticipated to flow in a southeasterly direction, i.e. in line with local topography and in the direction of the River Witham.
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain directly to ground.
Licensed groundwater abstractions	The environmental database report indicates that there is one groundwater abstraction within a 1km radius of the zone, which is used for general farming and domestic purposes.
Source protection zones	Information available in the Envirocheck report indicates that the zone does not lie within a currently designated source protection zone (SPZ).



# 10.7 Hydrology

A summary of the hydrology within the zone area is summarised in Table 44.

Table 44 Summary of hydrology in site area – Zone G

Condition	Description
Surface watercourses/ features	There are no watercourses or water features on or adjacent to the zone, with the closest watercourse most likely being a stream running through the village of Scopwick, located approximately 4 km to the east.
Surface water abstractions	The environmental database report indicates that there are no surface water abstractions within a 1 km radius of the zone.
Site drainage	There are no drains shown on the maps for this area, and therefore the zone is anticipated to drain directly to the ground.
Preliminary flood risk assessment	The indicative floodplain map for the area shows that the site does not lie within any designated floodplains.

### 10.8 Sensitive land uses

**Table 45** provides a summary of any environmentally sensitive areas identified within 250 m of the zone based on the environmental database report.

Table 45 Environmentally sensitive areas - Zone G

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	0	0	N/A
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	0	0	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	0	0	N/A
Nearest high sensitivity development, e.g. residential	1	The Maltings, located within the zone to the north west.	Direct contact, migration of potential contaminants.



# 11 DESK-BASED ASSESSMENT - ZONE H

## 11.1 Site history

### 11.1.1 Historical development record

The development history of Zone H and the surrounding area based upon assessment of historical plans and records is detailed in **Table 46**. The historical maps reviewed are shown within the environmental database report in Appendix D8.



Table 46Summary of historical development – Zone H

Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	The zone boundary cuts through Rowston Plantation, and a small pond feature is located south of Rowston Plantation, both within zone H4.	
1889	1904	Data Gap	
1905	1906	No significant change	
1907	1946	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1947	1951	There are some unidentified structures located in the south of the zone (H4), east of Rowston Plantation.	
1952	1955	Data Gap	
19	56	The unidentified structures are labelled as a sewage works. These sewage works are not included within the site redline boundary and will subsequently be referred to as an offsite feature going forward.	
1957	1978	Data Gap	
1979	1980	No significant change	
1981	1984	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
19	985	No significant change	
1986	1993	Data Gap	
19	994	No significant change	
1995	1999	Data Gap	
20	000	No significant change	
2001	2021	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
20	)22	No significant change	

Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation	
1887	1888	H8, and Stone Pit Plantation is located in zone H	mall quarry pit is located just outside the zone boundary in the southeast in zone and Stone Pit Plantation is located in zone H4 which has a stone pit in the th. There is another quarry located 600 m north of the zone, which will later the part of Longwood Quarries.	
1889	1904	Data Gap		
1905	1906	No Change		
1907	1946	Data Gap		
1947	1951	The quarry in zone H8 has been s	ignificantly enlarged.	
19	956	Airfield shown outside zone boundary (may have been there during previous map edition but not displayed due to the war effort). There is a sewage works located in zone H4 immediately adjacent to the site.		
1957	1978	Data Gap		
1979	1980	Map shows large scale development associated with the RAF base. (H7) Airfield shown as disused. (H8) map shows quarry has expanded significantly.		
1981	1984	Data Gap		
19	There has been a large amount of development to the west of the site in zone H which is now RAF Digby. The Airfield is labelled as disused, and the quarry in H now marked as disused.			
1986	1999	Data Gap		
20	000	There are a series of masts shown wi	thin the disused airfield.	
2001	2021	Data Gap		
20	)22	No Change		
	Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □			

Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.



There has been a minimal level of development on and around Zone H, and therefore it has not been subject to significant contaminative land use in this respect.

It is not clear whether the land functioned as arable farmland, however if this is the case then there may be some level of contamination associated with agricultural industry and the use of pesticides, herbicides and fertilisers.

The most significant source of contamination identified from the historic maps would be associated with the RAF airfield, which appeared to extend up to the western boundary of zone H8.

The sewage works, which is present as an 'off-site enclave' within zone H4, would also represent another potential source of contamination.

### 11.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D8</u>) are summarised below in **Table 47**.

Table 47 Summary of environmental permits, landfills and incidents – Zone H

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	1	0	212 m SW: Lincoln District, Unknown Pollutant, Underground Strata, 30/10/1992, Ref. 1496, Potential Groundwater, Unknown Cause, Cat 2 Significant Incident.



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details	
Discharge consents	1	1	0	On Site: Severn Trent Services Defence Limited, RAF Digby Sewage Treatment Works, Ref. Cdnnf09631, 23/12/1996, Sewage Discharges (Final/Treated Effluent), Freshwater Stream/River, Scopwick Beck. 154 m SE: Autism Care, Hospital, Prnlf12144, 14/12/2011, Sewage Dsicharges (Final/Treated Effluent) Land/Soakaway.	
Registered radioactive substances	0	0	0	N/A	
Landfill and waste					
Active landfills	0	0	0	N/A	
Historic / closed landfills	0	0	0	N/A	
Other waste management licences	0	0	0	N/A	
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A	
Hazardous substances/ industrial land uses					
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A	



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A
Contaminated land Part 2A register entries and notices	0	0	0	N/A
Contemporary trade directory entries	0	0	0 of relevance	N/A
Fuel station entries	0	1	0	61 m SE: Digby Aerodrome Post Office and Filling Station, Obsolete.

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

No potential sources of contamination have been identified from the environmental database report for Zone H except for potential tanks associated with the adjacent RAF base to the west.

# 11.3 Information from regulatory authorities

#### 11.3.1 Site services

Buried utility services and their backfill can provide preferential pathways for gas, vapour or groundwater to migrate along to another part of the site or to a receptor. They can also represent significant constraints to development.

Obtaining a full set of service plans was outside the scope of this report. Services identified on-site during the walkover are detailed in section 17.

## 11.4 Site geology

#### 11.4.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 48**.



Table 48 Site geology - Zone H

Strata	Description	Estimated thickness	Permeability	Map Legend		
	No Superficial	Deposits				
Blisworth Limestone Member	Pale grey to off-white or yellowish limestones with thin marls and mudstones, fossiliferous, bioturbated peloidal, ooidal and shell-fragmental more-or-less argillaceous packstones and wackestones, subordinate cross-bedded ooidal shell-fragmented grainstones.	Typically 6 – 7 m	Permeable	g <sup>7</sup>		
Rutland Formation	Grey marine mudstone passing up into non-marine mudstone and siltstone, with a greenish-grey rootlet bed at the top. Occasional limestone beds (Is)	Typically 8 – 12 m	Permeable	g <sup>6-7</sup>		
Upper Lincolnshire Limestone Member	Limestone, mainly coarse grained ooidal grainstones (ol), with subsidiary limestones of other types (gl) including fine to medium grained grainstone, recrystallized limestone and possible reef knolls	Up to 15 m	Permeable	g <sup>5</sup>		
Lower Lincolnshire Limestone Member	Limestones, dominated by low-energy calcilutite and peloidal wackestone (wl) and packstone. With subsidiary carbonate mudstone (ml).	Up to 20 m	Permeable			
Relevant informa	tion sources: BGS Geoindex ⊠ E	Relevant information sources: BGS Geoindex ⊠ BGS borehole logs □ Previous SI reports □				

With reference to the historical data the majority of the site has never been developed, and therefore widespread Made Ground would not be anticipated. There may be some Made Ground in the vicinity of both the RAF airfield adjacent to zone H8 and the off-site Sewage Works within Zone H4.

The site would be expected to be directly underlain by a limited thickness of topsoil.

A summary of historical BGS borehole records within and near the zone are provided in **Table 49** below.

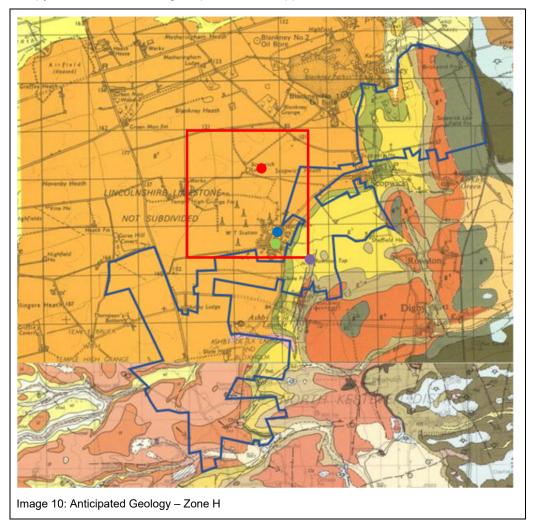
Table 49 Summary of BGS borehole records - Zone H

Borehole ref	Depth (m)	Map Legend
TF05 NW44	17.00	



Borehole ref	Depth (m)	Map Legend
TF05 NW7/A	37.03	
TF05 NW13	16.46	
TF05 NE4	34.00	

A copy of these borehole logs is presented in Appendix E.



11.4.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 10-30% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.



The environmental database report stated that less affected radon areas were present within the boundary of the zone, however the 10-30% classification has been chosen to represent the most conservative assessment.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the zone is considered for future residential development, further assessment will be required, in line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

## 11.5 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500 m of the zone.

### 11.5.1 Areas of other (rock or mineral) mining

The zone lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member and the Blisworth Limestone Formation. There is no history of quarrying within the zone itself, but there was a quarry located adjacent to the southwest of the zone (in zone H8), a Stone Pit adjacent to the southwest (in zone H4), and another quarry approximately 600 m northwest. The quarry 600 m northwest later forms part of the Longwood Quarry.

## 11.6 Hydrogeology

A summary of the hydrogeological setting of the site, with respect to the anticipated geological sequence, is presented below in **Table 50**.

Table 50 Summary of hydrogeological setting – Zone H

Condition	Description
Aquifor	Zone H is underlain by a Secondary B aquifer relating to the Rutland Formation and a Principal aquifer relating to the Lincolnshire Limestone Member and the Blisworth Limestone Formation.
Aquifer characteristics	The potential presence of low permeability clay at relatively shallow depths beneath the site, while restricting downwards migration, may increase the potential for lateral migration of shallow groundwater (and therefore mobile contamination, if present).
Depth to groundwater and flow	The anticipated depth to groundwater is in the order of 13 m below ground level estimated from BGS Logs. Shallow groundwater in the site area is anticipated to flow in an easterly direction, i.e. in line with local topography and in the direction of the River Witham.



Condition	Description
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain directly to ground.
Licensed groundwater abstractions	The environmental database report indicates that there are two groundwater abstractions within a 1km radius of the zone, both of which are for private water supply (Crown Property/Government Department) purposes.
Source protection zones	Information available in the Envirocheck report indicates that the north of the zone lies within zone I (Inner Zone) of a source protection zone, relating to the private supply borehole located just north of Heath Road (B1181) northwest of the zone.

## 11.7 Hydrology

A summary of the hydrology within the zone area is summarised in **Table 51**.

Table 51 Summary of hydrology in site area – Zone H

Condition	Description		
Surface watercourses/ features	There is a drain located 20 m southeast of the zone, and there is another drain leading to/from the sewage works.		
Surface water abstractions	The environmental database report indicates that there are no surface water abstractions within a 1 km radius of the zone.		
Site drainage	Evidence from the Envirocheck report indicates that drainage ditches/streams are present within the zone and in the surrounding area.		
Preliminary flood risk assessment	The indicative floodplain map for the area shows that the zone does not lie within any designated floodplains.		

## 11.8 Sensitive land uses

**Table 52** provides a summary of any environmentally sensitive areas identified within 250 m of the zone based on the environmental database report.



Table 52 Environmentally sensitive areas – Zone H

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  – Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	International designations – Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	No	N/A
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	No	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	No	N/A
Nearest high sensitivity development, e.g. residential	Nearest high sensitivity development, e.g. residential	Yes	Residential homes located on RAD Digby.



# 12 DESK-BASED ASSESSMENT – ZONE I

# 12.1 Site history

### 12.1.1 Historical development record

The development history of Zone I and the surrounding area based upon assessment of historical plans and records is detailed in **Table 53**. The historical maps reviewed are shown within the environmental database report in <u>Appendix D9</u>.



Table 53 Summary of historical development - Zone I

Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	Zone I is predominantly fields. In the northwest of the zone (I10), there are two quarries. One of the quarries falls within the zone completely, while the other is only partially within the zone and is an old quarry. A road named Trundle Lane is located in zone I15 in the northeast, running in an east-to-west direction, a road called Acre Lane is located in zone I16 in the northeast, running in a north-to-south direction, and another road (later the B1188) is running in a north-to-south direction running through the centre of zones I14, I10 and I7. There are also multiple small ponds, three are located in the northeast area of the zone (I16), and two are located in the southwest area of the zone (I1 and I5).	
1889	1904	Data Gap	
1905	1906	There are two structures located in I14 and I15 in the north-eastern portion of the zone, and they are labelled as pumps. There is another pump located 50 m away from these structures to the east (I15). The quarry in I10 is now disused.	
1907	1946	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1947	1951	No Change	
1952	1955	Data Gap	
19	56	There is a structure located centrally within the southwestern portion of the site in zone I5, which is labelled as a windpump.	
1957	1978	Data Gap	
19	79	There are drains located across the zone. Pylons have been constructed across the north-eastern portion of the zone (I14 and I15), running in a southeast-to-northwest direction.	SLDFWICK C.P. No.2 WAAD
1980	1984	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1985		The windpump in zone I5 has been expanded. The old quarry in zone I10 which partially encroached onto the site now has a structure built upon it, and there is a cemetery adjacent to the east which also encroaches slightly onto the zone (I10).	SCOWNCK CP
1986	1993	Data Gap	
19	994	No Change	
1995	1999	Data Gap	
2000		No Change	School Co.
2001	2021	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
20	)22	No Change	

Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation		
1887	1888	I11), where a pump is located 150 m south of the and a chapel in the east of the village. There is a believed to be Scopwick Beck, running through the east. Scopwick Corn Mill is located in zone I5 are some residential properties called Mill Cottag of the Mill itself. Sheffield House is located immer in the south of the zone (I2), and there is an Old surrounding cuttings/embankments, located in the zone. There are multiple roads around the zone, at various locations. One road (the B1188) is run through the centre of the zone, one is running ear centre of the zone, and another is Bloxholm Lane approximately 300 m northwest of the zone. An elimmediately west of the zone (I14), and there is a 100 m northwest of this which is also visible within disused Corn Mill located 500 m south of the zone Cobblers Lane runs from the boundary in the sou	copwick is located immediately south and east of the zone (I10 and timp is located 150 m south of the Old Quarry, and there is a school the east of the village. There is also an unnamed watercourse, icopwick Beck, running through the centre of town and flowing to ick Corn Mill is located in zone I5 in the west of the zone, and there ential properties called Mill Cottages approximately 250 m northeast Sheffield House is located immediately across a southern boundary ne zone (I2), and there is an Old Fish Pond which has some tings/embankments, located in the south-eastern corner of the multiple roads around the zone, some of which cross onto the zone ons. One road (the B1188) is running in a north-to-south direction the of the zone, one is running east-to-west (B1191) through the ne, and another is Bloxholm Lane running east-to-west 00 m northwest of the zone. An estate called The Firs is located st of the zone (I14), and there is a stone pit located approximately to of this which is also visible within zone I14. There is also a lill located 500 m south of the zone (I12) along Scopwick Beck. The state of the zone in direction. There are six small ponds located south and east of the line is because of the six by located in the village.		
1889	1904	Data Gap			
1905	1906	No Change			
1907	1946	Data Gap			
1947	1951	There has been some development in the west and east of the village, zones I10 and I11. No other significant change.			
1952	1955	Data Gap			
There is a wind pump located along Scopwick Beck southeast of the value have been constructed that run in a southeast-to-northwest direction, in the zone in I14 and I15.					
1957	1978	Data Gap			
1979	1980	No Change	_		



Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation			
1981	1984	Data Gap				
1985		Drains are now labelled across the east of the zone, and there has been some more minor development within the village. There is now a caravan park east of the village in zone I12.				
1986	1993	Data Gap				
19	94	The Firs has been renamed Scopwick House, and there are associated buildings called Scopwick House Cottage and The Paddock. No other significant change.				
1995	1999	Data Gap				
20	000	There is a Stone Quarry located approximately 500 m northwest of the zone, which forms part of Longwood Quarry.				
2001	2021	Data Gap				
20	)22	No Change				
Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □						
land u	Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.					

There has not been a significant amount of development on site, and any potential contamination is most likely to be associated with either its agricultural land use or the pumping station located in zone I5.

The stone quarries identified in zone I10 are presumed to have been infilled with inert and/or natural material, however there lies the potential for more onerous material to have been used.

It is not clear whether the land functioned as arable farmland, however if this is the case then there may be some level of contamination associated with agricultural industry and the use of pesticides, herbicides and fertilisers.

# 12.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D9</u>) are summarised below in **Table 54**.

Table 54 Summary of environmental permits, landfills and incidents – Zone I

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	2	0	194 m N: Road, Oils (petrol), 22/01/1998, Ref. 2916, Freshwater Stream/River, Leaking Bales/Bags, Cat 3 Minor Incident 204 m NE: Other General Premises, Miscellaneous, 03/03/1994, Ref. 1825, Freshwater Stream/River, Other Cause, Cat 3 Minor Incident



				On Site W: Paul E Scholey, Waste Water Treatment Works, Walnut Cottage, Ref. Pr3lfu504, 11/03/1971 to 09/06/1997, Unknown Type, Onto Land.
				On Site SW: North Kesteven District Council, Domestic Property (Multiple), LN4 3PA, Ref. Pr3lfu32, 10/02/1966 to 01/10/1996, Unknown Type, Onto Land.
Discharge consents	2	1	1	240 m NE: Anglian Water Services Limited, Pumping Station on Sewerage Network, Ref. Aw3nff984, 09/03/1973, Sewage Discharges, Freshwater Stream/River, Unknown Tributary.
				268 m NE: North Kesteven District Council, WWTW, Ref. Pr3nfa0872, 29/051963 to 30/03/1992, Sewage Discharges, Freshwater Stream/River, Unknown Tributary.
Registered radioactive substances	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details				
Landfill and waste								
Active landfills	0	0	1	393 m NW: Longwood Quarry, Licence Number 70908, Landfills Taking Non- Biodegradable Wastes (not construction), Issued 27/02/1987, Licence Status CLOSURE.				
Historic / closed landfills	0	0	0	N/A				
Other waste management licences	0	0	1	321 m NW: Longwood Quarry, Licence Number 400444, Treatment of Waste to Produce Soil <75,000 TPY, Issued 14/08/2013.				
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A				
Hazardous substances/ industri	al land use	es .						
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A				
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A				
Contaminated land Part 2A register entries and notices	0	0	0	N/A				
Contemporary trade directory entries	0	1	0	93 m NW: L Brackenbury & Son Ltd, Garage Services, Active				



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Fuel station entries	0	1	0	101 m NW: L Brackenbury & Sons Garage, Wcf, Petrol Station, Open.

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

The environmental database report has identified a licensed waste management facility within 400 m of the northwestern boundary of the zone (Longwood Quarry). The report suggests that part of the quarry is used as a waste treatment facility (maximum 75,000 tonnes per year) and another part as a registered landfill site, authorised to accept agricultural waste and "Lincs Category A – Solid Inert".

## 12.3 Information from regulatory authorities

#### 12.3.1 Site services

Buried utility services and their backfill can provide preferential pathways for gas, vapour or groundwater to migrate along to another part of the site or to a receptor. They can also represent significant constraints to development.

Obtaining a full set of service plans was outside the scope of this report. Services identified on-site during the walkover are detailed in section 17.

## 12.4 Site geology

#### 12.4.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 55**.

Table 55 Site geology - Zone I

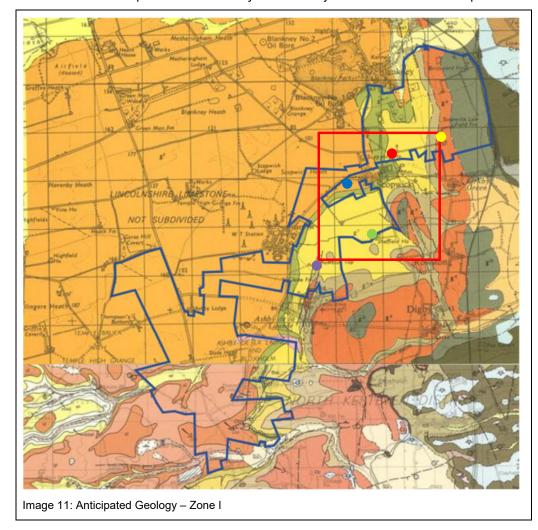
Strata		Estimated thickness	Permeability	Map Legend



Strata	Description	Estimated thickness	Permeability	Map Legend
Cornbrash Formation (east of the site only)	Limestone, medium to fine grained, predominantly bioclastic wackestone and packstone with sporadic peloids. Thin argillaceous partings or interbeds of argillaceous mudstone may occur.	Typically 2 – 4 m	Permeable	g°
Blisworth Clay Formation (southwest and northeast of the site only)	Silicate-mudstone, grey, commonly variegated purplish red, yellow and green, poorly bedded to blocky. Mudstone weathers to a highly plastic clay.	2 m – 4 m	Impermeable	g <sup>7-8</sup>
Blisworth Limestone Member	Pale grey to off-white or yellowish limestones with thin marls and mudstones, fossiliferous, bioturbated peloidal, ooidal and shell-fragmental more-or-less argillaceous packstones and wackestones, subordinate cross-bedded ooidal shell-fragmented grainstones.	Typically 6 – 7 m	Permeable	g <sup>7</sup>
Rutland Formation	Grey marine mudstone passing up into non-marine mudstone and siltstone, with a greenish-grey rootlet bed at the top.	Typically 8 – 12 m	Permeable	g <sup>6-7</sup>
Upper Lincolnshire Limestone Member	Limestone, mainly coarse grained ooidal grainstones, with subsidiary limestones of other types including fine to medium grained grainstone, recrystallized limestone and possible reef knolls	Up to 15 m	Permeable	g <sup>5</sup>
Lower Lincolnshire Limestone Member	Limestones, dominated by low-energy calcilutite and peloidal wackestone and packstone. With subsidiary carbonate mudstone.	Up to 20 m	Permeable	Olympia the F

With reference to the historical data the majority of the site has never been developed, and therefore widespread Made Ground would not be anticipated. There may be some Made Ground in the vicinity of the Old Quarry located in I10 and the roads running through the site.





The site would be expected to be directly underlain by a limited thickness of topsoil.

A summary of historical BGS borehole records within and near the zone are provided in **Table 56** below.

Table 56 Summary of BGS borehole records - Zone I

Borehole ref	Depth (m)	Map Legend
TF05 NE5	31.00	
TF05 NE2	31.00	
TF05 NE15	60.00	
TF05 NE4	34.00	
TF05 NE22	59.00	



#### 12.4.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 3-5% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the site is considered for future residential development, further assessment will be required, in line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

### 12.5 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500m of the zone.

#### 12.5.1 Areas of other (rock or mineral) mining

Zone I lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member and the Blisworth Limestone Formation, and historically there was one quarry within zone I10.

# 12.6 Hydrogeology

A summary of the hydrogeological setting of the zone, with respect to the anticipated geological sequence, is presented below in **Table 57**.

Table 57 Summary of hydrogeological setting - Zone I

Condition	Description
Aquifer characteristics	Zone I is underlain by a Secondary A Aquifer relating to the Cornbrash Formation, a Secondary B Aquifer relating to the Rutland Formation and unproductive strata relating to the Blisworth Clay Formation, as well as a Principal Aquifer relating to the Blisworth Limestone Formation and the Lincolnshire Limestone Member.
	The potential presence of low permeability clay at relatively shallow depths beneath the site, while restricting downwards migration, may increase the potential for lateral migration of shallow groundwater (and therefore mobile contamination, if present).



Condition	Description	
Depth to groundwater and flow	The anticipated depth to groundwater is in the order of 3 m below ground level estimated from BGS Logs. Shallow groundwater in the zone area is anticipated to flow in an easterly direction, i.e. in line with local topography and in the direction of the River Witham.	
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain directly to ground.	
Historical implications for hydrogeology	There are multiple small ponds on and around the zone.	
Licensed groundwater abstractions	The environmental database report indicates that there are 7 groundwater abstractions within a 1 km radius of the zone, one of which is for private household use including drinking.	
Source protection zones	Information available in the Envirocheck report indicates that some of the site lies within zone 1 of the groundwater source protection zone for the private supply borehole located just north of Heath Road (B1181) in the west of the zone.	

# 12.7 Hydrology

A summary of the hydrology within the zone area is summarised in **Table 58**.

Table 58 Summary of hydrology in site area – Zone I

Condition	Description			
Surface watercourses/ features	There are five small ponds within the zone site and another six ponds located within 1 km of the zone to the south and the east. There are multiple drainage ditches located on and around the zone, and there is a stream running through the village of Scopwick which flows to the east.			
Surface water abstractions	The environmental database report indicates that there are no surface water abstractions within a 1 km radius of the zone.			
Site drainage	Evidence from the Envirocheck report indicated that drainage ditches/streams are present within he zone and in the surrounding area.			
Preliminary flood risk assessment	The indicative floodplain map for the area shows that the majority of the site does not lie within any designated floodplains, with the exception of a small area in the central west of the site, which is in zone 2 (extreme flooding from Rivers without defence).			

### 12.8 Sensitive land uses

**Table 59** provides a summary of any environmentally sensitive areas identified within 250 m of the zone based on the environmental database report.



Table 59 Environmentally sensitive areas – Zone I

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	0	N/A	N/A
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	0	N/A	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	0	N/A	N/A
Nearest high sensitivity development, e.g. residential	Yes	Residential properties close to the zone boundary in the village of Scopwick, Sheffield House, Mill Cottages, Scopwick House.	Lateral migration of potential contaminants.



# 13 DESK-BASED ASSESSMENT – ZONE J

# 13.1 Site history

### 13.1.1 Historical development record

The development history of Zone J and the surrounding area based upon assessment of historical plans and records is detailed in **Table 60**. The historical maps reviewed are shown within the environmental database report in Appendix D10.



Table 60Summary of historical development - Zone J

Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	Zone J is predominantly fields, although there is a farm building located in the northwest of the zone (J13). This building is not included within the site redline boundary and will be discussed as an off-site feature going forwards.	Trans from the option of a tipout
1889	1904	Data Gap	
1905	1906	There is a small pond on the southern boundary of the zone (J13). No other significant change.	
1907	1946	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
	47	No Change	S T O S
1948	1955	Data Gap	
19	56	No change	
1957	1978	Data Gap	
19	79	No change	
1980	1984	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1985		There are multiple drains located on the site.	ROWSTON CS/
1986	1993	Data Gap	
1994		No Change	
1995	1999	Data Gap	
2000		There is a small forested area present in the central south of the site.	ROPESTALO
2001	2021	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
20	)22	No Change	

Date	Date			
from	to	Historical Land Use (off-site)  Distance (m) and orientation		
1887	1888	is located 250 m southwest of the zone (J9), and well, a pond and a church. There is a farm buildir zone (J13), which is not included within the site rewatercourse called Scopwick Beck running throudirection, and Kirkby Green Water Mill is located There is a small quarry located approximately 20 north of the village. The Great Northern & Great I located immediately beyond the eastern boundar running in a north-to-south direction. Running pay watercourse which splits off from the railway line goods shed associated with the railway located 2 and Scopwick and Timberland Station is located windmill located 700 m southeast of the zone. A sis located 750 m south of the zone, and there are	adding area is predominantly fields, although the village of Kirkby Green 50 m southwest of the zone (J9), and constitutes residential homes, a land a church. There is a farm building located in the northwest of the which is not included within the site redline boundary. There is a called Scopwick Beck running through the village flowing in an easterly located Scopwick Beck running through the south bank of the stream. It will again that the site redline boundary of the zone and just village. The Great Northern & Great Eastern Joint Railway line is nediately beyond the eastern boundary of the zone (J14), and it is north-to-south direction. Running parallel to the railway in the north is a see which splits off from the railway line to move to the south. There is a associated with the railway located 250 m southeast of the zone (J14), ck and Timberland Station is located 500 m southeast. There is a lated 700 m southeast of the zone. A forested area called Kirkby Gorse 50 m south of the zone, and there are various small ponds located east of the zone. There is a road (B1191) running in an east-to-west direction rough the village 300 m south of the zone.	
1889	1904	Data Gap		
1905	1906	There is a well located at the farm house in the other significant cha	` ,	
1907	1946	Data Gap		
		There has been some small development within change.	the village. No other significant	
1948	1955	Data Gap		
19	56	Kirkby Gorse is no longer present.		
1957	1978	Data Gap		
The farmhouse in the northwest of the zone (J13) has expanded and is labelle Scopwick Low Field Farm. There has been some development around the God Shed, there are more buildings and there are some circular structures which correpresent tanks (J14). There has also been development within the village, with more structures being present and Manor Farm being labelled.		development around the Goods ne circular structures which could lopment within the village, with		



Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation	
1981	1984	Data Gap		
19	The new buildings around the previous Goods Shed in zone J14 are now labelle as Poultry Houses, and the train station no longer appears on the map. There is sewage works located 1.1 km southwest of the zone, and there are many drains labelled around the zone to the south and the east.		appears on the map. There is a one, and there are many drains	
1986	1993	Data Gap		
19	1994 No Change			
1995	1999	Data Gap		
20	000	There is a pumping house located approximately 450 m southwest of the zone. No other significant changes.		
2001	2021	Data Gap		
20	)22	No Change		
	Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □			
Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.				

The most significant sources of potential contamination are associated with the agricultural land use of the site, the railway line running immediately adjacent to the site in the east, and the off-site goods shed which later becomes poultry houses.

It is not clear whether the land functioned as arable farmland, however if this is the case then there may be some level of contamination associated with agricultural industry and the use of pesticides, herbicides and fertilisers.

## 13.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D10</u>) are summarised below in **Table 61**.

Table 61 Summary of environmental permits, landfills and incidents - Zone J

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	1	252 m SE: Thames Valley Foods Ltd, Scopwick Free Range, Ref. PP3336FJ, 26/03/2012, Effective, Intensive Farming >40,000 Poultry.
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	1	790 m S: Construction, Scopwick, Oils (Diesel), 05/05/1997, Ref. 2723, Freshwater Stream/River, Poor Operational Practice, Cat 3 Minor Incident.



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Discharge consents	0	0	3	338 m SW: Mr F Pachler, Domestic Property (Single), Ref. Pr3lfu566, 08/06/1972 to 10/06/1997, Sewage Discharges (Final/Treated Effluent), Land/Soakaway. 386 m E: Mrs Anna Watt, Domestic Property (Single), Ref. Eprcb3895wc, 11/08/2015, Sewage Discharges (Final/Treated Effluent) Freshwater Stream/River, Ditch Leading to Car Dyke. 454 m SW: Anglian Water Services Ltd, Pumping Station on Sewerage Network, Ref. Aw3nff983, 09/03/1973, Sewage Discharges, Freshwater Stream/River, Unknown Tributary.
Registered radioactive substances	0	0	0	N/A
Landfill and waste				
Active landfills	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details		
Historic / closed landfills	0	0	0	N/A		
Other waste management licences	0	0	0	N/A		
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0 0 N/A			
Hazardous substances/ industrial land uses						
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A		
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A		
Contaminated land Part 2A register entries and notices	0	0	0	N/A		
Contemporary trade directory entries	0	0	0	N/A		
Fuel station entries	0	0	0	N/A		

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

No potential sources of contamination have been identified from the environmental database report for Zone J.

#### 13.2.1 Site services

Buried utility services and their backfill can provide preferential pathways for gas, vapour or groundwater to migrate along to another part of the site or to a receptor. They can also represent significant constraints to development.

Obtaining a full set of service plans was outside the scope of this report. Services identified on-site during the walkover are detailed in section 17.



# 13.3 Site geology

#### 13.3.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 62**.

Table 62 Site geology - Zone J

Strata	Description	Estimated thickness	Permeability	Map Legend
	No Superficial Deposit	s		
Oxford Clay Formation	Silicate-mudstone, grey, generally smooth to slightly silty, with sporadic beds of argillaceous limestone nodules.	50 – 70 m	Impermeable	g <sup>10</sup>
Kellaways Formation	Mudstone, grey, commonly silici-silty or silici-sandy, with beds of generally calcareous siltstone and sandstone.	5 – 8 m	Permeable	g <sup>10</sup>
Cornbrash Formation (west of the site only)	Limestone, medium to fine grained, predominantly bioclastic wackestone and packstone with sporadic peloids. Thin argillaceous partings or interbeds of argillaceous mudstone may occur.	Typically 2 – 4 m	Permeable	<b>g</b> 9
Relevant informa	tion sources: BGS Geoindex ⊠ E	BGS borehole le	ogs   Previous	SI reports □

With reference to the historical data the majority of the site has never been developed, and therefore widespread Made Ground would not be anticipated. There may be some Made Ground in the vicinity of the railway line in the east of the site (J14).

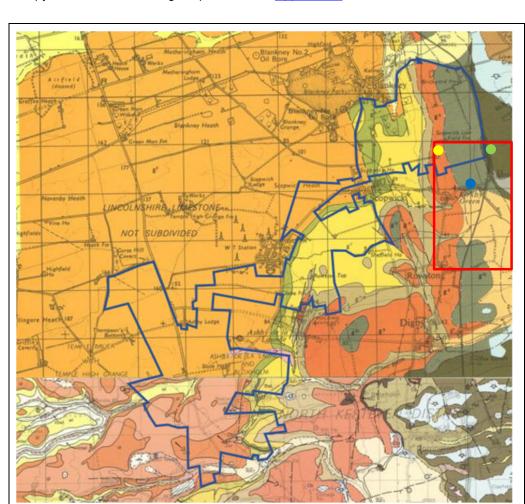
The site would be expected to be directly underlain by a limited thickness of topsoil.

A summary of historical BGS borehole records within and near the zone are provided in **Table 63** below.

Table 63 Summary of BGS borehole records - Zone J

Borehole ref	Depth (m)	Map Legend
TF05 NE17	18.00	
TF05 NE24	67.00	
TF05 NE22	59.00	





A copy of these borehole logs is presented in Appendix E.

Image 12: Anticipated Geology - Zone J

#### 13.3.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 1-3% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the zone



is considered for future residential development, further assessment will be required, in line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

### 13.4 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500m of the zone.

#### 13.4.1 Areas of other (rock or mineral) mining

Zone J lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member. While there is no evidence of pits or quarries on site, there was an old quarry located 200m south of the zone.

## 13.5 Hydrogeology

A summary of the hydrogeological setting of the zone, with respect to the anticipated geological sequence, is presented below in **Table 64**.

Table 64 Summary of hydrogeological setting - Zone J

Condition	Description
Aquifor	Zone J is underlain by a Secondary A Aquifer relating to the Kellaways Formation and the Cornbrash Formation, and unproductive strata relating to the Oxford Clay Formation.
Aquifer characteristics	The potential presence of low permeability clay at relatively shallow depths beneath the site, while restricting downwards migration, may increase the potential for lateral migration of shallow groundwater (and therefore mobile contamination, if present).
Depth to groundwater and flow	The anticipated depth to groundwater is in the order of 3 m below ground level estimated from BGS Logs. Shallow groundwater in the zone area is anticipated to flow in an easterly direction, i.e. in line with local topography and in the direction of the River Witham.
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain directly to ground.
Licensed groundwater abstractions	The environmental database report indicates that there are 2 groundwater abstractions within a 1 km radius of the zone, none of which are licenced for public potable water supply.
Source protection zones	Information available in the Envirocheck report indicates that the zone does not lie within a designated source protection zone.

# 13.6 Hydrology

A summary of the hydrology within the site area is summarised in **Table 65**.



Table 65 Summary of hydrology in site area – Zone J

Condition	Description			
Surface watercourses/ features	There are multiple small ponds located within 1 km of the zone to the south and the east, as well as many drainage ditches located within and around the zone. There is a stream running through the village of Kirkby Green which flows to the east.			
Surface water abstractions	The environmental database report indicates that there are no surface water abstractions within a 1 km radius of the zone.			
Site drainage	Evidence from the Envirocheck report indicates that drainage ditches/streams are present within the zone and in the surrounding area.			
Preliminary flood risk assessment	The indicative floodplain map for the area shows that the majority of the zone does not lie within any designated floodplains, with the exception of a small area in the east of the zone, which is in zones 2 and 3 (flooding/extreme flooding from Rivers without defences).			

### 13.7 Sensitive land uses

**Table 66** provides a summary of any environmentally sensitive areas identified within 250 m of the site based on the environmental database report.

Table 66 Environmentally sensitive areas - Zone J

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	0	N/A	N/A
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	0	N/A	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	0	N/A	N/A
Nearest high sensitivity development, e.g. residential	Yes	Scopwick Low Field Farm and residential homes in Kirkby Green	Lateral migration of potential contaminants.



# 14 DESK-BASED ASSESSMENT – ZONE K

Zone K does not encompass any of the site itself, beginning 900 m to the north and west of the site and including the remaining 100 m of the 1 km search buffer. Due to this, only the historical development of the land has been deemed relevant to the site assessment.

### 14.1 Site history

#### 14.1.1 Historical development record

The development history of Zone K and the surrounding area based upon assessment of historical plans and records is detailed in **Table 67**. The historical maps reviewed are shown within the environmental database report in <u>Appendix D11</u>.



Table 67Summary of historical development – Zone K

Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation		
1887	1888	There is a road/track running in a southwest-to-northeast direction approximately 900 m north of the zone, as well as another road running in a southeast-to-northwest direction called Bloxholm Lane approximately 500 m north of the zone			
1889	1904	Data Gap			
1905	1906	No Change			
1907	1946	Data Gap			
1947	1956	No Change			
1957	1972	Data Gap			
1973	1979	No Change			
1980	1984	Data Gap			
1985 No		No Change			
1986	1993	Data Gap			
19	94	No Change			
1995	1999	Data Gap			
20	00	No Change			
2001	2021	Data Gap			
20	The road running southwest-to-northeast is named as Long Wood Lane.				
Relevant information sources: Historical OS maps 🗵 Town plans 🗆 Information from the Local Planning Authority 🗆 Aerial photography 🗆 Previous reports 🗆					

Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.



The most significant sources of potential contamination are associated with the agricultural land use of the site.

## 14.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D11</u>) are summarised below in **Table 68**.

Table 68 Summary of environmental permits, landfills and incidents – Zone K

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details			
Agency and hydrological							
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A			
Enforcement and prohibition notices	0	0	0	N/A			
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	0	N/A			
Discharge consents	0	0	0	N/A			
Registered radioactive substances	0	0	0	N/A			
Landfill and waste							
Active landfills	0	0	0	N/A			
Historic / closed landfills	0	0	0	N/A			
Other waste management licences	0	0	0	N/A			



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A
Hazardous substances/ industri	al land use	es		
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A
Contaminated land Part 2A register entries and notices	0	0	0	N/A
Contemporary trade directory entries	0	0	0	N/A
Fuel station entries	0	0	0	N/A

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

No potential sources of contamination have been identified from the environmental database report for Zone K.



# 15 DESK-BASED ASSESSMENT – ZONE L

# 15.1 Site history

### 15.1.1 Historical development record

The development history of Zone L and the surrounding area based upon assessment of historical plans and records is detailed in **Table 69**. The historical maps reviewed are shown within the environmental database report in Appendix D12.



Table 69Summary of historical development - Zone L

Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	Zone L is predominantly fields, although Blankney Dairy is located in the west of the zone (L7), and brickyard plantation, which has a structure built in its centre, is located in the southwest of the zone (L2). There seem to be multiple small ponds located around the zone. There is a track/road running alongside the boundary of the zone in the northeast. There are some other wooded areas on the zone named Ash Holt and Catton's Holt, located in the southwest (L3) and the northeast (L12) of the zone respectively.	Change and the second of the s
1889	1904	Data Gap	
1905	1906	No Change	
1907	1946	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1947		There is a small structure which has been built in the southeast of the zone (L8). No other significant change.	
1948	1955	Data Gap	
1956		No Change	
1957	1978	Data Gap	
1979		The Blankney Dairy in zone L7 is now called Hall Farm and has undergone some development.	
1980	1984	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1985		There is no longer a built structure within Brickyard Planation in zone L8. Numerous drains are now labelled across the zone.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1986	1993	Data Gap	
1994		No Change	
1995	1999	Data Gap	
2000		No Change	
2001	2021	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
20	)22	No Change	

Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation	
1887	1888	The village of Blankney is located within 100 m northwest of the zone, and the village of Metheringham is located 500 m north. There is a road immediately west of the western boundary of the zone, running in a north-to-south direction. There is a Quarry, Old Quarry and Old Stone Pit located approximately 500 m southwest of the zone, one quarry is located on the western boundary in zone L11 in the north of the zone and 250 m northwest of the zone. The Great Northern & Great Eastern Joint Railway line is located 300 m north of the zone running in a southeast-to-northwest direction, and there are two pumps and a well located 150 m west of the zone and 400 m north of the zone, adjacent to the northbound road. There is a small fish pond located 50 m north of the zone (L7). Blankney Park is located 200 m west of the zone (L6), and there are various forested areas surrounding the zone. There is a watercourse located approximately 200 m north of the zone flowing in an easterly direction.		
1889	1904	Data Gap		
1905	1906	No Significant Change		
1907	1946	Data Gap		
1947	1950	The quarry located southwest of the zone has expanded, and this later becomes Longwood Quarries. There has been some small level of development in the villages of Blankney and Metheringham. A power line is running in a southeast to the northwest direction approximately 250 m southwest of the zone.		
1951	1955	Data Gap		
19	56	No Significant Change		
1957	1972	Data Gap		
1973	1979	There has been some more development within Blankney village. The Old Quarry located on the western boundary in the north of the site is no longer present. There has been a significant amount of residential development in Metheringham.		
1980	1984	Data Gap		
1985		The quarry located southwest of the site has undergone some development and expansion. There is a golf course located 250 m west of the site.		



Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation	
1986	1993	Data Gap		
19	94	No Significant Cha	inge	
1995	1999	Data Gap		
2000		Many drains are labelled across the site and in the surrounding area.		
2001	2021	Data Gap		
2022 No Change		No Change		
Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □				
Note: Reference to published historical maps provides invaluable information regarding the land use history of the site, but historical evidence may be incomplete for the period predating the first edition and between successive maps.				

The most significant sources of potential contamination are associated with the agricultural land use of the site. It should be noted that while Blankney Dairy is shown within the site boundary in the historical maps, in reality it is located outside the site redline boundary and would be considered an off-site feature.

It is not clear whether the land functioned as arable farmland, however if this is the case then there may be some level of contamination associated with agricultural industry and the use of pesticides, herbicides and fertilisers.

## 15.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D12</u>) are summarised below in **Table 70**.

Table 70 Summary of environmental permits, landfills and incidents – Zone L

Data type  Agency and hydrological	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	1	511 m SW: Longwood Quarries Ltd, IPPC/2004/9, PG3/8 quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete, authorised.



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	1	0 of relevance	99 m NE: Property Type Not Given, Oils (Diesel), Tributary of Car Dyke, 24/08/1996, Ref. 2552, Unknown Cause, Cat 3 Minor Incident.
Discharge consents	0	0	1 of relevance	701 NE: Anglian Water Services Limited, WWTW, Ref. Aw3nff821, 22/12/2021, Sewage Discharges (Final/Treated Effluent), Freshwater Stream/River, Tributary of Carr Dyke.
Landfill and waste				
Active landfills	0	0	0	N/A
Historic / closed landfills	0	0	1	393 m SW: Longwood Quarry, Licence No. 70908, Landfills Taking Non-Biodegradable Wastes (Not Construction), Issued 27/02/1987, Closure.
Other waste management licences	0	0	0 of relevance	N/A
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Hazardous substances/ industri	al land use	es		
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A
Contaminated land Part 2A register entries and notices	0	0	0	N/A
Contemporary trade directory entries	0	0	2 of relevance	364 m W: A & J A Roberts, Fishing & Angling Equipment, Inactive. 519 m SW: Longwood Quarries, Quarries, Active.
Fuel station entries	0	0	1	Bypass Service Station, Texaco, Petrol Station, Open.

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

Similar to Zone I, the environmental database report has identified a licensed waste management facility within 400 m of the western boundary of the zone (Longwood Quarry). The report suggests that part of the quarry is used as a waste treatment facility (maximum 75,000 tonnes per year) and another part as a registered landfill site, authorised to accept agricultural waste and "Lincs Category A – Solid Inert".

The pollution incident listed was categorised as a minor incident and is not considered to be a cause for concern.

# 15.3 Site geology

#### 15.3.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 71**.

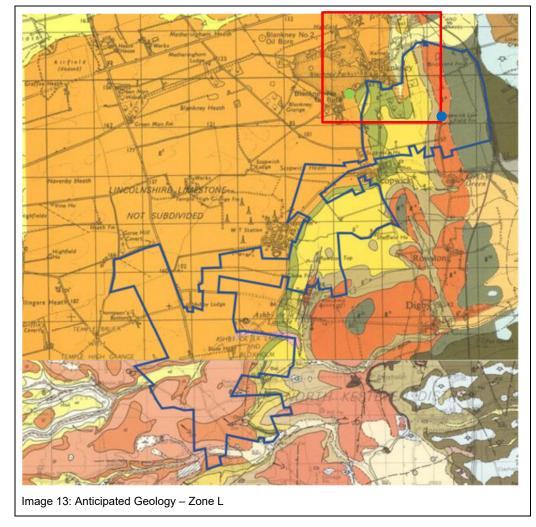


Table 71 Site geology - Zone L

Strata	Description	Estimated thickness	Permeability	Map Legend
Tidal Flat Deposits (north east of the site only)	Normally a consolidated soft silty clay with layers of peat, sand and a basal gravel. A stronger, desiccated surface zone is sometimes present.	Variable	Variable	}
Cornbrash Formation (east of the site only)	Limestone, medium to fine grained, predominantly bioclastic wackestone and packstone with sporadic peloids. Thin argillaceous partings or interbeds of argillaceous mudstone may occur.	Typically 2 – 4 m	Permeable	g
Blisworth Clay Formation (eastern part of the site only)	Silicate-mudstone, grey, commonly variegated purplish red, yellow and green, poorly bedded to blocky. Mudstone weathers to a highly plastic clay.	2 m – 4 m	Impermeable	g <sup>7-8</sup>
Blisworth Limestone Member	Pale grey to off-white or yellowish limestones with thin marls and mudstones, fossiliferous, bioturbated peloidal, ooidal and shell-fragmental more-or-less argillaceous packstones and wackestones, subordinate cross-bedded ooidal shell-fragmented grainstones.	Typically 6 – 7 m	Permeable	g <sup>7</sup>
Rutland Formation	Grey marine mudstone passing up into non-marine mudstone and siltstone, with a greenish-grey rootlet bed at the top.	Typically 8 – 12 m	Permeable	g <sup>6-7</sup>
Lincolnshire Limestone Formation	Limestone, typically calcilutites and peloidal wackestones and packstones in the lower part and high energy ooidal and shell fragmental grainstones in the upper part.	Typically 0 – 30 m	Permeable	g <sup>5</sup>
Relevant information sources: BGS Geoindex ⊠ BGS borehole logs □ Previous SI reports □				

With reference to the historical data the majority of the site has never been developed, and widespread Made Ground would not be anticipated, however there may be localised Made Ground at the structure located within Brickyard Plantation.





The site would be expected to be directly underlain by a limited thickness of topsoil.

A summary of historical BGS borehole records within and near the zone are provided in **Table 72** below.

Table 72 Summary of BGS borehole records - Zone L

Borehole ref	Depth (m)	Map Legend
TF05 NE1	940.00	
TF05 NE16	18.00	

A copy of these borehole logs is presented in Appendix E.

#### 15.3.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 5-10% of



homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area. Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the zone is considered for future residential development, further assessment will be required, in line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

### 15.4 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500m of the zone.

#### 15.4.1 Areas of other (rock or mineral) mining

Zone L lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member. While there is no evidence of pits or quarries within the zone, there is a large quarry located immediately adjacent to the zone to the southwest (Longwood Quarries).

# 15.5 Hydrogeology

A summary of the hydrogeological setting of the zone, with respect to the anticipated geological sequence, is presented below in **Table 73**.

Table 73 Summary of hydrogeological setting – Zone L

Condition	Description		
Aquifer	Zone L is underlain by a Secondary A Aquifer relating to the Cornbrash Formation, a Secondary B Aquifer relating to the Rutland Formation and unproductive strata relating to the Blisworth Clay Formation, as well a Principal Aquifer relating to the Blisworth Limestone Formation and the Lincolnshire Limestone Formation.		
characteristics	The potential presence of low permeability clay at relatively shallow depths beneath the site, while restricting downwards migration, may increase the potential for lateral migration of shallow groundwater (and therefore mobile contamination, if present).		
Depth to groundwater and flow	The anticipated depth to groundwater is in the order of 12 m below ground level estimated from BGS Logs. Shallow groundwater in the zone area is anticipated to flow in an easterly direction, i.e. in line with local topography and in the		



Condition	Description
	direction of the River Witham. Localised shallow groundwater may be present within superficial granular deposits such as the Tidal Flat Deposits.
Groundwater recharge/ attenuation	Most of the site is currently unsurfaced and will therefore drain to ground.
Licensed groundwater abstractions	The environmental database report indicates that there are 2 groundwater abstractions within a 1 km radius of the zone, none of which are licenced for public potable water supply.
Source protection zones	Information available in the Envirocheck report indicates that the zone does not lie within a designated source protection zone.

# 15.6 Hydrology

A summary of the hydrology within the zone area is summarised in Table 74.

Table 74 Summary of hydrology in site area – Zone L

Condition	Description
Surface watercourses/ features  There are some small ponds located within and around the zon multiple drainage ditches within and around the zone. There running through the village of Blankney which flows to the east	
Surface water abstractions	The environmental database report indicates that there are 9 surface water abstractions within a 1 km radius of the zone.
Site drainage	Evidence from the Envirocheck report indicates that drainage ditches/streams are present within the zone and in the surrounding area.
Preliminary flood risk assessment	The indicative floodplain map for the area shows that the majority of the zone does not lie within any designated floodplains, with the exception of a small area in the east of the zone, which is in zones 2 and 3 (flooding/extreme flooding from Rivers without defences).

### 15.7 Sensitive land uses

**Table 75** provides a summary of any environmentally sensitive areas identified within 250 m of the zone based on the environmental database report.



Table 75 Environmentally sensitive areas – Zone L

Feature	Present within 250 m of site?	Details	Likely pathways from site?	
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	0	N/A	N/A	
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	0	N/A	N/A	
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	0	N/A	N/A	
Nearest high sensitivity development, e.g. residential	Yes	Residential: Blankney Hall	Lateral migration of potential contamination.	



# 16 DESK-BASED ASSESSMENT – ZONE M

# 16.1 Site history

### 16.1.1 Historical development record

The development history of Zone M and the surrounding area based upon assessment of historical plans and records is detailed in **Table 76**. The historical maps reviewed are shown within the environmental database report in Appendix D13.



Table 76Summary of historical development - Zone M

Date from	Date to	Historical Land Use (on-site)	Area of site
1887	1888	Blankney Farm and Blankney Brickyard are located in the northeast of the zone (M5 and M9), and there are some small ponds in the brickyard. Blankney Gorse is located in the centre of the zone (M5), and there are other small ponds located around the zone in the west. Scopwick Lodge Farm is located in the southwest of the zone (M1). Blankey Farm, Blankney Brickyard and Scopwick Lodge are all technically outside the site redline boundary and therefore treated as off-site features going forward.	
1889	1904	Data Gap	
1905	1906	No Change	
1907	1946	Data Gap	



Date	Date	Historical Land Use (on-site)	Area of site
from	to		MALE AND
1947	1950	No Change	
1951	1955	Data Gap	
1956		Blankney Gorse is no longer present on the site.	
1957	1978	Data Gap	
1979		No Change	
1980 1984		Data Gap	
1985		There are many drains labelled within the zone. No other significant change.	
1986	1993	Data Gap	



Date from	Date to	Historical Land Use (on-site)	Area of site
1994		No Change	
1995	1999	Data Gap	
2000		No Change	TRANSET OF
2001	2021	Data Gap	
2022		No Change	

Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation
1887	1888	The surrounding area is primarily fields, presuma The Great Northern and Great Eastern Joint Rail boundary of the zone, and there is a road running the northern boundary of the zone. There are sor zone to the north and the east, and there is a Gralocated approximately 850 m north of the zone. A is located 500 m southeast, and Barf Holt is located.	way is located along the eastern g in an east-to-west direction along ne small ponds located around the avel Pit and an Old Gravel Pit to forested area called Pigeon Holt



Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation	
		Old Gravel Pit. Moor Lane is located 800 m north of the zone. There is a watercourse running alongside the railway line, which splits off in a north-easterl direction at the northern boundary of the zone. The water is flowing in a north-bound direction. Moor Farm is located approximately 1.1 km southeast of the zo		
1889	1904	Data Gap		
1905	1906	No Significant Cha	ange	
1907	1946	Data Gap		
1947	1950	No Significant Cha	ange	
1951	1955	Data Gap		
Moor Farm has been developed and has expanded to be within 1 km of the the southeast. There is now an airfield located 1 km northeast of the zone some structures have been built 1 km east of the zone, possibly associated airfield. There is a small building located 500 m northwest of the zone.		km northeast of the zone, and zone, possibly associated with the		
1957	1972	Data Gap		
1973	1979	No Significant Cha	ange	
1980	1984	Data Gap		
1985		There has been a large amount of development around the airfield, although this may not be associated with it directly. Pigeon Holt is now named as King's Covert, and Moor Farm is now named Westmoor Farm. There are many drains labelled across the zone.		
1986	1993	Data Gap		
19	94	No Significant Cha	No Significant Change	
1995	1999	Data Gap		
2000		The airfield is marked as disused. There are five reservoirs located immediately adjacent to the north-eastern boundary of the site, and beyond these there is a golf course where there are some structures which are presumably buildings associated with the golf course.		
2001	2021	Data Gap		
2022		Blankney Koi Centre is located east of the golf course. No other significant change.		
Relevant information sources: Historical OS maps ⊠ Town plans □ Information from the Local Planning Authority □ Aerial photography □ Previous reports □				
land u	se histo	ce to published historical maps provides invalu- ry of the site, but historical evidence may be inc t edition and between successive maps		

dating the first edition and between successive maps.

The most significant sources of potential contamination are associated with the agricultural land use of the site. It should be noted that while Blankey Farm, Blankney Brickyard and Scopwick Lodge are all shown within the site boundary in the historical maps, in reality they are located outside the site redline boundary and would be considered off-site features.



It is not clear whether the land functioned as arable farmland, however if this is the case then there may be some level of contamination associated with agricultural industry and the use of pesticides, herbicides and fertilisers.

### 16.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see <u>Appendix D13</u>) are summarised below in **Table 77**.

Table 77 Summary of environmental permits, landfills and incidents – Zone M

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Integrated Pollution Prevention and Control, Integrated Pollution Controls, Local Authority Integrated Pollution Prevention and Control	0	0	0	N/A
Enforcement and prohibition notices	0	0	0	N/A
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Discharge consents	1	0	2	On site: British Railways Eastern Region, Ref. Pr3lfu437, 08/01/1970 to 01/10/1996, Unknown Type, Onto Land. 338 m N: Martin Moor Golf Club Ltd, Ref. Prnnf18569, Issued 06/06/2006, Sewage and Trade Combined, Freshwater Stream/River, Tributary New Cut Drain. 941 m SE: Edward P F Scoley, WWTW, Prnnf12126, 15/09/1197, Sewage Discharges (Final/Treated Effluent), Freshwater Stream/River, Unnamed Ditch Tributary Queen.
Registered radioactive substances	0	0	0	N/A
Landfill and waste				
Active landfills	0	0	0	N/A
Historic / closed landfills	0	0	0	N/A



Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Other waste management licences	0	0	0	N/A
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	0	0	0	N/A
Hazardous substances/ industrial land uses				
Control of Major Accident Hazards (COMAH) sites	0	0	0	N/A
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	N/A
Contaminated land Part 2A register entries and notices	0	0	0	N/A
Contemporary trade directory entries	0	0	0	N/A
Fuel station entries	0	0	0	N/A

Note: Entries have only been included within the table where they are located within a 250 m radius of the site or, where they fall outside of this radius but are considered to comprise a significant entry.

### 16.3 Information from regulatory authorities

#### 16.3.1 Site services

Buried utility services and their backfill can provide preferential pathways for gas, vapour or groundwater to migrate along to another part of the site or to a receptor. They can also represent significant constraints to development.

Obtaining a full set of service plans was outside the scope of this report. Services identified on-site during the walkover are detailed in section 17.



### 16.4 Site geology

#### 16.4.1 Anticipated geological sequence

Published records (British Geological Survey, 2022) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 78**.

Table 78 Site geology - Zone M

Strata	Description	Estimated thickness	Permeability	Map Legend
Tidal Flat Deposits (north east of the site only)	Normally a consolidated soft silty clay with layers of peat, sand and a basal gravel. A stronger, desiccated surface zone is sometimes present.	Variable	Variable	{
Kellaways Formation	Mudstone, grey, commonly silici-silty or silici-sandy, with (predominantly in the upper part) beds of generally calcareous siltstone and sandstone.	Typically 5 – 8m	Permeable	gio
Cornbrash Formation (east of the site only)	Limestone, medium to fine grained, predominantly bioclastic wackestone and packstone with sporadic peloids. Thin argillaceous partings or interbeds of argillaceous mudstone may occur.	Typically 2 – 4m	Permeable	g°
Relevant information sources: BGS Geoindex ⊠ BGS borehole logs □ Previous SI reports □				

With reference to the historical data the majority of the site has never been developed, and widespread Made Ground would not be anticipated.

The site would be expected to be directly underlain by a limited thickness of topsoil.

Table 79 Summary of BGS borehole records - Zone M

Borehole ref	Depth (m)	Map Legend
TF06 SE20	69.22	
TF05 NE17	18.00	
TF05 NE22	59.00	

A copy of these borehole logs is presented in Appendix E.



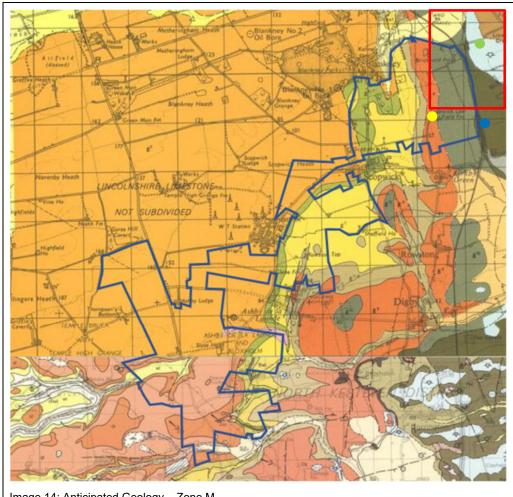


Image 14: Anticipated Geology - Zone M

#### 16.4.2 Radon

The environmental database report indicates that the zone is located within an area where more than 1% of homes are above the Action Level (termed an 'Affected Area') and indicates that radon protection measures are required. The report indicates that 5-10% of homes are at or above the Action Level of 200 Bq m-3. Although the radon data used in production of the ukradon.org indicative atlas comes from measurements in homes, the maps indicate the likely extent of the local radon hazard in all buildings.

In Affected Areas radon concentrations are generally low in well-ventilated workplaces such as workshops, but problems have been found in some more confined workplaces, such as offices, where rates of ventilation are relatively slow. HSE guidance suggests that where a premise is in an Affected Area, the employer should take a precautionary approach and undertake measurements in all premises located within an Affected Area.



Based on the information in the database report, it would be prudent to arrange monitoring of any poorly ventilated areas to determine if there is a current risk to site staff. If the site is considered for future residential development, further assessment will be required, in line with the guidance provided in BRE publication 211 "Radon: Guidance on Protective Measures for New Dwellings (2015)".

### 16.5 Mining and quarrying

Evidence has been sought to identify any mining, quarrying, landfilling and land reclamation operations, past and present, which have taken place within 500 m of the site.

#### 16.5.1 Areas of other (rock or mineral) mining

Zone M lies in an area with a known history of quarrying of limestone from the Lincolnshire Limestone Member. While there is no evidence of pits or quarries within the zone, historically there were some gravel pits located approximately 850 m north of the zone.

### 16.6 Hydrogeology

A summary of the hydrogeological setting of the zone, with respect to the anticipated geological sequence, is presented below in **Table 80**.

Table 80 Summary of hydrogeological setting - Zone M

Condition	Description
	Zone M is underlain by a Secondary A Aquifer relating to the Kellaways Formation and the Cornbrash Formation.
Aquifer characteristics	The potential presence of low permeability clay at relatively shallow depths beneath the zone, while restricting downwards migration, may increase the potential for lateral migration of shallow groundwater (and therefore mobile contamination, if present).
Depth to groundwater and flow	The anticipated depth to groundwater is in the order of 16.6 m below ground level estimated from BGS Logs. Shallow groundwater in the zone area is anticipated to flow in an easterly direction, i.e. in line with local topography and in the direction of the River Witham. Localised shallow groundwater may be present within superficial granular deposits such as the Tidal Flat Deposits.
Groundwater recharge/ attenuation	Most of the zone is currently unsurfaced and will therefore drain directly to ground.
Licensed groundwater abstractions	The environmental database report indicates that there are 2 groundwater abstractions within a 1 km radius of the zone, none of which are licenced for public potable water supply.
Source protection zones	Information available in the Envirocheck report indicates that the zone does not lie within a designated source protection zone.



# 16.7 Hydrology

A summary of the hydrology within the zone area is summarised in **Table 81**.

Table 81 Summary of hydrology in site area – Zone M

Condition	Description
Surface watercourses/ features	There are some small ponds located within and around the zone, as well as multiple drainage ditches on and around the site. There is a stream running alongside the railway line on the eastern boundary of the site, flowing in a northerly direction.
Surface water abstractions	The environmental database report indicates that there are no surface water abstractions within a 1 km radius of the zone.
Site drainage	Evidence from the Envirocheck report indicates that drainage ditches/streams are present within the zone and in the surrounding area.
Preliminary flood risk assessment	The indicative floodplain map for the area shows that the northeast of the zone lies within flood zones 2 and 3 (flooding/extreme flooding from Rivers without defences).

### 16.8 Sensitive land uses

**Table 82** provides a summary of any environmentally sensitive areas identified within 250 m of the site based on the environmental database report.

Table 82 Environmentally sensitive areas - Zone M

Feature	Present within 250 m of site?	Details	Likely pathways from site?
International designations  - Ramsar wetland, Special Area of Conservation (SAC), Special Protection Area (SPA)	0	N/A	N/A
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	0	N/A	N/A
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	0	N/A	N/A
Nearest high sensitivity development, e.g. residential	Yes		



### 17 SITE RECONNAISSANCE FINDINGS

A site reconnaissance survey was completed between the 20<sup>th</sup> and 21<sup>st</sup> October 2022 by RSK. The characteristics of the site observed during the walkover and from current ordnance Survey maps are summarised in **Table 83**.

A site plan showing the photograph locations is provided in <u>Figure 6</u> with photographic records included in <u>Appendix F</u> detailing the main features identified below.

Whilst the walkover summary includes consideration of current operations and housekeeping on the site as potential sources of contamination, it does not constitute a comprehensive environmental audit of the site, as covered under ISO 14001.

Table 83 Site reconnaissance findings

Feature	Description
Physical characteris	tics
Access constraints	The site comprises many fields which do not all have easy access points. Many are accessible from main roads, while others are only accessible via adjoining fields.
Site topography	Due to the nature of the site, the ground was often uneven, however the majority of the site was essentially flat, with some exceptions. In general, across the entirety of the site the ground slopes downwards to the east, and in the west of the site (Zone D), the site was sloping downwards to the south.
Surface cover	The vast majority of the site was unsurfaced. There were some small areas of hardstanding found in various areas, including; zone A16 (central), zone E16 (northeast) and zone M5 (northeast) and zones J13 and M1. These hardstanding areas are all associated with agricultural activity around the site, and appear to be for stockpiling (A16, E16, M5) or there are buildings in the particular area (J13 and M1).
Site drainage	Many drainage ditches were noted across the site, some of which had outfall points. It is likely that the site is draining to lesser watercourses such as Scopwick Beck and Springwell Brook, with all watercourses ultimately discharging into the River Witham in the east.  There were areas of waterlogging noted around the site, however the site walkover was conducted on two days of heavy rainfall.
Surface water	There were multiple drainage ditches on and adjacent to the site. No visual evidence of contamination was noted in any watercourses. The nearest major watercourse to the site is the River Witham to the east.
Trees and hedges	Most of the fields are divided by trees, hedges or shrubs, and there are multiple forested areas across the site, found in zones B10, B14, D4, E6, H4, L3, L8 and L12.
Invasive species	Based upon the walkover survey obvious evidence of Japanese Knotweed or other invasive species has not been identified on-site. However, it should be noted that a detailed survey of the possible presence or absence of invasive species is outside of the scope of



Feature	Description
	investigation and consideration should be given to commissioning a specialist survey, as necessary.
Existing buildings on-site	The site contains multiple buildings associated with its agricultural land use, including; Scopwick Low Field Farm (J13 and M1), two barns (both located in M5, one in the southwest and one in the northeast), and two residential homes (both located in M9, one in the central south and one in the southeast).
Deteining wells and	No retaining walls observed.
Retaining walls and adjacent buildings on or close to site boundary	There are some buildings which are located within the outer site boundary site but are not within the overall site redline boundary. These include a sewage works facility located within H4, a residential home and equestrian facility within F13, the Slate House estate in E2 and E6 and a dilapidated barn located in I5.
Basements on-site	No evidence of existing or infilled basements was observed.
Made ground, earthworks and quarrying	None observed
Potentially unstable slopes on or close to site	None observed
	Overhead services were noted in multiple locations across the site, including; L12, L8, M5, J14, M9, I9, I15, I16, M1, L6, E16, E15, B13, D4.
Buried and overhead services	There were several manhole covers noted on site within zones M5, M2, I16, I15, I9 and E9.
present	Additionally, there was a gas pipeline marker observed in zone I6, and gas taps were noted in zone E, specifically running in an east-to-west direction across E15, E14, E13.
Environmental chara	acteristics
Underground/ above ground storage tanks and pipework	There was a storage tank noted within zone M5, although technically this does not fall within the site redline boundary. The absence of bunding, staining or any other pumping infrastructure suggests this is probably used as water storage. No other storage tanks observed.
Potentially hazardous materials storage and use	None observed, however, considering the agricultural land use of the site there are likely to be chemicals and other materials stored on site which were not directly observed during the reconnaissance survey.
Asbestos-containing materials	No obvious asbestos construction materials were observed but a detailed survey of the buildings would be required to confirm the presence or otherwise of asbestos-containing materials.
Waste storage	None observed
Fly-tipping	None observed
Electricity sub- stations/ transformers	None observed



Feature	Description
Evidence of possible land contamination onsite	None observed
Potential off-site sources of ground contamination	There are quarries located adjacent to the site in the southwest (A8 and B5) and the northeast (L1, L2, I13, I14), there is RAF Digby Sewage Treatment Works located in H4 and there is a petrol filling station located in I10. These sites represent the most likely off-site sources of contamination due to their industrial activities and their close proximity to the site.

No potentially significant on-site land contamination or geotechnical issues were identified during the site reconnaissance survey.

RAF Digby, the sewage treatment works and quarries directly adjacent to the site boundaries may be considered potential sources of off-site contamination.

Due to the size of the site, the reconnaissance survey was generally limited to the external perimeter of the site and therefore a number of the former ponds and quarries were not directly observed.



# 18 PRELIMINARY GEOTECHNICAL CONSTRAINTS

#### 18.1 Design class

BS EN 1997-1 defines three different Geotechnical Categories that structures may fall into, which are summarised as follows:

- Category 1: Small and relatively simple structures for which it is possible to ensure
  that the fundamental requirements will be satisfied on the basis of experience and
  qualitative geotechnical investigations; with negligible risk
- Category 2: Conventional types of structure and foundation with no exceptional risk or difficult ground or loading conditions
- Category 3: Structures or part of structures, which fall outside limits of Geotechnical
  Categories 1 and 2. Examples include very large or unusual structures; structures
  involving abnormal risks, or unusual or exceptionally difficult ground or loading
  conditions; structures in highly seismic areas; structures in areas of probable site
  instability or persistent ground movements that require separate investigation or
  special measures.

Based on the information provided above on the proposed development and in view of the anticipated ground conditions, a Geotechnical Category of <u>Category 2</u> has been assumed for the purposes of designing the geotechnical investigation. This should be reviewed at all stages of the investigation and revised where necessary.

### 18.2 Preliminary geotechnical hazards assessment

A summary of commonly occurring geotechnical hazards associated with the anticipated geology identified within each zone is given in **Table 84** together with an assessment of whether the site may be affected by each of the stated hazards.

Table 84 Summary of preliminary geotechnical risks that may affect site

Hazard category	Zone of site likely to be affected based on desk study findings and proposed development*	Engineering considerations if hazard affects site
Sudden lateral changes in ground conditions	A, B, E, F, H, I, J, L, M  These zones underlain by multiple geological strata from surface	Likely to affect ground engineering and foundation design and construction
Shrinkable clay soils	A, B, D, F, I, J, L, M Relates to all strata except unweathered limestone	Design to NHBC Standards Chapter 4 or similar



Hazard category	Zone of site likely to be affected based on desk study findings and proposed development*	Engineering considerations if hazard affects site
Highly compressible and low bearing capacity soils, (including peat and soft clay)	A, B, D, L, M Relates to Superficial Head Deposits and Tidal Flat Deposits	Likely to affect ground engineering and foundation design and construction
Silt-rich soils susceptible to rapid loss of strength in wet conditions	A, B, D, E, F, H, I, J, L, M Relates to all strata except unweathered limestone	Likely to affect ground engineering and foundation design and construction
Running sand at and below water table	A, B, D, E, F, G, H, I, J, L, M  Potentially relates to all saturated granular soils (including weathered limestones)	Likely to affect ground engineering and foundation design and construction
Karstic dissolution features (including 'swallow holes' in Chalk terrain)	A, B, D, E, F, G, H, I, J, L, M Relates to multiple Limestone strata	May affect ground engineering and foundation design and construction – refer to Section 4.1.2
Evaporite dissolution features and/or subsidence	Unlikely to be present due to anticipated absence of evaporite deposits	May affect ground engineering and foundation design and construction
Ground subject to or at risk from landslides	Unlikely to be present due to gentle topography	Likely to require special stabilisation measures
Ground subject to peri-glacial valley cambering with gulls possibly present	Unlikely to be present due to gentle topography	Likely to affect ground engineering and foundation design and construction
Ground subject to or at risk from coastal or river erosion	Unlikely to be present	Likely to require special protection/stabilisation measures
High groundwater table (including waterlogged ground)	A, B, D, E, F, G, H, I, J, L, M  Considered likely to be present across all areas of low-lying ground	May affect temporary and permanent works
Rising groundwater table due to diminishing abstraction in urban area	Unlikely to be present	May affect deep foundations, basements and tunnels
Geological faults, fissures and breaklines	A, B, D, E, F, G, H, I, J, L, M Potential exists for all areas	May affect ground engineering and foundation design and construction



Hazard category	Zone of site likely to be affected based on desk study findings and proposed development*	Engineering considerations if hazard affects site
Underground mining, including shafts and adits (e.g. coal, mineral)	A, B, D, E, F, G, H, I, J, L, M Potential exists for all areas	Likely to require further assessment including potentially special stabilisation measures
Effects of extreme temperature (e.g. cold stores or brick kilns/furnaces)	Unlikely to be present	Likely to affect ground engineering and foundation design and construction
Existing sub- structures (e.g. tunnels, foundations, basements, and adjacent sub- structures)	Unlikely to be present	Likely to affect ground engineering and foundation design and construction
Filled and made ground (including embankments, infilled ponds and quarries)	B, D, E, F, G, H, I, J, L, M Infilled ponds, stone pits and gravel pits. Possible overspill made ground from RAF airfield and sewage works.	Likely to affect ground engineering and foundation design and construction
Adverse ground chemistry (including expansive slags and weathering of sulphides to sulphates)	B, F, I, J, L, M Oxford Clay Formation, Blisworth Clay and Kellaway Formation is considered to be pyrite-rich	May affect ground engineering and foundation design and construction
Site topography	Not present – topography fairly gentle across site area	May affect ground engineering and foundation design and construction

\*Preliminary assessment must be confirmed by intrusive ground investigation

Note: Seismicity is not included in the above table as this is not normally a design consideration in the UK.



### 19 UNEXPLODED ORDNANCE

A Stage 1 Unexploded Ordnance (UXO) Preliminary Risk Assessment has been carried out by Brimstone Site Investigation to highlight any sources of UXO with the potential to contaminate the site.

The Preliminary UXO Assessment is presented in full as Appendix H.

The site was considered to be at a potential risk of UXO due to the proximity of RAF Digby, which may have been targeted by enemy aircraft during the second world war. In addition, the undeveloped and unoccupied nature of the site may have resulted in potential strikes going unrecorded.

A Detailed UXO Risk Assessment was recommended to further assess risks to the proposed development works.



### 20 INITIAL CONCEPTUAL SITE MODEL

In the UK land contamination is assessed using a risk-based approach taking account of the magnitude (severity of the hazard) and likelihood (probability) of occurrence. A 'receptor' is something that could be adversely affected by contamination (e.g. people, an ecological system, property or a water body). A 'pathway' is a route or means by which a receptor is or could be exposed to or affected by a contaminant. A 'contaminant source' is a hazard but it can only pose a risk to a receptor where a pathway is present. The relationship between sources, pathways and receptors are referred to as a conceptual site model. A risk can only be released where a contaminant source, pathway and receptor are all in place, referred to as a 'pollutant linkage'.

In line with LCRM (Environment Agency, 2021) and BS 10175: 2011 + A2 2017 (BSI, 2017), RSK has used information in the preceding sections to identify hazards (sources of contaminants), receptors that may be impacted and plausible linking pathways. Where all three are present this is termed a potentially complete contaminant linkage and a qualitative risk estimation is made.

### 20.1 Potential soil, soil vapour and groundwater linkages

#### 20.1.1 Potential sources of contamination

Potential sources of soil and groundwater contamination identified from current activities and the history of the site and surrounding area are presented in **Table 85**. Ground gas sources are addressed in the next section.

Table 85 Potential sources of soil and groundwater contamination

Potential sources	Contaminants of concern
On-site	
Made ground (anticipated to be localised to historical structures and roads)	Unknown fill material but potentially including brick, ash and clinker and containing toxic and phytotoxic metals, inorganics, polycyclic aromatic hydrocarbons (PAHs), asbestos
Former quarry or pit ( <i>c</i> .1920s to 1960s) identified throughout site area in multiple zones	Unknown fill material but potentially including brick, ash and clinker and containing toxic and phytotoxic metals, inorganics, polycyclic aromatic hydrocarbons (PAHs), asbestos
Agricultural land use	Pesticides, herbicides, fertilisers, fuels, and oils.
Off-site	
Petrol filling station, from 100 m north, zone I	Petroleum hydrocarbons, fuel additives, PAHs, chlorinated solvents, asbestos
Landfills (Brauncewell and Longwood Quarry) and infilled former pits	Inert/ commercial/ industrial/ municipal waste. Landfill leachate including ammoniacal nitrogen, chloride,



Potential sources	Contaminants of concern
Railway, 5 m east of the site in zone M and zone J	Petroleum hydrocarbons, toxic and phytotoxic metals, inorganics, PAHs, asbestos, herbicides
Agricultural land use	Pesticides, herbicides, fertilisers, fuels, and oils.
Historical RAF airfield extending to the western boundary of H8	Aviation fuels such as kerosene in addition to standard total petroleum hydrocarbons (TPH), toxic and phytotoxic metals, inorganics, polycyclic aromatic hydrocarbons (PAH), asbestos. Potential unexploded ordnance (UXO)
Sewage works within zone H4	Toxic and phytotoxic metals, inorganics, polycyclic aromatic hydrocarbons (PAHs), asbestos, fuel oils, polychlorinated biphenyls (PCBs), micro-organisms (e.g. salmonella, typhus bacteria)

Potential contamination from the fuel station could form LNAPL.

#### 20.1.2 Sensitive receptors and linking exposure/ migration pathways

Sensitive receptors identified at or in the vicinity of the site that could be affected by the potential sources identified above comprise:

- Future site users Commercial/industrial workers [oral, dermal and inhalation exposure with impacted soil, soil vapour and dust, inhalation of vapours from groundwater]
- Current adjacent site users residential, public open space users [migration of contamination via dust/fibre deposition, vapour or groundwater migration combined with inhalation]
- Future buildings and services [direct contact with contaminated soils or groundwater and chemical attack]
- Groundwater in secondary A and secondary B aquifers within superficial deposits [leaching from soils/ percolation to aquifer]
- Groundwater in principal aquifer within Lincolnshire Limestone and Blisworth Limestone bedrock deposits [percolation through permeable strata to aquifer]

Potential linking pathways are show in brackets for each item above.

Please note that construction workers and future maintenance workers have not been identified in the conceptual model as receptors because risks are considered to be managed through health and safety procedures according to the CDM Regulations.

Ecological receptors are only considered within the conceptual model in the context of statutory protected sites.

### 20.2 Potential ground gas linkages

#### 20.2.1 Ground gas generation potential

Potential ground gas sources identified for the site and surrounding are shown in **Table 86**.



Table 86 Potential ground gas sources

Potential sources	Indicative ground gas generation potential (CIEH, 2008)	Additional information
On-site		
Natural carbonate soil and strata such as chalk and limestone	Very low	The bedrock geology across much of the site is limestone of the Lincolnshire Limestone Member or the Blisworth Limestone Formation.
Made ground with low degradable organic content (e.g. up to 5% organic material and no easily degradable waste).	Very low	There may be Made Ground associated with the roads that cross the site and some of the adjacent buildings, as well as some of the disused pits and quarries.
Infilled pond less than 15m diameter, infilled before 1930s to 1940s	Very low	Numerous former stone pits and gravel pits that have been infilled
Off-site		
Natural carbonate soil and strata such as chalk and limestone	Very low	Much of the bedrock geology surrounding the site is limestone of the Lincolnshire Limestone Member or the Blisworth Limestone Formation.
Made ground with low degradable organic content (e.g. up to 5% organic material and no easily degradable waste).	Very low	There is likely to be Made Ground associated with off site development.
Sewage sludge	Moderate	There are two sewage facilities adjacent to the site, one within H4 and another 300m outside Zone E.
Landfill mid-1960s to early 1990s – Inert	Low	Neither of the landfill facilities
Landfill early 1990s onwards – Inert	Low	adjacent to the site are licensed to take biodegradable waste, and neither are they able to accept construction waste.

The assessment has identified potential sources of ground gases, notably a number of infilled quarries and gravel pits across the site, a Sewage Works located within an off-site enclave in zone H4 and two landfill sites located adjacent to the site boundaries.

The on-site former quarries and gravel pits are fairly small in size, no more than 50 m and are presumed to have been backfilled with inert and/or natural materials. Individually,



especially given their distribution across the site, they are not considered to pose a significant source of ground gases.

The landfill sites to the southwest and centre-west (Brauncewell Quarry and Longwood Quarry respectively) were historically (and are currently) licensed to accept inert and non-biodegradable wastes. However, given their size and the proximity to the site area, these sources should be considered further as viable gas sources in the conceptual model.

The sewage works within the off-site enclave in zone H4 may have generated sewage sludge that is buried or spread on site. The size of the works suggests that any such material would be limited, and thus the potential for generation of ground gases would be considered to be limited.

#### 20.2.2 Preferential pathways for ground gas migration

Credible preferential pathways potentially connecting the source and receptor through vertical and lateral migration are:

- geology of the superficial granular deposits and weathered limestones, all of which are likely to be permeable.
- faults/ fissures/ fractures in the underlying Lincolnshire Limestone Formation,
   Blisworth Limestone Formation, Cornbrash and Rutland Formation
- building foundations, piled foundations and vibro-stone columns
- · construction joints and cracks within building structure
- utility routes and service penetrations into buildings

#### 20.2.3 Sensitive receptors and linking pathways

Sensitive receptors identified at or in the vicinity of the site that could be affected by the potential ground gas sources identified above comprise:

- future site users commercial/industrial workers [migration and ingress of ground gases into buildings, build-up in confined spaces and explosion/ asphyxiation]
- current/adjacent site users residential users, commercial/industrial workers [migration and ingress of ground gases into buildings, build-up in confined spaces and explosion/ asphyxiation]
- current/future buildings and services [migration and ingress of ground gases into buildings, build-up in confined spaces and explosion].

The assessment has identified receptors to include building structures and proposed endusers.

Construction workers have not been identified as receptors for the purposes of this assessment. Risks may still be present to construction workers especially where works include the entry into excavations within the ground. Construction workers should undertake appropriate risk assessments and risks should be managed through health and safety procedures and the use of PPE.



## 20.3 Preliminary risk assessment

The preliminary risk assessment findings and potentially complete contaminant linkages are shown in **Table 87** overleaf. The risk classification based on the combination of hazard consequence and probability using a risk matrix from CIRIA C552 (Rudland et al., 2001), a summary of which is included in <u>Appendix G</u>. This relates to Tier 1 preliminary risk assessment in LCRM (Environment Agency, 2021).



Table 87 Risk estimation for potentially complete contaminant linkages

Potential source	Potential receptor	Possible pathway	Likelihood	Severity	Potential risk	Justification
Contamination associated with localised areas of made ground or agricultural land use	Future site users	Direct contact, oral, dermal and inhalation exposure with impacted soil, soil vapour and dust, and inhalation of vapours from groundwater.	Unlikely	Medium	Low	The future land use will comprise photovoltaic panels throughout the fields, in what is likely to be an unmanned site. Any attendance by site workers is thought to be sporadic and most likely associated with the maintenance of the solar panels, thus reducing the potential for direct contact with soil. Additionally, due to the largely undeveloped nature of the site and the exclusion of areas with any development, Made Ground is not anticipated to be widespread or abundant except in localised areas.
	Adjacent site users		Unlikely	Medium	Low	Migration of contaminants via wind deposit on in sufficient quantities as to be harmful is considered unlikely, especially considering that significant quantities of Made Ground is not anticipated. Additionally, the depth to groundwater is anticipated to be in the order of 2.5 to 30 mbgl.



Potential source	Potential receptor	Possible pathway	Likelihood	Severity	Potential risk	Justification
	Future buildings, infrastructure and services	Direct contact with contaminated soils or groundwater, and chemical attack	Low Likelihood	Mild	Low	Any contamination or made ground is likely to be localised and limited in extent and may be removed as part of future earthworks.
Contamination associated with localised areas of made ground or agricultural land use	subsequent notable	permeable strata to	Low likelihood	Mild Medium (Zone H and I only)	Low <b>Moderate/Low</b> (Zone H and I only)	The impact of potential contamination within near surface soils leaching and impacting groundwater will only be likely where groundwater levels are higher than 5 m. Across the majority of the site, groundwater is anticipated below 15 m depth. Ultimately, the only viable receptor is the localised SPZ1 located within zones H and I. Additional consideration to protection of groundwater resources may need to be given in these zones of the site.



Potential source	Potential receptor	Possible pathway	Likelihood	Severity	Potential risk	Justification
Contamination associated with localised areas of made ground or agricultural land use	Surface waters	Lateral migration of groundwater through soils/bedrock and field drains	Low likelihood	Medium	Low	Surface watercourses are present and run into larger watercourses to the east. Any sources of contamination could migrate to nearby watercourse through lateral migration in superficial deposits or surface water flow across possibly saturated ground. Sources of contamination are thought to be relatively small and localised and therefore possible impact to surface watercourses and downstream receptors may be limited.
Petrol filling station located 100m north of zone I	Future site users	Direct contact, oral, dermal and inhalation exposure with impacted soil, soil vapour and dust, and inhalation of vapours from groundwater.	Unlikely	Medium	Low	The site is not anticipated to be a manned facility and therefore prolonged exposure to any potential contaminants is considered unlikely. In addition, the depth to
Off-site Made Ground and potentially infilled quarries and pits Includes potential Sewage sludge associated with	Future site users	Lateral migration and oral, dermal and/or inhalation exposure with impacted soil, soil vapour and dust, and inhalation of vapours from groundwater.	Unlikely	Medium	Low	groundwater is anticipated to be in excess of 3 mbgl, and therefore exposure to impacted vapours is deemed unlikely.



Potential source	Potential receptor	Possible pathway	Likelihood	Severity	Potential risk	Justification
Sewage works in Zone H4.	nronocod etructurae	Asphyxiation or build up in confined spaces followed by explosion	Unlikely (no manned structures) Low likelihood (manned structures)	Medium	Low (no manned structures) <b>Low to moderate</b> (manned structures)	Whilst large landfill sites are located adjacent to the site boundaries, these were licensed to accept inert non-biodegradable waste. In addition, the proposed development is understood to comprise a primarily unmanned solar farm. Consideration to this risk may need to be given should manned structures be proposed within the affected areas of the site.

Risk matrix		Consequences						
		Severe	Medium	Mild	Minor			
	Highly likely	Very high	High	Moderate	Moderate/low			
obability	Likely	High	Moderate	Moderate/low	Low			
⊆ =	Low likelihood	Moderate	Moderate/low	Low	Very low			
۵	Unlikely	Moderate/low	Low	Very low	Very low			



Potentially complete contaminant linkages with a potential risk of moderate to low or higher identified in **Table 87** comprise:

- Potential impaction of shallow groundwater within SPZ1 via leaching of contaminated soils through the infiltration of rainwater – Zones H and I only
- Migration of ground gases from adjacent landfill sites and accumulation in enclosed spaces resulting in asphyxiation and/or explosion – Zones A, B, I, L only and only if proposed development comprises manned and/or enclosed structures

These potentially complete contaminant linkages need to be assessed further through appropriate site investigation to target the identified sources of potential contamination and assess the feasibility of identified pathways.

### 20.4 Data gaps and uncertainties

Key data gaps and uncertainties identified in the CSM at desk study stage include:

- gaps in available historical OS maps 1889 to 1904, 1907 to 1946, 1952 to 1955, 1957 to 1977, 1981 to 1984, 1986 to 1993, 1996 1999 and 2001 to 2021.
- access not available to some areas within zone B (B5, B6, B9, B10, B11), D (D14, D15, D16) and G (G3 and G4), as these were added for to the desk-study after the site reconnaissance survey had taken place
- Due to the large nature of the site, it is highly likely that areas of the site were not observed by the RSK engineer during the site reconnaissance survey
- status of the observed gas pipe line is not known
- there are no previous investigations available for the site, therefore no information on actual concentrations of contaminants in soil and groundwater at this stage
- groundwater depth and flow direction are conceptual at this stage



### 21 CONCLUSIONS AND RECOMMENDATIONS

### 21.1 Site History

The site has largely remained undeveloped throughout its entire history, except for localised construction of minor structures, tracks, paths and access roads. Numerous stone pits, gravel pits and small quarries are shown to be distributed across the site area (notably RSK subzones B10, B14, D4, D12, E7, E10, F13, G4, I10).

The surrounding area is equally agricultural, although residential expansion occurred in surrounding villages. A sewage works was constructed within zone H4 (outside the redline site boundary) and a large RAF Base (RAF Digby) was constructed adjacent to the central part of the site to the west.

Two adjacent quarries (Brauncewell and Longwood) have been historically used as landfill sites and waste treatment facilities.

### 21.2 Likely ground and groundwater conditions

Given its agricultural setting, the site is likely to be primarily covered by a nominal to limited thickness of topsoil, with any made ground anticipated to be localised to distinct previously developed areas, such as former small structures, roads and paths. There may also be made ground 'overspill' from directly adjacent features such as the RAF airfield and sewage works.

As the site is so large, the geological sequence is highly varied. Superficial deposits are localised in the north of the site where a covering of Tidal Flat deposits encroaches upon the northern part of zones L and M. In the central (zone E) and southwestern (zones A, B and D) parts of the site, thin bands of Head Deposits and Sleaford Sand and Gravel are present directly over the bedrock.

The bedrock outcrops in a sequence presenting itself from east (youngest) to west (oldest) and comprises Oxford Clay, Kellaways Formation (clays and mudstones), Cornbrash Formation (limestone), Blisworth Clay (clays and mudstones), Blisworth Limestone, Rutland Formation (mudstone with limestone beds) and the Lincolnshire Limestone Formation. An overall figure showing site-wide geology is presented as Figure 5.

Through reference to historical BGS borehole records, depths to groundwater appear to vary across the site dependent upon the strata. Groundwater in some cases was recorded at shallow depths (2-3 mbgl) within weathered limestones and locally within superficial deposits. Groundwater was generally recorded within limestone units at depths between 12 and 30 mbgl.

#### 21.3 Geo-environmental assessment

The PRA has identified no obvious potential sources of on-site contamination, except for perhaps the use of pesticides and herbicides as a result of the site's agricultural history. The presence of made ground in some areas is likely although considered to be limited to minor previously developed areas such as small structures (i.e. wind pumps) and tracks, paths and access roads. There are a number of former stone/gravel pits as well as ponds



that have the potential to be infilled with onerous material, although it is likely that any infill comprised natural and/or inert soils.

Two off-site landfills at Brauncewell and Longwood Quarry were licensed to accept inert and non-biodegradable waste, though their proximity and currently active status means that risks may exist for affected zones, but only if the proposed development in these areas comprises manned structures or un-manned enclosed structures where gases could accumulate.

Identified potential pollutant linkages were identified, associated with:

- Potential impaction of shallow groundwater within SPZ1 via leaching of contaminated soils through the infiltration of rainwater – Zones H and I only; and
- Migration of ground gases from adjacent landfill sites and accumulation in enclosed spaces resulting in asphyxiation and/or explosion – Zones A, B, I, L only and only if proposed development comprises manned and/or enclosed structures.

#### 21.4 Geotechnical assessment

The key findings of the initial geotechnical assessment are as follows:

- Silt rich and shrinkable clay soils associated with all strata except granular superficial soils and unweathered limestone;
- Potential compressible and low bearing capacity soils associated with superficial Head Deposits and Tidal Flat Deposits;
- Potential running sand associated with saturated granular deposits;
- Karstic dissolution features within limestone strata;
- Potentially waterlogged ground and/or localised high groundwater table;
- Potential for geological faults within underlying bedrock geology;
- Infilled ponds, quarries and gravel pits as well as potential for unrecorded extraction pits, shafts and adits;
- Adverse ground chemistry associated with Oxford Clay, Blisworth Clay and Kellaway Formation; and
- Lateral variation in ground conditions

#### 21.5 Recommendations

The following recommendations are made for further assessment of the site to investigate the risks identified above and/or to address remaining uncertainties:

Sitewide shallow intrusive works (likely trial pitting and drive-in sampler boreholes)
to determine ground and groundwater conditions across each zone of the site and
target potential areas of made ground (i.e. in locations of former structures and
infilled pits/ponds)



- Gas monitoring may be required in areas of the site adjacent to the identified landfill sites to assess baseline concentrations of ground gas, especially if enclosed and/or manned structures are proposed in these parts of the site
- Deeper boreholes may be required to either prove depth to bedrock and/or provide information for use in piled foundation design
- The findings of the Unexploded Ordnance (UXO) Preliminary Risk Assessment were that a Detailed UXO Risk Assessment be carried out to assess the risks to the proposed development works.

It is understood that a ground investigation specification is currently being drafted by others.



### REFERENCES

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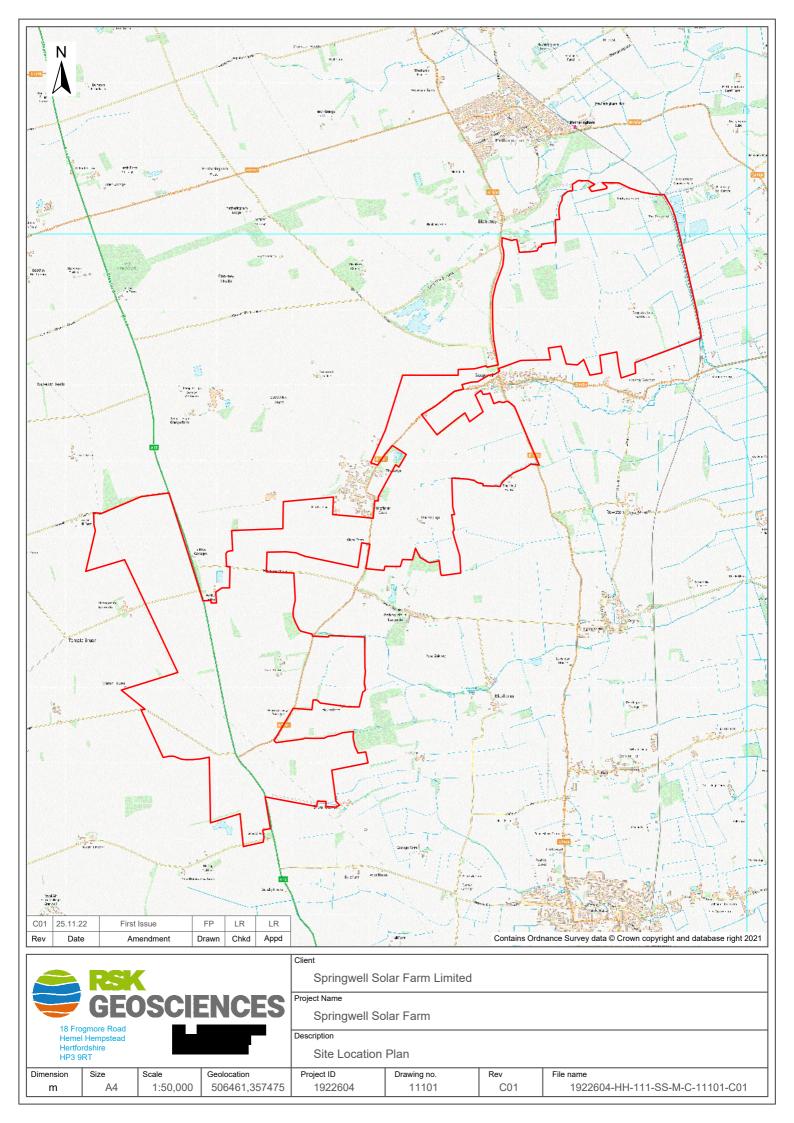
Stone, K., Murray, A., Cooke, S., Foran, J., Gooderham, L., (2009) CIRIA C681, Unexploded Ordnance (UXO). A guide or the construction industry.



# **FIGURES**



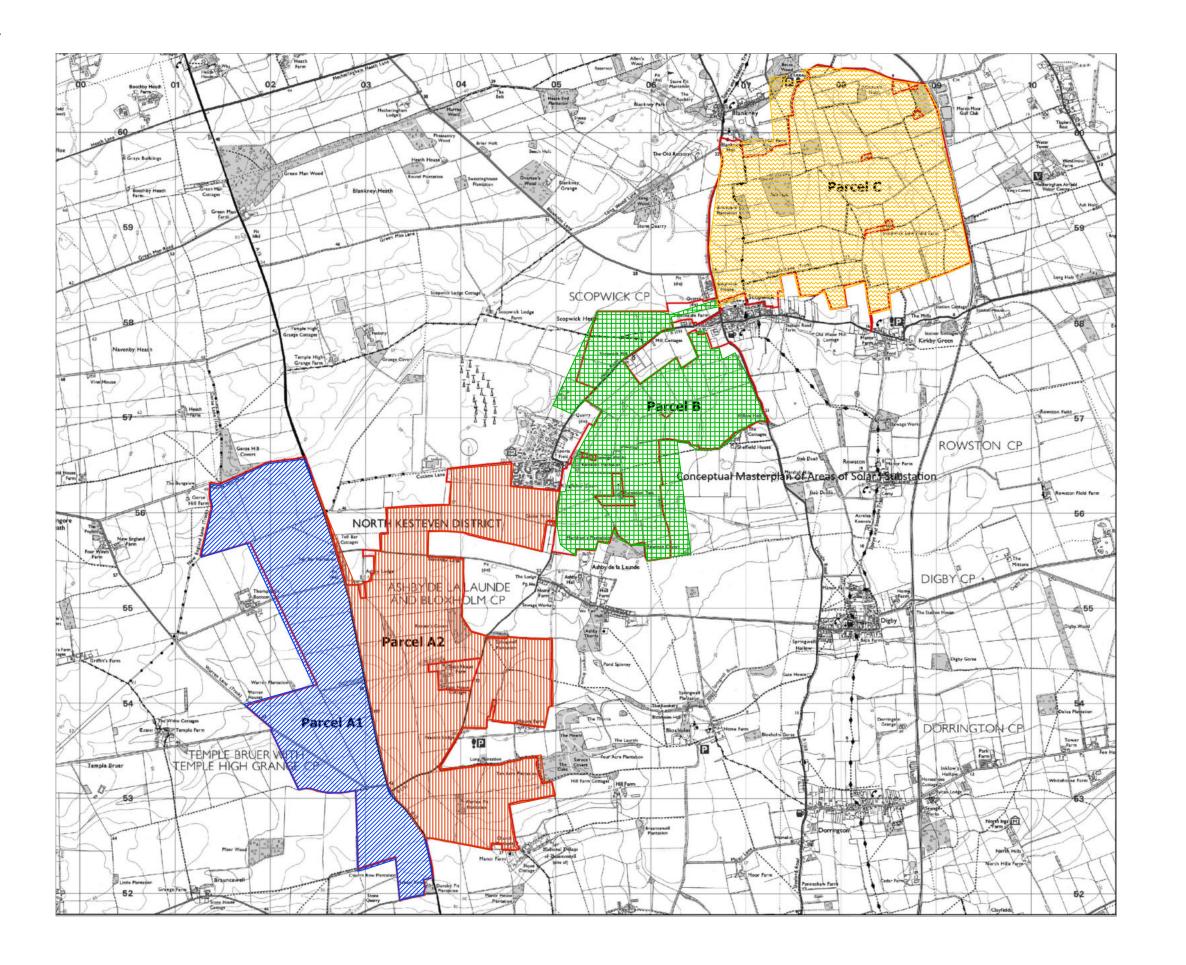
### FIGURE 1 SITE LOCATION PLAN

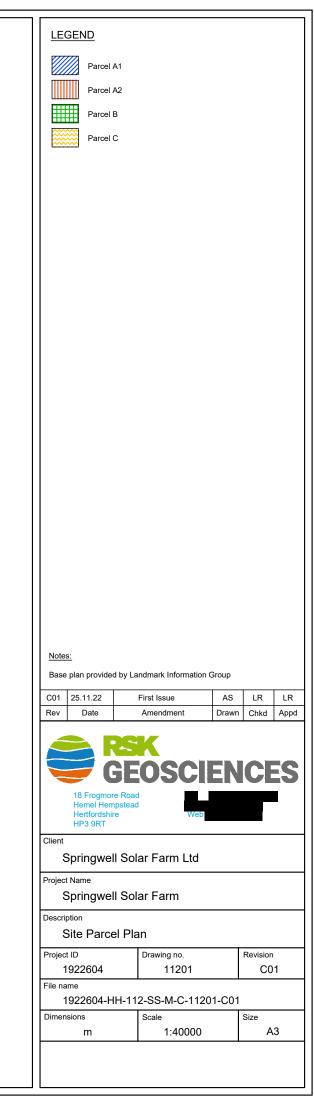




# FIGURE 2 SITE PARCEL PLAN







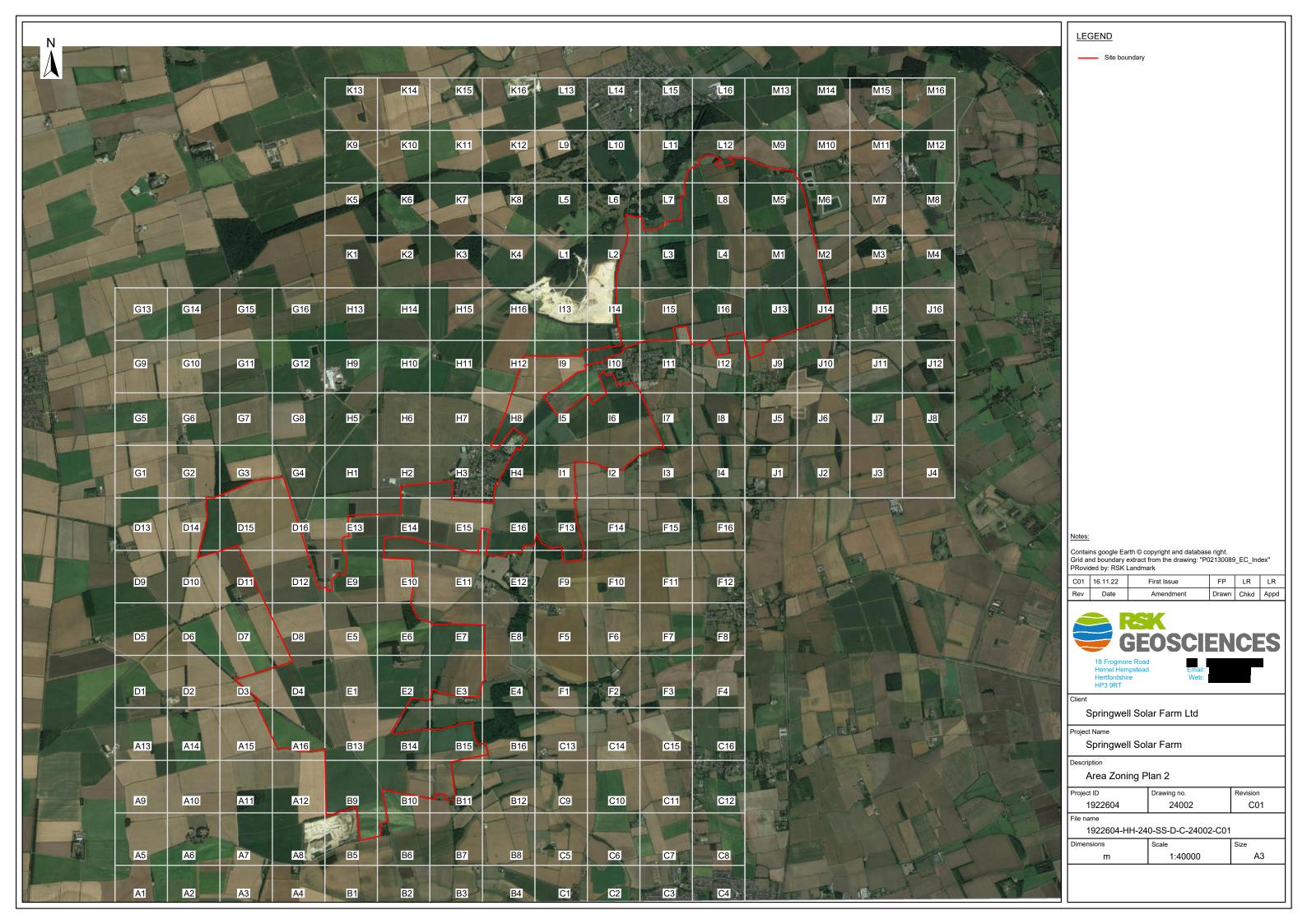


# FIGURE 3 SITE ZONING PLAN (ENVIRONMENTAL ASSESSMENT)





### FIGURE 4 SITE ADDITIONAL ZONING PLAN

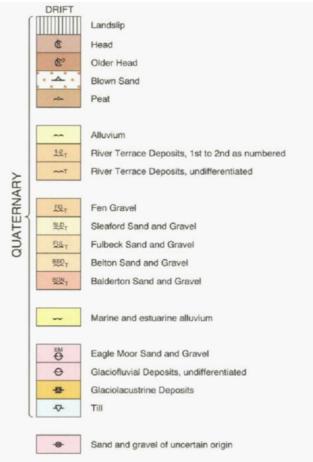


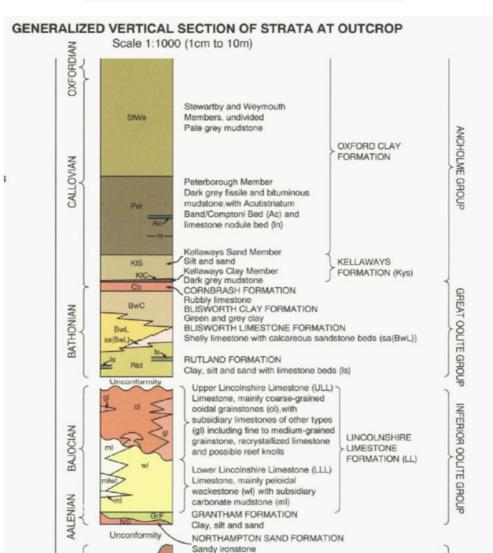


## FIGURE 5 SITE-WIDE GEOLOGY PLANS

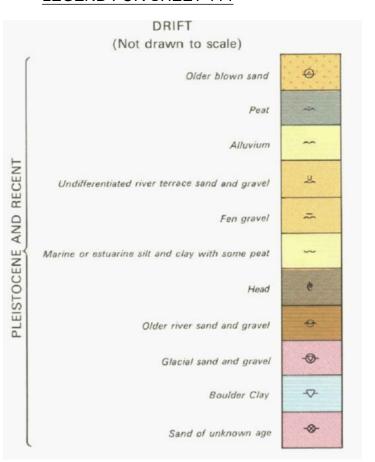
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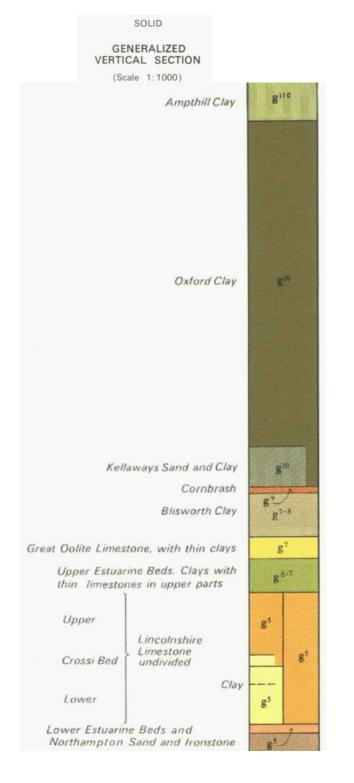
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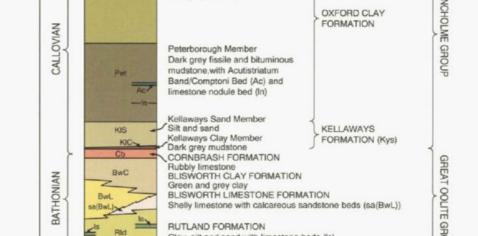




## **LEGEND FOR SHEET 114**







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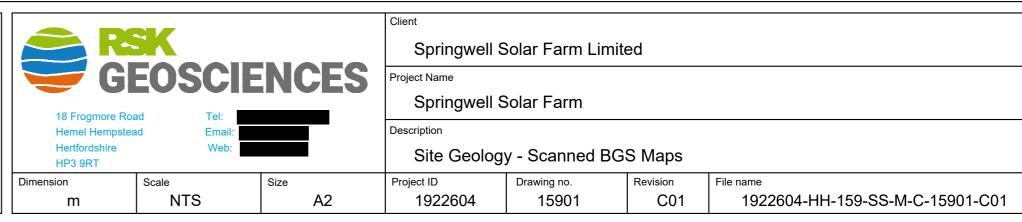
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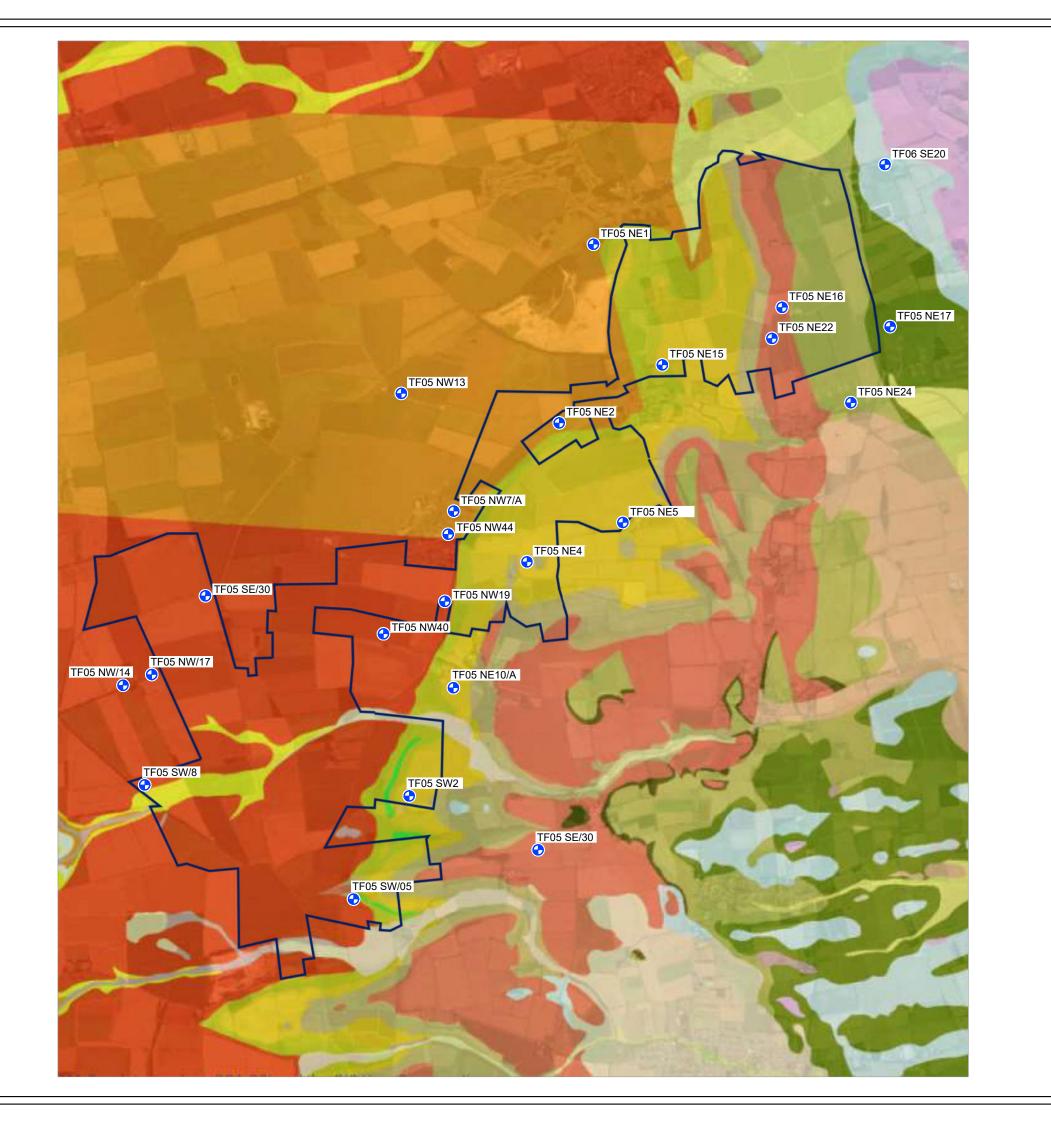
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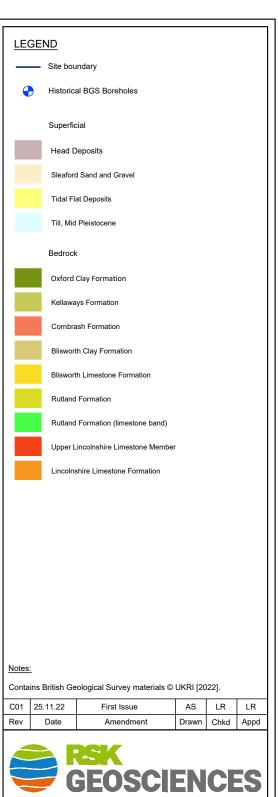
First Issue

Amendment













C01

#### Client

Springwell Solar Farm Ltd

#### Project Name

Springwell Solar Farm

#### Description

Site Geology - online BGS viewer including BGS Boreholes

oject ID	Drawing no.
1922604	15902

File name

1922604-HH-159-SS-M-C-15902-C01

ı	Dimensions	Scale	Size
l	m	1:40000	A3



## FIGURE 6 SITE RECONNAISSANCE PHOTOGRAPH PLAN





# **APPENDICES**



## APPENDIX A SERVICE CONSTRAINTS

- 1. This report and the site investigation carried out in connection with the report (together the "Services") were compiled and carried out by RSK Environment Limited (RSK) for Springwell Solar Farm Limited (the "Client") in accordance with the terms of a consultancy services agreement between RSK and the Client, dated 8 August 2022. The Services were performed by RSK with the reasonable skill and care ordinarily exercised by an environmental consultant at the time the Services were performed. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the Client.
- 2. Other than that, expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services.
- 3. Unless otherwise agreed in writing, the Services were performed by RSK exclusively for the purposes of the Client. RSK is not aware of any interest of or reliance by any party other than the Client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and RSK disclaims any liability to such parties. Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.
- 4. It is RSK's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without RSK 's review and advice shall be at the client's sole and own risk. Should RSK be requested to review the report after the date of this report, RSK shall be entitled to additional payment at the then existing rates or such other terms as agreed between RSK and the client.
- 5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the report in the future shall be at the Client's own and sole risk. Should RSK be requested to review the report in the future, RSK shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between RSK and the client.
- The observations and conclusions described in this report are based solely upon the Services which were provided pursuant to the agreement between the Client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and RSK. RSK is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, RSK did not seek to evaluate the presence on or off site of asbestos, invasive plants, electromagnetic fields, lead paint, heavy metals, radon gas, persistent, bioaccumulative or toxic chemicals (including PFAS/PFOS) or other radioactive or hazardous materials, unless specifically identified in the Services.
- 7. The Services are based upon RSK's observations of existing physical conditions at the Site gained from a visual inspection of the site together with RSK's interpretation of information, including documentation, obtained from third parties and from the Client on the history and usage of the site, unless specifically identified in the Services or accreditation system (such as UKAS ISO 17020:2012 clause 7.1.6):
  - a. The Services were based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely.
  - b. The Services were limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the visual inspection.



c. The Services did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services.

RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK and including the doing of any independent investigation of the information provided to RSK save as otherwise provided in the terms of the contract between the Client and RSK.

- The intrusive environmental site investigation aspects of the Services are a limited sampling of the site at pre-determined locations based on the known historic / operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the properties of the materials adjacent and local conditions, together with the position of any current structures and underground utilities and facilities, and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters (as stipulated in the scope between the client and RSK, based on an understanding of the available operational and historical information) and it should not be inferred that other chemical species are not present.
- 9. Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (intrusive and sample locations etc) annotated on site plans are not drawn to scale but are centred over the approximate location. Such features should not be used for setting out and should be considered indicative only.
- 10. The comments given in this report and the opinions expressed are based on the ground conditions encountered during the site work and on the results of tests made in the field and in the laboratory. However, there may be conditions pertaining to the site that have not been disclosed by the investigation and therefore could not be taken into account. In particular, it should be noted that there may be areas of made ground not detected due to the limited nature of the investigation or the thickness and quality of made ground across the site may be variable. In addition, groundwater levels and ground gas concentrations and flows, may vary from those reported due to seasonal, or other, effects and the limitations stated in the data should be recognised.
- 11. Asbestos is often observed to be present in soils in discrete areas. Whilst asbestos-containing materials may have been locally encountered during the fieldworks or supporting laboratory analysis, the history of brownfield and demolition sites indicates that asbestos fibres may be present more widely in soils and aggregates, which could be encountered during more extensive ground works
- 12. Unless stated otherwise, only preliminary geotechnical recommendations are presented in this report and these should be verified in a Geotechnical Design Report, once proposed construction and structural design proposals are confirmed.



# APPENDIX B SUMMARY OF LEGISLATION AND POLICY RELATING TO LAND CONTAMINATION

## Part IIA of the Environmental Protection Act 1990

Part IIA of the Environmental Protection Act 1990 (Part IIA) and its associated Contaminated Land Regulations 2000 (SI 2000/227), which came into force in England on 1 April 2000, formed the basis for the current regulatory framework and the statutory regime for the identification and remediation of contaminated land. Part IIA of the EPA 1990 defines contaminated land as 'any land which appears to the Local Authority in whose area it is situated to be in such a condition by reason of substances in, on or under the land, that significant harm is being caused, or that there is significant possibility of significant harm being caused, or that pollution of controlled waters is being or is likely to be caused'. Controlled waters are considered to include all groundwater, inland waters and estuaries.

In August 2006, the Contaminated Land (England) Regulations 2006 (SI 2006/1380) were implemented, which extended the statutory regime to include Part IIA of the EPA as originally introduced on 1 April 2000, together with changes intended chiefly to address land that is contaminated by virtue of radioactivity. These have been replaced subsequently by the Contaminated Land (England) (Amendment) Regulations 2012, which now exclude land that is contaminated by virtue of radioactivity.

The intention of Part IIA is to deal with contaminated land issues that are considered to cause significant harm on land that is not undergoing development (see Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance, April 2012). This document replaces Annex III of Defra Circular 01/2006, published in September 2006 (the remainder of this document is now obsolete).

## **Planning Policy**

Contaminated land is often dealt with through planning because of land redevelopment. This approach was documented in Planning Policy Statement: Planning and Pollution Control PPS23, which states that it remains the responsibility of the landowner and developer to identify land affected by contamination and carry out sufficient remediation to render the land suitable for use. PPS23 was withdrawn early in 2012 and has been replaced by much reduced guidance within the National Planning Policy Framework (NPPF), reference ISBN: 978-1-5286-1033-9, February 2019.

The new framework has only limited guidance on contaminated land, as follows:

## Chapter 11. Making effective use of land

- Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Strategic policies should set out a clear strategy for accommodating objectively assessed needs, in a way that makes as much use as possible of previously-developed or 'brownfield' land.
- 118. Planning policies and decisions should:
  - c) give substantial weight to the value of using suitable brownfield land within settlements for homes and other identified needs, and support appropriate opportunities to remediate despoiled, degraded, derelict, contaminated or unstable land.



## Chapter 15. Conserving and enhancing the natural environment

- 170. Planning policies and decisions should contribute to and enhance the natural and local environment by:
  - e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
  - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

## Ground conditions and pollution

- 178. Planning policies and decisions should ensure that:
  - a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);
  - b) after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990; and
  - c) adequate site investigation information, prepared by a competent person, is available to inform these assessments.
- 179. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.

## **Water Resources Act (WRA)**

The Water Resources Act 1991 (Amendment) (England and Wales) Regulations 2009 updated the Water Resources Act 1991, which introduced the offence of causing or knowingly permitting pollution of controlled waters. The Act provides the Environment Agency with powers to implement remediation necessary to protect controlled waters and recover all reasonable costs of doing so.

## Water Framework Directive (WFD)

The Water Framework Directive 2000/60/EC is designed to:

- enhance the status and prevent further deterioration of aquatic ecosystems and associated wetlands that depend on the aquatic ecosystems
- promote the sustainable use of water
- reduce pollution of water, especially by 'priority' and 'priority hazardous' substances
- ensure progressive reduction of groundwater pollution.

The WFD requires a management plan for each river basin be developed every six years.

## **Groundwater Directive (GWD)**



The 1980 Groundwater Directive 80/68/EEC and the 2006 Groundwater Daughter Directive 2006/118/EC of the WFD are the main European legislation in place to protect groundwater. The 1980 Directive is due to be repealed in December 2013. The European legislation has been transposed into national legislation by regulations and directions to the Environment Agency.

## **Priority Substances Directive (PSD)**

The Priority Substances Directive 2008/105/EC is a 'Daughter' Directive of the WFD, which sets out a priority list of substances posing a threat to or via the aquatic environment. The PSD establishes environmental quality standards for priority substances, which have been set at concentrations that are safe for the aquatic environment and for human health. In addition, there is a further aim of reducing (or eliminating) pollution of surface water (rivers, lakes, estuaries and coastal waters) by pollutants on the list. The WFD requires that countries establish a list of dangerous substances that are being discharged and EQS for them. In England and Wales, this list is provided in the River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Directions 2010. In order to achieve the objectives of the WFD, classification schemes are used to describe where the water environment is of good quality and where it may require improvement.

### Environmental Permitting Regulations (EPR)

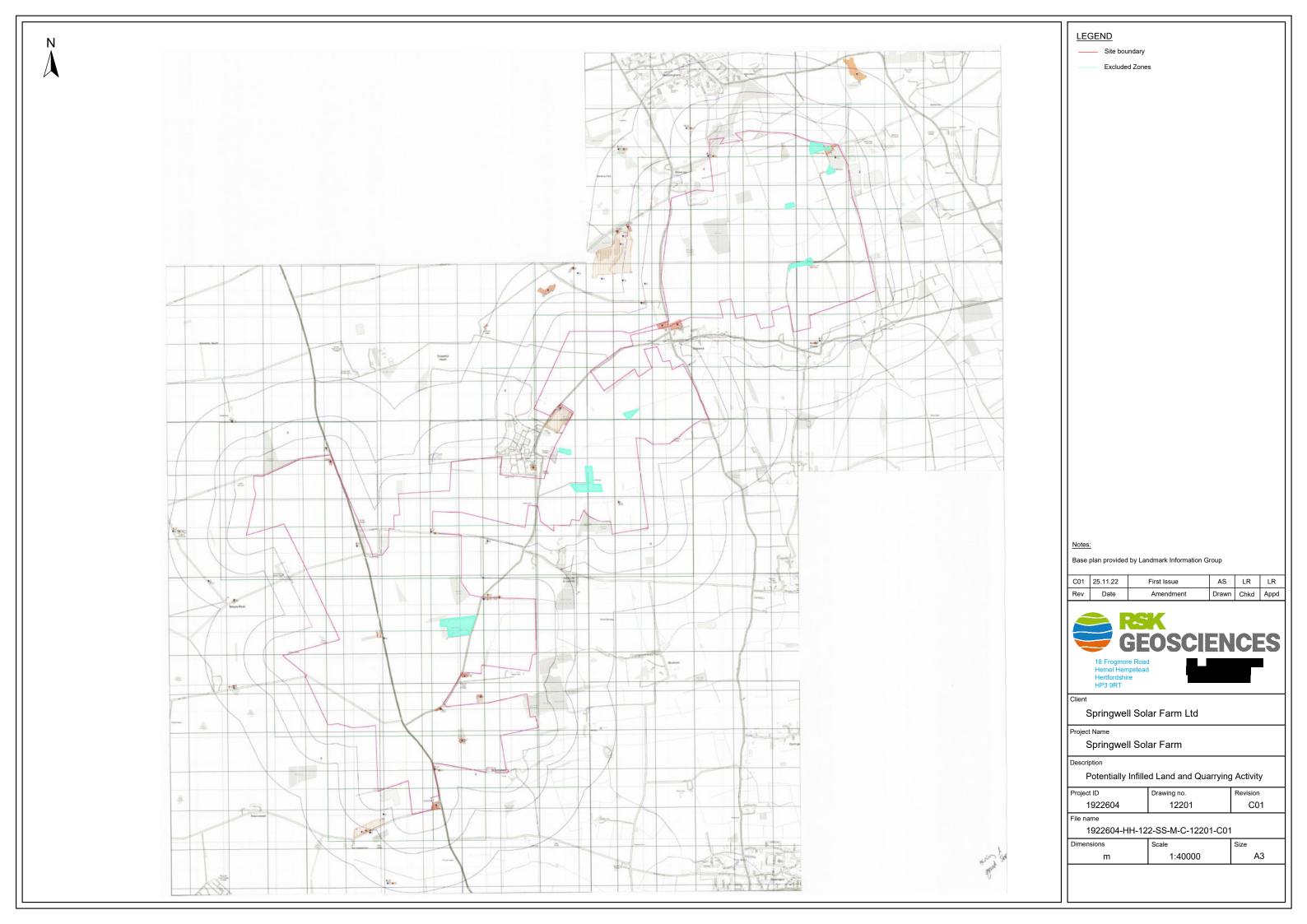
The Environmental Permitting (England and Wales) Regulations 2016 (as amended) provide a single regulatory framework that streamlines and integrates waste management licensing, pollution prevention and control, water discharge consenting, groundwater authorisations, and radioactive substances regulation. Schedule 22, paragraph 6 of EPR 2016 states: 'the regulator must, in exercising its relevant functions, take all necessary measures - (a) to prevent the input of any hazardous substance to groundwater; and (b) to limit the input of non-hazardous pollutants to groundwater so as to ensure that such inputs do not cause pollution of groundwater.'

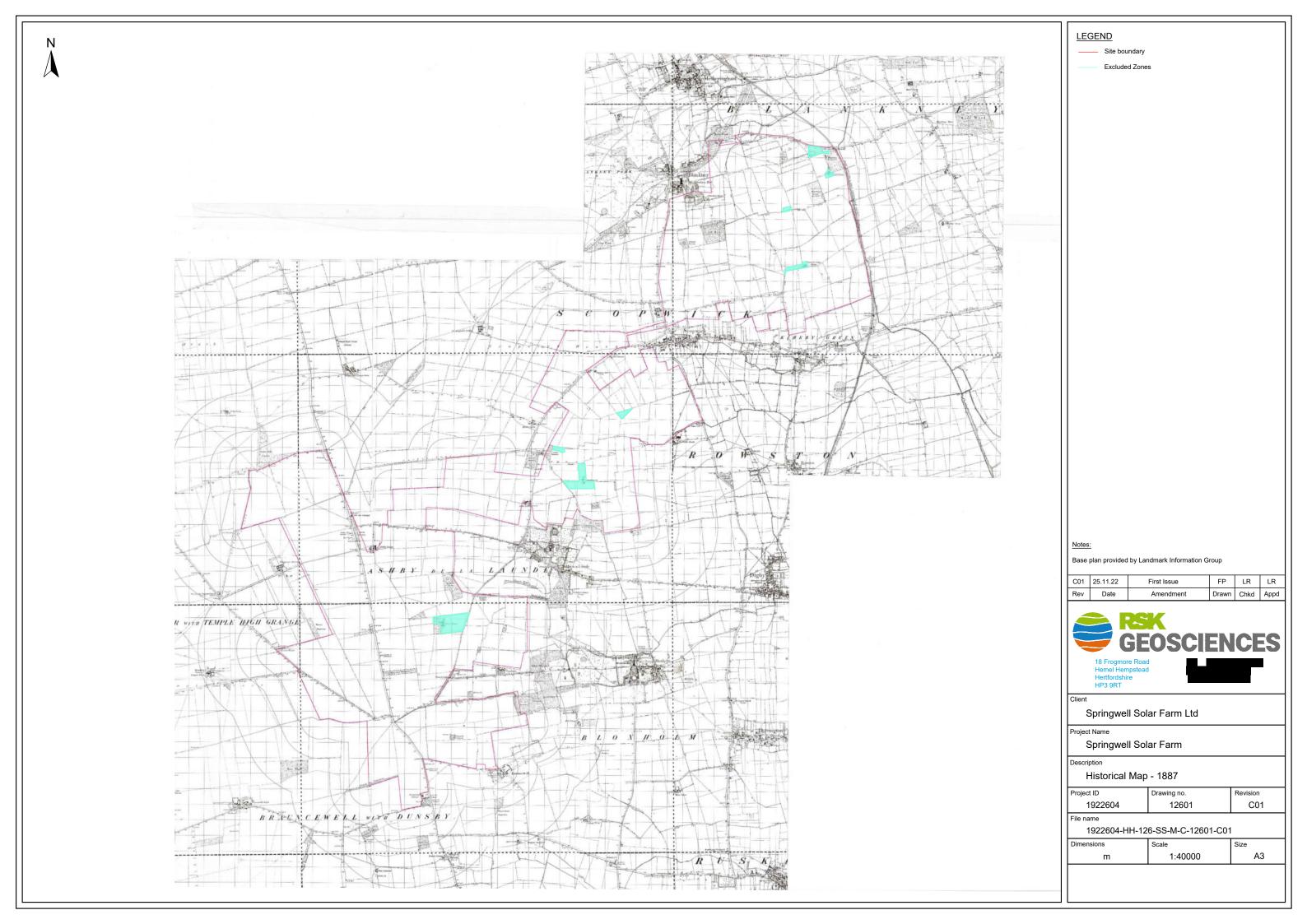
#### Notes:

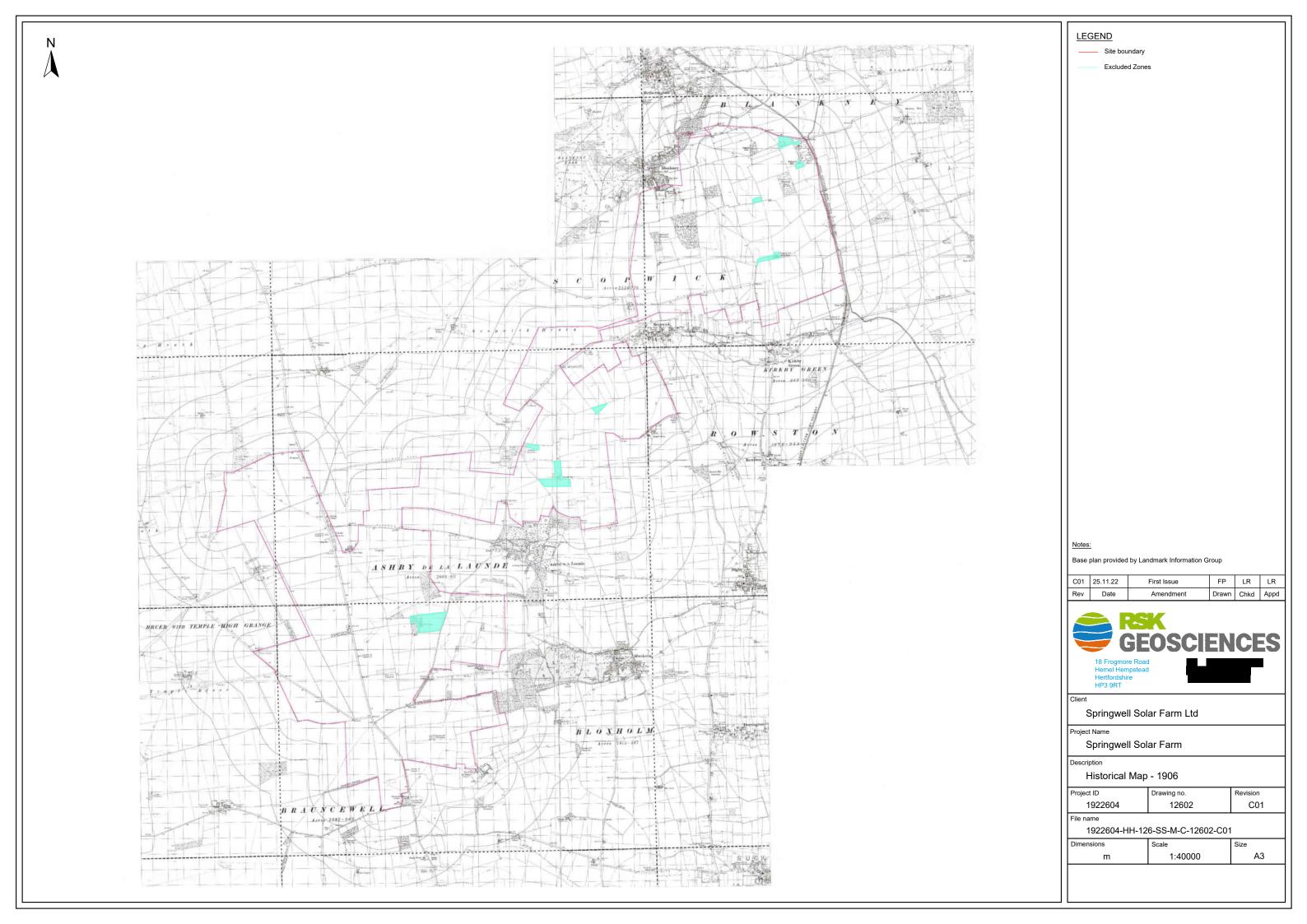
- 1. The above information is provided for background but does not constitute site-specific advice
- 2. The above summary applies to England only. Variations exist within other countries of the United Kingdom

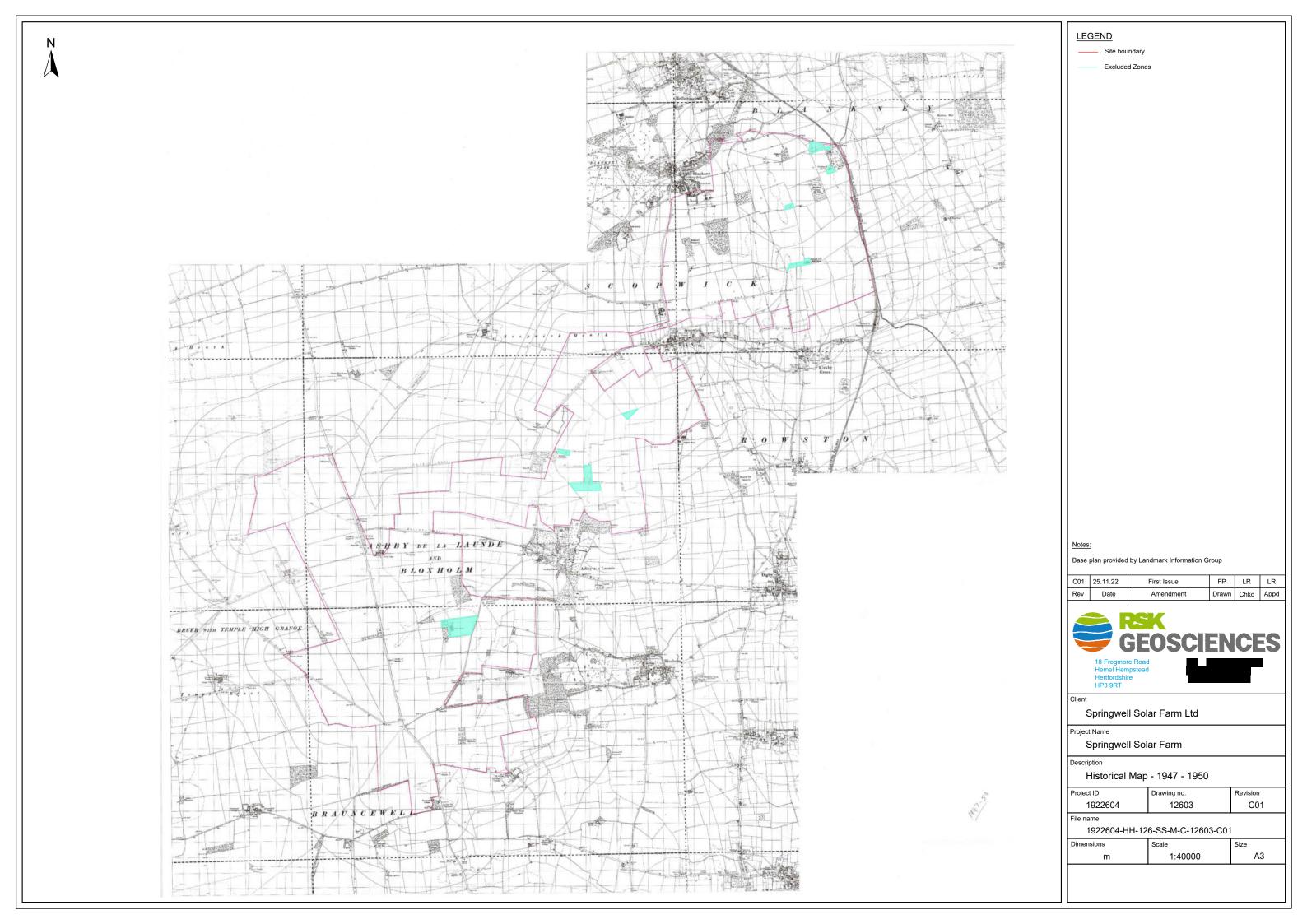


## APPENDIX C SITE-WIDE HISTORICAL MAPS AND PLANS

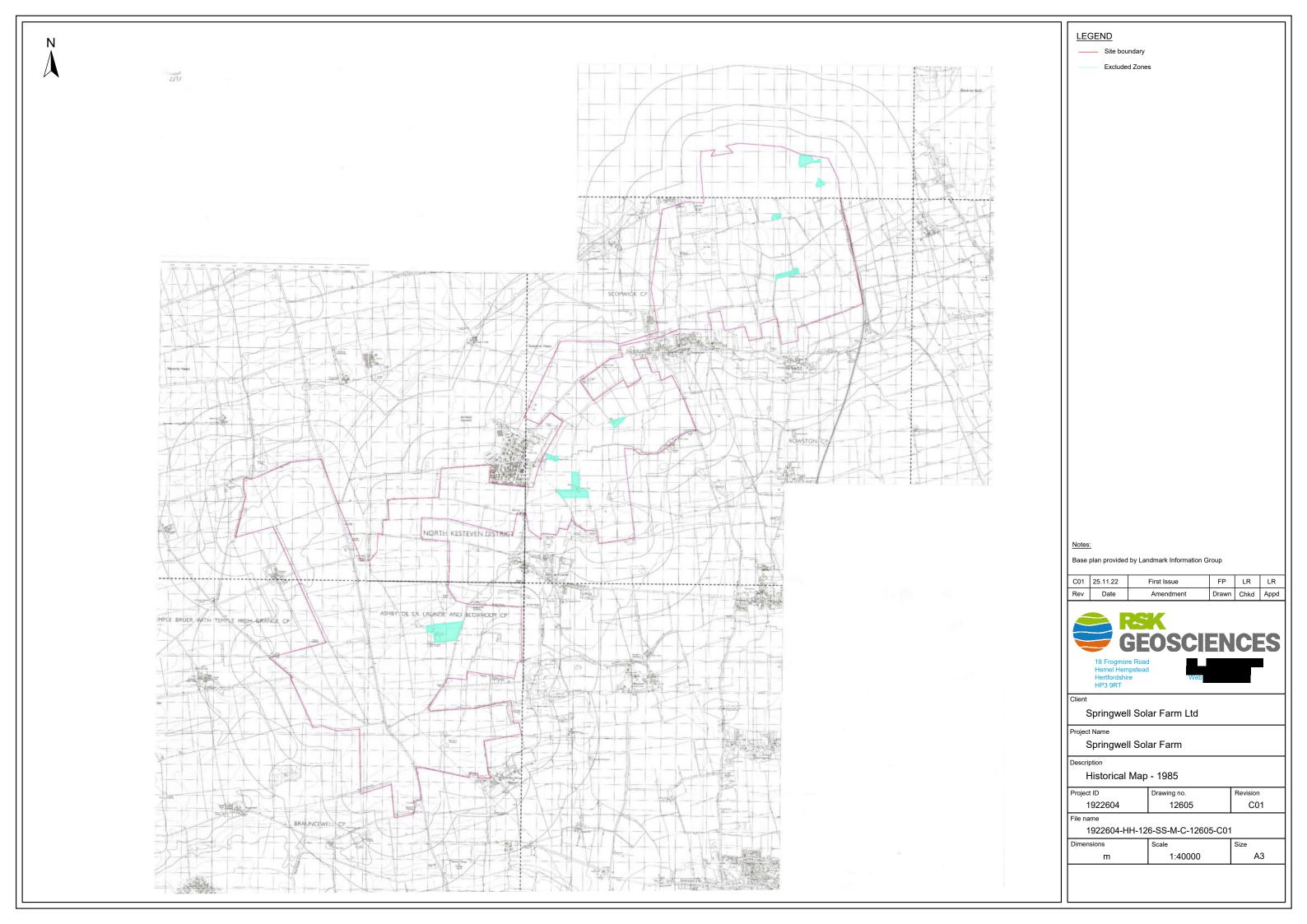


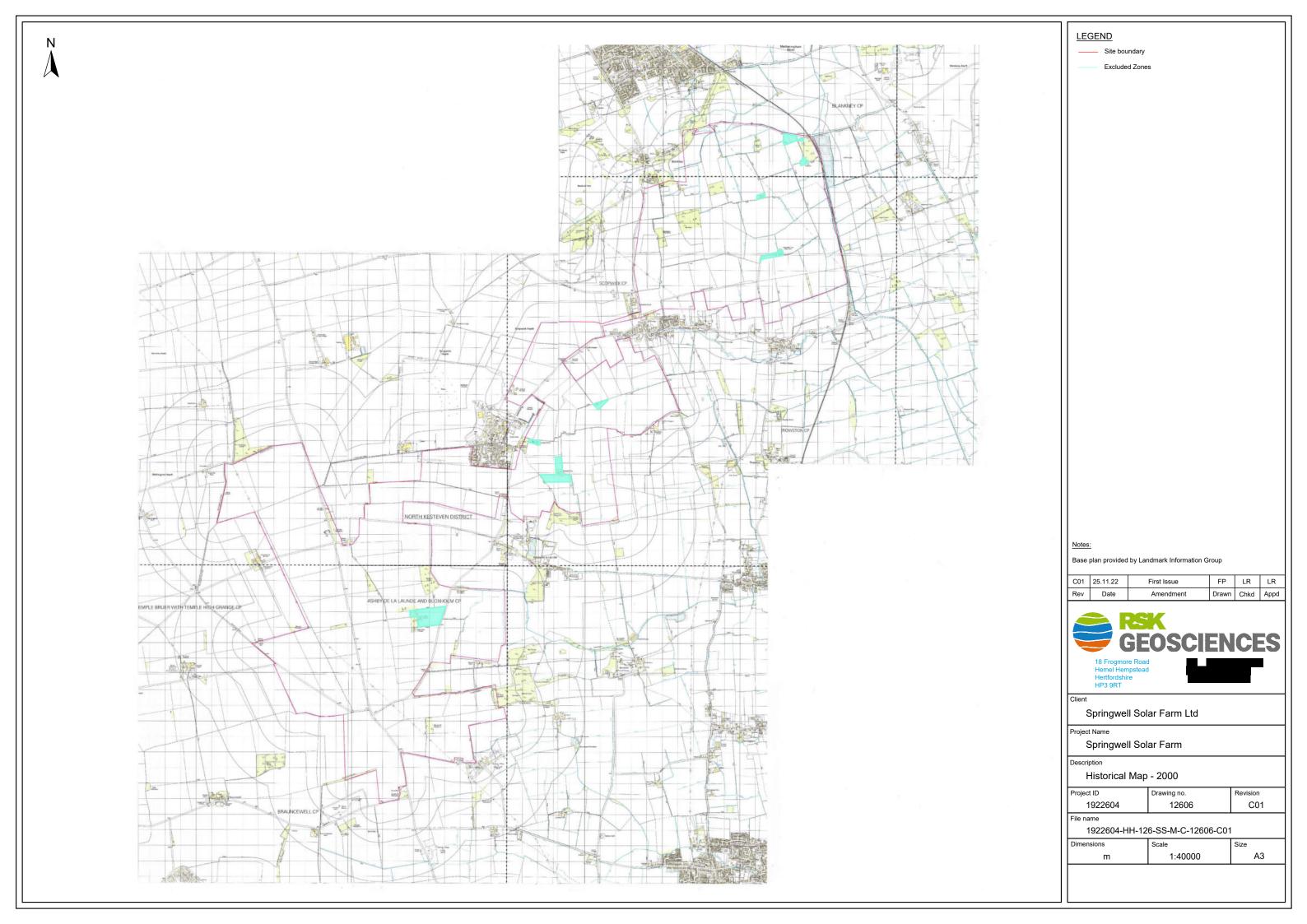


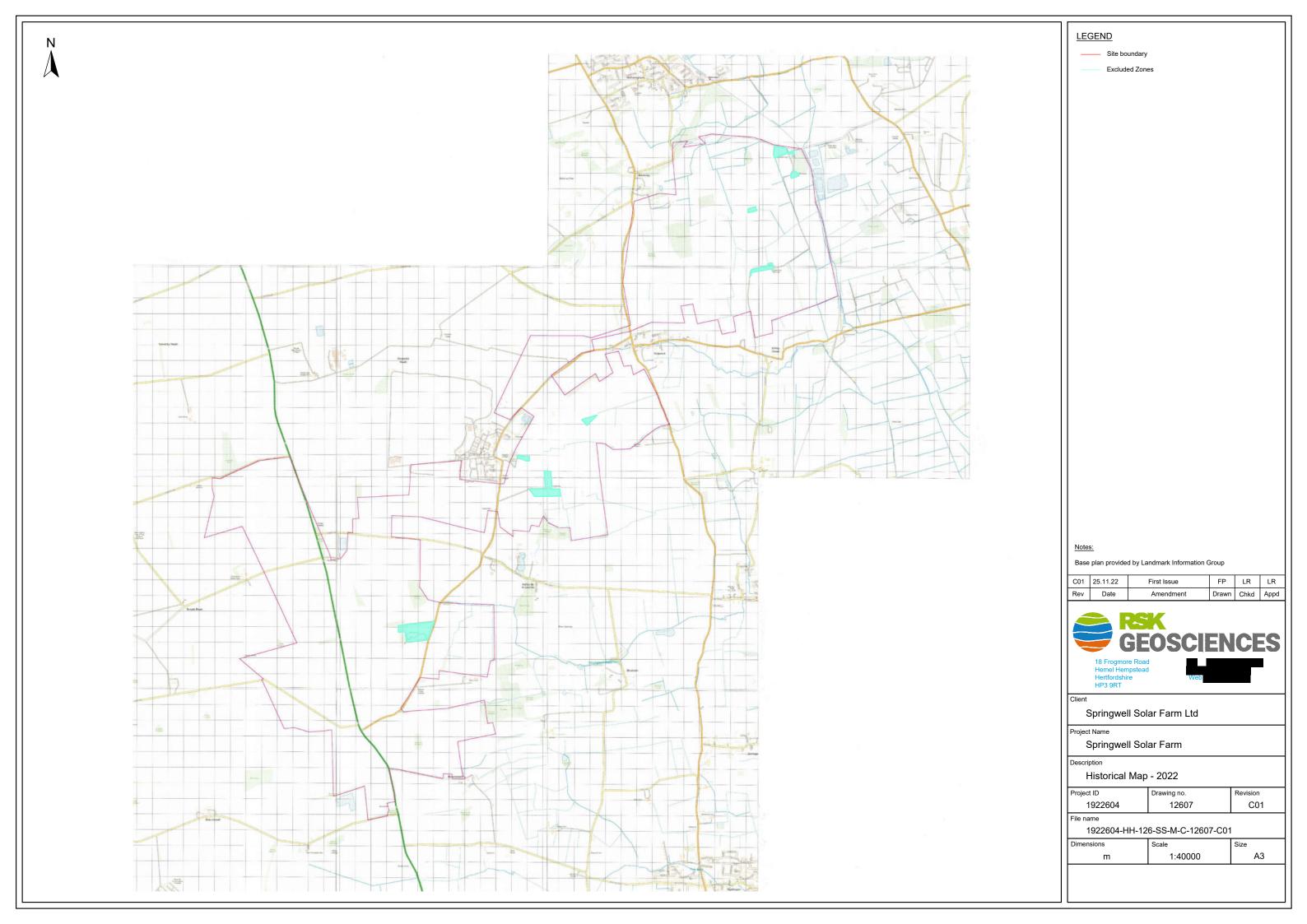














# APPENDIX D1 ENVIRONMENTAL DATABASE REPORT – ZONE A



# **Envirocheck® Report:**

## **Datasheet**

## **Order Details:**

**Order Number:** 

303381609\_1\_1

**Customer Reference:** 

P02130089

**National Grid Reference:** 

502200, 352660

Slice:

Α

Site Area (Ha):

1774.17

Search Buffer (m):

1000

**Site Details:** 

All Areas New







Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	11
Hazardous Substances	-
Geological	13
Industrial Land Use	15
Sensitive Land Use	16
Data Currency	17
Data Suppliers	21
Useful Contacts	22

#### Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.

For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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#### Report Version v53.0



# **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 3				6
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 4				1
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 4				3
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 5		Yes		
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
Substantiated Pollution Incident Register					
River Quality Chemistry Sampling Points					
Water Abstractions	pg 5				(*1)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 5	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 9	9	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 9	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 9	Yes	n/a	n/a	n/a
Source Protection Zones	pg 10	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 10				1



# **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 11		3	2	
Licensed Waste Management Facilities (Locations)	pg 11			1	
Local Authority Landfill Coverage	pg 12	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Registered Landfill Sites	pg 12			2	
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					
Geological					
BGS 1:625,000 Solid Geology	pg 13	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 13				3
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 13	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 13	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 14	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 14	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 14	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 14	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 14	Yes	n/a	n/a	n/a



# **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 15				1
Fuel Station Entries					
Gas Pipelines					
Underground Electrical Cables					
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 16	2			
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	(E)	0	1	503500 352300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SE)	0	1	502800 352350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NE (NE)	0	1	502650 353450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	502850 353950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	503200 354150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	0	1	503250 354150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	0	1	503400 352500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (NE)	0	1	502500 353350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	1	503000 354000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	0	1	503100 352300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	1	503300 352150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	0	1	502450 352050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	503250 352000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	0	1	503250 352450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	0	1	503500 352450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SE)	0	1	502850 352350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NE (S)	0	1	502199 352663
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	502199 353750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	502500 353800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	502500 353850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	502300 353850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	0	1	503050 354100



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	(NE)	0	1	503150 354100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	0	1	503200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	354100 502300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15NE	0	1	353900 501950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N) A16NE	0	1	353600 502800
	BGS Groundwater Flooding Susceptibility	(NE)	0	ı	353600
	Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (SE)	24	1	502750 352050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SE)	68	1	502800 352400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SE (SE)	99	1	502800 351600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SE (SE)	116	1	502950 351850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	117	1	502600 352500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE	118	1	502750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SE) A15NW	122	1	352400 501900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N) A8NE	185	1	353600 502900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE) A8NE	193	1	352050 502650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	200	1	352150 503000
	BGS Groundwater Flooding Susceptibility				352050
	Flooding Type: Potential for Groundwater Flooding to Occur at Surface  BGS Groundwater Flooding Susceptibility	A15NW (NW)	234	1	501800 353550
	Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	304	1	502400 352100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	310	1	502650 351950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	314	1	503000 351900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7SE	339	1	502199
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S) A8SE	356	1	351900 502750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)  A8SE (SE)	385	1	351900 502900 351850



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Limited Potential for Groundwater Flooding to Occur	A8SW (SE)	402	1	502550 351850
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SE (SE)	422	1	502700 351850
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	430	1	502400 351950
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Limited Potential for Groundwater Flooding to Occur	A8SE (SE)	435	1	502750 351800
	BGS Groundwater I Flooding Type:	Flooding Susceptibility  Potential for Groundwater Flooding to Occur at Surface	A14NE (NW)	444	1	501550 353500
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SE (SE)	468	1	502700 351800
1	Discharge Consent Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Brauncewell Hill Top Cottages, Brauncewell, Sleaford. Environment Agency, Anglian Region Not Supplied Pr3lfu561 1 14th March 1972 14th March 1972 1st October 1996 Unknown Onto Land  Land Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 100m	A4NE (SE)	632	2	502900 351500
1	Discharge Consent Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Brauncewell Hill Top Cottages, Brauncewell, Sleaford. Environment Agency, Anglian Region Not Supplied Pr3lfu5512 1 11th February 1966 11th February 1966 30th May 1997 Unknown Onto Land Land Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 100m	A4NE (SE)	632	2	502900 351500
2	Discharge Consent Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Arable Farming Temple Farm Temple Bruer, Wellingore, Lincoln, Lincs, Ln5 0dp Environment Agency, Anglian Region Catchment 29 Unknown Detail Gwnlf40489 1 1st April 1999 20th July 2000 Not Supplied Trade Discharge - Agricultural And Surface Onto Land Groundwater Deemed Groundwater Regulations Authorisation Located by supplier to within 100m	A14NW (NW)	648	2	501200 353600



Page 4 of 22

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consents Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Ag Reserves Ltd Arable Farming Manor Farm Church End Wood, Walton, Huntingdon, Cambs, Pe17 5yz Environment Agency, Anglian Region Catchment 29 Unknown Detail Gwnlf40713 1 1st April 1999 19th July 2000 Not Supplied Trade Discharge - Agricultural And Surface Onto Land  Groundwater Deemed Groundwater Regulations Authorisation Located by supplier to within 100m	A8SW (S)	763	2	502500 351600
4		Hallsworth (Farmland Trust) Ltd Domestic Property (Single) New Homestead Farm Brauncewell, Sleaford., Lincs, Ng34 8rl Environment Agency, Anglian Region Not Supplied Pr3lfu5511 2 14th December 2011 14th December 2011 Sewage Discharges - Final/Treated Effluent - Not Water Company Land/Soakaway  Land Varied under EPR 2010 Located by supplier to within 10m	A4NW (S)	815	2	502553 351508
4	Discharge Consents Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Hallsworth (Farmland Trust) Ltd Domestic Property (Single) New Homestead Farm Brauncewell, Sleaford., Lincs, Ng34 8rl Environment Agency, Anglian Region Not Supplied Pr3lfu5511 1 11th February 1966 11th February 1966 13th December 2011 Sewage Discharges - Final/Treated Effluent - Not Water Company Land/Soakaway  Land Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 10m	A4NW (S)	815	2	502553 351508
5	Integrated Pollution Name: Location: Authority: Permit Reference: Original Permit Ref: Effective Date: Status: Application Type: App. Sub Type: Positional Accuracy: Activity Code: Activity Description: Primary Activity: Activity Code:	n Prevention And Control Brauncewell Quarries Brauncewell, Sleaford, Lincolnshire, NG34 8RL Environment Agency, Anglian Region YP3238LE	A8SE (SE)	555	2	502733 351713
6	Local Authority Pol Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status:	Iution Prevention and Controls  Brauncewell Quarries Ltd Brauncewell, Ng34 7ef North Kesteven District Council, Environmental Health Department IPPC/2004/7 1st January 2005 Local Authority Pollution Prevention and Control PG3/8 Quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete Authorised Manually positioned to the address or location	A8SE (SE)	555	3	502733 351713



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Name: Location: Authority: Permit Reference: Dated: Process Type: Description:	Brauncewell Quarries Ltd Brauncewell Quarries Ltd Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, Ng34 8rl North Kesteven District Council, Environmental Health Department Ag4700 16th September 1992 Local Authority Air Pollution Control Processes registered under S. 9 of the Alkali Act 1906 and S. 5 of the Health & Safety at Work Act 1974 Application Refused Or Cancelled Manually positioned to the address or location	A8SE (SE)	575	3	502735 351691
6	Name: Location: Authority: Permit Reference: Dated: Process Type: Description:	Brauncewell Quarries Ltd Brauncewell, LN5 0DH North Kesteven District Council, Environmental Health Department Ippc/2004/7 Not Supplied Local Authority Pollution Prevention and Control PG3/8 Quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete Authorised Manually positioned to the address or location	A8SE (SE)	581	3	502722 351689
	Nearest Surface Wa	iter i eature	A8NE (SE)	27	-	502893 352195
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*g/079 Not Supplied Brauncewell Grange Borehole, BRAUNCEWELL Environment Agency, Anglian Region Domestic & Agriculture Not Supplied Well And Borehole 1 4550 Central Lincolnshire Limestone; Status: Revoked Not Supplied Located by supplier to within 100m	A6SW (SW)	1795	2	501100 351750
	Groundwater Vulne Combined Classification: Combined Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness: Superficial Thickness: Superficial Recharge:	rability Map Secondary Bedrock Aquifer - High Vulnerability High Productive Bedrock Aquifer, No Superficial Aquifer Intermediate Well Connected Fractures <300 mm/year >70% <90% <3m No Data	(SE)	0	4	503000 351754
	Groundwater Vulne Combined Classification: Combined Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness: Superficial Thickness: Superficial Recharge:	Principle Bedrock Aquifer - High Vulnerability  High  Productive Bedrock Aquifer, No Superficial Aquifer High Well Connected Fractures <300 mm/year >70% <90%  <3m  No Data	A11NE (S)	0	4	502199 352663



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined Classification:	Principle Bedrock Aquifer - High Vulnerability	(E)	0	4	503000 352663
	Combined Vulnerability:	High				002000
	Combined Aquifer: Pollutant Speed:	Productive Bedrock Aquifer, No Superficial Aquifer High				
	Bedrock Flow:	Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial	>70% <90%				
	Patchiness: Superficial	<3m				
	Thickness: Superficial	No Data				
	Recharge:					
	Groundwater Vulne Combined	erability Map Principle Bedrock Aguifer - High Vulnerability	(SE)	0	4	503000
	Classification:	High	(32)		, i	352073
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial Patchiness:	<90%				
	Superficial Thickness:	<3m				
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Principle Bedrock Aquifer - High Vulnerability	(N)	0	4	502000 354000
	Combined Vulnerability:	High				
	Combined Aquifer: Pollutant Speed:	Productive Bedrock Aquifer, No Superficial Aquifer High				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial	>70% <90%				
	Patchiness: Superficial	<3m				
	Thickness: Superficial	No Data				
	Recharge:	unhille. Man				
	Groundwater Vulne Combined	erability Map  Principle Bedrock Aquifer - High Vulnerability	(N)	0	4	502199
	Classification: Combined	High	(14)		<del>-</del>	354000
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution: Baseflow Index:	Veil Connected Fractures <300 mm/year >70%				
	Superficial Patchiness:	<90%				
	Superficial Thickness:	<3m				
	Superficial Recharge:	No Data				



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined Classification:	Principle Bedrock Aquifer - High Vulnerability	(NE)	0	4	503000 354000
	Combined Vulnerability: Combined Aquifer:	High Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index:	High Well Connected Fractures <300 mm/year >70%				
	Superficial Patchiness: Superficial	<90%				
	Thickness: Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Superficial Aquifer - High Vulnerability	A15NE (N)	0	4	502084 353489
	Combined Vulnerability: Combined Aquifer:	High  Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed: Bedrock Flow: Dilution:	High Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial Patchiness:	>70% <90%				
	Superficial Thickness: Superficial	<3m No Data				
	Recharge:	NO Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Superficial Aquifer - High Vulnerability	(N)	0	4	502000 353687
	Combined Vulnerability: Combined Aquifer:	High  Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed: Bedrock Flow: Dilution:	High Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial Patchiness:	>70% <90%				
	Superficial Thickness: Superficial	<3m No Data				
	Recharge:	NO Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Superficial Aquifer - High Vulnerability	(SE)	0	4	503000 352210
	Combined Vulnerability: Combined Aquifer:	High  Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed: Bedrock Flow: Dilution:	High Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial Patchiness:	>70% <90%				
	Superficial Thickness:	<3m				
	Superficial Recharge:	No Data				



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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map					
	Combined	Secondary Superficial Aquifer - High Vulnerability	(E)	0	4	503276
	Classification: Combined	High				352267
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness:	- Chi				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	•				
	Combined	Secondary Superficial Aquifer - High Vulnerability	A11NE	0	4	502174
	Classification: Combined	Lligh	(SW)			352608
	Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness:	.0				
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(SE)	0	4	503000
	Classification:					352000
	Combined Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	Intermediate				
	Bedrock Flow:	Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial	<90%				
	Patchiness:					
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(N)	0	4	501813
	Classification:					353623
	Combined	High				
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow:	Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial	>70% <90%				
	Patchiness:	••				
	Superficial	<3m				
	Thickness:	No Data				
	Superficial Recharge:	No Data				[



Map ID	Details		Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map					
	Combined	Principle Bedrock Aquifer - High Vulnerability	A15SE	0	4	502199
	Classification:		(N)			353000
	Combined	High				
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow:	Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index: Superficial	>70% <90%				
	Patchiness:	13070				
	Superficial	<3m				
	Thickness:	W 5 4				
	Superficial Recharge:	No Data				
	_	and the same				
	Groundwater Vulne		(NE)	0		500000
	Combined Classification:	Principle Bedrock Aquifer - High Vulnerability	(NE)	0	4	503000 353000
	Combined	High				000000
	Vulnerability:	-				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness:	- Chi				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability - Soluble Rock Risk				
	Classification:	Very Significant Risk - Moderate Possibility	(SE)	0	4	503000
						352000
		erability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	A11NE (S)	0	4	502199
	Groundwater Vulne	wahility Salubla Book Biok	(3)			352663
	Classification:	erability - Soluble Rock Risk  Very Significant Risk - Moderate Possibility	(5)	0	4	F02000
	Classification.	very Significant Risk - Moderate Possibility	(E)	0	4	503000 352663
	Groundwater Vulne	erability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	A15SE	0	4	502000
	Oldooniodiioiii	organical Contraction (Contraction)	(NW)		·	353000
	Groundwater Vulne	erability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	A15SE	0	4	502199
		,	(N)			353000
	Groundwater Vulne	erability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	(NE)	0	4	503000
						353000
		erability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	(N)	0	4	502000
	0	weblife. Oaluble Beat Bird				354000
		erability - Soluble Rock Risk		_	_	
	Classification:	Significant Risk - Low Possibility	(N)	0	4	502199 354000
	Groundwater Vol-	vrahility. Saluhla Back Bisk				334000
		erability - Soluble Rock Risk	(A.E.)			E00000
	Classification:	Very Significant Risk - Moderate Possibility	(NE)	0	4	503000 354000
	Bedrock Aquifer De	esignations				507000
	= -	Secondary Aquifer - B	A8SE	0	4	502818
	Aquiler Designation:	Occordary Aquilor - D	(SE)		<b>-</b>	351693
	Bedrock Aquifer De	esignations	(/			
	Aquifer Designation:	_	A11NE	0	4	502199
	, iquilor Designation.	i iliopai / quiloi	(S)			352663
	Bedrock Aquifer De	esignations	(-/			
	Aquifer Designation:	_	A8SE	0	4	502848
	, iquilor Designation.	i iliopai / quiloi	(SE)			351605
	Superficial Aquifer	Designations				
	-	Secondary Aquifer - A	(E)	0	4	503276
		7	(=/			352267



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Superficial Aquifer Designations				
	Aquifer Designation: Secondary Aquifer - Undifferentiated	A15NE (N)	0	4	502084 353489
	Superficial Aquifer Designations				
	Aquifer Designation: Secondary Aquifer - Undifferentiated	A15NW (N)	0	4	501873 353602
	Superficial Aquifer Designations				
	Aquifer Designation: Secondary Aquifer - Undifferentiated	A11NE (SW)	0	4	502174 352608
	Source Protection Zones				
7	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.	A11NE (S)	0	2	502199 352663
	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				
	OS Water Network Lines				
8	Watercourse Form: Inland river Watercourse Length: 947.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	A4NW (S)	780	5	502611 351360





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Licensed Waste Ma	nagement Facilities (Landfill Boundaries)				
9	Name: Licence Number: Location: Licence Holder: Authority: Site Category: Max Input Rate: Licence Status: Issued:	Brauncewell Quarry 73008 Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Not Supplied Modified 12th April 2001 Positioned by the supplier	A8NE (SE)	9	2	502631 352151
		nagement Facilities (Landfill Boundaries)				
10	Name: Licence Number: Location: Licence Holder: Authority: Site Category: Max Input Rate: Licence Status: Issued:	Brauncewell Quarry Landfill 73320 Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Not Supplied Inactive 19th March 2007 Positioned by the supplier	A8SE (SE)	194	2	502741 351833
11	Name: Licence Number: Location: Licence Holder: Authority: Site Category: Max Input Rate: Licence Status: Issued:	nagement Facilities (Landfill Boundaries)  Brauncewell Quarry Landfill 73320  Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Not Supplied Expired 19th March 2007 Positioned by the supplier As Supplied	A8SE (SE)	194	2	502741 351833
12	Name: Licence Number: Location: Licence Holder: Authority: Site Category: Max Input Rate: Licence Status: Issued:	nagement Facilities (Landfill Boundaries)  Brauncewell Quarry 70905  Brauncewell Quarries Ltd, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Not Supplied Inactive 28th July 1986 Positioned by the supplier As Supplied	A8SE (SE)	354	2	502657 351861
		···				
13	Name: Licence Number: Location: Licence Holder: Authority: Site Category: Max Input Rate: Licence Status: Issued: Positional Accuracy: Boundary Accuracy:		A8SE (SE)	354	2	502657 351861
14	Licence Number: Location: Operator Name: Operator Location: Authority: Site Category: Licence Status: Issued: Last Modified: Expires: Suspended: Revoked: Surrendered: IPPC Reference:	nagement Facilities (Locations)  101884 Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Not Supplied Environment Agency - Anglian Region, Northern Area Inert & excavation Waste TS + treatment Modified  30th January 2012 9th July 2021 Not Supplied Located by supplier to within 10m	A8SE (SE)	468	2	502731 351808

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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Lan	dfill Coverage				
	Name:	North Kesteven District Council - Had landfill data but passed it to the relevant environment agency		0	3	502199 352663
	Local Authority Lan	dfill Coverage				
	Name:	Lincolnshire County Council - Had landfill data but passed it to the relevant environment agency		0	6	502199 352663
	Registered Landfill	Sites				
15	Licence Holder: Licence Reference: Site Location: Licence Easting: Licence Northing: Operator Location: Authority: Site Category: Max Input Rate: Waste Source Restrictions: Status: Dated: Preceded By Licence: Superseded By Licence: Positional Accuracy: Boundary Accuracy: Authorised Waste	Brauncewell Quarry, Brauncewell, SLEAFORD, Lincolnshire, NG34 8RL 502900 351900 Brauncewell Quarry, Brauncewell, SLEAFORD, Lincolnshire, NG34 8RL Environment Agency - Anglian Region, Northern Area Landfill Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) No known restriction on source of waste  Operational as far as is knownOperational 12th April 2001 L 51  Not Given  Manually positioned to the address or location	A8SE (SE)	335	2	502900 351900
	B	<u>'</u>				
15	Registered Landfill Licence Holder: Licence Reference: Site Location: Licence Easting: Licence Easting: Licence Northing: Operator Location: Authority: Site Category: Max Input Rate:  Waste Source Restrictions: Status: Dated: Preceded By Licence: Superseded By Licence: Positional Accuracy: Boundary Accuracy: Authorised Waste  Prohibited Waste	Brauncewell Quarries Ltd L 51 Brauncewell Quarry, Brauncewell, SLEAFORD, Lincolnshire, NG34 8RL 502900 351900 As Site Address Environment Agency - Anglian Region, Northern Area Landfill Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) No known restriction on source of waste  Site Closed 28th July 1986 Not Given  EAWML73008  Manually positioned to the address or location	A8SE (SE)	335	2	502900 351900



# **Geological**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Soli Description:	d Geology Inferior Oolite Group	A11NE (S)	0	1	502199 352663
	BGS 1:625,000 Soli Description:	d Geology Great Oolite Group	(SE)	0	1	502989
	BGS Recorded Min	aval Sitaa				351751
16	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity:	Brauncewell Stone Pit Brauncewell, Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 136080 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	A8SE (SE)	543	1	502814 351703
17	BGS Recorded Min Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Brauncewell Stone Pit Brauncewell, Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 136079 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	A8SE (SE)	565	1	502707 351713
	BGS Recorded Min	eral Sites				
18	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Temple Farm Stone Pit Temple Bruer, Welbourn, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 134924 Opencast Ceased Unknown Operator Not Supplied Jurassic Lower Lincolnshire Limestone Member Limestone Located by supplier to within 10m	A14NW (NW)	755	1	501085 353577
	Coal Mining Affects					
	In an area that might	t not be affected by coal mining				
	No Hazard  Potential for Collap  Hazard Potential:	reas of Great Britain sible Ground Stability Hazards Very Low	A11NE	0	1	502199
	Source:	British Geological Survey, National Geoscience Information Service	(S)			352663
	Hazard Potential: Source:	ressible Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
	Potential for Groun Hazard Potential: Source:	d Dissolution Stability Hazards  No Hazard  British Geological Survey, National Geoscience Information Service	A8SE (SE)	0	1	502818 351693
	Potential for Groun Hazard Potential: Source:	d Dissolution Stability Hazards  Low  British Geological Survey, National Geoscience Information Service	(N)	0	1	501781 353681
	Potential for Groun Hazard Potential: Source:	d Dissolution Stability Hazards  Low  British Geological Survey, National Geoscience Information Service	A15NW (N)	0	1	501873 353602
	Potential for Groun Hazard Potential: Source:	d Dissolution Stability Hazards  Low  British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
	Potential for Groun Hazard Potential: Source:	d Dissolution Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	A15NW (NW)	0	1	501819 353557

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# **Geological**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards					
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A8NE (SE)	0	1	502868 351966
	Potential for Groun	d Dissolution Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A8SE (SE)	116	1	502848 351605
	Potential for Ground Hazard Potential: Source:	d Dissolution Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A15NW (NW)	118	1	501715 353537
	Potential for Lands Hazard Potential: Source:	ide Ground Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
	Potential for Runnin Hazard Potential: Source:	ng Sand Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
		ng Sand Ground Stability Hazards	(0)			002000
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A11NE (SW)	0	1	502174 352608
	Potential for Runnin Hazard Potential: Source:	ng Sand Ground Stability Hazards Very Low British Geological Survey, National Geoscience Information Service	A15NW (N)	0	1	501873 353602
	Potential for Runnin Hazard Potential: Source:	ng Sand Ground Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	A15NE (N)	0	1	502084 353489
	Potential for Shrink	ing or Swelling Clay Ground Stability Hazards	( )			
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
	Potential for Shrink Hazard Potential: Source:	ing or Swelling Clay Ground Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	A11NE (SW)	0	1	502174 352608
	Potential for Shrink Hazard Potential: Source:	ing or Swelling Clay Ground Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	A15NE (N)	0	1	502084 353489
	Potential for Shrink Hazard Potential: Source:	ing or Swelling Clay Ground Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	A15NW (N)	0	1	501873 353602
	Radon Potential - R Affected Area: Source:	adon Affected Areas  The property is in an Intermediate probability radon area (5 to 10% of homes are estimated to be at or above the Action Level).  British Geological Survey, National Geoscience Information Service	A15NE (N)	0	1	502150 353426
		adon Affected Areas  The property is in an Intermediate probability radon area (5 to 10% of homes are estimated to be at or above the Action Level).  British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
		adon 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).	A11NE (N)	0	1	502199 352676
	Source:	British Geological Survey, National Geoscience Information Service				
		adon Protection Measures  Basic radon protective measures are necessary in the construction of new dwellings or extensions  British Geological Survey, National Geoscience Information Service	A15NE (N)	0	1	502150 353426
	Radon Potential - R	adon Protection Measures  Basic radon protective measures are necessary in the construction of new dwellings or extensions  British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
	Radon Potential - R	adon Protection Measures  No radon protective measures are necessary in the construction of new dwellings or extensions  British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	502199 352676

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## **Industrial Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Contemporary Trad	e Directory Entries				
19	Name: Location: Classification: <b>Status:</b> Positional Accuracy:	Brauncewell Quarries Ltd Brauncewell, Sleaford, NG34 8RL Quarries Active Automatically positioned to the address	A8SE (SE)	555	-	502732 351713

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## **Sensitive Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	Nitrate Vulnerable Name: Description: Source:	Zones  Lower Witham Nvz Surface Water Environment Agency, Head Office	A11NE (S)	0	4	502199 352663
21	Nitrate Vulnerable Name: Description: Source:	Zones Lincolnshire Limestone Groundwater Environment Agency, Head Office	A11NE (S)	0	4	502199 352663

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Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
South Kesteven District Council - Environmental Health	April 2015	Annual Rolling Update
Environment Agency - Head Office	June 2020 October 2017	Annually Annual Rolling Update
North Kesteven District Council - Environmental Health Department	October 2017	Annual Rolling Opdate
Discharge Consents	Out the m 0000	Occupation
Environment Agency - Anglian Region	October 2022	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Anglian Region	March 2013	
Integrated Pollution Controls		
Environment Agency - Anglian Region	January 2009	
ntegrated Pollution Prevention And Control		
Environment Agency - Anglian Region	July 2022	Quarterly
Local Authority Integrated Pollution Prevention And Control		
South Kesteven District Council - Environmental Health	April 2014	Variable
North Kesteven District Council - Environmental Health Department	May 2014	Variable
Local Authority Pollution Prevention and Controls		
South Kesteven District Council - Environmental Health	April 2014	Annual Rolling Update
North Kesteven District Council - Environmental Health Department	May 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements	, 2011	
South Kesteven District Council - Environmental Health	April 2014	Variable
North Kesteven District Council - Environmental Health Department	May 2014	Variable
•	Way 2014	Variable
Nearest Surface Water Feature	August 2022	
Ordnance Survey	August 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
	November 2001	11017 τρριιοαδίο
River Quality Biology Sampling Points	April 2012	
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	October 2022	Quarterly
Water Industry Act Referrals		
Environment Agency - Anglian Region	October 2017	
Groundwater Vulnerability Map		
Environment Agency - Head Office	June 2018	As notified
	54.16 20 10	A3 Houned
Groundwater Vulnerability - Soluble Rock Risk	h 2010	A 1161 - 1
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

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Agency & Hydrological	Version	Update Cycle
Source Protection Zones Environment Agency - Head Office	September 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
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified
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	October 2022	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Anglian Region - Northern Area	July 2022	Quarterly
Local Authority Landfill Coverage Lincolnshire County Council North Kesteven District Council - Environmental Health Department South Kesteven District Council - Environmental Health	February 2003 February 2003 February 2003	Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Lincolnshire County Council North Kesteven District Council - Environmental Health Department South Kesteven District Council - Environmental Health	October 2018 October 2018 October 2018	
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	

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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
South Kesteven District Council	February 2016	Variable
North Kesteven District Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents		
Lincolnshire County Council - Highways and Planning Department	August 2007	Variable
South Kesteven District Council	February 2016	Variable
North Kesteven District Council - Planning Department	October 2015	Variable
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology	J.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	A Aif I
British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Recorded Mineral Sites		D: A !!
British Geological Survey - National Geoscience Information Service	May 2022	Bi-Annually
CBSCB Compensation District		
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	November 2020	As notified
Coal Mining Affected Areas		
The Coal Authority - Property Searches	March 2014	Annual Rolling Updat
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
	January 2010	7.0 11041104
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
	January 2019	A3 HUIIIIEU
Radon Potential - Radon Affected Areas	luk 2011	Approally
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

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Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries		
Thomson Directories	October 2022	Quarterly
Fuel Station Entries		
Catalist Ltd - Experian	August 2022	Quarterly
Gas Pipelines	O at a la a a 0004	D: A
National Grid	October 2021	Bi-Annually
Jnderground Electrical Cables National Grid	May 2021	Bi-Annually
National Griu	IVIAY 2021	DI-AIIIIUAIIY
Sensitive Land Use	Version	Update Cycle
Ancient Woodland	F. I	B: A #
Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt  North Kesteven District Council	hill 2022	Occartante
North Kesteven District Council South Kesteven District Council	July 2022 July 2022	Quarterly Quarterly
Areas of Unadopted Green Belt	July 2022	Quarterly
North Kesteven District Council	July 2022	Quarterly
South Kesteven 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	4 11 00 40	
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016 June 2017	Ri Appuelly
Environment Agency - Head Office	June 2017	Bi-Annually
Ramsar Sites Natural England	August 2020	Bi-Annually
	August 2020	Di-Allilually
Sites of Special Scientific Interest Natural England	February 2021	Bi-Annually
Special Areas of Conservation	1 Colludity 2021	Di Ailidally
Special Areas of Conservation  Natural England	July 2020	Bi-Annually
Special Protection Areas	54., 2020	2. 7 amadany
Natural England	February 2021	Bi-Annually

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# **Data Suppliers**

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SEPS Scottish Environment Protection Agency
The Coal Authority	The Coal Authority
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	Cyfoeth Naturol Cynru Natural Resources Wales
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Public Health England	Public Health England
Ove Arup	ARUP
Stantec UK Ltd	ARUP Stantec

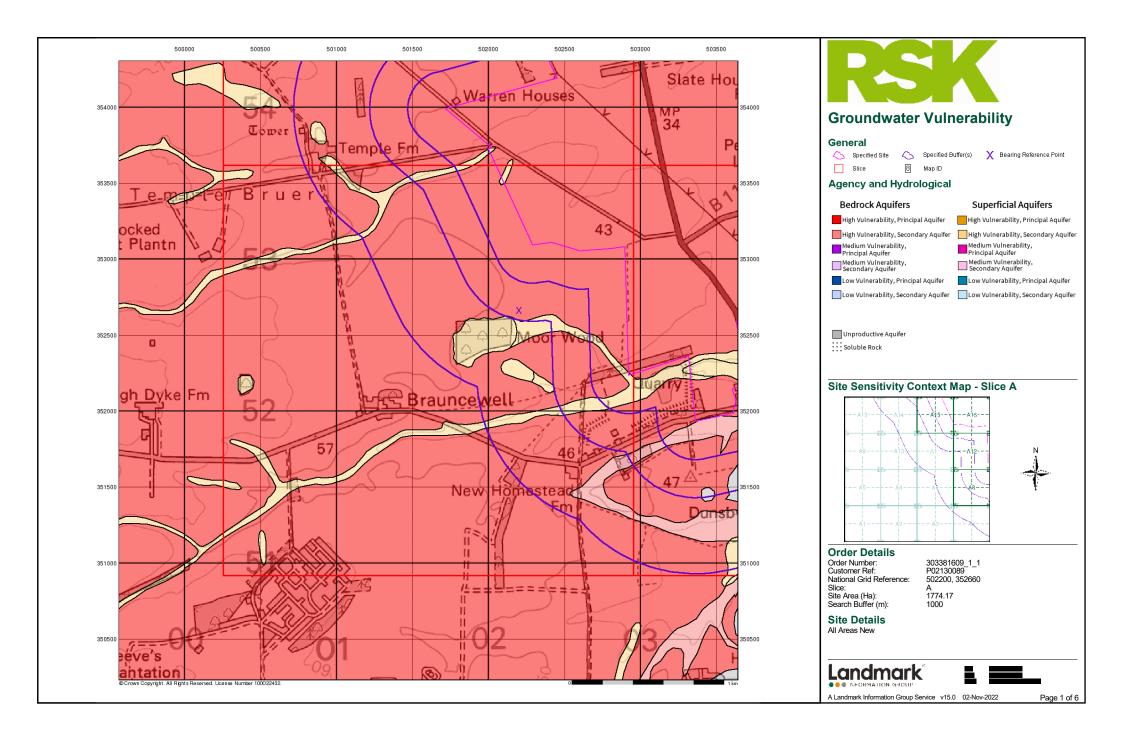


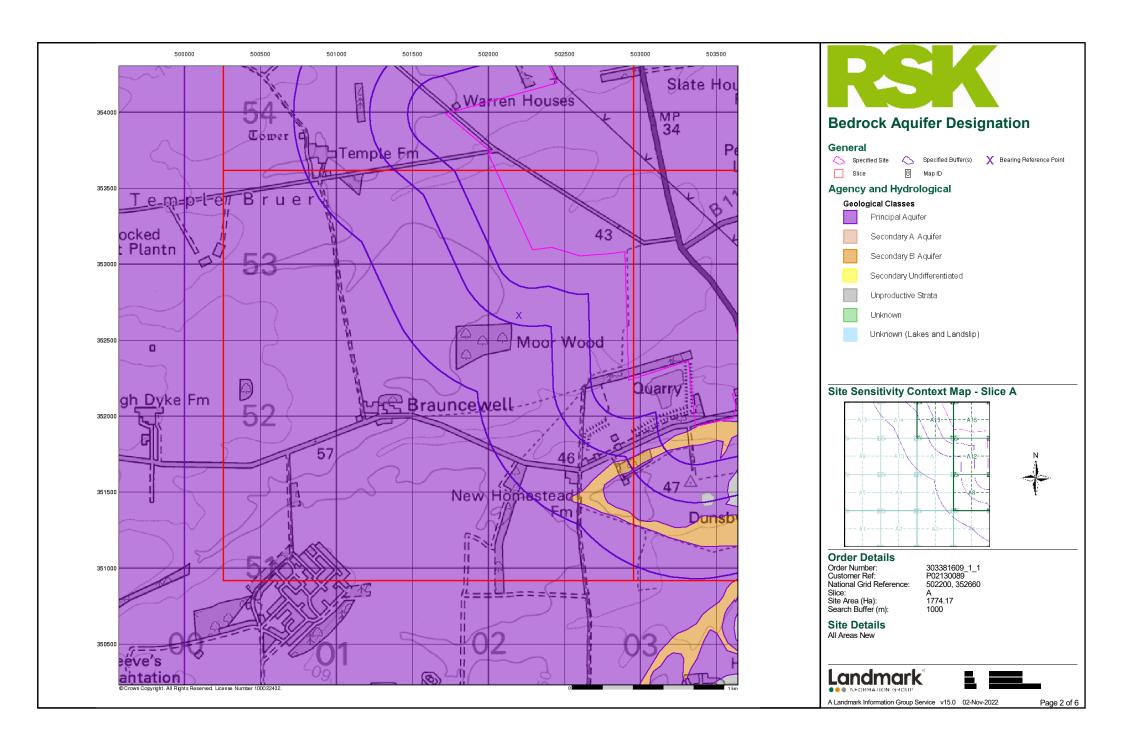
## **Useful Contacts**

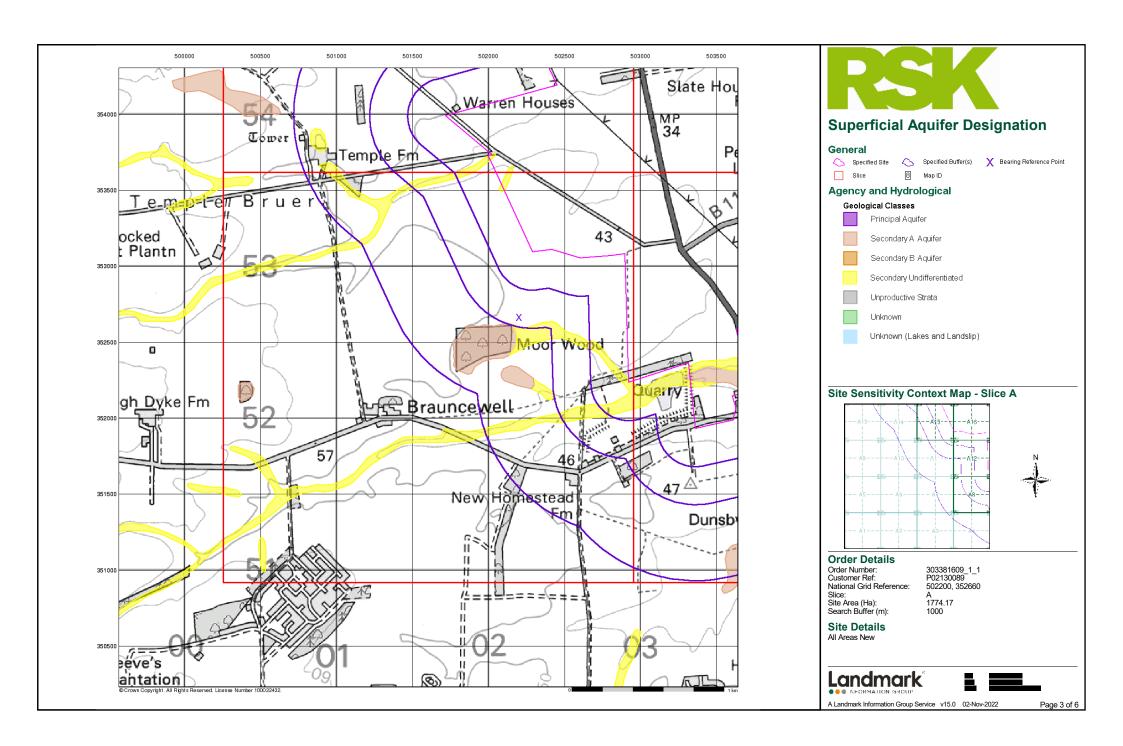
Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service  British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone:
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: Email: enquiries@environment-agency.gov.uk
3	North Kesteven District Council - Environmental Health Department  District Council Offices, Kesteven Street, Sleaford, Lincolnshire, NG34 7EF	Website: www.n-kesteven.gov.uk
4	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	
5	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Website: www.ordnancesurvey.gov.uk
6	Lincolnshire County Council 4th Floor, City Hall, Lincoln, Lincolnshire, LN1 1DN	Website: www.lincolnshire.gov.uk
7	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone:
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	

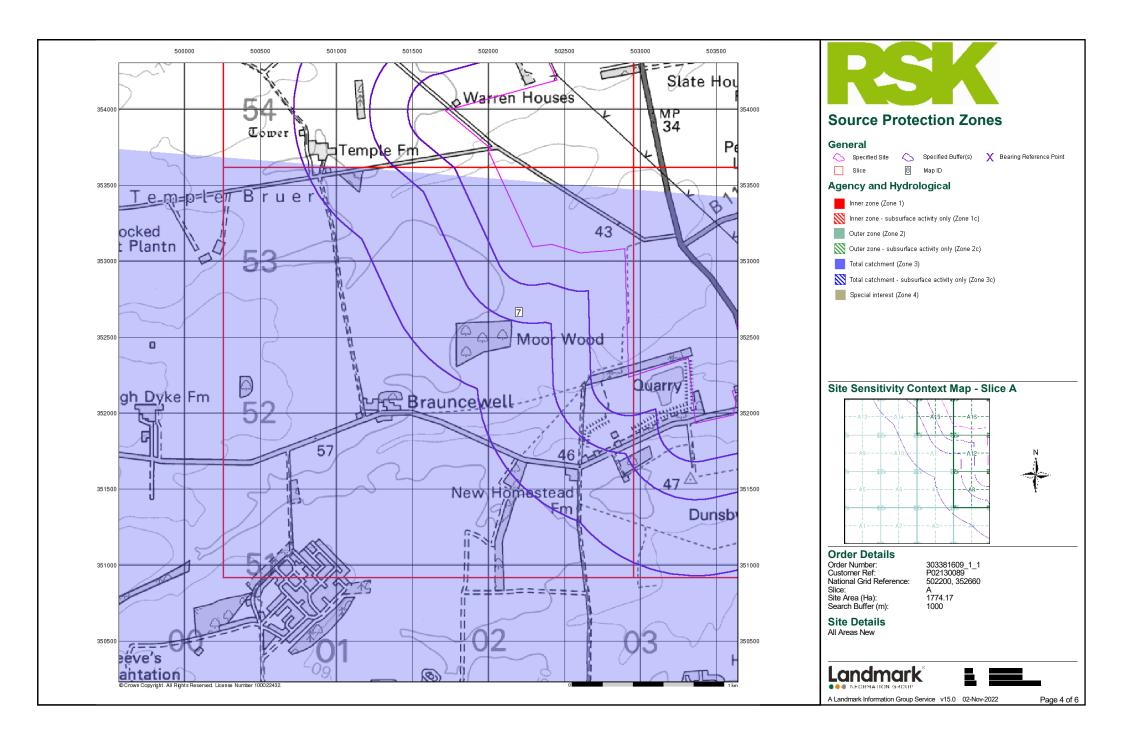
Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

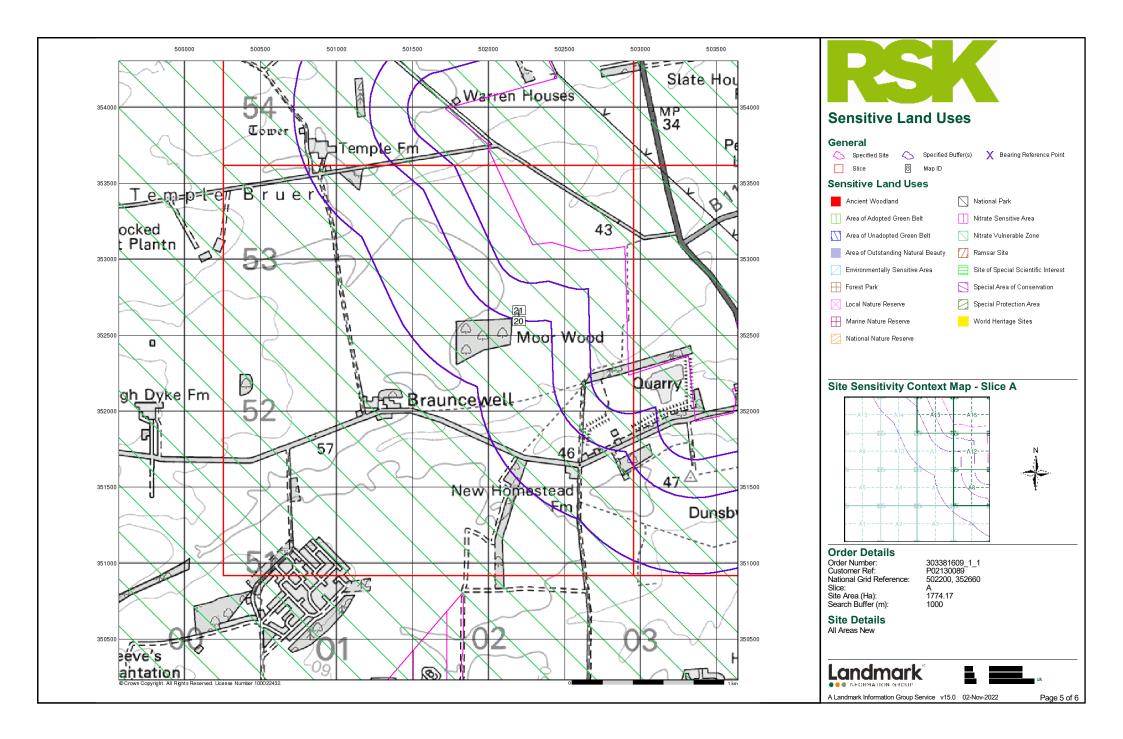
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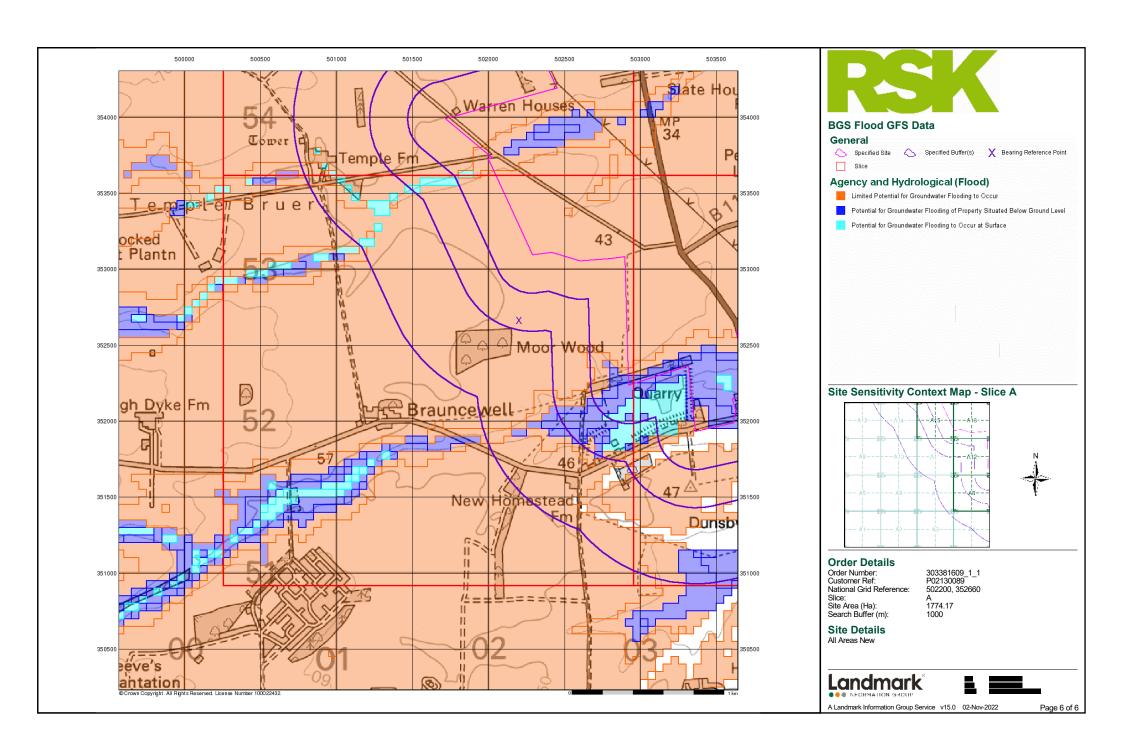


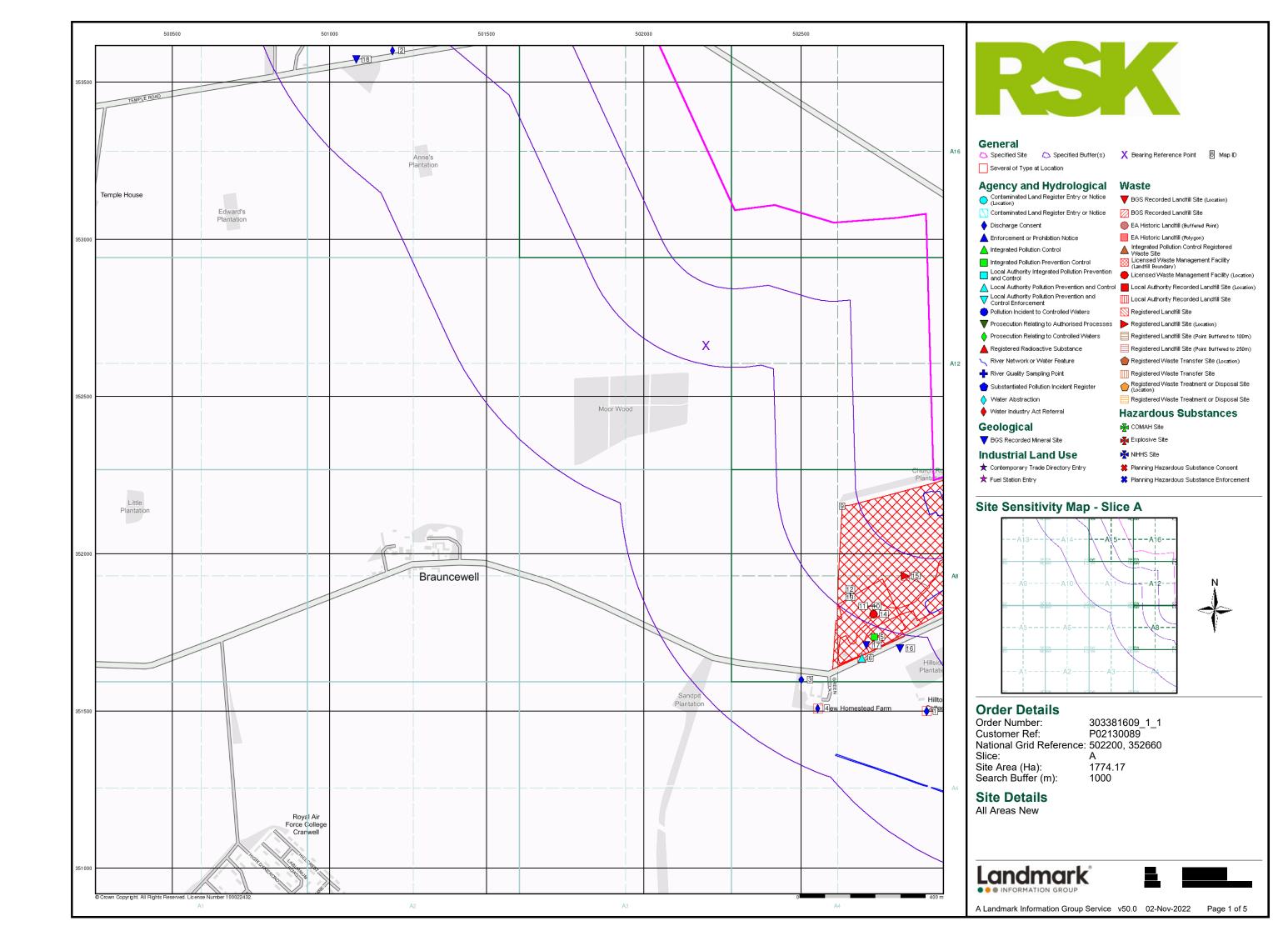


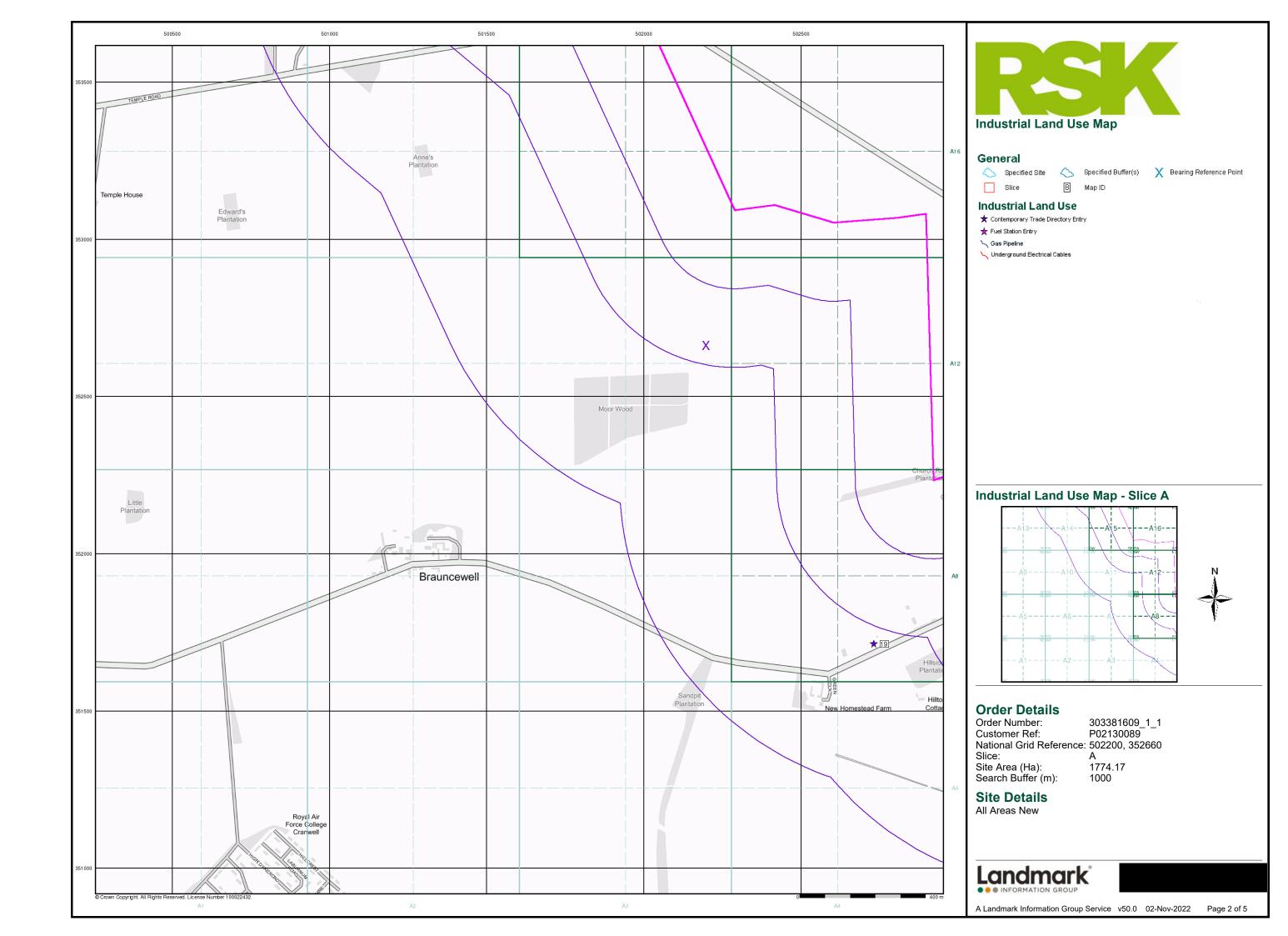


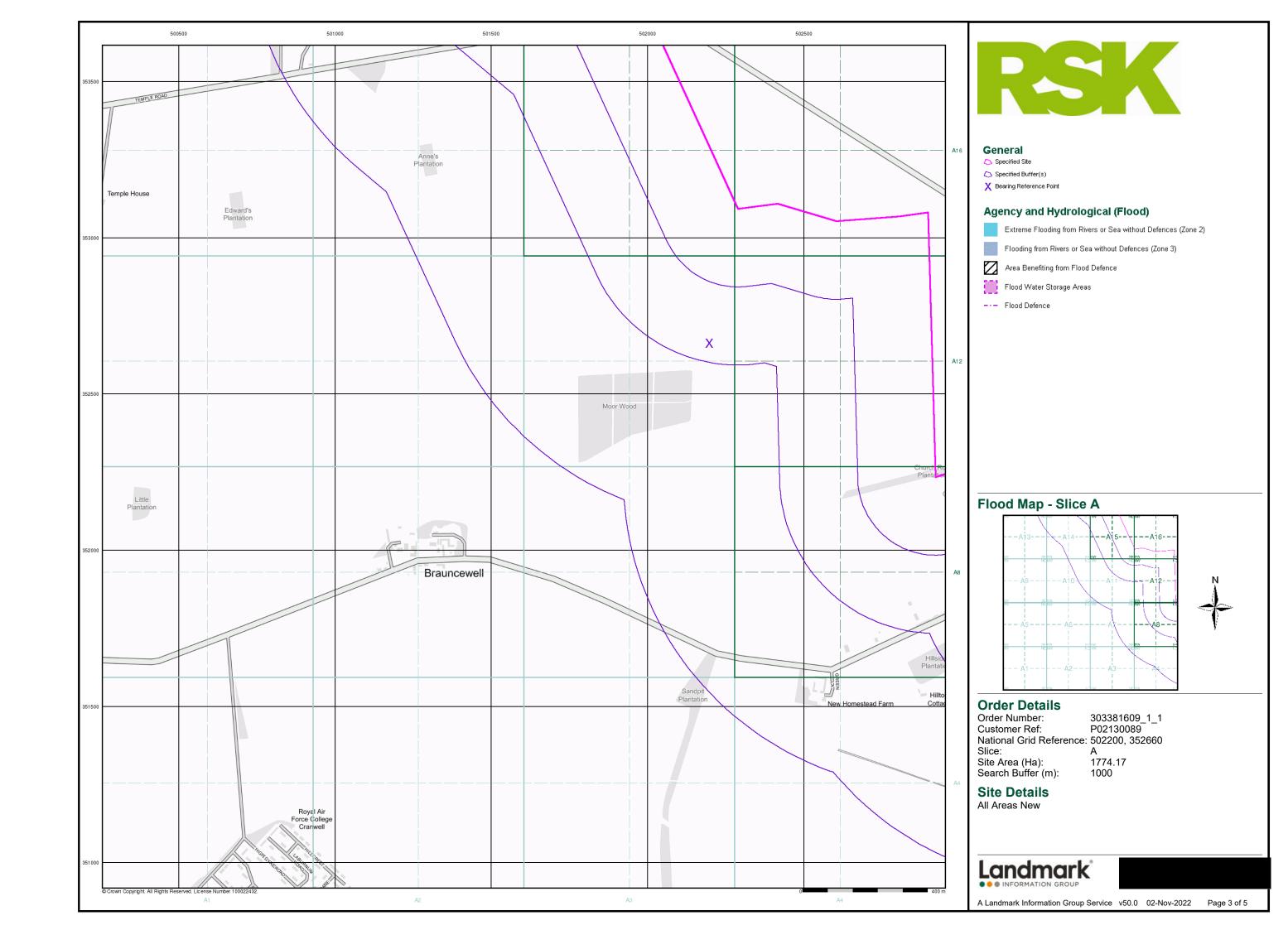


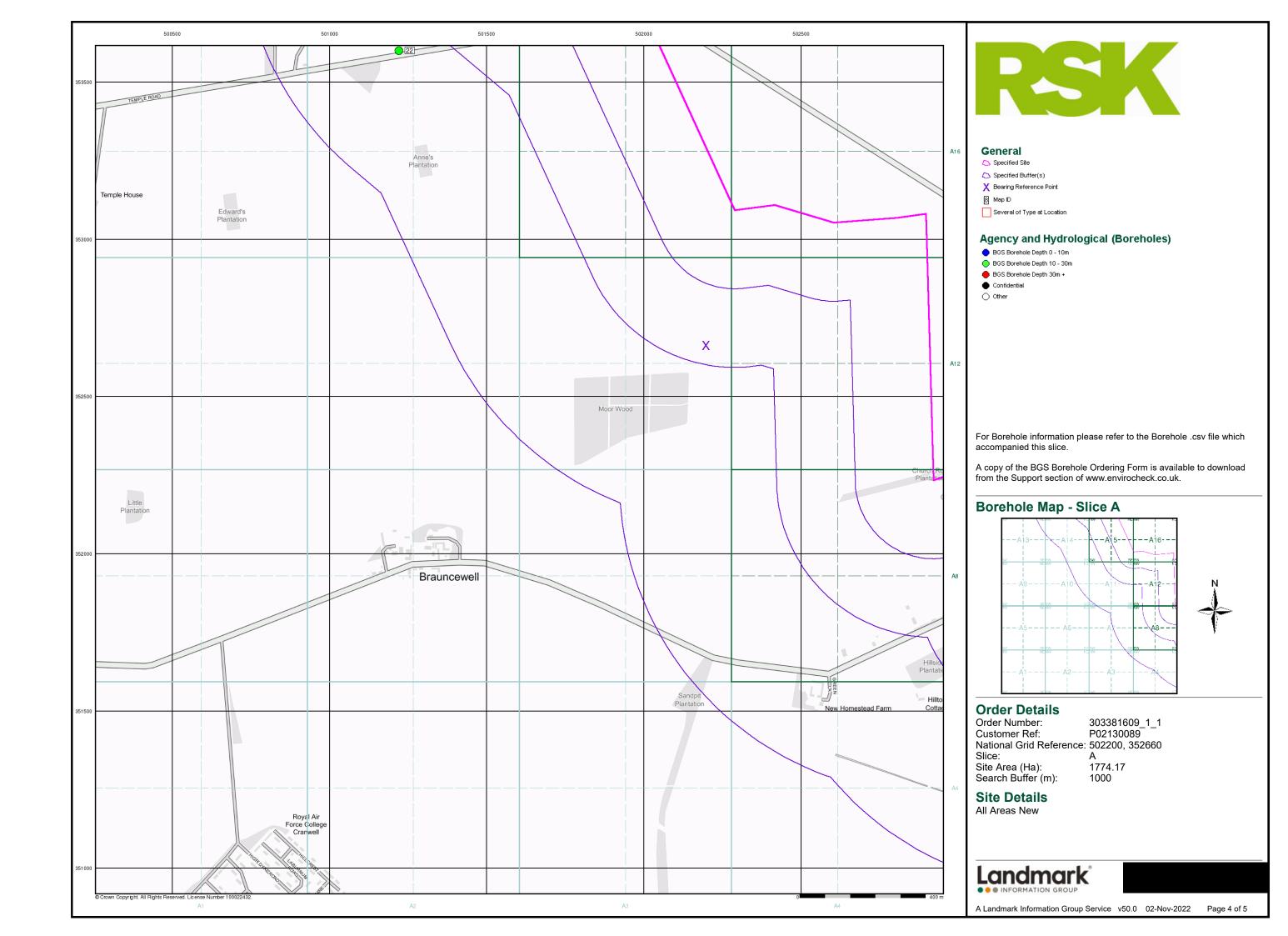


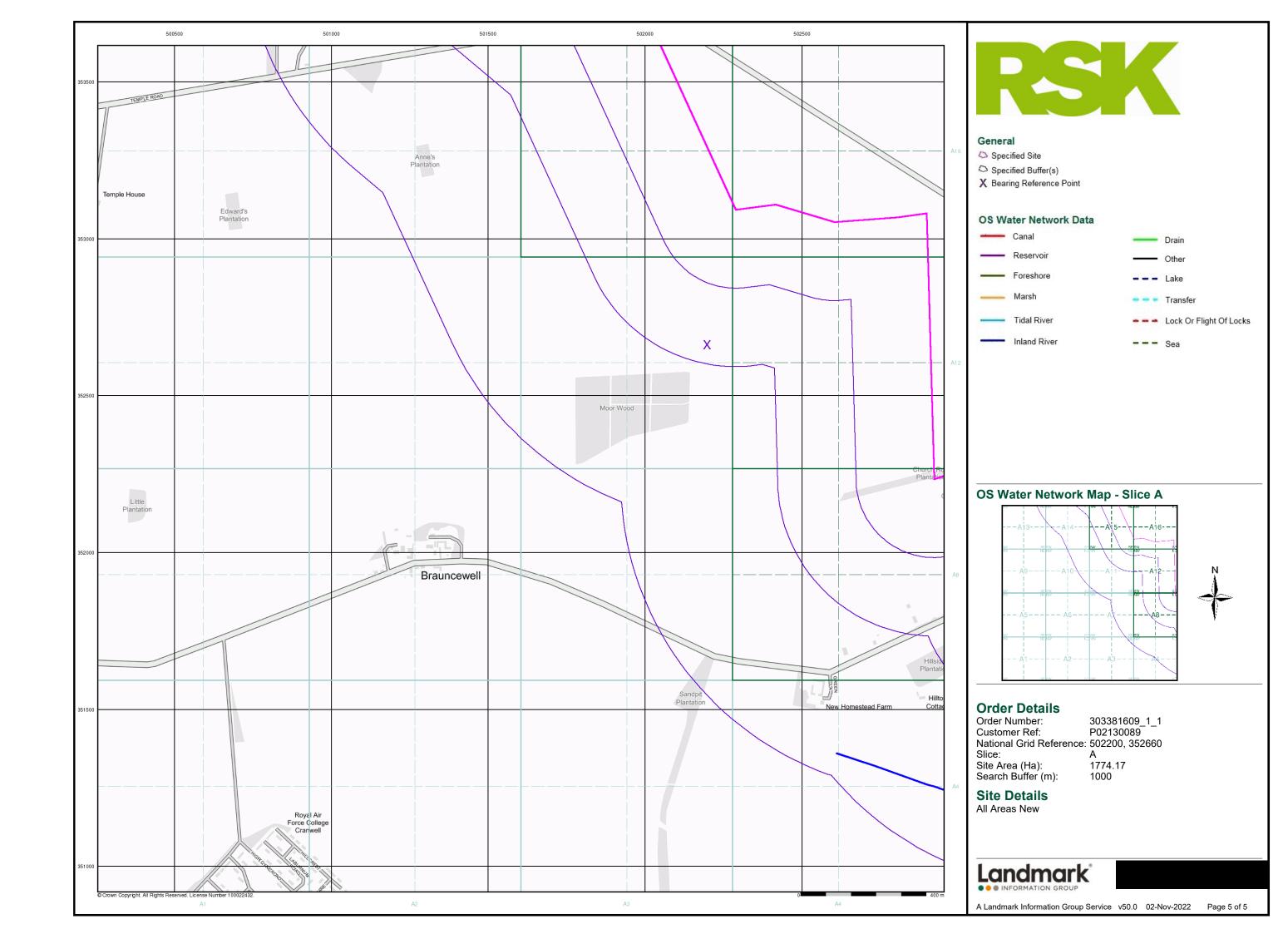














# **Envirocheck® Report:**

# **Mining and Ground Stability Datasheet**

## **Order Details:**

Order Number:

304263548\_1\_1

**Customer Reference:** 

P02130089

**National Grid Reference:** 

502200, 352660

Slice:

Α

Site Area (Ha):

1774.17

Search Buffer (m):

1000

**Site Details:** 

All Areas New

S:

Landmark Staff WEB Logins Imperium Imperial Way Reading Berkshire RG2 0TD







Report Section and Details	Page Number
Summary	-

The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected.

For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).

### Mining and Natural Cavities Data

1

The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities.

Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.

#### Historical Land Use Information (1:2,500)

-

The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative.

For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.

#### **Historical Land Use Information (1:10,000)**

2

The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses.

For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.

#### **Ground Stability Data (1:50,000)**

3

The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.

## Historical Map List 5

The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.

Data Currency	6
Data Suppliers	7
Useful Contacts	8

#### Copyright Notice

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

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

#### Report Version v53.0





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

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## LANDMARK INFORMATION GROUP®

# **Mining and Natural Cavities Data**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Recorded Mine	eral Sites				
1	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Brauncewell Stone Pit Brauncewell, Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 136080 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	A8SE (SE)	543	1	502814 351703
	BGS Recorded Mine	eral Sites				
2	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Brauncewell Stone Pit Brauncewell, Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 136079 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	A8SE (SE)	565	1	502707 351713
	BGS Recorded Mine	eral Sites				
3	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Temple Farm Stone Pit Temple Bruer, Welbourn, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 134924 Opencast Ceased Unknown Operator Not Supplied Jurassic Lower Lincolnshire Limestone Member Limestone Located by supplier to within 10m	A14NW (NW)	755	1	501085 353577
	Coal Mining Affecte	d Areas				
	In an area which may	not be affected by coal mining				
	Non Coal Mining Are	eas of Great Britain				

Order Number: 304263548\_1\_1 Date: 23-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service



# **Historical Land Use Information (1:10,000)**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	General Quarrying Use: Date of Mapping:	Not Supplied 1891 - 1985	A8SE (SE)	353	-	502636 351749
5	General Quarrying Use: Date of Mapping:	Not Supplied 1891	A8SE (SE)	544	-	502815 351701
6	General Quarrying Use: Date of Mapping:	Not Supplied 1890	A14NW (NW)	748	-	501084 353592
7	Potentially Infilled I Use: Date of Mapping:	Land (Non-Water) Unknown Filled Ground (Pit, quarry etc) 1985	A8SE (SE)	546	-	502815 351700
8	Potentially Infilled I Use: Date of Mapping:	Land (Non-Water) Unknown Filled Ground (Pit, quarry etc) 1985	A14NW (NW)	748	-	501084 353592

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Order Number: 304263548\_1\_1

# **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.				
	Potential for Collapsible Ground Stability Hazards				
9	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
	Potential for Compressible Ground Stability Hazards	(0)			332003
	Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
	Potential for Ground Dissolution Stability Hazards				
10	Hazard Potential: Low Source: Entitish Geological Survey, National Geoscience Information Service	(N)	0	1	501781 353681
11	Potential for Ground Dissolution Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	503276 352267
	Potential for Ground Dissolution Stability Hazards				
12	Hazard Potential: Low Source: Entitish Geological Survey, National Geoscience Information Service	A15NW (N)	0	1	501873 353602
	Potential for Ground Dissolution Stability Hazards				
13	Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663
	Potential for Ground Dissolution Stability Hazards	(3)			332003
14	Hazard Potential: Very Low	A15NW	0	1	501819
	Source: British Geological Survey, National Geoscience Information Service	(NW)	-	•	353557
15	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low	A8NE	0	1	502868
	Source: British Geological Survey, National Geoscience Information Service	(SE)			351966
16	Potential for Ground Dissolution Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A8SE (SE)	116	1	502848 351605
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(NE)	0	1	503207 354161
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A8SE (SE)	0	1	502818 351693
	Potential for Ground Dissolution Stability Hazards				
	Hazard Potential: No Hazard Source: No Hazard British Geological Survey, National Geoscience Information Service	A15NW (NW)	118	1	501715 353537
	Potential for Ground Dissolution Stability Hazards				
	Hazard Potential: No Hazard Source: No Hazard British Geological Survey, National Geoscience Information Service	(SE)	150	1	503671 351727
17	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low	A11NE	0	1	502199
	Source: British Geological Survey, National Geoscience Information Service	(S)		<u> </u>	352663
	Potential for Landslide Ground Stability Hazards				
18	Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(SE)	10	1	503173 352208
19	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (SW)	0	1	502174 352608
20	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15NW (N)	0	1	501873 353602
21	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	0	1	502084 353489
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663

Page 3 of 8



# **Ground Stability Data (1:50,000)**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrin	king or Swelling Clay Ground Stability Hazards				
22	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A11NE (SW)	0	1	502174 352608
	Potential for Shrin	king or Swelling Clay Ground Stability Hazards				
23	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A15NE (N)	0	1	502084 353489
	Potential for Shrin	king or Swelling Clay Ground Stability Hazards				
24	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A15NW (N)	0	1	501873 353602
	Potential for Shrin	king or Swelling Clay Ground Stability Hazards				
25	Hazard Potential: Source:	Moderate British Geological Survey, National Geoscience Information Service	(SE)	150	1	503671 351727
	Potential for Shrin	king or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	A11NE (S)	0	1	502199 352663

Order Number: 304263548\_1\_1 Date: 23-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 4 of 8



## **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	TF0153	1979
Ordnance Survey Plan	TF0252	1979
Ordnance Survey Plan	TF0252	1979
Ordnance Survey Plan	TF0252	1979
Ordnance Survey Plan	TF0252	1979
Ordnance Survey Plan	TF0253	1979
Ordnance Survey Plan	TF0253	1979
Ordnance Survey Plan	TF0152	1980
Ordnance Survey Plan	TF0251	1980

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

1:10,560	Mapsheet	Published Date
Lincolnshire	096_NE	1890
Lincolnshire	097_NW	1891
Lincolnshire	097_SW	1891
Lincolnshire	096_SE	1892
Lincolnshire	096_NE	1905
Lincolnshire	096_SE	1905
Lincolnshire	097_NW	1906
Lincolnshire	097_SW	1906
Lincolnshire	096_NE	1947
Lincolnshire	096_SE	1947
Lincolnshire	097_NW	1950
Lincolnshire	097_SW	1950
Ordnance Survey Plan	TF05SW	1956
1:10,000	Mapsheet	Published Date
Ordnance Survey Plan	TF05SW	1985



Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	November 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)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	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
Bhilish Geological Survey - National Geoscience Information Service	· · · · · · · · · · · · · · · · · · ·	
Potential for Landslide Ground Stability Hazards		
Potential for Landslide Ground Stability Hazards	January 2019	As notified
	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019 January 2019	As notified  As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Running Sand Ground Stability Hazards		
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service  Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service		
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service  Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service  Potential for Shrinking or Swelling Clay Ground Stability Hazards	January 2019	As notified

Order Number: 304263548\_1\_1 Date: 23-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 6 of 8



## **Data Suppliers**

A selection of organisations who provide data within this report

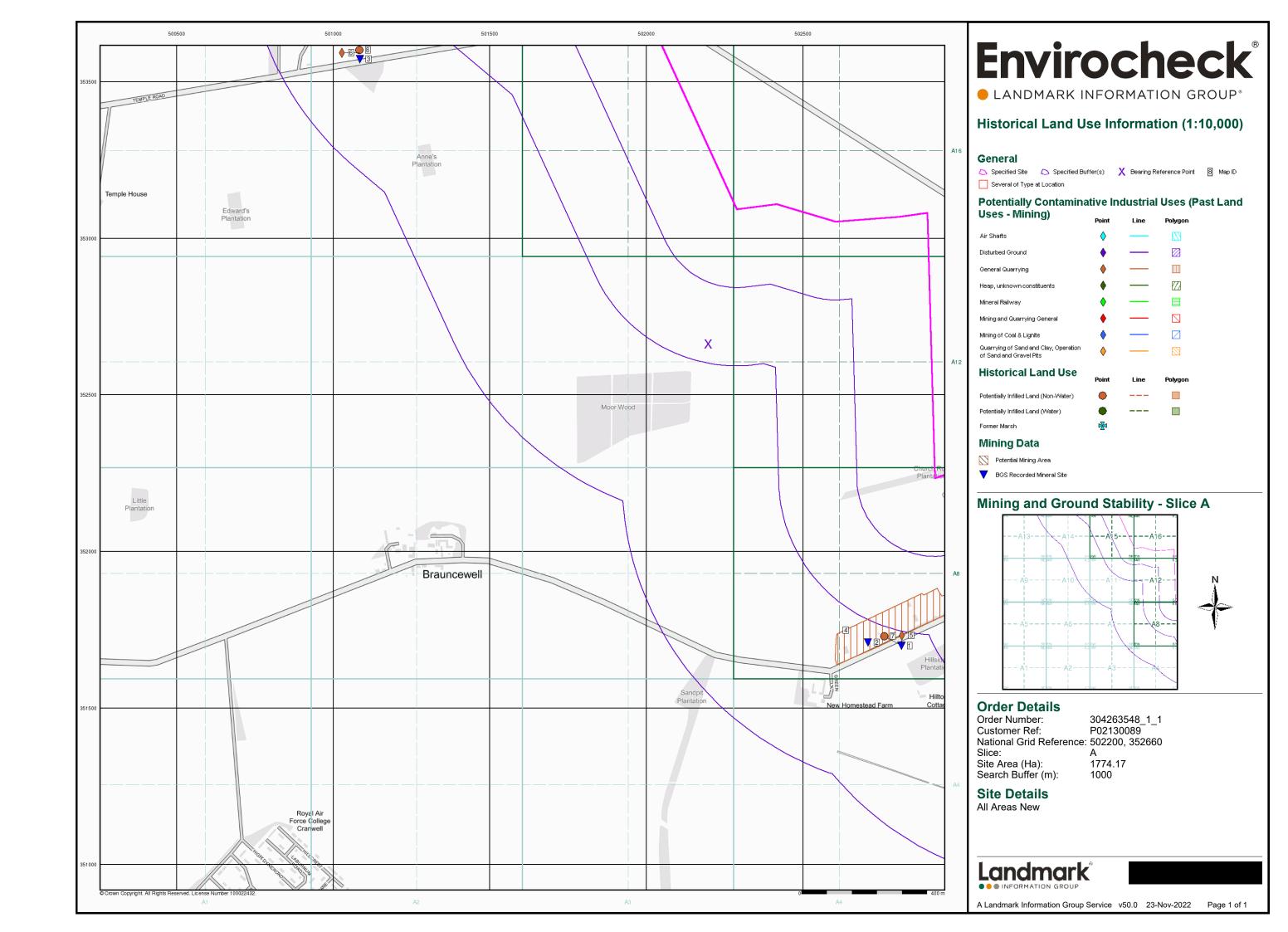
Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	The Coal Authority
Ove Arup	ARUP
Stantec UK Ltd	Stantec
Wardell Armstrong	wardell armstrong your earth our world
Johnson Poole & Bloomer	JPB

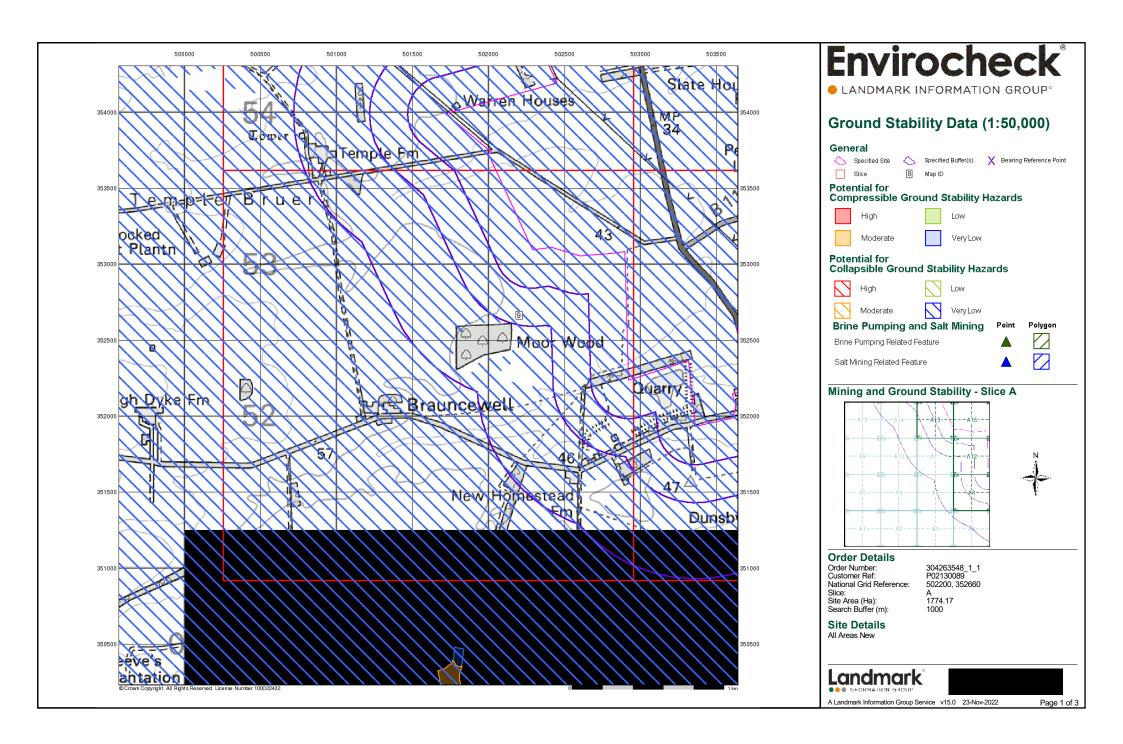


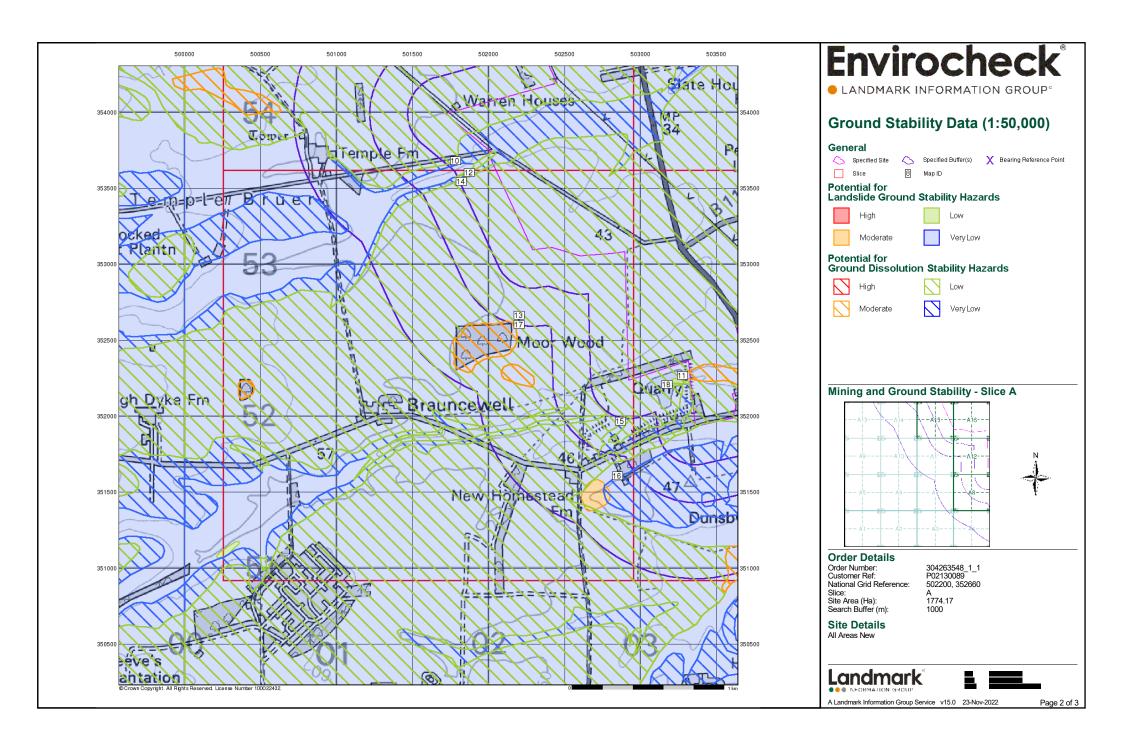
## **Useful Contacts**

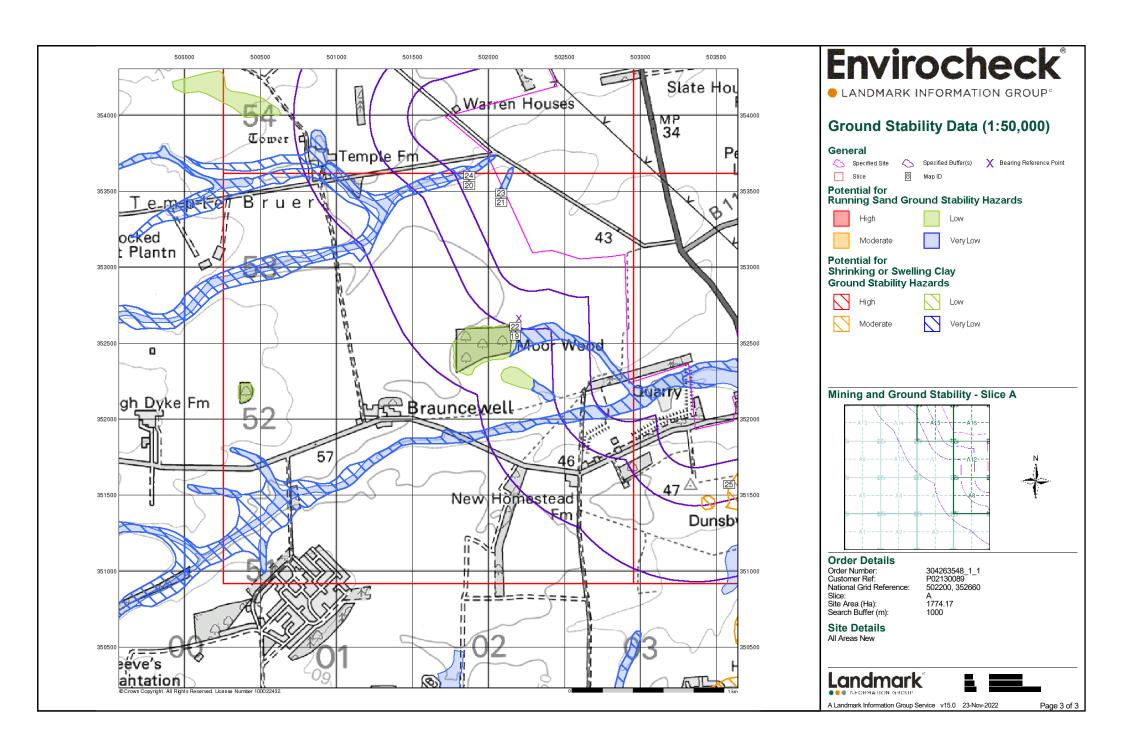
Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service  British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	

Order Number: 304263548\_1\_1 Date: 23-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 8 of 8









## **Ordnance Survey County Series 1:10,560** Other Gravel Orchard Osiers Mixed Wood Deciduous Brushwood Furze Rough Pasture Arrow denotes Trigonometrical flow of water Station Site of Antiquities Bench Mark Pump, Guide Post, Well, Spring, Signal Post **Boundary Post** ·285 Surface Level Sketched Instrumental Contour Contour Fenced Fenced Main Roads Minor Roads Un-Fenced Sunken Road Raised Road Railway over Road over Ri∨er Railway Railway over Level Crossing Road Road over Road over Road over County Boundary (Geographical) County & Civil Parish Boundary Administrative County & Civil Parish Boundary County Borough Boundary (England) Co. Boro. Bdy.

County Burgh Boundary (Scotland)

Rural District Boundary

····· Civil Parish Boundary

GP

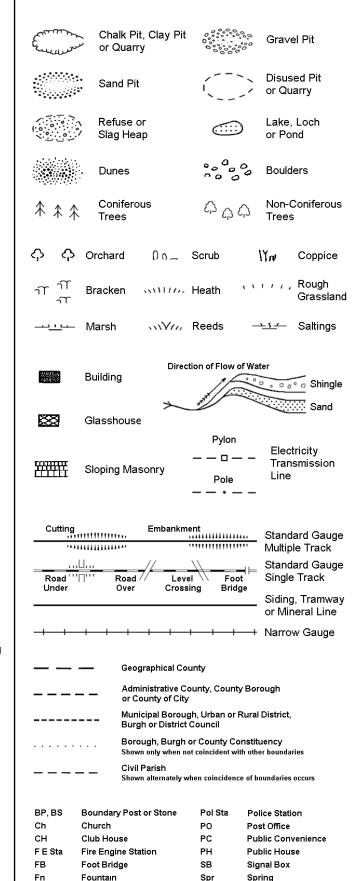
**Guide Post** 

Mile Post

Co. Burgh Bdy.

RD. Bdy.

## Ordnance Survey Plan 1:10,000



TCB

TCP

Telephone Call Box

Telephone Call Post

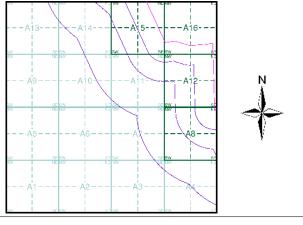
## 1:10,000 Raster Mapping

	Gravel Pit		Refuse tip or slag heap
	Rock	3	Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle	Mud	Mud
Sand	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)	• • • • •	Ci∨il, parish or community boundary
	District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
۵ <sup>0</sup> **	Area of wooded vegetation	۵ <sup>۵</sup> ۵	Non-coniferous trees
۵ ۵	Non-coniferous trees (scattered)	**	Coniferous trees
*	Coniferous trees (scattered)	ĊΘ	Positioned tree
4 4 4 4	Orchard	* *	Coppice or Osiers
्रार्गेत स्रोतित	Rough Grassland	www.	Heath
On_	Scrub	7 <u>₩</u> ۲	Marsh, Salt Marsh or Reeds
6	Water feature	<b>← ←</b>	Flow arrows
MHW(S)	Mean high water (springs)	MLW(S)	Mean low water (springs)
	Telephone line (where shown)	<b></b>	Electricity transmission line (with poles)
← BM 123.45 m	Bench mark (where shown)	Δ	Triangulation station
•	Point feature (e.g. Guide Post or Mile Stone)	$\boxtimes$	Pylon, flare stac or lighting tower
+	Site of (antiquity)		Glasshouse
	General Building		Important Building

## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:10,560	1887	2
Lincolnshire	1:10,560	1905 - 1906	3
Lincolnshire	1:10,560	1947 - 1950	4
Ordnance Survey Plan	1:10,000	1956	5
Ordnance Survey Plan	1:10,000	1985	6
10K Raster Mapping	1:10,000	2000	7
Street View	Variable		8

## **Historical Map - Slice A**



### **Order Details**

Order Number: 303381609\_1\_1 **Customer Ref:** P02130089 National Grid Reference: 502200, 352660 Slice:

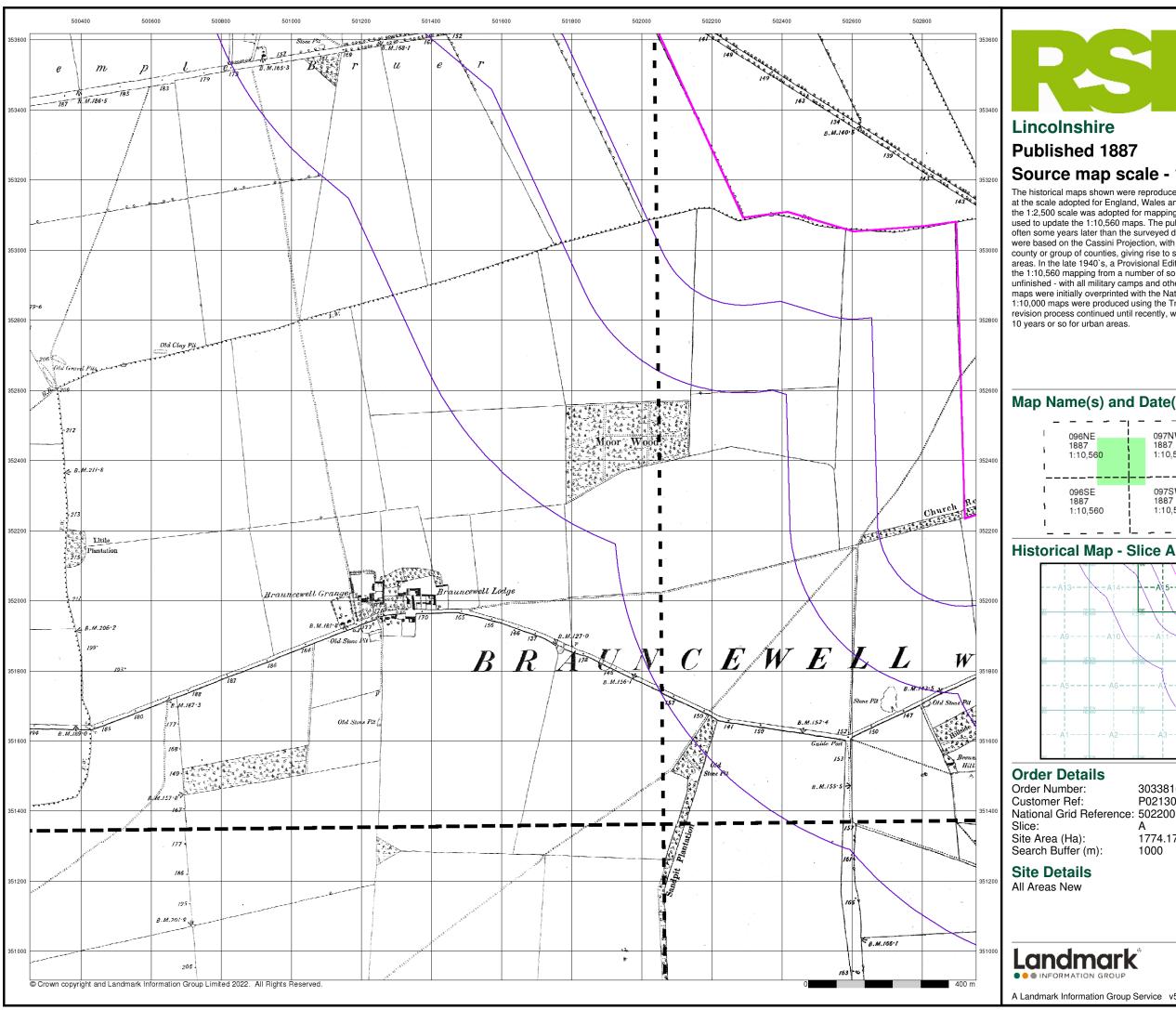
Site Area (Ha): 1774.17 Search Buffer (m): 1000

**Site Details** 

All Areas New





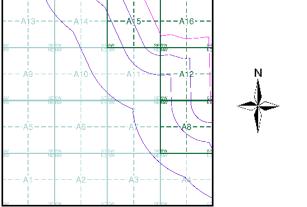


# Source map scale - 1:10,560

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

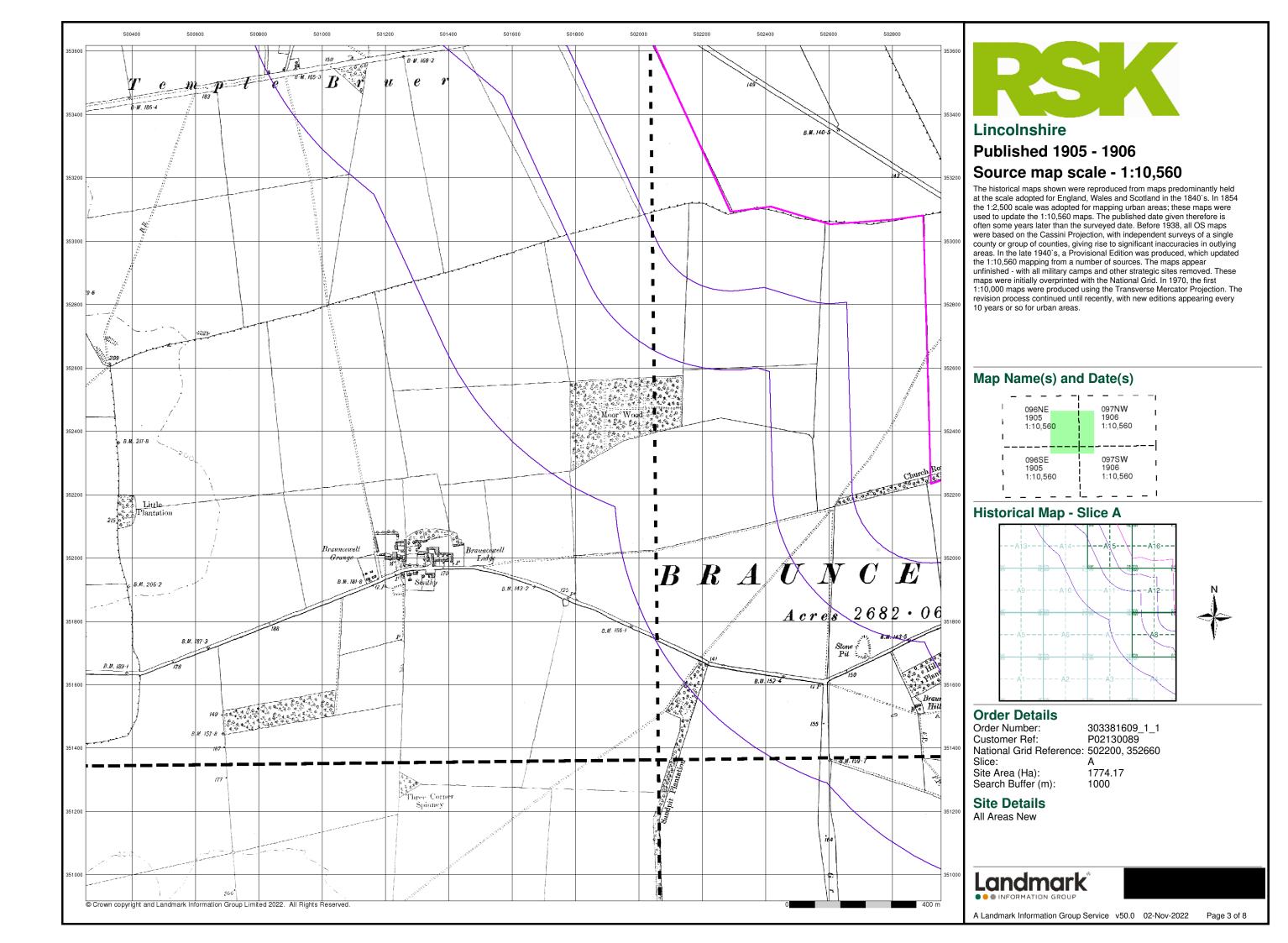
## Map Name(s) and Date(s)

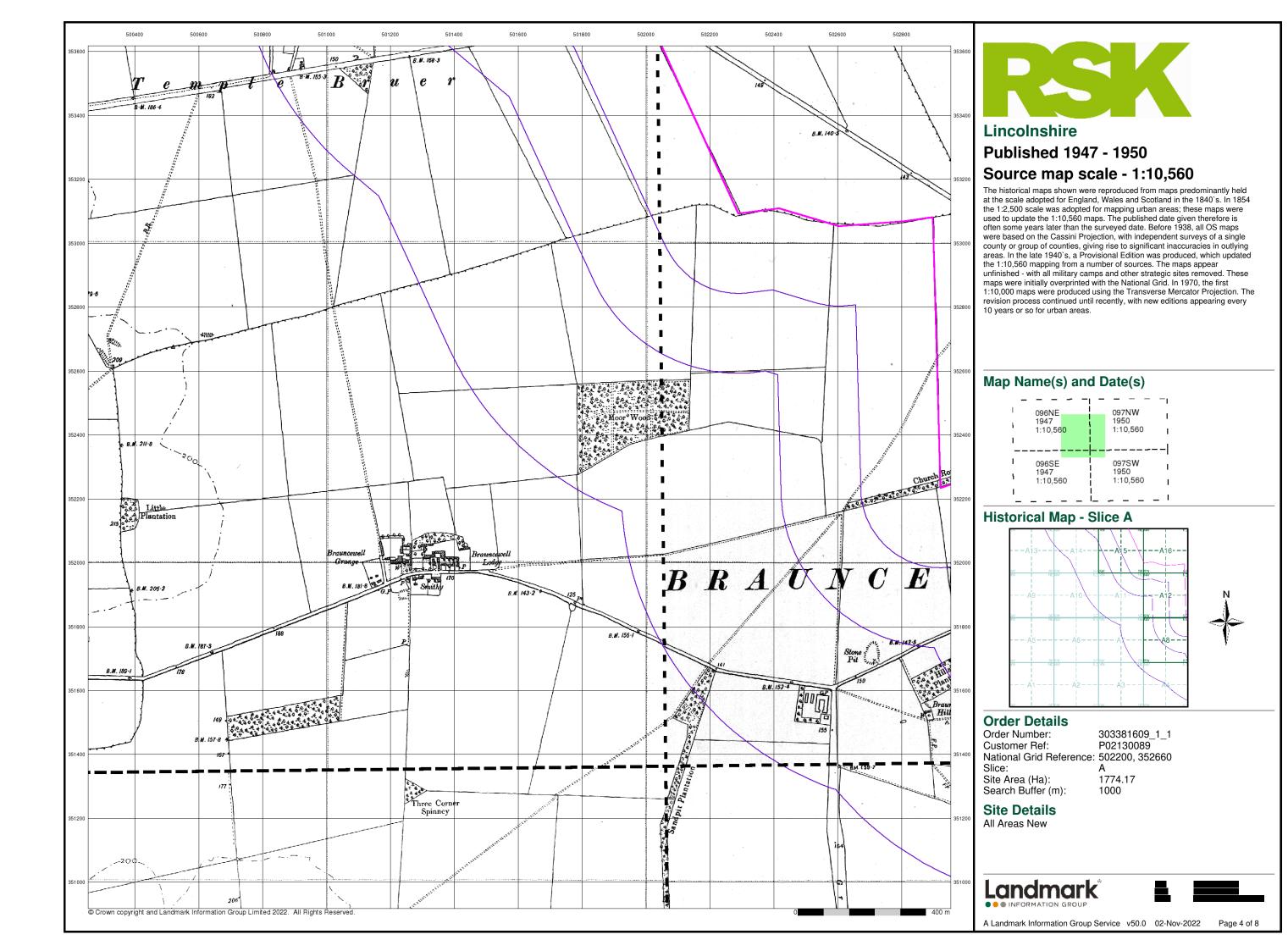
l i	096NE 1887 1:10,560	097NW 1887 1:10,560
ı		
1	096SE	097SW
١	1887 1:10,560	1887 1:10,560
ı		!

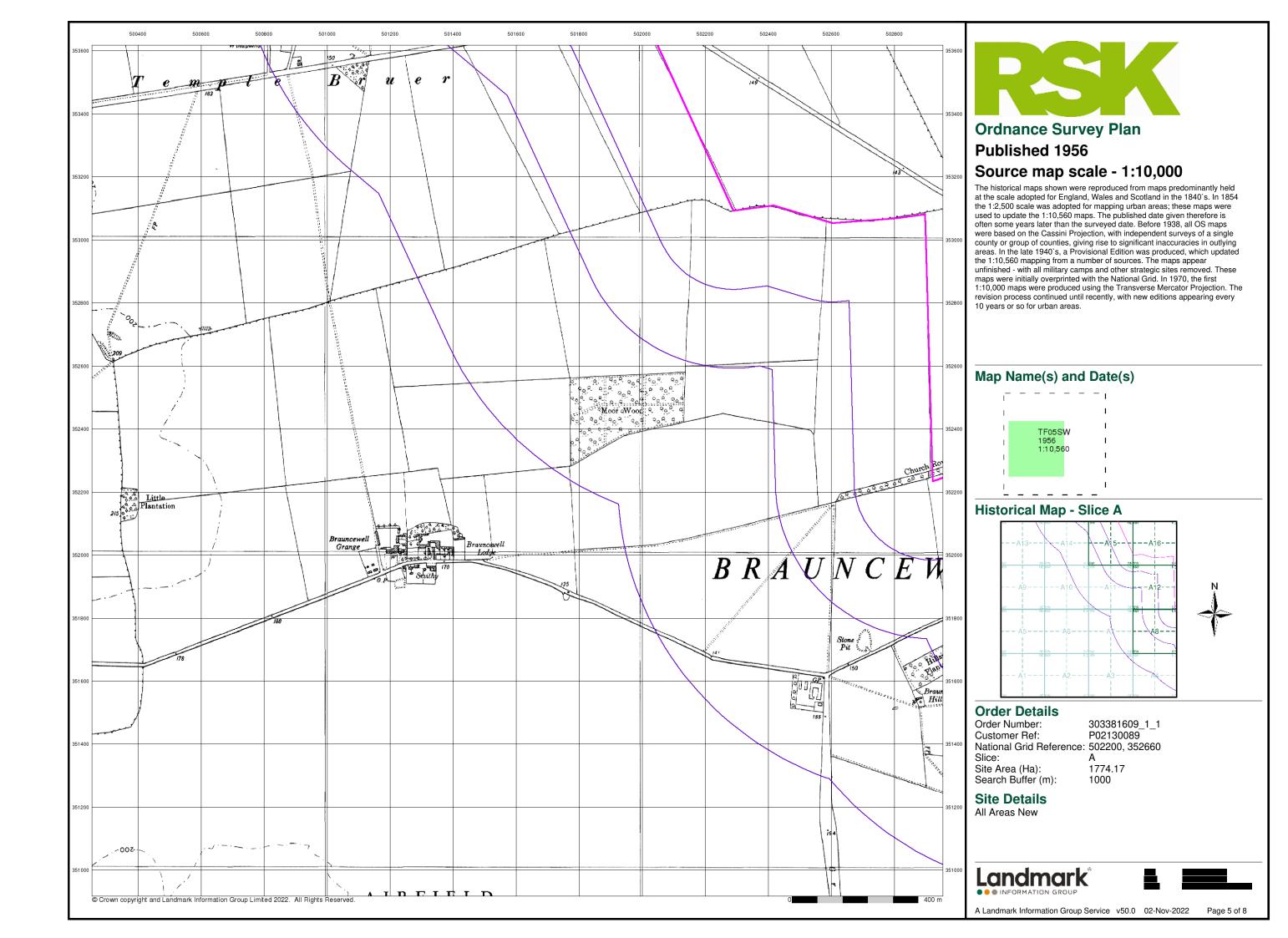


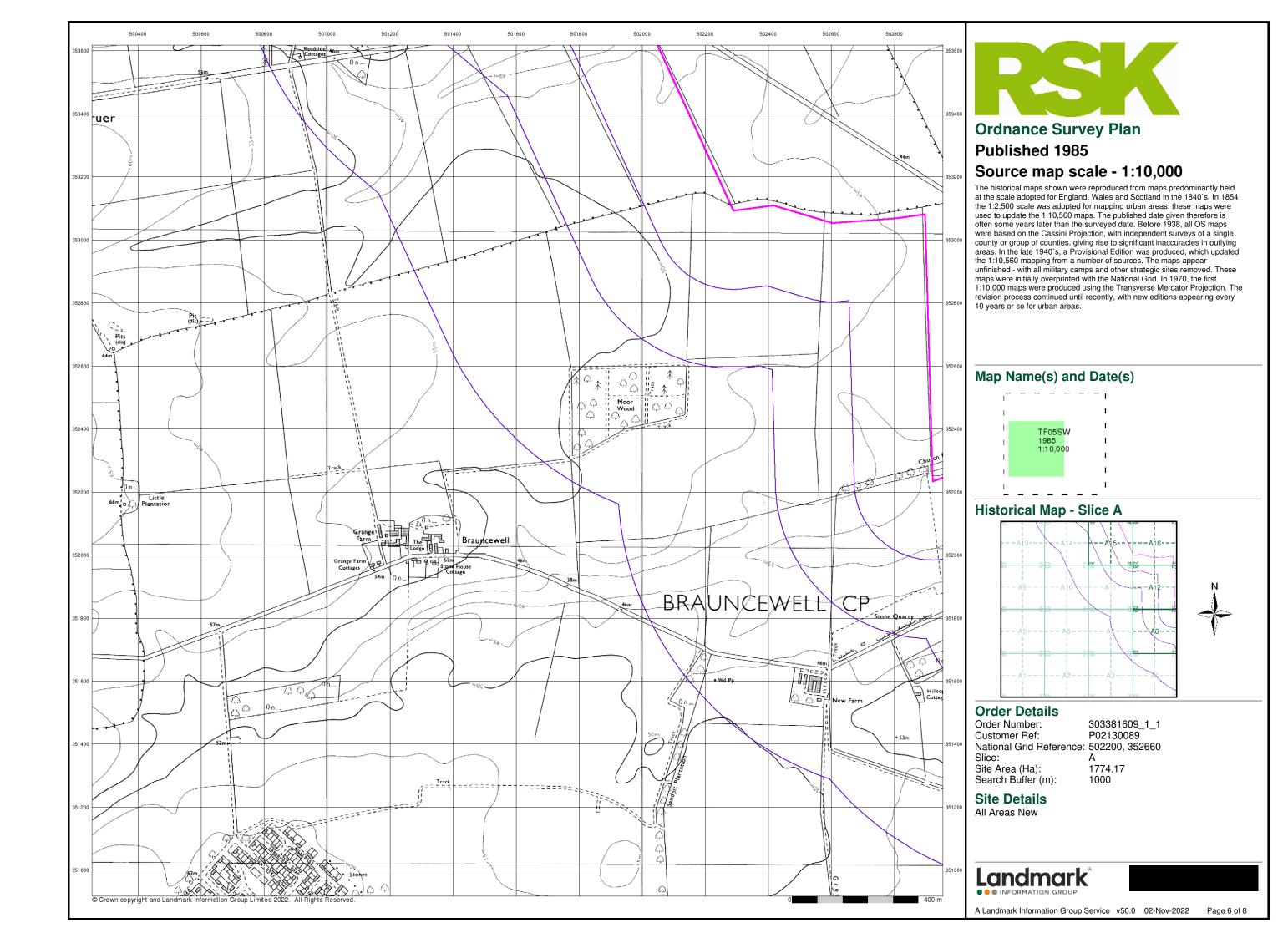
303381609\_1\_1 P02130089 National Grid Reference: 502200, 352660

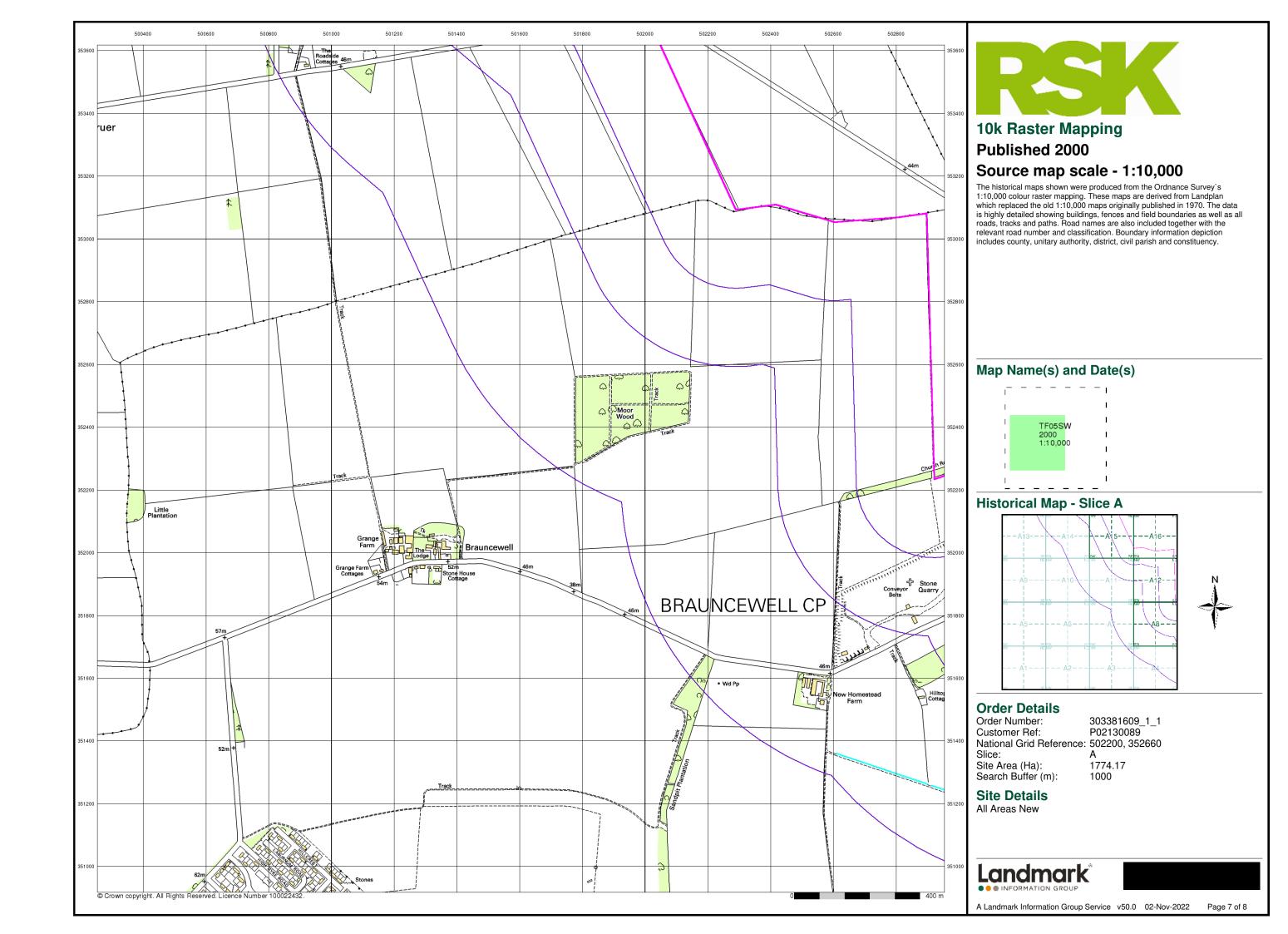
1774.17

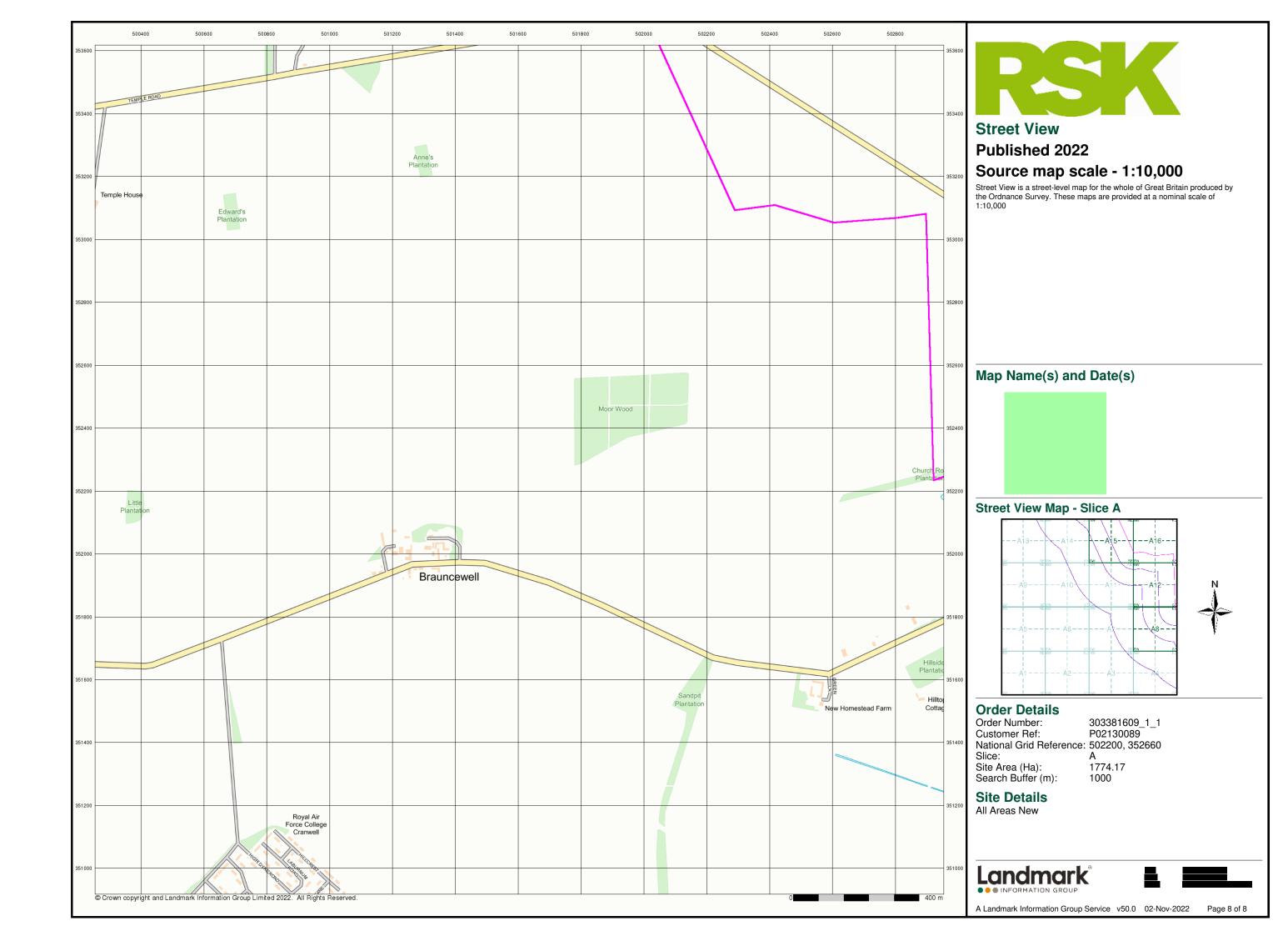




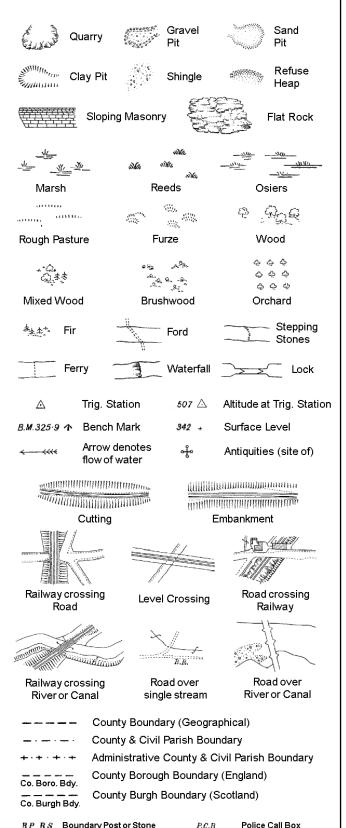








## **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



Pump

Sluice

Spring

Trough

Well

Signal Post

Telephone Call Box

S.P

T.C.B

Sl.

Tr

B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

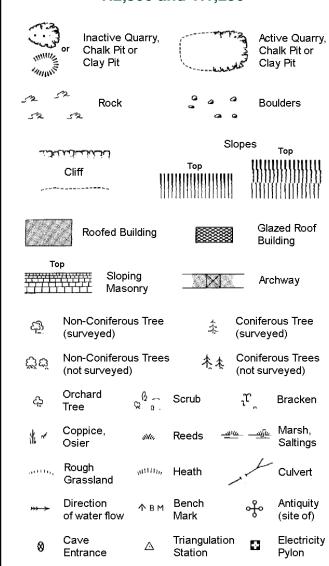
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250

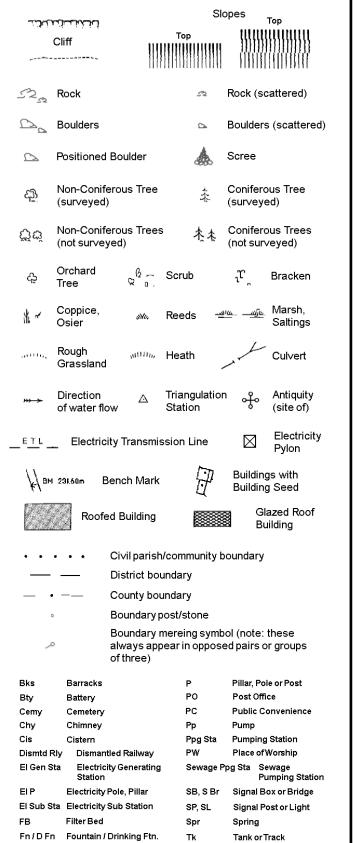


**Electricity Transmission Line** County Boundary (Geographical) County & Civil Parish Boundary Civil Parish Boundary Admin. County or County Bor. Boundary L B Bdy London Borough Boundary

Symbol marking point where boundary mereing changes

-			
вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

# 1:1,250



Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

MP, MS

Tr

Wd Pp

Wks

Trough

Wind Pump Wr Pt. Wr T Water Point, Water Tap

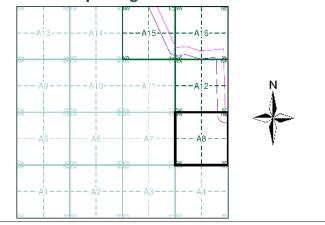
Works (building or area)



## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979 - 1980	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment A8**



### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 502200, 352660 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 100

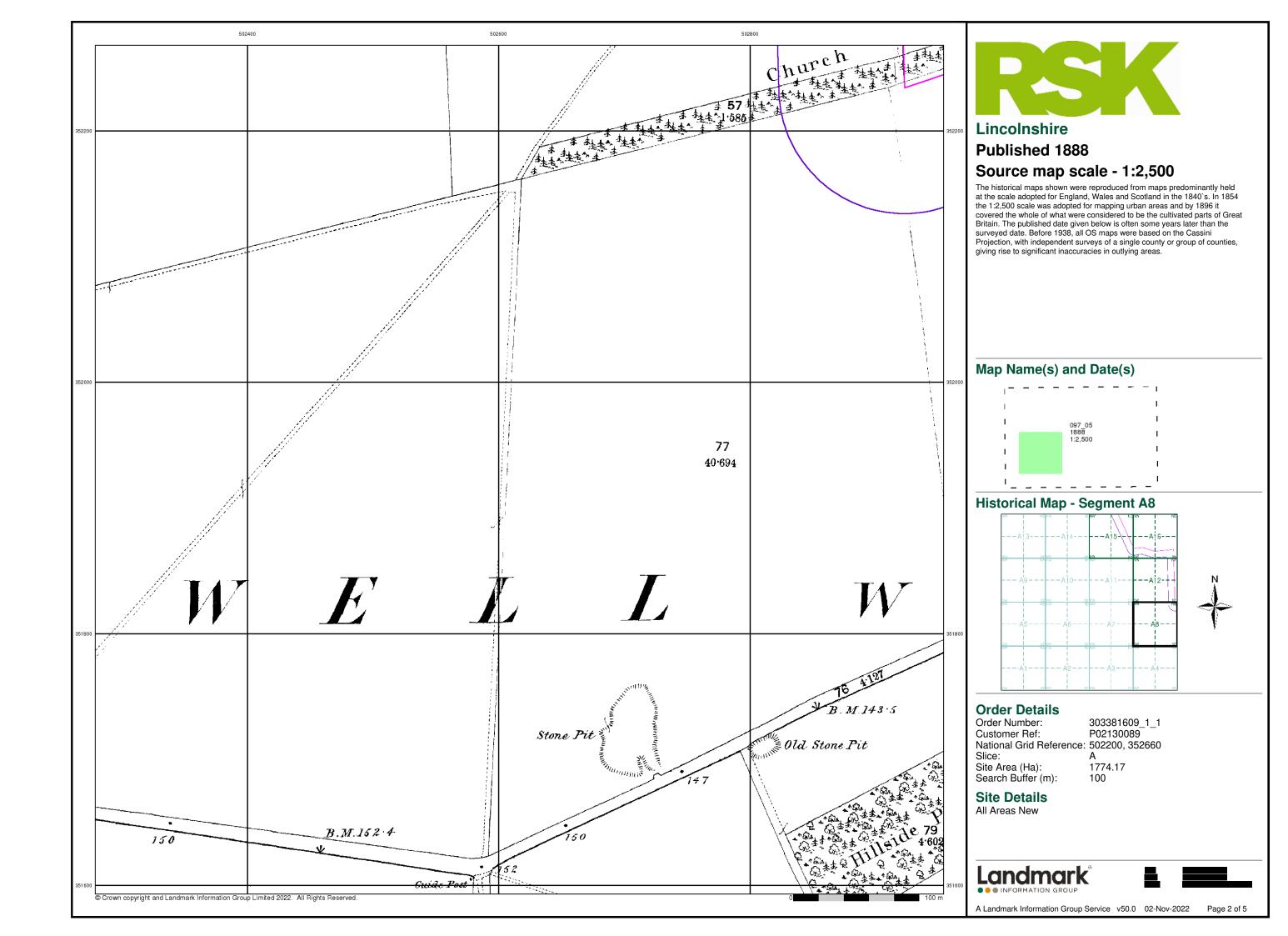
### **Site Details** All Areas New

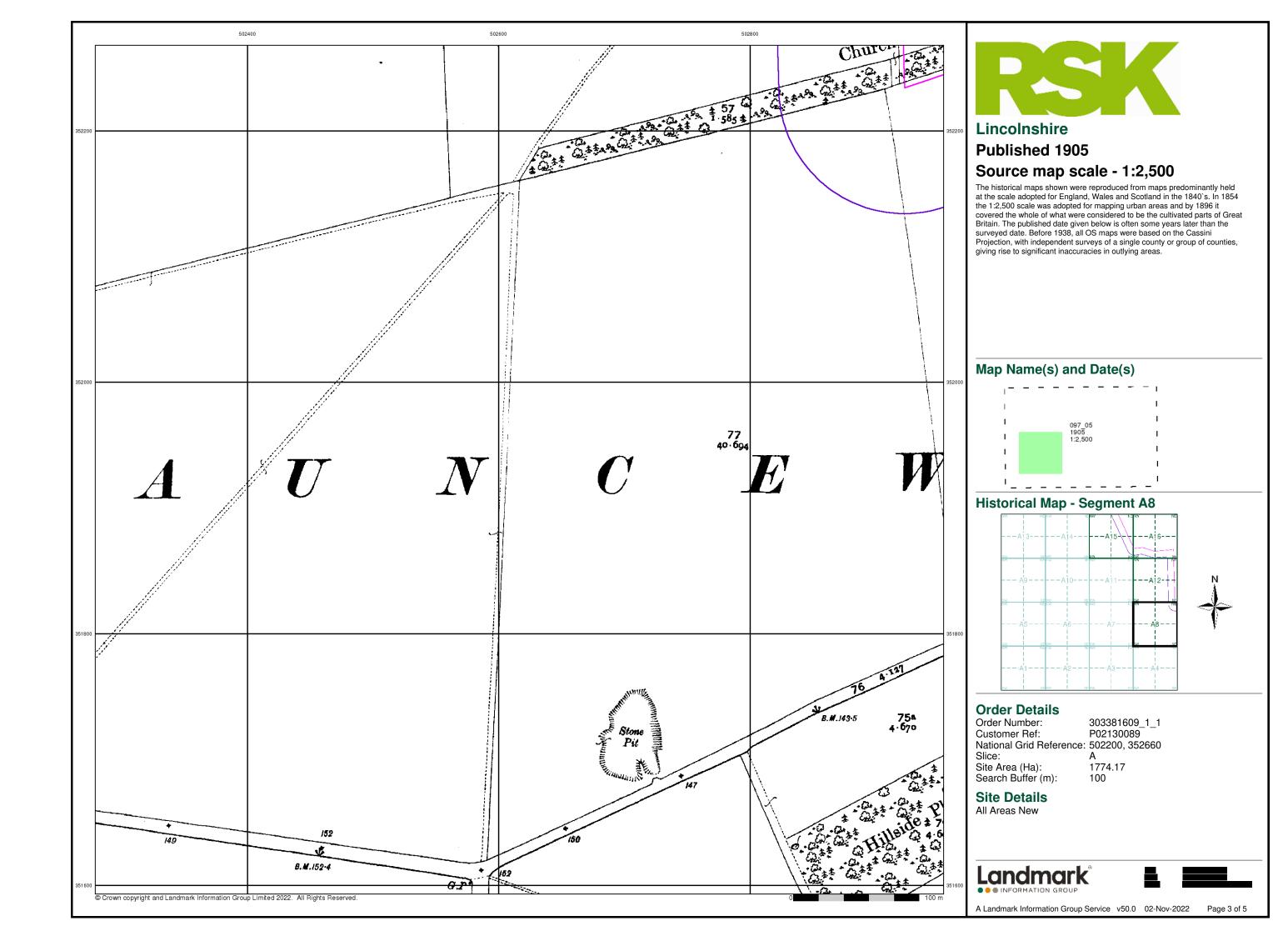


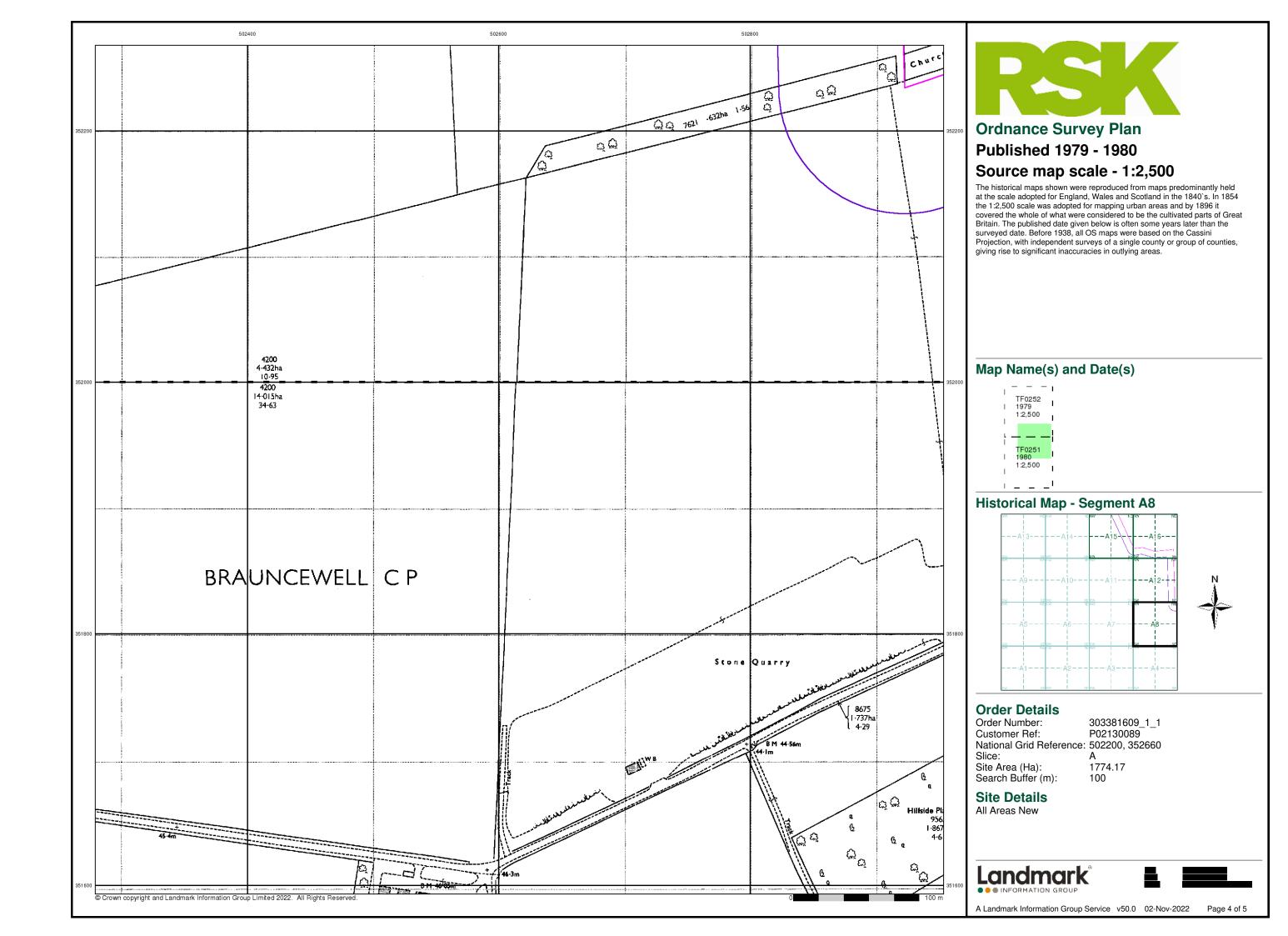


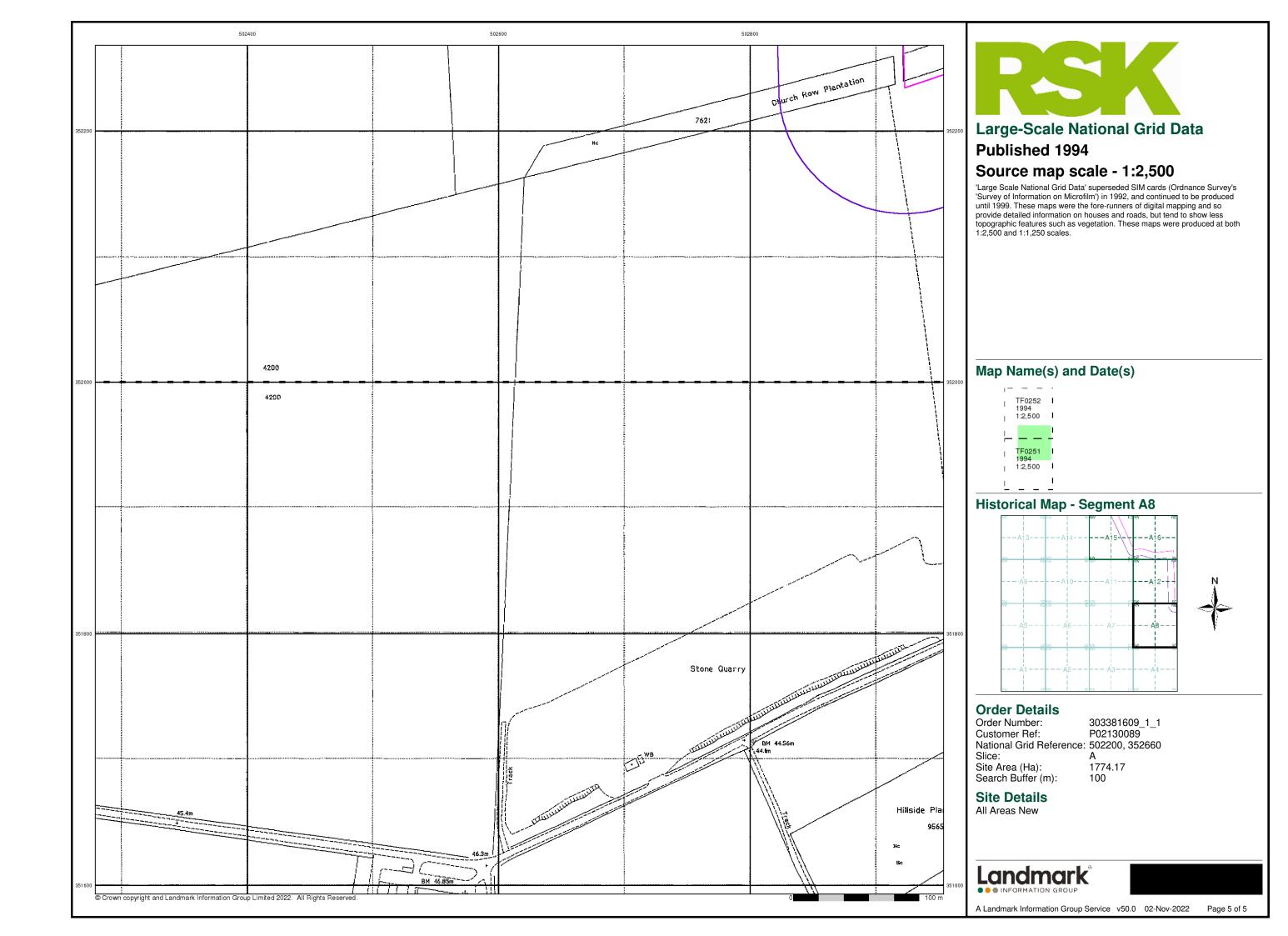


Page 1 of 5

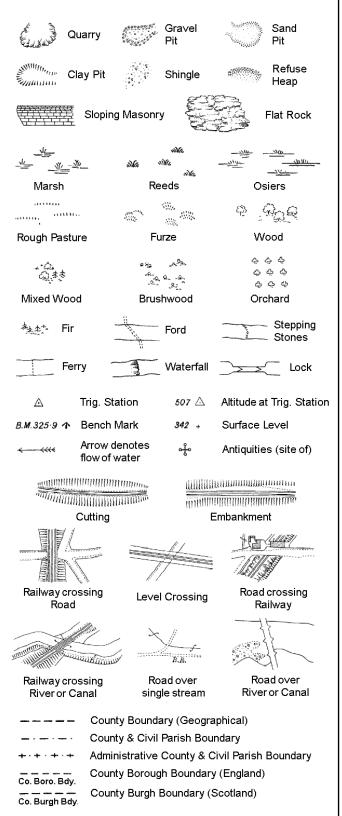








## **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

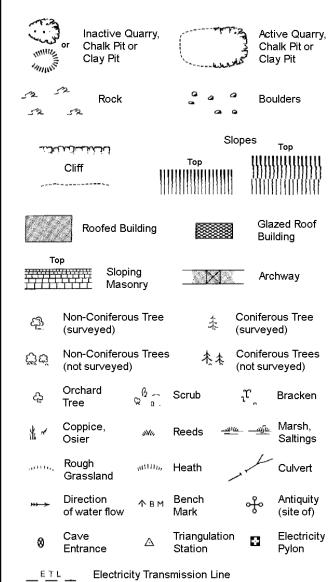
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

## Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



2	_	Symbol marking point where boundary mereing changes		
вн	Beer House	Р	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	
EIP	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	
Н	Hydrant or Hydraulic	TCB	Telephone Call Box	
LC	Level Crossing	TCP	Telephone Call Post	
MH	Manhole	Tr	Trough	
MP	Mile Post or Mooring Post	WrPt, WrT	Water Point, Water Tap	
MS	Mile Stone	W	Well	
NTL	Normal Tidal Limit	Wd Pp	Wind Pump	

County Boundary (Geographical)

Admin. County or County Bor. Boundary

County & Civil Parish Boundary

Civil Parish Boundary

London Borough Boundary

L B Bdy

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

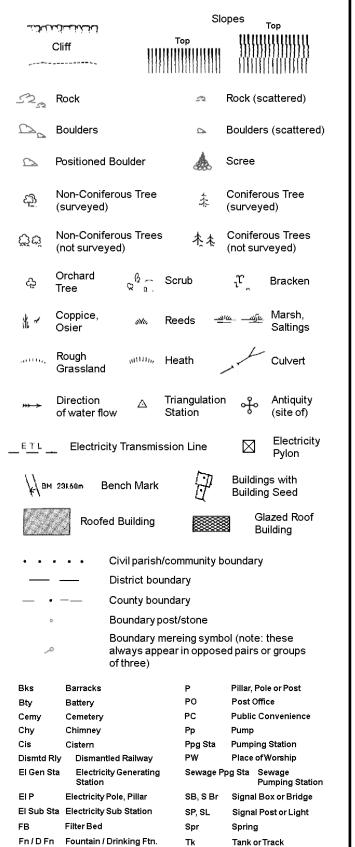
S.P

T.C.B

Sl.

 $T_T$ 

# 1:1,250



Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

Tr

Wd Pp

Wks

Trough

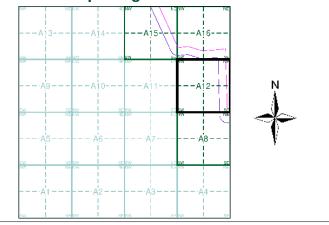
Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment A12**



### **Order Details**

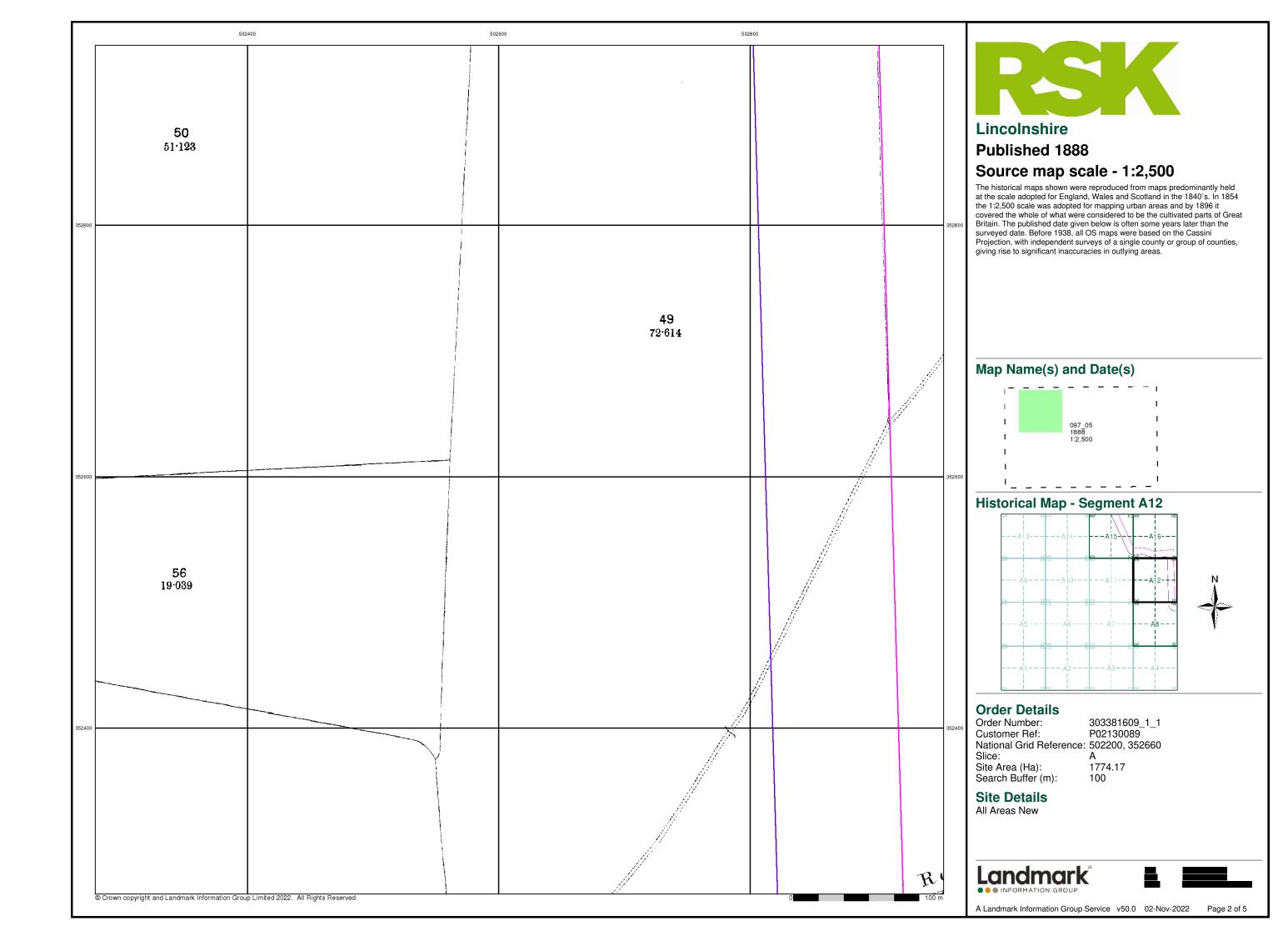
Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 502200, 352660

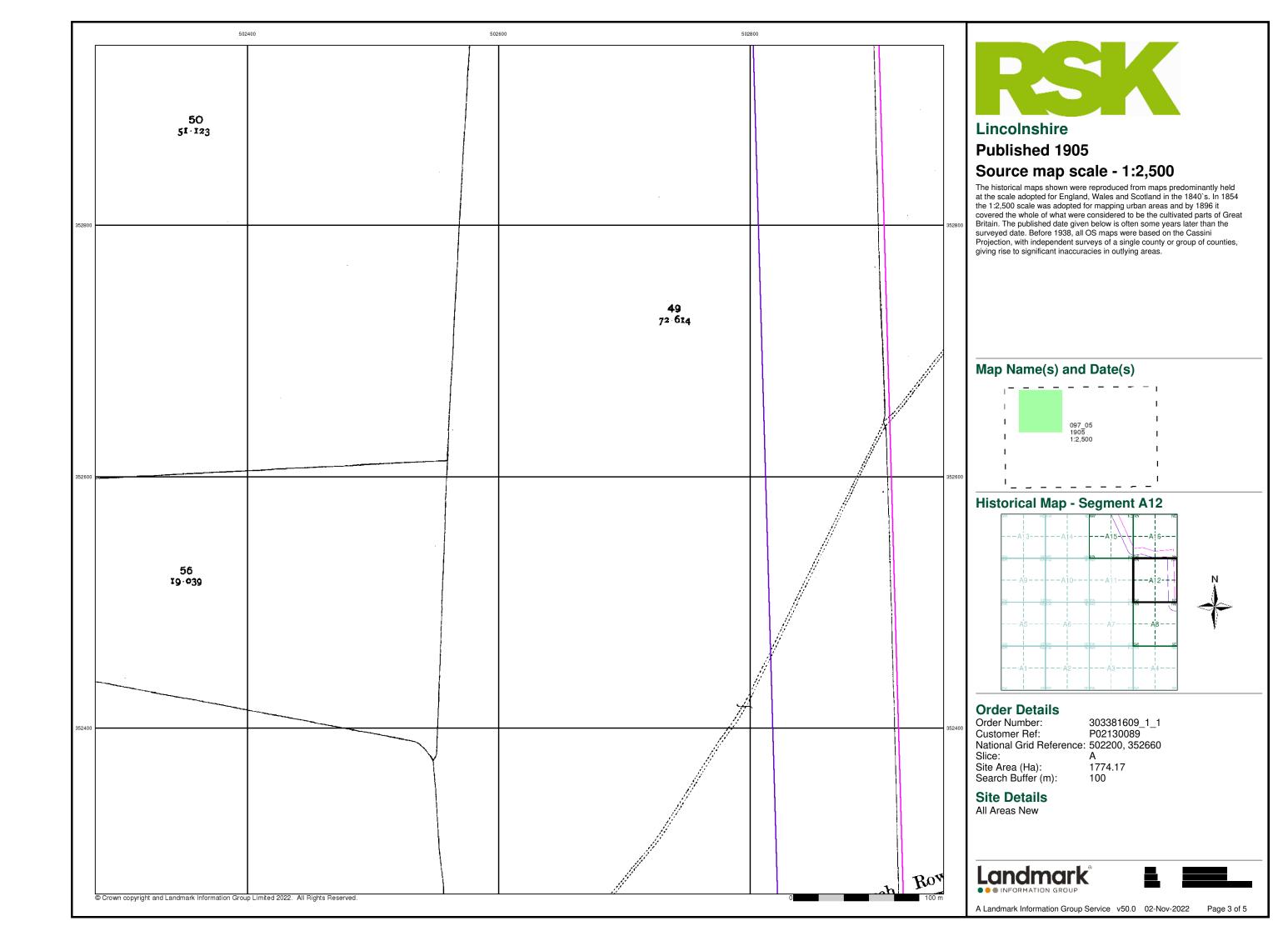
Slice:

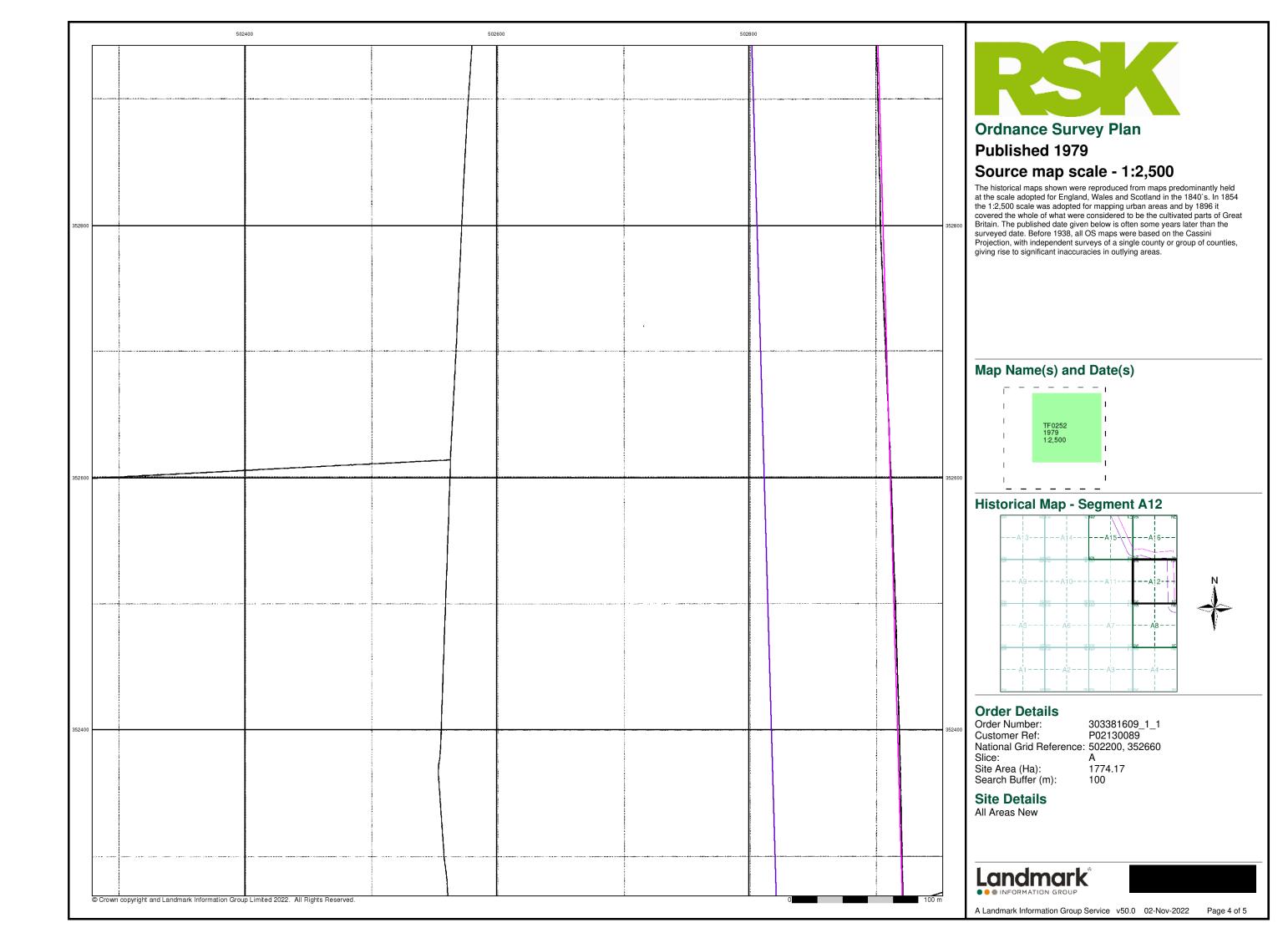
1774.17 Site Area (Ha): Search Buffer (m): 100

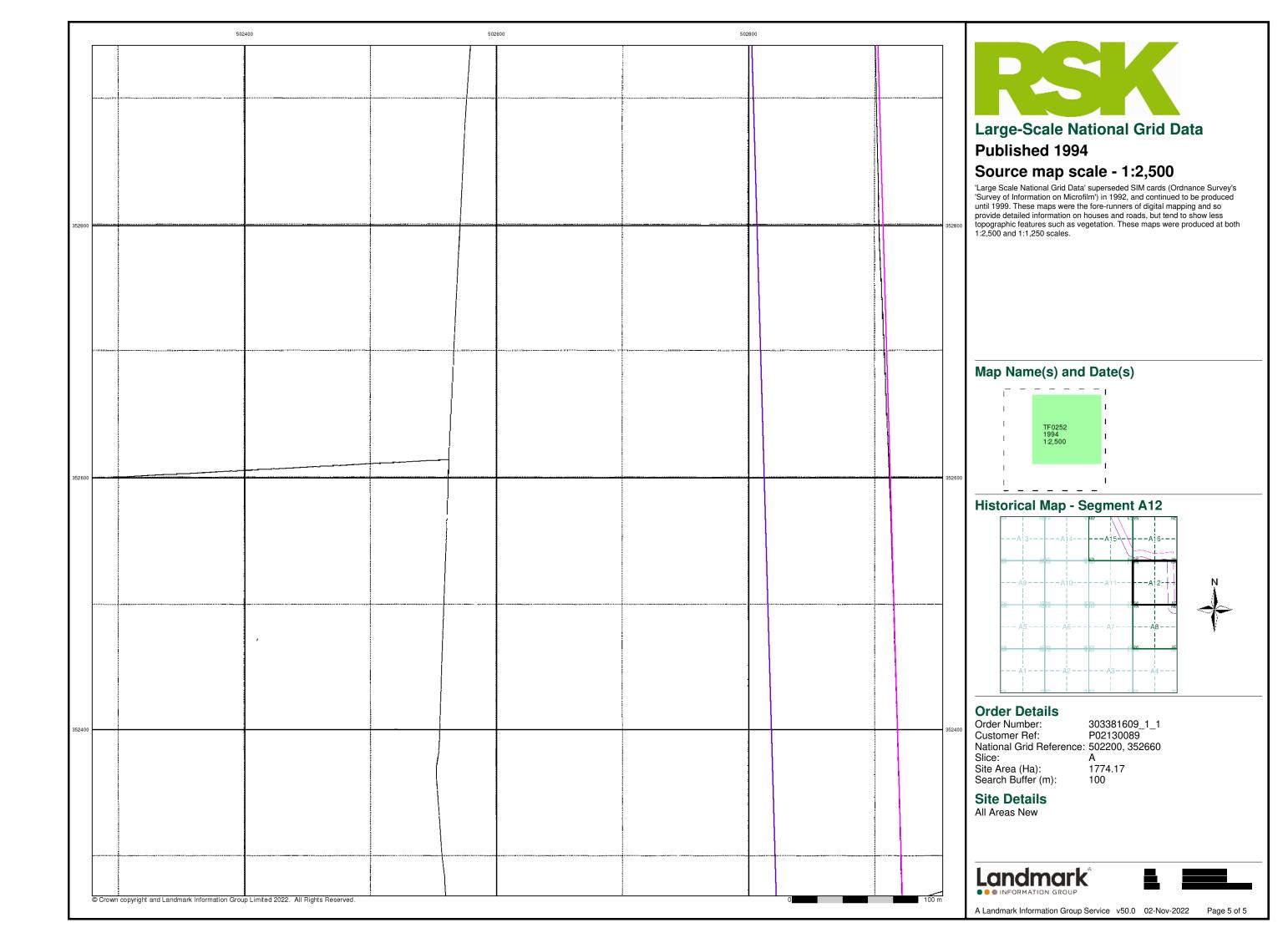
### **Site Details** All Areas New



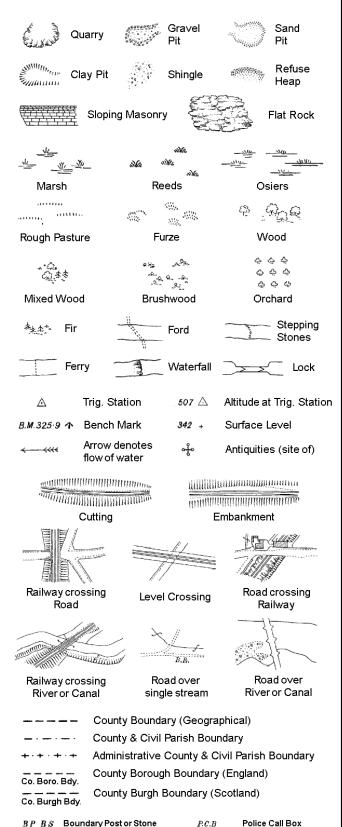








## **Ordnance Survey County Series and Ordnance Survey Plan 1:2,500**



Pump

Sluice

Spring

Trough Well

Signal Post

Telephone Call Box

S.P

Sl.

Tr:

B.R.

EP

F.B.

Bridle Road

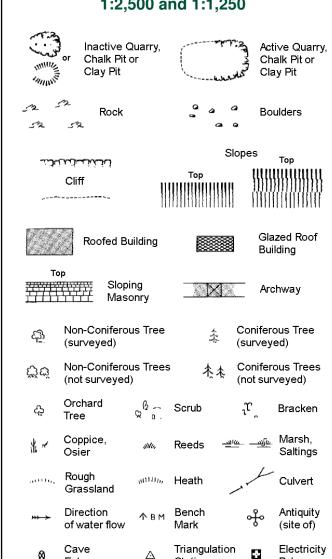
Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

## Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



	County Boundary (Geographical)
	County & Civil Parish Boundary
	Civil Parish Boundary
· <del></del> · <del></del> ·	Admin. County or County Bor. Boundary
L B Bdy	London Borough Boundary

**Electricity Transmission Line** 

***		Symbol marking point where boundary mereing changes			
	вн	Beer House		Р	Pillar, Pole or Post
	BP, BS	Boundary Pos	st or Stone	PO	Post Office
	Cn, C	Capstan, Crar	ie	PC	Public Convenience
	Chy	Chimney		PH	Public House
	D Fn	Drinking Four	itain	Pp	Pump
	EIP	Electricity Pills	ar or Post	SB, S Br	Signal Box or Bridge
	FAP	Fire Alarm Pills	ar	SP, SL	Signal Post or Light
	FB	Foot Bridge		Spr	Spring
	GP	Guide Post		Tk	Tank or Track
	Н	Hydrant or Hy	draulic	TCB	Telephone Call Box
	LC	Level Crossin	g	TCP	Telephone Call Post
	MH	Manhole		Tr	Trough
	MP	Mile Post or Me	ooring Post	WrPt,WrT	Water Point, Water Tap
	MS	Mile Stone		W	Well
	NTL	Normal Tidal L	.imit	Wd Pp	Wind Pump

# 1:1,250

لاشتانانانان		Slopes Top		
	Cliff	Top	<b>111</b>	
525	Rock	52	Rock (so	cattered)
$\triangle_{\Delta}$	Boulders	Δ	Boulders	s (scattered)
	Positioned Boulde	r 🎄	Scree	
<u> </u>	Non-Coniferous Ti (surveyed)	ree ‡	Conifero	
ਨੁੱਖ	Non-Coniferous Ti (not surveyed)	rees 🎄	Coniferd	ous Trees /eyed)
දා	Orchard ৫ Tree <sup>©</sup>	⊊ Scrub	$^{\jmath}\mathcal{U}_{\overset{\circ}{}}$	Bracken
* ~	Coppice, Osier	n Reeds	<u>-माहर —मोहर</u>	Marsh, Saltings
A11111,	Rough ,utt Grassland	un, Heath	1	Culvert
<del>&gt;&gt;&gt; →</del>	Direction 2 of water flow	∆ Triangula Station	tion 😽	Antiquity (site of)
E_TL	_ Electricity Tran	smission Line	$\boxtimes$	Electricity Pylon
/F/ BM	231.60m Bench M	lark	) Building Building	
	Roofed Buildi	ing	20000	azed Roof uilding
	· • • Civil pa	ırish/communi	tv boundarv	
		: boundary	, ,	
_ •	—— County	boundary		
٥	Bounda	ary post/stone		
	Bounda	ary mereing sy	mbol (note:	these
٥	always of three	appear in opp e)	osed pairs o	or groups
Bks	Barracks	P		le or Post
Bty Cemv	Battery Cemeters	PO PC	Post Offi Public C	ce onvenience
Chy	Cemetery Chimney	Pp	Pump	V.114011161166
Cis	Cistern	Ppg S	•	Station
Dismtd R	ly Dismantled Railw	-	Place of	Worship
El Gen St	a Electricity Genera Station	ating Sewa		ewage umping Station
EIP	Electricity Pole, Pilla		Br Signal B	ox or Bridge
El Sub St	a Electricity Sub Stati	on SP, SL	_ Signal P	ost or Light
FB	Filter Bed	Spr	Spring	
Fn / D Fn	Fountain / Drinking	Ftn. Tk	Tank or 1	rack rack

Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

Trough

Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

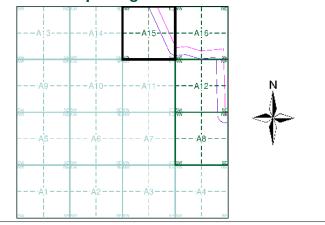
Wd Pp

Wks

## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1887 - 1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979 - 1980	4
Additional SIMs	1:2,500	1980	5
Large-Scale National Grid Data	1:2,500	1994	6

## **Historical Map - Segment A15**



### **Order Details**

Order Number: 303381609\_1\_1 **Customer Ref:** P02130089 National Grid Reference: 502200, 352660 Slice:

Site Area (Ha): 1774.17 Search Buffer (m):

## **Site Details**

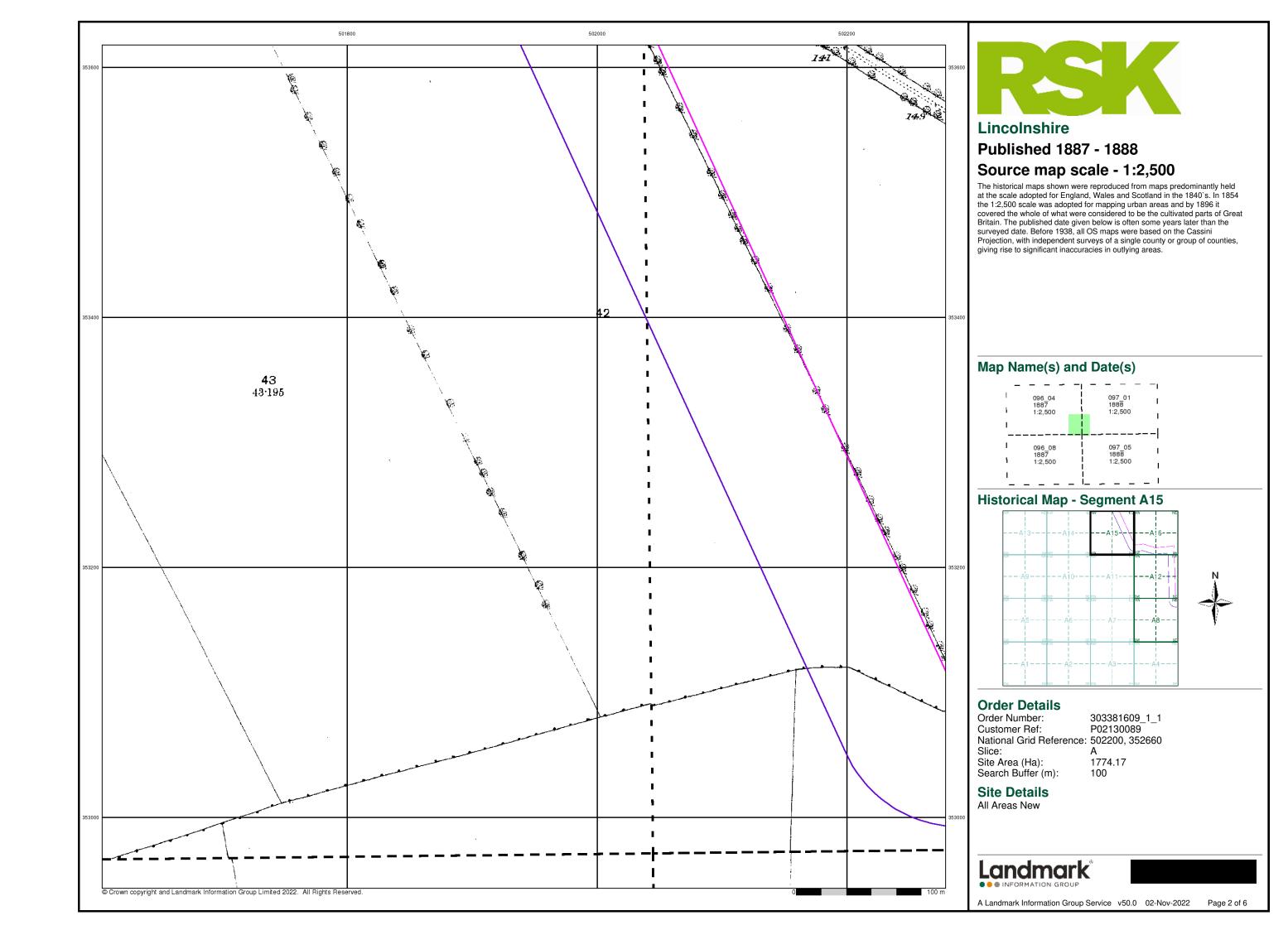
All Areas New

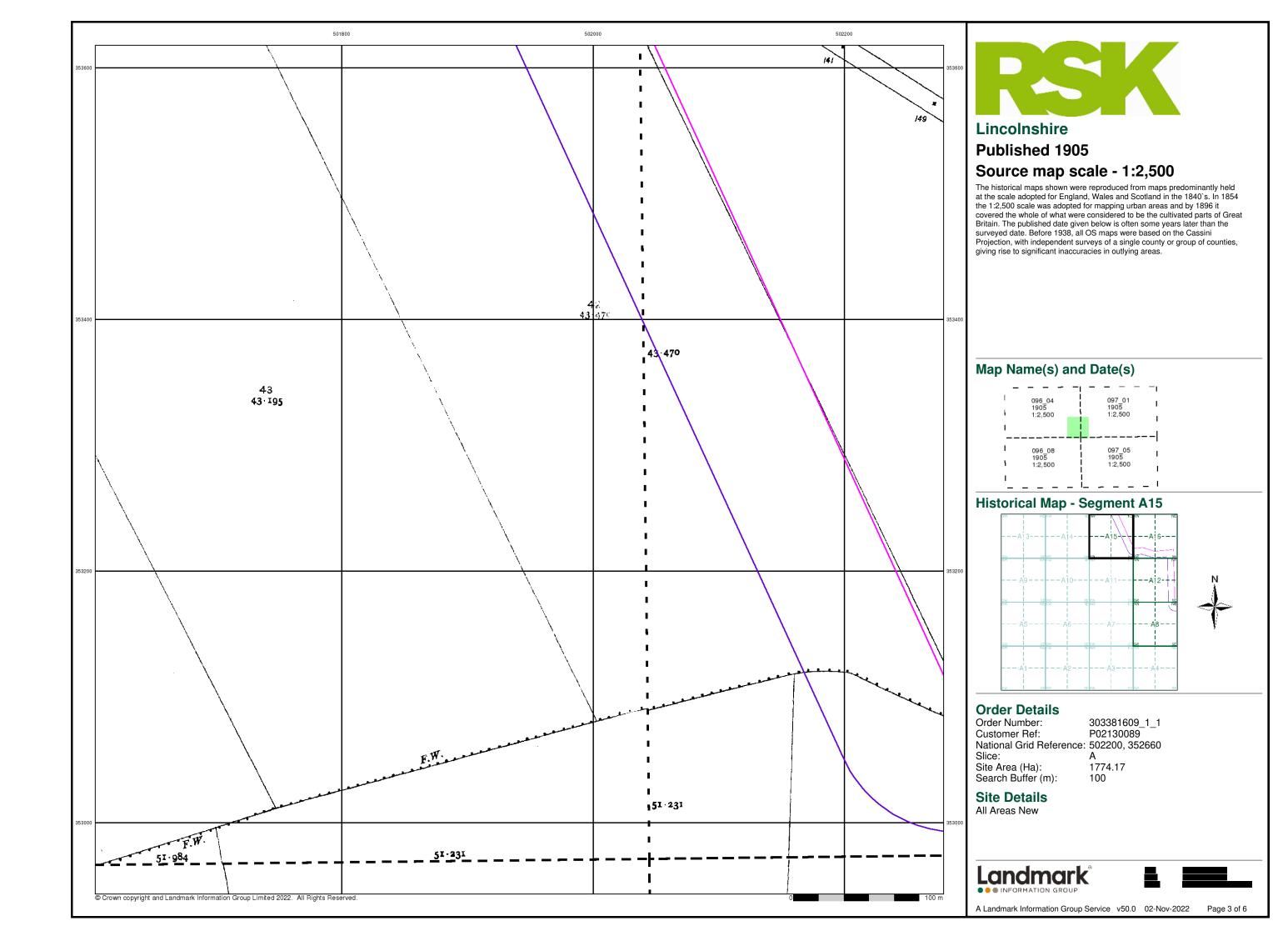


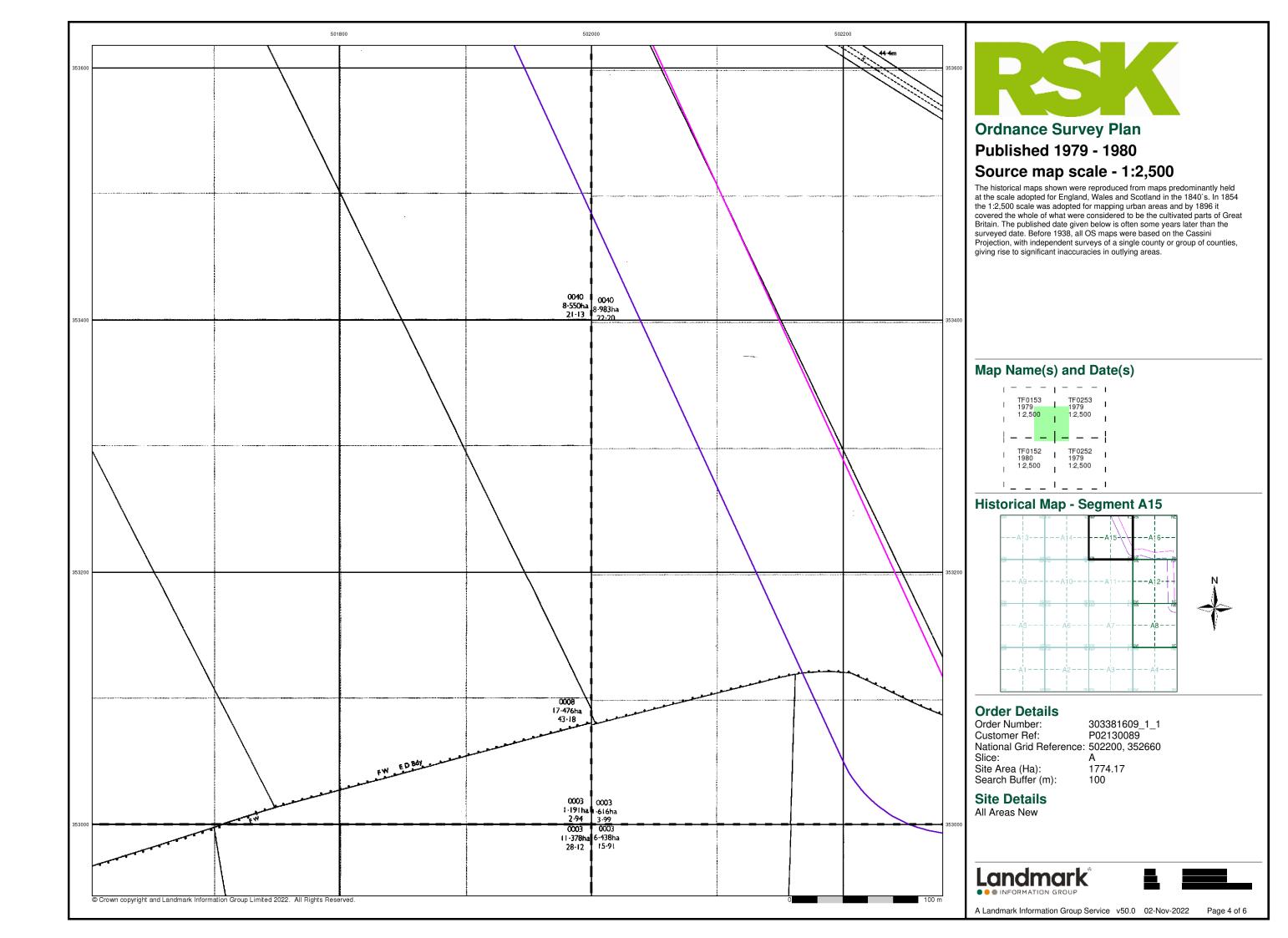


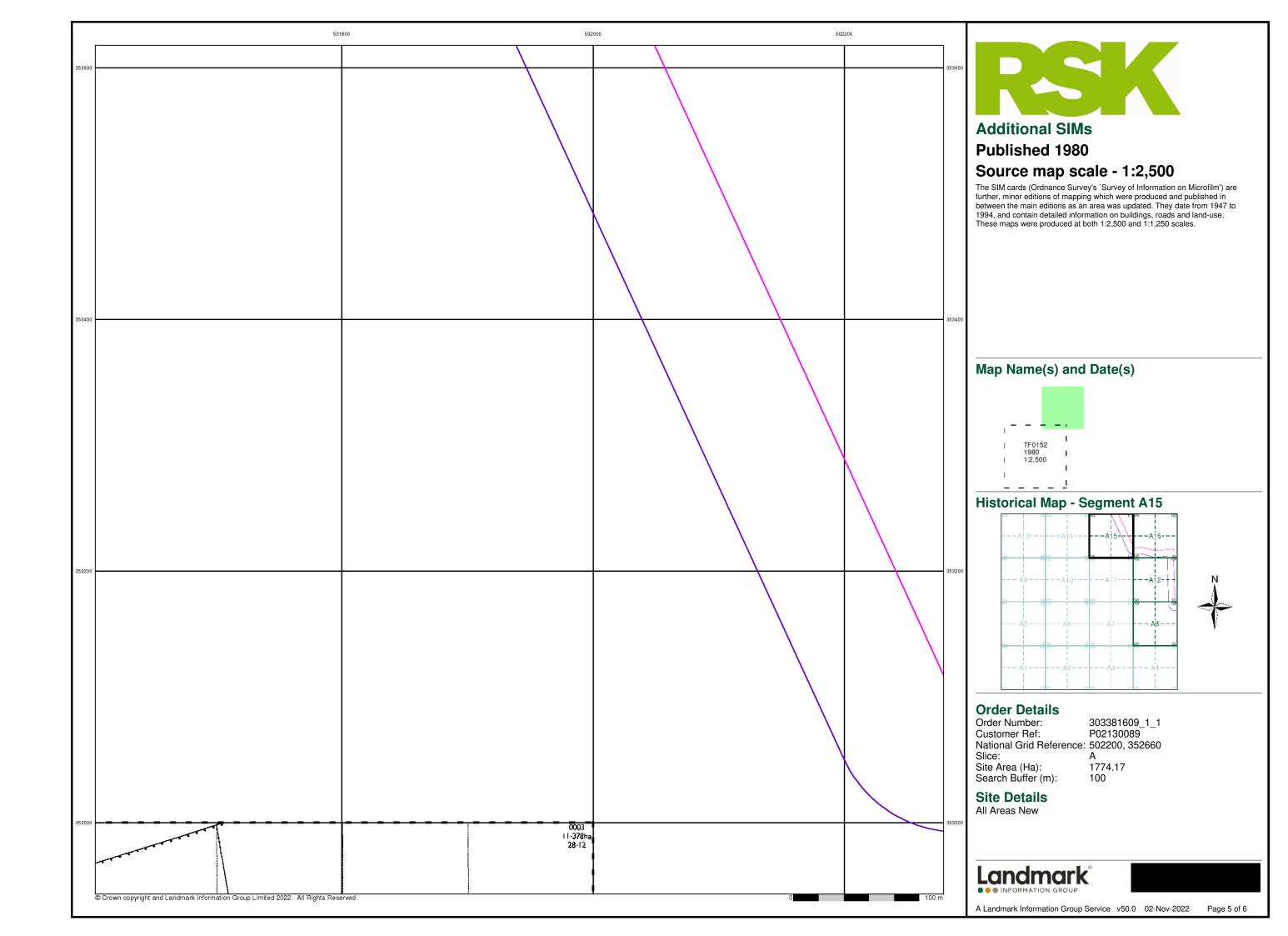


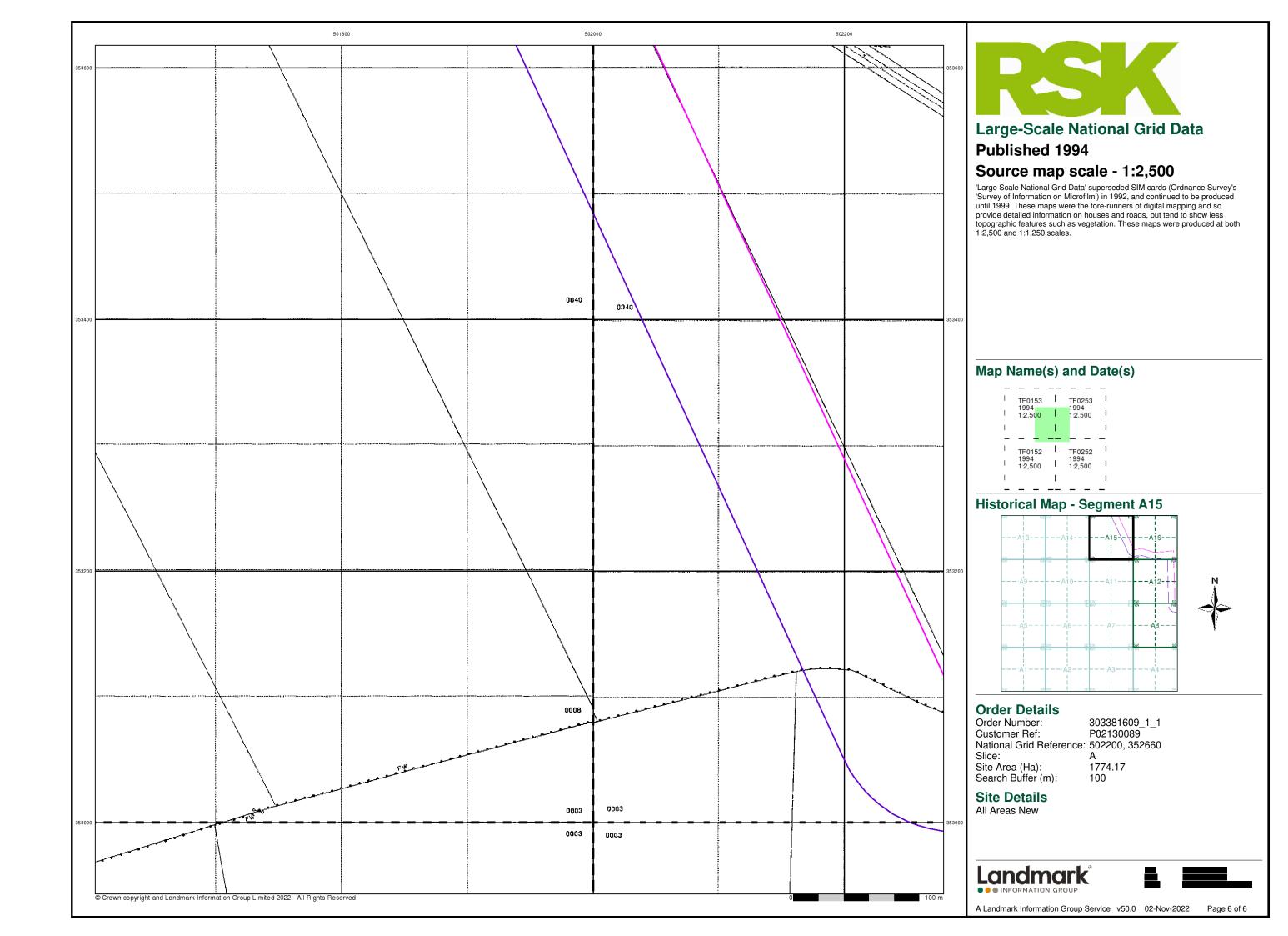
Page 1 of 6



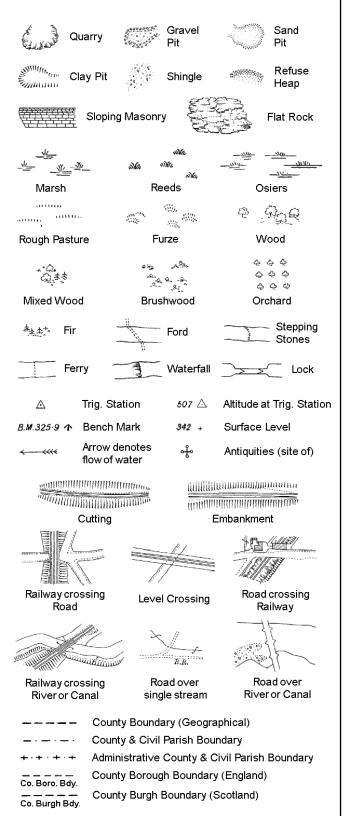








## **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

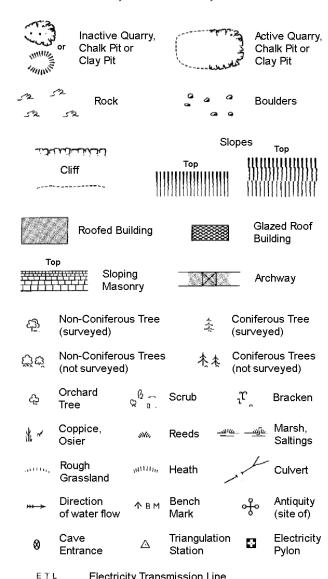
S.P

T.C.B

Sl.

Tr

## Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250

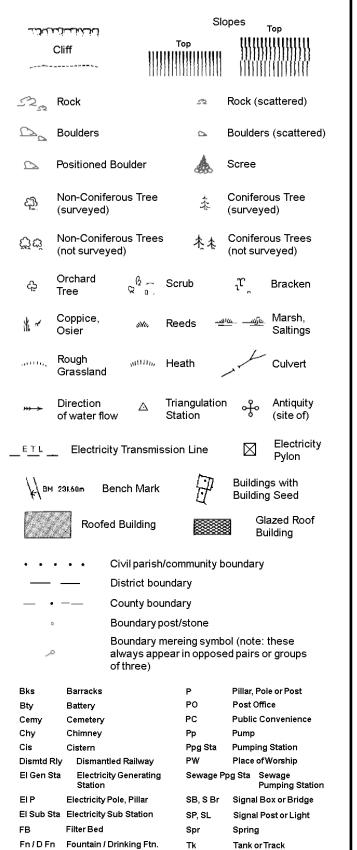


Electricity Transn	nission Line
--------------------	--------------

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

,			
вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

# 1:1,250



Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

MP, MS

Tr

Wd Pp

Wks

Trough

Wind Pump Wr Pt. Wr T Water Point, Water Tap

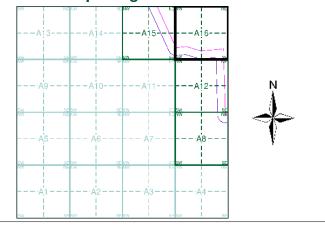
Works (building or area)



## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment A16**



### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 502200, 352660 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 100

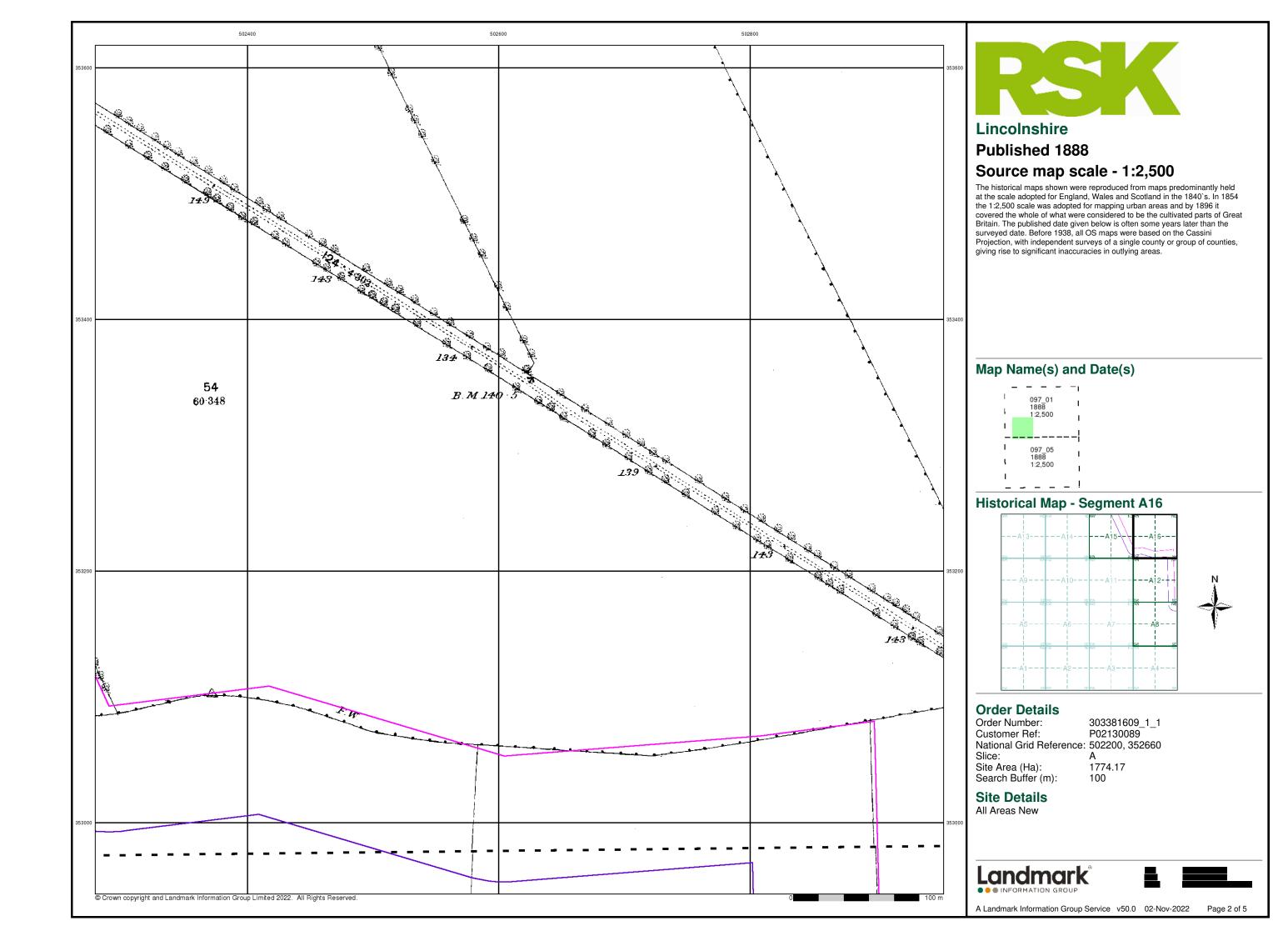
### **Site Details** All Areas New

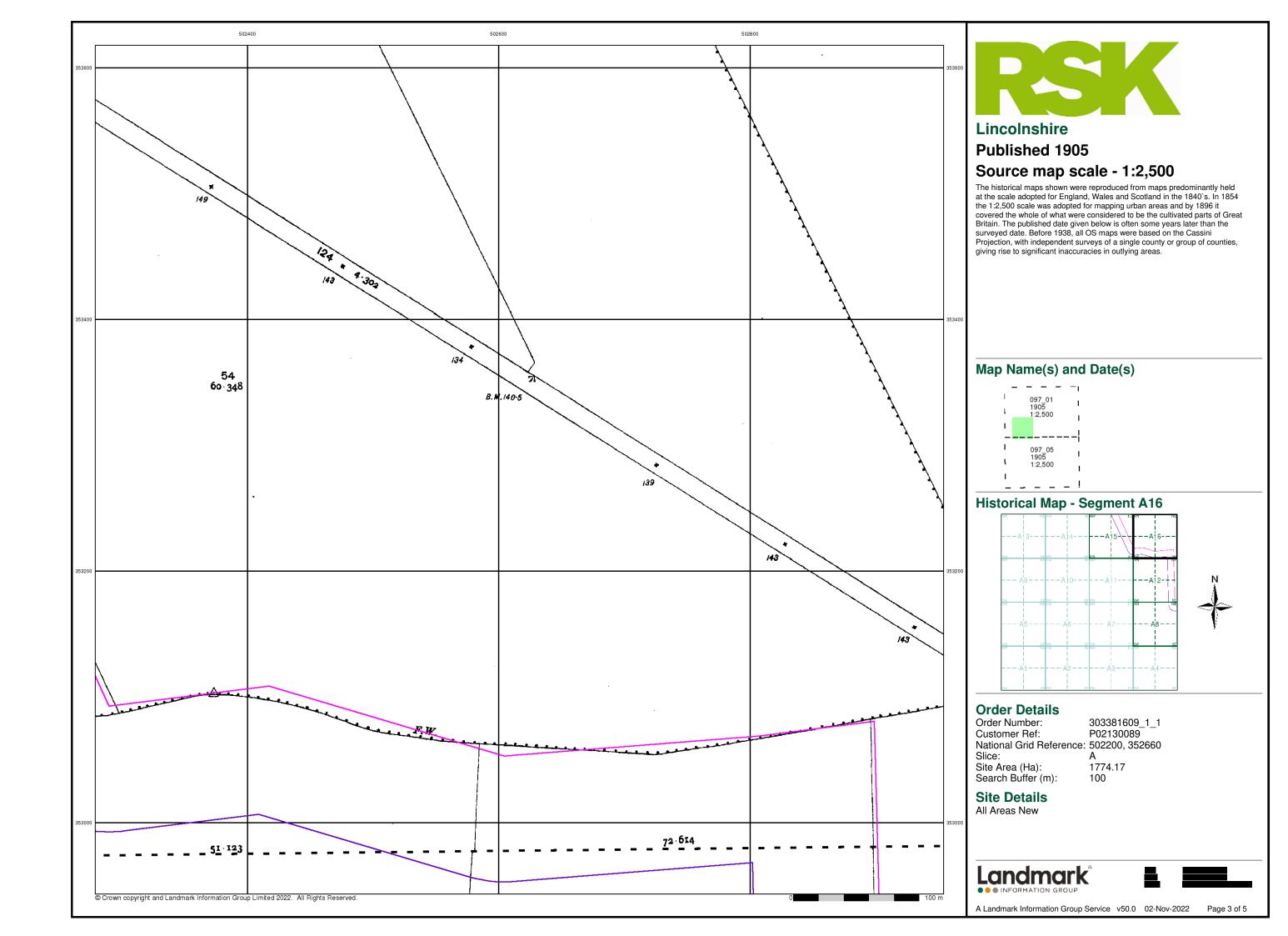


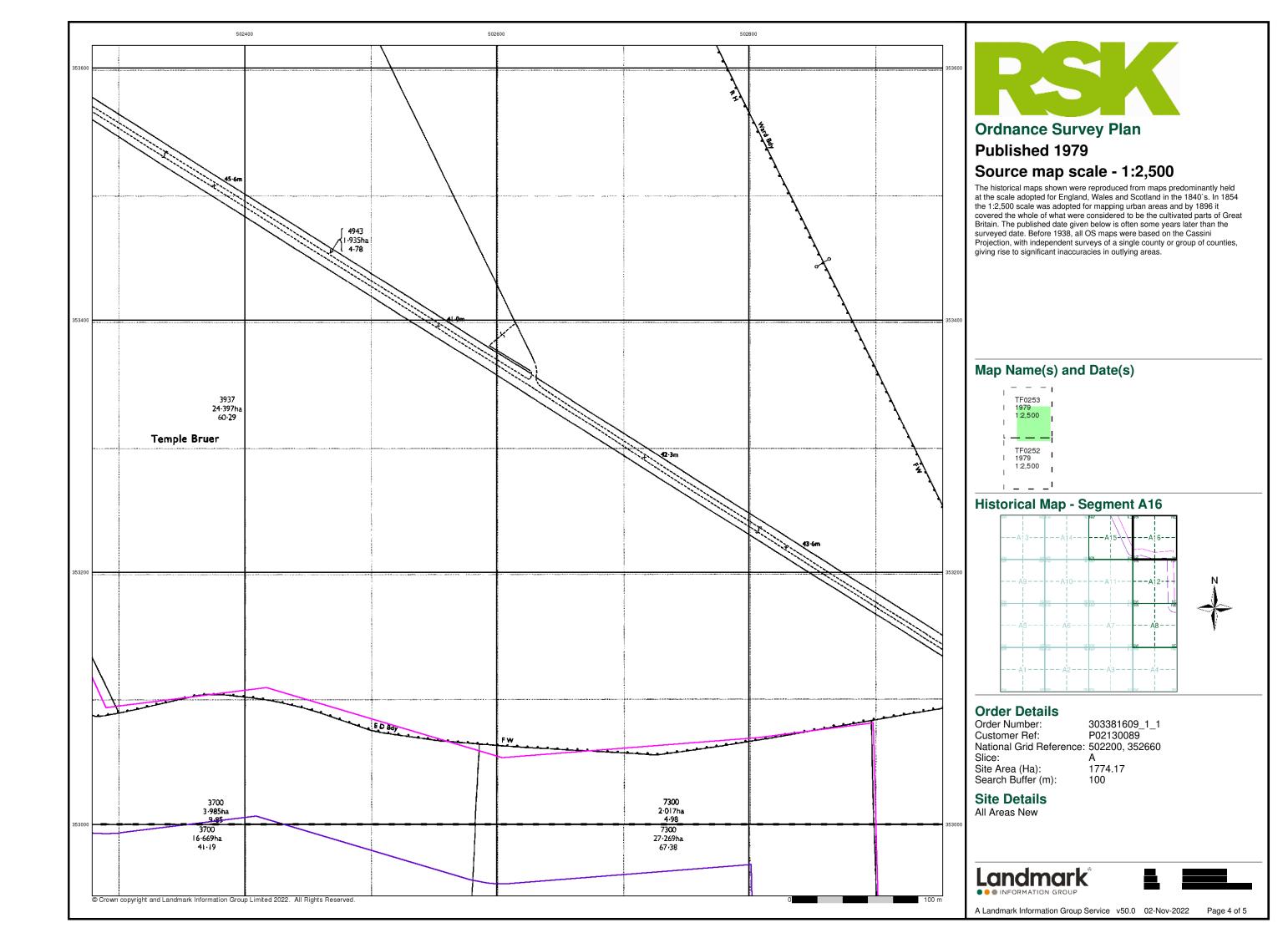


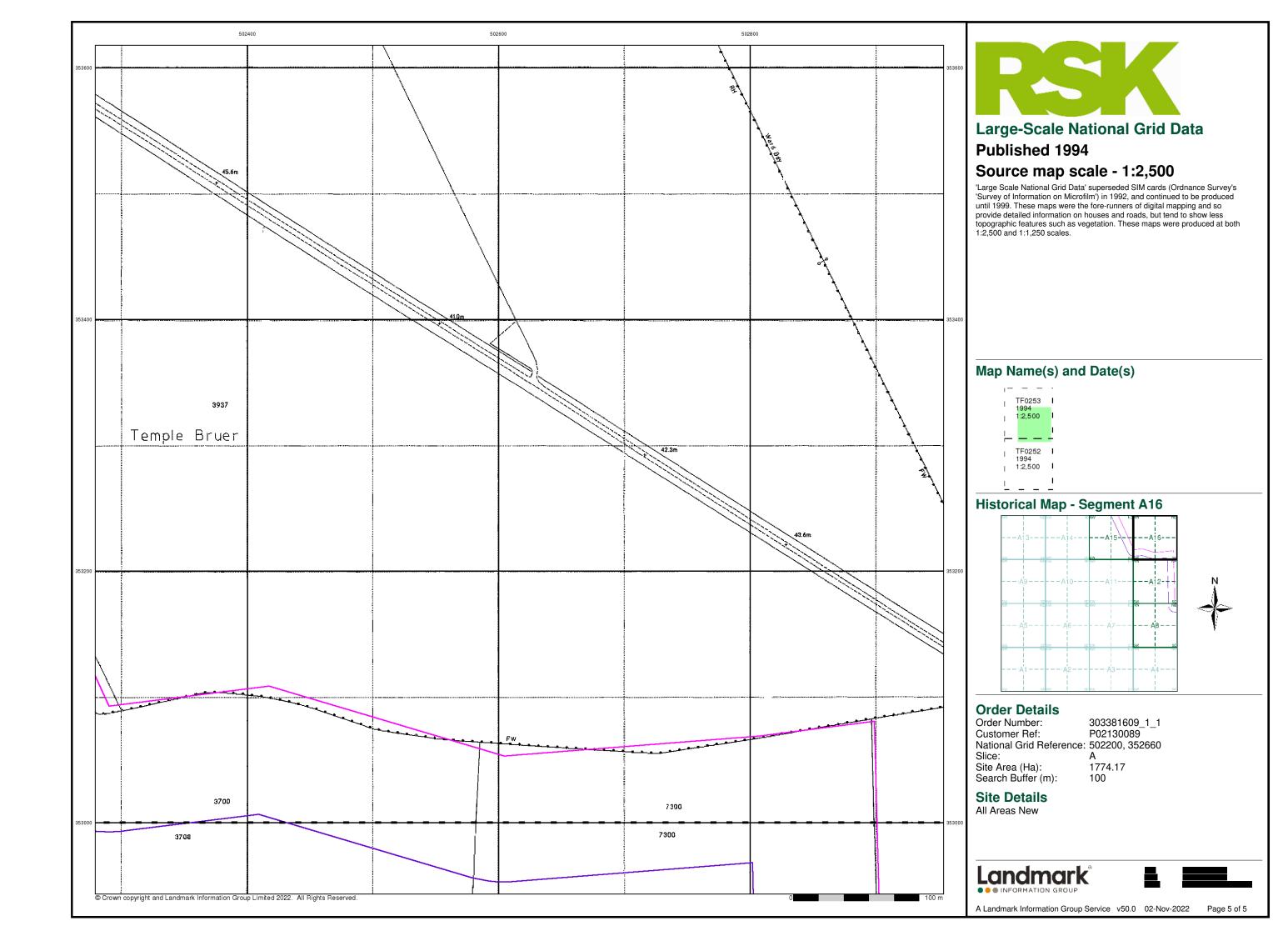


Page 1 of 5











## APPENDIX D2 ENVIRONMENTAL DATABASE REPORT – ZONE B



# **Envirocheck® Report:**

## **Datasheet**

### **Order Details:**

**Order Number:** 

303381609\_1\_1

**Customer Reference:** 

P02130089

**National Grid Reference:** 

504190, 352440

Slice:

В

Site Area (Ha):

1774.17

Search Buffer (m):

1000

**Site Details:** 

All Areas New



Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service





port Section Page Number		
Summary	-	
Agency & Hydrological	1	
Waste	28	
Hazardous Substances	-	
Geological	30	
Industrial Land Use	-	
Sensitive Land Use	35	
Data Currency	36	
Data Suppliers	40	
Useful Contacts	41	

### 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

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

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Report Version v53.0



## **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 5				4
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 6	Yes			
Pollution Incidents to Controlled Waters					
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 6		3		3 (*1)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 8	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 18	10	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 18	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 19	Yes	n/a	n/a	n/a
Source Protection Zones	pg 19	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 19	6	15	10	39

Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service



### **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 28		3		
Licensed Waste Management Facilities (Locations)	pg 28		4		
Local Authority Landfill Coverage	pg 29	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 30	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 30	2	3	1	1
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 31	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 31	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 32	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 32	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 33	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 34	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 34	Yes	n/a	n/a	n/a



## **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries					
Fuel Station Entries					
Gas Pipelines					
Underground Electrical Cables					
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 35	2			
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	B9SE (W)	0	1	503600 352300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (W)	0	1	503250 352400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	502800 353450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	502900 353950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	503250 354150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	503300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	354150 504500 354150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B15SW (N)	0	1	354150 504350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	353250 504350 353850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B11SW (E)	0	1	504400 352500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SE	0	1	503500 352450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B15NW	0	1	504450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B10SE	0	1	353400 504186
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	0	1	352443 502550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	353350 503100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	354000 504450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B10SE	0	1	354000 504000 353300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B6NW	0	1	352300 503650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW) (N)	0	1	352050 504550 354300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NW	0	1	354300 503100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B5NE	0	1	352250 503450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SE (W)	0	1	352100 503400 352443



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 Leve	el B10SW	0	1	503950 352400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B10SE (W)	0	1	504150 352443
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B10SE (W)	0	1	504000 352500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	,	0	1	502500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	353800 503100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Levi	el (NW)	0	1	353800 502750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B10NE	0	1	353900 504186
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	(N) el (NW)	0	1	352800 502600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B10NE	0	1	353900 504300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B15SE	0	1	352700 504700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	0	1	353000 503150 354100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	el (NW)	0	1	503200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	354100 503250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	el (NW)	0	1	354100 502400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	353900 504400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B10NE	0	1	353900 504200 353750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N) (NW)	0	1	352750 502450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	353750 502850 353600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B16SW (NE)	6	1	505000 353000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	24	1	505000 353950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9SE	24	1	503300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	29	1	352300 505050 354000



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	(NE)	30	1	505250 354300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	I B6NW (SW)	67	1	503950 352150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	68	1	502850 352400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B11SE (E)	86	1	504650 352400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	I B11SE	95	1	504700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E) B6SE	99	1	352443 504050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S) B11SW	113	1	351850 504400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B5SW	116	1	352350 503250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW) (W)	117	1	351900 502800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	I (W)	118	1	352443 502800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B16NW	139	1	352400 505000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve		142	1	353400 504750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E) B11SE	144	1	352450 504750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	145	1	352443 505050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B7NW	164	1	353700 504550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve		176	1	352250 504000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	(SW)	185	1	352350 502950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	I (W)	193	1	352050 502750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve		200	1	352150 503050 353050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B11NE	205	1	352050 504800 353700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B12NW	208	1	352700 505100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	(E) I (NE)	225	1	352800 505250 354050



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B7NE (E)	225	1	504700 352250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B12SW (E)	234	1	505000 352600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B11SE (E)	243	1	504850 352500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level		253	1	505150 353750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	263	1	505150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	el (W)	304	1	353700 502650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	el (W)	310	1	352100 502800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B7NW	313	1	351950 504500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B7NW	313	1	352150 504550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level		314	1	352150 503050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B12NW	328	1	351900 505150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E) B5SW	339	1	352700 503050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B12NW	342	1	351800 505050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E) B6SE	348	1	352650 504100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	(S)	356	1	351900 502800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B7NW	363	1	351900 504500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B7NW	363	1	352100 504450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SE)	377	1	352100 505450 354050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	el (SW)	385	1	354050 502950 351850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B12SW	392	1	351850 505000 353443
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E) (W)	402	1	352443 502700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B7NW (SE)	414	1	351900 504400 352050



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibil Flooding Type: Potential for Ground	ity water Flooding of Property Situated Below Ground Level	(SW)	422	1	502750 351850
	BGS Groundwater Flooding Susceptibil Flooding Type: Potential for Ground	ity water Flooding of Property Situated Below Ground Level	(W)	430	1	502650 351900
	BGS Groundwater Flooding Susceptibil Flooding Type: Limited Potential for	ity Groundwater Flooding to Occur	(SW)	435	1	502900 351800
	BGS Groundwater Flooding Susceptibil Flooding Type: Limited Potential for	ity Groundwater Flooding to Occur	B6SE (S)	443	1	504050 351700
	BGS Groundwater Flooding Susceptibil Flooding Type: Limited Potential for	ity Groundwater Flooding to Occur	B6SW (S)	443	1	503950 351650
	BGS Groundwater Flooding Susceptibil Flooding Type: Potential for Ground	ity water Flooding of Property Situated Below Ground Level	(NE)	463	1	505400 353700
	BGS Groundwater Flooding Susceptibil Flooding Type: Limited Potential for	ity Groundwater Flooding to Occur	B6NE (S)	466	1	504250 352000
	BGS Groundwater Flooding Susceptibil Flooding Type: Limited Potential for	ity Groundwater Flooding to Occur	B7NW (S)	466	1	504350 352000
	BGS Groundwater Flooding Susceptibil Flooding Type: Potential for Ground	ity water Flooding of Property Situated Below Ground Level	(SW)	468	1	502750 351800
	BGS Groundwater Flooding Susceptibil Flooding Type: Limited Potential for	ity Groundwater Flooding to Occur	B6SE (S)	476	1	504186 351900
	BGS Groundwater Flooding Susceptibil Flooding Type: Limited Potential for	ity Groundwater Flooding to Occur	B6NE (S)	494	1	504186 351950
1	Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment Agency Not Supplied Pr3lfu486 Pr3lfu486 Pr3lfu486 Pr3lfu486 Thy January 1971 Thy January 1971 Test October 1996 Unknown Onto Land Environment: Receiving Water: Land	Authority Legislation where issue date < 01/09/1989	B2NW (S)	654	2	503900 351400
	Discharge Consents					
1	Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type:	ER CO) (NOT STP AT A PRIVATE PREMISES) House, Brauncewell, Sleaford, Ng34 8se , Anglian Region  Authority Legislation where issue date < 01/09/1989	B2NW (S)	654	2	503900 351400



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Discharge Consent Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Anglian Water Services Limited PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Willow Lane Sps, Cranwell, Lincolnshire, Ng34 8dq Environment Agency, Anglian Region Non-Tidal (River Slea) Annnf10370 2 19th July 1995 19th July 1995 Not Supplied Sewage Discharges - Pumping Station - Water Company Freshwater Stream/River  Trib Ruskington Beck Post National Rivers Authority Legislation where issue date > 31/08/1989 Located by supplier to within 10m	B2SE (S)	922	2	504020 351160
2	Discharge Consent Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Anglian Water Services Limited PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Willow Lane Sps, Cranwell, Lincolnshire, Ng34 8dq Environment Agency, Anglian Region Not Given Annnf10370 1 24th January 1991 24th January 1991 Public Sewage: Storm Sewage Overflow Freshwater Stream/River  Trib Ruskington Beck Post National Rivers Authority Legislation where issue date > 31/08/1989 Located by supplier to within 100m	B2SE (S)	922	2	504020 351160
	Nearest Surface Wa	ter Feature	B15NE (NE)	0	-	504799 353436
3	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*G/0060a 100 Manor Farm Bore Brauncewell Environment Agency, Anglian Region Household Water Supply: Drinking; Cooking; Sanitary; Washing; (Small Garden) Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st April 2004 Not Supplied Located by supplier to within 100m	B11SW (E)	113	2	504550 352350
3	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*G/0060a 100 Manor Farm Bore Brauncewell Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st April 2004 Not Supplied Located by supplier to within 100m	B11SW (E)	118	2	504555 352345



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*g/060a Not Supplied Dale Farm Borehole, ROXHOLM Environment Agency, Anglian Region Unspecified Not Supplied Well And Borehole Not Supplied Located by supplier to within 100m	B11SW (E)	118	2	504550 352345
4	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*g/060a Not Supplied Manor Farm Bore , BRAUNCEWELL Environment Agency, Anglian Region Domestic Use Only Not Supplied Well And Borehole 0 680 Central Lincolnshire Limestone; Status: Perpetuity Not Supplied Located by supplier to within 100m	B3NE (SE)	968	2	504905 351550
4	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*G/0060a 100 Dale Farm Borehole Roxholm Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st April 2004 Not Supplied Located by supplier to within 100m	B3NE (SE)	971	2	504900 351545
4	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*G/0060a 100 Dale Farm Borehole Roxholm Environment Agency, Anglian Region Household Water Supply: Drinking; Cooking; Sanitary; Washing; (Small Garden) Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st April 2004 Not Supplied Located by supplier to within 100m	B3NE (SE)	972	2	504905 351545



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator:	Roxholme Estates	(SE)	1968	2	505350
	Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3):	4/30/11/*G/0027a 100 Roxholme Hall Borehole Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied	(02)		_	350650
	Details: Authorised Start: Authorised End: Permit Start Date:	Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st April 2004				
	Permit End Date: Positional Accuracy:	Not Supplied Located by supplier to within 100m				
	Groundwater Vulne		D450W		2	E04047
	Combined Classification: Combined Vulnerability:	Principle Bedrock Aquifer - High Vulnerability High	B15SW (N)	0	3	504347 353200
	Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution:	Productive Bedrock Aquifer, No Superficial Aquifer Intermediate Well Connected Fractures				
	Baseflow Index: Superficial Patchiness:	<300 mm/year >70% <90%				
	Superficial Thickness:	<3m				
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification: Combined	Secondary Bedrock Aquifer - High Vulnerability High	B15NW (N)	0	3	504466 353410
	Vulnerability: Combined Aquifer: Pollutant Speed:	Productive Bedrock Aquifer, No Superficial Aquifer Intermediate				
	Bedrock Flow: Dilution: Baseflow Index:	Well Connected Fractures <300 mm/year >70%				
	Superficial Patchiness: Superficial	<90% <3m				
	Thickness: Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Bedrock Aquifer - High Vulnerability	(N)	0	3	504440 353624
	Combined Vulnerability: Combined Aquifer:	High  Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow: Dilution:	Intermediate Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial Patchiness:	>70% <90%				
	Superficial Thickness: Superficial	<3m No Data				
	Recharge:	no Dala				



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Secondary Bedrock Aquifer - High Vulnerability	(N)	0	3	504481
	Classification: Combined	High				353691
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness:	S.II.				
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Bedrock Aquifer - High Vulnerability	B14SE (N)	0	3	504187 353000
	Combined	High	(14)			333000
	Vulnerability:					
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness:					
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined	Secondary Bedrock Aquifer - High Vulnerability	B10NE	0	3	504000
	Classification:	, , ,	(NW)			352853
	Combined	High				
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow:	Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index: Superficial	>70% <90%				
	Patchiness:					
	Superficial	<3m				
	Thickness: Superficial	No Data				
	Recharge:	NO Data				
	Groundwater Vulne	• •				
	Combined Classification:	Secondary Bedrock Aquifer - High Vulnerability	B10NE (N)	0	3	504279 352724
	Combined	High	(14)			332124
	Vulnerability:					
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	- Citi				
	Superficial	No Data				
	Recharge:					



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Secondary Bedrock Aquifer - High Vulnerability	B10NE	0	3	504089
	Classification: Combined	High	(N)			352865
	Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial	Productive Bedrock Aquifer, No Superficial Aquifer Intermediate Well Connected Fractures <300 mm/year >70% <90%				
	Patchiness: Superficial	<3m				
	Thickness: Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Bedrock Aquifer - High Vulnerability	B11SW (NE)	0	3	504315 352533
	Combined Vulnerability: Combined Aquifer: Pollutant Speed:	High  Productive Bedrock Aquifer, No Superficial Aquifer Intermediate				
	Bedrock Flow: Dilution: Baseflow Index: Superficial	Well Connected Fractures <300 mm/year >70% <90%				
	Patchiness: Superficial Thickness:	<3m				
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Bedrock Aquifer - High Vulnerability	(N)	0	3	504424 354000
	Combined Vulnerability: Combined Aquifer:	High  Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow: Dilution:	Intermediate Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial Patchiness: Superficial	>70% <90% <3m				
	Thickness: Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Bedrock Aquifer - High Vulnerability	(N)	0	3	504244 354000
	Combined Vulnerability:	High				
	Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution:	Productive Bedrock Aquifer, No Superficial Aquifer Intermediate Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial Patchiness:	>70% <90%				
	Superficial Thickness: Superficial	<3m No Data				
	Recharge:					



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Secondary Bedrock Aquifer - High Vulnerability	B6NE	0	3	504000
	Classification: Combined	High	(SW)			352000
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:					
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined	Unproductive Aquifer (may have productive aquifer beneath)	B11NW	0	3	504379
	Classification: Combined	Unproductive	(NE)			352837
	Vulnerability: Combined Aquifer:	Unproductive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	Intermediate				
	Bedrock Flow:	Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index: Superficial	>70% <90%				
	Patchiness:	130 /0				
	Superficial	<3m				
	Thickness:	N- D-4-				
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Unproductive Aquifer (may have productive aquifer beneath)	B16NW (NE)	0	3	505000 353590
	Combined	Unproductive	(IVL)			333390
	Vulnerability: Combined Aquifer:	Unproductive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	3011				
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined	Unproductive Aquifer (may have productive aquifer beneath)	B15SW	0	3	504449
	Classification: Combined	Unproductive	(NE)			353000
	Vulnerability:					
	Combined Aquifer:	Unproductive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	Intermediate				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	Sill				
	Superficial	No Data				
	Recharge:					



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined Classification:	Unproductive Aquifer (may have productive aquifer beneath)	B10NE (N)	0	3	504000 352933
	Combined Vulnerability:	Unproductive				
	Combined Aquifer: Pollutant Speed: Bedrock Flow:	Unproductive Bedrock Aquifer, No Superficial Aquifer High Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial Patchiness: Superficial	<90%				
	Thickness: Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined Classification:	Unproductive Aquifer (may have productive aquifer beneath)	B10NE (NW)	0	3	504000 352818
	Combined Vulnerability: Combined Aquifer:	Unproductive Unproductive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70% <90%				
	Superficial Patchiness: Superficial	<3m				
	Thickness: Superficial	No Data				
	Recharge:					
	Groundwater Vulne	•		_	_	
	Combined Classification: Combined	Unproductive Aquifer (may have productive aquifer beneath)  Unproductive	B10NE (N)	0	3	504110 352793
	Vulnerability: Combined Aquifer:	Unproductive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution: Baseflow Index: Superficial	<300 mm/year >70% <90%				
	Patchiness: Superficial	<3m				
	Thickness: Superficial Recharge:	No Data				
	Groundwater Vulne	arahility Man				
	Combined Classification:	Unproductive Aquifer (may have productive aquifer beneath)	B14SE (N)	0	3	504186 353000
	Combined Vulnerability:	Unproductive	(14)			333000
	Combined Aquifer: Pollutant Speed:	Unproductive Bedrock Aquifer, No Superficial Aquifer Intermediate				
	Bedrock Flow: Dilution: Baseflow Index:	Well Connected Fractures <300 mm/year >70%				
	Superficial Patchiness:	<90%				
	Superficial Thickness:	<3m				
	Superficial Recharge:	No Data				



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined Classification: Combined	Principle Bedrock Aquifer - High Vulnerability High	B9SW (W)	0	3	503000 352443
	Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness: Superficial	Productive Bedrock Aquifer, No Superficial Aquifer High Well Connected Fractures <300 mm/year >70% <90% <3m				
	Thickness: Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification: Combined Vulnerability: Combined Aquifer:	Principle Bedrock Aquifer - High Vulnerability  High  Productive Bedrock Aquifer, No Superficial Aquifer	B10SE (W)	0	3	504000 352443
	Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial	High Well Connected Fractures <300 mm/year >70% <90%				
	Patchiness: Superficial Thickness: Superficial	<3m No Data				
	Recharge:	NO Data				
	Groundwater Vulne	erability Map				
	Combined Classification: Combined	Principle Bedrock Aquifer - High Vulnerability High	B6NE (SW)	0	3	504000 352153
	Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial	Productive Bedrock Aquifer, No Superficial Aquifer High Well Connected Fractures <300 mm/year >70% <90%				
	Patchiness: Superficial Thickness: Superficial	<3m No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined Classification:	Principle Bedrock Aquifer - High Vulnerability	B10NE (N)	0	3	504272 352782
	Combined Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness:	High  Productive Bedrock Aquifer, No Superficial Aquifer Intermediate Well Connected Fractures <300 mm/year >70% <90%				
	Superficial Thickness: Superficial Recharge:	<3m No Data				



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	B14SE	0	3	504000
	Classification: Combined	High	(N)			352975
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	VIII				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	B10SE	0	3	504186
	Classification: Combined	High	(S)			352443
	Vulnerability:	r ngri				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	Intermediate				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	2311				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Secondary Bedrock Aquifer - High Vulnerability	B15SE	0	3	504692
	Classification: Combined	Llink	(NE)			35298
	Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	Intermediate				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness:	<b>-2m</b>				
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(NW)	0	3	50300
	Classification: Combined	High				35400
	Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness:	<b>-2m</b>				
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(N)	0	3	504000
	Classification: Combined	High				354000
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	<b>3</b> 111				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(N)	0	3	504186
	Classification: Combined	High				354000
	Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	Intermediate				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness:	40				
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(N)	0	3	504545
	Classification: Combined	High				354000
	Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	Intermediate				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness:	*0				
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Secondary Superficial Aquifer - High Vulnerability	B10SE	0	3	504000
	Classification:	High	(SW)			352288
	Combined Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	<300 mm/year >70%				
	Superficial	<90%				
	Patchiness:					
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:	··- =				



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Secondary Superficial Aquifer - High Vulnerability	B10SE	0	3	504000
	Classification: Combined	High	(SW)			352283
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness:	<b>5</b>				
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Superficial Aquifer - High Vulnerability	B10SE (E)	0	3	504202 352441
	Combined Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed:	Intermediate				
	Bedrock Flow:	Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial	<90%				
	Patchiness:					
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined Classification:	Secondary Superficial Aquifer - High Vulnerability	B11SW (E)	0	3	504376 352519
	Combined	High	,			
	Vulnerability:					
	Combined Aquifer: Pollutant Speed:	Productive Bedrock Aquifer, Productive Superficial Aquifer Intermediate				
	Bedrock Flow:	Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index: Superficial	>70% <90%				
	Patchiness:	<b>190</b> /0				
	Superficial	<3m				
	Thickness:	N. D.				
	Superficial Recharge:	No Data				
	Groundwater Vulne					
	Combined Classification:	Secondary Superficial Aquifer - High Vulnerability	B5NW (W)	0	3	503000 352210
	Combined	High	( ( v )			332210
	Vulnerability:					
	Combined Aquifer:	Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	<b>5</b>				
	Superficial	No Data				
	Recharge:					



ap O		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	B6NW	0	3	503862
	Classification: Combined	High	(SW)			352000
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness:	*0				
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:	110 Bulu				
	Groundwater Vulne	•				
	Combined	Principle Bedrock Aquifer - High Vulnerability	B13SW	0	3	50300
	Classification: Combined	High	(NW)			35300
	Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow:	Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial	<90%				
	Patchiness:	•••				
	Superficial	<3m				
	Thickness:	N. D.				
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	B14SE	0	3	504000
	Classification:		(N)			35300
	Combined	High				
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow:	Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70% <90%				
	Superficial Patchiness:	NO 70				
	Superficial	<3m				
	Thickness:					
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	B14SE	0	3	50423
	Classification:		(N)			35300
	Combined	High				
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	Intermediate				
	Bedrock Flow:	Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness:	•				
	Superficial	No Data				
	Recharge:					1



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	rability Map				
	Combined Classification: Combined	Principle Bedrock Aquifer - High Vulnerability High	B14SE (N)	0	3	504040 353000
	Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution:	Productive Bedrock Aquifer, No Superficial Aquifer Intermediate Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial Patchiness: Superficial	>70% <90% <3m				
	Thickness: Superficial Recharge:	No Data				
	Groundwater Vulne	rability Map				
	Combined Classification: Combined Vulnerability: Combined Aquifer:	Secondary Bedrock Aquifer - High Vulnerability  High  Productive Bedrock Aquifer, No Superficial Aquifer	B15SE (NE)	0	3	504698 353000
	Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness:	Intermediate Well Connected Fractures <300 mm/year >70% <90%				
	Superficial Thickness: Superficial Recharge:	<3m No Data				
	Groundwater Vulne Classification:	erability - Soluble Rock Risk  Very Significant Risk - Moderate Possibility	B6NE (SW)	0	3	504000 352000
	Groundwater Vulne Classification:	erability - Soluble Rock Risk Significant Risk - Low Possibility	B9SW (W)	0	3	503000 352443
	Groundwater Vulne Classification:	erability - Soluble Rock Risk  Very Significant Risk - Moderate Possibility	B10SE (W)	0	3	504000 352443
	Groundwater Vulne Classification:	erability - Soluble Rock Risk  Very Significant Risk - Moderate Possibility	B10SE (S)	0	3	504186 352443
	Groundwater Vulne Classification:	erability - Soluble Rock Risk Significant Risk - Low Possibility	B13SW (NW)	0	3	503000 353000
	Groundwater Vulne Classification:	rability - Soluble Rock Risk Significant Risk - Low Possibility	B14SE (N)	0	3	504000 353000
	Groundwater Vulne Classification:	erability - Soluble Rock Risk Significant Risk - Low Possibility	B14SE (N)	0	3	504186 353000
	Groundwater Vulne Classification:	erability - Soluble Rock Risk Significant Risk - Low Possibility	(NW)	0	3	503000 354000
	Groundwater Vulne Classification:	erability - Soluble Rock Risk Very Significant Risk - Moderate Possibility	(N)	0	3	504000 354000
	Groundwater Vulne Classification:	rability - Soluble Rock Risk Very Significant Risk - Moderate Possibility	(N)	0	3	504186 354000
	Bedrock Aquifer De Aquifer Designation:	esignations Secondary Aquifer - A	(N)	0	3	504440 353624
	Bedrock Aquifer De Aquifer Designation:	esignations Secondary Aquifer - A	B10NE (N)	0	3	504279 352724
	Bedrock Aquifer De Aquifer Designation:	esignations Secondary Aquifer - A	B10NE (N)	0	3	504089 352865



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B15NW (N)	0	3	504466 353410
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	B11SW (NE)	0	3	504315 352533
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	B16NW (NE)	0	3	505000 353590
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	B11NW (NE)	0	3	504379 352837
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	B10SE (S)	0	3	504186 352443
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	B10NE (N)	0	3	504272 352782
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	B15SW (N)	0	3	504347 353200
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B15SE (NE)	0	3	504692 352987
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	B10NE (N)	0	3	504110 352793
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B10SE (E)	0	3	504202 352441
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	B10SE (SW)	0	3	504015 352283
5	Source Protection Zones	B10SE (S)	0	2	504186 352443
	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				
6	Flood Defences None  OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 210.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11SW (E)	0	4	504370 352469
7	Primacy: 1  OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 6.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11SW (E)	0	4	504574 352509



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B15NE (NE)	0	4	504833 353406
9	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B15NE (NE)	0	4	504843 353407
10	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 110.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B15NE (NE)	0	4	504813 353443
11	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 22.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B15NE (NE)	0	4	504799 353436
12	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Level: 9.0  Watercourse Level: On ground surface  Permanent: True  Watercourse Name: Not Supplied  Catchment Name: Witham  Primacy: 1	B11SW (E)	5	4	504579 352514
13	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 41.9  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied  Catchment Name: Witham  Primacy: 1	B11SW (E)	10	4	504579 352538
14	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: Underground True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11SW (E)	10	4	504571 352579
15	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 156.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11SW (E)	11	4	504570 352584
16	OS Water Network Lines  Watercourse Form: Lake Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Primacy: 1	B11SW (E)	12	4	504579 352538



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 263.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B15NE (NE)	66	4	504921 353433
	OS Water Network Lines				
18	Watercourse Form: Inland river Watercourse Length: 364.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B16SW (NE)	69	4	505014 352972
19	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 17.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B6NW (SW)	107	4	503739 351995
20	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 4.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11NE (E)	162	4	504718 352618
21	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 252.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11NE (E)	167	4	504722 352619
22	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 200.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11SE (E)	173	4	504782 352472
23	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 222.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11NE (NE)	216	4	504907 352785
24	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 8.3  Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11NE (NE)	231	4	504899 352782
25	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 170.3  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B12NW (E)	232	4	505123 352831



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12NW (NE)	232	4	505119 352842
27	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 38.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B16NW (NE)	274	4	505128 353461
28	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 345.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11SE (E)	292	4	504838 352294
29	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B16NW (NE)	311	4	505164 353468
30	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 40.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11SE (E)	357	4	504955 352557
31	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 257.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B11SE (E)	359	4	504953 352576
32	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 459.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B6NE (S)	386	4	504255 352031
33	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 492.3  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B12NW (E)	401	4	505182 352684
34	OS Water Network Lines  Watercourse Form: Lake Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B6NE (S)	413	4	504089 352011



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 137.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B12NW (E)	429	4	505048 352611
36	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 260.2  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B16NE (NE)	487	4	505335 353512
37	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B12SW (E)	512	4	505120 352495
38	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 316.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12SW (E)	512	4	505120 352495
39	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 318.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B16NE (NE)	523	4	505585 353571
40	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 148.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B12SW (E)	527	4	505135 352469
41	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12NE (E)	570	4	505548 352904
42	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 89.9  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12NE (E)	575	4	505553 352905
43	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 327.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12SW (E)	592	4	505181 352328



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 313.3  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B12SW (E)	592	4	505181 352328
	OS Water Network Lines				
45	Watercourse Form: Inland river Watercourse Length: 6.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12NE (E)	604	4	505416 352606
46	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 230.5  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12NE (E)	607	4	505422 352607
47	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 102.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B16SE (NE)	647	4	505620 353202
48	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 48.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B16NE (NE)	661	4	505612 353284
49	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 9.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12NE (E)	663	4	505643 352904
50	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: Witham Primacy: 2	(E)	672	4	505656 352854
51	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 94.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B12NE (E)	687	4	505654 352760
52	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 6.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B12NE (E)	710	4	505647 352759



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 947.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B1SE (SW)	780	4	503513 351109
54	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B8NW (E)	805	4	505279 352030
55	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 500.4  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B8NW (E)	805	4	505279 352030
56	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 450.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12SE (E)	808	4	505498 352407
57	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 346.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	B12SE (E)	808	4	505498 352407
58	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 196.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B2NE (S)	809	4	504259 351410
59	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 51.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B2NE (S)	814	4	503972 351257
60	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 213.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B1SE (SW)	837	4	503513 351109
61	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 489.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B2SE (S)	837	4	503995 351193



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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 23.7  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B7SW (S)	839	4	504366 351618
63	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B7SW (S)	852	4	504370 351595
64	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 187.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B3NW (S)	855	4	504370 351589
65	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 275.3 Watercourse Level: On ground surface True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B7SW (SE)	862	4	504543 351601
66	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 17.8  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied  Catchment Name: Witham  Primacy: 1	B2SE (S)	865	4	503991 351209
67	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 65.6  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B2SE (S)	882	4	504000 351193
68	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 155.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B2SE (S)	933	4	504032 351154
69	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 494.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Beck Catchment Name: Witham Primacy: 1	B2SE (S)	933	4	504068 351169
70	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 208.3  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B3NW (S)	951	4	504363 351402



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 19.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B8NE (E)	959	4	505475 352065
72	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B8NE (E)	976	4	505495 352068
73	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 2.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B8NE (E)	977	4	505496 352068
74	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B8NE (E)	978	4	505499 352069
75	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 279.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	B8NE (E)	984	4	505505 352070





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	Name: Licence Number: Location: Licence Holder: Authority: Site Category: Max Input Rate: Licence Status: Issued:	nagement Facilities (Landfill Boundaries)  Brauncewell Quarry 73008  Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Not Supplied  Modified 12th April 2001 Positioned by the supplier As Supplied	B9SE (W)	9	2	503299 352309
77	Name: Licence Number: Location: Licence Holder: Authority: Site Category: Max Input Rate: Licence Status: Issued:	nagement Facilities (Landfill Boundaries)  Brauncewell Quarry Landfill 73320  Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Not Supplied Inactive 19th March 2007 Positioned by the supplier As Supplied	B5NW (SW)	194	2	503128 351931
78	Name: Licence Number: Location: Licence Holder: Authority: Site Category: Max Input Rate: Licence Status: Issued:	nagement Facilities (Landfill Boundaries)  Brauncewell Quarry Landfill 73320  Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Not Supplied Expired 19th March 2007 Positioned by the supplier As Supplied	B5NW (SW)	194	2	503128 351931
79	Licence Number: Location: Operator Name: Operator Location: Authority: Site Category: Licence Status: Issued: Last Modified: Expires: Suspended: Revoked: Surrendered: IPPC Reference:	nagement Facilities (Locations) 73008 Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Not Supplied Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Modified 12th April 2001 20th November 2019 Not Supplied Located by supplier to within 10m	B5NW (W)	171	2	502969 352070
79	Licence Number: Location: Operator Name: Operator Location: Authority: Site Category: Licence Status: Issued: Last Modified: Expires: Suspended: Revoked: Surrendered: IPPC Reference:	nagement Facilities (Locations) 73320 Brauncewell Quarry, Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Not Supplied Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Expired 19th March 2007 Not Supplied 28th June 2019 02/10/2009 Not Supplied Not Supplied Not Supplied Not Supplied Not Supplied Located by supplier to within 10m	B5NW (W)	173	2	502969 352068





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Licensed Waste Ma	nagement Facilities (Locations)				
79	Licence Number: Location: Operator Name: Operator Location: Authority: Site Category: Licence Status: Issued: Last Modified: Expires: Suspended: Revoked: Surrendered: IPPC Reference: Positional Accuracy:	210104 Brauncewell Quarries, Brauncewell, Lincolnshire, NG34 8RL Brauncewell Quarry Ltd Not Supplied Environment Agency - Anglian Region, Northern Area Inert LF Expired 19th March 2007 2nd October 2009 Not Supplied 02/10/2009 Not Supplied Not Supplied Not Supplied Not Supplied Not Supplied Located by supplier to within 10m	B5NW (W)	173	2	502967 352067
	Licensed Waste Ma	nagement Facilities (Locations)				
79	Licence Number: Location: Operator Name: Operator Location: Authority: Site Category: Licence Status: Issued: Last Modified: Expires: Suspended: Revoked: Surrendered: IPPC Reference:	70905 Brauncewell, Sleaford, Lincolnshire, NG34 8RL Brauncewell Quarries Ltd Not Supplied Environment Agency - Anglian Region, Northern Area Landfills Taking Non-biodegradeable Wastes (Not Construction) Expired 28th July 1986 Not Supplied 28th June 2019 02/10/2009 Not Supplied Not Supplied Not Supplied Not Supplied Not Supplied Located by supplier to within 10m	B5NW (W)	173	2	502973 352069
	Local Authority Lan	5				
	Name:	North Kesteven District Council - Had landfill data but passed it to the relevant environment agency		0	5	504186 352443
	Local Authority Lan	ndfill Coverage				
	Name:	Lincolnshire County Council - Had landfill data but passed it to the relevant environment agency		0	6	504186 352443



# Geological

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Soli		B.400E		_	504400
	Description:	Inferior Oolite Group	B10SE (S)	0	1	504186 352443
	BGS 1:625,000 Soli		D400E		4	504050
	Description:	Great Oolite Group	B10SE (NE)	0	1	504253 352529
80	BGS Recorded Min Site Name: Location: Source: Reference: Type: Status: Operator: Operator: Operator Location: Periodic Type:	eral Sites  Long Plantation Stone Pit Ashby De La Launde, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136081 Opencast Ceased Unknown Operator Not Supplied Jurassic	B14NW (NW)	0	1	503737 353288
	Geology: Commodity: Positional Accuracy:	Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m				
	BGS Recorded Min	eral Sites				
81	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Warren Pit Plantation Stone Pit Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 134841 Opencast Ceased Unknown Operator Not Supplied Jurassic Cornbrash Formation Limestone Located by supplier to within 10m	B10NE (N)	0	1	504012 352876
	BGS Recorded Min					
82	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Brauncewell Stone Pit Brauncewell, Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 136077 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B10SW (W)	12	1	503659 352514
	BGS Recorded Min	eral Sites				
83		Dunsby Pit Brauncewell, Lincolnshire British Geological Survey, National Geoscience Information Service 8539 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B6NW (SW)	49	1	503673 352049
٠.	BGS Recorded Min					
84	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Long Plantation Stone Pit Ashby De La Launde, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136076 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B14NE (N)	87	1	504254 353440





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Recorded Mine	eral Sites				
85	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Brauncewell Quarry Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 2753 Opencast Active Brauncewell Quarries Ltd. Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B5NW (SW)	302	1	502990 351940
	BGS Recorded Mine	eral Sites				
86	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity:	West Pastures Stone Pit Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 136070 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B1SW (SW)	909	1	503037 351083
	Coal Mining Affecte					
		not be affected by coal mining				
	Non Coal Mining Ar No Hazard	eas of Great Britain				
		sible Cround Stability Hazarda				
	Hazard Potential:	sible Ground Stability Hazards Very Low	B10SE	0	1	504186
	Source:	British Geological Survey, National Geoscience Information Service	(S)			352443
	Potential for Collaps Hazard Potential:	sible Ground Stability Hazards  Very Low	B12SW	6	1	505000
	Source:	British Geological Survey, National Geoscience Information Service	(E)	0	ı	352443
	Potential for Compr	ressible Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	B10SE (S)	0	1	504186 352443
	Potential for Compr Hazard Potential: Source:	ressible Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	B12SW (E)	6	1	505000 352443
	Potential for Ground	d Dissolution Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	B11SW (NE)	0	1	504315 352533
	Potential for Ground Hazard Potential: Source:	d Dissolution Stability Hazards  No Hazard  British Geological Survey, National Geoscience Information Service	B16NW (NE)	0	1	505000 353590
	Potential for Ground Hazard Potential: Source:	d Dissolution Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	B11NW (NE)	0	1	504379 352837
	Potential for Ground Hazard Potential: Source:	d Dissolution Stability Hazards Moderate British Geological Survey, National Geoscience Information Service	B10SE (E)	0	1	504202 352441
	Potential for Ground Hazard Potential: Source:	d Dissolution Stability Hazards  Low  British Geological Survey, National Geoscience Information Service	B10SE (S)	0	1	504186 352443
		d Dissolution Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	B5NE (W)	0	1	503323 352211
	Potential for Ground Hazard Potential: Source:	d Dissolution Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	B10NE (N)	0	1	504089 352865
	Potential for Ground Hazard Potential: Source:	d Dissolution Stability Hazards Very Low British Geological Survey, National Geoscience Information Service	B15SW (N)	0	1	504347 353200





Map ID	Details	Quad Refer (Com Direc	pass	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards					
	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat		SSE IE)	0	1	504692 352987
	Potential for Ground Dissolution Stability Hazards					
	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat		NE N)	0	1	504272 352782
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: Very Low	-	sw	6	1	505000
	Source: British Geological Survey, National Geoscience Informat	on Service (N	IE)			352995
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: No Hazard  Source: British Geological Survey, National Geoscience Informat	-	SW IE)	31	1	505000 353227
	Potential for Ground Dissolution Stability Hazards	on service (N	L)			333221
	Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Informat		SW E)	43	1	505000 352443
	Potential for Ground Dissolution Stability Hazards	· · · · · · · · · · · · · · · · · · ·	,			
	Hazard Potential: Low Source: British Geological Survey, National Geoscience Informat	B7I on Service (S	NW E)	92	1	504573 352251
	Potential for Ground Dissolution Stability Hazards		•			
	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat	on Service B7I	NW E)	116	1	504562 352193
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat	-	NW IE)	135	1	505000 353369
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: No Hazard British Geological Survey, National Geoscience Informat	B7I on Service (S	NW E)	150	1	504637 352248
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat	B11 on Service (E		151	1	504733 352387
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat	B12	NW	223	1	505000 352754
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low	В7	NE	239	1	504693
	Source: British Geological Survey, National Geoscience Informat  Potential for Landslide Ground Stability Hazards	on service (s	E)			352222
	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat		OSE S)	0	1	504186 352443
	Potential for Landslide Ground Stability Hazards					
	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat		SW E)	6	1	505000 352443
	Potential for Landslide Ground Stability Hazards					
	Hazard Potential: Low Source: British Geological Survey, National Geoscience Informat		NE V)	10	1	503323 352212
	Potential for Landslide Ground Stability Hazards  Hazard Potential: Low Source: British Geological Survey, National Geoscience Informat	-	SSW IE)	222	1	505155 353280
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Informat		OSE S)	0	1	504186 352443
	Potential for Running Sand Ground Stability Hazards		,			-02.10
	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat		OSE E)	0	1	504202 352441
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Informat		!NW ≣)	6	1	505000 352754
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat	B14	1NE N)	28	1	504077 353426
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Informat		NW ≣)	232	1	505000 352610





Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B11NE (E)	249	1	504801 352656
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B15SE (NE)	0	1	504692 352987
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B10SE (S)	0	1	504186 352443
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B10NE (N)	0	1	504110 352793
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B16NW (NE)	0	1	505000 353590
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B11NW (NE)	0	1	504379 352837
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B11SW (E)	0	1	504501 352457
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B10SE (SW)	0	1	504015 352283
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard  Source: British Geological Survey, National Geoscience Information Service	B12SW (E)	6	1	505000 352416
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B14NE (N)	28	1	504077 353426
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B16SW (NE)	31	1	505000 353227
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B12SW (E)	43	1	505000 352443
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B11SE (E)	112	1	504690 352551
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B16NW (NE)	135	1	505000 353369
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B7NW (SE)	150	1	504637 352248
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard  Source: British Geological Survey, National Geoscience Information Service	B12SW (E)	223	1	505000 352593
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard  Source: British Geological Survey, National Geoscience Information Service	B7NE (SE)	239	1	504693 352222
	Radon Potential - Radon Affected Areas  Affected Area: The property is in an Intermediate probability radon area (5 to 10% of hom are estimated to be at or above the Action Level).  Source: British Geological Survey, National Geoscience Information Service	es B10NE (N)	0	1	504225 352651
	Radon Potential - Radon Affected Areas  Affected Area: The property is in an Intermediate probability radon area (1 to 3% of home are estimated to be at or above the Action Level).  Source: British Geological Survey, National Geoscience Information Service	s B11NW (NE)	0	1	504625 352926
	Radon Potential - Radon Affected Areas  Affected Area: The property is in an Intermediate probability radon area (1 to 3% of home are estimated to be at or above the Action Level).  Source: British Geological Survey, National Geoscience Information Service	B10NE (N)	0	1	504075 352776



## **Geological**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - R	adon Affected Areas				
	Affected Area: Source:	The property is in an Intermediate probability radon area (5 to 10% of homes are estimated to be at or above the Action Level).  British Geological Survey, National Geoscience Information Service	B14NE (N)	0	1	504125 353351
	Radon Potential - R	adon Affected Areas				
	Affected Area: Source:	The property is in an Intermediate probability radon area (5 to 10% of homes are estimated to be at or above the Action Level).  British Geological Survey, National Geoscience Information Service	B15NW (N)	0	1	504450 353326
	Radon Potential - R	adon Affected Areas				
	Affected Area: Source:	The property is in an Intermediate probability radon area (5 to 10% of homes are estimated to be at or above the Action Level).  British Geological Survey, National Geoscience Information Service	B10SE (SW)	0	1	504075 352351
	Radon Potential - R	adon Affected Areas				
	Affected Area: Source:	The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level).  British Geological Survey, National Geoscience Information Service	B10SE (S)	0	1	504186 352443
		<u> </u>				
		adon Protection Measures  Basic radon protective measures are necessary in the construction of new dwellings or extensions	B10NE (N)	0	1	504225 352651
	Source:	British Geological Survey, National Geoscience Information Service				
	Radon Potential - R	adon Protection Measures				
	Protection Measure: Source:	No radon protective measures are necessary in the construction of new dwellings or extensions British Geological Survey, National Geoscience Information Service	B11NW (NE)	0	1	504625 352926
	Radon Potential - R	adon Protection Measures				
	Protection Measure:	No radon protective measures are necessary in the construction of new dwellings or extensions	B10NE (N)	0	1	504075 352776
	Source:	British Geological Survey, National Geoscience Information Service				
		adon Protection Measures	D44NE		_	504405
	Source:	Basic radon protective measures are necessary in the construction of new dwellings or extensions British Geological Survey, National Geoscience Information Service	B14NE (N)	0	1	504125 353351
	Radon Potential - R	adon Protection Measures				
		Basic radon protective measures are necessary in the construction of new dwellings or extensions	B15NW (N)	0	1	504450 353326
	Source:	British Geological Survey, National Geoscience Information Service				
	Radon Potential - R	adon Protection Measures				
	Protection Measure: Source:	Basic radon protective measures are necessary in the construction of new dwellings or extensions British Geological Survey, National Geoscience Information Service	B10SE (SW)	0	1	504075 352351
	Radon Potential - R	adon Protection Measures				
		No radon protective measures are necessary in the construction of new dwellings or extensions British Geological Survey, National Geoscience Information Service	B10SE (S)	0	1	504186 352443



### **Sensitive Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Nitrate Vulnerab	le Zones				
87	Name: Description: Source:	Lower Witham Nvz Surface Water Environment Agency, Head Office	B10SE (S)	0	3	504186 352443
	Nitrate Vulnerab	le Zones				
88	Name: Description: Source:	Lincolnshire Limestone Groundwater Environment Agency, Head Office	B10SE (S)	0	3	504186 352443

Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 35 of 41



Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	June 2020	Annually
North Kesteven District Council - Environmental Health Department	October 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - Anglian Region	October 2022	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 Kesteven District Council - Environmental Health Department	May 2014	Variable
Local Authority Pollution Prevention and Controls		
North Kesteven District Council - Environmental Health Department	May 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
North Kesteven District Council - Environmental Health Department	May 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	August 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	October 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
Source Protection Zones		
Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences		-
Environment Agency - Head Office	August 2022	Quarterly

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Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2022	Quarterly
<u> </u>	August 2022	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2022	Quarterly
Flood Water Storage Areas	7 (agust 2022	Quartony
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
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	As notified
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
ntegrated Pollution Control Registered Waste Sites		
Environment Agency - Anglian Region	January 2009	Not Applicable
icensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Anglian Region - Northern Area	October 2022	Quarterly
icensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Northern Area	July 2022	Quarterly
ocal Authority Landfill Coverage		
Lincolnshire County Council	February 2003	Not Applicable
North Kesteven District Council - Environmental Health Department	February 2003	Not Applicable
Local Authority Recorded Landfill Sites	O-t-h-= 2010	
incolnshire County Council  North Kesteven District Council - Environmental Health Department	October 2018 October 2018	
· · · · · · · · · · · · · · · · · · ·	October 2010	
Registered Landfill Sites Environment Agency - Anglian Region - Northern Area	March 2006	Not Applicable
Registered Waste Transfer Sites	Maron 2000	110t7 (ppilousio
Environment Agency - Anglian Region - Northern Area	April 2018	
Registered Waste Treatment or Disposal Sites	742010	
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		
incolnshire County Council - Highways and Planning Department	August 2010	Variable
North Kesteven District Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents	A 0007	West-Li-
Lincolnshire County Council - Highways and Planning Department	August 2007 October 2015	Variable Variable
lorth Kesteven District Council - Planning Department	October 2015	Variable

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Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology  British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Recorded Mineral Sites	Sandary 2005	As notined
British Geological Survey - National Geoscience Information Service	May 2022	Bi-Annually
CBSCB Compensation District	,	,
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	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	A 2020	A = == 4:6: = d
British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards	January 2010	As notified
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
•	January 2019	As notined
Potential for Landslide Ground Stability Hazards  British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards	Sandary 2010	7.6 116411164
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
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries		
Thomson Directories	October 2022	Quarterly
Fuel Station Entries		
Catalist Ltd - Experian	August 2022	Quarterly
Gas Pipelines		
National Grid	October 2021	Bi-Annually
Underground Electrical Cables		
National Grid	May 2021	Bi-Annually

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Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt		
North Kesteven District Council	July 2022	Quarterly
Areas of Unadopted Green Belt		
North Kesteven 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

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# **Data Suppliers**

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SEPS Scottish Environment Protection Agency
The Coal Authority	The Coal Authority
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	Cyfoeth Naturol Cynru Natural Resources Wales
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Public Health England	Public Health England
Ove Arup	ARUP
Stantec UK Ltd	ARUP Stantec

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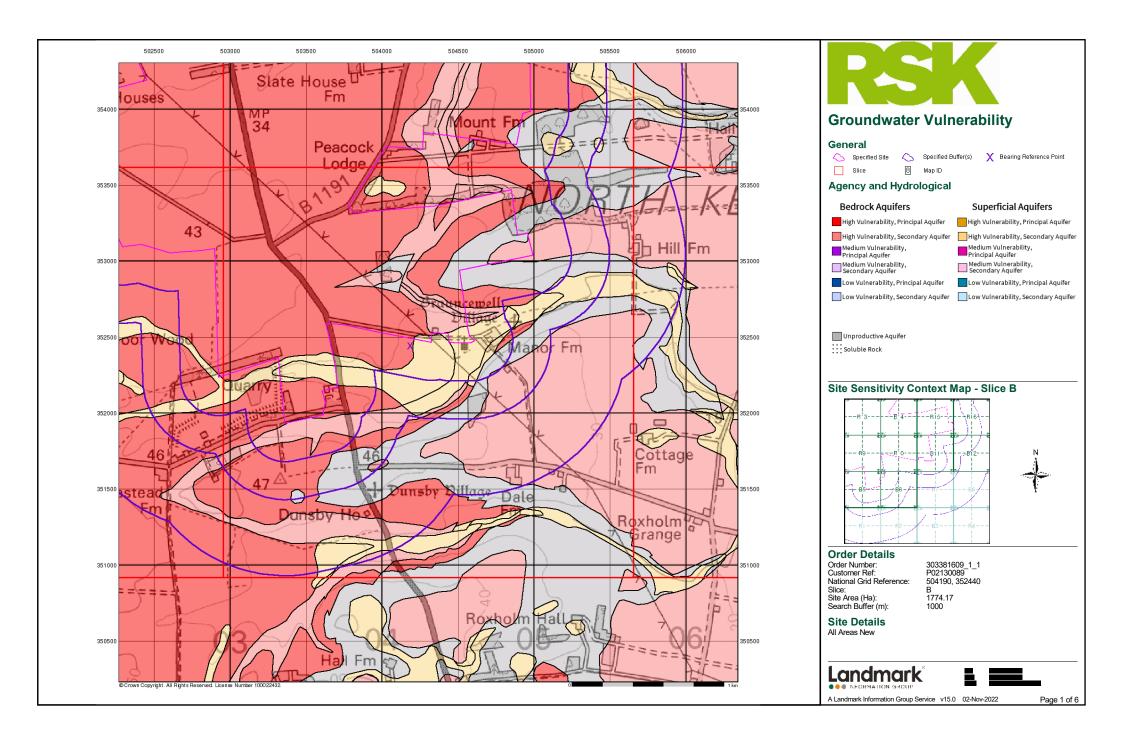


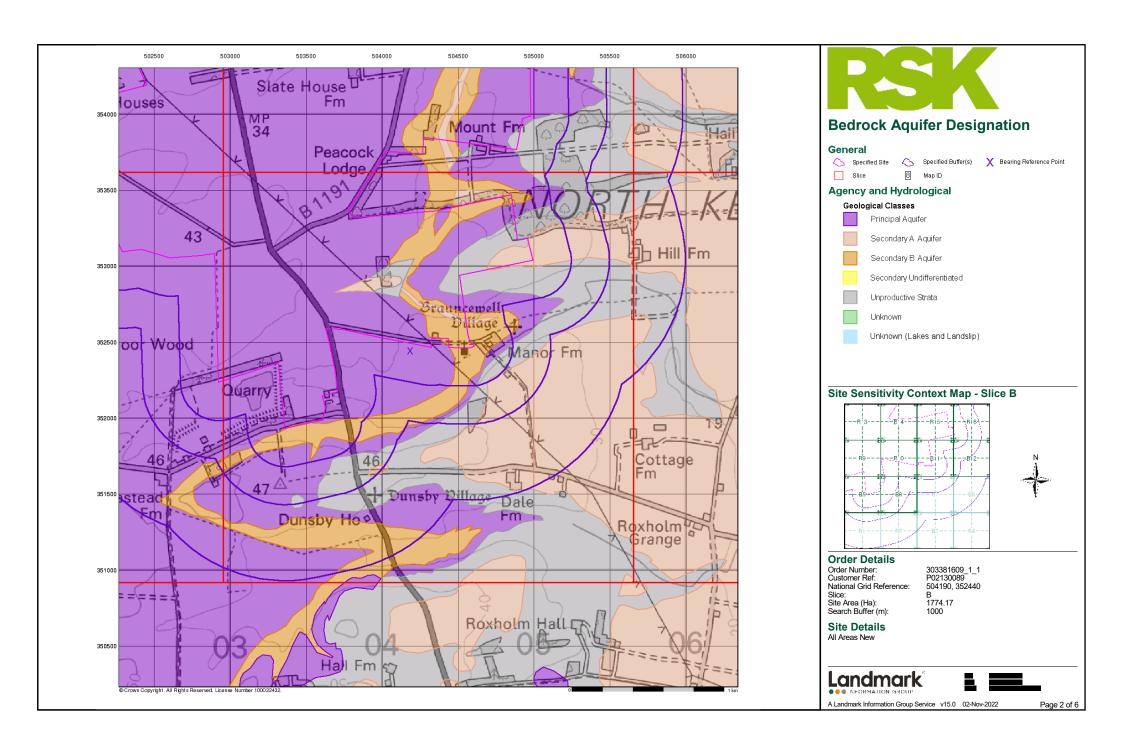
### **Useful Contacts**

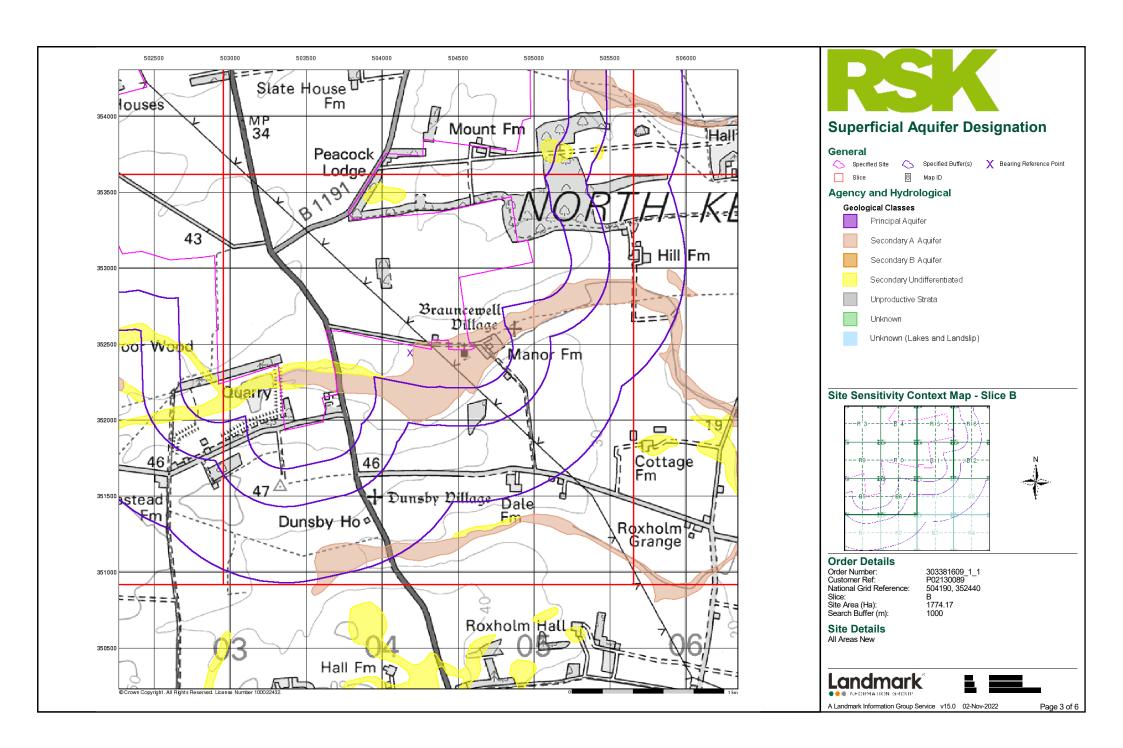
Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service	
	British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
2	Environment Agency - National Customer Contact Centre (NCCC)	
	PO Box 544, Templeborough, Rotherham, S60 1BY	
3	Environment Agency - Head Office	
	Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	
4	Ordnance Survey	
	Adanac Drive, Southampton, Hampshire, SO16 0AS	Website: www.ordnancesurvey.gov.uk
5	North Kesteven District Council - Environmental Health Department	Website: www.n-kesteven.gov.uk
	District Council Offices, Kesteven Street, Sleaford, Lincolnshire, NG34 7EF	website. www.ii-kesteveii.gov.uk
6	Lincolnshire County Council	
	4th Floor, City Hall, Lincoln, Lincolnshire, LN1 1DN	Website: www.lincolnshire.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards	
	Chilton, Didcot, Oxfordshire, OX11 0RQ	
-	Landmark Information Group Limited	
	Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	

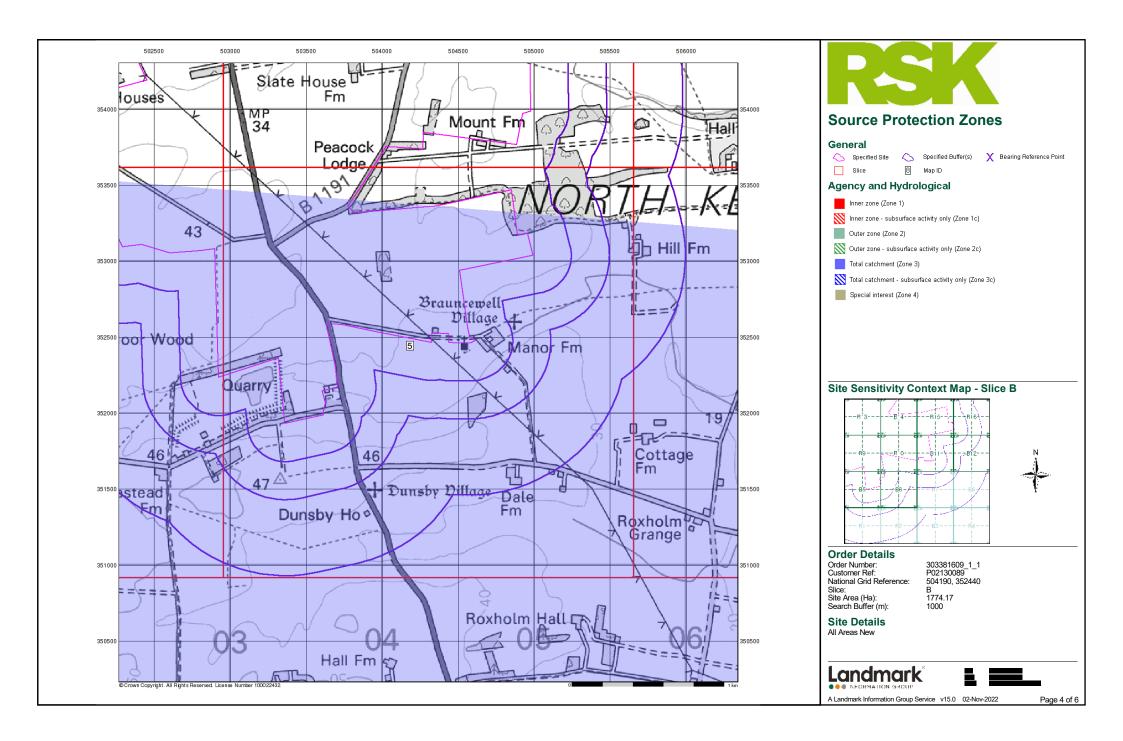
Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

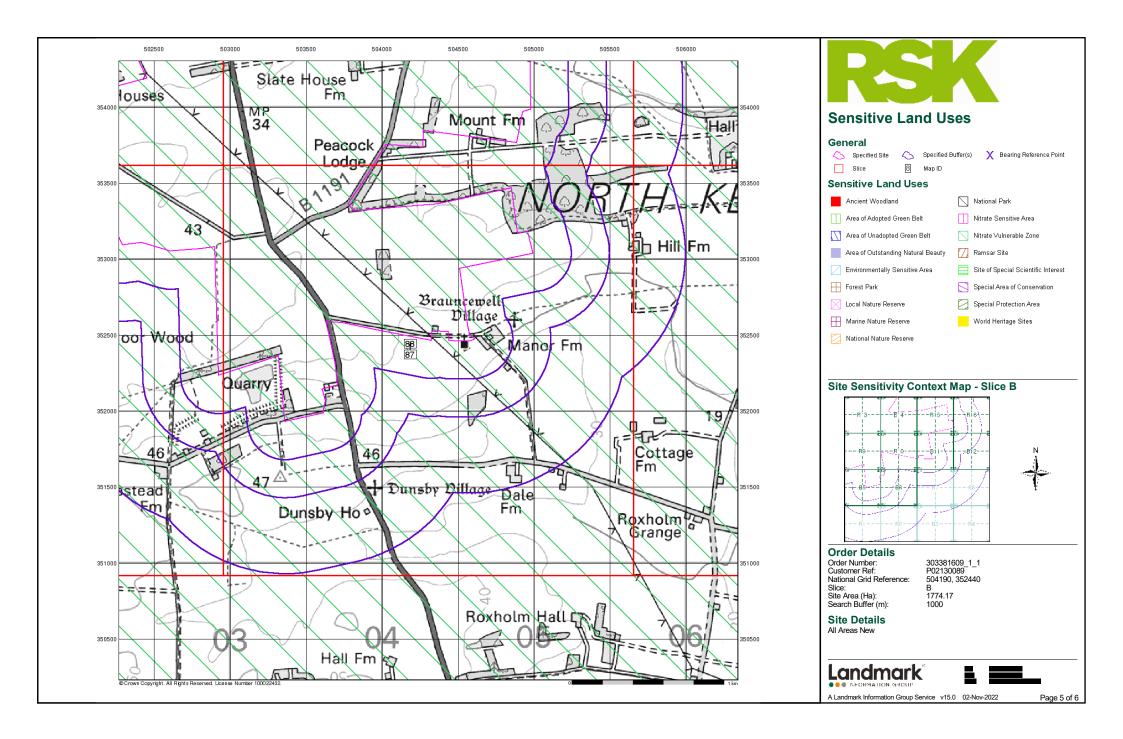
Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 41 of 41

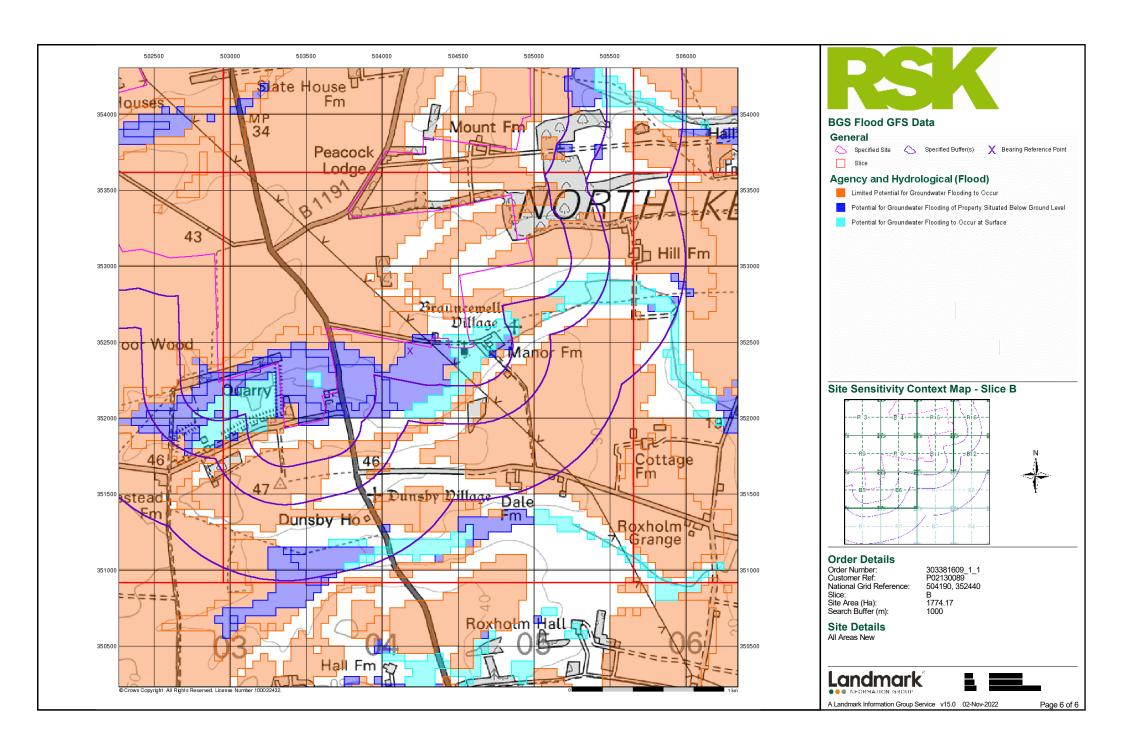


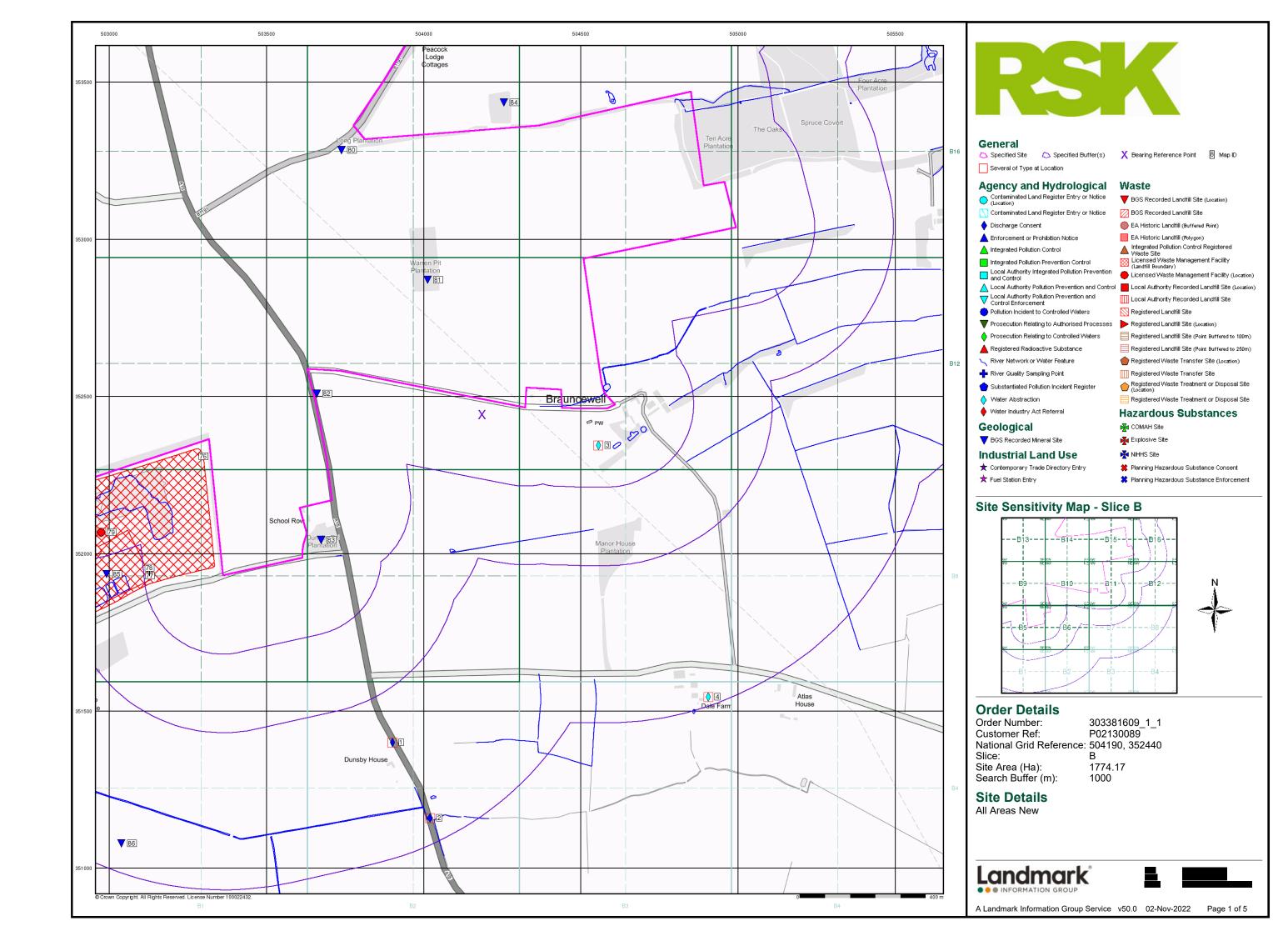


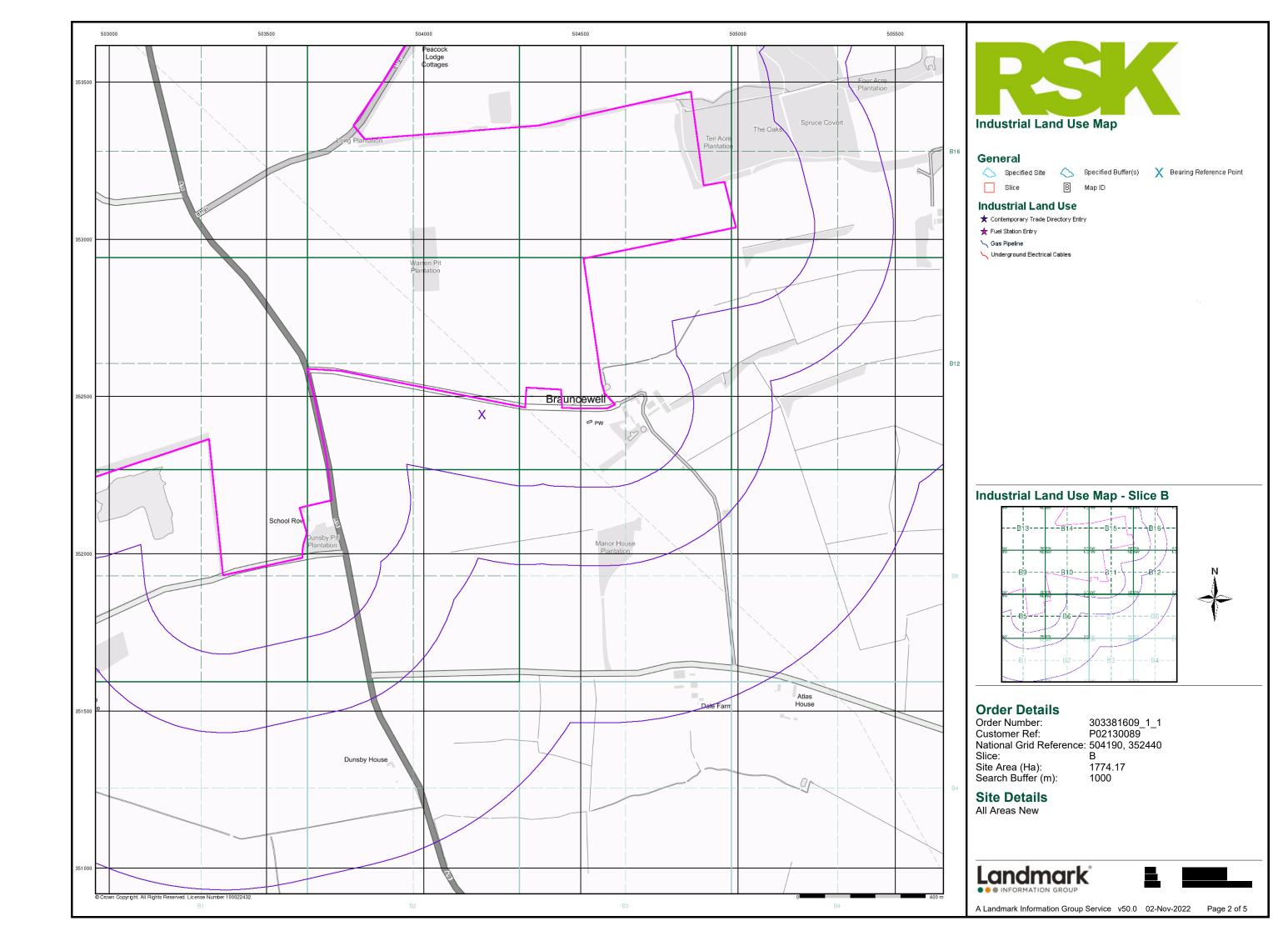


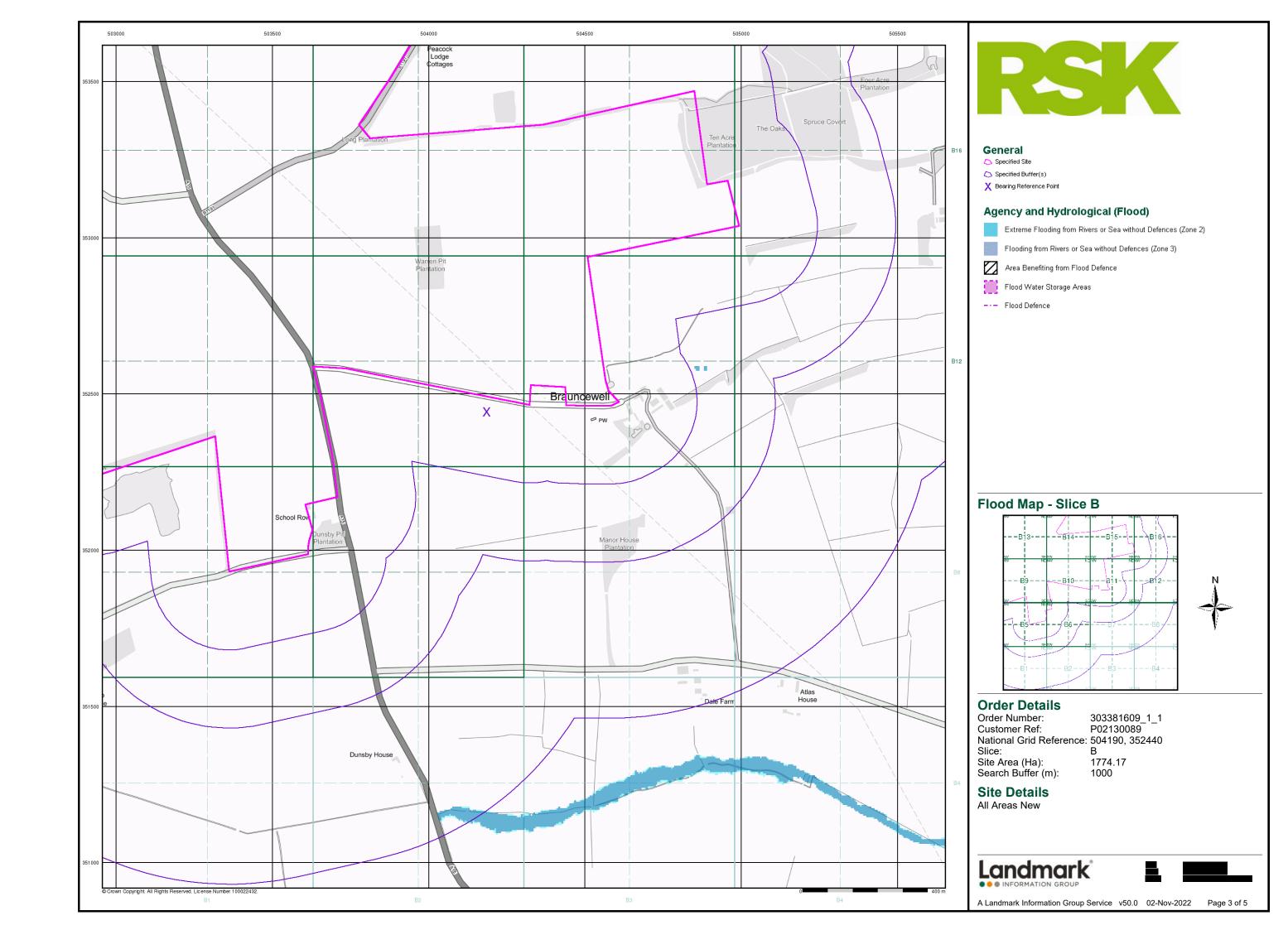


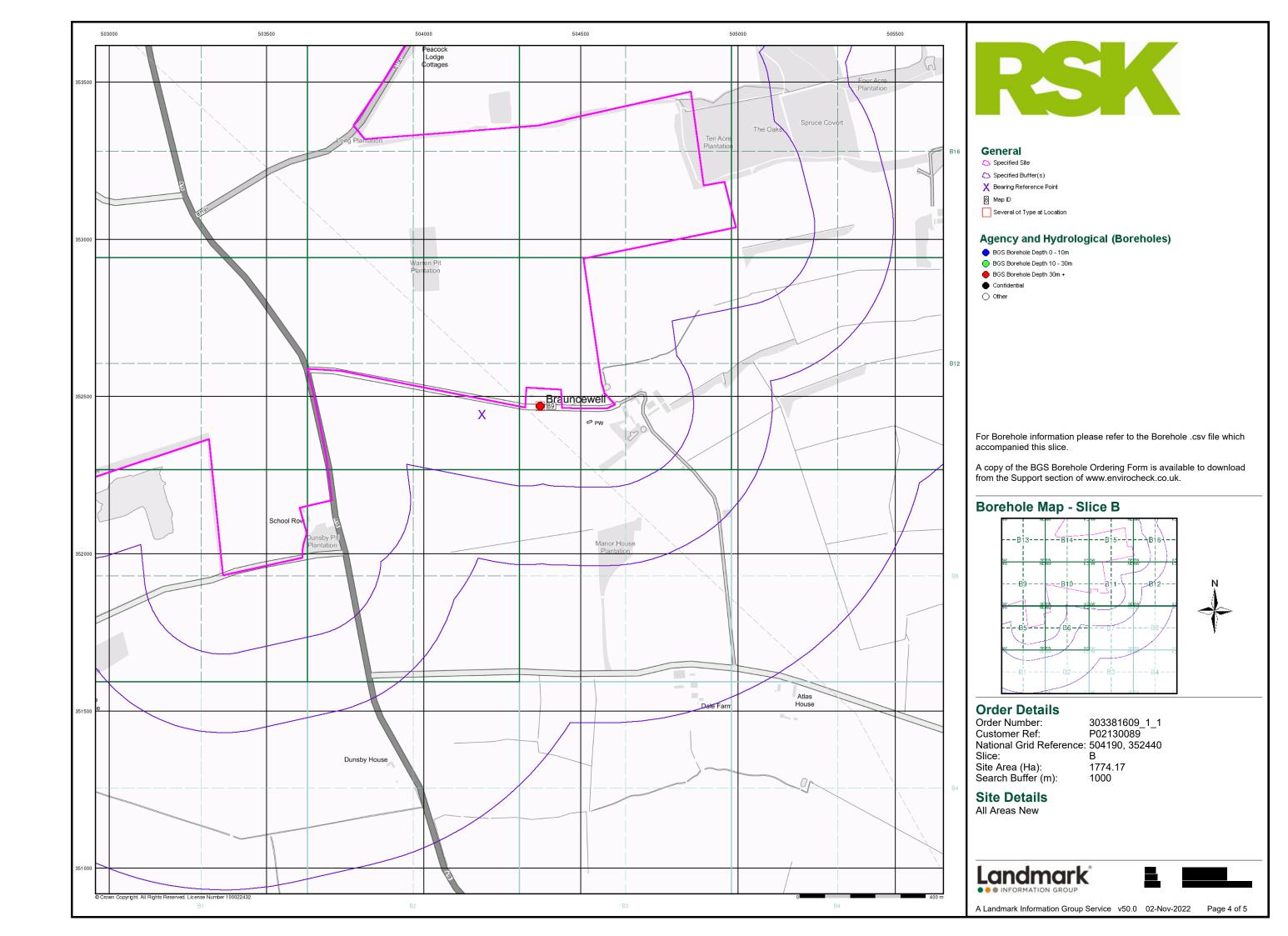


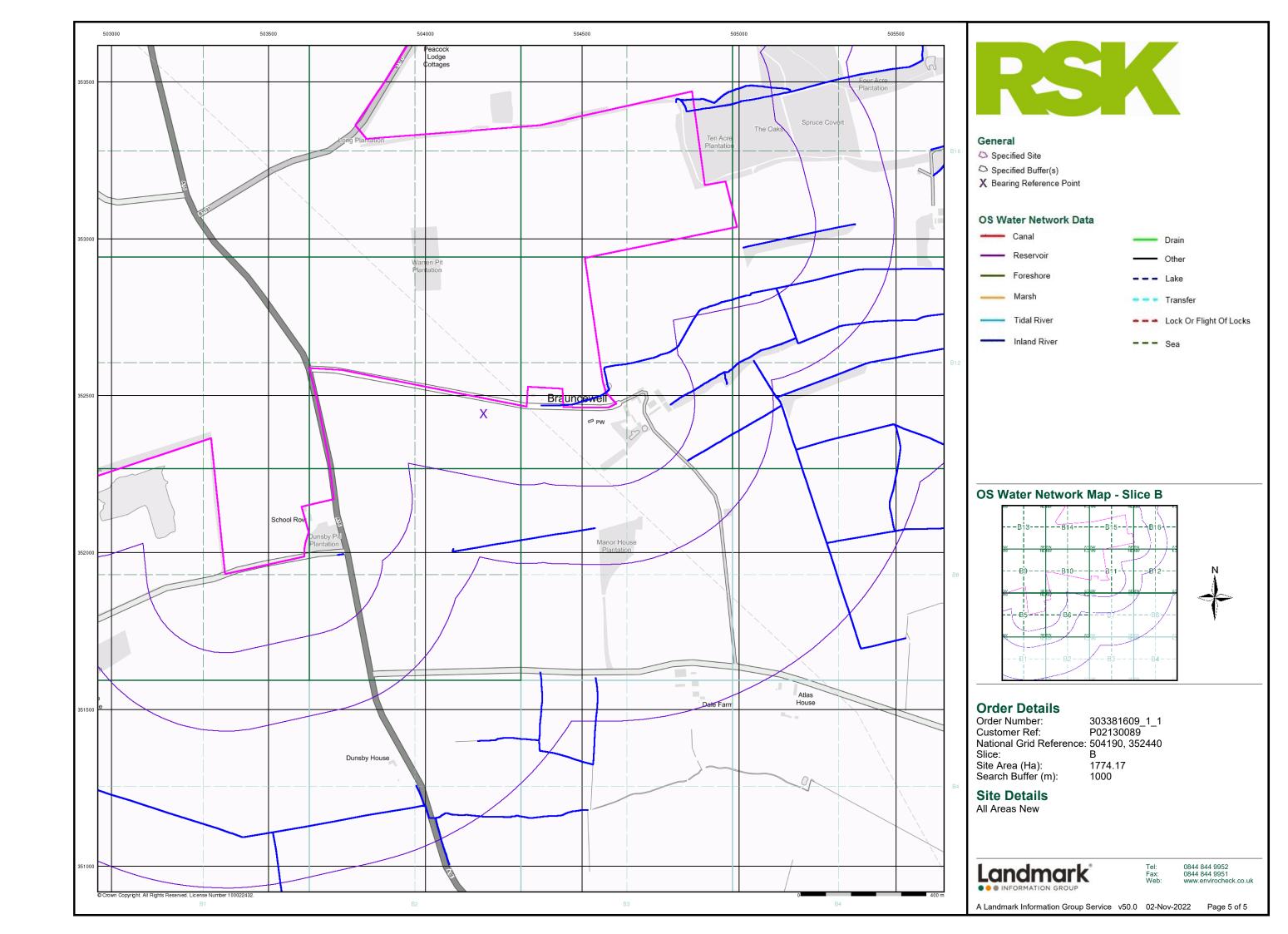














### **Envirocheck® Report:**

# Mining and Ground Stability Datasheet

### **Order Details:**

Order Number:

304263548\_1\_1

**Customer Reference:** 

P02130089

**National Grid Reference:** 

504190, 352440

Slice:

В

Site Area (Ha):

1774.17

Search Buffer (m):

1000

### **Site Details:**

All Areas New

### **Client Details:**

Landmark Staff WEB Logins Imperium Imperial Way Reading Berkshire RG2 0TD



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Report Section and Details	Page Number
Summary	-

The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected.

For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).

#### Mining and Natural Cavities Data

1

The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities.

Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.

#### Historical Land Use Information (1:2,500)

3

The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative.

For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.

#### **Historical Land Use Information (1:10,000)**

4

The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses.

For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.

#### Ground Stability Data (1:50,000)

5

8

The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.

### Historical Map List

The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.

Data Currency	10
Data Suppliers	11
Useful Contacts	12

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

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#### Report Version v53.0





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

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# **Mining and Natural Cavities Data**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	BGS Recorded Mine Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Peral Sites  Long Plantation Stone Pit Ashby De La Launde, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136081 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B14NW (NW)	0	1	503737 353288
2	BGS Recorded Mine Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Warren Pit Plantation Stone Pit Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 134841 Opencast Ceased Unknown Operator Not Supplied Jurassic Combrash Formation Limestone Located by supplier to within 10m	B10NE (N)	0	1	504012 352876
3	BGS Recorded Mine Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Brauncewell Stone Pit Brauncewell, Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 136077 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B10SW (W)	12	1	503659 352514
4	BGS Recorded Mine Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Paral Sites  Dunsby Pit  Brauncewell, Lincolnshire  British Geological Survey, National Geoscience Information Service 8539  Opencast  Ceased  Unknown Operator Not Supplied  Jurassic  Upper Lincolnshire Limestone Member  Limestone  Located by supplier to within 10m	B6NW (SW)	49	1	503673 352049
5	BGS Recorded Mine Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Long Plantation Stone Pit Ashby De La Launde, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136076 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B14NE (N)	87	1	504254 353440
6	BGS Recorded Mine Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Brauncewell Quarry Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 2753 Opencast Active Brauncewell Quarries Ltd. Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B5NW (SW)	302	1	502990 351940

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# **Mining and Natural Cavities Data**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Recorded Mine	eral Sites				
7	Operator: Operator Location: Periodic Type: Geology: Commodity:	West Pastures Stone Pit Cranwell, Sleaford, Lincolnshire British Geological Survey, National Geoscience Information Service 136070 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	B1SW (SW)	909	1	503037 351083
	Coal Mining Affecte	d Areas				
	In an area which may	not be affected by coal mining				
	Non Coal Mining Ar	eas of Great Britain				

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# **Historical Land Use Information (1:2,500)**

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extractive Industries or Potential Excavations from 1950-1980				
8	Use: Pond First Map Published 1979 Date: Last Map Published N/A Date:	B11SW (E)	1	-	504571 352528
	Extractive Industries or Potential Excavations from 1950-1980				
9	Use: Pond First Map Published 1979 Date: Last Map Published N/A Date:	B15NW (N)	59	-	504584 353470

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# **Historical Land Use Information (1:10,000)**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	General Quarrying Use:	Not Supplied 1891	B6NW	0	-	503715
	Date of Mapping:	1091	(SW)			352099
11	General Quarrying Use: Date of Mapping:	Not Supplied 1891 - 1956	B14NW (NW)	0	-	503758 353281
12	General Quarrying Use: Date of Mapping:	Not Supplied 1891	B10NE (N)	0	-	504040 352865
13	General Quarrying Use: Date of Mapping:	Not Supplied 1891	B10SW (W)	13	-	503660 352519
14	General Quarrying Use: Date of Mapping:	Not Supplied 1891	B14NE (N)	15	-	504220 353370
15	General Quarrying Use: Date of Mapping:	Not Supplied 1985	B5SW (SW)	353	-	502984 351878
16	General Quarrying Use: Date of Mapping:	Not Supplied 1891	B1SW (SW)	907	-	503025 351090
17	Potentially Infilled L Use: Date of Mapping:	.and (Non-Water) Unknown Filled Ground (Pit, quarry etc) 1985	B14SW (NW)	0	-	503759 353279
18	Potentially Infilled L Use: Date of Mapping:	and (Non-Water) Unknown Filled Ground (Pit, quarry etc) 1985	B10NE (N)	0	-	504040 352865
19	Potentially Infilled L Use: Date of Mapping:	and (Non-Water) Unknown Filled Ground (Pit, quarry etc) 1985	B6NW (SW)	0	-	503715 352099
20	Potentially Infilled L Use: Date of Mapping:	.and (Non-Water) Unknown Filled Ground (Pit, quarry etc) 1985	B10SW (W)	13	-	503660 352519
	Potentially Infilled L	and (Non-Water)				
21	Use: Date of Mapping:	Unknown Filled Ground (Pit, quarry etc) 1985	B14NE (N)	75	-	504212 353425
22	Potentially Infilled L Use: Date of Mapping:	and (Non-Water) Unknown Filled Ground (Pit, quarry etc) 1985	B1SW (SW)	907	-	503025 351090

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# **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.				
	Potential for Collapsible Ground Stability Hazards		_		
23	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B10SE (S)	0	1	504186 352443
	Potential for Collapsible Ground Stability Hazards				
24	Hazard Potential: Very Low	B12SW	6	1	505000
	Source: British Geological Survey, National Geoscience Information Service	(E)			352443
	Potential for Compressible Ground Stability Hazards				
	Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B10SE (S)	0	1	504186 352443
	Potential for Compressible Ground Stability Hazards	(-)			
	Hazard Potential: No Hazard	B12SW	6	1	505000
	Source: British Geological Survey, National Geoscience Information Service	(E)			352443
	Potential for Ground Dissolution Stability Hazards				
25	Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(NW)	0	1	503133 354128
	Potential for Ground Dissolution Stability Hazards				004120
26	Hazard Potential: Moderate	B10SE	0	1	504202
	Source: British Geological Survey, National Geoscience Information Service	(E)	-		352441
	Potential for Ground Dissolution Stability Hazards				
27	Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B10SE	0	1	504186 352443
	, , , , , , , , , , , , , , , , , , ,	(S)			332443
28	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low	(NW)	0	1	503131
20	Source: British Geological Survey, National Geoscience Information Service	(1444)	O	'	353807
	Potential for Ground Dissolution Stability Hazards				
29	Hazard Potential: Very Low	B5NE	0	1	503323
	Source: British Geological Survey, National Geoscience Information Service	(W)			352211
30	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low	B10NE	0	1	504089
00	Source: British Geological Survey, National Geoscience Information Service	(N)	· ·		352865
	Potential for Ground Dissolution Stability Hazards				
31	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B15SW	0	1	504347
		(N)			353200
32	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low	B15SE	0	1	504692
02	Source: British Geological Survey, National Geoscience Information Service	(NE)	· ·		352987
	Potential for Ground Dissolution Stability Hazards				
33	Hazard Potential: Very Low	B10NE	0	1	504272
	Source: British Geological Survey, National Geoscience Information Service	(N)			352782
34	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low	B16SW	6	1	505000
34	Source: British Geological Survey, National Geoscience Information Service	(NE)	U	'	352995
	Potential for Ground Dissolution Stability Hazards				
35	Hazard Potential: Very Low	(NE)	24	1	505000
	Source: British Geological Survey, National Geoscience Information Service				353965
00	Potential for Ground Dissolution Stability Hazards	(NIE)	74	4	E0E0E0
36	Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(NE)	71	1	505252 354181
	Potential for Ground Dissolution Stability Hazards				
37	Hazard Potential: Low	B7NW	92	1	504573
	Source: British Geological Survey, National Geoscience Information Service	(SE)			352251
	Potential for Ground Dissolution Stability Hazards				
38	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B7NW (SE)	116	1	504562 352193
	Potential for Ground Dissolution Stability Hazards	, ,			
39	Hazard Potential: Very Low	B16NW	135	1	505000
	Source: British Geological Survey, National Geoscience Information Service	(NE)			353369

Order Number: 304263548\_1\_1 Date: 23-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service

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# **Ground Stability Data (1:50,000)**

Hazard Posource:  Potential in Hazard Posource:	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
Source:  Potential in Hazard Potential in Haza	ntial for Ground Dissolution Stability Hazards				
Hazard Posource:  Potential in Hazard Posource:		B11SE (E)	151	1	504733 352387
Source:  Potential of Hazard Posource:  Potential of Hazard Po	ntial for Ground Dissolution Stability Hazards				
Potential of Hazard Posource:	rd Potential: Very Low be: British Geological Survey, National Geoscience Information Service	B12NW (E)	223	1	505000 352754
Hazard Posource:  Potential in Hazard Posource:	ntial for Ground Dissolution Stability Hazards	(=)			002.01
Potential of Hazard Posource:	rd Potential: Very Low	B7NE	239	1	504693
Hazard Po Source:  Potential of Hazard Po Source:	ce: British Geological Survey, National Geoscience Information Service  ntial for Ground Dissolution Stability Hazards	(SE)			352222
Potential of Hazard Posource:	rd Potential: No Hazard	(NW)	0	1	503267
Hazard Po Source:  Potential in Hazard Po Source:					354160
Source:  Potential in Hazard Potential in Haza	ntial for Ground Dissolution Stability Hazards rd Potential: No Hazard	B11SW	0	1	504315
Hazard Po Source:  Potential in Hazard Po Source:		(NE)		'	352533
Source:  Potential in Hazard Potential in Haza	ntial for Ground Dissolution Stability Hazards				
Hazard Po Source:  Potential in Hazard Po Source:	rd Potential: No Hazard be: British Geological Survey, National Geoscience Information Service	B16NW (NE)	0	1	505000 353590
Potential in Hazard Posource:	ntial for Ground Dissolution Stability Hazards				
Potential of Hazard Posource:	rd Potential: No Hazard be: British Geological Survey, National Geoscience Information Service	B11NW (NE)	0	1	504379 352837
Hazard Po Source:  Potential in Hazard Po Source:	ntial for Ground Dissolution Stability Hazards	(NL)			332037
Potential of Hazard Posource:	rd Potential: No Hazard	B16SW	31	1	505000
Hazard Po Source:  Potential of Hazard Po Source:	3	(NE)			353227
Source:  Potential of Hazard Posource:	ntial for Ground Dissolution Stability Hazards rd Potential: No Hazard	B12SW	43	1	505000
Hazard Po Source:  Potential in Hazard Po Source:		(E)		·	352443
Source:  Potential in Hazard Potential in Haza	ntial for Ground Dissolution Stability Hazards	D71114	450		50400
Hazard Po Source:  Potential in Hazard Po Source:		B7NW (SE)	150	1	504637 352248
Source:  Potential if Hazard Potential if Haza	ntial for Landslide Ground Stability Hazards				
Potential in Hazard Potent	rd Potential: Very Low be: British Geological Survey, National Geoscience Information Service	B10SE (S)	0	1	504186 352443
Hazard Po Source:  Potential of Hazard Po Source:	ntial for Landslide Ground Stability Hazards	(5)			002.10
Potential in Hazard Potent	rd Potential: Very Low	B12SW	6	1	505000
Hazard Po Source:  Potential in Hazard Po Source:	be: British Geological Survey, National Geoscience Information Service  ntial for Landslide Ground Stability Hazards	(E)			352443
Potential of Hazard Posource:	rd Potential: Low	B5NE	10	1	503323
Hazard Po Source:  Potential of Hazard Po Source:	ce: British Geological Survey, National Geoscience Information Service	(W)			352212
Source:  Potential if Hazard Potential if Haza	ntial for Landslide Ground Stability Hazards rd Potential: Low	B16SW	222	1	505155
Hazard Po Source:  Potential of Hazard Po Source:		(NE)	222	'	353280
Source:  Potential 1 Hazard Po Hazard Po Hazard Po Hazard Po	ntial for Running Sand Ground Stability Hazards				
Hazard Po Source:  Potential of Hazard Po Source:	rd Potential: Very Low be: British Geological Survey, National Geoscience Information Service	B10SE (E)	0	1	504202 352441
Source:  Potential 1 Hazard Po Source:  Potential 2 Hazard Po Source:  Potential 3 Hazard Po Hazard Po Hazard Po Hazard Po	ntial for Running Sand Ground Stability Hazards				
Potential 1 Hazard Po Source: Potential 1 Hazard Po Source: Potential 1 Hazard Po Hazard Po	rd Potential: Very Low be: British Geological Survey, National Geoscience Information Service	B14NE	28	1	504077 353426
Hazard Po Source:  Potential in Hazard Po Source:  Potential in Hazard Po	ntial for Running Sand Ground Stability Hazards	(N)			333420
Potential of Source:  Potential of Source:  Potential of Hazard Po	rd Potential: Very Low	(NE)	29	1	505252
50 Hazard Po Source: Potential 1	, , , , , , , , , , , , , , , , , , ,				354181
Source:  Potential 1  Hazard Po	ntial for Running Sand Ground Stability Hazards rd Potential: Very Low	(NE)	151	1	505102
51 Hazard Po	•	(INL)	131	<u> </u>	353697
	ntial for Running Sand Ground Stability Hazards				
Cource.	rd Potential: Very Low be: British Geological Survey, National Geoscience Information Service	B12NW (E)	232	1	505000 352610
	ntial for Running Sand Ground Stability Hazards	. ,			
52 Hazard Po	rd Potential: Very Low	B11NE	249	1	504801
Source:	<i>y</i>	(E)			352656
	ntial for Running Sand Ground Stability Hazards rd Potential: No Hazard	B10SE	0	1	504186

Order Number: 304263548\_1\_1 Date: 23-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service

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# **Ground Stability Data (1:50,000)**

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard	B12NW	6	1	505000
	Source: British Geological Survey, National Geoscience Information Service	(E)	Ü	•	352754
53	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B10NE (N)	0	1	504110 352793
54	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B16NW (NE)	0	1	505000 353590
55	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B11NW (NE)	0	1	504379 352837
56	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B11SW (E)	0	1	504501 352457
57	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B10SE (SW)	0	1	504015 352283
58	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(N)	8	1	504503 353716
59	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B14NE (N)	28	1	504077 353426
60	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B16SW (NE)	31	1	505000 353227
61	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B12SW (E)	43	1	505000 352443
62	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B11SE (E)	112	1	504690 352551
63	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B7NW (SE)	150	1	504637 352248
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B15SE (NE)	0	1	504692 352987
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B10SE (S)	0	1	504186 352443
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B12SW (E)	6	1	505000 352416
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(NE)	24	1	505000 353965
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B16NW (NE)	135	1	505000 353369
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B12SW (E)	223	1	505000 352593
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B7NE (SE)	239	1	504693 352222

Order Number: 304263548\_1\_1 Date: 23-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 7 of 12



### **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	TF0252	1979
Ordnance Survey Plan	TF0252	1979
Ordnance Survey Plan	TF0252	1979
Ordnance Survey Plan	TF0253	1979
Ordnance Survey Plan	TF0352	1979
Ordnance Survey Plan	TF0352	1979
Ordnance Survey Plan	TF0352	1979
Ordnance Survey Plan	TF0352	1979
Ordnance Survey Plan	TF0352	1979
Ordnance Survey Plan	TF0352	1979
Ordnance Survey Plan	TF0353	1979
Ordnance Survey Plan	TF0353	1979
Ordnance Survey Plan	TF0452	1979
Ordnance Survey Plan	TF0452	1979
Ordnance Survey Plan	TF0452	1979
Ordnance Survey Plan	TF0452	1979
Ordnance Survey Plan	TF0452	1979
Ordnance Survey Plan	TF0452	1979
Ordnance Survey Plan	TF0452	1979
Ordnance Survey Plan	TF0453	1979
Ordnance Survey Plan	TF0453	1979
Ordnance Survey Plan	TF0453	1979
Ordnance Survey Plan	TF0552	1979
Ordnance Survey Plan	TF0552	1979
Ordnance Survey Plan	TF0553	1979
Ordnance Survey Plan	TF0251	1980
Ordnance Survey Plan	TF0351	1980
Ordnance Survey Plan	TF0351	1980
Ordnance Survey Plan	TF0451	1980



### **Historical Map List**

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

1:10,560	Mapsheet	Published Date
Lincolnshire	097_NW	1891
Lincolnshire	097_SW	1891
Lincolnshire	097_NW	1906
Lincolnshire	097_SW	1906
Lincolnshire	097_NW	1950
Lincolnshire	097_SW	1950
Ordnance Survey Plan	TF05SE	1956
Ordnance Survey Plan	TF05SW	1956
1:10,000	Mapsheet	Published Date
Ordnance Survey Plan	TF05SE	1985
Ordnance Survey Plan	TF05SW	1985



Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	November 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)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	November 2020	As notified
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	April 2020	As notified
	7 45 2020	7.10.110.1110.11
Potential for Compressible Ground Stability Hazards	7 (2020	7.6.1.64.1.64
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
•		
British Geological Survey - National Geoscience Information Service		
British Geological Survey - National Geoscience Information Service  Potential for Ground Dissolution Stability Hazards	January 2019	As notified
British Geological Survey - National Geoscience Information Service  Potential for Ground Dissolution Stability Hazards  British Geological Survey - National Geoscience Information Service  Potential for Landslide Ground Stability Hazards	January 2019	As notified
British Geological Survey - National Geoscience Information Service  Potential for Ground Dissolution Stability Hazards  British Geological Survey - National Geoscience Information Service	January 2019 January 2019	As notified  As notified
British Geological Survey - National Geoscience Information Service  Potential for Ground Dissolution Stability Hazards  British Geological Survey - National Geoscience Information Service  Potential for Landslide Ground Stability Hazards  British Geological Survey - National Geoscience Information Service	January 2019 January 2019	As notified  As notified
British Geological Survey - National Geoscience Information Service  Potential for Ground Dissolution Stability Hazards  British Geological Survey - National Geoscience Information Service  Potential for Landslide Ground Stability Hazards  British Geological Survey - National Geoscience Information Service  Potential for Running Sand Ground Stability Hazards	January 2019  January 2019  January 2019	As notified  As notified  As notified
British Geological Survey - National Geoscience Information Service  Potential for Ground Dissolution Stability Hazards  British Geological Survey - National Geoscience Information Service  Potential for Landslide Ground Stability Hazards  British Geological Survey - National Geoscience Information Service  Potential for Running Sand Ground Stability Hazards  British Geological Survey - National Geoscience Information Service	January 2019  January 2019  January 2019	As notified  As notified  As notified
British Geological Survey - National Geoscience Information Service  Potential for Ground Dissolution Stability Hazards  British Geological Survey - National Geoscience Information Service  Potential for Landslide Ground Stability Hazards  British Geological Survey - National Geoscience Information Service  Potential for Running Sand Ground Stability Hazards  British Geological Survey - National Geoscience Information Service  Potential for Shrinking or Swelling Clay Ground Stability Hazards	January 2019  January 2019  January 2019  January 2019	As notified  As notified  As notified  As notified

Order Number: 304263548\_1\_1 Date: 23-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 10 of 12



### **Data Suppliers**

A selection of organisations who provide data within this report

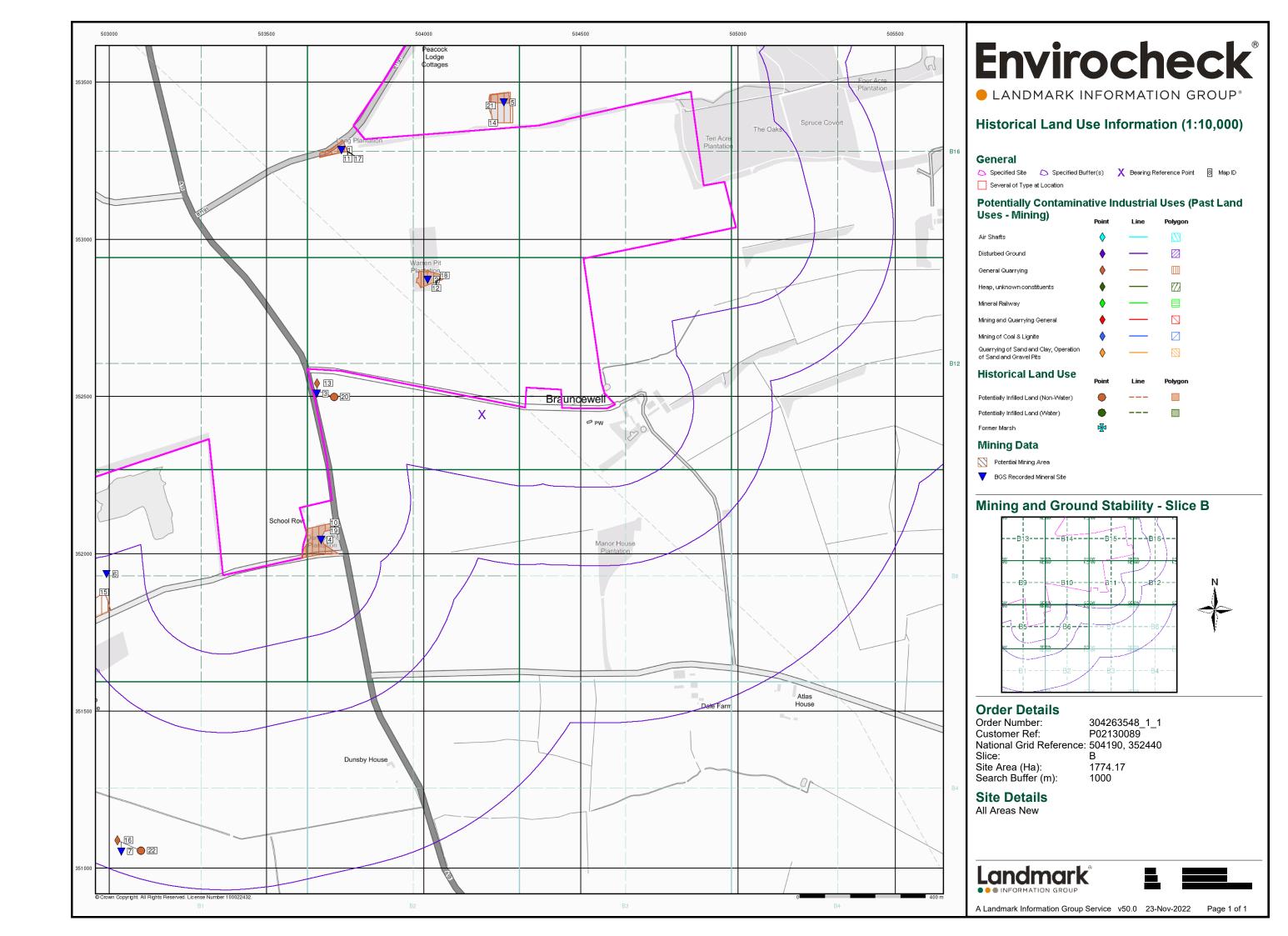
Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	The Coal Authority
Ove Arup	ARUP
Stantec UK Ltd	Stantec
Wardell Armstrong	wardell armstrong your earth our world
Johnson Poole & Bloomer	JPB

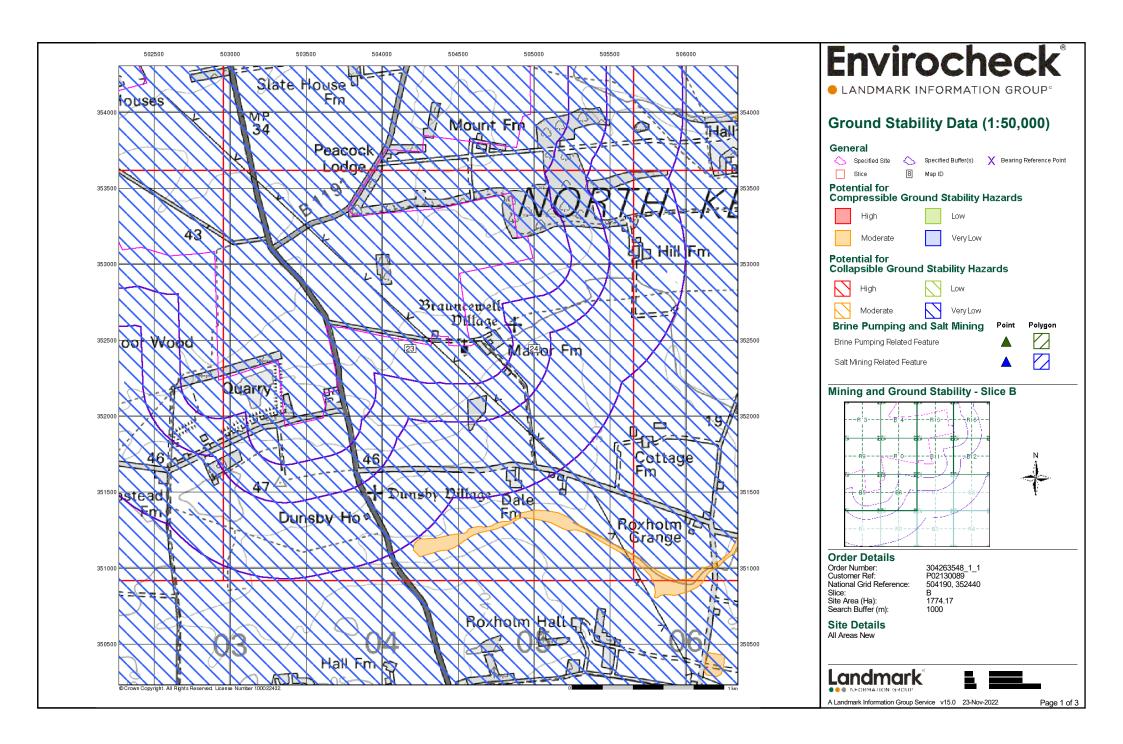


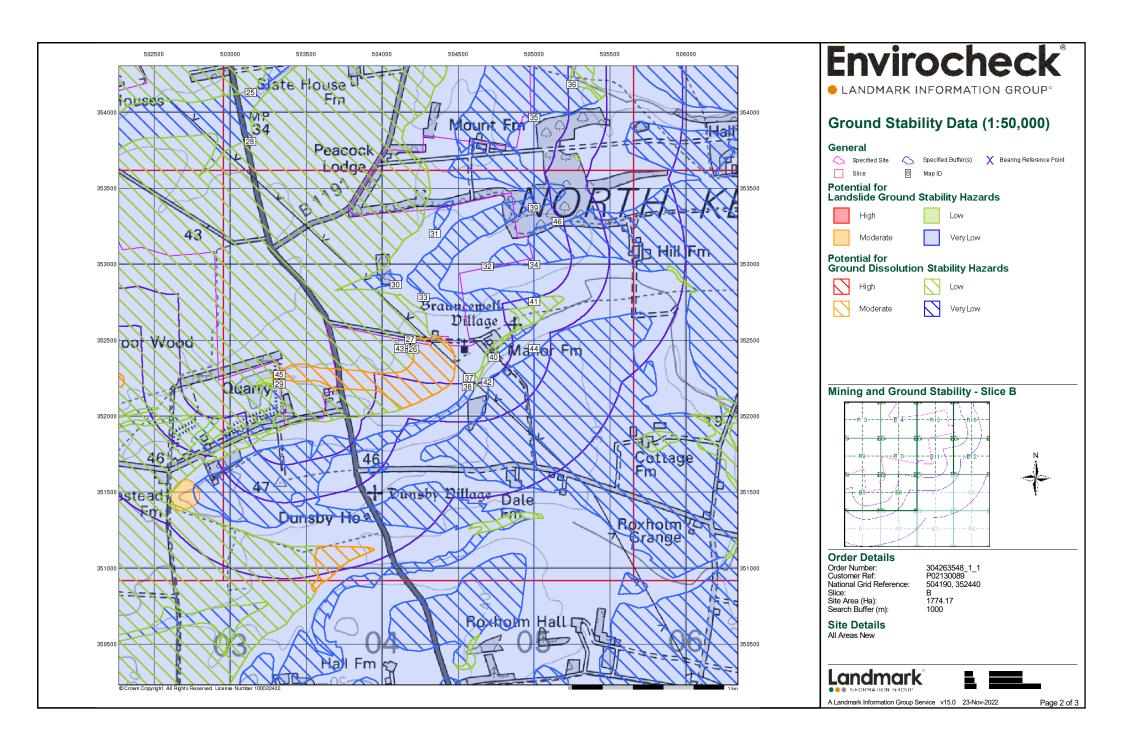
### **Useful Contacts**

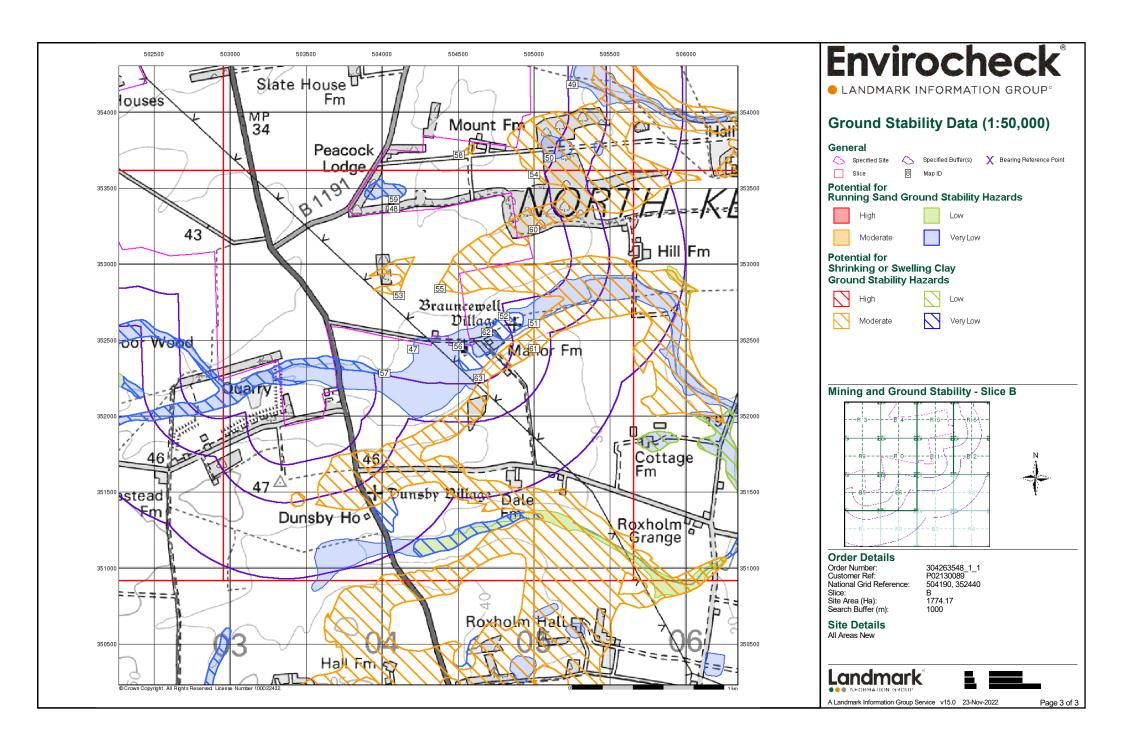
Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service  British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	

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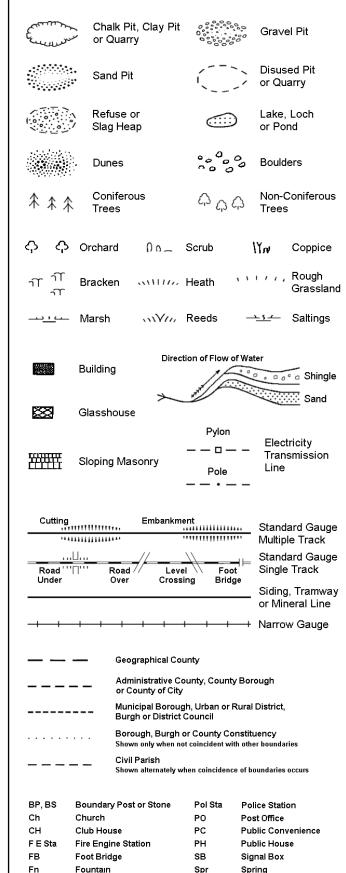
### **Ordnance Survey County Series 1:10,560** Gravel Other Orchard Osiers Mixed Wood Deciduous Brushwood Furze Rough Pasture Arrow denotes Trigonometrical flow of water Station Site of Antiquities Bench Mark Pump, Guide Post, Well, Spring, Signal Post **Boundary Post** ·285 Surface Level Sketched Instrumental Contour Contour Fenced Fenced Main Roads Minor Roads Un-Fenced Sunken Road Raised Road Railway over Road over Ri∨er Railway Railway over Level Crossing Road Road over Road over Road over County Boundary (Geographical) County & Civil Parish Boundary Administrative County & Civil Parish Boundary County Borough Boundary (England) Co. Boro. Bdy. County Burgh Boundary (Scotland) Co. Burgh Bdy.

Rural District Boundary

····· Civil Parish Boundary

RD. Bdy.

## Ordnance Survey Plan 1:10,000



TCB

TCP

Telephone Call Box

Telephone Call Post

GP

**Guide Post** 

Mile Post

## 1:10,000 Raster Mapping

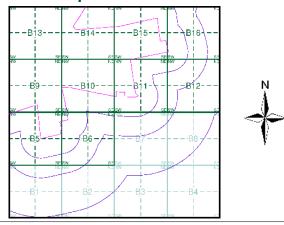
Gravel Pit	Refuse tip or slag heap
Rock	Rock (scattered)
்ஃஃ Boulders	。
Shingle	Mud Mud
Sand Sand	Sand Pit
≀₁₁₁₁₁₁∿ Slopes	Top of cliff
General detail	Underground detail
— — — Overhead detail	Narrow gauge railway
Multi-track railway	Single track railway
• • County boundar (England only)	boundary
District, Unitary Metropolitan, London Borougl boundary	Constituency
Area of wooded vegetation	Non-coniferous trees
△ Non-coniferous	0 :
	Coniferous trees
1 4 11	trees  Positioned
	trees  Positioned
⇔ trees (scattered  Coniferous  trees (scattered  Coniferous  Coniferous  Coniferous  Coniferous	trees  Positioned tree  Coppice
Coniferous trees (scattered trees (scattered trees))  Orchard  Rough	trees  Positioned tree  Coppice or Osiers
Coniferous trees (scattered trees (scattered Coniferous trees (scattered Coniferous trees (scattered Rough Grassland	trees  Positioned tree  Coppice or Osiers  Heath  Marsh, Salt
Coniferous trees (scattered trees (scattered trees (scattered Coniferous trees (scattered Rough Grassland Coniferous trees (scattered Scattered Coniferous trees (scattered Coniferous trees (scattere	Positioned tree  Coppice or Osiers  Heath  Warsh, Salt Marsh or Reeds
Coniferous trees (scattered trees (scattered Coniferous tr	Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  MLW(S) Mean low
Coniferous trees (scattered trees (scattered trees (scattered Coniferous trees (scattered T	Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  MLW(S)  Mean low water (springs)  Electricity transmission line
Coniferous trees (scattered trees (scattered trees (scattered Coniferous trees Coniferous trees (scattered Coniferous trees (scattered Coniferous trees (scattered Coniferous trees Coniferous trees (scattered Coniferous trees Coniferous trees (scattered Coniferous trees C	Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  MLW(S)  Mean low water (springs)  Electricity transmission line (with poles)  Triangulation station  Pylon flare stack
Coniferous trees (scattered trees (scatt	Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  MLW(S)  Mean low water (springs)  Electricity transmission line (with poles)  Triangulation station  Pylon, flare stack or lighting tower

Building

# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:10,560	1887	2
Lincolnshire	1:10,560	1906	3
Lincolnshire	1:10,560	1950	4
Ordnance Survey Plan	1:10,000	1956	5
Ordnance Survey Plan	1:10,000	1985	6
10K Raster Mapping	1:10,000	2000	7
Street View	Variable		8

# **Historical Map - Slice B**



#### **Order Details**

Order Number: 303381609\_1\_1 **Customer Ref:** P02130089 National Grid Reference: 504190, 352440 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 1000

# **Site Details**

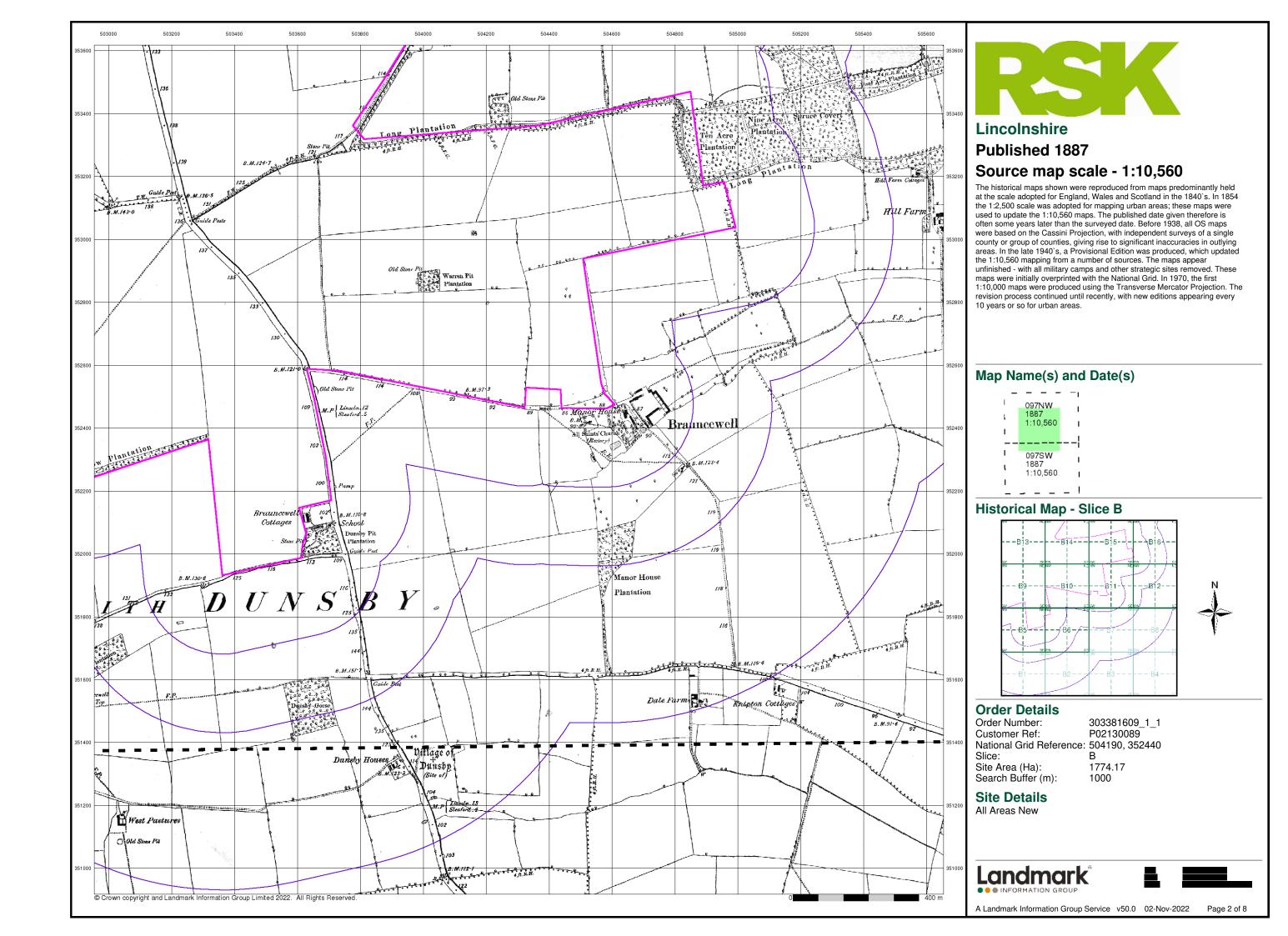
All Areas New

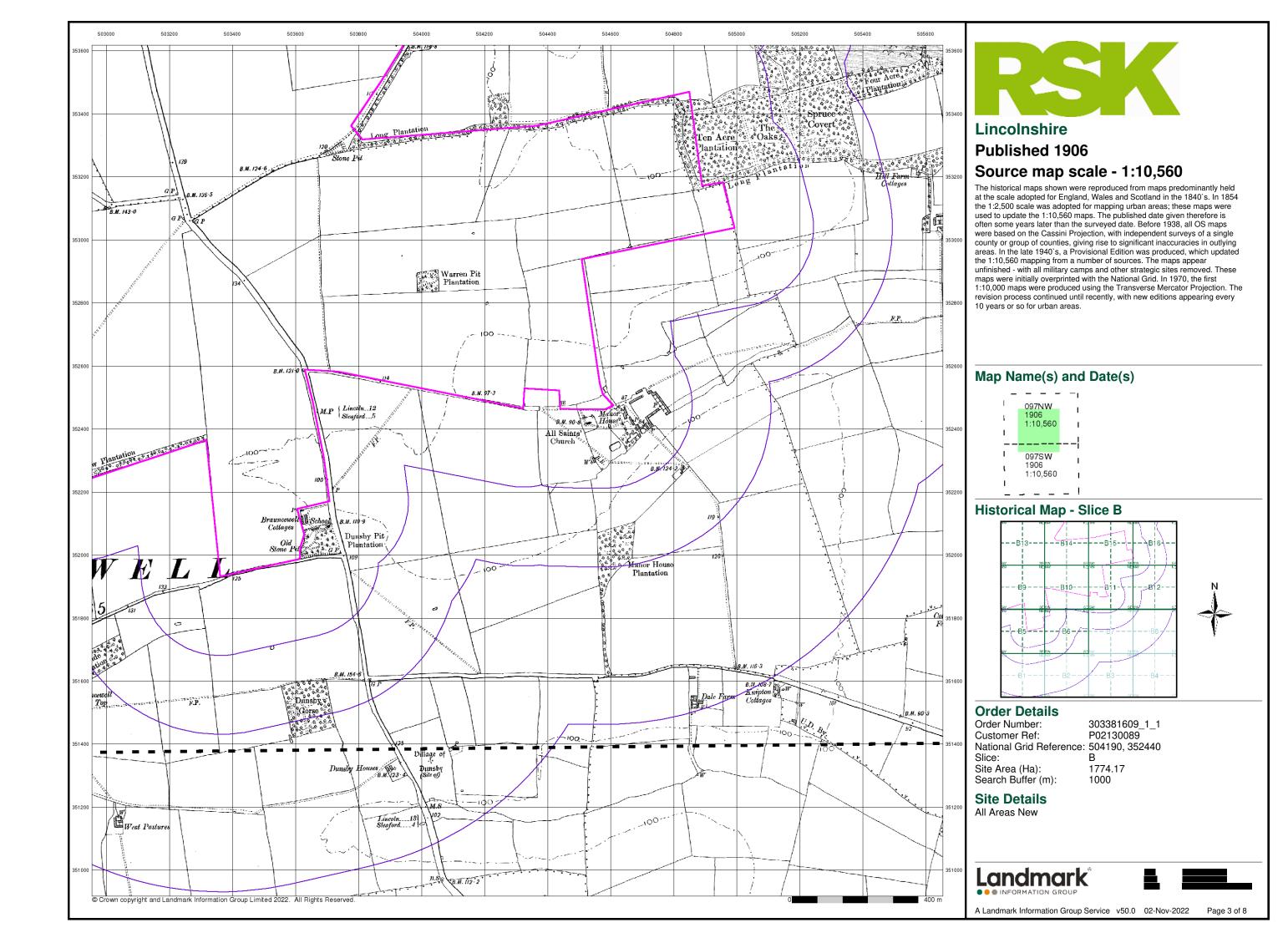


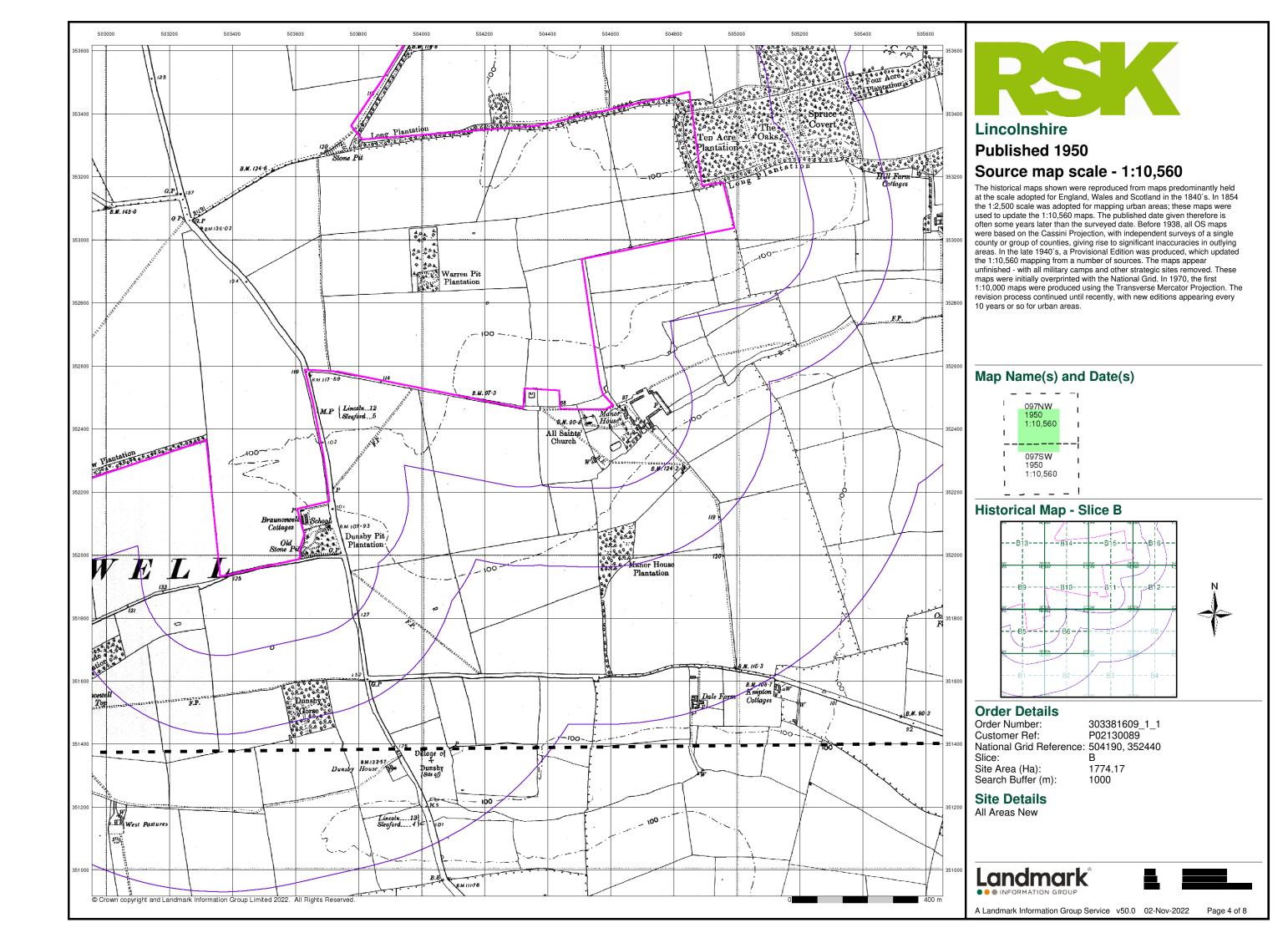


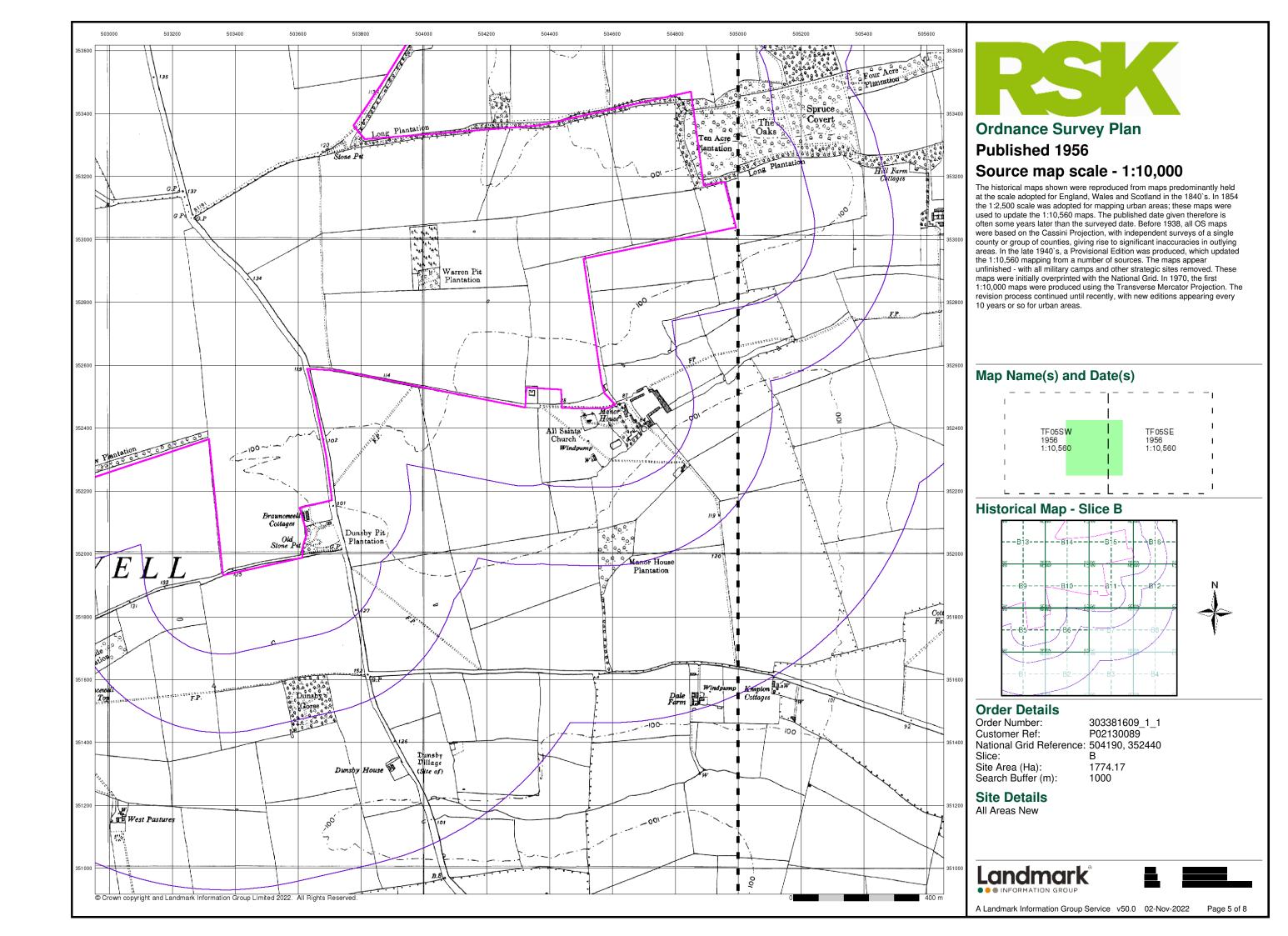


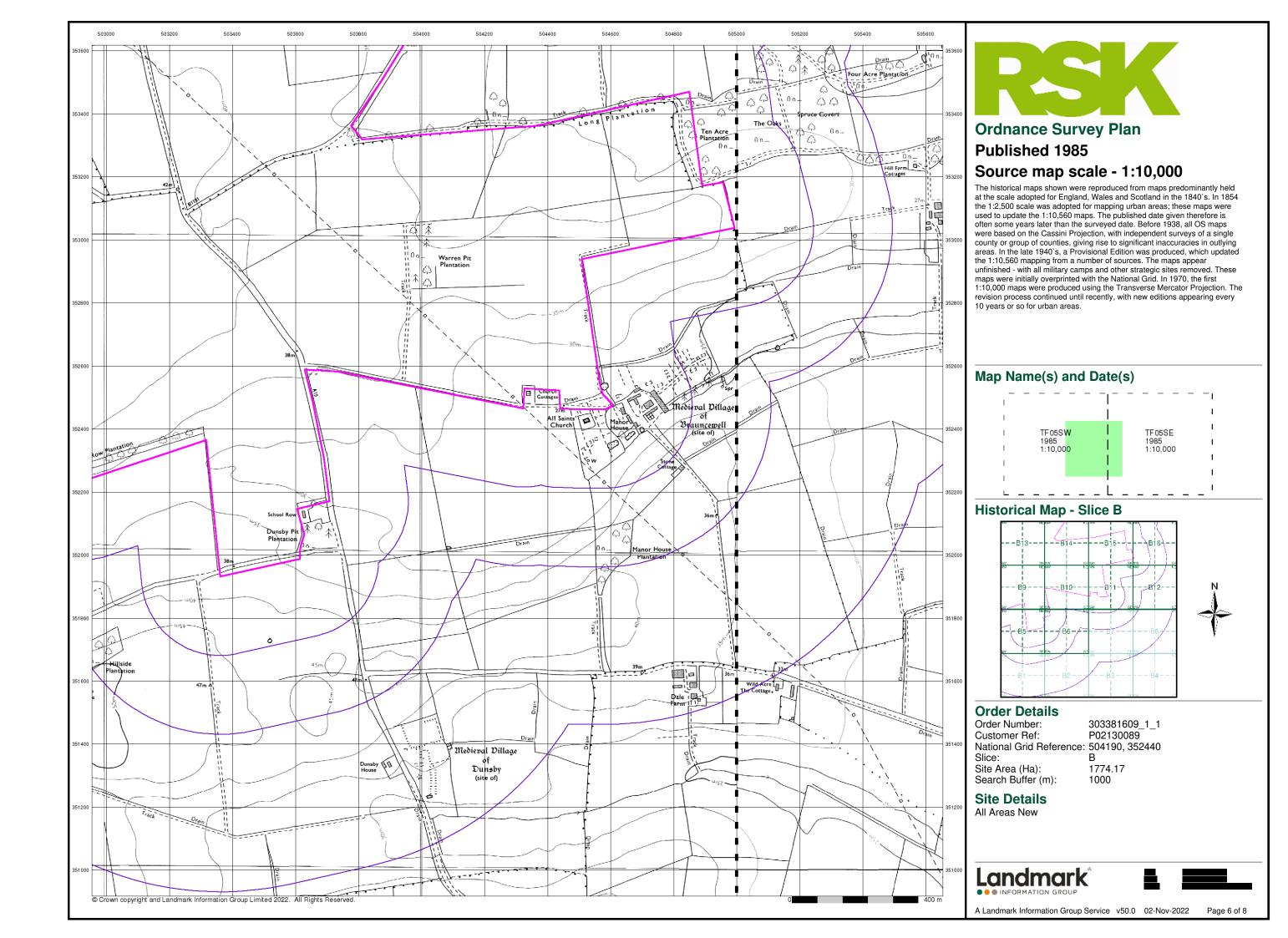
Page 1 of 8

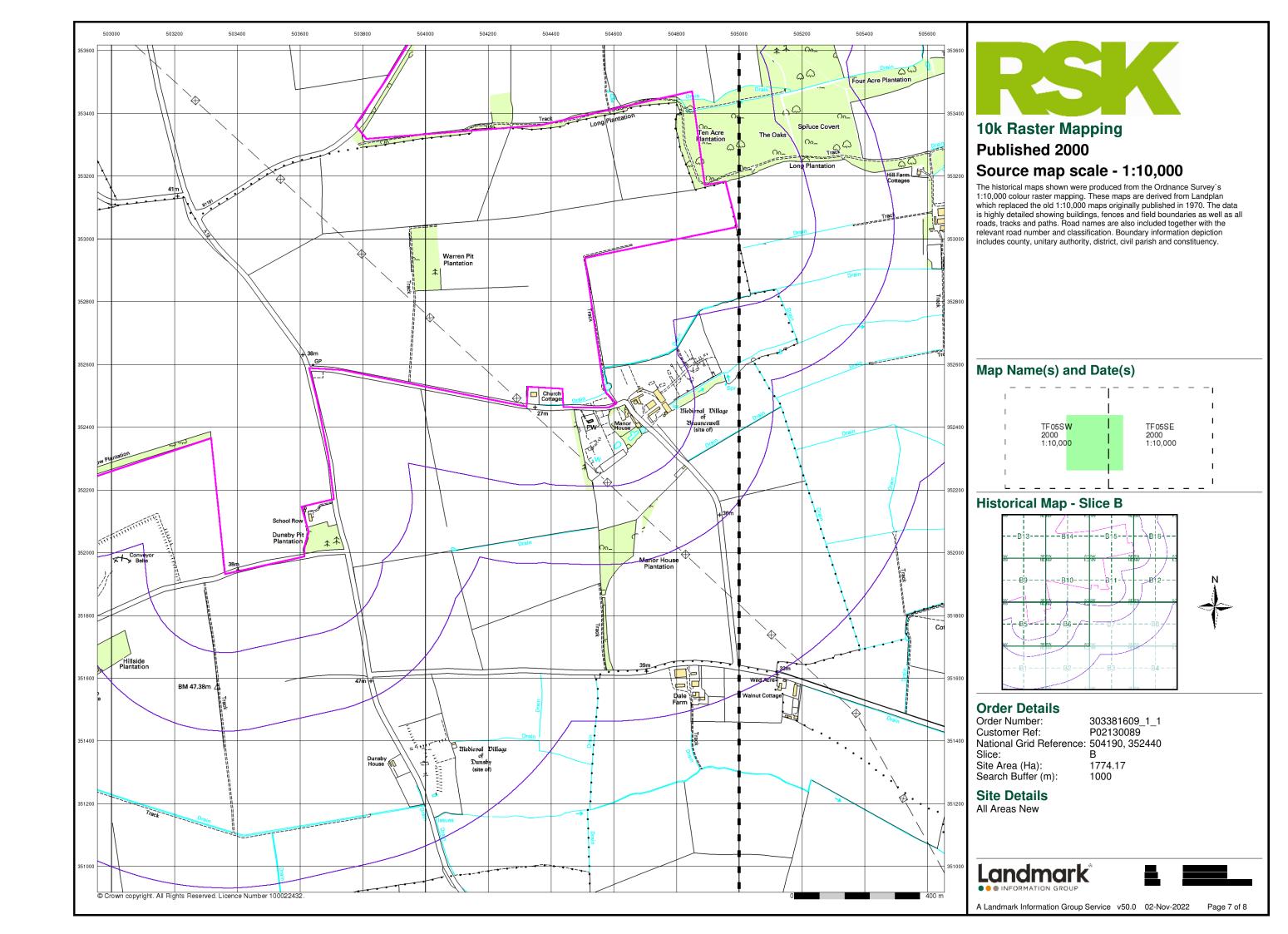


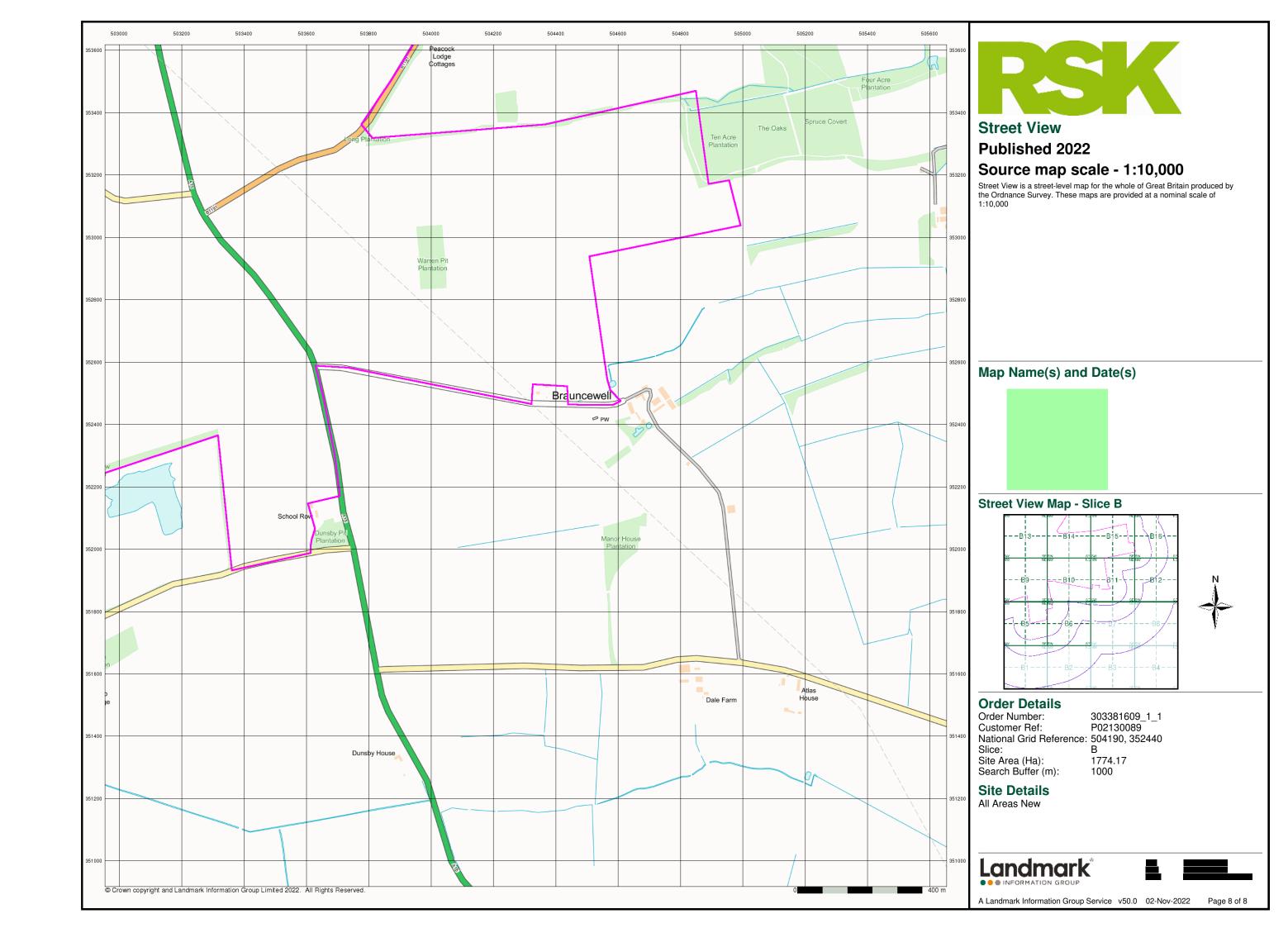




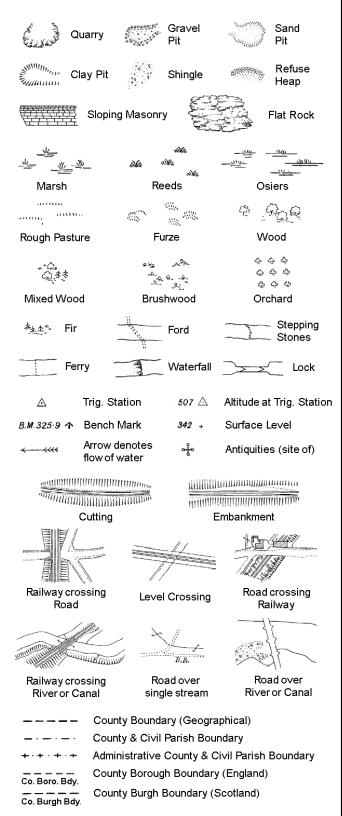








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

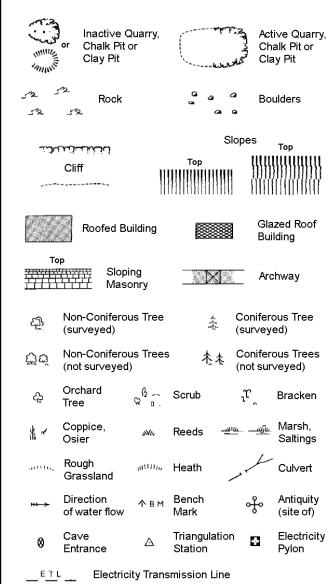
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



,			
вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

County Boundary (Geographical)

Admin. County or County Bor. Boundary

Symbol marking point where boundary

GVC

MP, MS

Gas Governer

Mile Post or Mile Stone

**Guide Post** 

Manhole

Wd Pp

Wks

Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

County & Civil Parish Boundary

Civil Parish Boundary

mereing changes

London Borough Boundary

L B Bdy

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

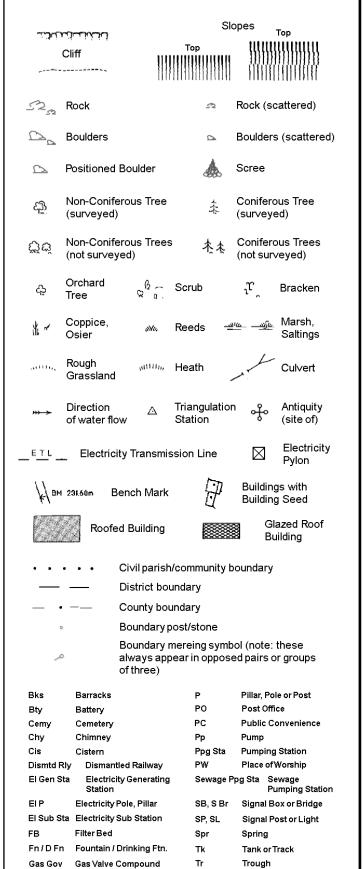
S.P

T.C.B

 $T_{T}$ 

Sl.

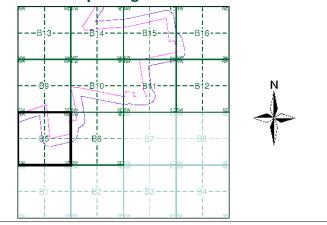
# 1:1,250



# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979 - 1980	4
Large-Scale National Grid Data	1:2,500	1994	5

# **Historical Map - Segment B5**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 504190, 352440 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 100

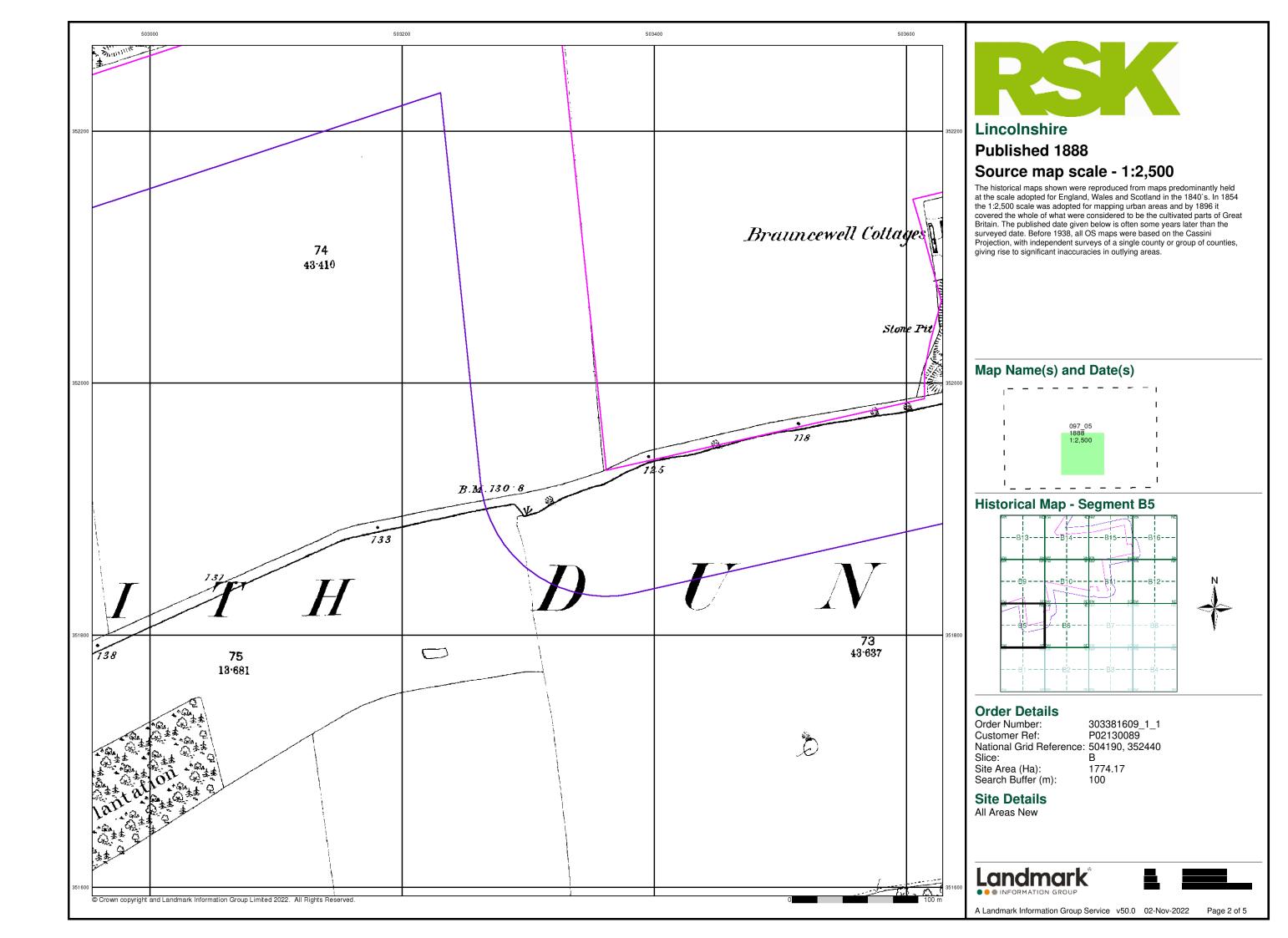
### **Site Details** All Areas New

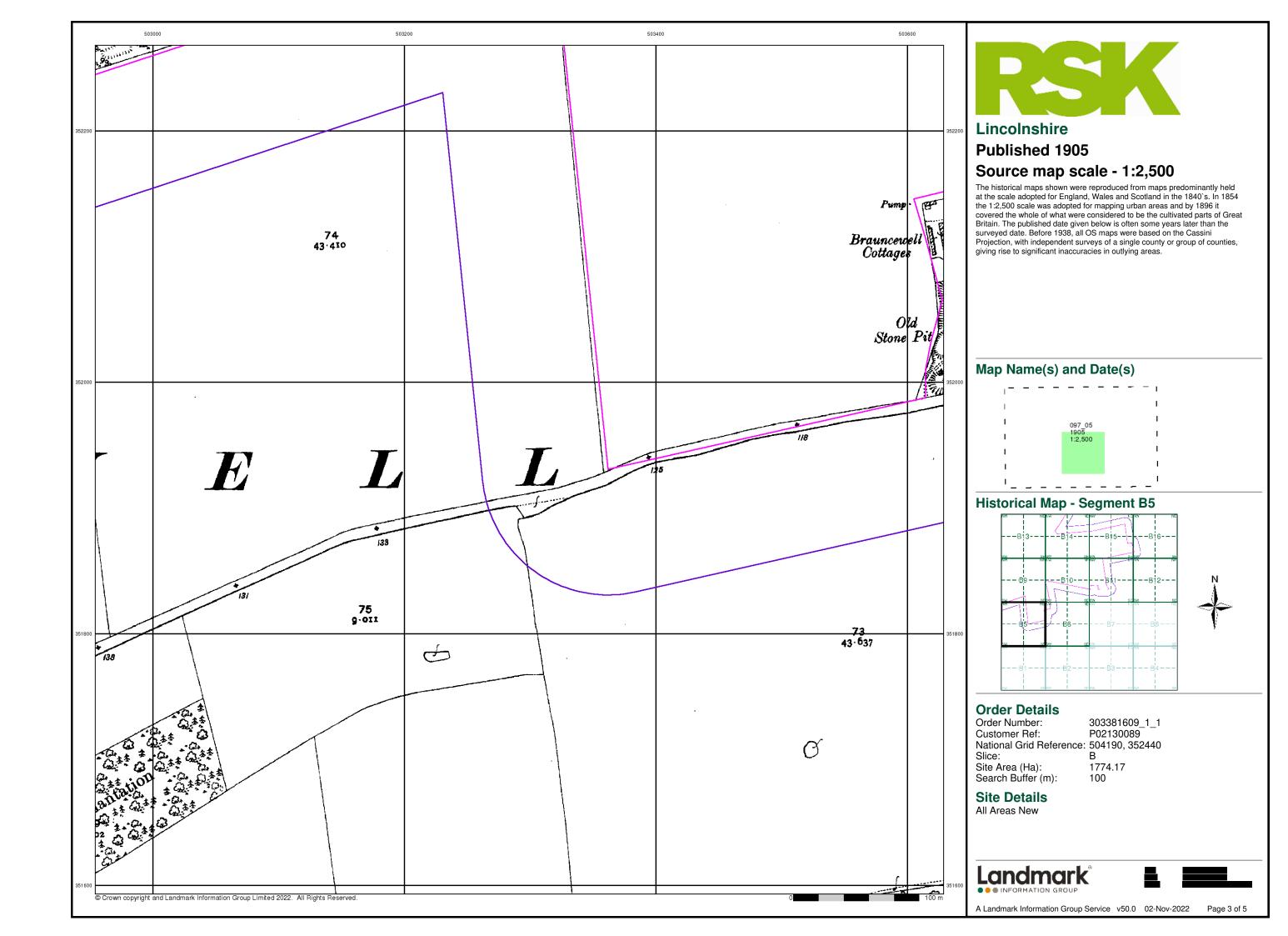


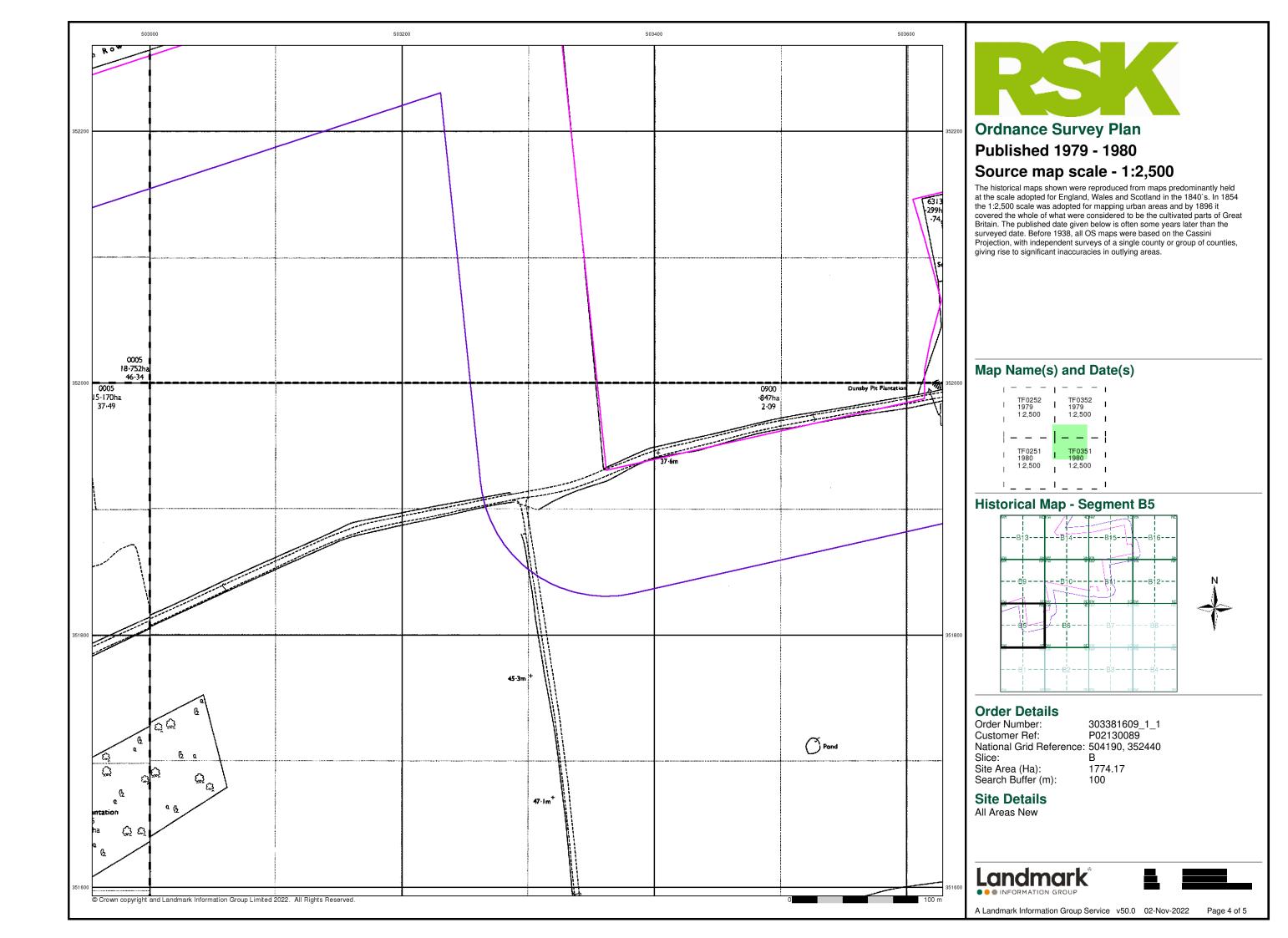


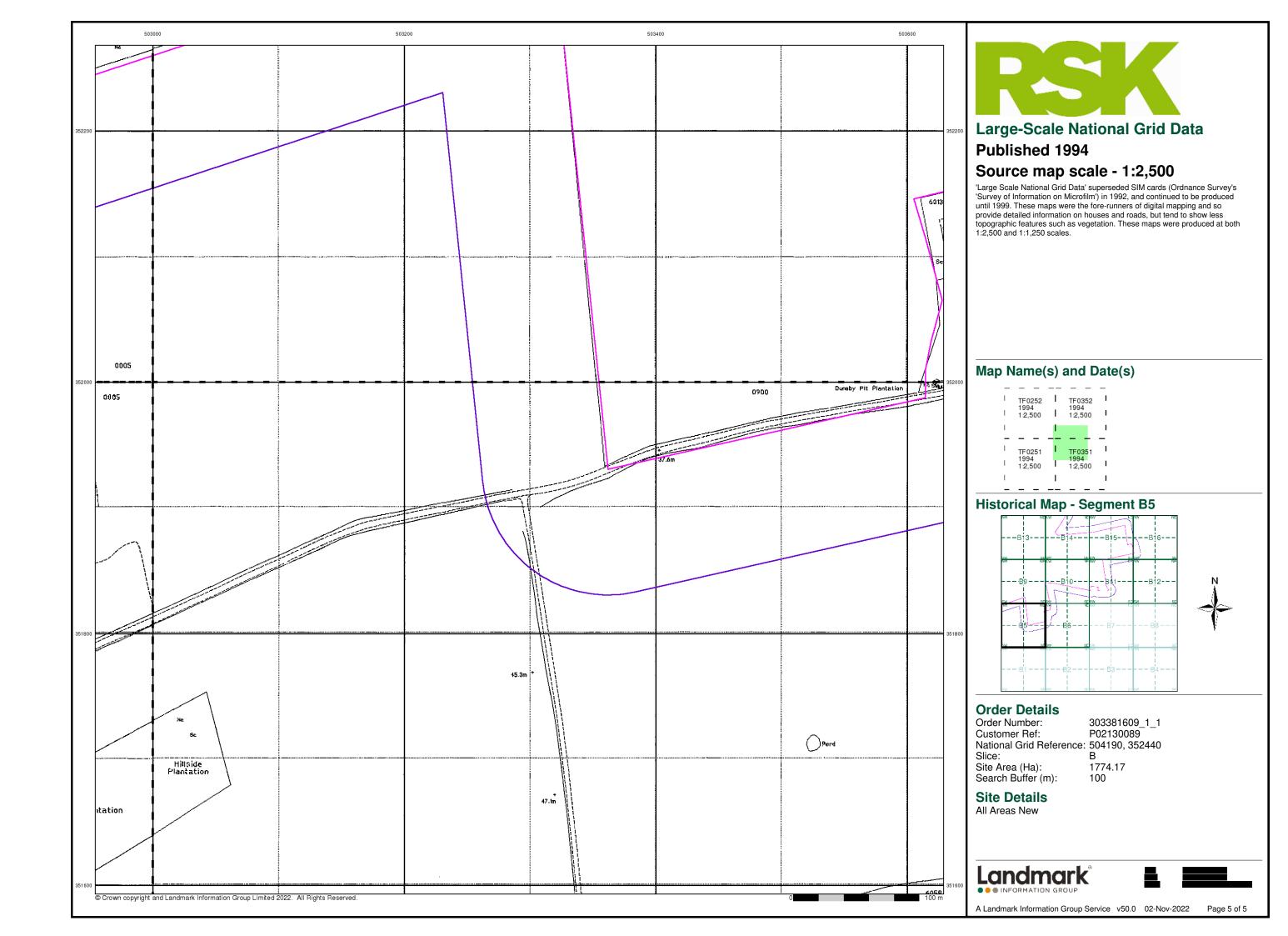


Page 1 of 5

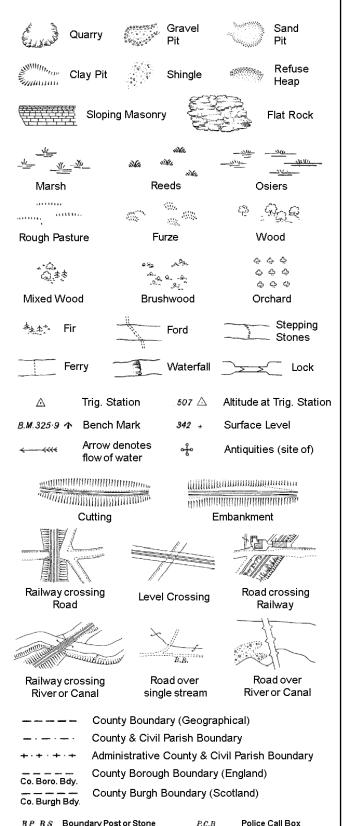








## **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



Pump

Sluice

Spring

Trough

Well

Signal Post

Telephone Call Box

S.P

T.C.B

 $T_{T}$ 

Sl.

B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

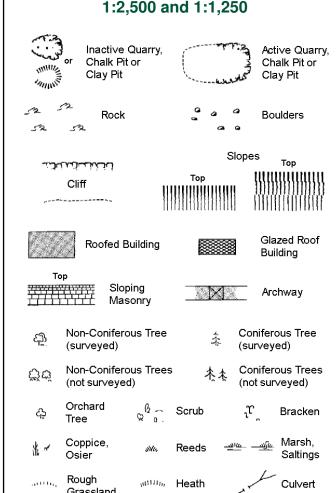
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250

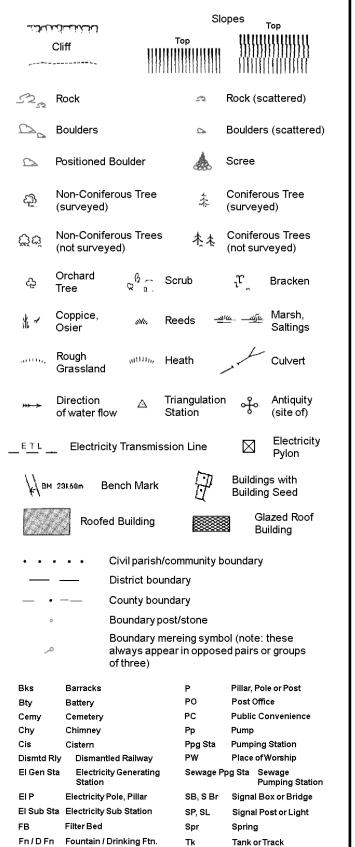


Grassland Direction Bench Antiquity of water flow (site of) Electricity Triangulation Cave ÷ Entrance

ETL **Electricity Transmission Line** 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

вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

# 1:1,250



Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

MP, MS

Tr

Wd Pp

Wks

Trough

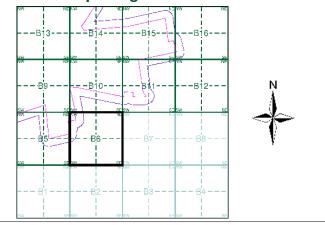
Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979 - 1980	4
Large-Scale National Grid Data	1:2,500	1994	5

# **Historical Map - Segment B6**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 504190, 352440 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 100

# **Site Details**

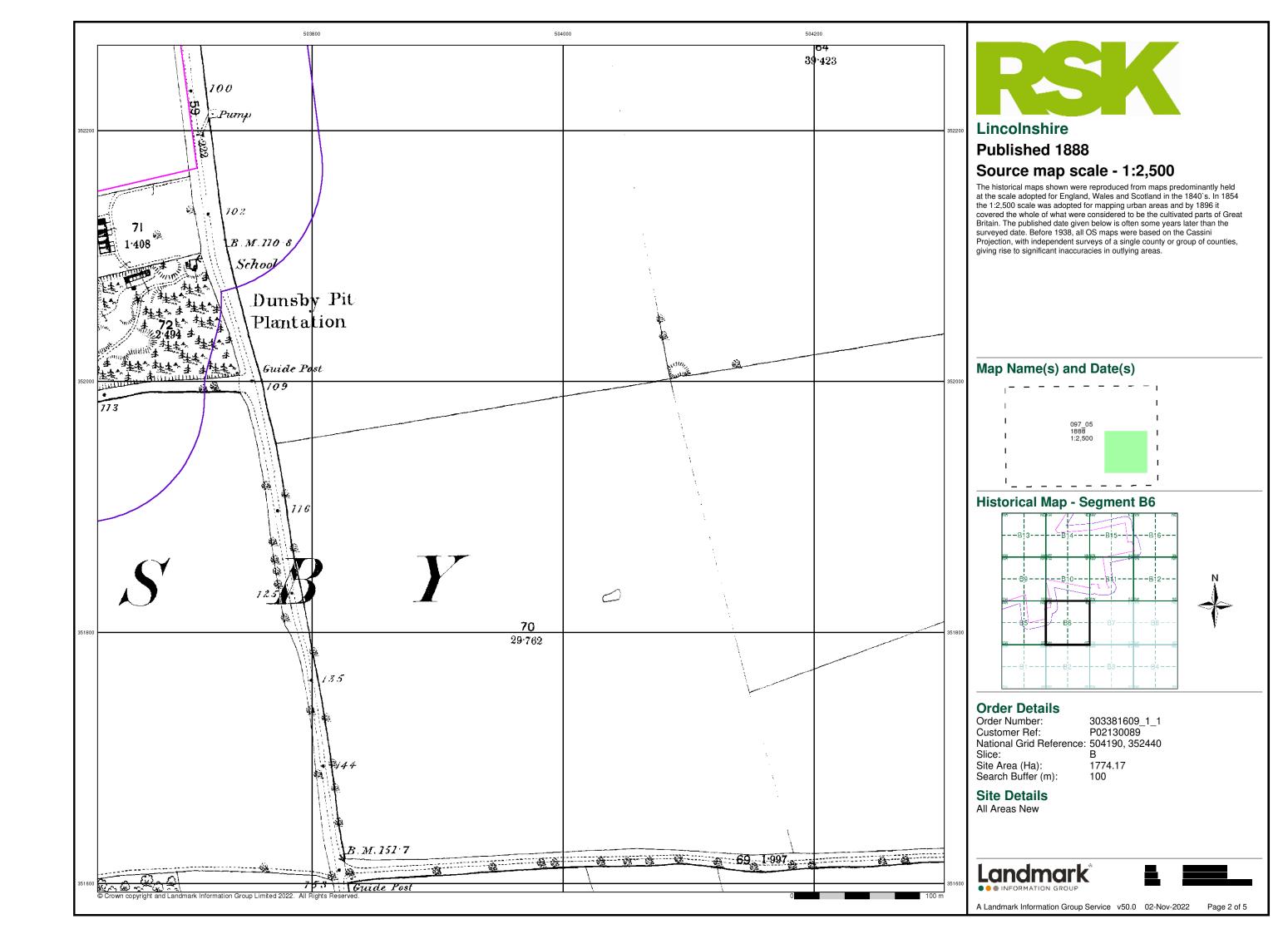
All Areas New

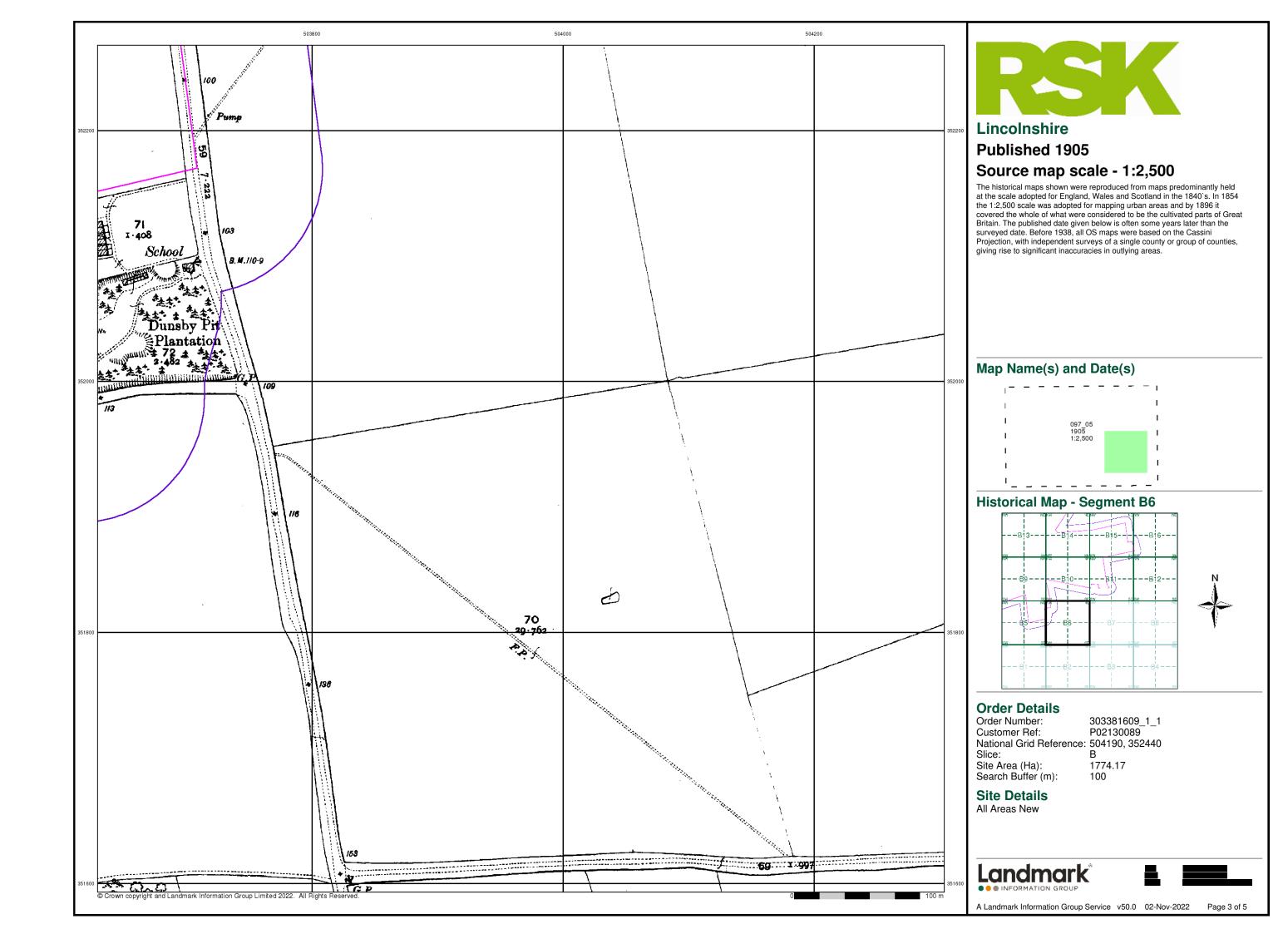


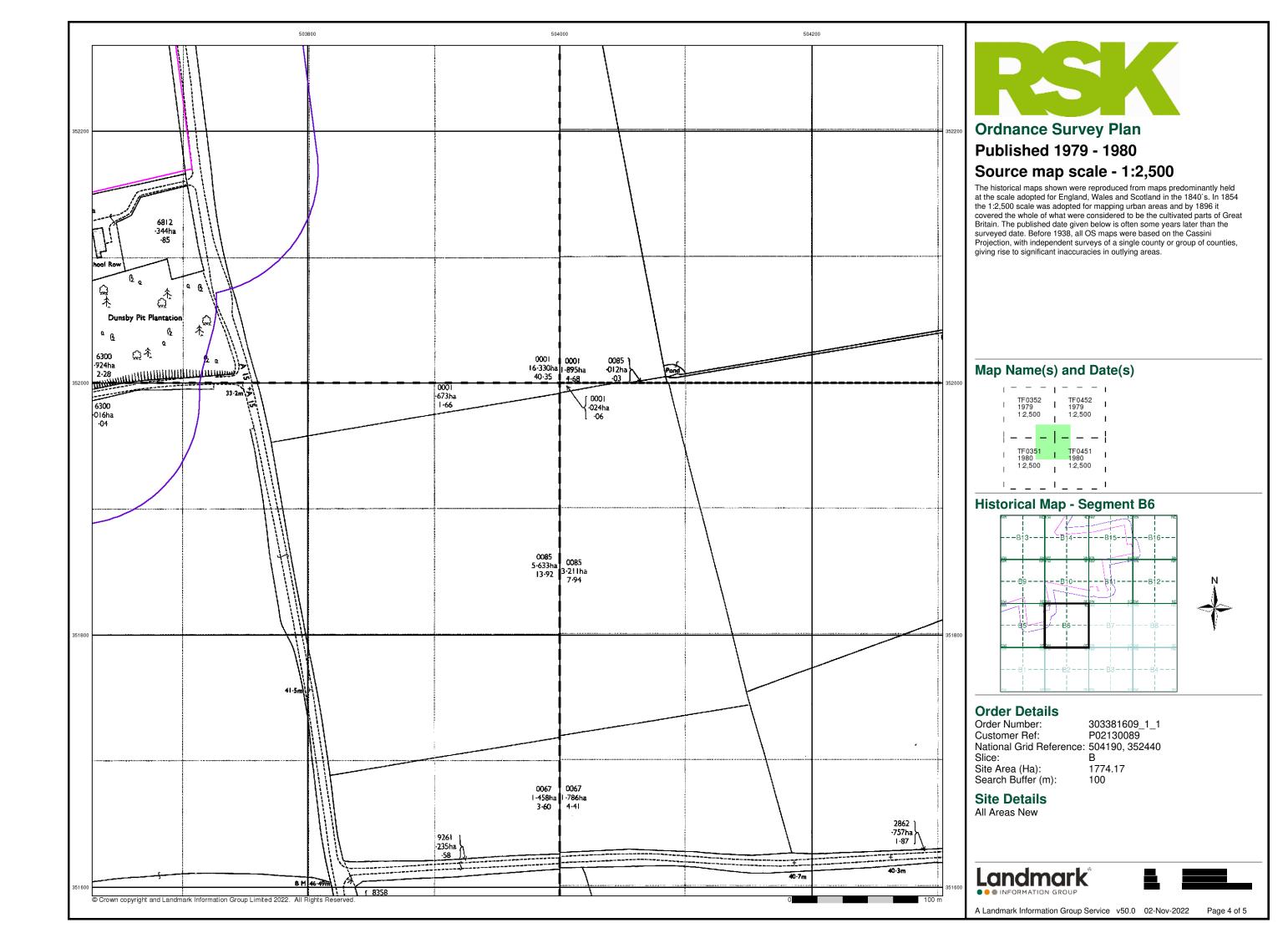


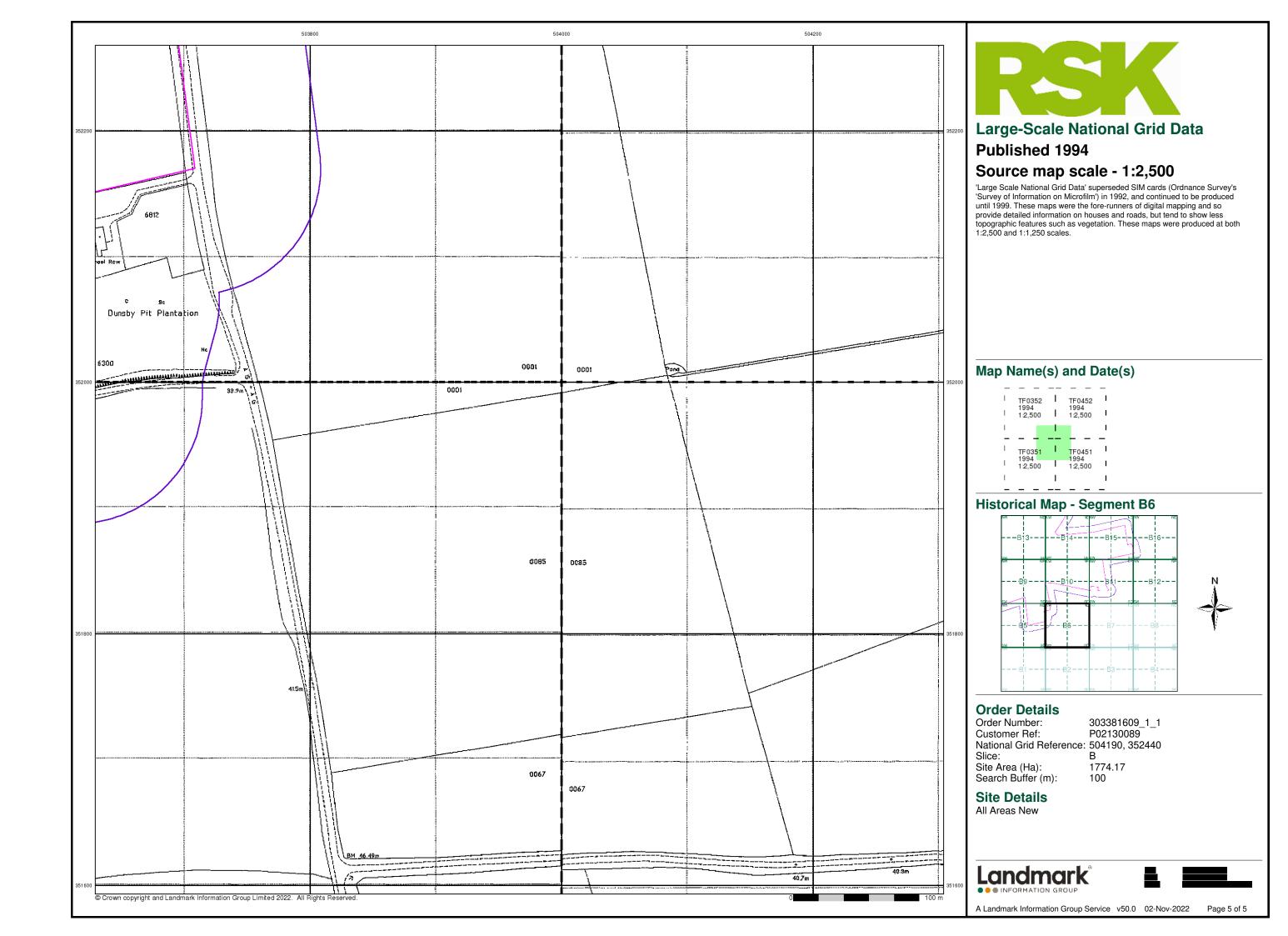


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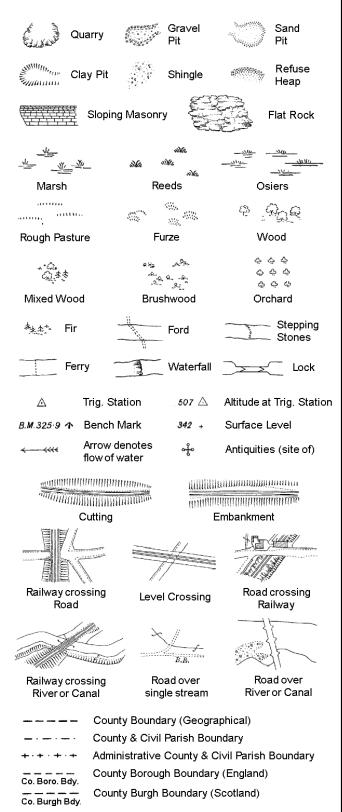








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

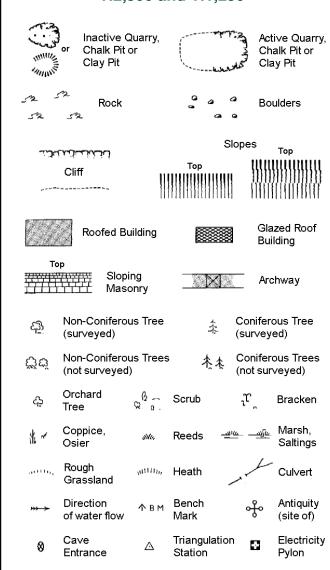
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



L B Bdy		London Boro	ugh Boun	dary
2		Symbol mark mereing cha		where boundary
ВН	Beer House		Р	Pillar, Pole or Post
BP, BS	Boundary Pos	st or Stone	PO	Post Office
Cn, C	Capstan, Crar	пе	PC	Public Convenience
Chy	Chimney		PH	Public House
D Fn	Drinking Four	ntain	Pp	Pump
EIP	Electricity Pills	ar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pill	ar	SP, SL	Signal Post or Light
FB	Foot Bridge		Spr	Spring
GP	Guide Post		Tk	Tank or Track
Н	Hydrant or Hy	draulic	TCB	Telephone Call Box
LC	Level Crossin	g	TCP	Telephone Call Post
MH	Manhole		Tr	Trough
MP	Mile Post or M	ooring Post	Wr Pt, Wr T	Water Point, Water Ta

**Electricity Transmission Line** 

L B Bdy

Mile Stone

Normal Tidal Limit

NTL

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

S.P

T.C.B

Sl.

 $T_T$ 

County Boundary (Geographical)

Admin. County or County Bor. Boundary

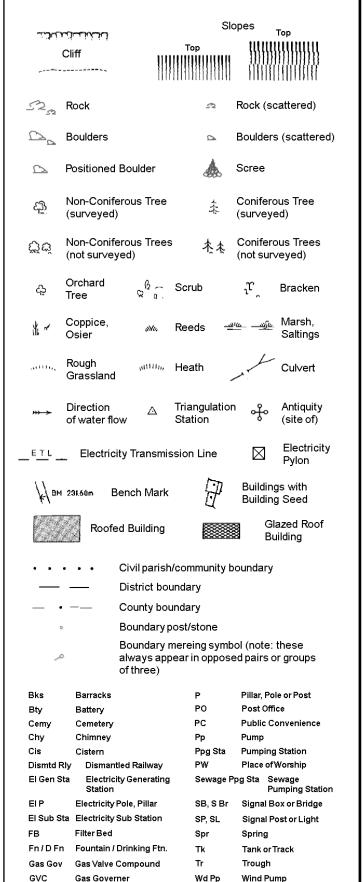
County & Civil Parish Boundary

Wd Pp

Wind Pump

Civil Parish Boundary

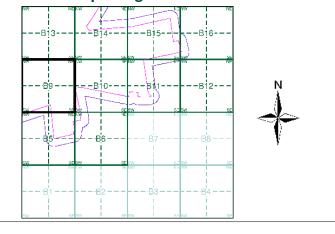
# 1:1,250



# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

# **Historical Map - Segment B9**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 504190, 352440 Slice:

Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

Wks

**Guide Post** 

Mile Post or Mile Stone

Manhole

1774.17 Site Area (Ha): Search Buffer (m): 100

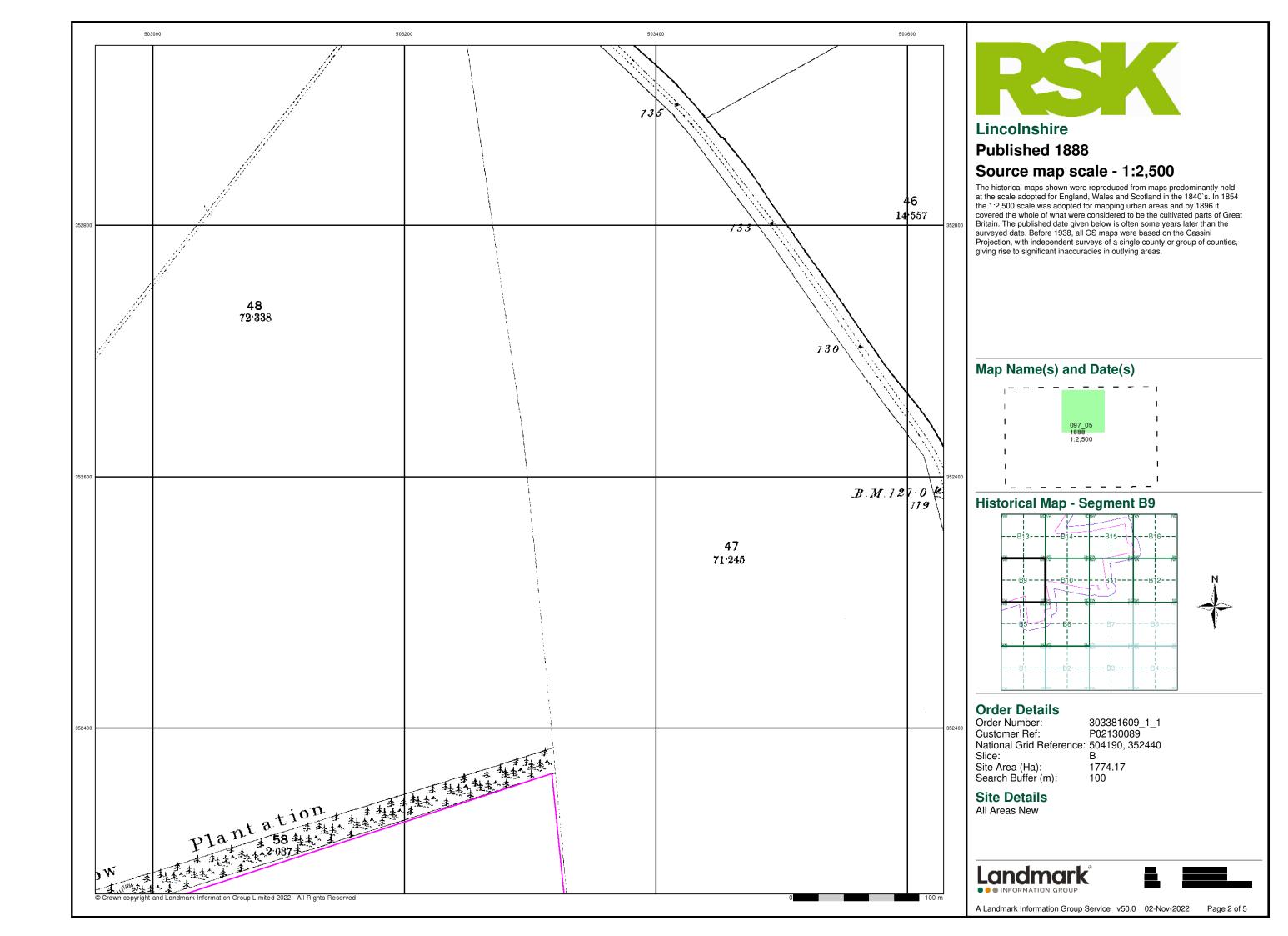
### **Site Details** All Areas New

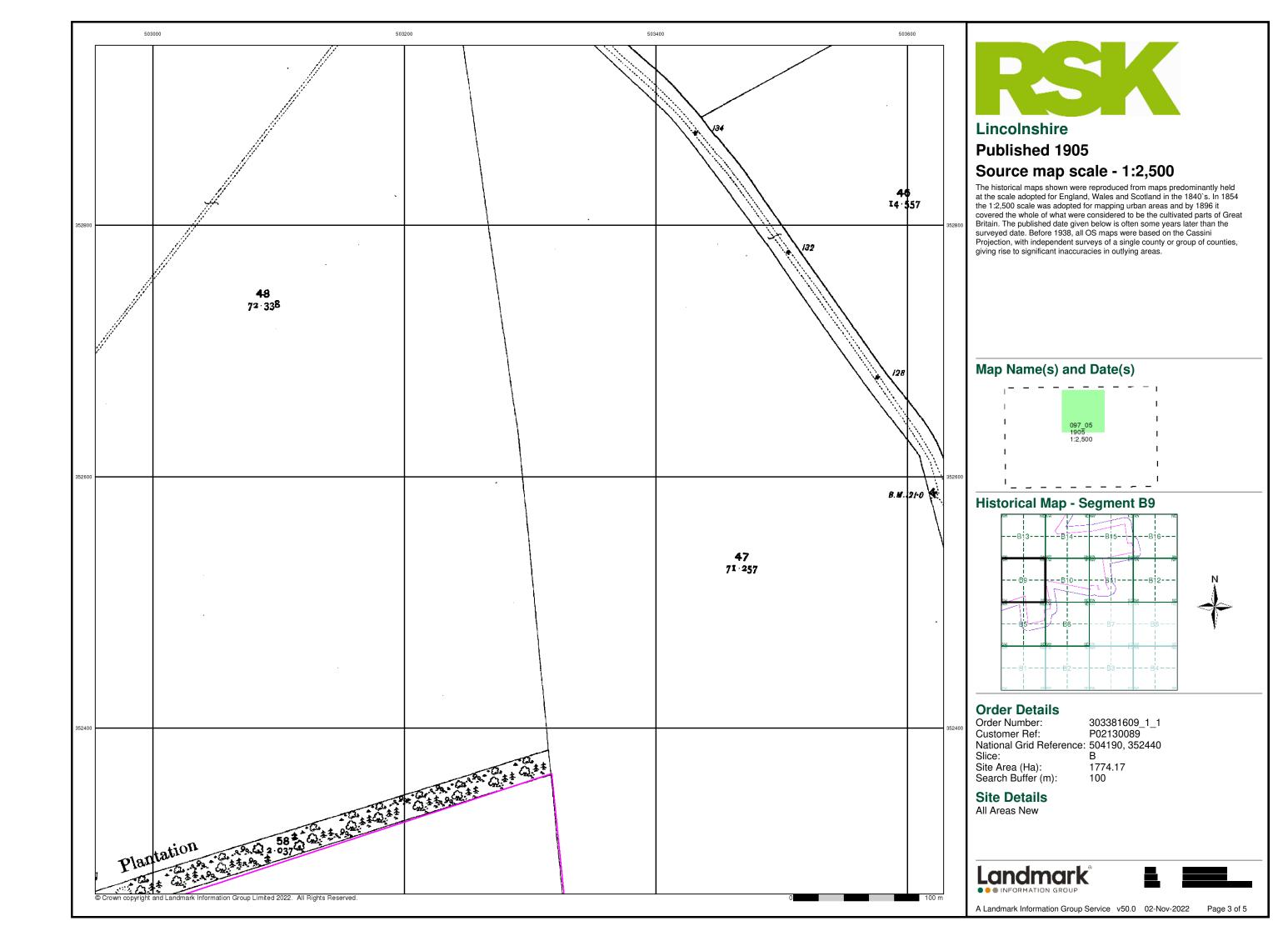


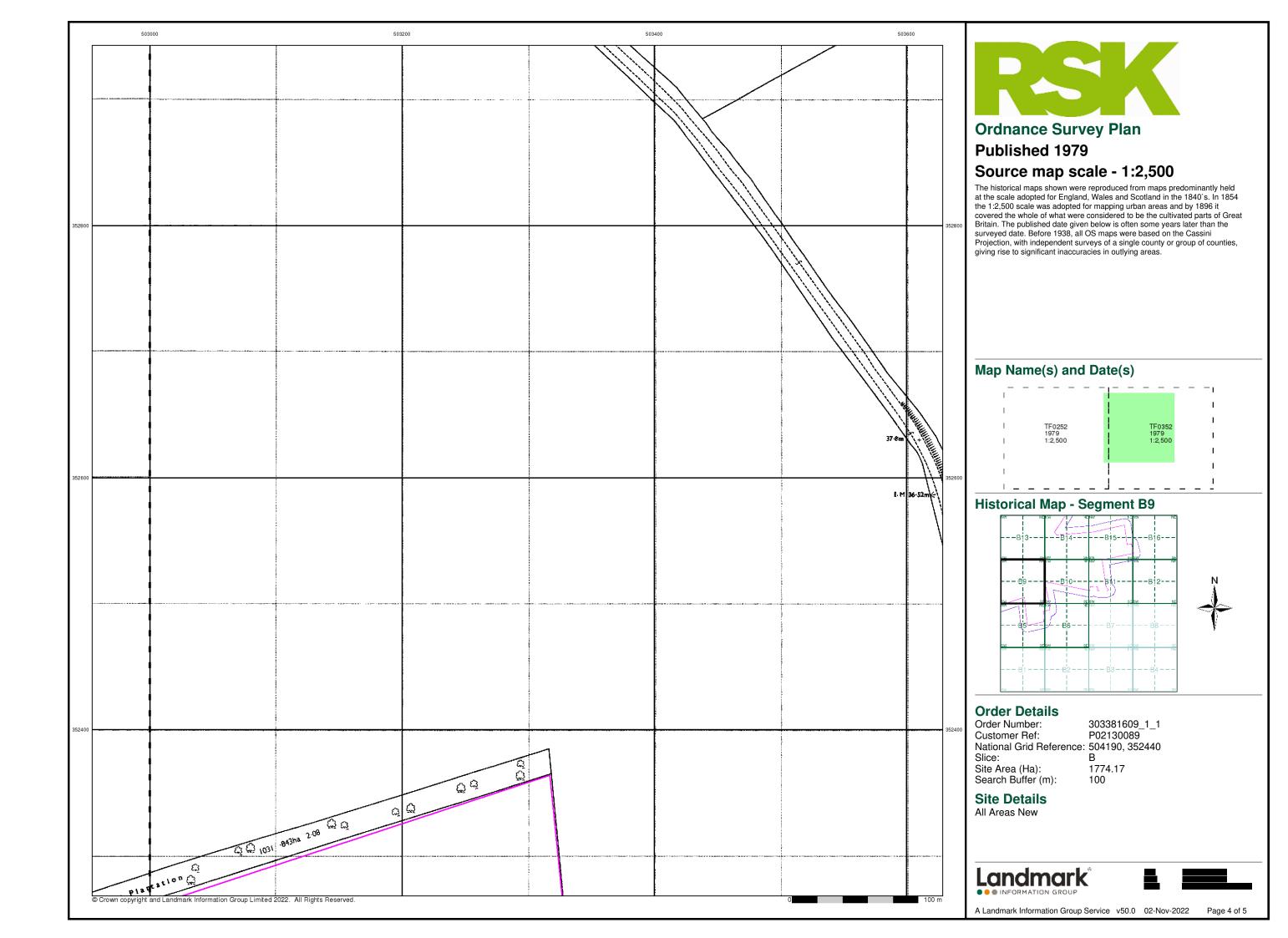


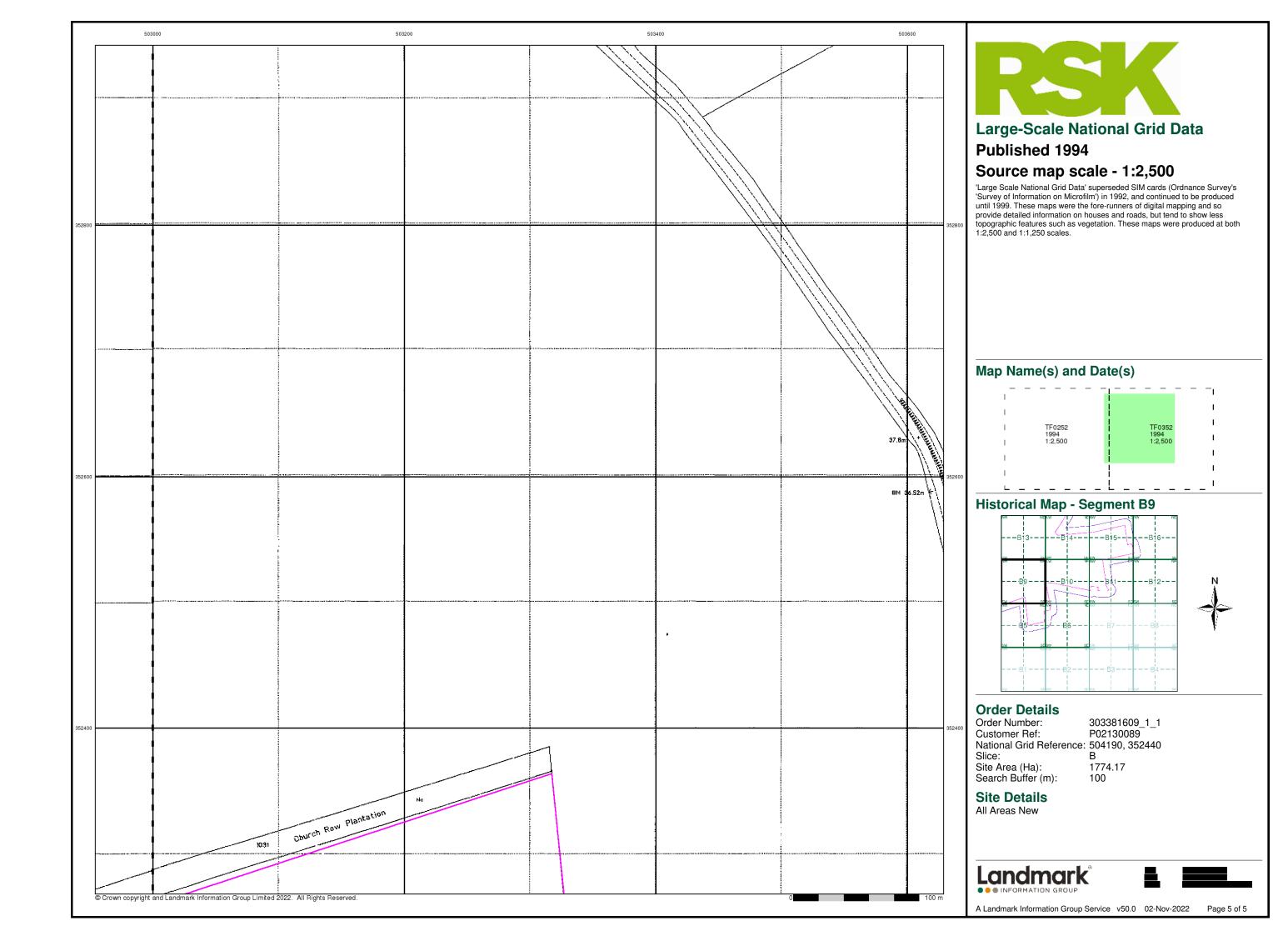


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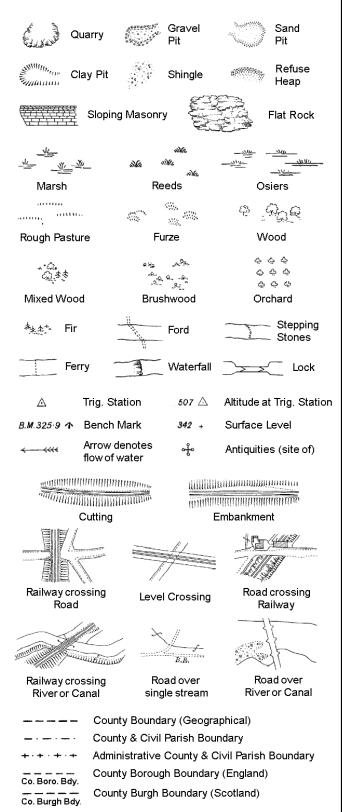








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

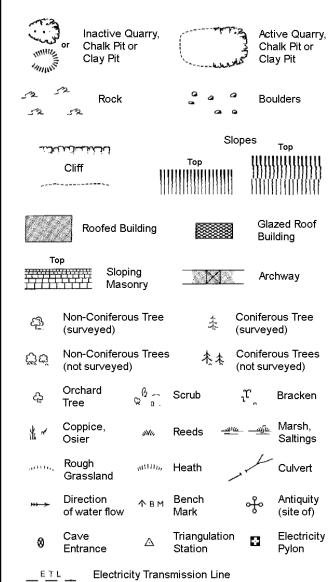
S.P

T.C.B

 $T_{T}$ 

Sl.

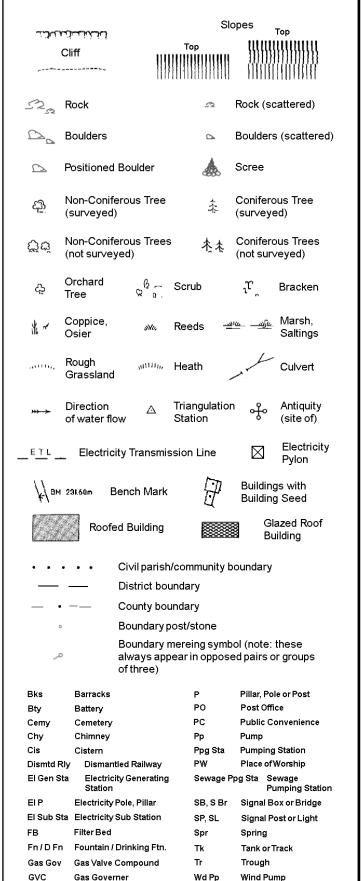
### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



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

вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

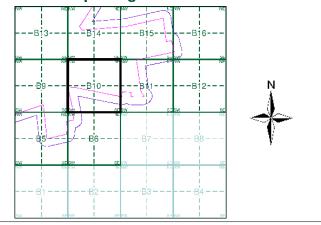
# 1:1,250



# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

# **Historical Map - Segment B10**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 504190, 352440 Slice:

Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

Wks

**Guide Post** 

Mile Post or Mile Stone

Manhole

MP, MS

1774.17 Site Area (Ha): Search Buffer (m): 100

# **Site Details**

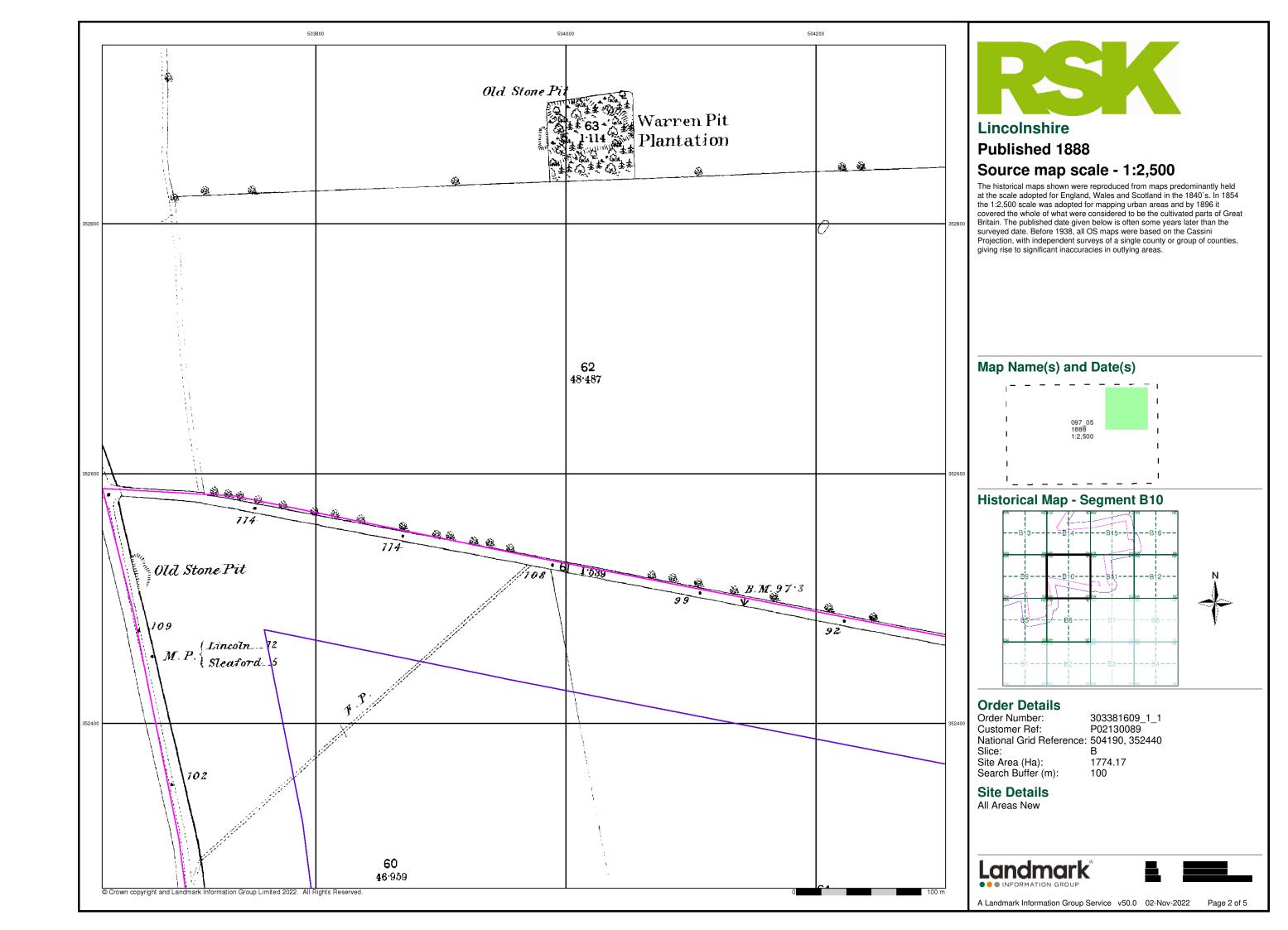
All Areas New

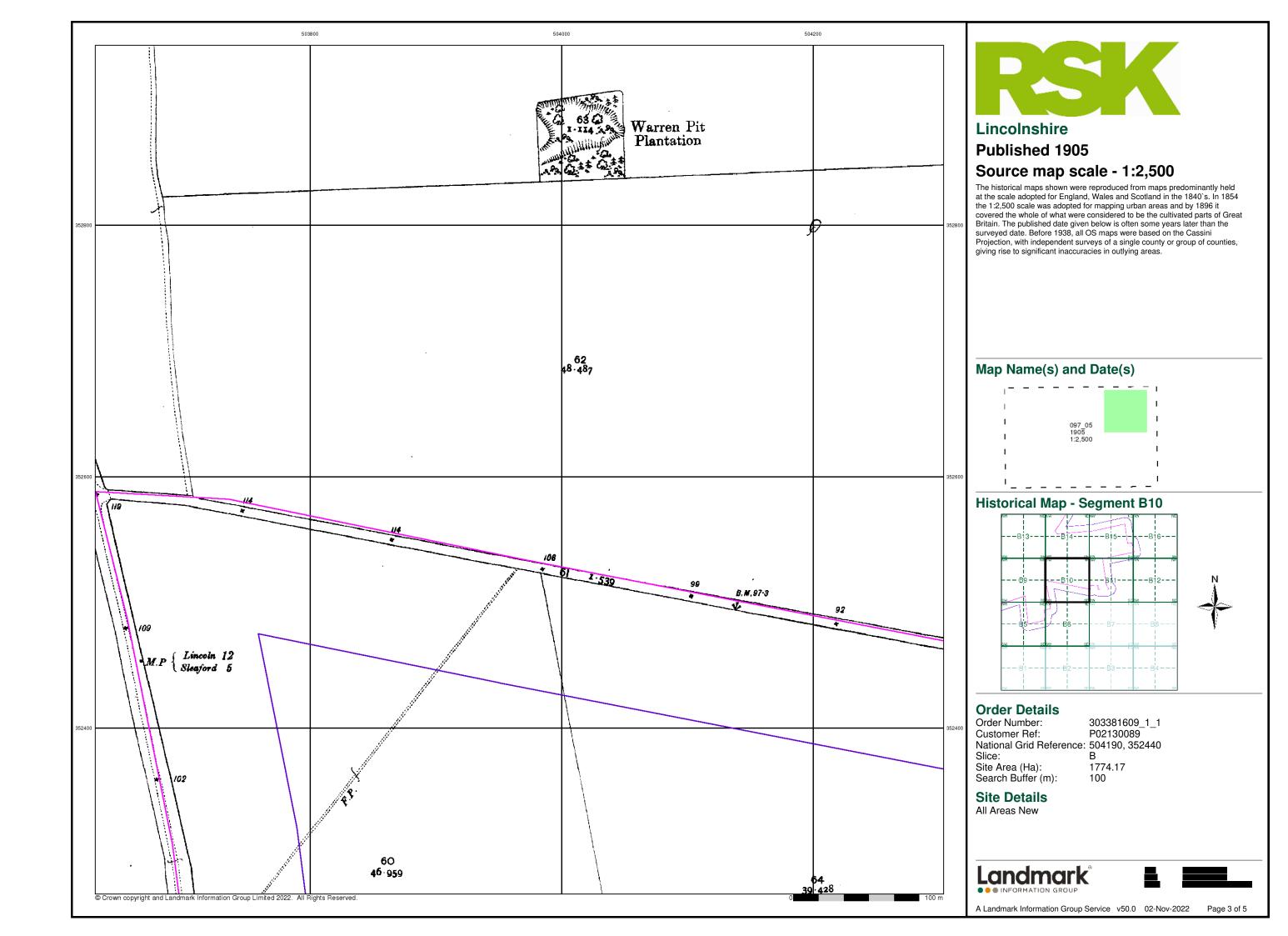


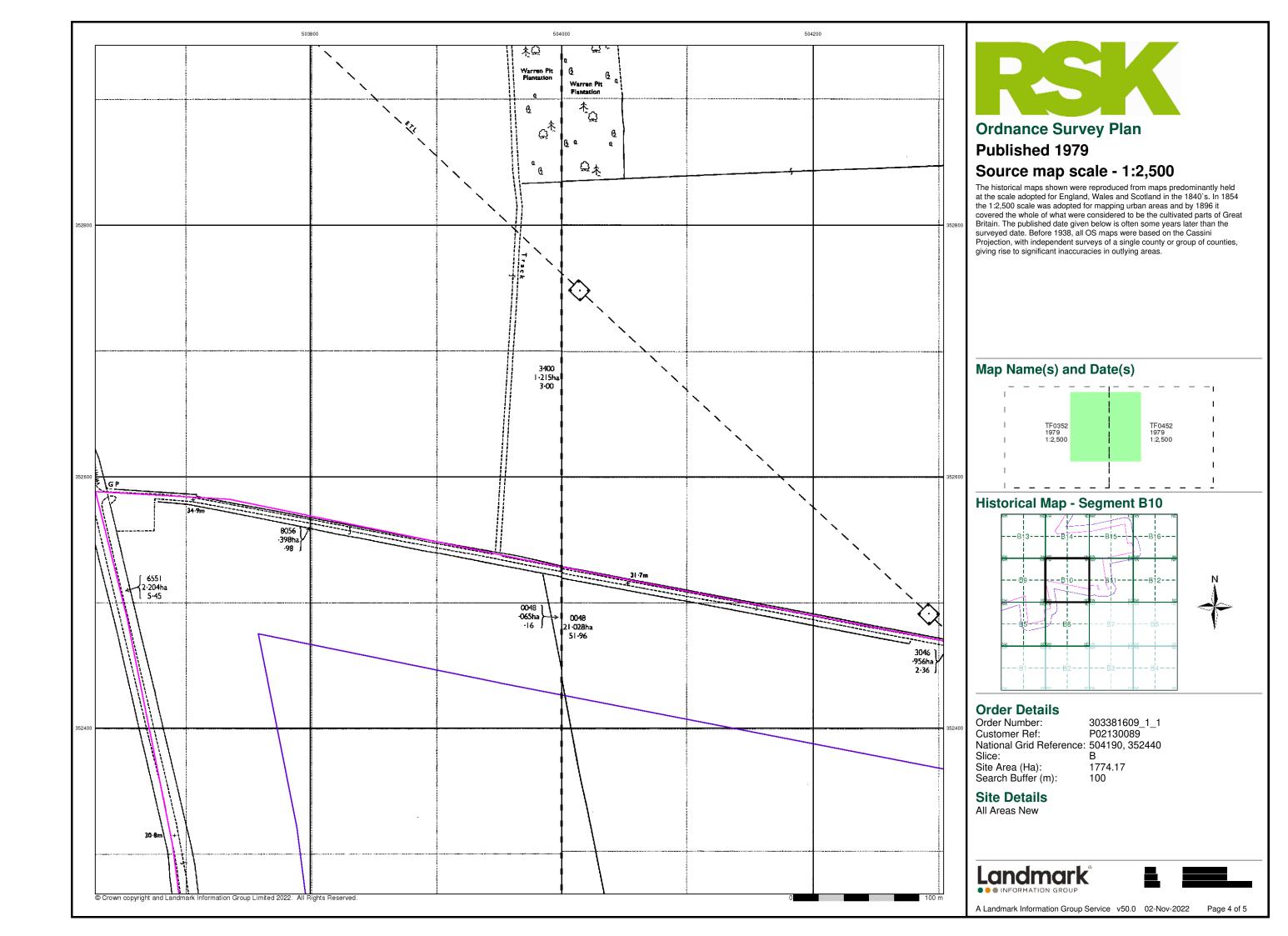


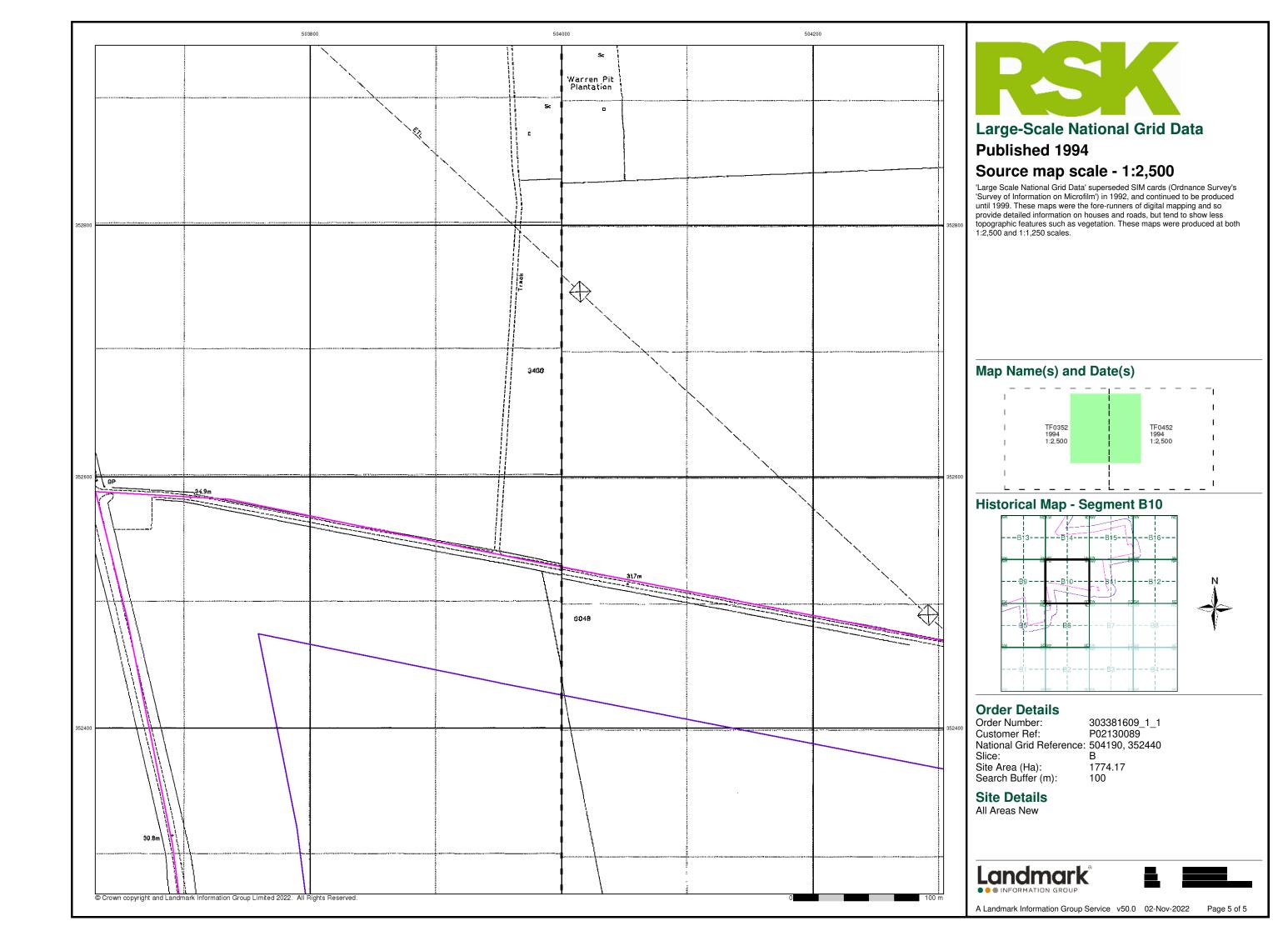


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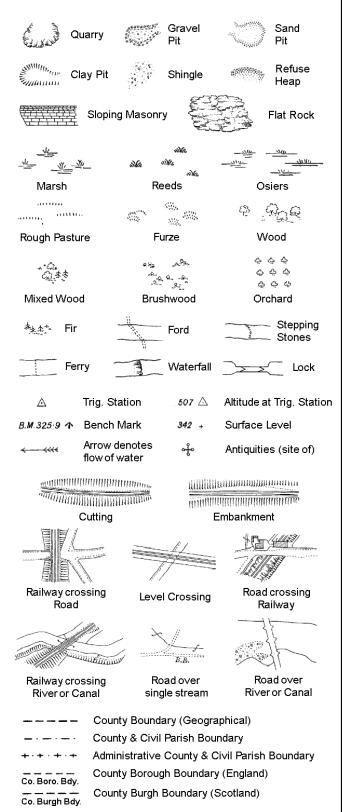








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

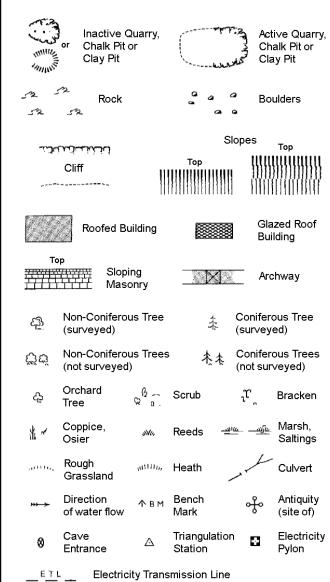
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



24	Symbol ma mereing cha	• .	where boundary
вн	Beer House	Р	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
EIP	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
Н	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

Wd Pp

Wind Pump

County Boundary (Geographical)

Admin. County or County Bor. Boundary

GVC

Gas Governer

Mile Post or Mile Stone

**Guide Post** 

Manhole

Wd Pp

Wks

Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

County & Civil Parish Boundary

Civil Parish Boundary

London Borough Boundary

L B Bdy

NTL

Normal Tidal Limit

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

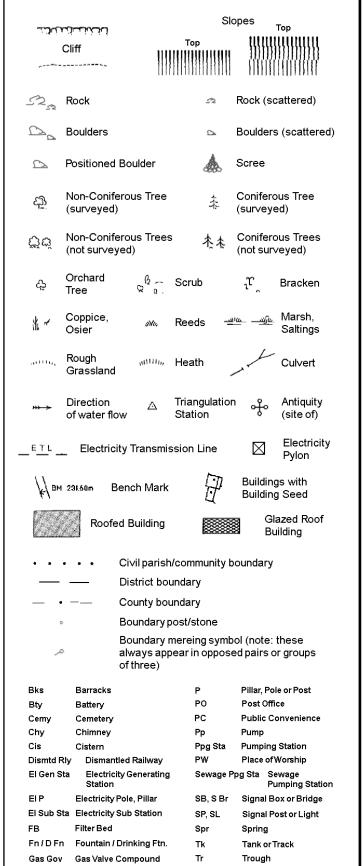
S.P

T.C.B

Sl.

 $T_T$ 

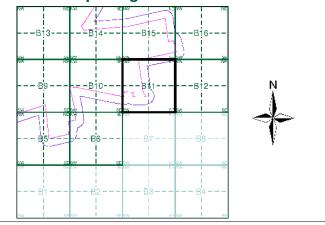
# 1:1,250



# **Historical Mapping & Photography included:**

Scale	Date	Pg
1:2,500	1888	2
1:2,500	1905	3
1:2,500	1979	4
1:2,500	1994	5
	1:2,500 1:2,500 1:2,500	1:2,500 1888 1:2,500 1905 1:2,500 1979

# **Historical Map - Segment B11**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 504190, 352440 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 100

# **Site Details**

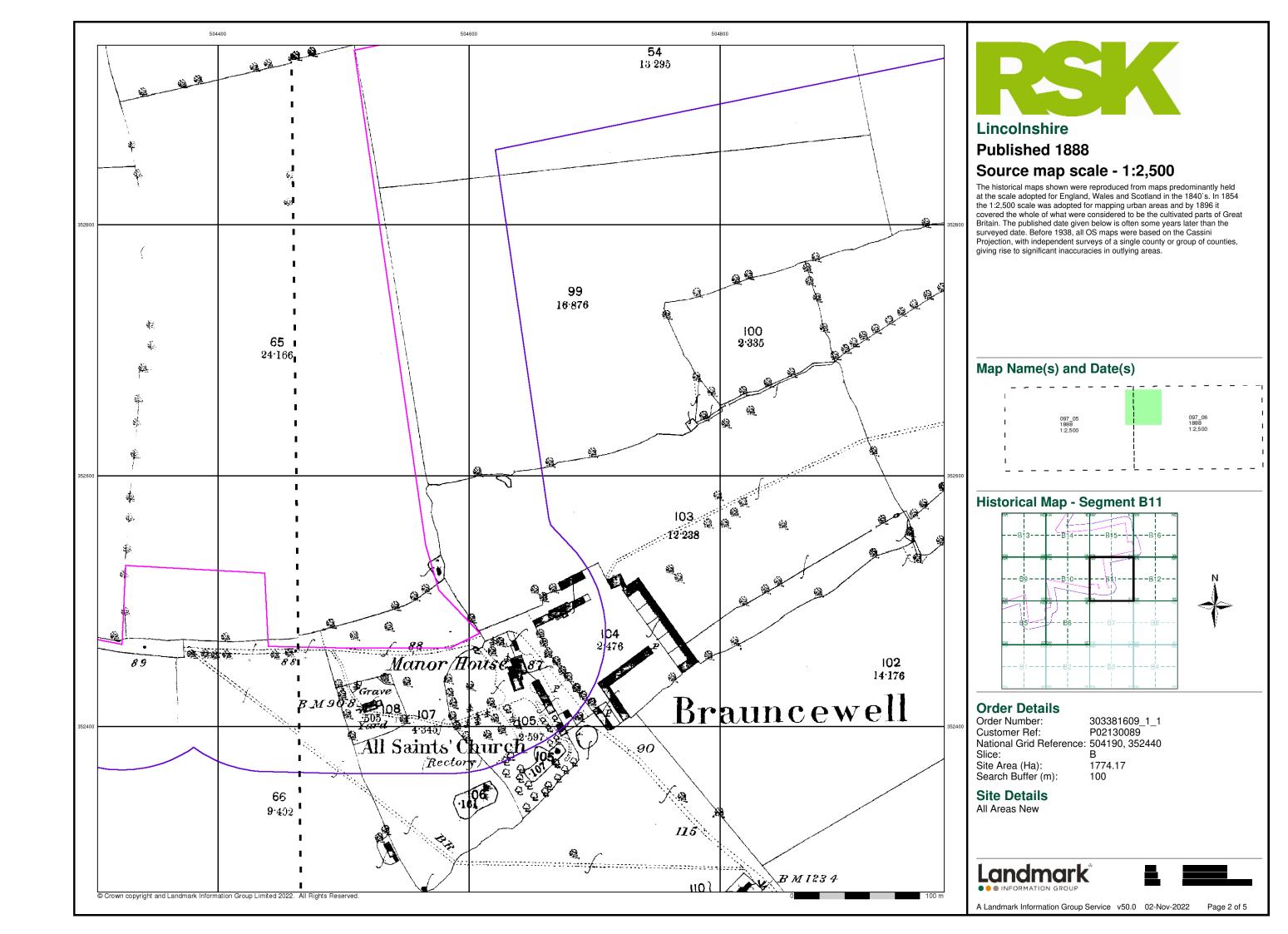
All Areas New

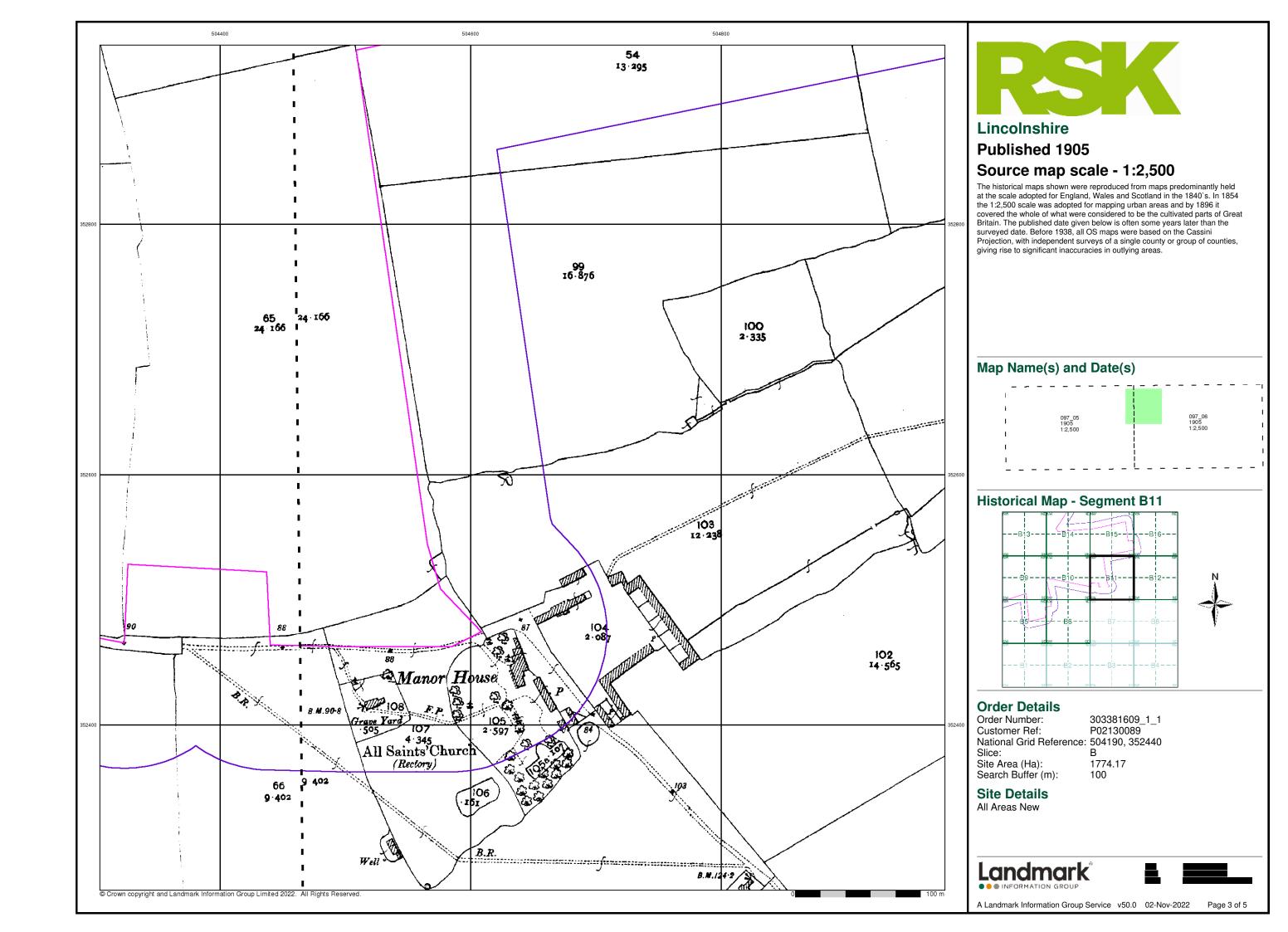


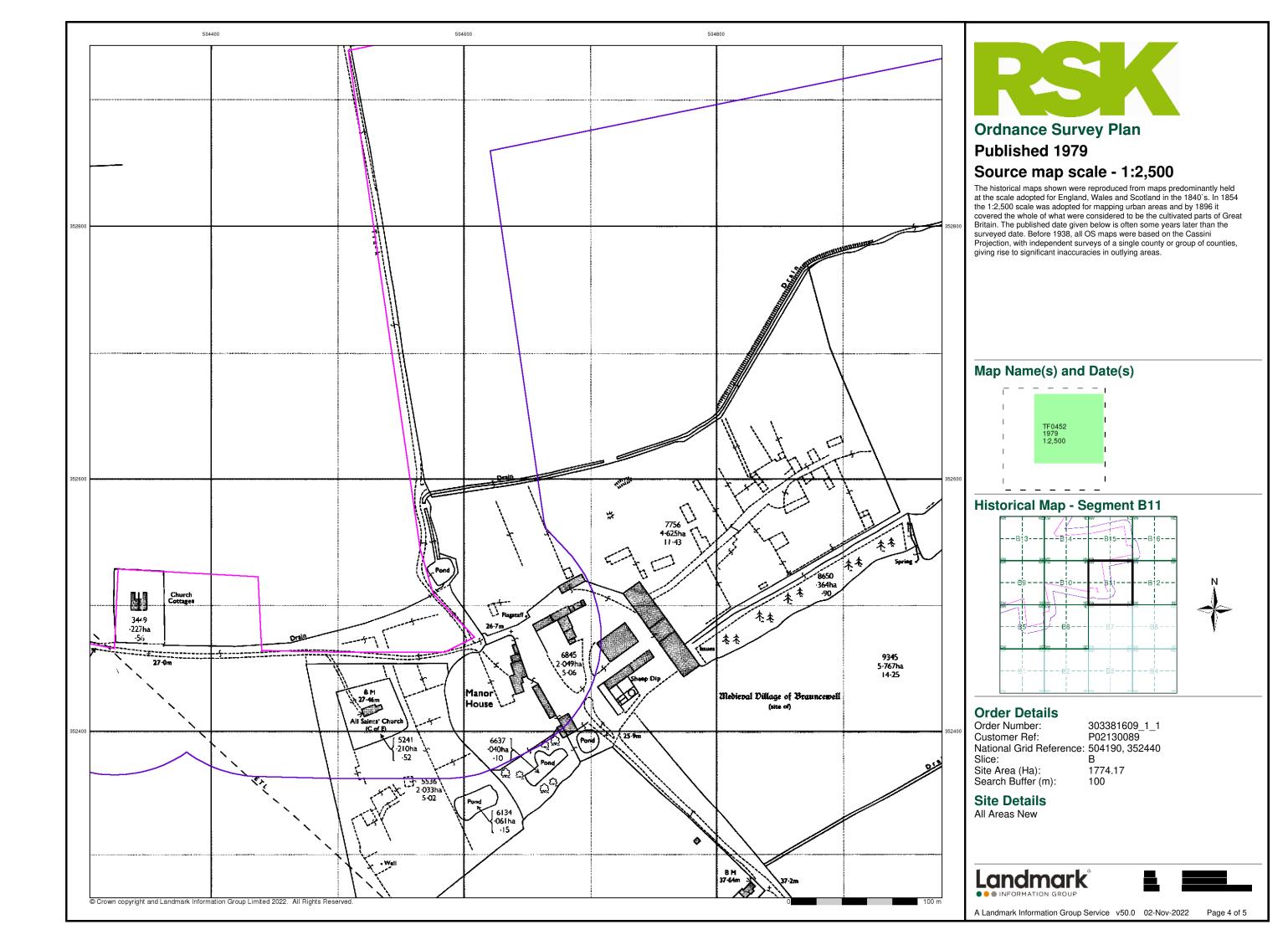


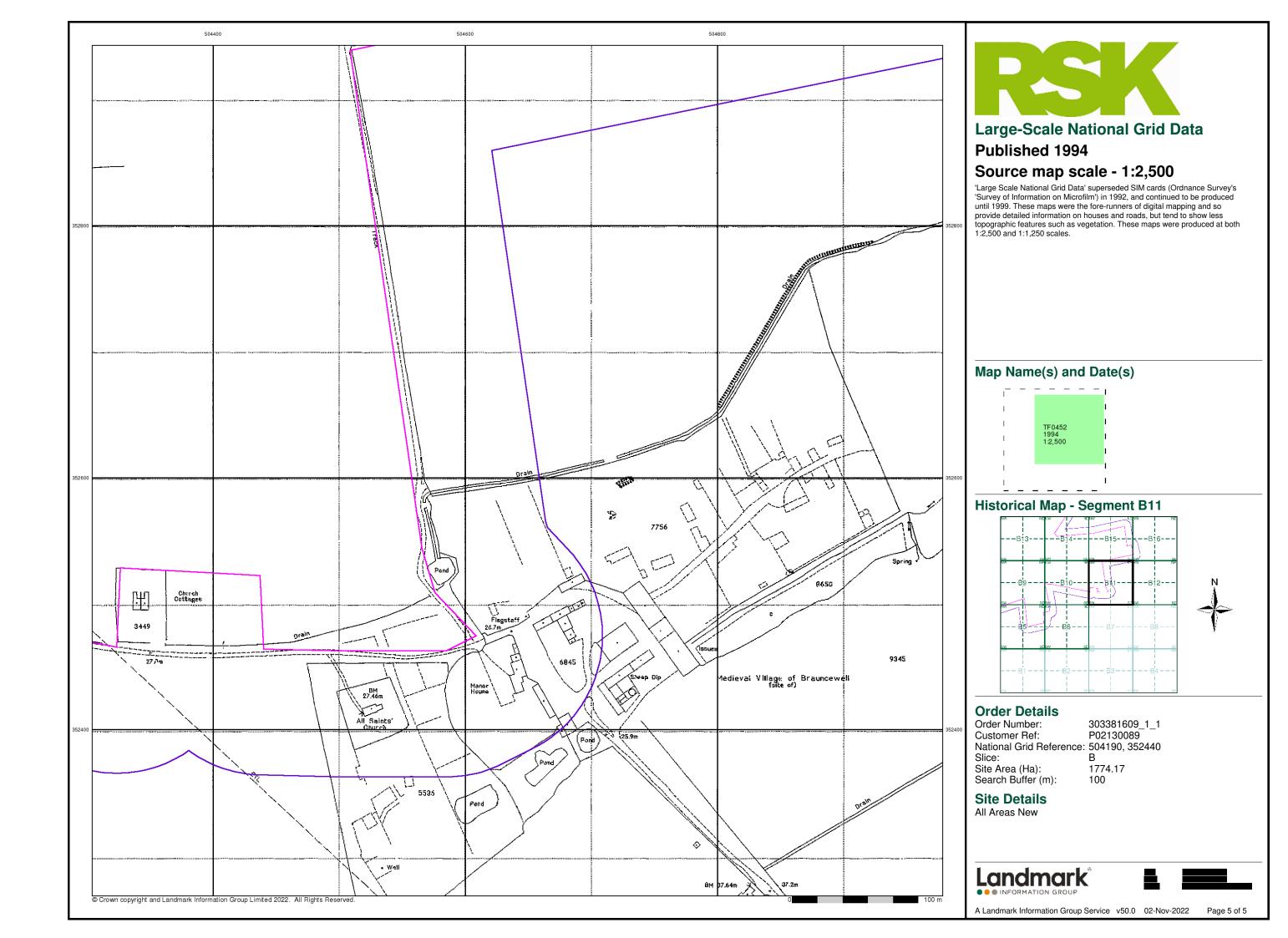


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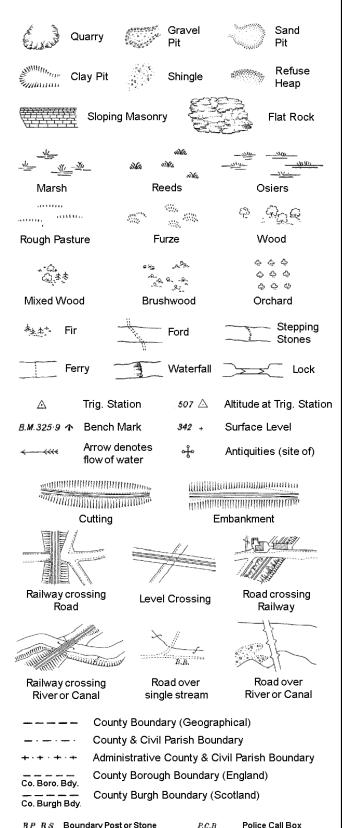








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



Pump

Sluice

Spring

Trough

Well

Signal Post

Telephone Call Box

MS

NTL

Normal Tidal Limit

S.P

Sl.

 $T_T$ 

T.C.B

B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

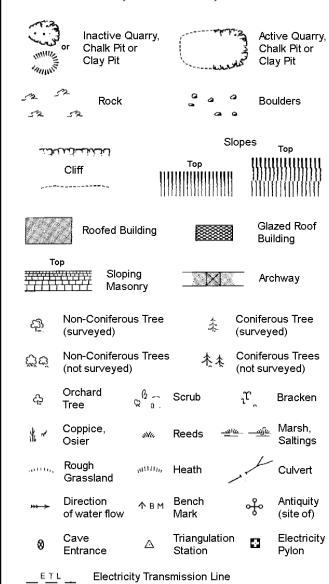
Mile Stone

M.P.M.R Mooring Post or Ring

Electricity Pylor

Guide Post or Board

### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 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

mereing changes

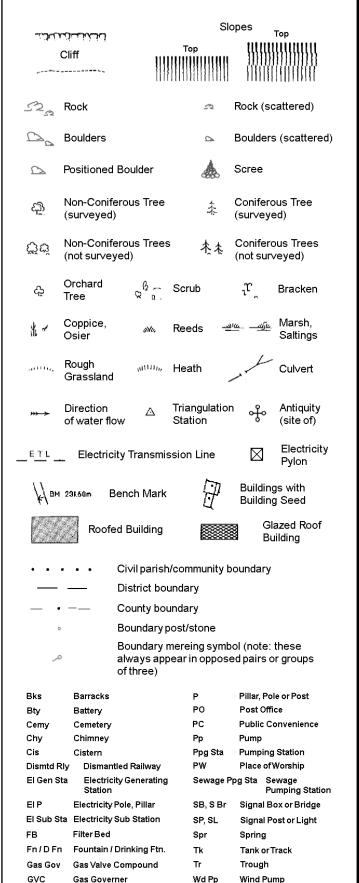
Symbol marking point where boundary

Beer House Pillar, Pole or Post **Boundary Post or Stone** РО Post Office Capstan, Crane **Public Convenience** PH Chv Chimney **Public House** D Fn Drinking Fountain Pump EIP Electricity Pillar or Post SB, SB Signal Box or Bridge FAP Fire Alarm Pillar SP. SL Signal Post or Light FB Foot Bridge Spring Tank or Track Guide Post Τk Hydrant or Hydraulic TCB Telephone Call Box LC Level Crossing TCP Telephone Call Post Manhole Trough MP Mile Post or Mooring Post Wr Pt. W Water Point, Water Tap

Wd Pp

Wind Pump

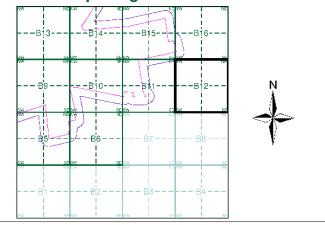
# 1:1,250



# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

# **Historical Map - Segment B12**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 504190, 352440 Slice:

Site Area (Ha):

1774.17 Search Buffer (m): 100

### **Site Details** All Areas New

Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

Wks

**Guide Post** 

Mile Post or Mile Stone

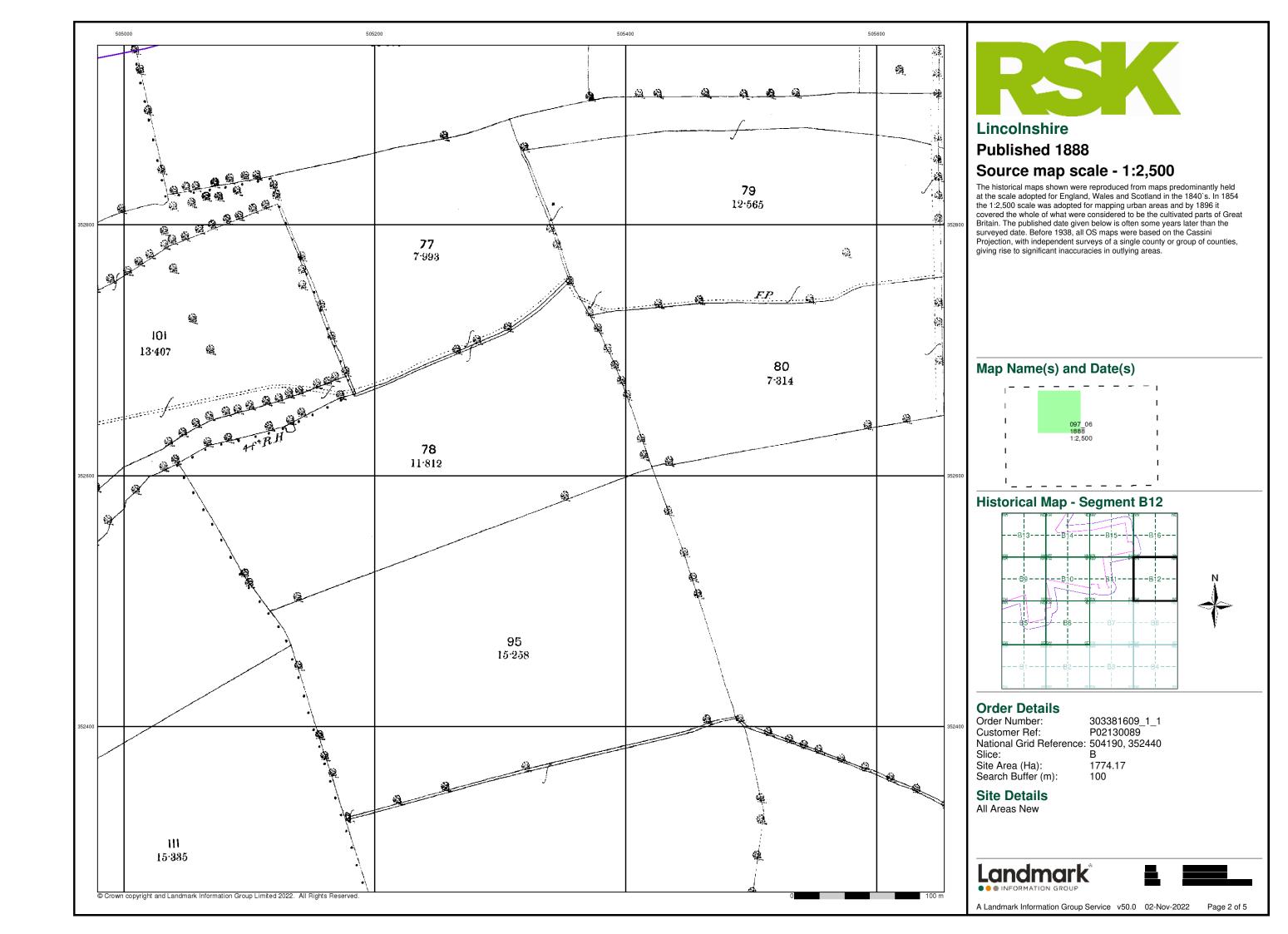
Manhole

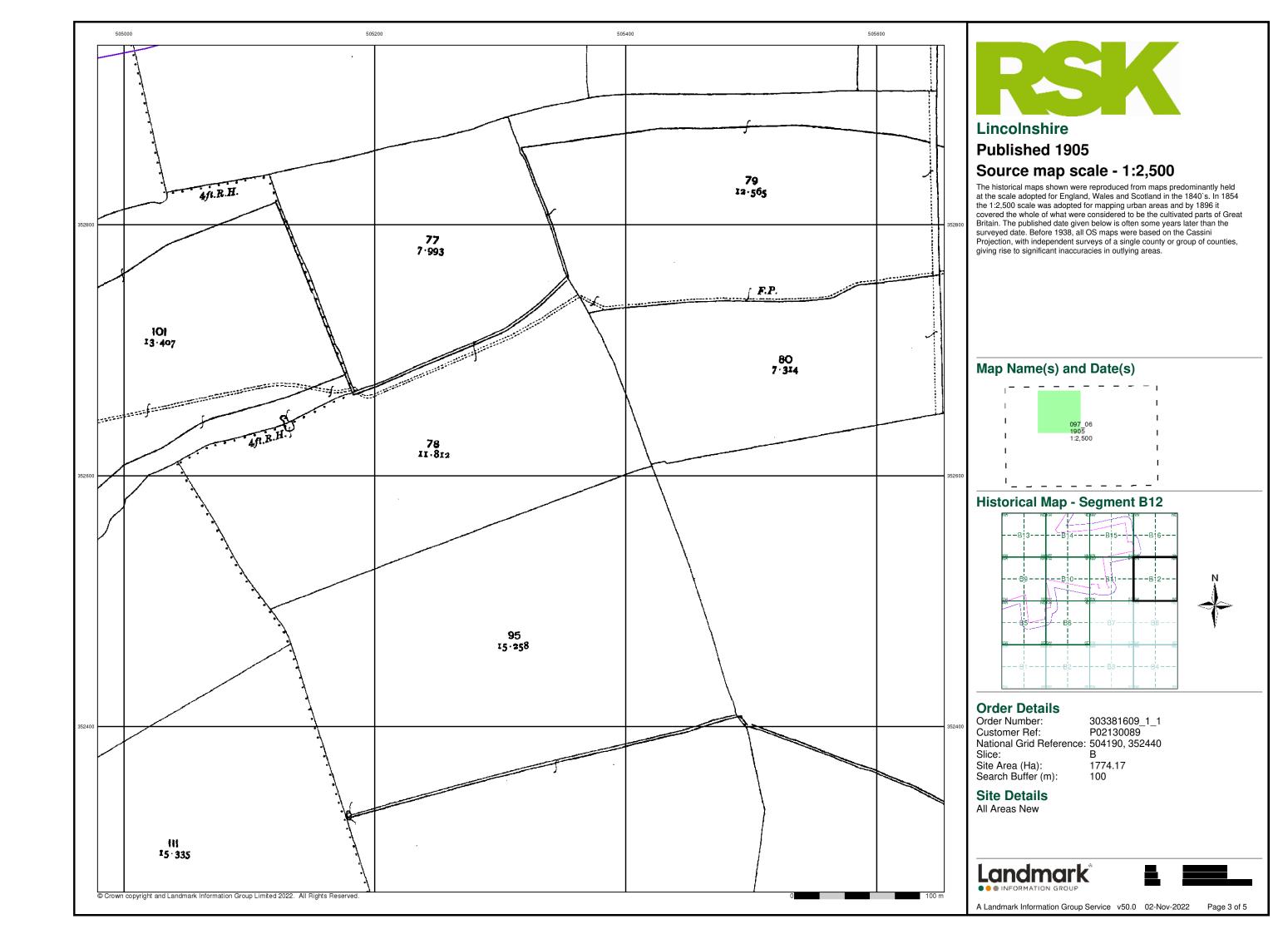


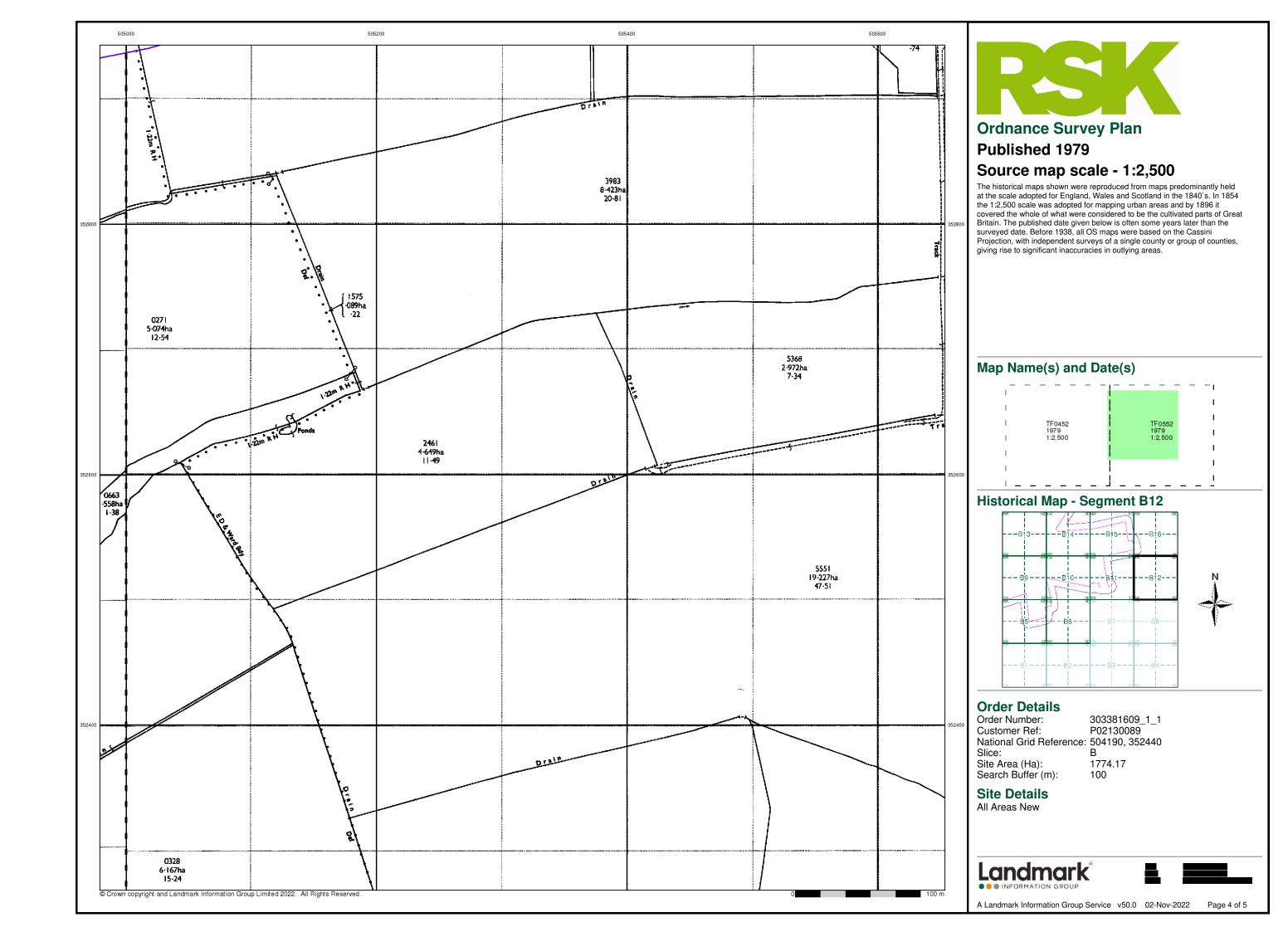


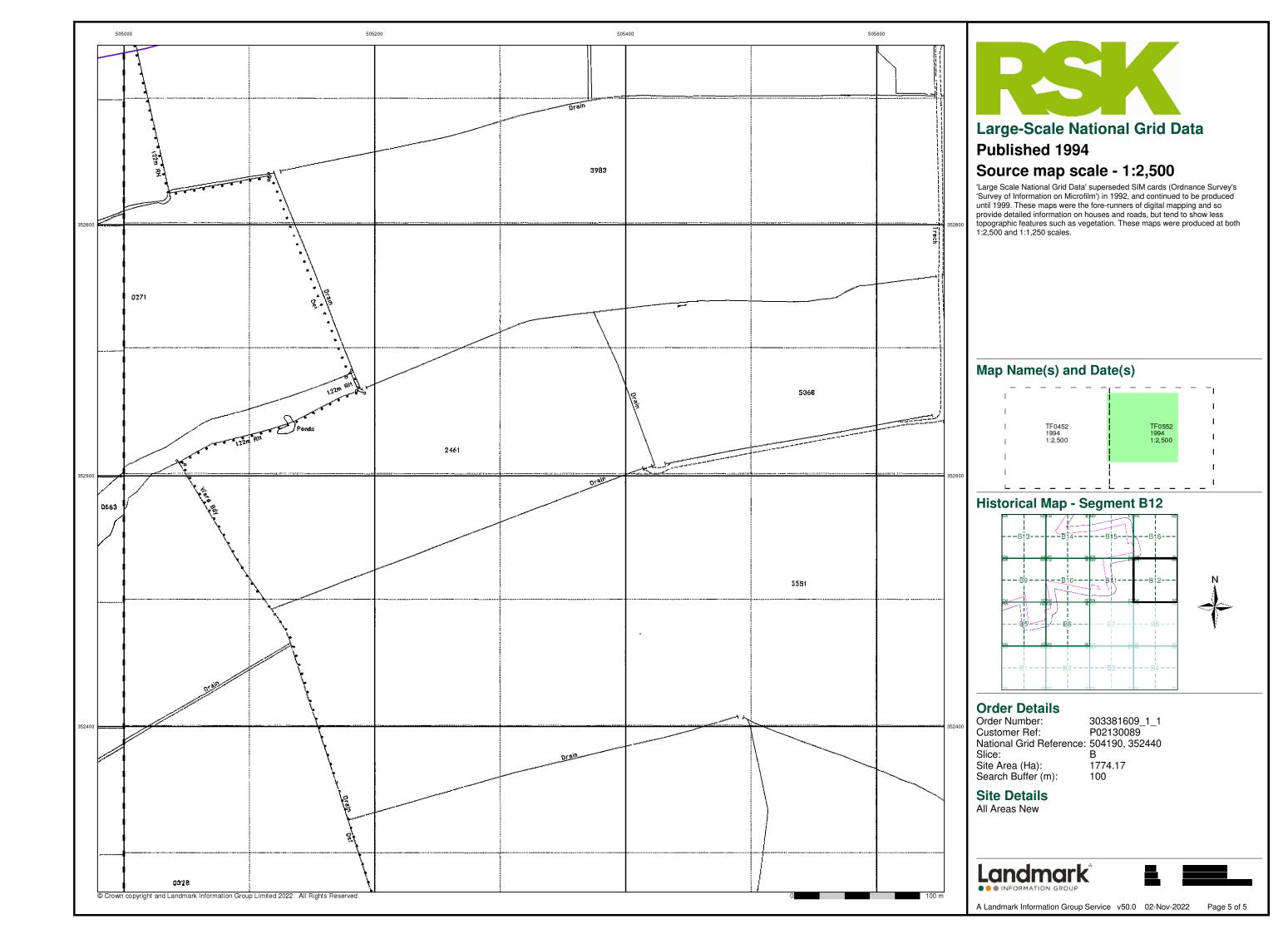


Page 1 of 5

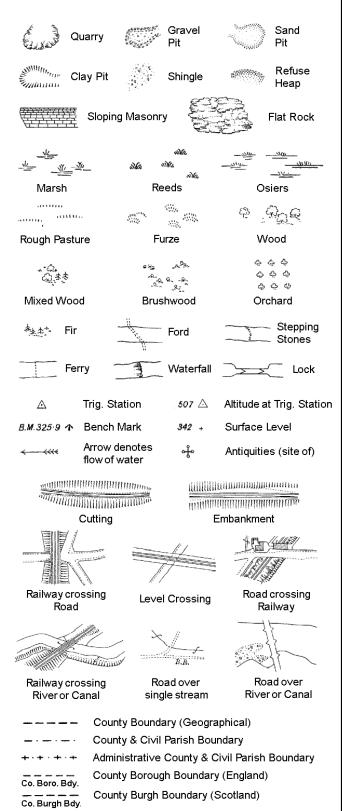








## **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

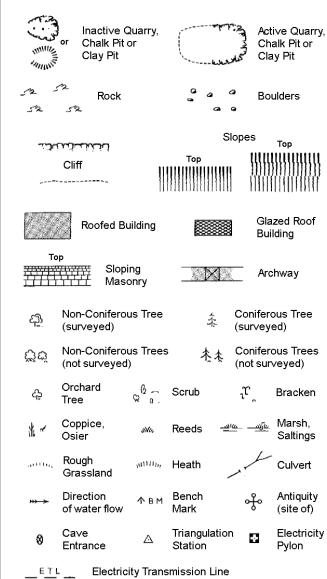
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

## Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



PA	mereing cha	anges		
вн	Beer House	Р	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	
EIP	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	
Н	Hydrant or Hydraulic	тсв	Telephone Call Box	
LC	Level Crossing	TCP	Telephone Call Post	
MH	Manhole	Tr	Trough	
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap	
MS	Mile Stone	W	Well	
NTL	Normal Tidal Limit	Wd Pp	Wind Pump	

County Boundary (Geographical)

Admin. County or County Bor. Boundary

Symbol marking point where boundary

County & Civil Parish Boundary

Civil Parish Boundary

London Borough Boundary

L B Bdy

34,0

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

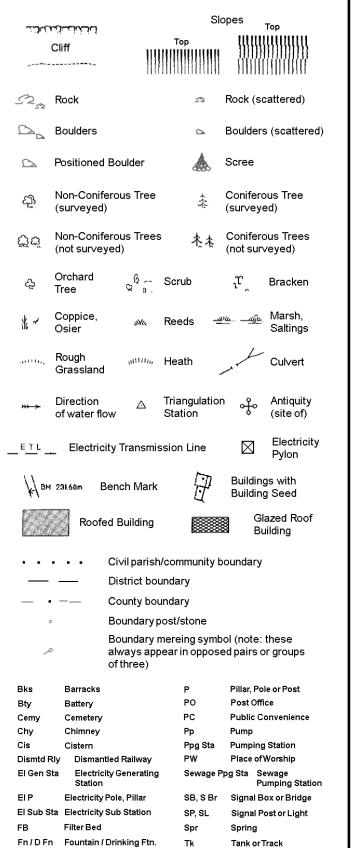
S.P

T.C.B

Sl.

 $T_T$ 

# 1:1,250



Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

Tr

Wd Pp

Wks

Trough

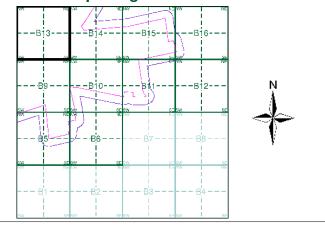
Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment B13**



## **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 504190, 352440 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 100

## **Site Details** All Areas New

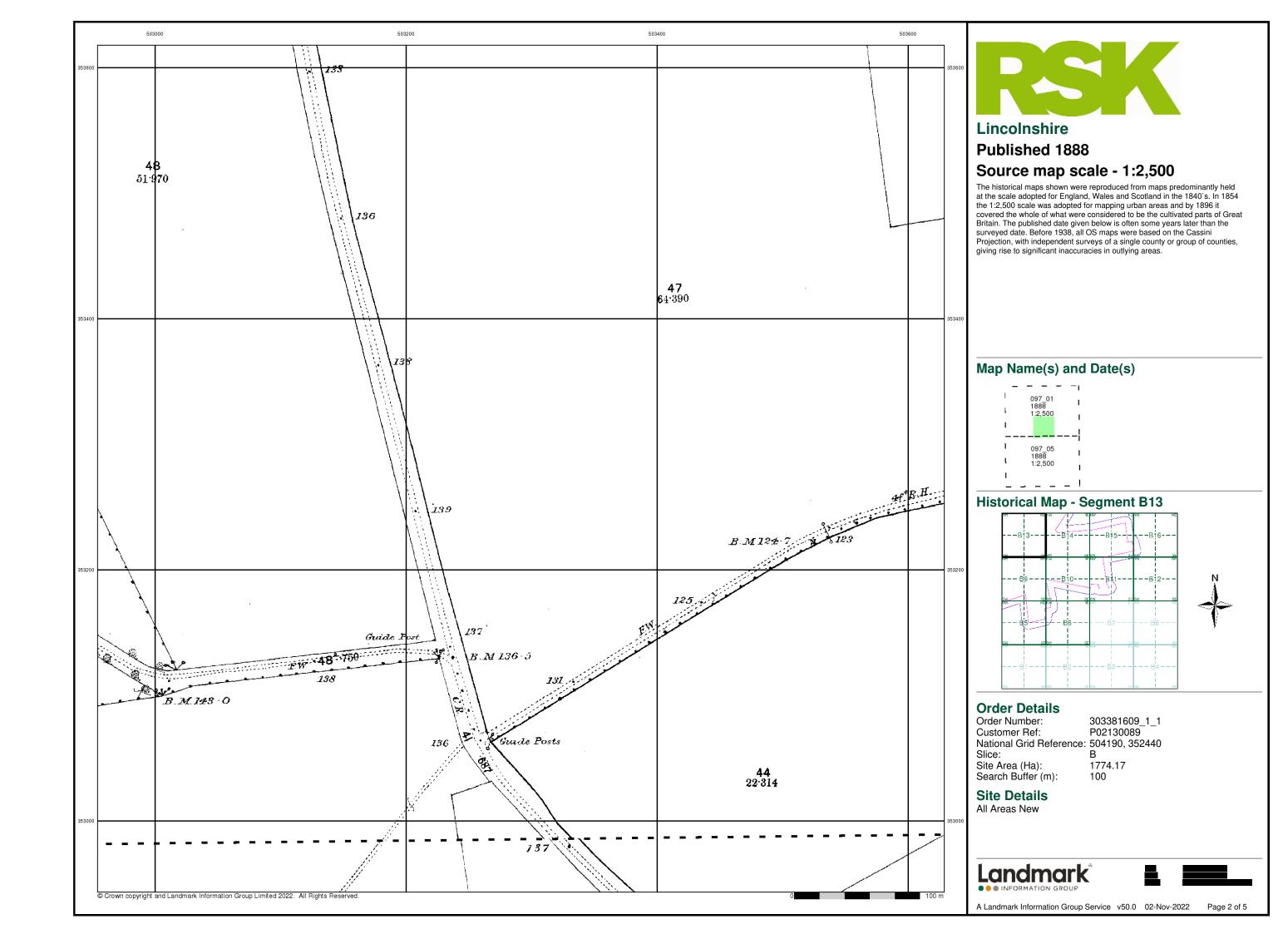


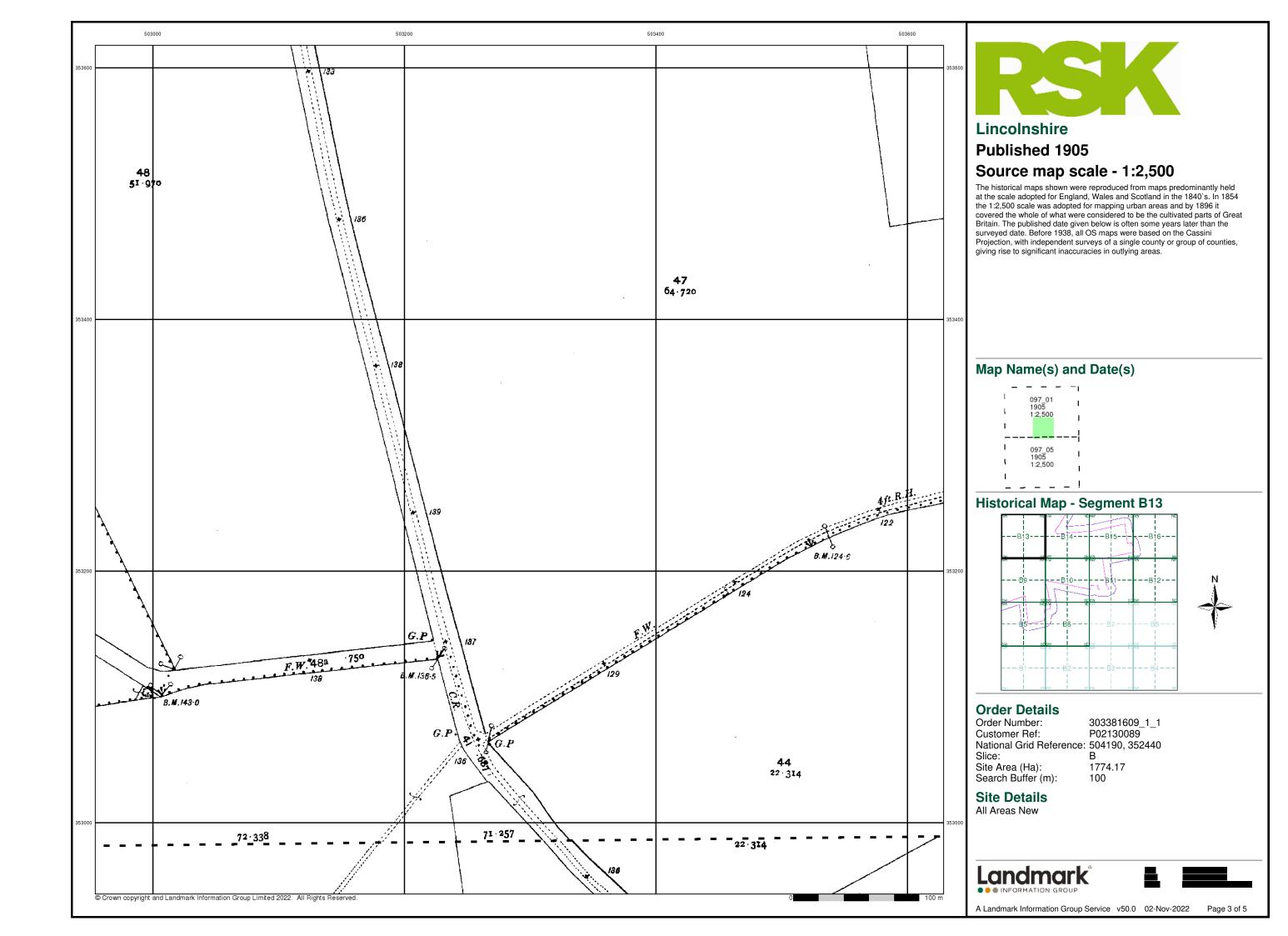


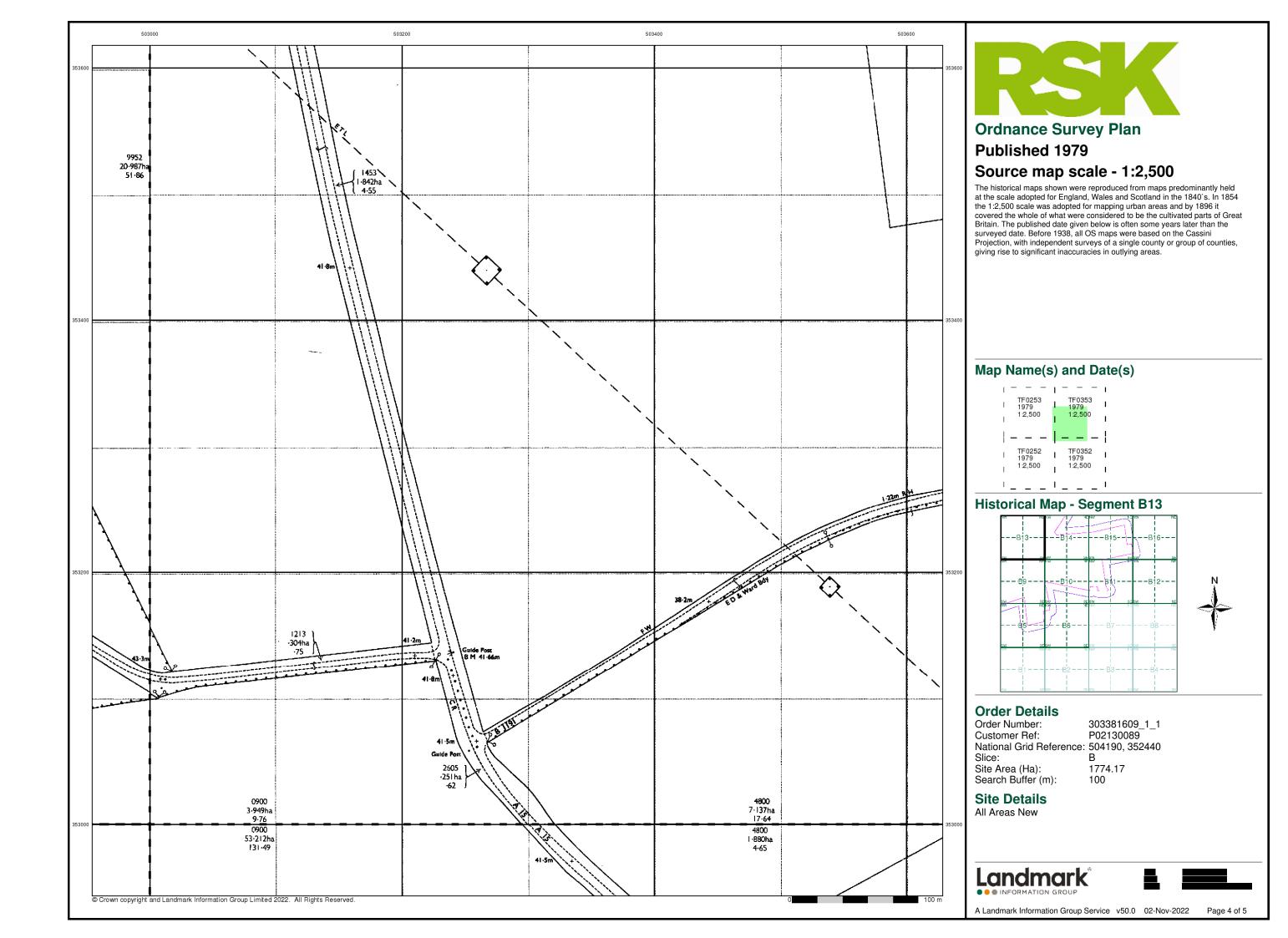


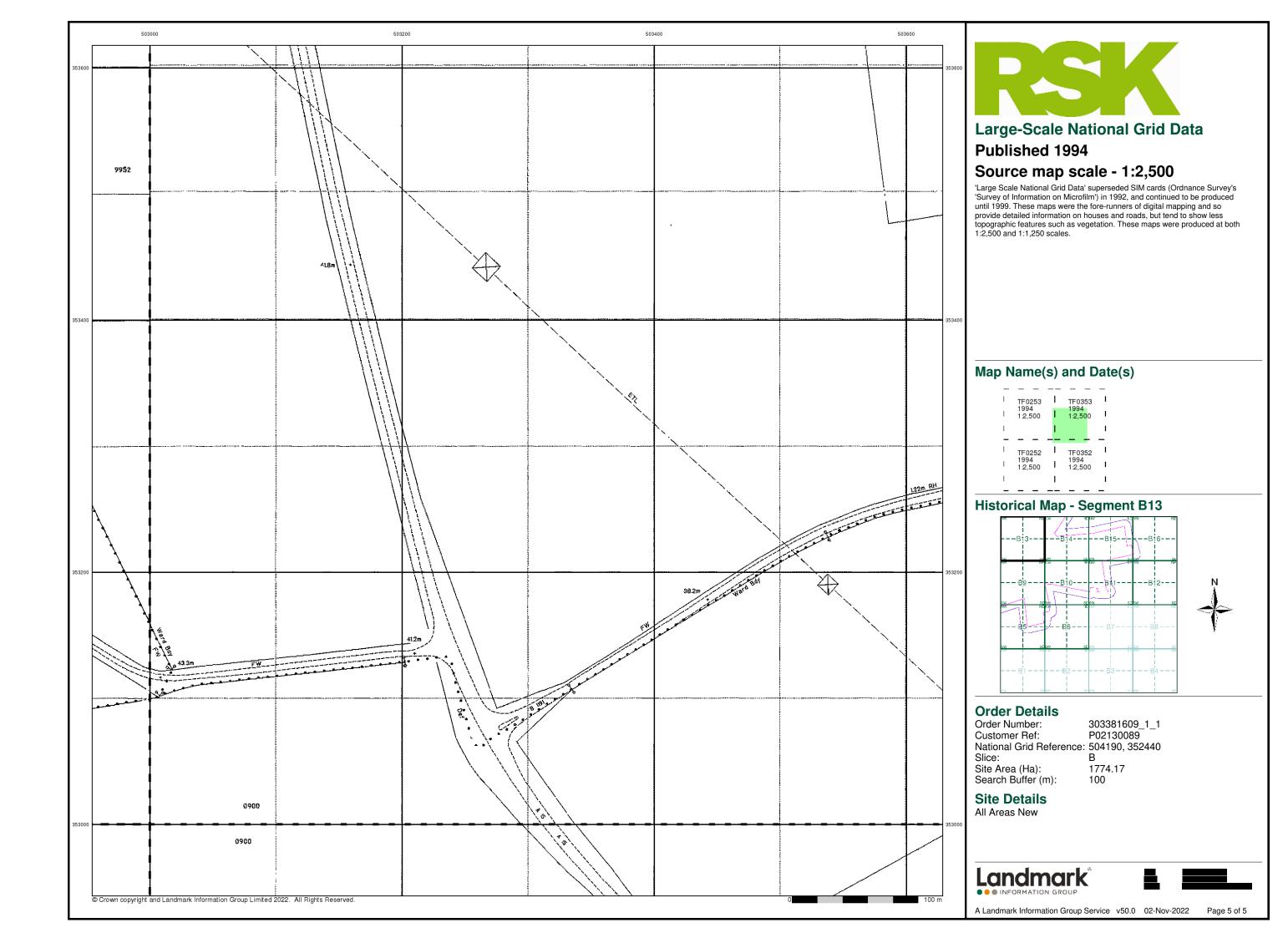
Page 1 of 5

A Landmark Information Group Service v50.0 02-Nov-2022

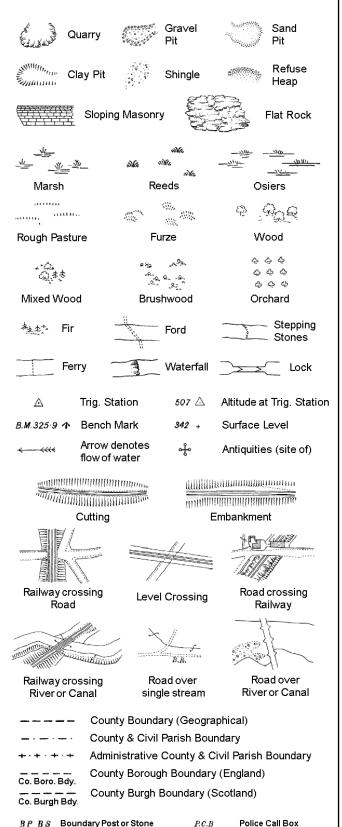








## **Ordnance Survey County Series and Ordnance Survey Plan 1:2,500**



Pump

Sluice

Spring

Trough

Well

Signal Post

Telephone Call Box

S.P

Sl.

Tr:

B.R.

EP

F.B.

Bridle Road

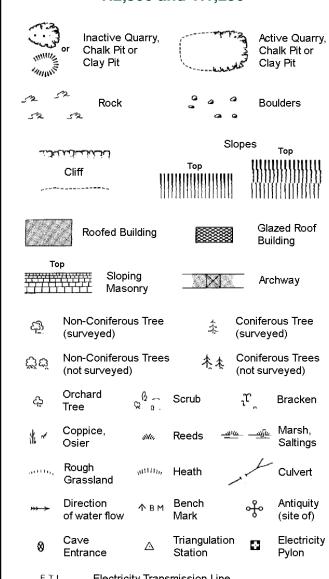
Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

## Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



## **Electricity Transmission Line**

	<b>,</b>
	County Boundary (Geographical)
· — · — ·	County & Civil Parish Boundary
	Civil Parish Boundary
· <del></del> -	Admin. County or County Bor. Boundary
L B Bdy	London Borough Boundary
	Symbol marking point where boundary mereing changes

вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

# 1:1,250

رأعلاند	لانتخابان		SI	opes	Тор
	Cliff	1111	Top 		
,				MIII	
520	Rock		22	Rock (so	cattered)
$ \mathcal{Q}^{\nabla} $	Boulders		Δ	Boulders	s (scattered)
	Positioned	l Boulder		Scree	
<u> 원</u>	Non-Conif (surveyed	erous Tree )	\$	Coniferd (surveye	ous Tree ed)
ζ̈́σ́	Non-Conif (not surve	erous Trees yed)	杰杰	Coniferd (not sur	ous Trees /eyed)
Ą.	Orchard Tree	Q 6 a.	Scrub	$^{j}\!\mathcal{L}^{}$	Bracken
* ~	Coppice, Osier	sNu,	Reeds 🛥	11cc — <u>11</u> Jcc	Marsh, Saltings
arrin,	Rough Grassland	mum,	Heath	1	Culvert
<del>**&gt; &gt;</del>	Direction of water fl	Δ ow	Triangulation Station	n 4	Antiquity (site of)
_ETL_	_ Electric	ity Transmis	sion Line	$\boxtimes$	Electricity Pylon
\ <del> </del>	231.6ûm [	Bench Mark		Building Building	
	Roof	ed Building		28	azed Roof uilding
		Ci∨il parish.	community l	ooundary	
		District bou	ındary		
_ •		County bou	ındary		
¢	,	Boundary p	ost/stone		
٨	>		nereing symb ear in oppos		
Bks	Barracks		Р	Pillar, Po	le or Post
Bty	Battery		PO	Post Offi	ce
Cemy	Cemetery		PC	Public C	onvenience
Chy	Chimney		Pp	Pump	
Cis	Cistern		Ppg Sta	Pumping	
Dismtd F	•	tled Railway	PW	Place of	
El Gen S	ta Electric Station	ity Generating	Sewage F		ewage umping Station
EIP	Electricity	Pole, Pillar	SB, S Br	Signal B	ox or Bridge
El Sub S	ta Electricity	Sub Station	SP, SL	Signal P	ost or Light
FB	Filter Bed		Spr	Spring	

Fn / D Fn Fountain / Drinking Ftn.

Gas Governer

**Guide Post** 

Manhole

GVC

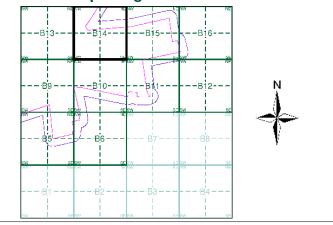
Gas Valve Compound

Mile Post or Mile Stone

## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment B14**



## **Order Details**

Order Number: 303381609\_1\_1 **Customer Ref:** P02130089 National Grid Reference: 504190, 352440 Slice:

Tank or Track

Trough

Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

Tr

Wd Pp

Wks

1774.17 Site Area (Ha): Search Buffer (m): 100

## **Site Details**

All Areas New

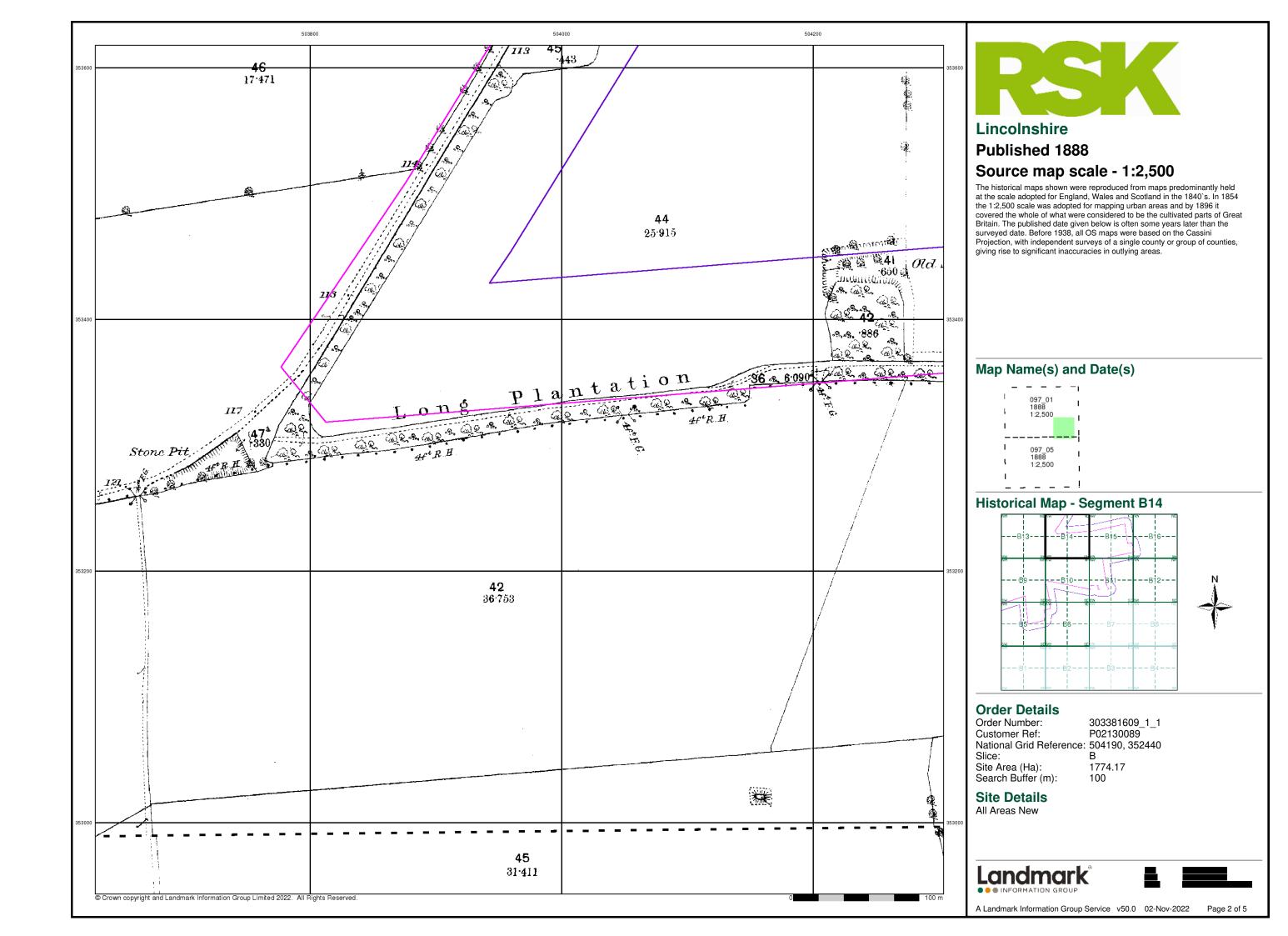


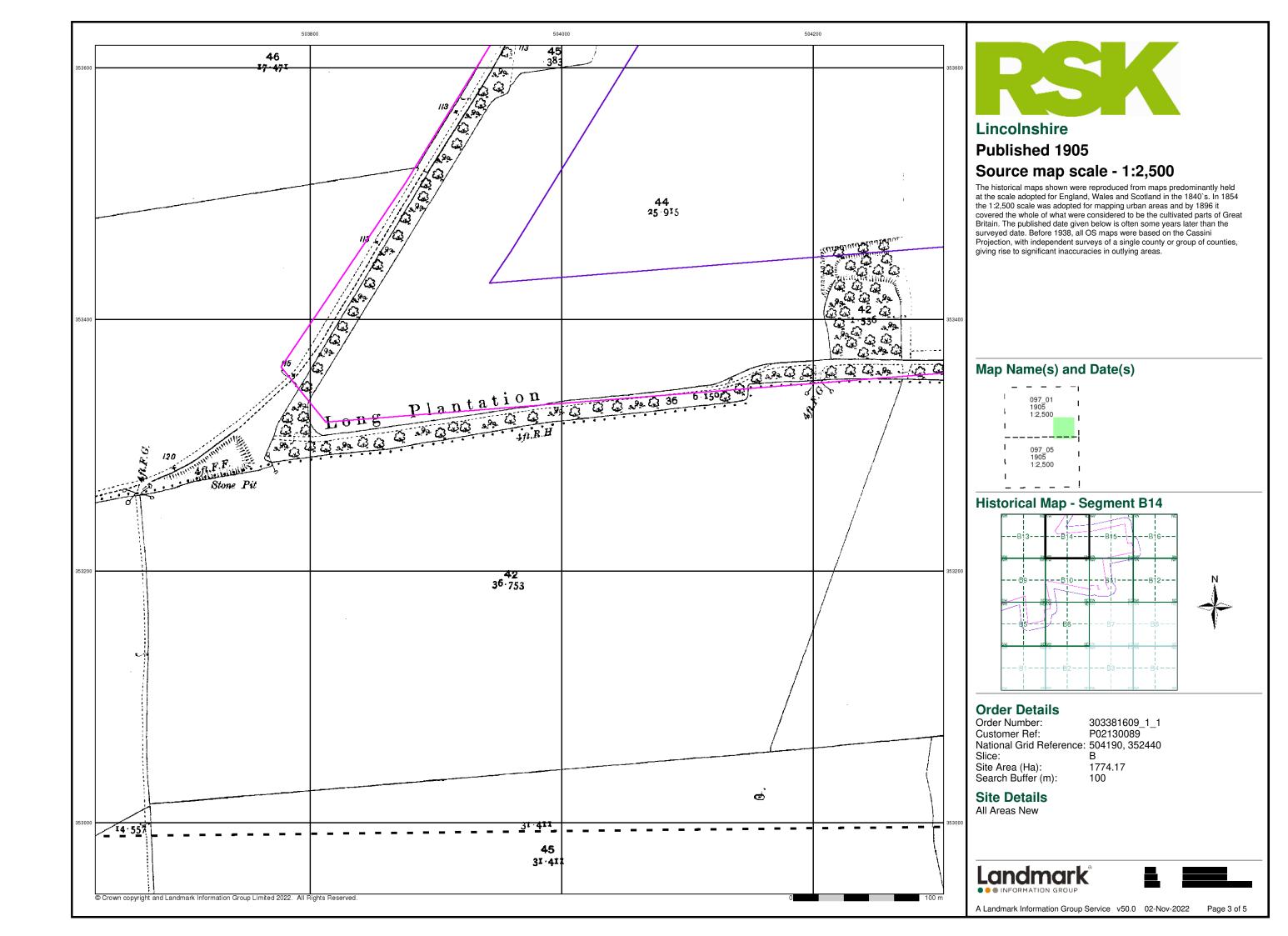


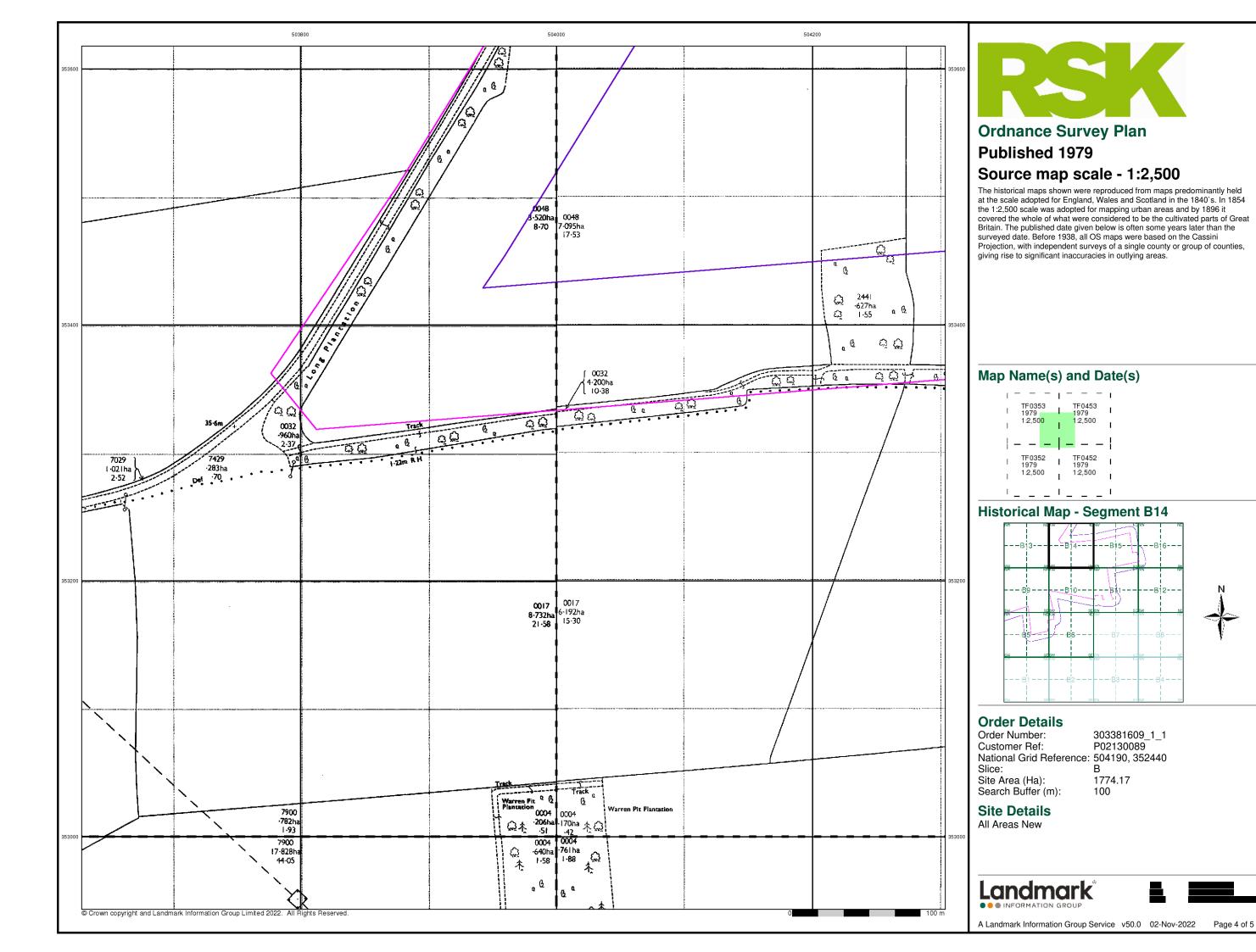


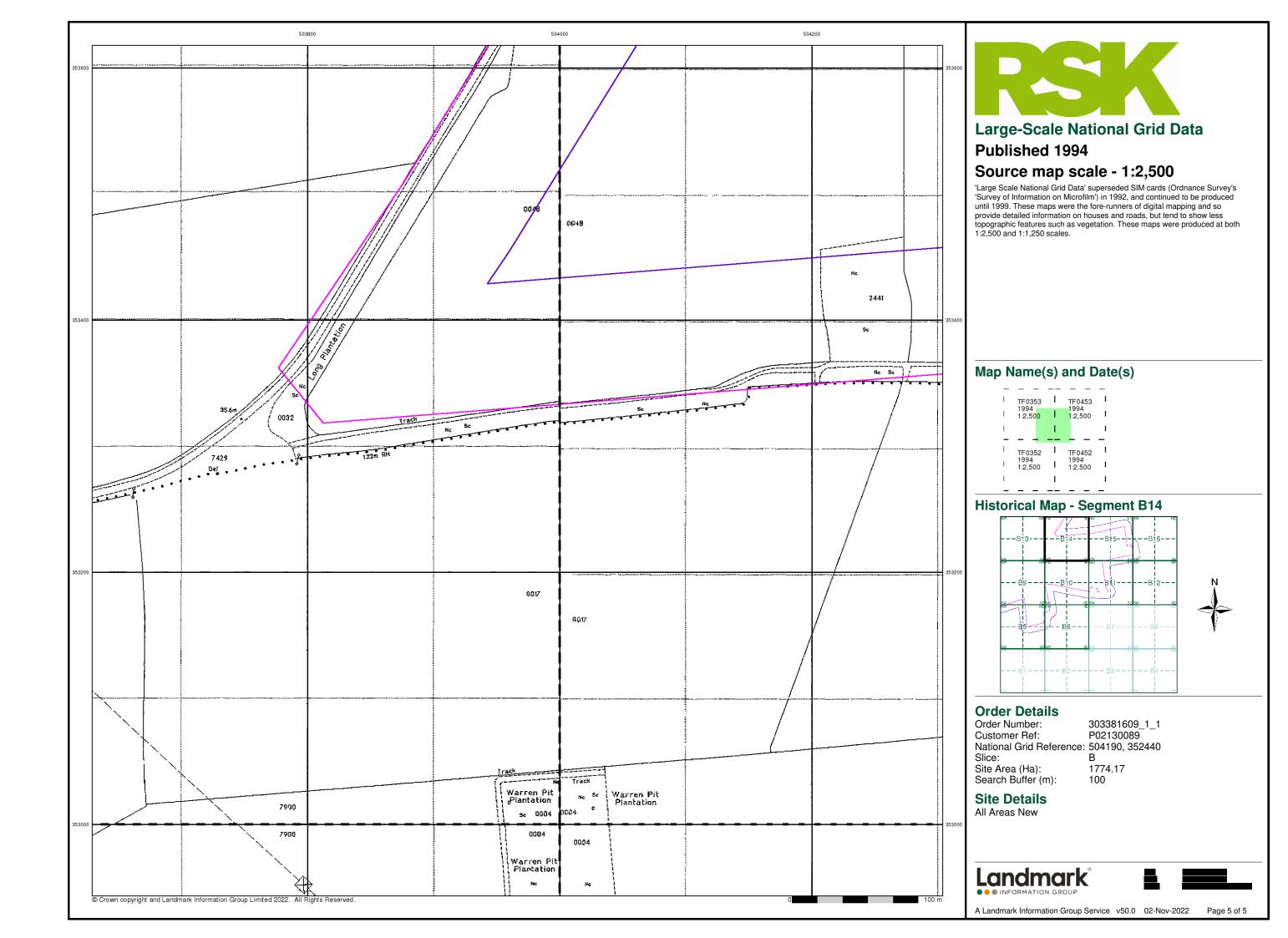
Page 1 of 5

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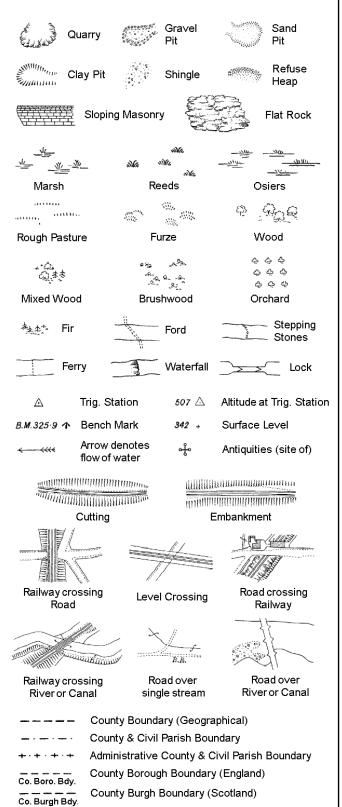








## **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

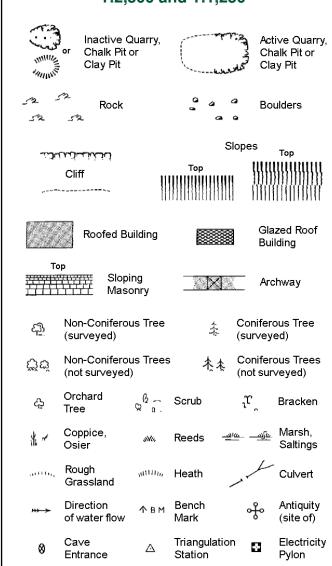
S.P

T.C.B

Sl.

Tr

## Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



**Electricity Transmission Line** 

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

вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

GVC

MP, MS

Gas Governer

Mile Post or Mile Stone

**Guide Post** 

Manhole

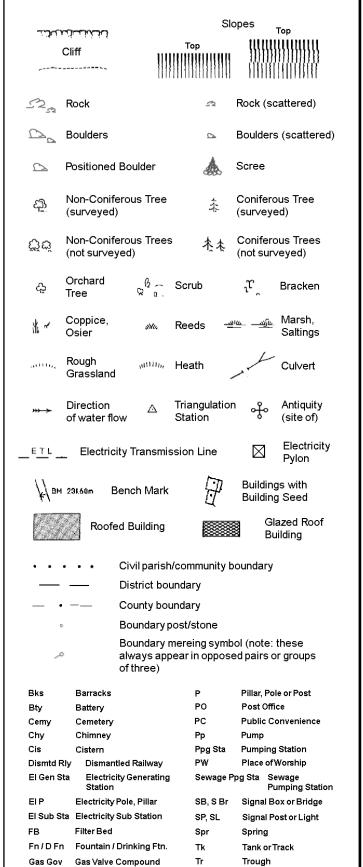
Wd Pp

Wks

Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

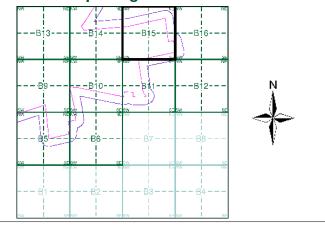
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## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment B15**



## **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 504190, 352440 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 100

## **Site Details** All Areas New

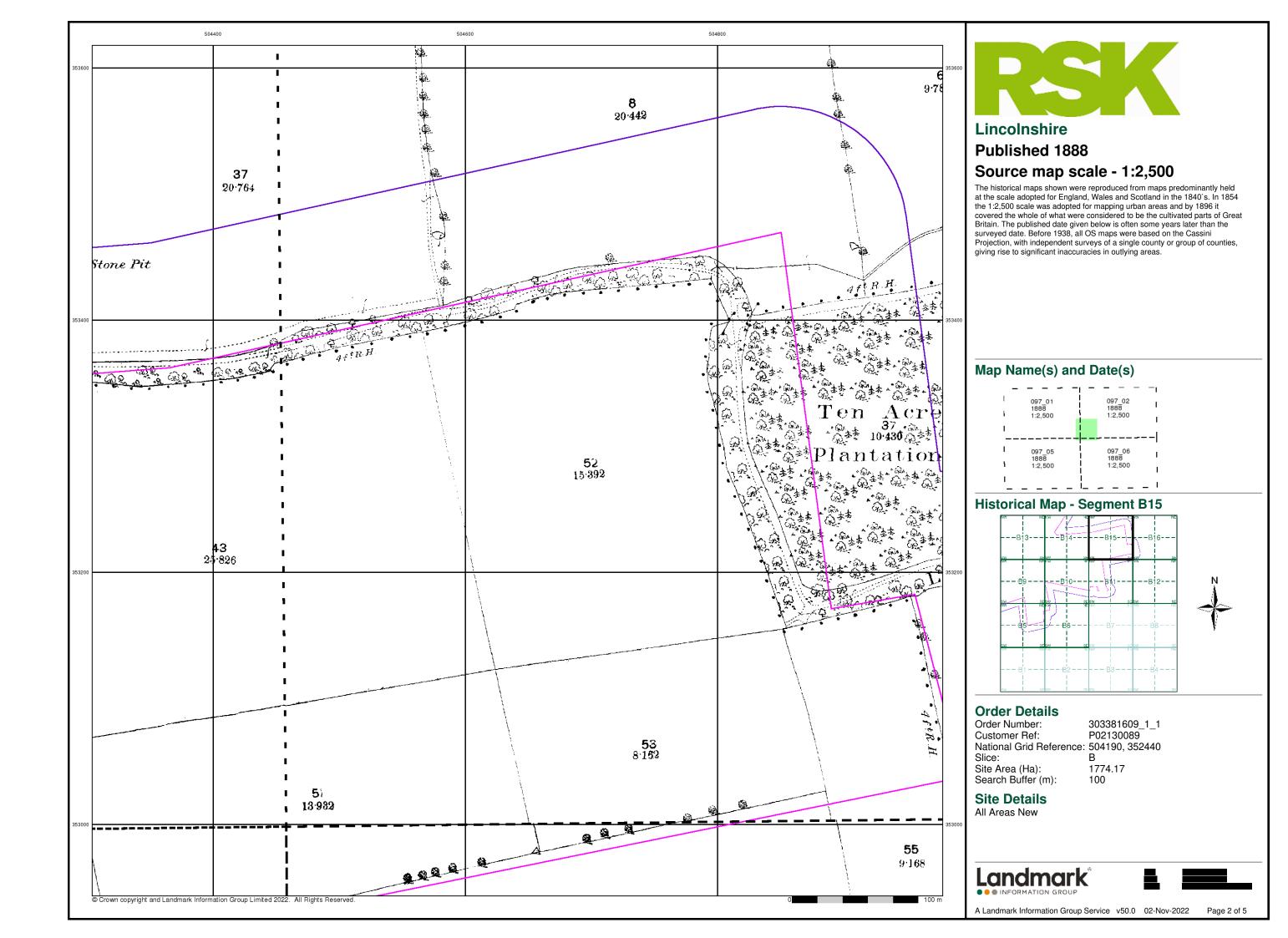


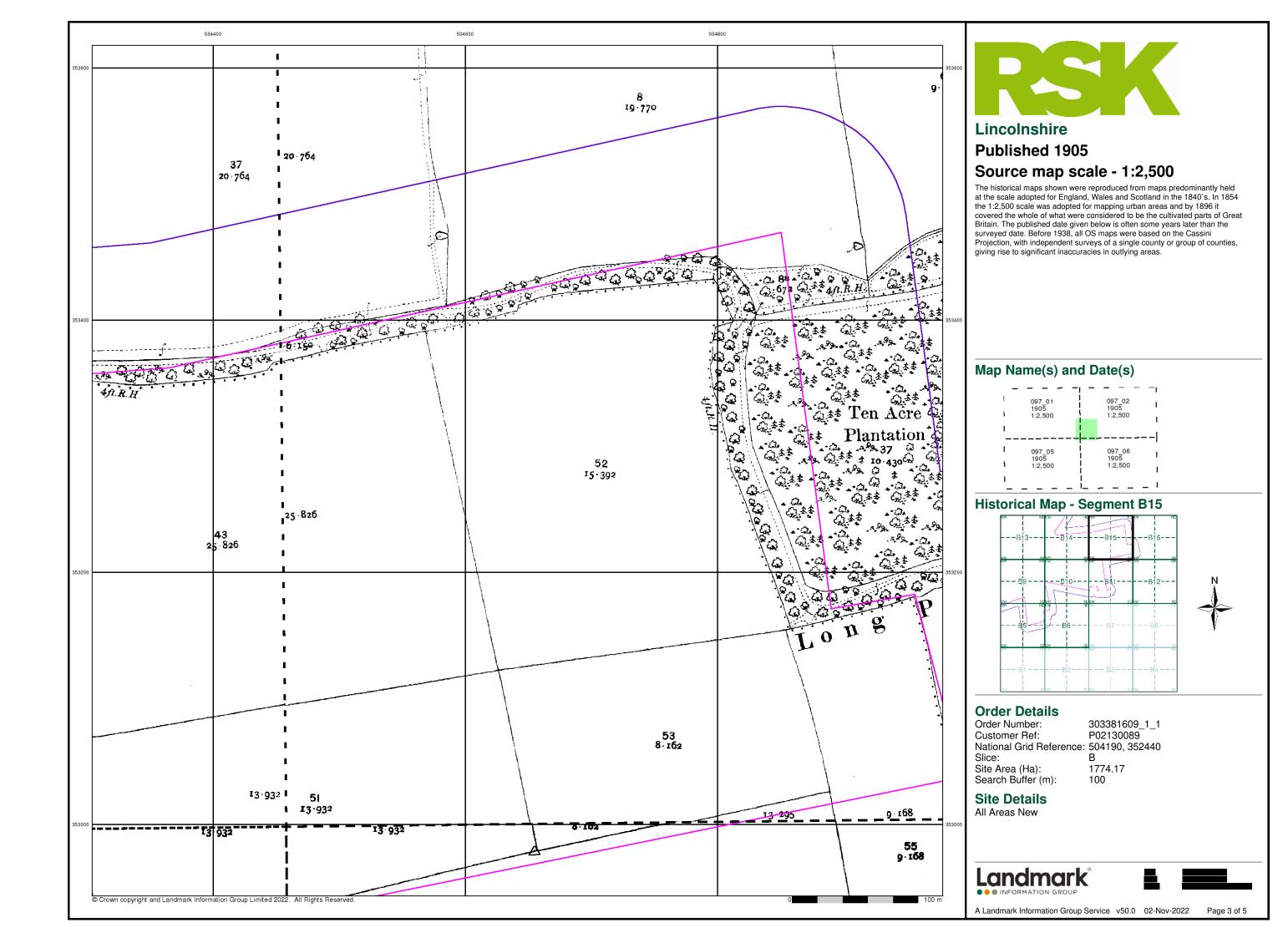


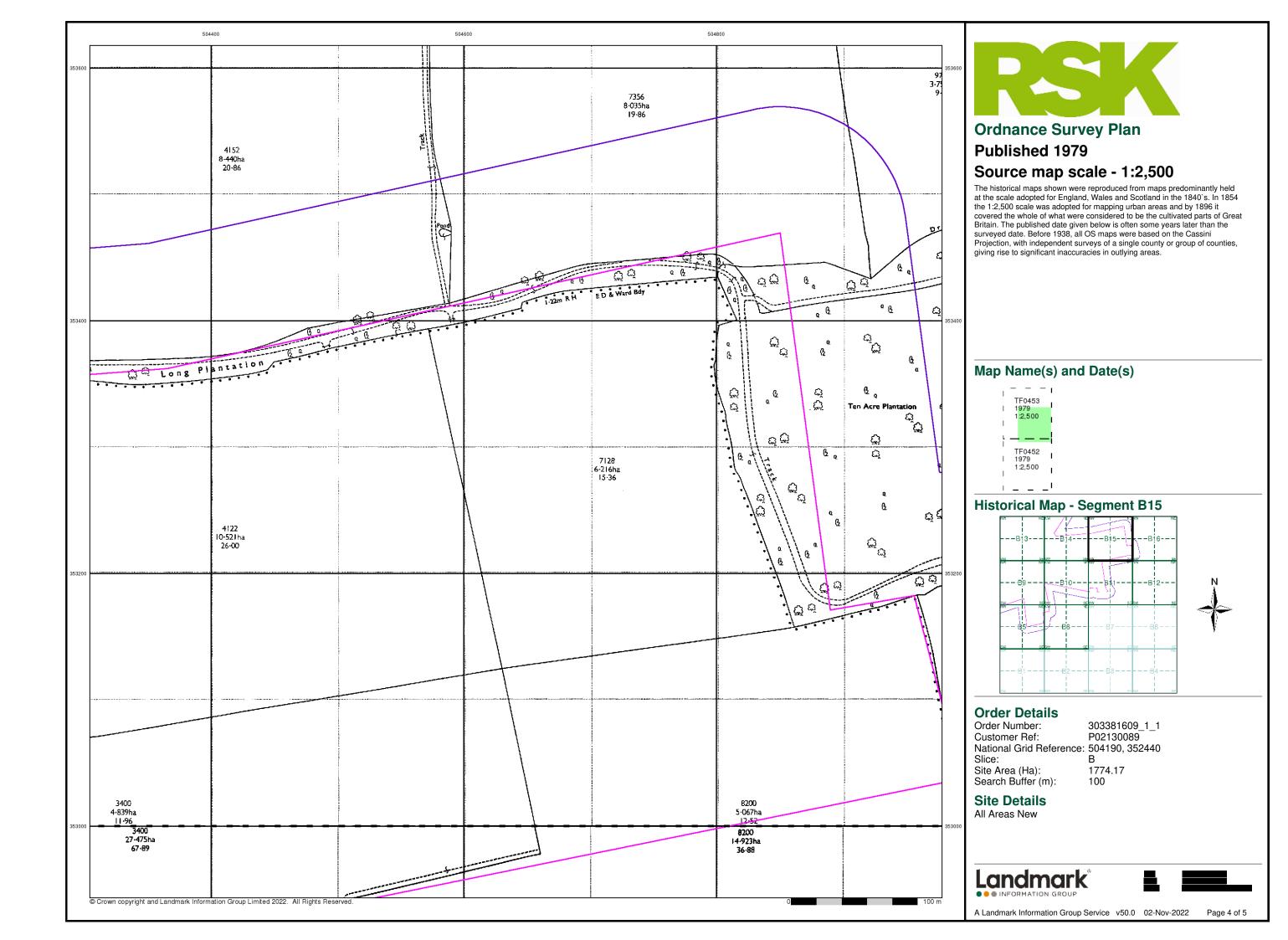


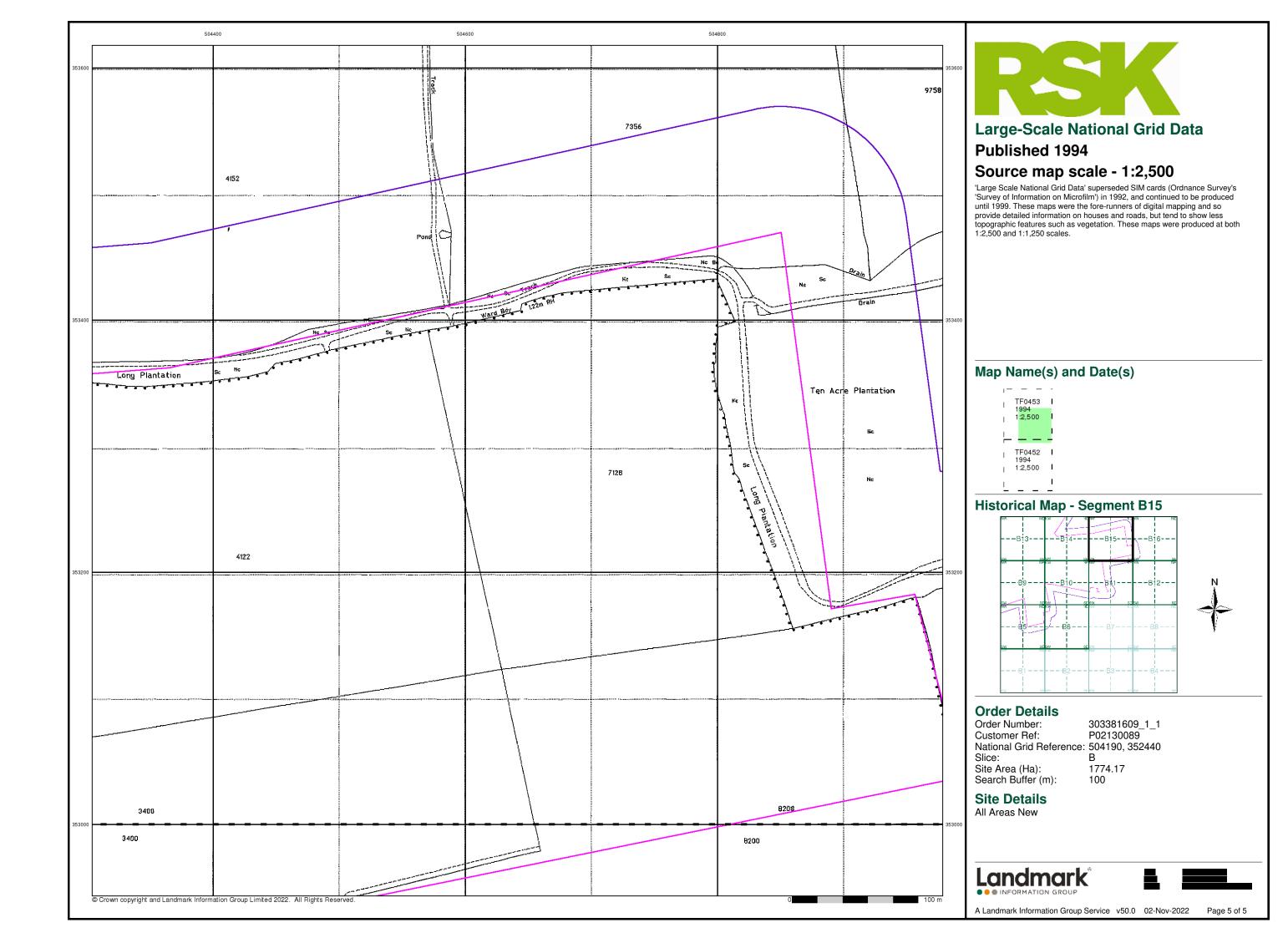
Page 1 of 5

A Landmark Information Group Service v50.0 02-Nov-2022

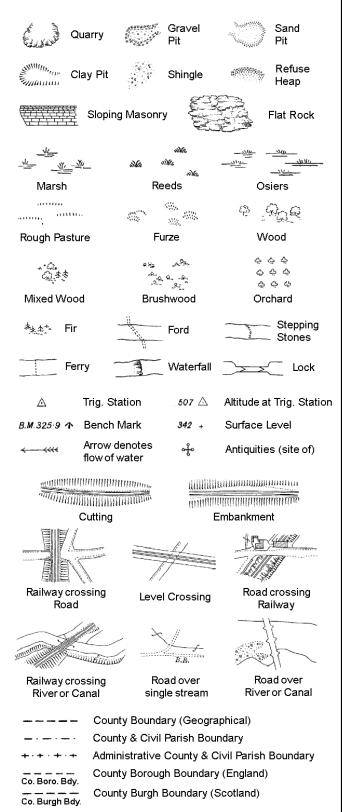








## **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

EP

F.B.

M.S

Bridle Road

Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

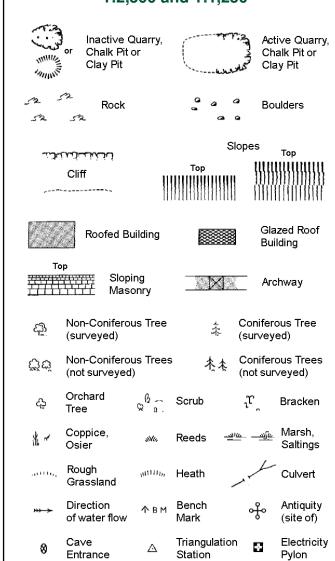
Trough Well

S.P

Sl.

Tr:

## Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



## County Boundary (Geographical) County & Civil Parish Boundary Civil Parish Boundary

**Electricity Transmission Line** 

Admin. County or County Bor. Boundary L B Bdy London Borough Boundary Symbol marking point where boundary mereing changes

вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

# 1:1,250

			Slopes <sub>Top</sub>			
	للتغينات		Тор	111111	111111111111	
C	Cliff	1111	141111111111111111111111111111111111111		))))))))	
,		[[]]		111111	11111111111	
520	Rock		52	Rock (se	cattered)	
	Boulders		₽	Boulder	s (scattered)	
	Positioned E	Boulder		Scree		
C 13	Non-Conife (surveyed)	rous Tree	\$	Conifero	ous Tree ed)	
C 3 C 5	Non-Conife (not sur∨eye		* **	Conifer (not sur	ous Trees veyed)	
45	Orchard Tree	Q a.	Scrub	Jr.	Bracken	
	Coppice, Osier	siVis,	Reeds 🛥	100 — <u>- 10</u> 00	Marsh, Saltings	
	Rough Grassland	$mnn_{b}$	Heath	1	Culvert	
,,,,	Direction of water flow	e A	Triangulation Station	, of	Antiquity (site of)	
ETL.	Electricit	y Transmis	ssion Line	$\boxtimes$	Electricity Pylon	
K BM	231.6ûm Be	ench Mark		Buildin Buildin	gs with g Seed	
	Roofed	d Building		∞.	lazed Roof uilding	
		≏ivil narieb	/community b	oundary		
		District bou	=	ouridary		
		County bou	-			
0		Boundary p	<del>-</del>			
4				al (noto:	thoso	
٥	á		nereing symb ear in oppose			
Bks	Barracks		Р	Pillar, Po	le or Post	
Bty	Battery		PO	Post Off		
Cemy	Cemetery		PC		onvenience	
Chy	Chimney		Pp	Pump	u Ctation	
Cis Dismtd RI	Cistern	ed Railway	Ppg Sta PW	Pumping Place of	g Station Worship	
Dismtd RI El Gen Sta	•	ed Kallway y Generating	Sewage F		worsnip ewage	
	Station	_	_	P	umping Station	
EIP	Electricity P		SB, S Br	_	ox or Bridge	
	a Electricity S	up Station	SP, SL		ost or Light	
FB En/DEn	Filter Bed	rinkin - Ft-	Spr	Spring	T I.	
Fn / D Fn Gas Gov	Fountain / D	_	Tk Tr	Tank or	ırack	

Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

Trough

Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

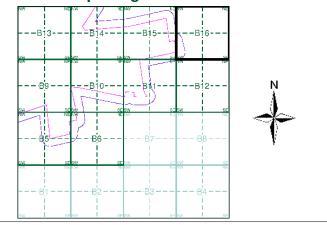
Wd Pp

Wks

## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2.500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
•	1:2,500	1979	5
Large-Scale National Grid Data	1:2,500	1994	<u> </u>

## **Historical Map - Segment B16**



## **Order Details**

Order Number: 303381609\_1\_1 **Customer Ref:** P02130089 National Grid Reference: 504190, 352440 Slice:

1774.17 Site Area (Ha): Search Buffer (m):

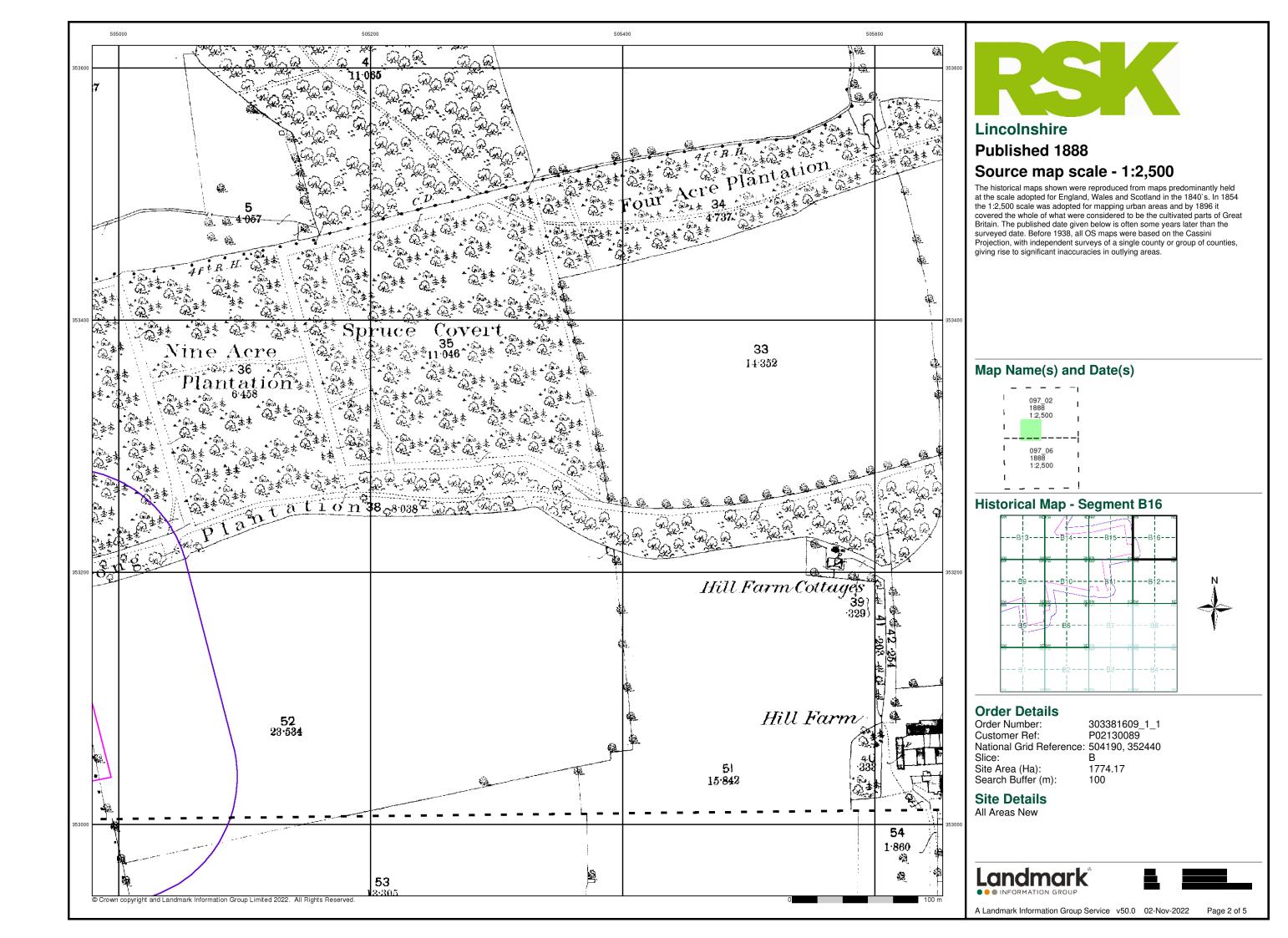
## **Site Details** All Areas New

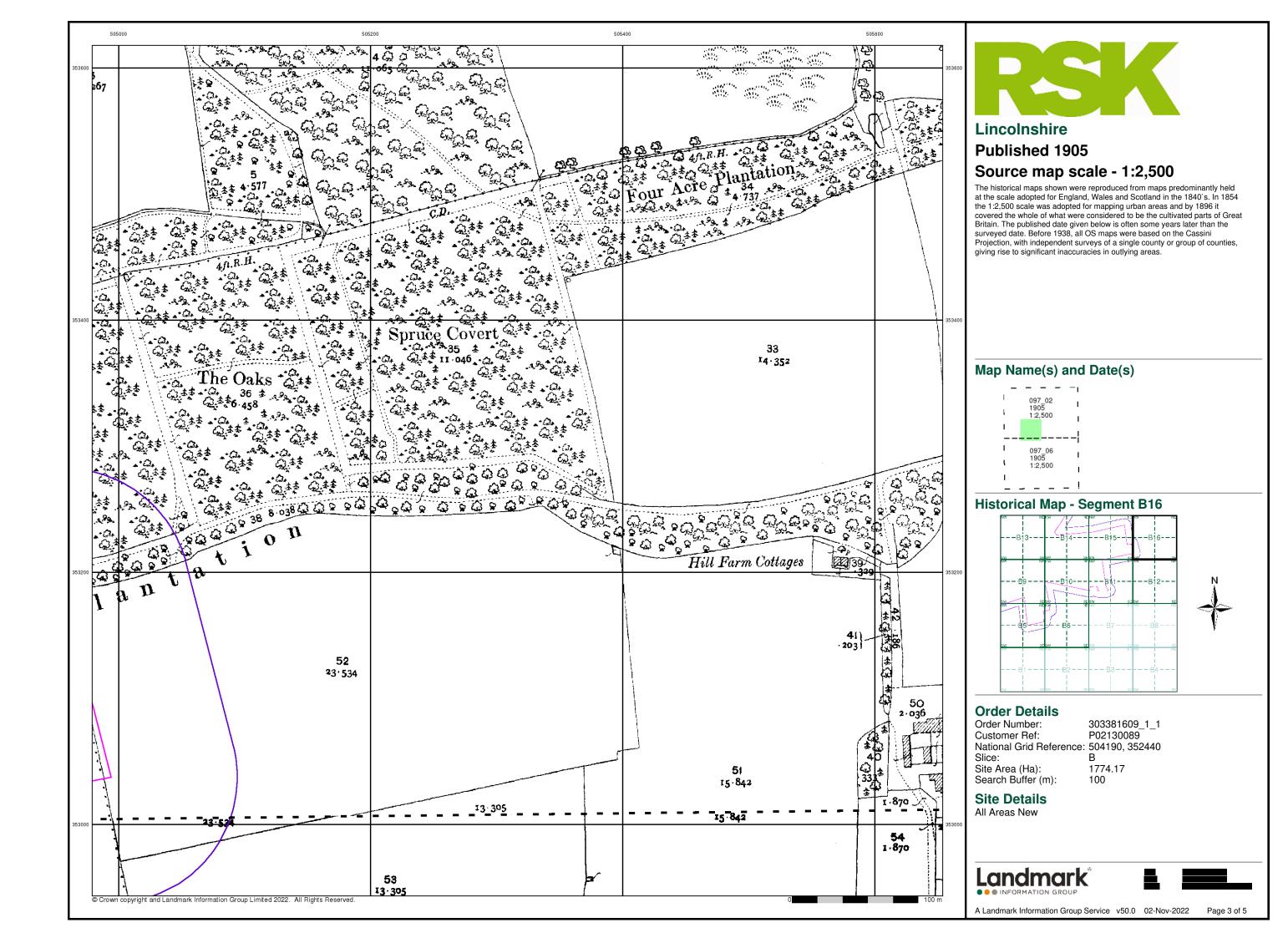


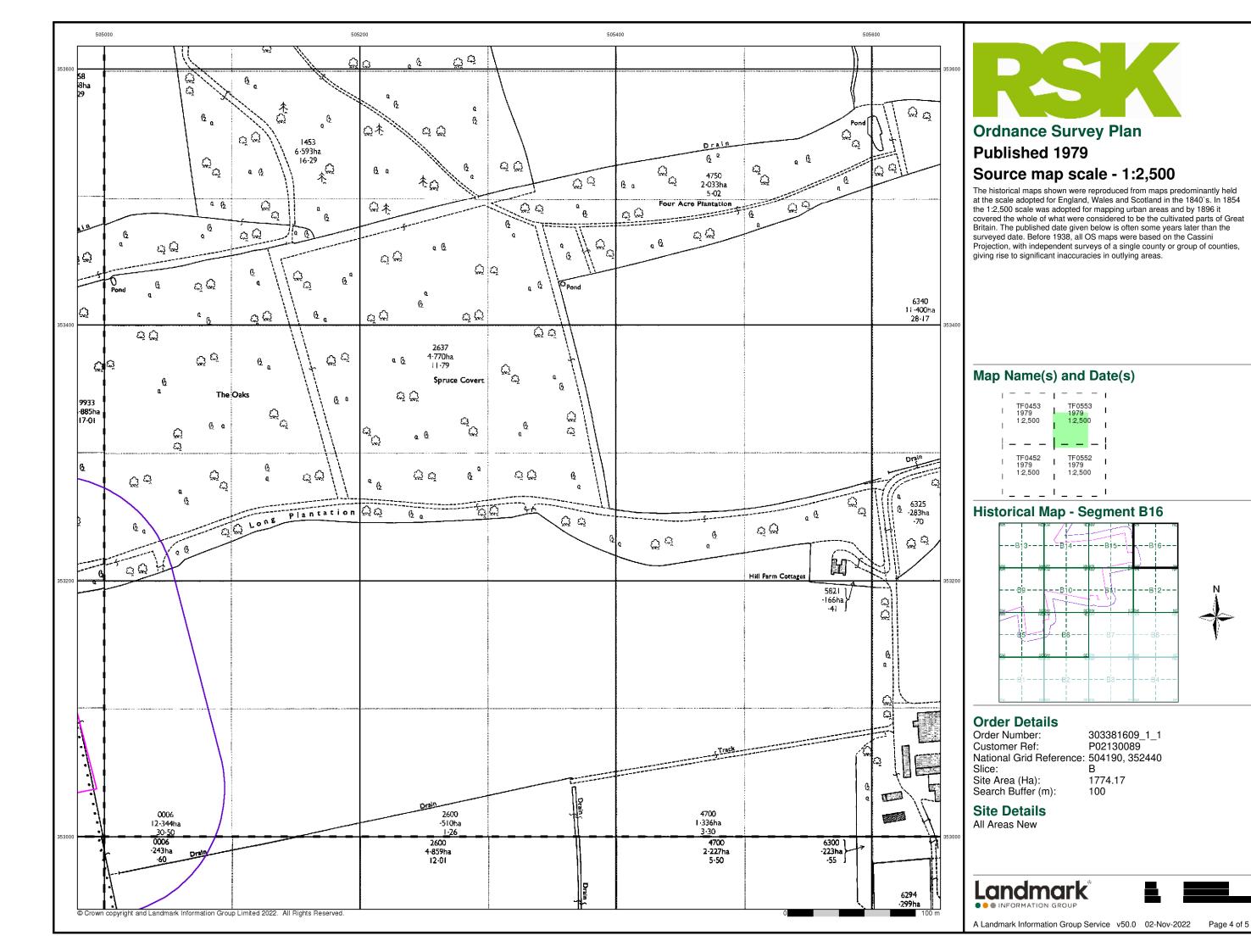


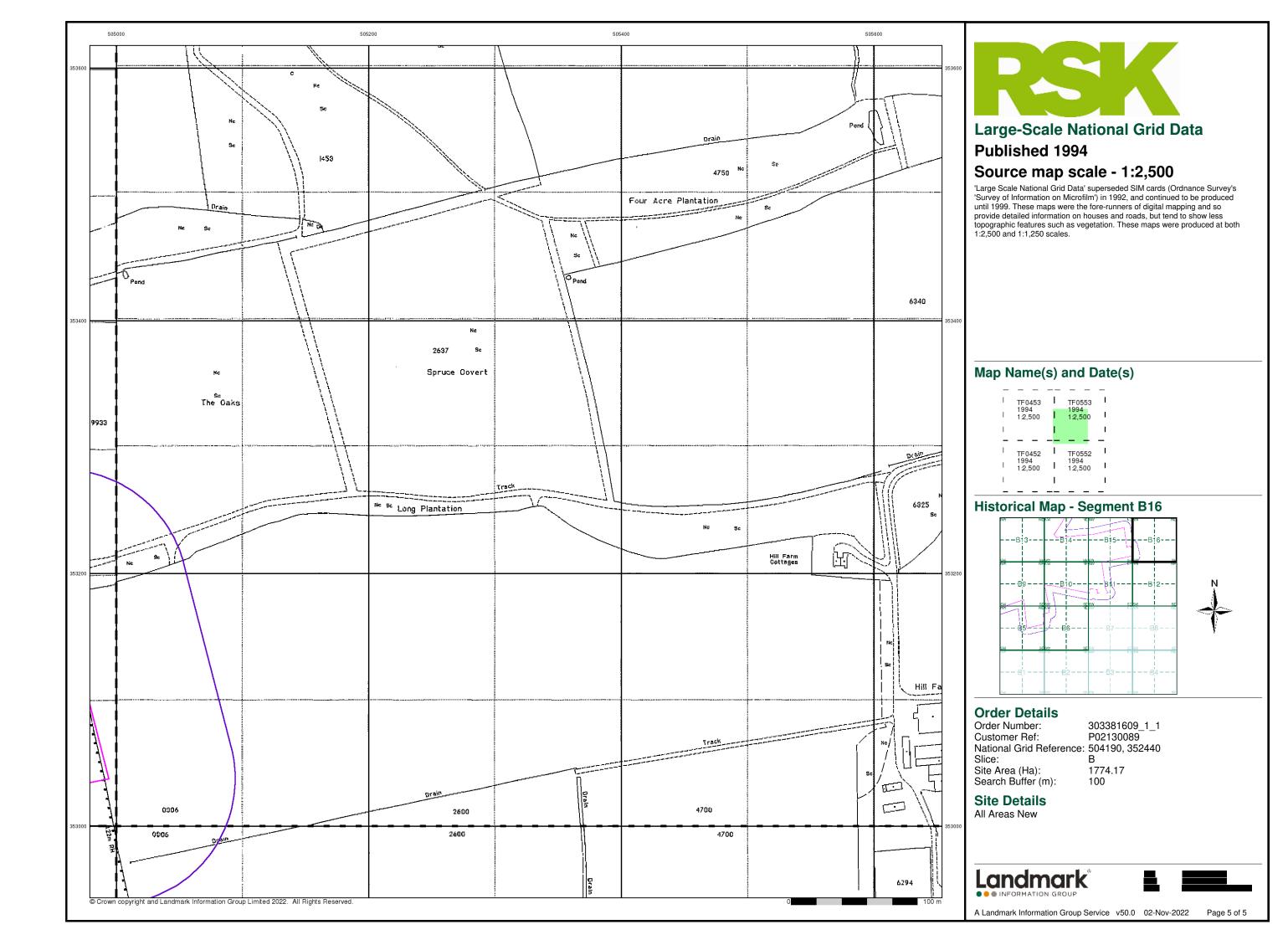


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## APPENDIX D3 ENVIRONMENTAL DATABASE REPORT - ZONE C



# **Envirocheck® Report:**

## **Datasheet**

## **Order Details:**

**Order Number:** 

303381609\_1\_1

**Customer Reference:** 

P02130089

**National Grid Reference:** 

505800, 353020

Slice:

С

Site Area (Ha):

1774.17

Search Buffer (m):

1000

**Site Details:** 

All Areas New







Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	9
Hazardous Substances	-
Geological	10
Industrial Land Use	-
Sensitive Land Use	11
Data Currency	12
Data Suppliers	16
Useful Contacts	17

### Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.

For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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### Report Version v53.0



## **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					
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 1				Yes
Pollution Incidents to Controlled Waters					
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				5 (*1)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 3	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 5	3	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 5	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 6	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				24



## **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 9	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 10	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 10		Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 10		Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 10		Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 10		Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 10		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



# **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries					
Fuel Station Entries					
Gas Pipelines					
Underground Electrical Cables					
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 11	2			
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: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	505000 353350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	505000 353022
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	C13SW (W)	6	1	505797 353022
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	24	1	505050 353950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	29	1	505300 354000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	30	1	505300 354300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	139	1	505200 353450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	145	1	505150 353700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	205	1	505000 352800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	C9NW (SW)	208	1	505700 352900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	225	1	505400 354050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	225	1	505000 352400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	234	1	505200 352800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	253	1	505250 353750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	263	1	505200 353700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SW)	328	1	505200 352750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SW)	342	1	505100 352700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	377	1	505797 354000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	C9NW (S)	392	1	505700 352700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	463	1	505450 353700
	Nearest Surface Water Feature	(NW)	649	-	505632 353212



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*G/0017 101 Hill Farm Well Bloxholm Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Not Supplied O1 January 31 December 6th January 2000 Not Supplied Located by supplier to within 10m	C13SW (W)	687	2	505680 353020
1	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*G/0017 100 Hill Farm Well Bloxholm Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st August 1966 Not Supplied Located by supplier to within 100m	C13SW (W)	687	2	505680 353020
2	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*G/0102 100 Catchpit Hill Farm Bloxholm Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Not Supplied O1 May 31 August 1st September 1985 Not Supplied Located by supplier to within 100m	C9NW (S)	874	2	505800 352700
2	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Bowlby Enterprises 4/30/11/*G/0102 102 Catchpit Hill Farm Bloxholm Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Not Supplied 01 May 31 August 10th June 2011 Not Supplied Located by supplier to within 10m	C9NW (S)	921	2	505850 352700



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions					
2	Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/11/*G/0102 101 Catchpit Hill Farm Bloxholm Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Not Supplied O1 May 31 August 6th January 2000 Not Supplied Located by supplier to within 10m	C9NW (S)	921	2	505850 352700
	Water Abstractions					
	-	4/30/11/*G/0060b 100 Cottage Farm Bore Bloxholm Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st May 1971 Not Supplied Located by supplier to within 100m	C5SW (S)	1326	2	505750 351800
	Groundwater Vulne	• •	(2.02.0)			504007
	Combined Classification: Combined Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness: Superficial Thickness: Superficial Recharge:	Secondary Bedrock Aquifer - High Vulnerability  High  Productive Bedrock Aquifer, No Superficial Aquifer Intermediate Well Connected Fractures <300 mm/year >70% <90%  <3m  No Data	(NW)	0	3	504987 353447
	Groundwater Vulne	• •				
	Combined Classification: Combined Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness: Superficial Thickness: Superficial Recharge:	Unproductive Aquifer (may have productive aquifer beneath)  Unproductive  Unproductive Bedrock Aquifer, No Superficial Aquifer Intermediate  Well Connected Fractures  <300 mm/year  >70%  <90%  <3m  No Data	(W)	0	3	505000 352995



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Unproductive Aquifer (may have productive aquifer beneath)	(NW)	0	3	505000
	Classification: Combined	Unproductive				353590
	Vulnerability: Combined Aquifer:	Unproductive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness:	- Chil				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined Classification:	Unproductive Aquifer (may have productive aquifer beneath)	(W)	0	3	505000 353227
	Combined	Unproductive				000227
	Vulnerability:					
	Combined Aquifer: Pollutant Speed:	Unproductive Bedrock Aquifer, No Superficial Aquifer Intermediate				
	Bedrock Flow:	Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70% <90%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness:					
	Superficial Recharge:	No Data				
	Groundwater Vulne	vrshility Man				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(W)	0	3	505000
	Classification:	Filliciple bedrock Aquiler - Flight vulnerability	( ( ( )		3	352811
	Combined	High				
	Vulnerability:					
	Combined Aquifer: Pollutant Speed:	Productive Bedrock Aquifer, No Superficial Aquifer Intermediate				
	Bedrock Flow:	Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70% <90%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness:					
	Superficial Recharge:	No Data				
	Groundwater Vulne	veshility Man				
	Combined	Secondary Bedrock Aquifer - High Vulnerability	(W)	0	3	505000
	Classification:	Occordary Dedicor Aquiler - High Vulliciability	(**)		3	353000
	Combined	High				
	Vulnerability:	Desductive Desdess I. Assistan No. Com. C. J. A. 15				
	Combined Aquifer: Pollutant Speed:	Productive Bedrock Aquifer, No Superficial Aquifer Intermediate				
	Bedrock Flow:	Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index: Superficial	>70% <90%				
	Patchiness:	-0070				
	Superficial	<3m				
	Thickness:	W 5 /				
	Superficial	No Data				
	Recharge:					



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined Classification:	Principle Bedrock Aquifer - High Vulnerability	(NW)	0	3	505000 354000
	Combined Vulnerability:	High				334000
	Combined Aquifer: Pollutant Speed:	Productive Bedrock Aquifer, No Superficial Aquifer Intermediate				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index: Superficial Patchiness:	>70% <90%				
	Superficial Thickness:	<3m				
	Superficial Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Principle Bedrock Aquifer - High Vulnerability	(NW)	0	3	505000 353369
	Combined Vulnerability:	High				
	Combined Aquifer: Pollutant Speed: Bedrock Flow:	Productive Bedrock Aquifer, No Superficial Aquifer Intermediate Well Connected Fractures				
	Dilution: Baseflow Index:	Veil Connected Fractures <300 mm/year >70%				
	Superficial Patchiness:	<90%				
	Superficial Thickness:	<3m				
	Superficial Recharge:	No Data				
	Groundwater Vulne					
	Combined Classification:	Secondary Bedrock Aquifer - High Vulnerability	(W)	0	3	505000 353022
	Combined Vulnerability: Combined Aquifer:	High  Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	Intermediate Well Connected Fractures				
	Dilution: Baseflow Index: Superficial	<300 mm/year >70% <90%				
	Patchiness: Superficial	<3m				
	Thickness: Superficial	No Data				
	Recharge:					
	Classification:	erability - Soluble Rock Risk Very Significant Risk - Moderate Possibility	(W)	0	3	505000 353000
		erability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	(W)	0	3	505000 353022
	Groundwater Vulne Classification:	erability - Soluble Rock Risk Very Significant Risk - Moderate Possibility	(NW)	0	3	505000 354000
	Bedrock Aquifer De	_				
	Aquifer Designation:	Secondary Aquifer - B	(NW)	0	3	504987 353447
	Bedrock Aquifer De Aquifer Designation:	esignations Unproductive Strata	(NW)	0	3	505000
	Bedrock Aquifer De	esignations				353590
		Unproductive Strata	(W)	0	3	505000 352995
	Bedrock Aquifer De Aquifer Designation:	_	(W)	0	3	505000
	Bedrock Aquifer De	esignations				352811
	Aquifer Designation:	Secondary Aquifer - A	(W)	0	3	505000 353022



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(W)	0	3	505000 352754
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.	C13SW (W)	0	2	505797 353022
	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: Inland river Watercourse Length: 102.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	(NW)	647	4	505632 353212
5	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 48.6  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13NW (NW)	661	4	505659 353297
6	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: Witham Primacy: 2	C9NW (SW)	672	4	505655 352902
7	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 214.1  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C9NW (SW)	687	4	505686 352849
8	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 94.3  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C9NW (SW)	687	4	505656 352854
9	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 41.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13SW (NW)	699	4	505727 353131



## **Agency & Hydrological**

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 25.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13SW (NW)	739	4	505747 353120
	OS Water Network Lines				
11	Watercourse Form: Inland river Watercourse Length: 4.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13SW (NW)	758	4	505751 353120
12	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 156.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13SW (N)	762	4	505797 353117
13	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 122.1  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13SW (N)	767	4	505796 353034
14	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 450.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	C9SW (S)	808	4	505913 352374
15	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 157.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13SW (SE)	887	4	505877 352958
16	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 83.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13SW (E)	887	4	505881 353017
17	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 13.2  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C9NW (S)	897	4	505854 352785
18	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 90.3  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C9NW (S)	910	4	505867 352782



## **Agency & Hydrological**

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 14.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	C9NW (S)	910	4	505871 352796
	OS Water Network Lines				
20	Watercourse Form: Inland river Watercourse Length: 6.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 2	C9NW (S)	910	4	505873 352802
21	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 498.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C9NW (S)	910	4	505873 352802
22	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 3.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13SW (NE)	916	4	505906 353121
23	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 638.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13SW (NE)	920	4	505910 353121
24	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 30.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C13NW (N)	986	4	505873 353546
25	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 5.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C9NW (SE)	990	4	505933 352723
26	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 359.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	C9NW (SE)	992	4	505933 352718
	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 6.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Witham Primacy: 1	(SW)	710	4	505654 352760



## **Waste**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority La	ndfill Coverage				
	Name:	North Kesteven District Council - Had landfill data but passed it to the relevant environment agency		0	5	505797 353022
	Local Authority La	ndfill Coverage				
	Name:	Lincolnshire County Council - Had landfill data but passed it to the relevant environment agency		0	6	505797 353022

Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 9 of 17



## **Geological**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Soli	id Geology				
	Description:	Great Oolite Group	C13SW (W)	0	1	505797 353022
	Coal Mining Affects	ed Areas	(**)			
	In an area that migh	t not be affected by coal mining				
	Non Coal Mining A No Hazard	reas of Great Britain				
	Potential for Collag	osible Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
	Potential for Comp	ressible Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
	Potential for Groun	nd Dissolution Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
	Potential for Groun	nd Dissolution Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	C13NW (N)	31	1	505659 353365
	Potential for Groun	nd Dissolution Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	C13SW (S)	43	1	505806 352956
	Potential for Lands	slide Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
	Potential for Runni	ing Sand Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
	Potential for Runni	ing Sand Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	C9NW (SW)	232	1	505689 352890
	Potential for Shrink	king or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
	Potential for Shrink	king or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	Moderate British Geological Survey, National Geoscience Information Service	C13NW (N)	31	1	505659 353365
	Potential for Shrink	king or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	Moderate British Geological Survey, National Geoscience Information Service	C13SW (S)	43	1	505806 352956
	Radon Potential - F	Radon Affected Areas				
	No Data Available					
	Radon Potential - F No Data Available	Radon Protection Measures				

Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 10 of 17



## **Sensitive Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	Nitrate Vulnerable Name: Description: Source:	le Zones  Lower Witham Nvz Surface Water Environment Agency, Head Office	C13SW (W)	0	3	505797 353022
28	Nitrate Vulnerabl Name: Description: Source:	le Zones  Lincolnshire Limestone Groundwater Environment Agency, Head Office	C13SW (W)	0	3	505797 353022

Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 11 of 17



Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	June 2020	Annually
North Kesteven District Council - Environmental Health Department	October 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - Anglian Region	October 2022	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 Kesteven District Council - Environmental Health Department	May 2014	Variable
Local Authority Pollution Prevention and Controls		
North Kesteven District Council - Environmental Health Department	May 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
North Kesteven District Council - Environmental Health Department	May 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	August 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	October 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
Source Protection Zones		
Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences		-
Environment Agency - Head Office	August 2022	Quarterly

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Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2022	Quarterly
<u> </u>	August 2022	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2022	Quarterly
Flood Water Storage Areas	7 (agust 2022	Quartony
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
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	As notified
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
ntegrated Pollution Control Registered Waste Sites		
Environment Agency - Anglian Region	January 2009	Not Applicable
icensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Anglian Region - Northern Area	October 2022	Quarterly
icensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Northern Area	July 2022	Quarterly
ocal Authority Landfill Coverage		
Lincolnshire County Council	February 2003	Not Applicable
North Kesteven District Council - Environmental Health Department	February 2003	Not Applicable
Local Authority Recorded Landfill Sites	O-t-h-= 2010	
incolnshire County Council  North Kesteven District Council - Environmental Health Department	October 2018 October 2018	
· · · · · · · · · · · · · · · · · · ·	October 2010	
Registered Landfill Sites Environment Agency - Anglian Region - Northern Area	March 2006	Not Applicable
Registered Waste Transfer Sites	Maron 2000	110t7 (ppilousio
Environment Agency - Anglian Region - Northern Area	April 2018	
Registered Waste Treatment or Disposal Sites	742010	
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		
incolnshire County Council - Highways and Planning Department	August 2010	Variable
North Kesteven District Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents	A 0007	Mantalata
Lincolnshire County Council - Highways and Planning Department	August 2007 October 2015	Variable Variable
lorth Kesteven District Council - Planning Department	October 2015	Variable

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Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology  British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Recorded Mineral Sites	Sandary 2005	As notined
British Geological Survey - National Geoscience Information Service	May 2022	Bi-Annually
CBSCB Compensation District	,	,
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	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	A 2020	A = == 4:6: = d
British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards	January 2010	As notified
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
•	January 2019	As notined
Potential for Landslide Ground Stability Hazards  British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards	Sandary 2010	7.6 116411164
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
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries		
Thomson Directories	October 2022	Quarterly
Fuel Station Entries		
Catalist Ltd - Experian	August 2022	Quarterly
Gas Pipelines		
National Grid	October 2021	Bi-Annually
Underground Electrical Cables		
National Grid	May 2021	Bi-Annually

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Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt		
North Kesteven District Council	July 2022	Quarterly
Areas of Unadopted Green Belt		
North Kesteven 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

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## **Data Suppliers**

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SEPA Scottish Environment Protection Agency
The Coal Authority	The Coal Authority
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology  NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	Cyfoeth Naturiol Cymru Netural Resources Wales
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Public Health England	Public Health England
Ove Arup	ARUP
Stantec UK Ltd	<b>Stantec</b>

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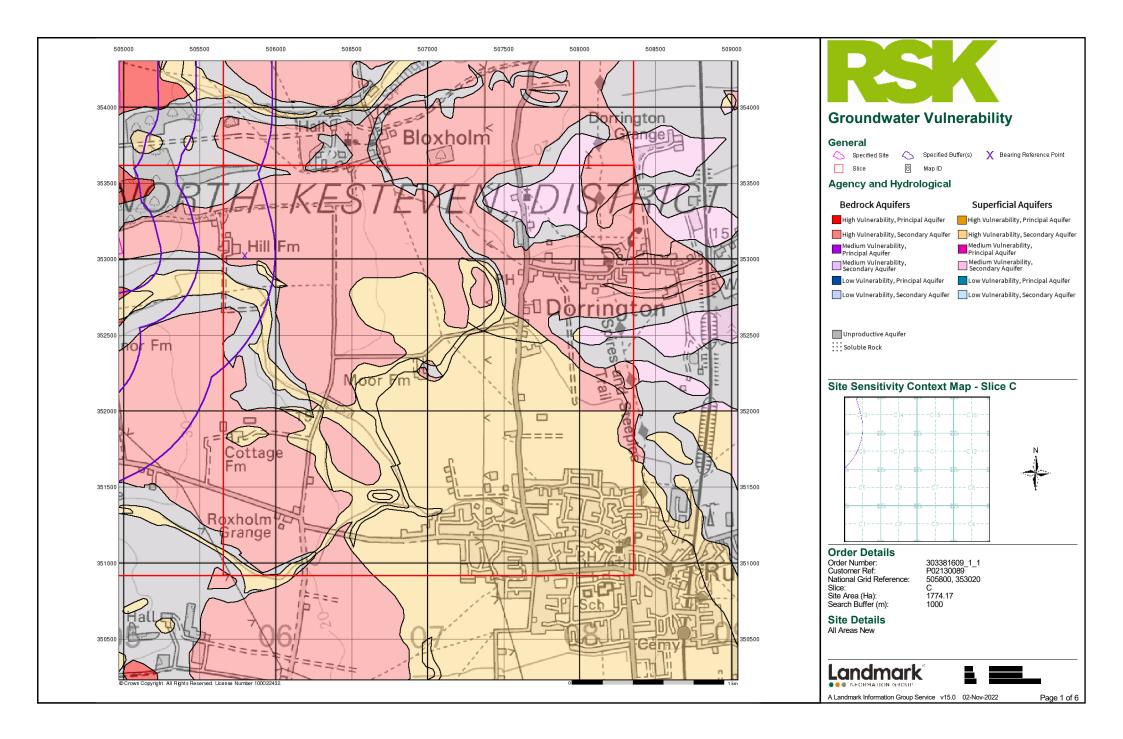


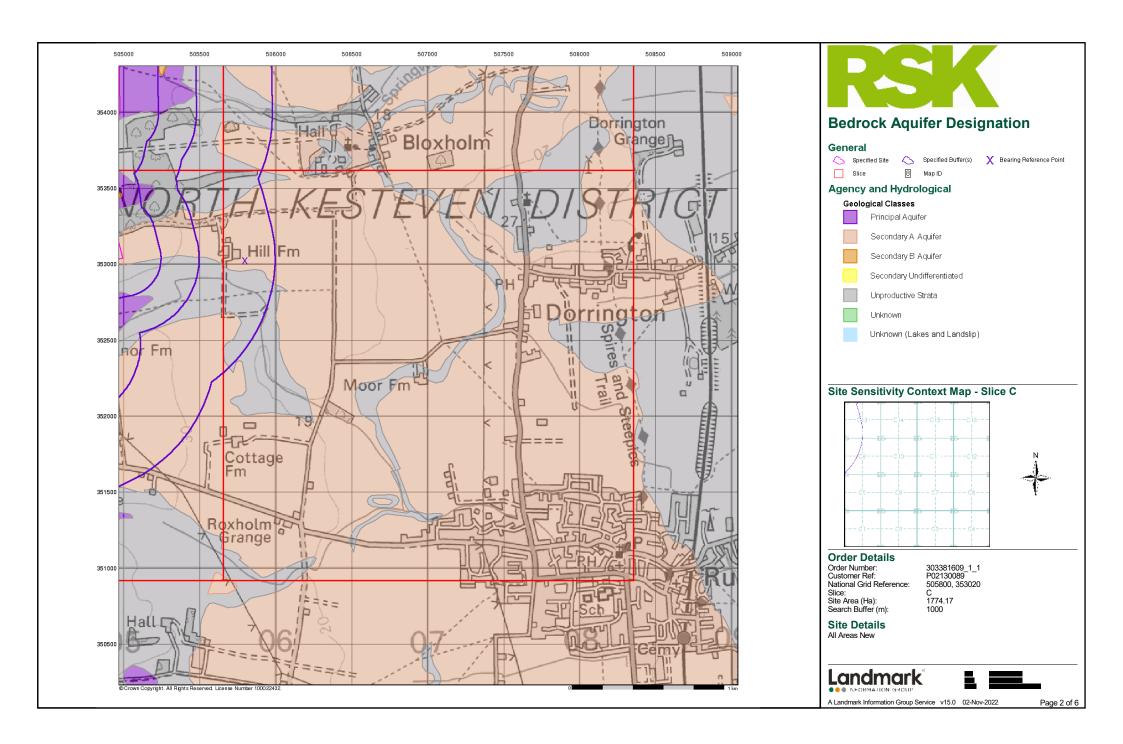
## **Useful Contacts**

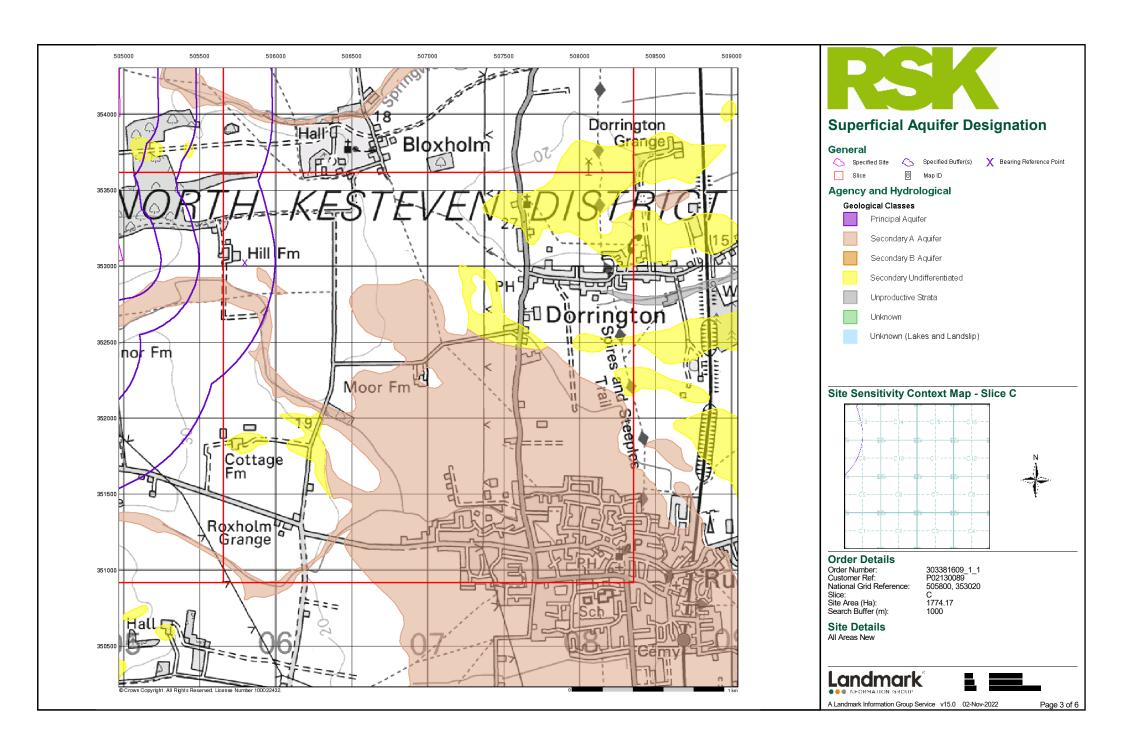
Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service	
	British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
2	Environment Agency - National Customer Contact Centre (NCCC)	
	PO Box 544, Templeborough, Rotherham, S60 1BY	
3	Environment Agency - Head Office	
	Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	
4	Ordnance Survey	
	Adanac Drive, Southampton, Hampshire, SO16 0AS	Website: www.ordnancesurvey.gov.uk
5	North Kesteven District Council - Environmental Health Department	Website: www.n-kesteven.gov.uk
	District Council Offices, Kesteven Street, Sleaford, Lincolnshire, NG34 7EF	Tresone: William Reduction.gov.un
6	Lincolnshire County Council	
	4th Floor, City Hall, Lincoln, Lincolnshire, LN1 1DN	Website: www.lincolnshire.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards	
	Chilton, Didcot, Oxfordshire, OX11 0RQ	
-	Landmark Information Group Limited	
	Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	

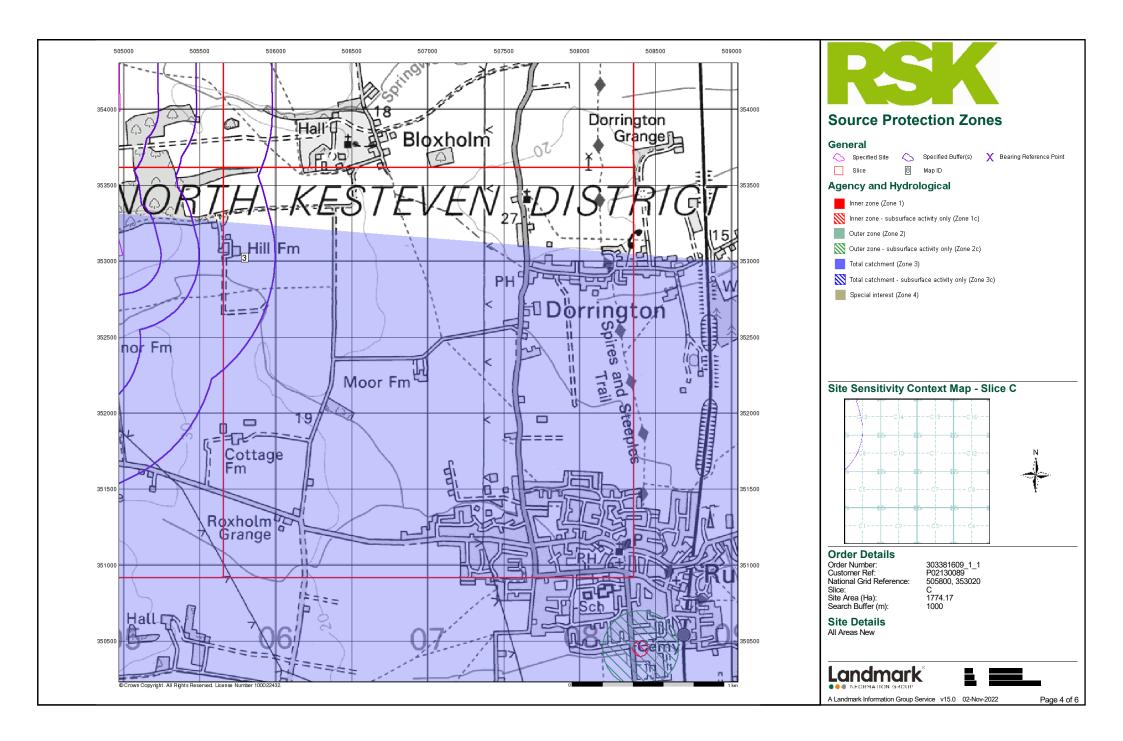
Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

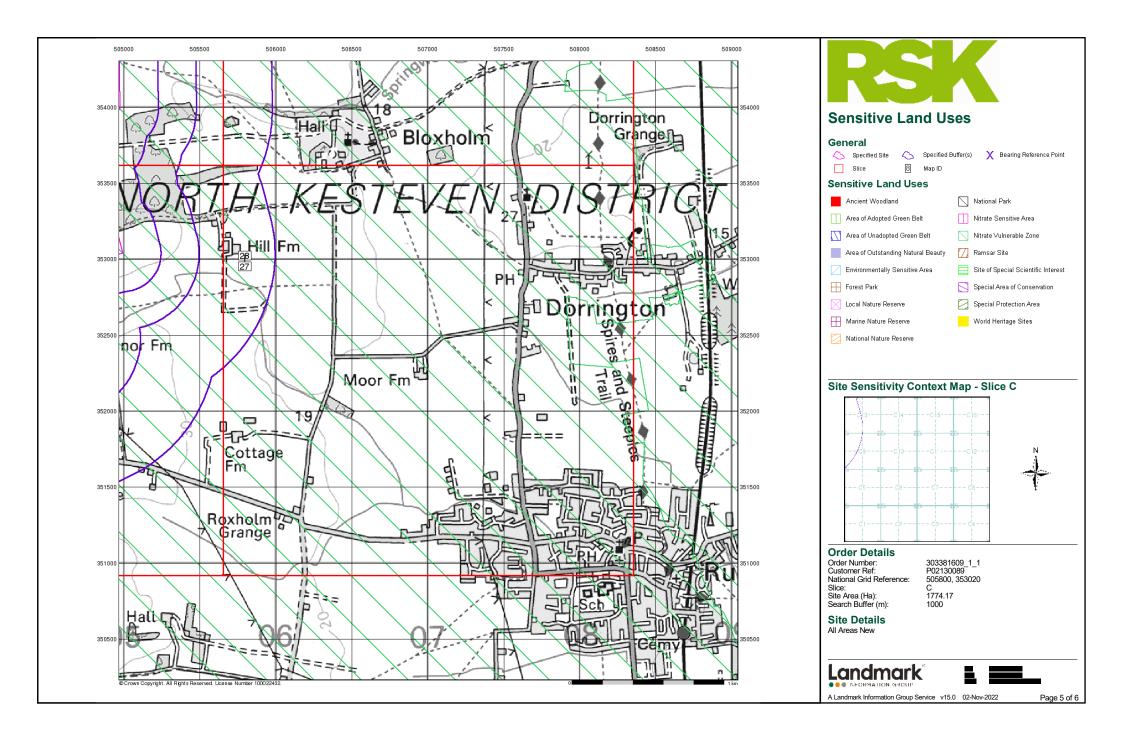
Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 17 of 17

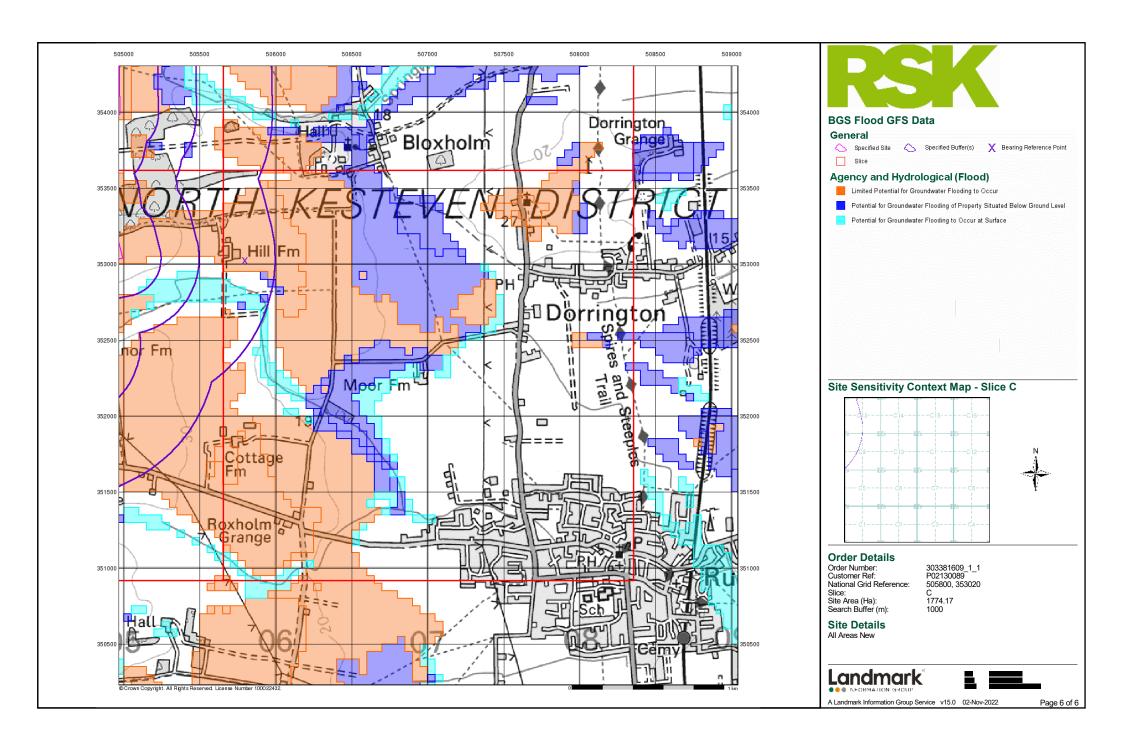


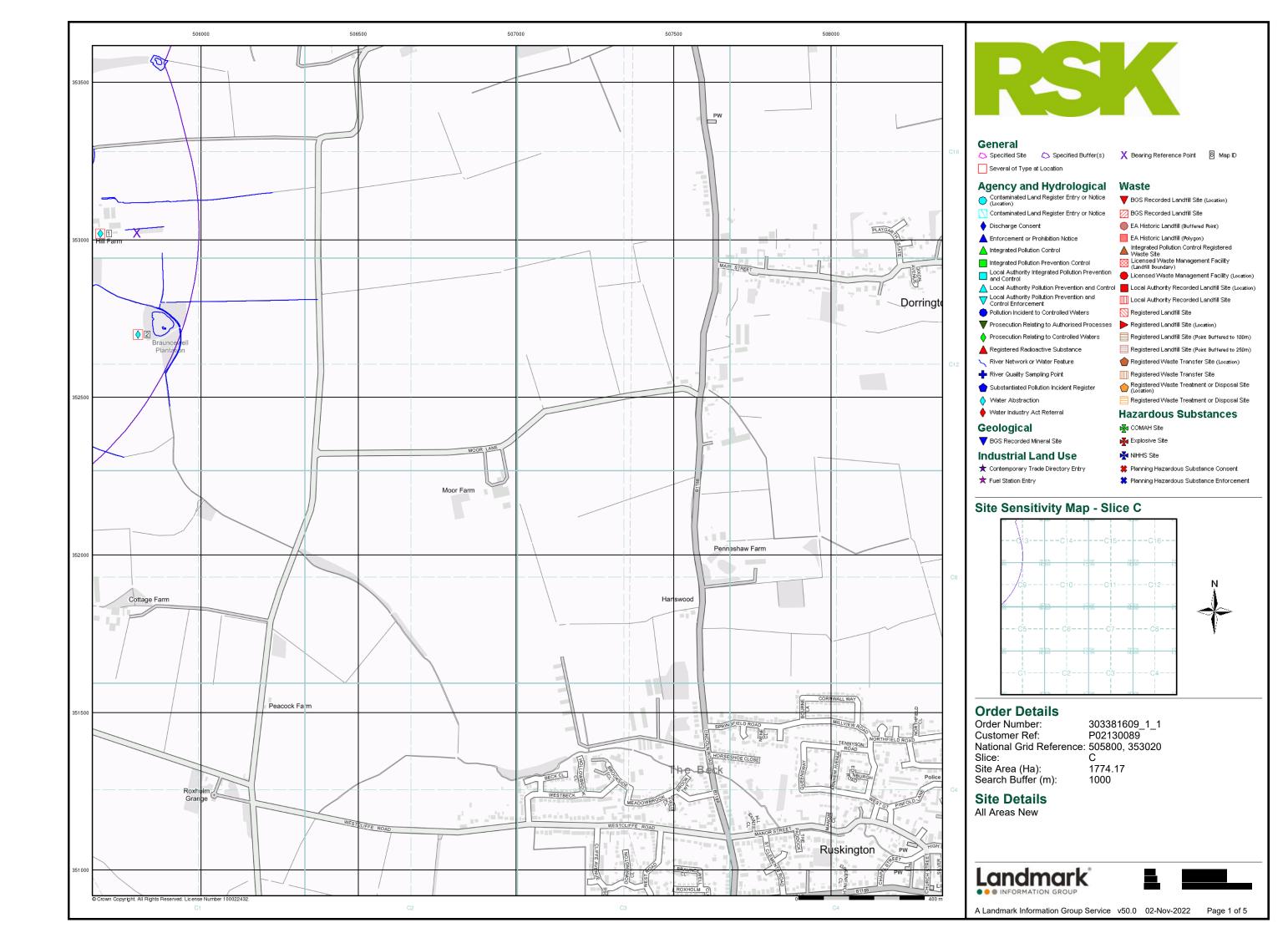


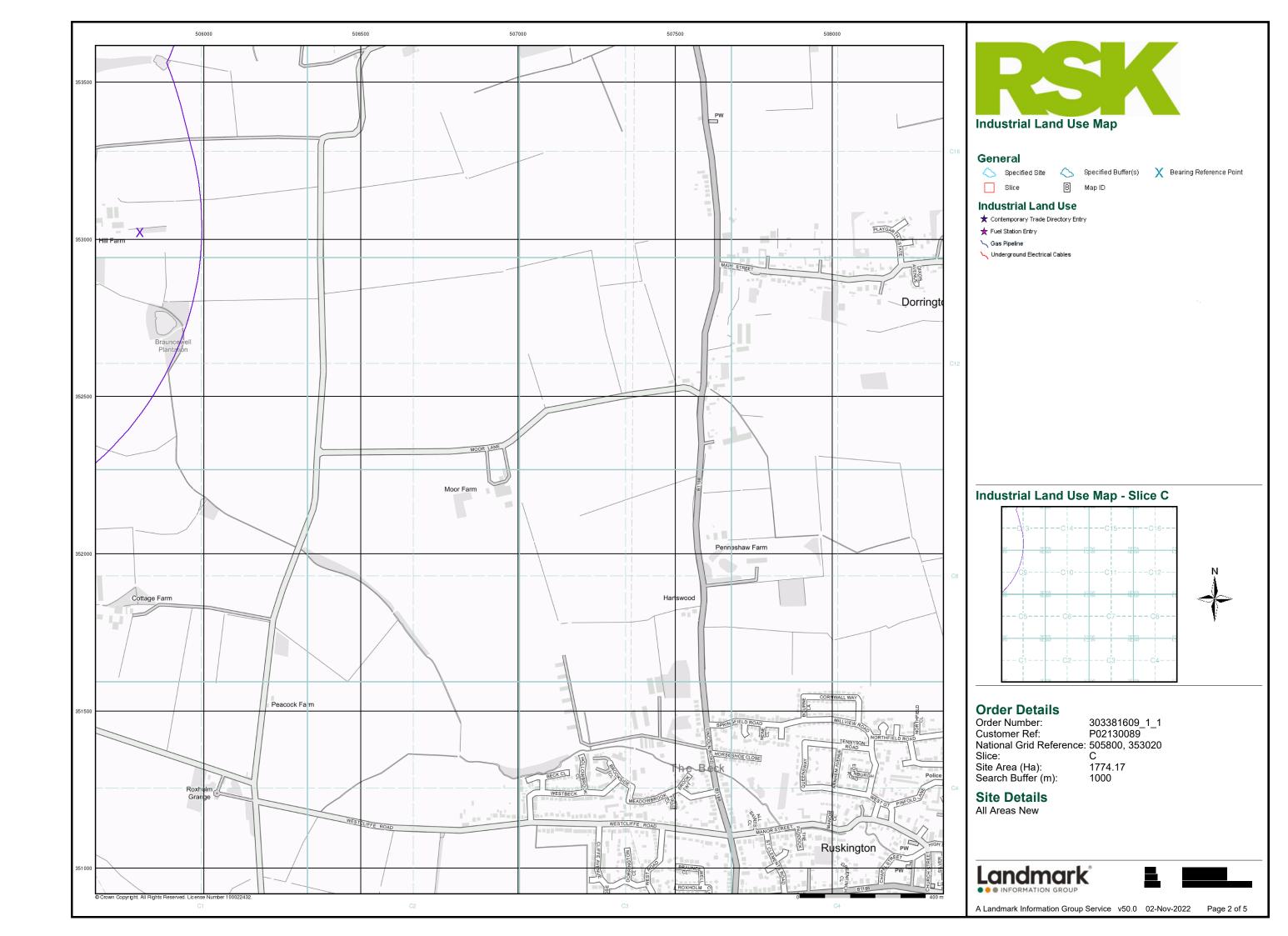


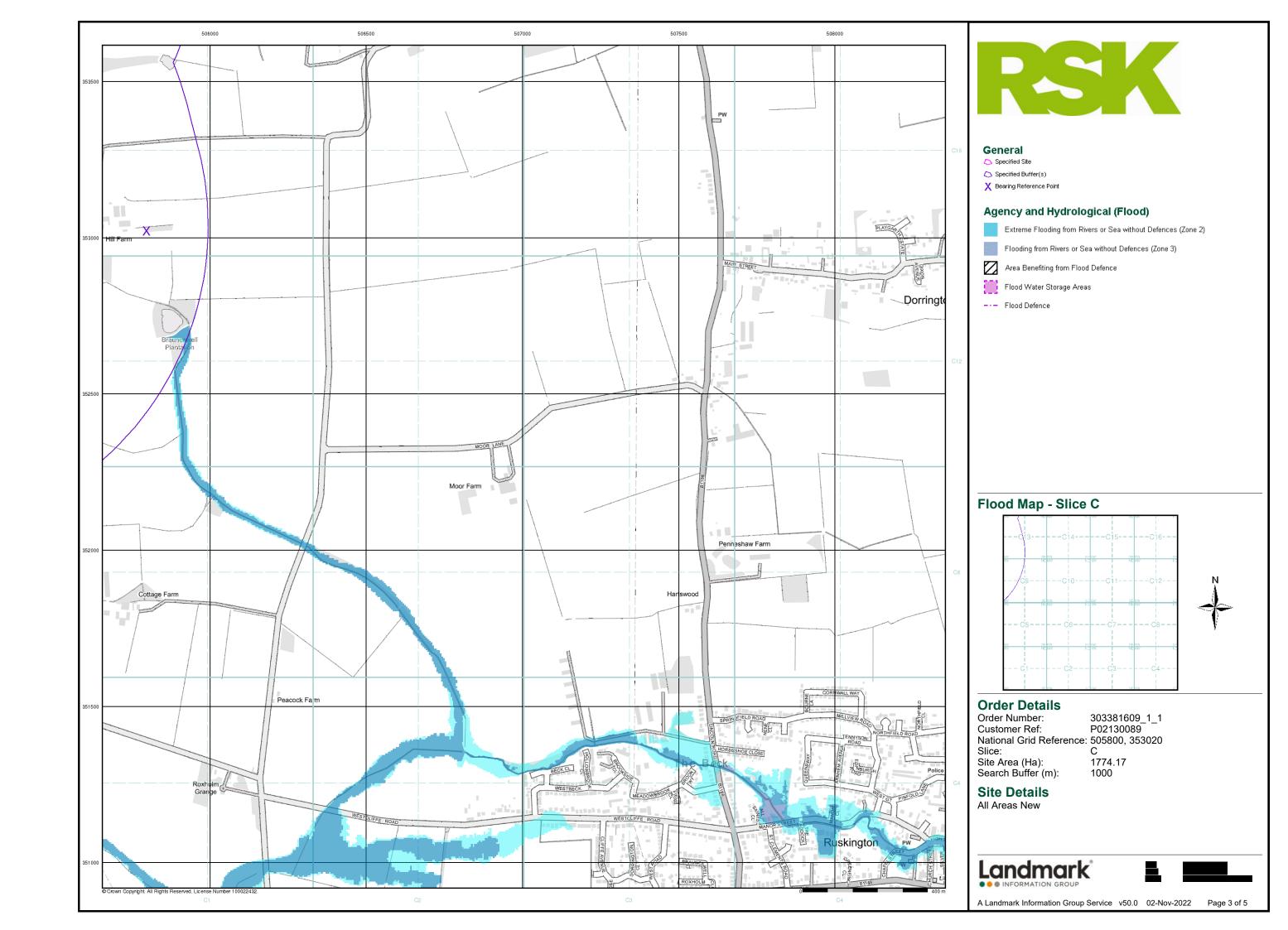


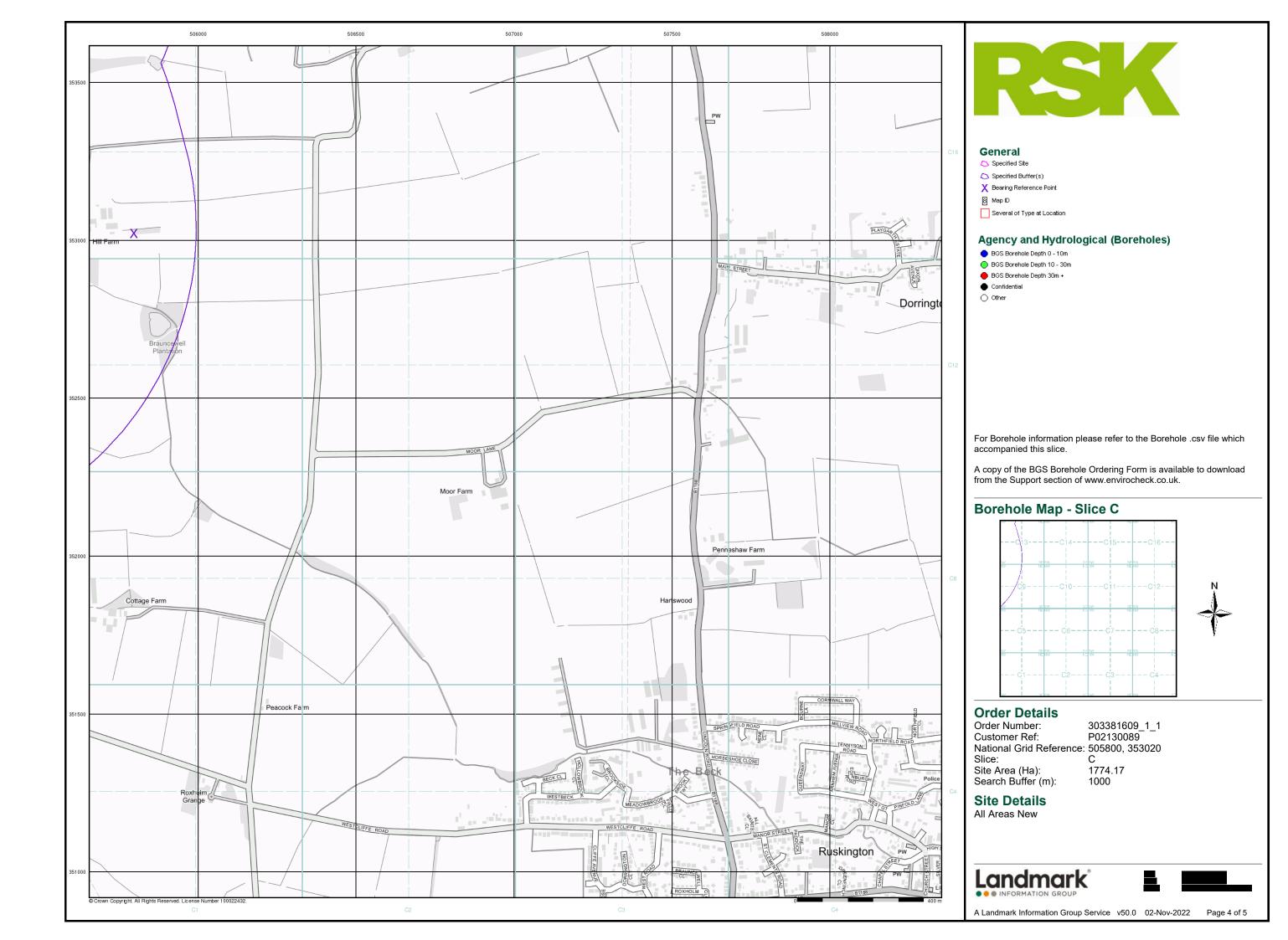


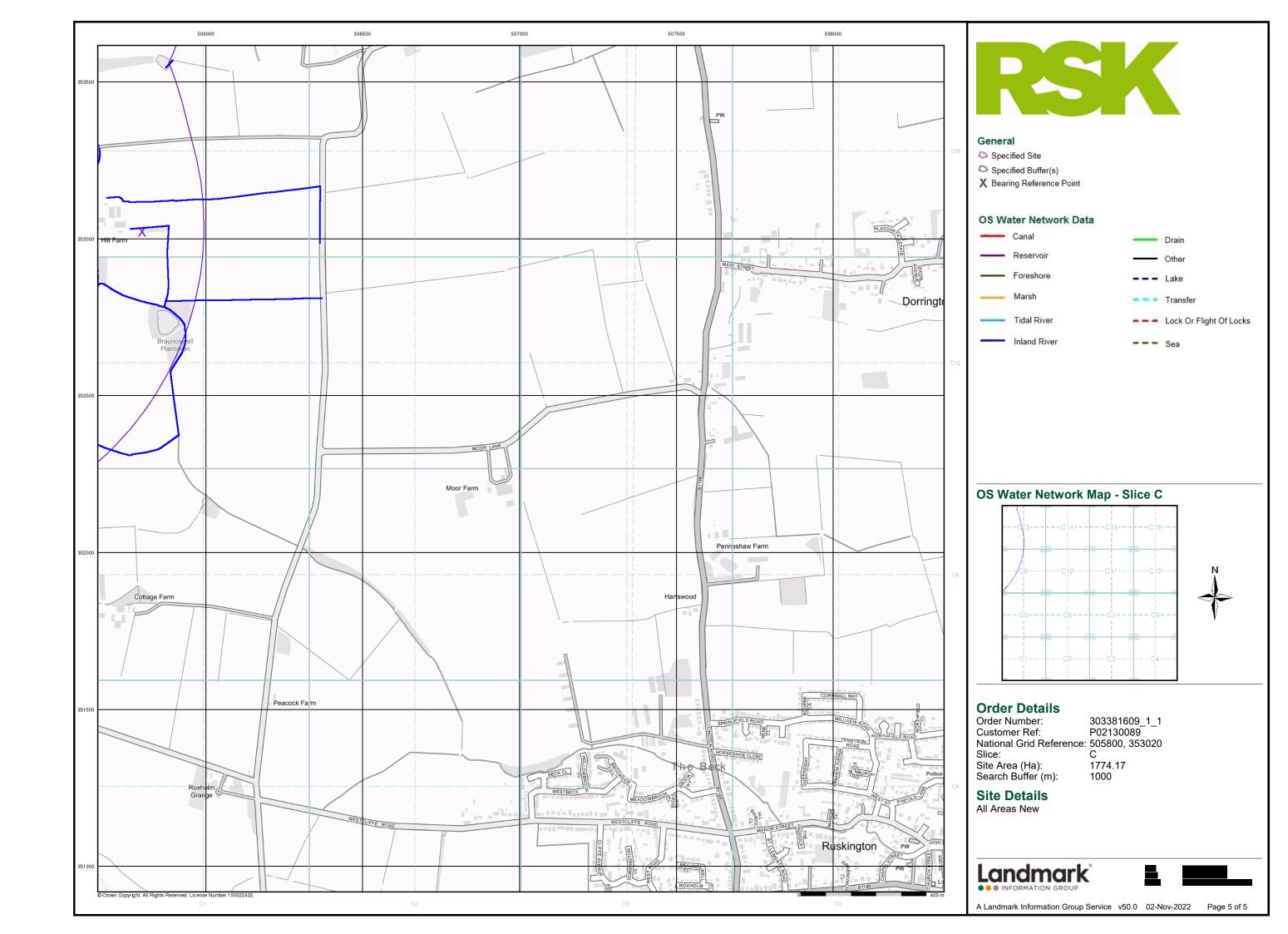














## **Envirocheck® Report:**

# Mining and Ground Stability Datasheet

#### **Order Details:**

Order Number:

304263548\_1\_1

**Customer Reference:** 

P02130089

**National Grid Reference:** 

505800, 353020

Slice:

C

Site Area (Ha):

1774.17

Search Buffer (m):

1000

#### **Site Details:**

All Areas New

#### **Client Details:**

Landmark Staff WEB Logins Imperium Imperial Way Reading Berkshire RG2 0TD







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

Historical Map List 4

The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.

Data Currency	5
Data Suppliers	6
Useful Contacts	7

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

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

#### Report Version v53.0





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





Report Version v53.0



# **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.				
	Potential for Collapsible Ground Stability Hazards				
1	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	505000 353022
	Potential for Collapsible Ground Stability Hazards				
2	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
	Potential for Compressible Ground Stability Hazards				
	Hazard Potential: No Hazard Source: No Hazard British Geological Survey, National Geoscience Information Service	(W)	0	1	505000 353022
	Potential for Compressible Ground Stability Hazards  Hazard Potential: No Hazard  Source: British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
	Potential for Ground Dissolution Stability Hazards				
3	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	505000 353022
	Potential for Ground Dissolution Stability Hazards				
4	Hazard Potential: Very Low	(W)	0	1	505000
	Source: British Geological Survey, National Geoscience Information Service				352811
_	Potential for Ground Dissolution Stability Hazards	042014	0	4	505707
5	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
6	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low	(NW)	24	1	505289
O	Source: British Geological Survey, National Geoscience Information Service	(1447)	24	'	354003
7	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low	(N)	71	1	505425
	Source: British Geological Survey, National Geoscience Information Service				354079
8	Potential for Ground Dissolution Stability Hazards  Hazard Potential: Low  Source: British Geological Survey, National Geoscience Information Service	(W)	92	1	505000 352754
	Potential for Ground Dissolution Stability Hazards				002.0.
9	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(NW)	135	1	505203 353470
	Potential for Ground Dissolution Stability Hazards				
10	Hazard Potential: Very Low British Geological Survey, National Geoscience Information Service	(SW)	151	1	505000 352610
	Potential for Ground Dissolution Stability Hazards				
11	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(W)	223	1	505053 352790
	Potential for Ground Dissolution Stability Hazards				
12	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(SW)	239	1	505000 352416
	Potential for Ground Dissolution Stability Hazards				
	Hazard Potential: No Hazard Source: No Hazard British Geological Survey, National Geoscience Information Service	(NW)	0	1	504987 353447
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(NW)	0	1	505000 353590
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	505000 352995
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C13NW (N)	31	1	505659 353365
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C13SW (S)	43	1	505806 352956



# **Ground Stability Data (1:50,000)**

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: Source: No Hazard British Geological Survey, National Geoscience Information Service	(SW)	150	1	505000 352593
13	Potential for Landslide Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	505000 353022
14	Potential for Landslide Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
15	Potential for Landslide Ground Stability Hazards  Hazard Potential: Low  Source: British Geological Survey, National Geoscience Information Service	(NW)	222	1	505205 353280
16	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(N)	29	1	505937 353946
17	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(NW)	151	1	505241 353733
18	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C9NW (SW)	232	1	505689 352890
19	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(W)	249	1	505000 352754
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	505000 353022
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
20	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(NW)	0	1	505000 353590
21	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	505000 352995
22	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C13NW (N)	31	1	505659 353365
23	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C13SW (S)	43	1	505806 352956
24	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(SW)	150	1	505000 352593
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	505000 353022
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	505000 352811
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C13SW (W)	6	1	505797 353022
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(NW)	24	1	505289 354003
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(NW)	135	1	505203 353470
	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(W)	223	1	505189 352781



## **Ground Stability Data (1:50,000)**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrin	king or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	(SW)	239	1	505000 352416





#### No Historical Land Use information available.

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

1:10,560	Mapsheet	Published Date
Lincolnshire	097_NE	1891
Lincolnshire	097_NW	1891
Lincolnshire	097_SE	1891
Lincolnshire	097_SW	1891
Lincolnshire	097_NE	1906
Lincolnshire	097_NW	1906
Lincolnshire	097_SE	1906
Lincolnshire	097_SW	1906
Lincolnshire	097_NE	1947
Lincolnshire	097_SE	1947
Lincolnshire	097_NW	1950
Lincolnshire	097_SW	1950
Ordnance Survey Plan	TF05SE	1956
1:10,000	Mapsheet	Published Date
Ordnance Survey Plan	TF05SE	1985



Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	November 2022	Bi-Annually
Coal Mining Affected Areas		
The Coal Authority - Property Searches	March 2014	Annual Rolling Updat
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)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	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		



## **Data Suppliers**

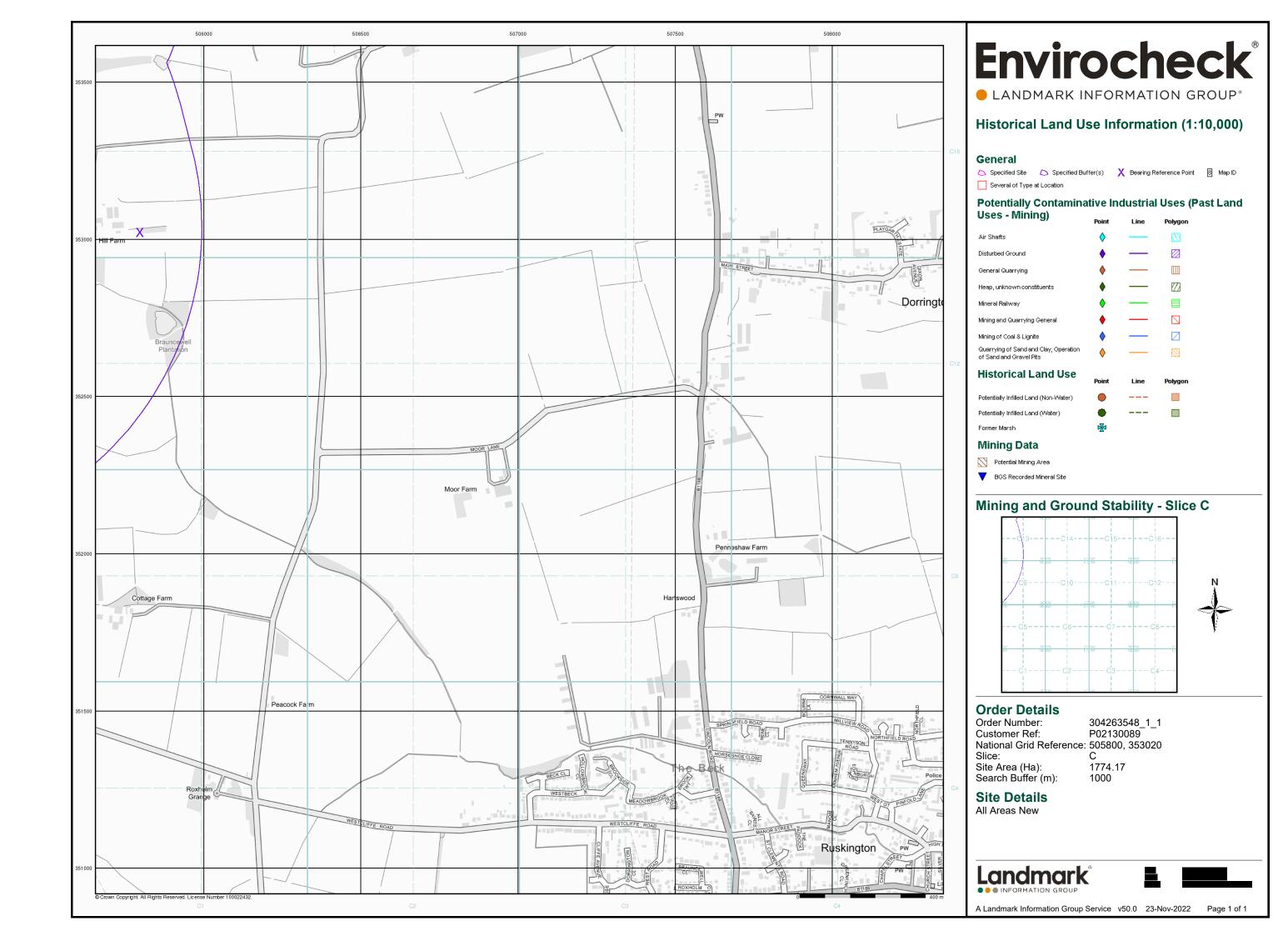
A selection of organisations who provide data within this report

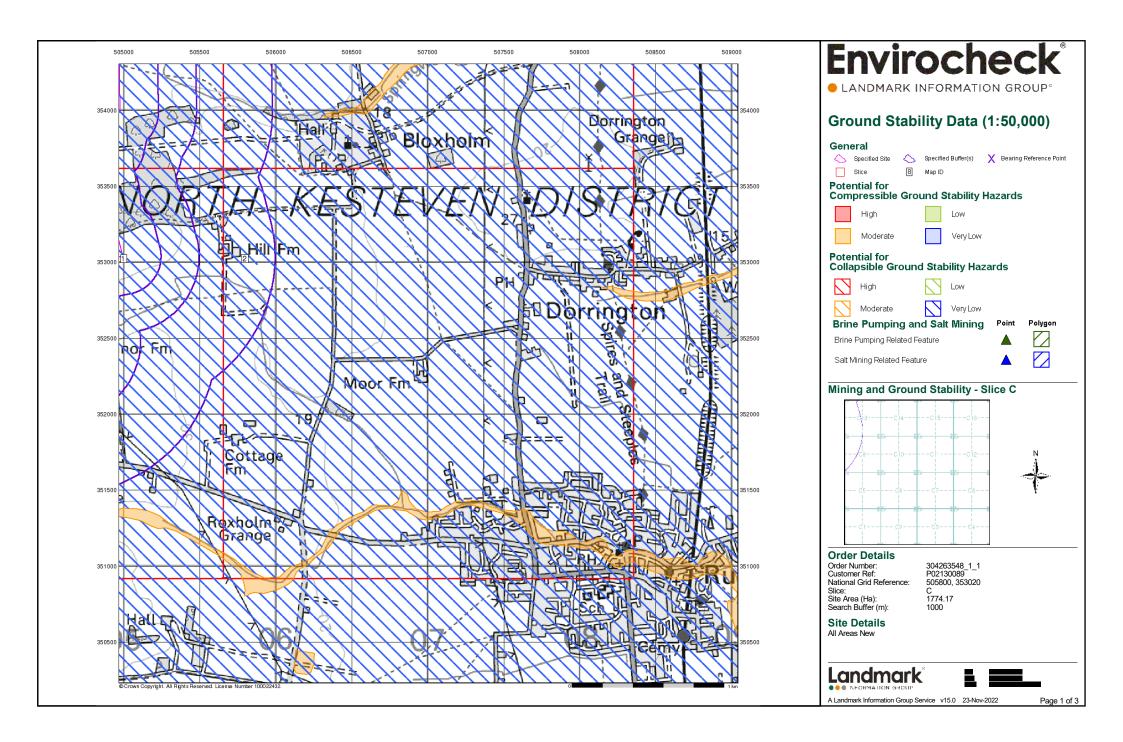
Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	The Coal Authority
Ove Arup	ARUP
Stantec UK Ltd	<b>Stantec</b>
Wardell Armstrong	wardell armstrong your earth our world
Johnson Poole & Bloomer	JPB

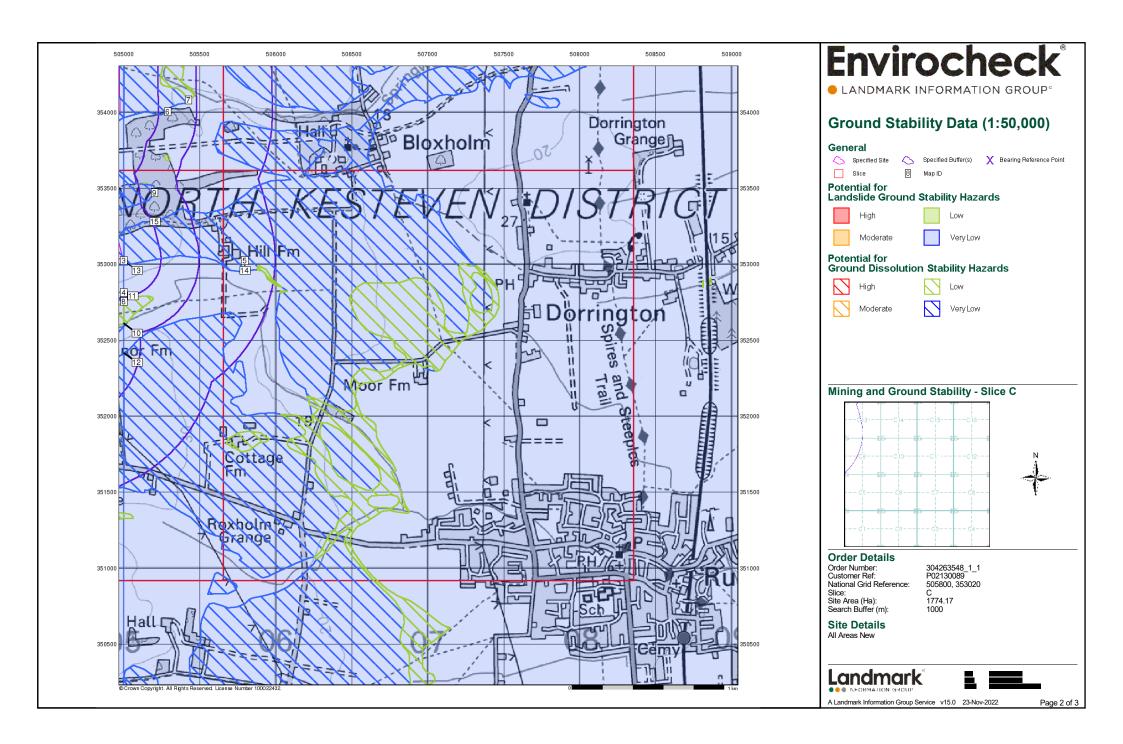


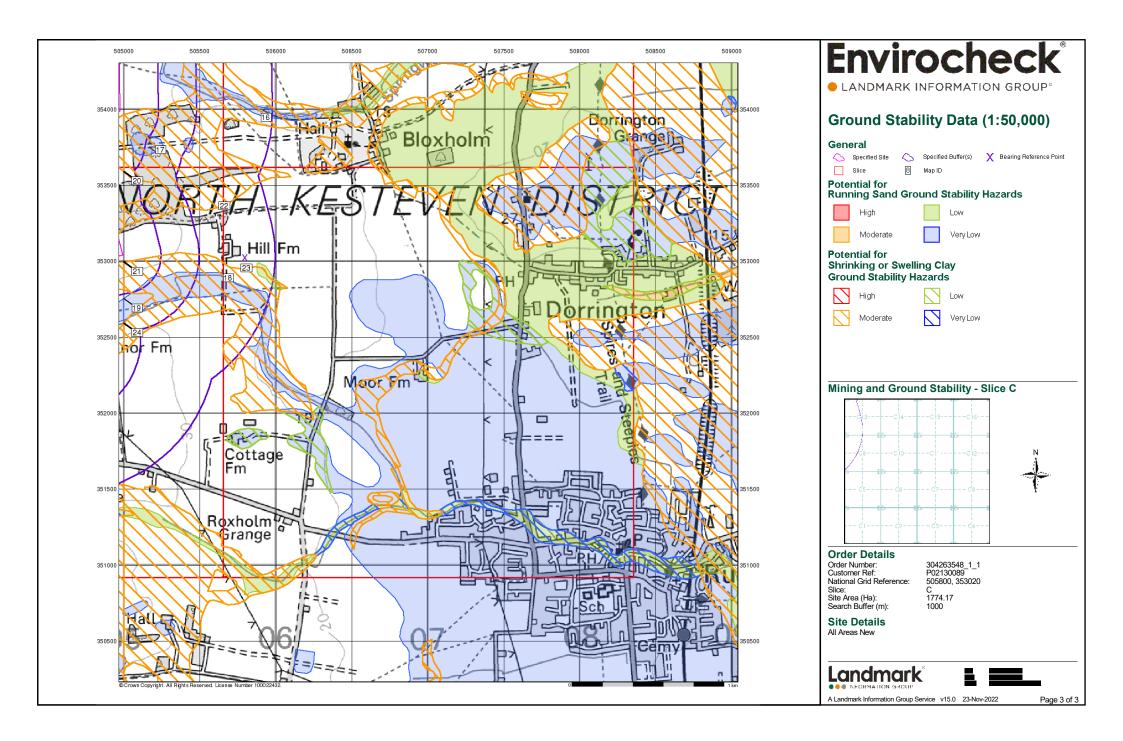
## **Useful Contacts**

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service  British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	







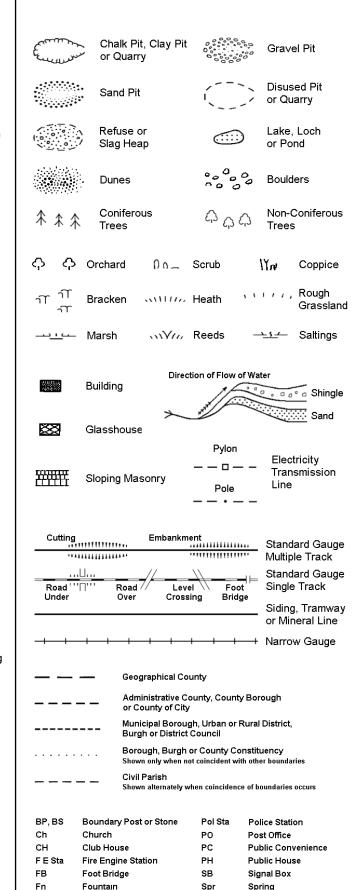


# **Historical Mapping Legends**

### **Ordnance Survey County Series 1:10,560** Gravel Other Orchard Osiers Mixed Wood Deciduous Brushwood Furze Rough Pasture Arrow denotes Trigonometrical flow of water Station Site of Antiquities Bench Mark Pump, Guide Post, Well, Spring, Signal Post **Boundary Post** ·285 Surface Level Sketched Instrumental Contour Contour Fenced Fenced Main Roads Minor Roads Un-Fenced Sunken Road Raised Road Railway over Road over Ri∨er Railway Railway over Level Crossing Road Road over Road over Road over County Boundary (Geographical) County & Civil Parish Boundary Administrative County & Civil Parish Boundary County Borough Boundary (England) Co. Boro. Bdy. County Burgh Boundary (Scotland) Co. Burgh Bdy. Rural District Boundary RD. Bdy.

····· Civil Parish Boundary

### Ordnance Survey Plan 1:10,000



TCB

TCP

Telephone Call Box

Telephone Call Post

GP

**Guide Post** 

Mile Post

### 1:10,000 Raster Mapping

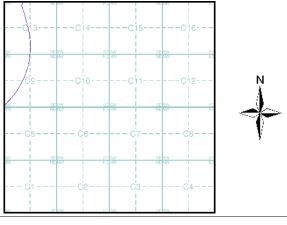
	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle	Mud	Mud
Sand	Sand		Sand Pit
mmi	Slopes		Top of cliff
	General detail		Underground detail
	- Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)	• • • • • •	Civil, parish or community boundary
	District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
۵ <sup>0</sup>	Area of wooded vegetation	۵ <sup>۵</sup>	Non-coniferous trees
۵ ۵	Non-coniferous trees (scattered)	**	Coniferous trees
<b>*</b>	Coniferous trees (scattered)	Ö̈	Positioned tree
ф ф ф ф	Orchard	* *	Coppice or Osiers
ωTi,	Rough Grassland	www.	Heath
On_	Scrub	7 <u>/</u> √/۲	Marsh, Salt Marsh or Reeds
6	Water feature	<b>←</b>	Flow arrows
MHW(S)	Mean high water (springs)	MLW(S)	Mean low water (springs)
	Telephone line	<b></b>	Electricity transmission line
	(where shown)		(with poles)
← BM 123.45 m	(where shown)  Bench mark (where shown)	Δ	(with poles) Triangulation station
	Bench mark	Δ	Triangulation
	Bench mark (where shown) Point feature (e.g. Guide Post		Triangulation station

Building

### **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:10,560	1887	2
Lincolnshire	1:10,560	1906	3
Lincolnshire	1:10,560	1947 - 1950	4
Ordnance Survey Plan	1:10,000	1956	5
Ordnance Survey Plan	1:10,000	1985	6
10K Raster Mapping	1:10,000	2000	7
Street View	Variable		8

### **Historical Map - Slice C**



#### **Order Details**

Order Number: 303381609\_1\_1 **Customer Ref:** P02130089 National Grid Reference: 505800, 353020 Slice:

Site Area (Ha):

1774.17 Search Buffer (m): 1000

### **Site Details**

All Areas New







A Landmark Information Group Service v50.0 02-Nov-2022 Page 1 of 8



### Lincolnshire

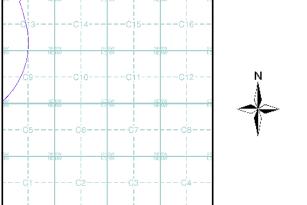
### **Published 1887** Source map scale - 1:10,560

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)

1	097NW		(	097NE	
ı	1887	i		1887	٠,
	1:10,560			1:10,560	I
ı					- 1
I	097SW			097SE	- 1
1	1887			1887	•
	1:10,560		1	1:10,560	ı
1			!		

### **Historical Map - Slice C**



303381609\_1\_1 P02130089 National Grid Reference: 505800, 353020

1774.17 1000

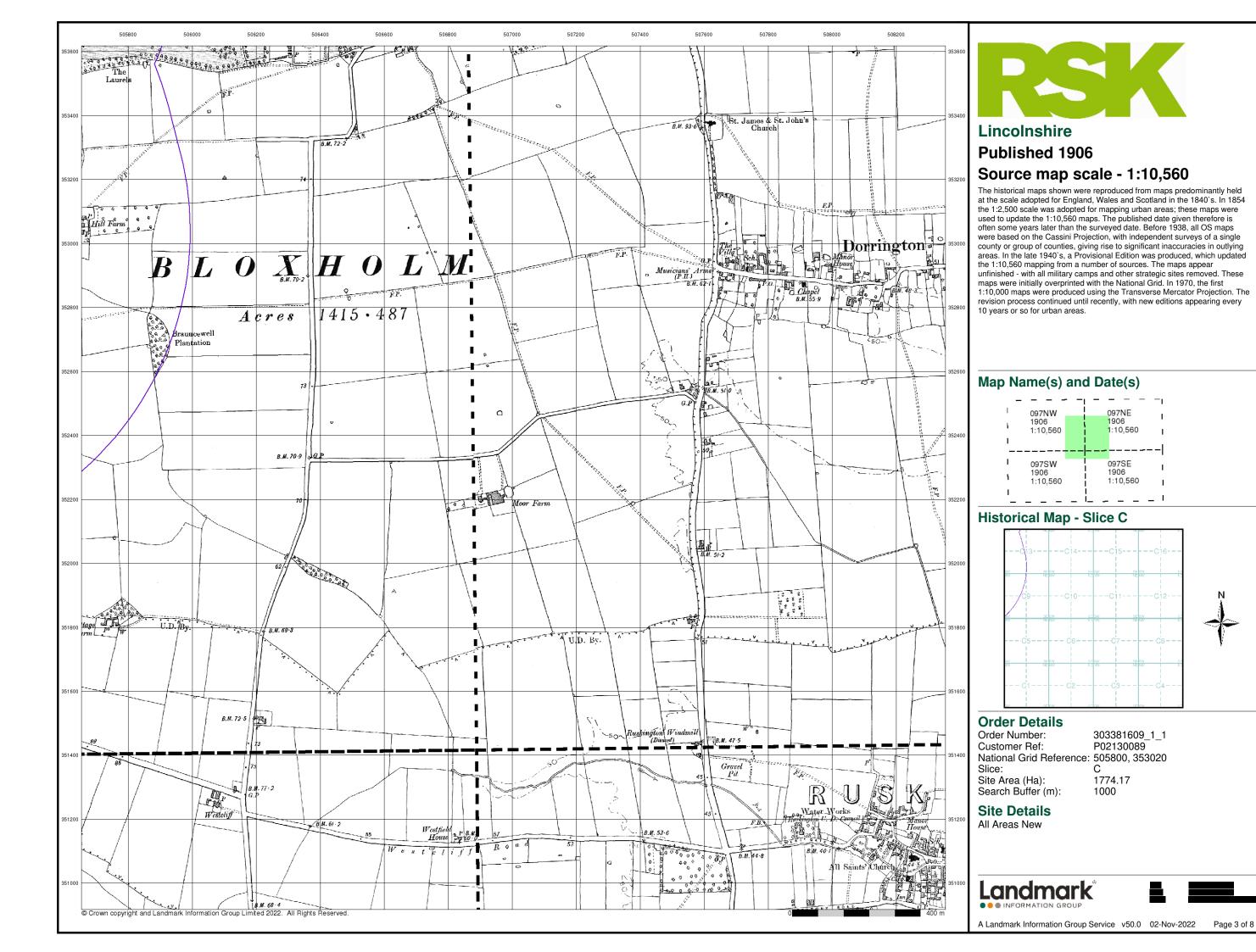
### **Site Details**

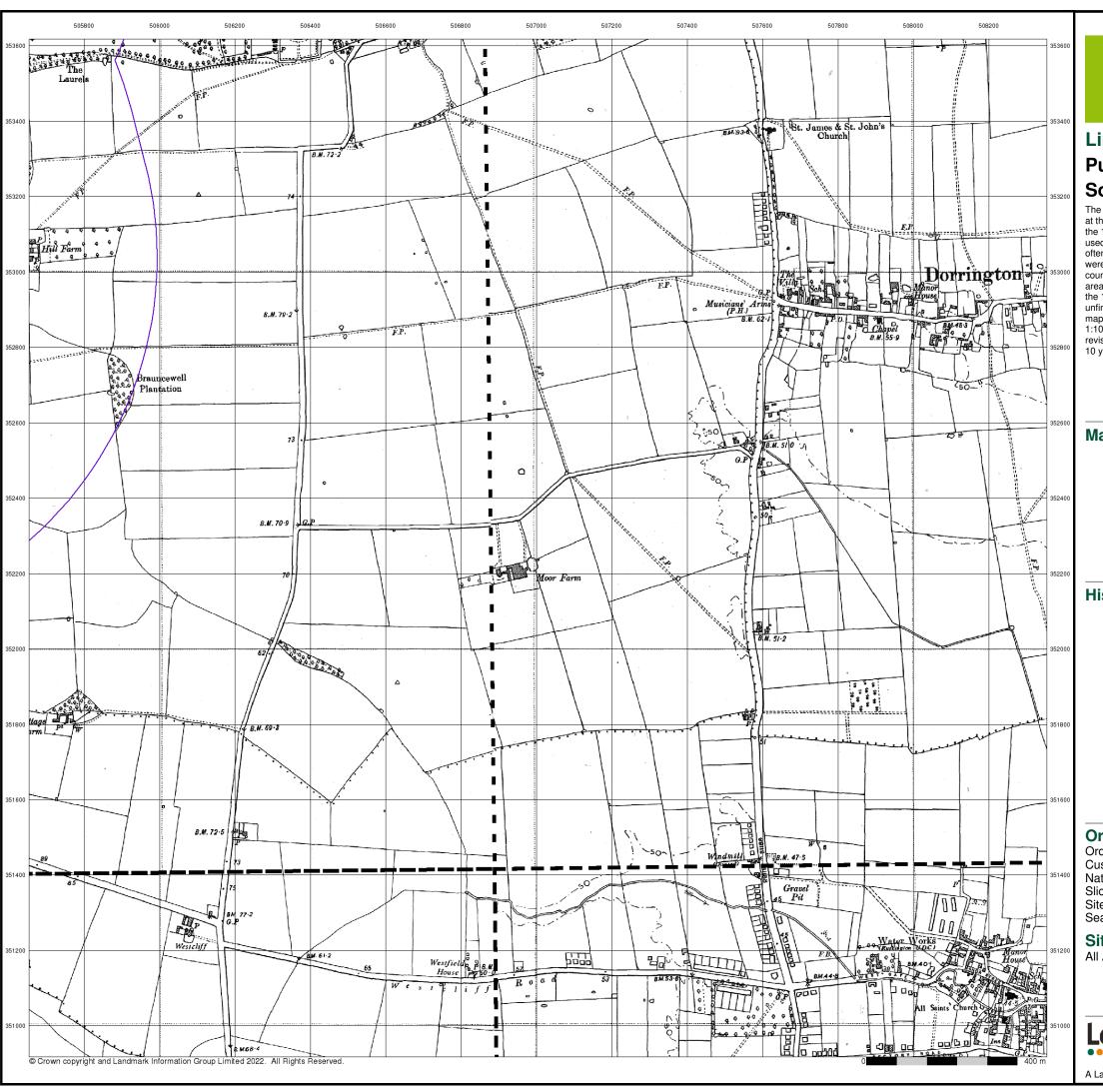






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# RSK

### Lincolnshire

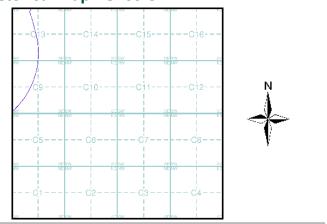
# **Published 1947 - 1950 Source map scale - 1:10,560**

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)

1	097NW	. (	097NE	
i	1950 1:10,560		1947 1:10,560	i
1				
		 		1
1	097SW		097SE	
1	1950 1:10,560		1947 1:10,560	i
1		!		

### **Historical Map - Slice C**



### **Order Details**

Order Number: 303381609\_1\_1
Customer Ref: P02130089
National Grid Reference: 505800, 353020
Slice: C

Site Area (Ha): 1774.17 Search Buffer (m): 1000

Site Details

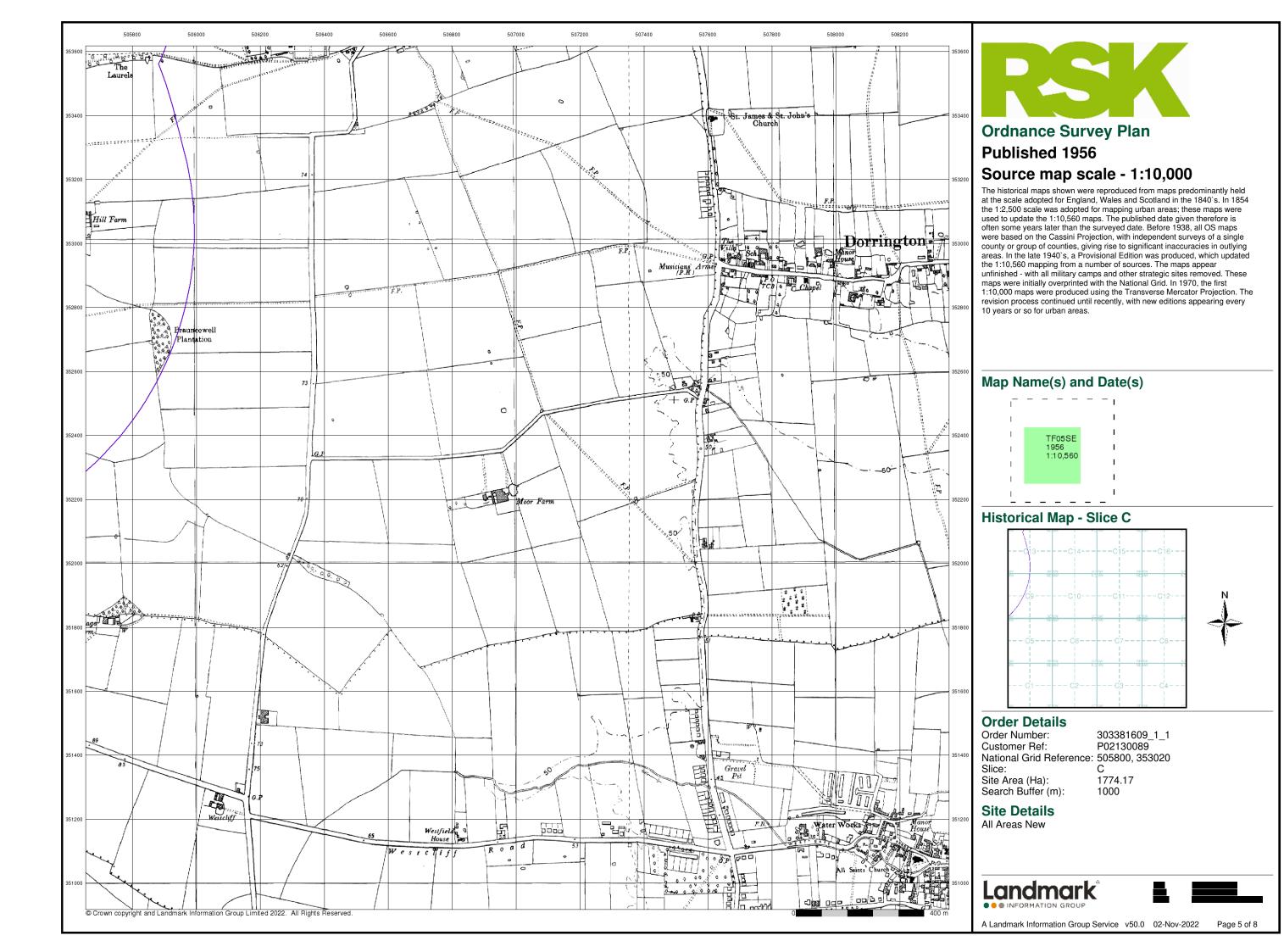
Site Details
All Areas New

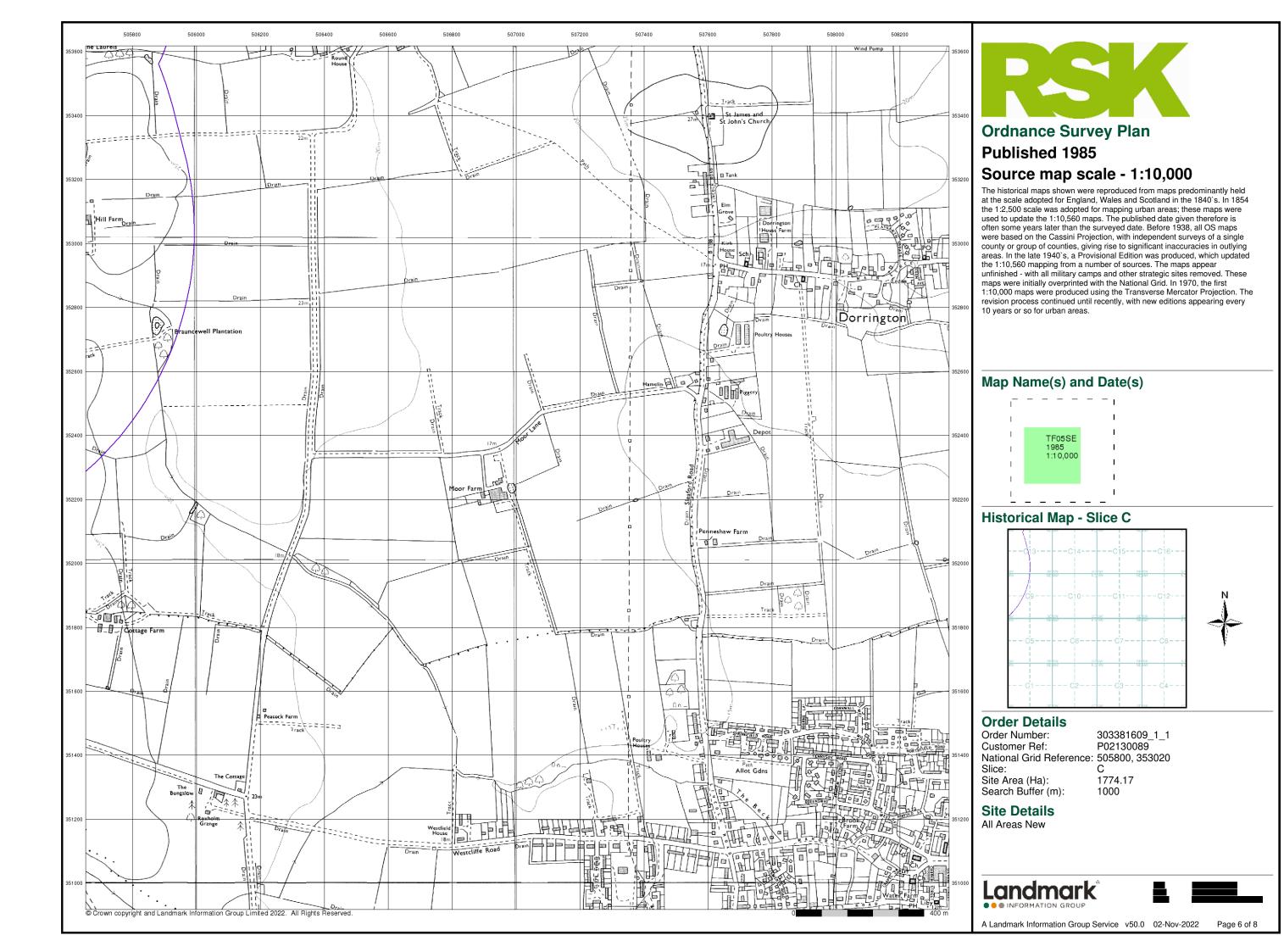


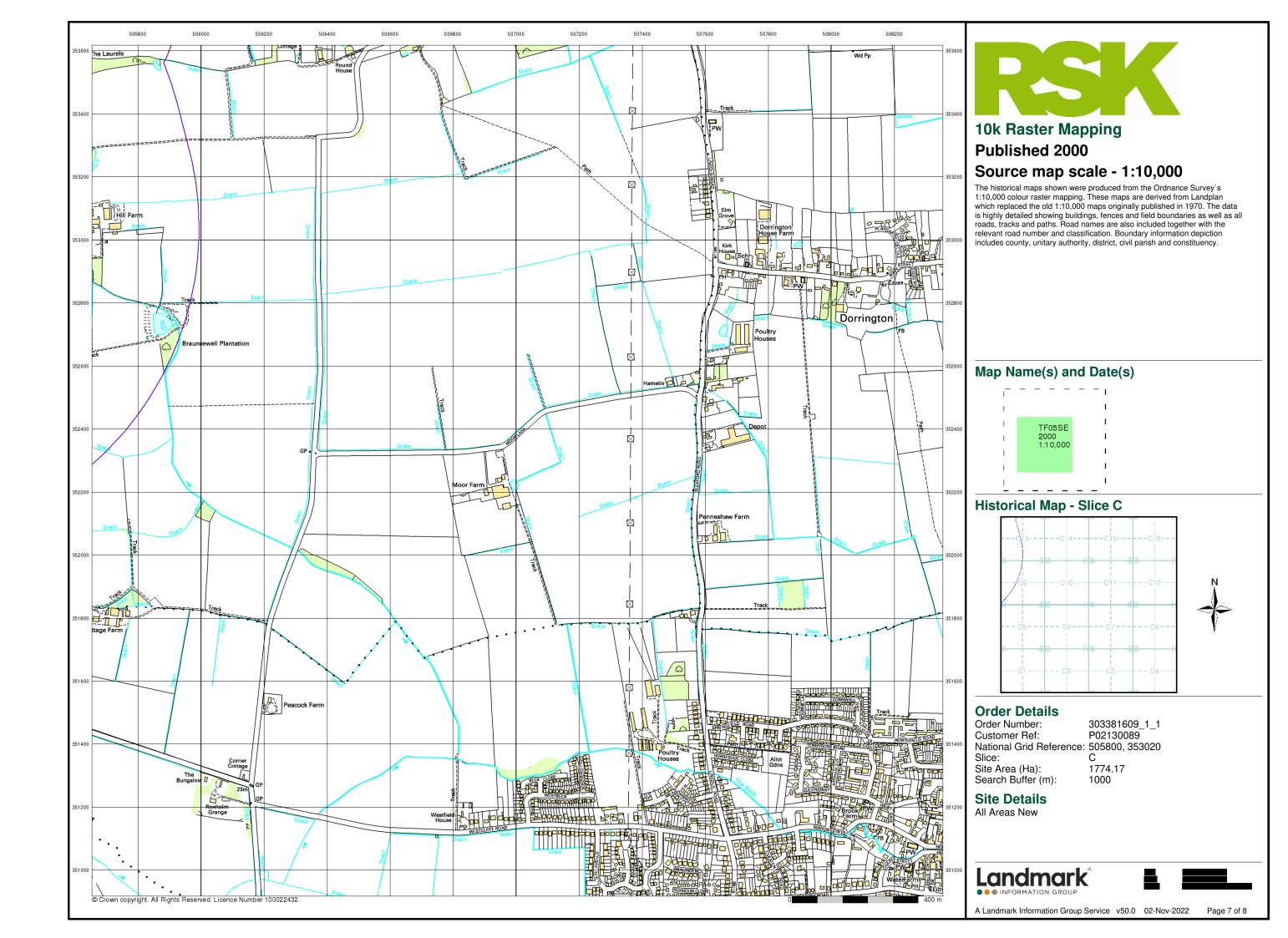


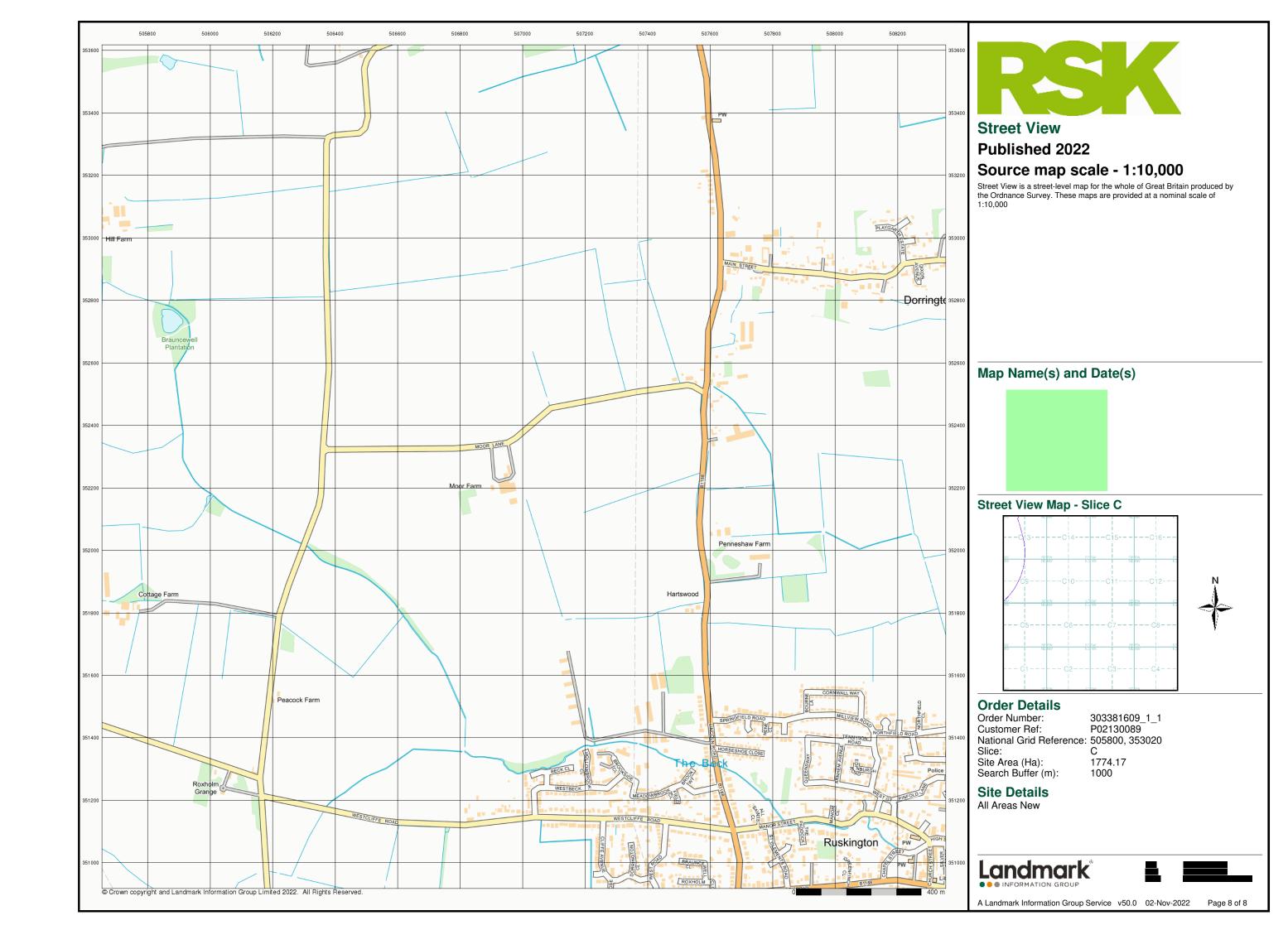


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### APPENDIX D4 ENVIRONMENTAL DATABASE REPORT – ZONE D



# **Envirocheck® Report:**

### **Datasheet**

### **Order Details:**

**Order Number:** 

303381609\_1\_1

**Customer Reference:** 

P02130089

**National Grid Reference:** 

501730, 355030

Slice:

D

Site Area (Ha):

1774.17

Search Buffer (m):

1000

**Site Details:** 

All Areas New



Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service





Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	10
Hazardous Substances	-
Geological	11
Industrial Land Use	14
Sensitive Land Use	15
Data Currency	16
Data Suppliers	20
Useful Contacts	21

#### 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

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

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Report Version v53.0



### **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					
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					
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	2	4		1
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 4	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 8	14	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 8	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 8	Yes	n/a	n/a	n/a
Source Protection Zones	pg 9	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					

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### **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 10	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 11	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 11	1			3
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 11	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 12	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 12	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 12	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 12	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 13	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 13	Yes	n/a	n/a	n/a



# **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 14		2		
Fuel Station Entries					
Gas Pipelines					
Underground Electrical Cables					
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 15	2			
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: Limited Potential for Groundwater Flooding to Occur	(E)	0	1	503550 354500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	502750 353600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	D4NE	0	1	502850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	1	354000 503200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	354200 503200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	354400 502500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	1	353400 503000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	D11SW	0	1	354050 501731
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S) D3SE (SE)	0	1	355000 502250 353900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	D4NE (SE)	0	1	502700 354050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	D4NW (SE)	0	1	502400 354000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	D4SW (SE)	0	1	502300 353900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	D8SE (SE)	0	1	502800 354500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	502150 356500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	503050 354150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	1	503150 354150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	503200 354150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	D4SW (SE)	0	1	502300 353950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	D3NE (SE)	0	1	502250 354000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	D4SE (SE)	0	1	502800 353750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	D11SW (NW)	0	1	501731 355027
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	D7SE (SE)	0	1	502250 354550

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	D8SE (SE)	0	1	502700 354550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	el (NE)	50	1	502400 356600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	90	1	502450 356600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	D3SW (S)	122	1	501800 353650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve		162	1	502500 356650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(S)	234	1	501731 353600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Leve	el (NE)	403	1	502650 356850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(S)	444	1	501550 353550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	474	1	502700 356900
	Nearest Surface Water Feature	D6NE (SW)	502	-	501576 354886
1	Water Abstractions  Operator: Licence Number: 4/30/09/*G/0028  Permit Version: 100  Location: H.N.Nevile Well3 Temple Bruer Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Central Lincolnshire Limestone; Status: Revoked Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st August 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	D3NW (S)	0	2	501800 354000
1	Operator: Licence Number: 4/30/09/*g/028 Permit Version: Not Supplied Location: H N Nevile Well2 , TEMPLE BRUER Authority: Environment Agency, Anglian Region Abstraction: Domestic & Agriculture Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 3 Yearly Rate (m3): 11360 Details: Central Lincolnshire Limestone; 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 100m	D3NW (S)	0	2	501800 353995

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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Water Abstractions Operator:		D14SE	50	2	501300
	-	4/30/09/*g/028 Not Supplied H N Nevile Bore1 , TEMPLE BRUER Environment Agency, Anglian Region Domestic & Agriculture Not Supplied Well And Borehole 3 11360 Central Lincolnshire Limestone; Status: Perpetuity Not Supplied Located by supplier to within 100m	(NW)			355895
2	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit End Date: Permit End Date: Positional Accuracy:	4/30/09/*G/0028 100 H.N.Nevile Bore1 Temple Bruer Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Revoked 01 January 31 December 1st August 1966 Not Supplied Located by supplier to within 100m	D14SE (NW)	51	2	501300 355900
3	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/09/*G/0077 100 A.L.&D.F.Bell Bore Wellingore Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st February 1966 Not Supplied Located by supplier to within 100m	D14NW (NW)	167	2	501200 356250
4	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/09/*G/0028 100 H.N.Nevile Well2 Temple Bruer Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st August 1966 Not Supplied Located by supplier to within 100m	D11SW (E)	250	2	501801 355001



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions	·				
5	Operator: Licence Number: Permit Version: Location: Authority: Abstraction: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	4/30/09/*G/0041 100 H.N.Nevile Bore Wellingore Hth Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Central Lincolnshire Limestone; Status: Perpetuity 01 January 31 December 1st September 1976 Not Supplied Located by supplier to within 100m	D13SW (NW)	973	2	500300 355650
	Groundwater Vulner Combined Classification: Combined Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness: Superficial Thickness: Superficial Recharge:	Principle Bedrock Aquifer - High Vulnerability  High  Productive Bedrock Aquifer, No Superficial Aquifer High Well Connected Fractures <300 mm/year >70% <90%  <3m  No Data	(S)	0	3	502000 353000
	Groundwater Vulner Combined Classification: Combined Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness: Superficial Thickness: Superficial Recharge:	Prability Map Principle Bedrock Aquifer - High Vulnerability High Productive Bedrock Aquifer, No Superficial Aquifer High Well Connected Fractures <300 mm/year >70% <90% <3m No Data	(SE)	0	3	503000 353000
	Groundwater Vulner Combined Classification: Combined Vulnerability: Combined Aquifer: Pollutant Speed: Bedrock Flow: Dilution: Baseflow Index: Superficial Patchiness: Superficial Thickness: Superficial Recharge:	Principle Bedrock Aquifer - High Vulnerability  High  Productive Bedrock Aquifer, No Superficial Aquifer High Well Connected Fractures <300 mm/year >70% <90%  <3m  No Data	D11SW (S)	0	3	501731 355000

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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	D11SE	0	3	502000
	Classification: Combined	High	(E)			355000
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow:	Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial	<90%				
	Patchiness:					
	Superficial	<3m				
	Thickness: Superficial	No Data				
	Recharge:	No Data				
	Groundwater Vulne	erability Map				
	Combined Classification:	Principle Bedrock Aquifer - High Vulnerability	(E)	0	3	503000 355000
	Combined	High				333000
	Vulnerability:	··· <del>g</del> ··				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	-0111				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne					
	Combined Classification:	Secondary Superficial Aquifer - High Vulnerability	D3SE	0	3	502153 353659
	Combined	High	(S)			353659
	Vulnerability:	<del>.</del>				
	Combined Aquifer:	Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	<b>10</b> 111				
	Superficial	No Data				
	Recharge:	suphilities Man				
	Groundwater Vulne Combined	Prablity Map  Secondary Superficial Aquifer - High Vulnerability	D3SE	0	3	502028
	Classification:		(S)		_	353739
	Combined	High				
	Vulnerability: Combined Aquifer:	Productive Bedrock Aquifer, Productive Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow:	Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial	>70% <90%				
	Patchiness:	••				
	Superficial	<3m				
	Thickness:	No Data				
	Superficial Recharge:	No Data				

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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	D15NW	0	3	501731
	Classification:		(N)			356000
	Combined Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness:	<b>~</b> 2m				
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	D15NE	0	3	502000
	Classification:		(N)			356000
	Combined Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow:	Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial	<90%				
	Patchiness:					
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(NE)	0	3	503000
	Classification: Combined	Lliah				356000
	Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High Well Connected Fractures				
	Bedrock Flow: Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:	Solii				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne					
	Combined	Principle Bedrock Aquifer - High Vulnerability	D3NW	0	3	501731
	Classification: Combined	High	(S)			354000
	Vulnerability:	· ··ʊ··				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:					
	Superficial	No Data				
	Recharge:					



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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	D3NE	0	3	502000
	Classification: Combined	High	(S)			354000
	Vulnerability:					
	Combined Aquifer: Pollutant Speed:	Productive Bedrock Aquifer, No Superficial Aquifer High				
	Bedrock Flow:	Well Connected Fractures				
	Dilution: Baseflow Index:	<300 mm/year >70%				
	Superficial	<90%				
	Patchiness:					
	Superficial Thickness:	<3m				
	Superficial	No Data				
	Recharge:					
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(SE)	0	3	503000
	Classification: Combined	High				354000
	Vulnerability:					
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index: Superficial	>70% <90%				
	Patchiness:	190 /0				
	Superficial	<3m				
	Thickness: Superficial	No Data				
	Recharge:	110 Bala				
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	(E)	0	3	503000
	Classification: Combined	High				355027
	Vulnerability:	ngii				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed: Bedrock Flow:	High Well Connected Fractures				
	Dilution:	<300 mm/year				
	Baseflow Index:	>70%				
	Superficial Patchiness:	<90%				
	Superficial	<3m				
	Thickness: Superficial	No Data				
	Recharge:	NO Data				
	Groundwater Vulne	erability Map				
	Combined	Principle Bedrock Aquifer - High Vulnerability	D11SW	0	3	501731
	Classification:		(NW)			355027
	Combined Vulnerability:	High				
	Combined Aquifer:	Productive Bedrock Aquifer, No Superficial Aquifer				
	Pollutant Speed:	High				
	Bedrock Flow: Dilution:	Well Connected Fractures <300 mm/year				
	Baseflow Index:	>70%				
	Superficial	<90%				
	Patchiness: Superficial	<3m				
	Thickness:					
	Superficial	No Data				
	Recharge:					



ap D		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnera Combined	<b>ability Map</b> Principle Bedrock Aquifer - High Vulnerability	D11SE	0	3	502000
	Classification: Combined	High	(E)			355027
	Vulnerability:	nigii				
		Productive Bedrock Aquifer, No Superficial Aquifer				
		High Well Connected Fractures				
		<300 mm/year				
		>70% <90%				
	Patchiness:	10				
	Superficial Thickness:	<3m				
	Superficial Recharge:	No Data				
		ability - Soluble Rock Risk		_	_	
	Classification:	Significant Risk - Low Possibility	D11SW (NW)	0	3	501731 355027
		ability - Soluble Rock Risk Significant Risk - Low Possibility	(S)	0	3	502000
		,	(5)		J	353000
		ability - Soluble Rock Risk Very Significant Risk - Moderate Possibility	(SE)	0	3	503000
		, , , , , , , , , , , , , , , , , , ,	(SE)	0	J	353000
		ability - Soluble Rock Risk Significant Risk - Low Possibility	D15NW	0	3	501731
		<u>,                                      </u>	(N)	0	3	356000
		ability - Soluble Rock Risk Significant Risk - Low Possibility	D15NE	0	3	502000
	Classification.	Significant Risk - Low Possibility	(N)	U	J	356000
		ability - Soluble Rock Risk	(NE)	0	2	E02000
	Classification.	Significant Risk - Low Possibility	(NE)	U	3	503000 356000
		ability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	D11SE (E)	0	3	502000 355027
	Groundwater Vulner	ability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	D3NW (S)	0	3	501731 354000
	Groundwater Vulner	ability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	D3NE (S)	0	3	502000 354000
	Groundwater Vulner	ability - Soluble Rock Risk	(3)			001000
	Classification:	Significant Risk - Low Possibility	(SE)	0	3	503000 354000
		ability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	(E)	0	3	503000 355027
		ability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	D11SW (S)	0	3	50173 <sup>2</sup> 355000
	Groundwater Vulner	ability - Soluble Rock Risk				
	Classification:	Significant Risk - Low Possibility	D11SE (E)	0	3	502000 355000
	Groundwater Vulner	ability - Soluble Rock Risk	(-/			22000
	Classification:	Very Significant Risk - Moderate Possibility	(E)	0	3	503000 355000
	Bedrock Aquifer Des	_				22000
	Aquifer Designation:	Principal Aquifer	D11SW (S)	0	3	501731 355000
	Bedrock Aquifer Des	_				
	Aquifer Designation:	Principal Aquifer	D11SW (NW)	0	3	50173 <sup>2</sup> 355027
	Superficial Aquifer D	_				
	Aquifer Designation:	Secondary Aquifer - Undifferentiated	D3SE (S)	0	3	502153 353659
	Superficial Aquifer D	_				
	Aquifer Designation:	Secondary Aquifer - Undifferentiated	D3SE (S)	0	3	502028 353739

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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Source Protectio	n Zones				
6	Name: Source: Reference: Type:	Not Supplied Environment Agency, Head Office Not Supplied Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	(S)	0	2	501617 353577
	Extreme Flooding	g from Rivers or Sea without Defences				
	None					
	Flooding from Ri	vers or Sea without Defences				
	None					
	Areas Benefiting	from Flood Defences				
	None					
	Flood Water Stor	rage Areas				
	None					
	Flood Defences					
	None					
	OS Water Networ	rk Lines				
	None					

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### **Waste**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority La	ndfill Coverage				
	Name:	North Kesteven District Council - Had landfill data but passed it to the relevant environment agency		0	4	501731 355027
	Local Authority La	ndfill Coverage				
	Name:	Lincolnshire County Council - Had landfill data but passed it to the relevant environment agency		0	5	501731 355027

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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid	d Geology				
	Description:	Inferior Oolite Group	D11SW (NW)	0	1	501731 355027
	BGS Recorded Mine	eral Sites				
7	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Ashby Lodge Stone Pit Ashby De La Launde, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136054 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	D12NE (NE)	0	1	502684 355424
	BGS Recorded Mine	eral Sites				
8	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	St Johns Gravel Pit Wellingore, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136048 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Sand and Gravel Located by supplier to within 10m	D5NE (W)	765	1	500772 354954
	BGS Recorded Mine					
9	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	St Johns Gravel Pit Wellingore, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136047 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Sand and Gravel Located by supplier to within 10m	D6NW (SW)	846	1	501098 354709
	BGS Recorded Mine	eral Sites				
10	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity:	Wellingore Heath Gravel Pit Wellingore, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136046 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Sand and Gravel Located by supplier to within 10m	D9NW (NW)	950	1	500321 355630
	Coal Mining Affecte	d Areas				
	In an area that might	not be affected by coal mining				
	Non Coal Mining Ar	eas of Great Britain				
		sible Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
	Potential for Collap Hazard Potential: Source:	sible Ground Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	501731 355000
	Potential for Compr Hazard Potential: Source:	ressible Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
	Potential for Compr Hazard Potential: Source:	ressible Ground Stability Hazards  No Hazard  British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	501731 355000

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lap ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Groun	d Dissolution Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
	Potential for Groun	d Dissolution Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	501731 355000
		d Dissolution Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	D3SE (S)	0	1	502028 353739
	Potential for Groun	d Dissolution Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	D4SW (SE)	0	1	502364 353812
	Potential for Groun	d Dissolution Stability Hazards	,			
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	D8SW (SE)	0	1	502372 354544
		d Dissolution Stability Hazards	,			
	Hazard Potential:	No Hazard	D3SW	118	1	501822
	Source:	British Geological Survey, National Geoscience Information Service	(S)			353665
	Potential for Lands Hazard Potential: Source:	lide Ground Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
		lide Ground Stability Hazards	(1447)			000027
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	50173 <sup>2</sup> 355000
	Potential for Runni	ng Sand Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	50173 35502
		ng Sand Ground Stability Hazards	D440W		_	50470
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	50173 <sup>-</sup> 355000
	Potential for Runni Hazard Potential:	ng Sand Ground Stability Hazards Very Low	D3SE	0	1	502028
	Source:	British Geological Survey, National Geoscience Information Service	(S)			353739
	Potential for Runni Hazard Potential:	ng Sand Ground Stability Hazards Very Low	D3SE	0	1	50215
	Source:	British Geological Survey, National Geoscience Information Service	(S)	U	ı	353659
	Potential for Shrink	ring or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	50173 35500
	Potential for Shrink	ring or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	50173 35502
		king or Swelling Clay Ground Stability Hazards	(1400)			33302
	Hazard Potential:	Very Low	D3SE	0	1	50215
	Source:	British Geological Survey, National Geoscience Information Service	(S)			353659
	Potential for Shrink Hazard Potential:	king or Swelling Clay Ground Stability Hazards  Very Low	D3SE	0	1	502028
	Source:	British Geological Survey, National Geoscience Information Service	(S)		Į	35373
	Radon Potential - R	adon Affected Areas				
	Affected Area:	The property is in a Higher probability radon area (10 to 30% of homes are estimated to be at or above the Action Level).	D15SW (N)	0	1	50173 35592
	Source:	British Geological Survey, National Geoscience Information Service				
	Radon Potential - R Affected Area:	Radon Affected Areas  The property is an Intermediate probability radon area (3 to 5% of homes are	D11SW	0	1	50192
	Source:	estimated to be at or above the Action Level).  British Geological Survey, National Geoscience Information Service	(E)		ı	35502
	Radon Potential - R	adon Affected Areas				
	Affected Area:	The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level).	D11SW (E)	0	1	50192 35500
	Source:	British Geological Survey, National Geoscience Information Service				
	Radon Potential - R Affected Area:	Radon Affected Areas  The property is in an Intermediate probability radon area (5 to 10% of homes	D3SE	0	1	50202

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# **Geological**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Affected Areas					
	Affected Area: Source:	The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level).  British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
	Radon Potential - R	adon Affected Areas				
	Affected Area: Source:	The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level).  British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	501731 355001
	Radon Potential - R	adon Protection Measures				
	Protection Measure: Source:	Full radon protective measures are necessary in the construction of new dwellings or extensions British Geological Survey, National Geoscience Information Service	D15SW (N)	0	1	501731 355926
		adon Protection Measures				
		Basic radon protection measures  Basic radon protective measures are necessary in the construction of new dwellings or extensions  British Geological Survey, National Geoscience Information Service	D11SW (E)	0	1	501925 355027
	Radon Potential - R	adon Protection Measures				
	Protection Measure: Source:	Basic radon protective measures are necessary in the construction of new dwellings or extensions British Geological Survey, National Geoscience Information Service	D11SW (E)	0	1	501925 355001
	Radon Potential - R	adon Protection Measures				
		Basic radon protective measures are necessary in the construction of new dwellings or extensions	D3SE (S)	0	1	502025 353826
	Source:	British Geological Survey, National Geoscience Information Service				
		adon Protection Measures				
	Protection Measure: Source:	No radon protective measures are necessary in the construction of new dwellings or extensions  British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
		adon Protection Measures				
		No radon protection measures  No radon protective measures are necessary in the construction of new dwellings or extensions	D11SW (S)	0	1	501731 355001
	Source:	British Geological Survey, National Geoscience Information Service	\			

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### **Industrial Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	Contemporary Trad	e Directory Entries Timmart Electrical Services	D12SE	12	-	502913
	Location: Classification: <b>Status:</b> Positional Accuracy:	3, Ashby Lodge Cottages, Ashby de la Launde, Lincoln, LN4 3JW Electrical Engineers Inactive Automatically positioned to the address	(E)			355268
	Contemporary Trad	e Directory Entries				
12	Name: Location: Classification: <b>Status:</b> Positional Accuracy:	D F Bell Haulage Gorse Hill Lane, Wellingore, Lincoln, LN5 0BY Road Haulage Services Inactive Automatically positioned to the address	D14NW (NW)	224	-	501143 356206

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### **Sensitive Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Nitrate Vulnerab	le Zones				
13	Name: Description: Source:	Lower Witham Nvz Surface Water Environment Agency, Head Office	D11SW (NW)	0	3	501731 355027
	Nitrate Vulnerab	le Zones				
14	Name: Description: Source:	Lincolnshire Limestone Groundwater Environment Agency, Head Office	D11SW (NW)	0	3	501731 355027

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Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	June 2020	Annually
North Kesteven District Council - Environmental Health Department	October 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - Anglian Region	October 2022	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 Kesteven District Council - Environmental Health Department	May 2014	Variable
Local Authority Pollution Prevention and Controls		
North Kesteven District Council - Environmental Health Department	May 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
North Kesteven District Council - Environmental Health Department	May 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	August 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	ouly 2022	Quartorry
Environment Agency - Anglian Region	October 2022	Quarterly
	0000001 2022	Quarterly
<b>Water Industry Act Referrals</b> Environment Agency - Anglian Region	October 2017	
	October 2017	
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
	Julie 2016	As notined
Groundwater Vulnerability - Soluble Rock Risk	lum = 0040	As notified
Environment Agency - Head Office	June 2018	AS HOURED
Bedrock Aquifer Designations	lanus=: 2042	Amazzallar
Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations		
Environment Agency - Head Office	January 2018	Annually
Source Protection Zones		
Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	August 2022	Quarterly

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Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2022	Quarterly
,	August 2022	Quarterly
Areas Benefiting from Flood Defences  Environment Agency - Head Office	August 2022	Quarterly
Flood Water Storage Areas	/ tagaot 2022	Quartony
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
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	As notified
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
ntegrated 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	October 2022	Quarterly
icensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Northern Area	July 2022	Quarterly
ocal Authority Landfill Coverage		
incolnshire County Council	February 2003	Not Applicable
North Kesteven District Council - Environmental Health Department	February 2003	Not Applicable
Local Authority Recorded Landfill Sites	O-t-h -= 2010	
incolnshire County Council  North Kesteven District Council - Environmental Health Department	October 2018 October 2018	
•	October 2010	
Registered Landfill Sites Environment Agency - Anglian Region - Northern Area	March 2006	Not Applicable
Registered Waste Transfer Sites	March 2000	110t7 (ppilousio
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	, tagast 2001	
incolnshire County Council - Highways and Planning Department	August 2010	Variable
North Kesteven District Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents		
incolnshire County Council - Highways and Planning Department	August 2007	Variable
lorth Kesteven District Council - Planning Department	October 2015	Variable

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Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	January 2009	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)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	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
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries		
Thomson Directories	October 2022	Quarterly
Fuel Station Entries		
Catalist Ltd - Experian	August 2022	Quarterly
Gas Pipelines		
National Grid	October 2021	Bi-Annually
Underground Electrical Cables		
National Grid	May 2021	Bi-Annually

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Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt		
North Kesteven District Council	July 2022	Quarterly
Areas of Unadopted Green Belt		
North Kesteven 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

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# **Data Suppliers**

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SEPA Scottish Environment Protection Agency
The Coal Authority	The Coal Authority
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology  NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	Cyfoeth Naturiol Cymru Netural Resources Wales
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Public Health England	Public Health England
Ove Arup	ARUP
Stantec UK Ltd	<b>Stantec</b>

Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 20 of 21

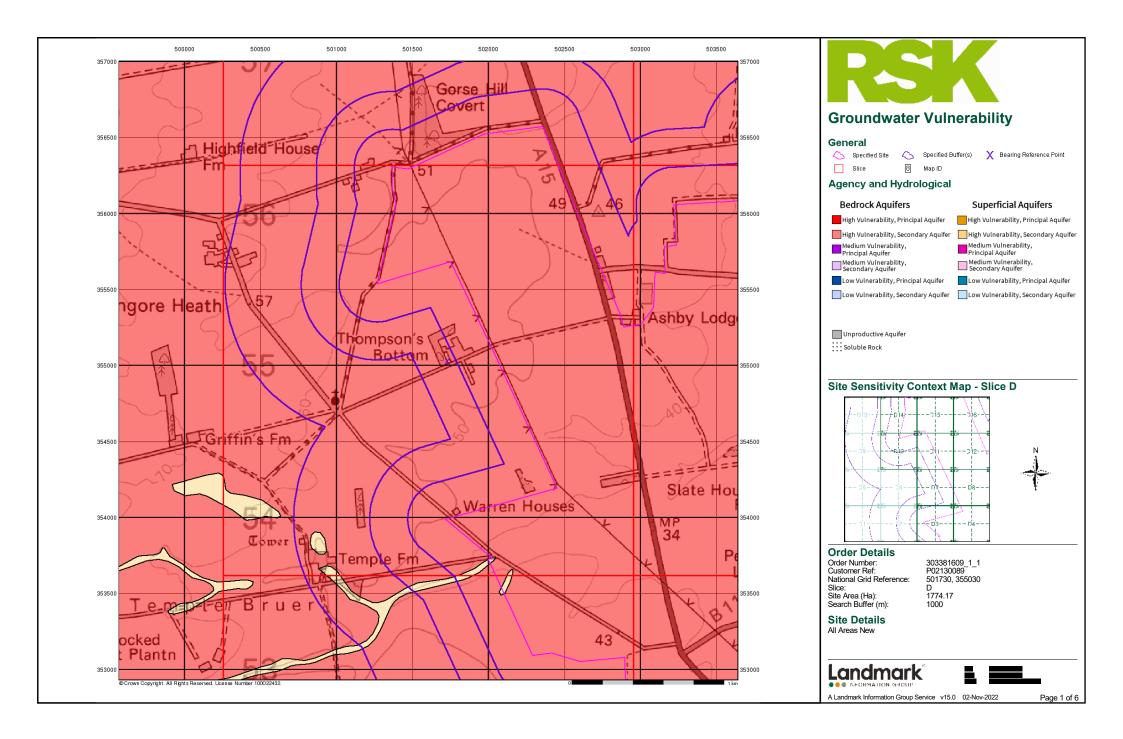


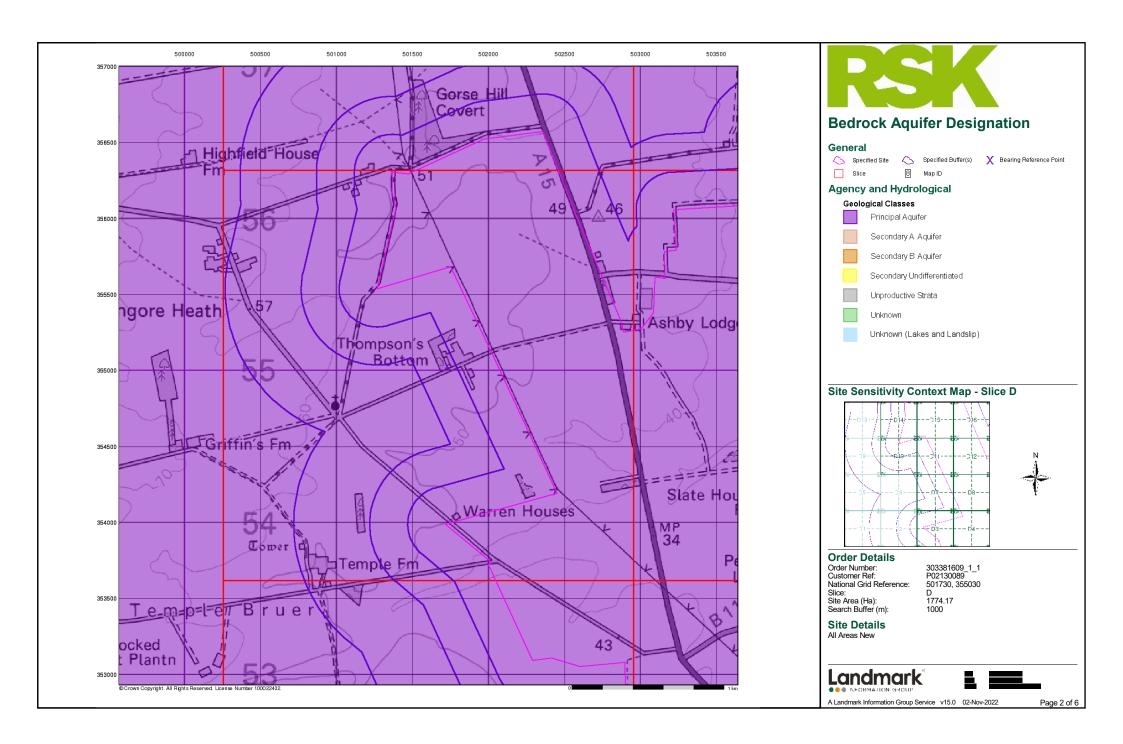
### **Useful Contacts**

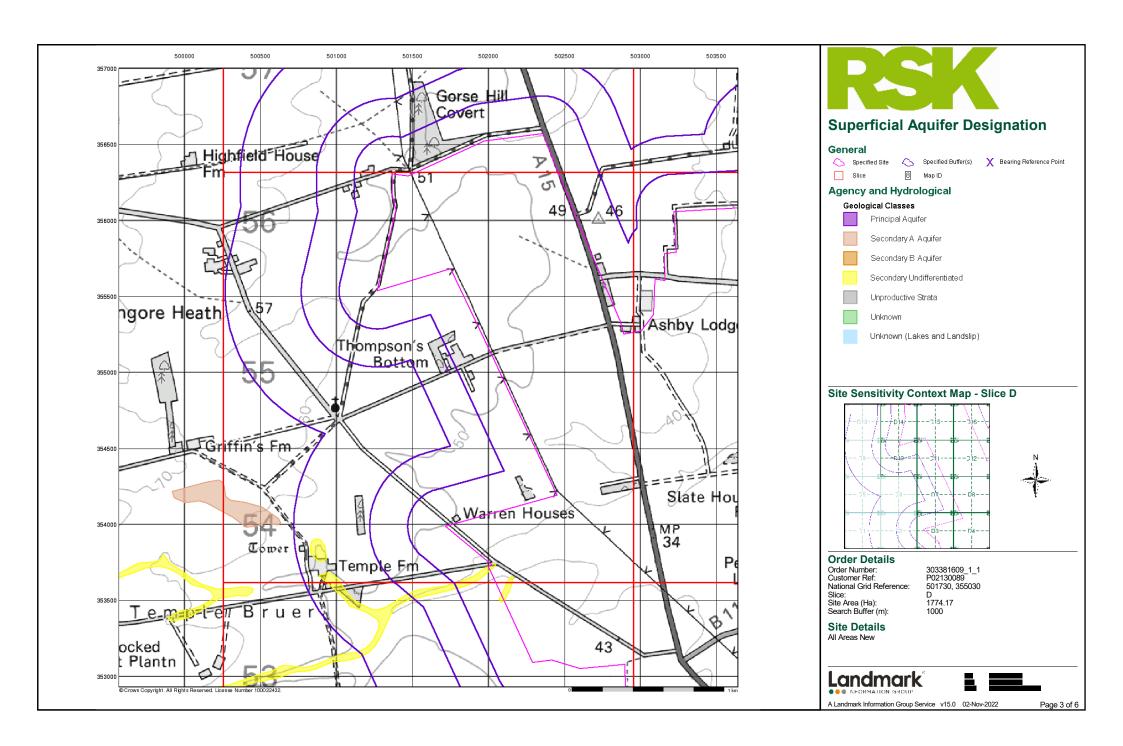
Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service  British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	
3	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	
4	North Kesteven District Council - Environmental Health Department  District Council Offices, Kesteven Street, Sleaford, Lincolnshire, NG34 7EF	Website: www.n-kesteven.gov.uk
5	Lincolnshire County Council 4th Floor, City Hall, Lincoln, Lincolnshire, LN1 1DN	Website: www.lincolnshire.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	

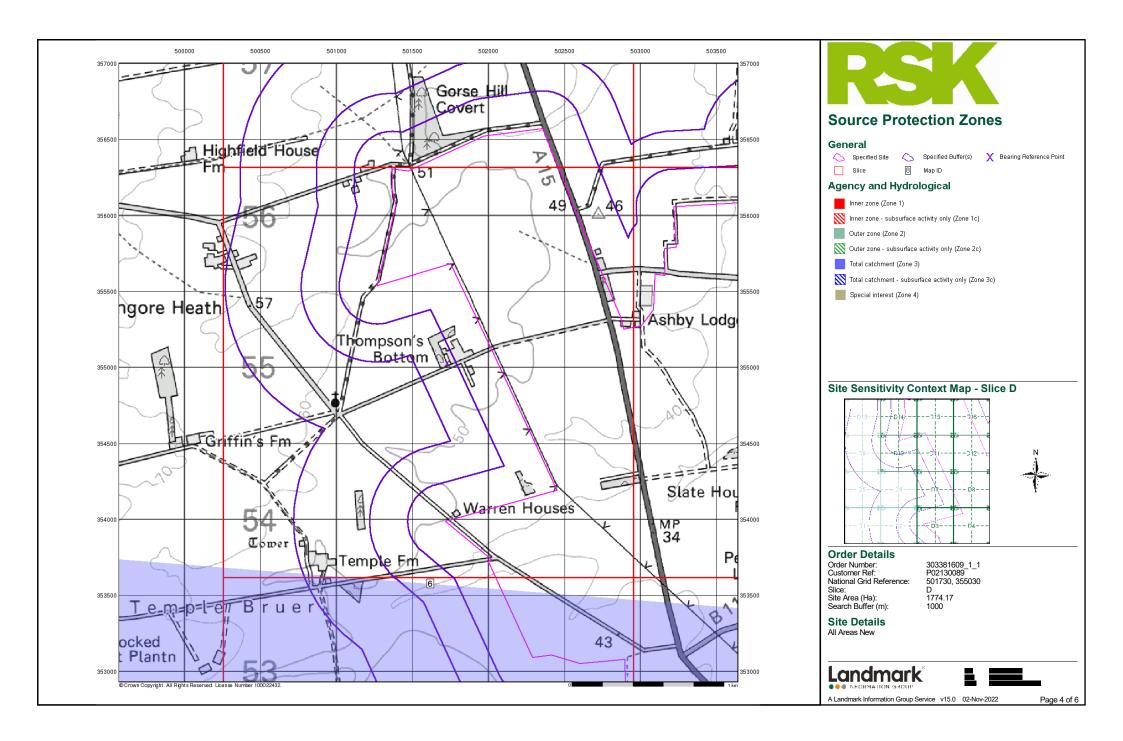
Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

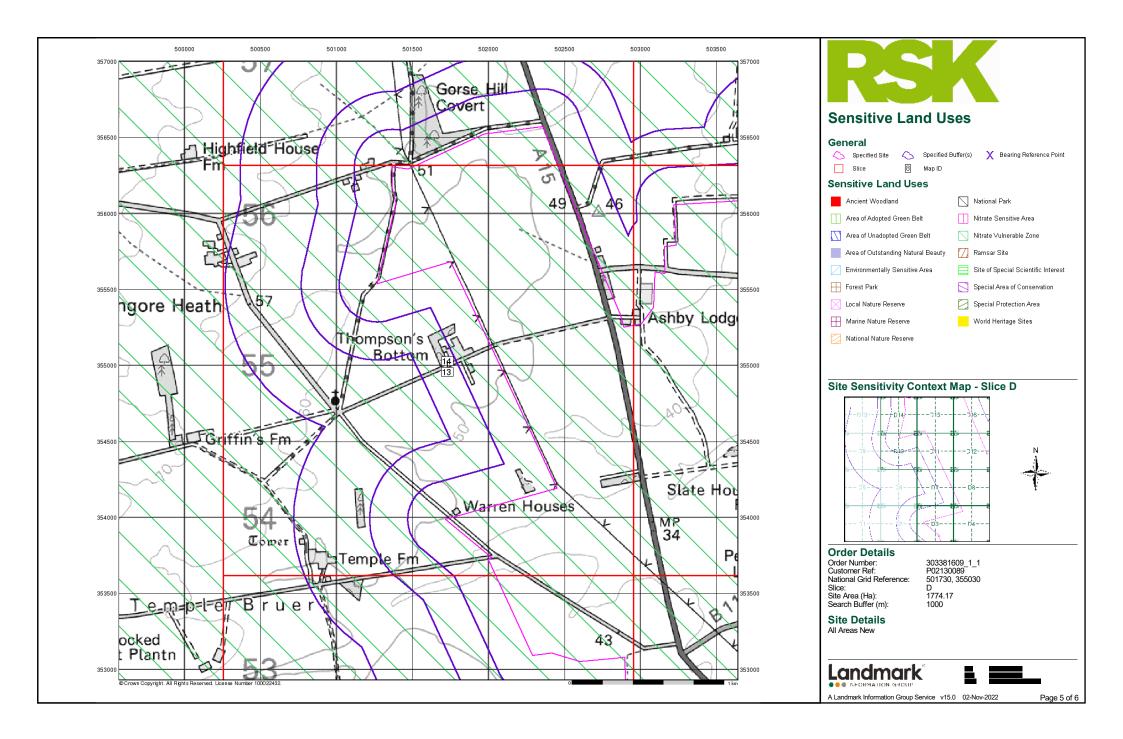
Order Number: 303381609\_1\_1 Date: 02-Nov-2022 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 21 of 21

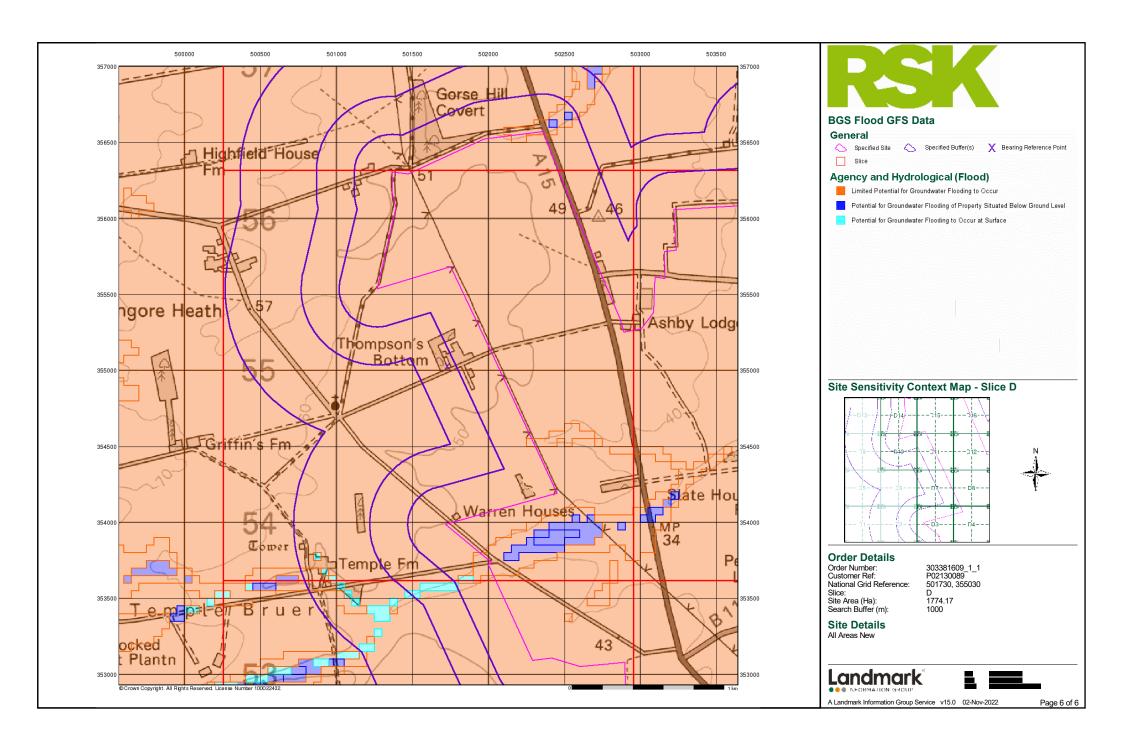


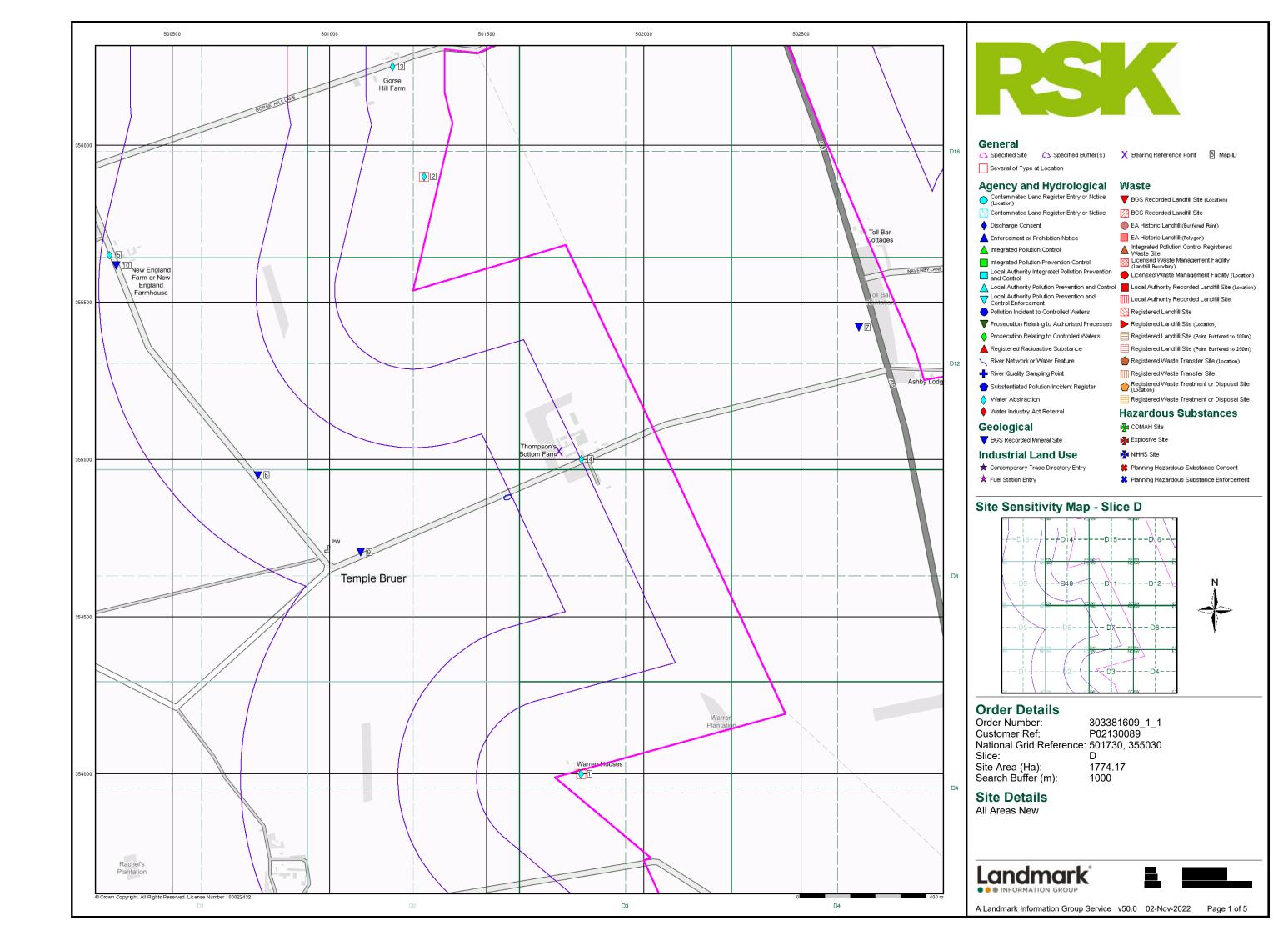


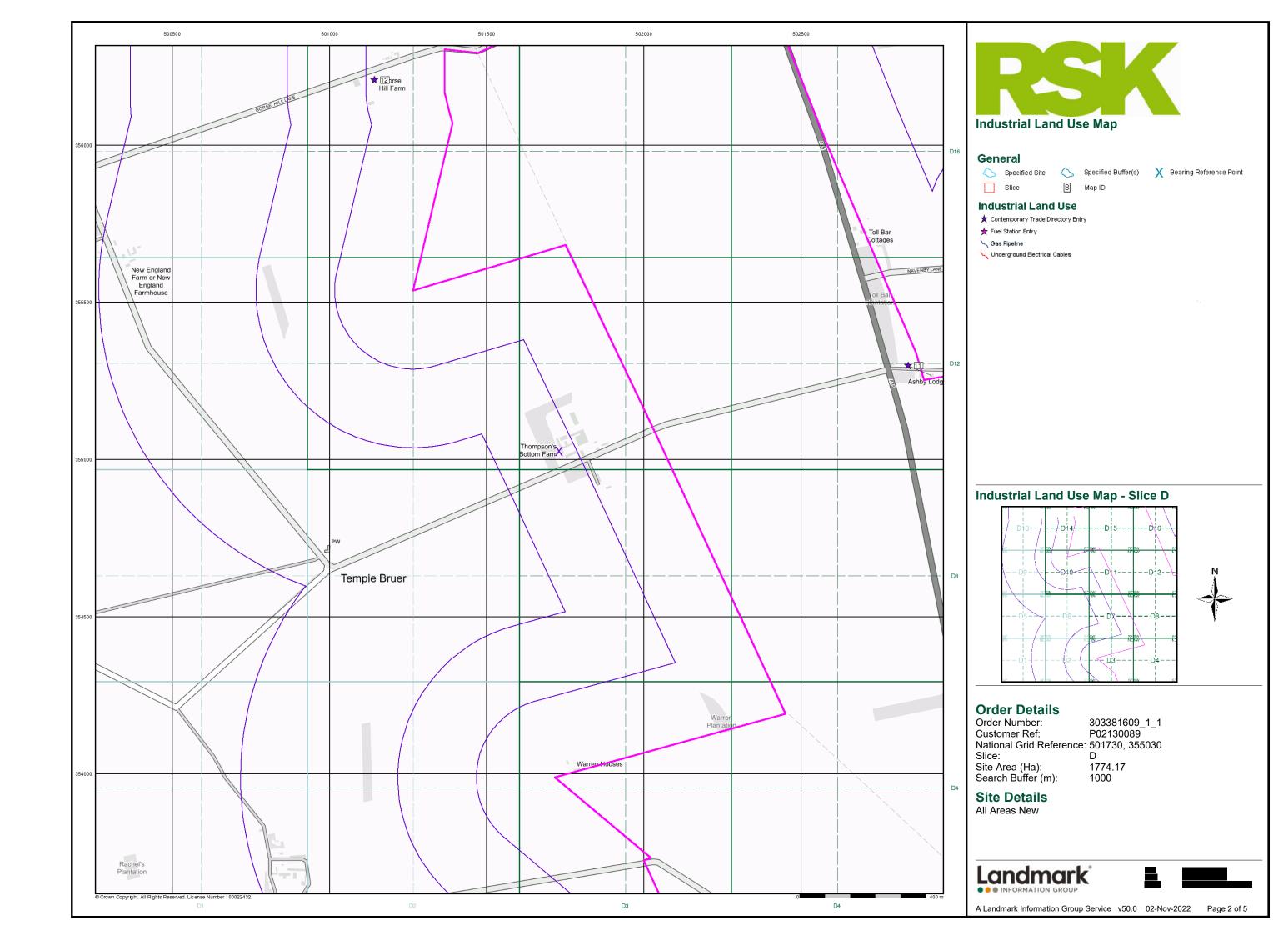


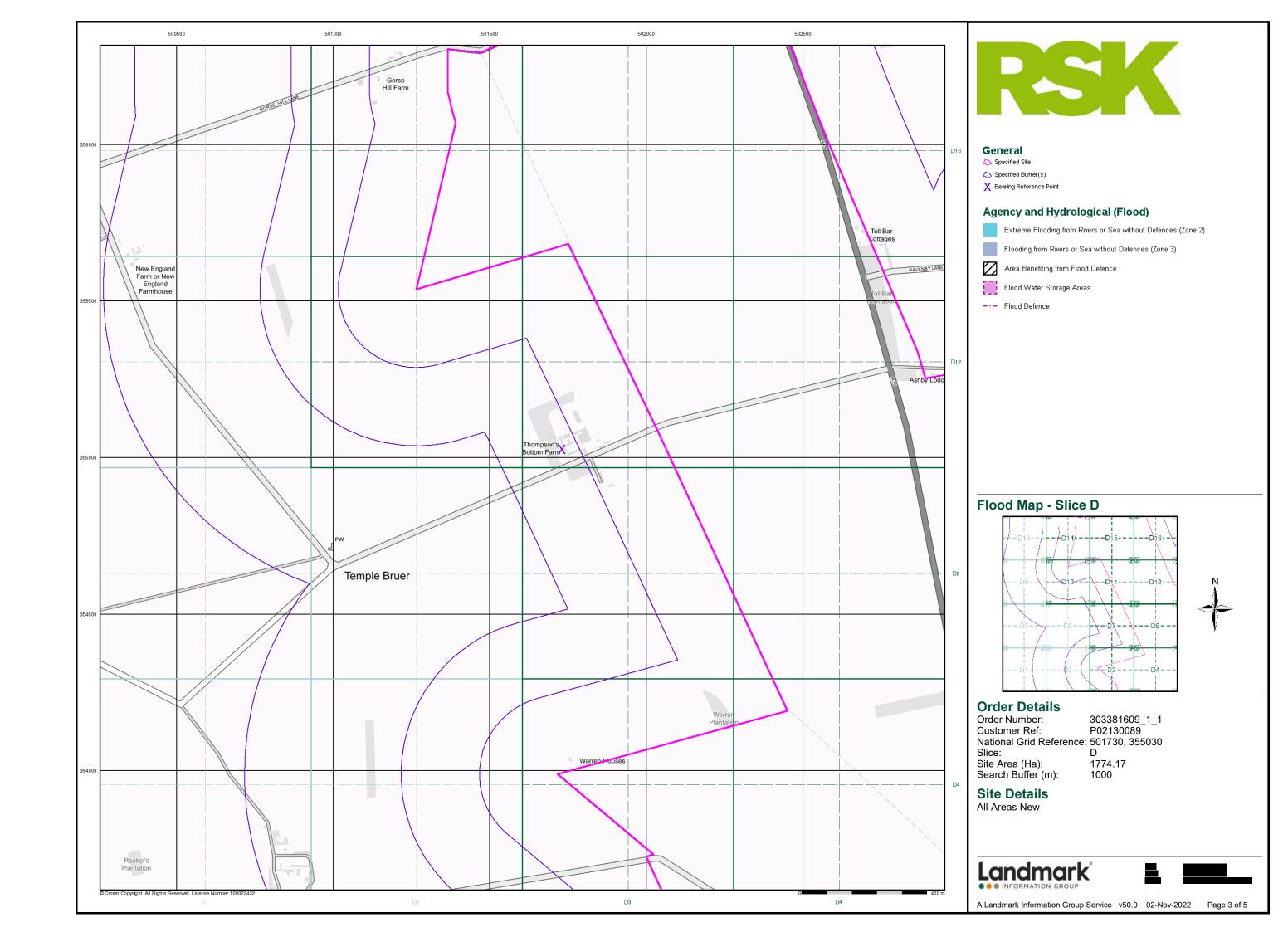


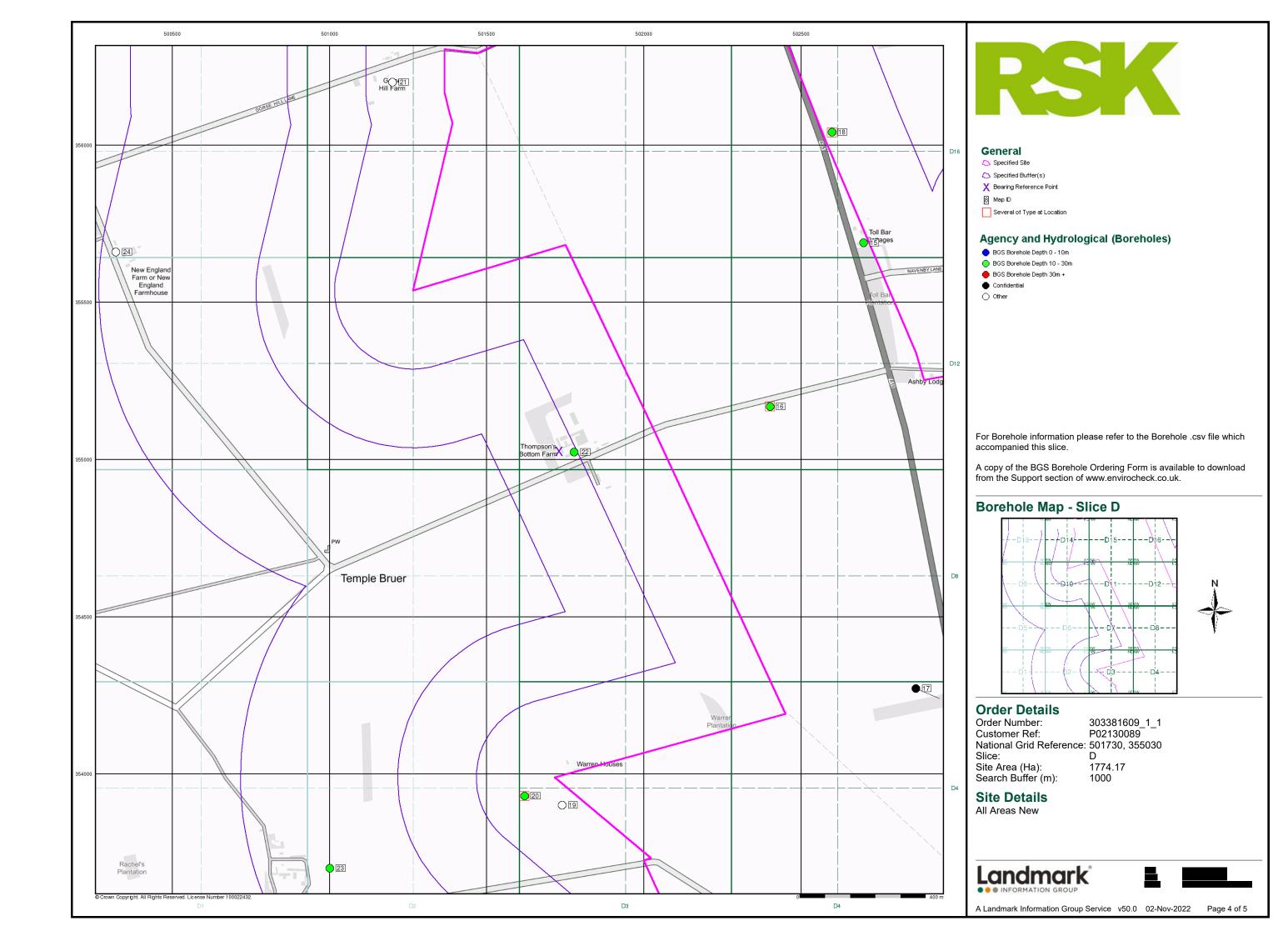


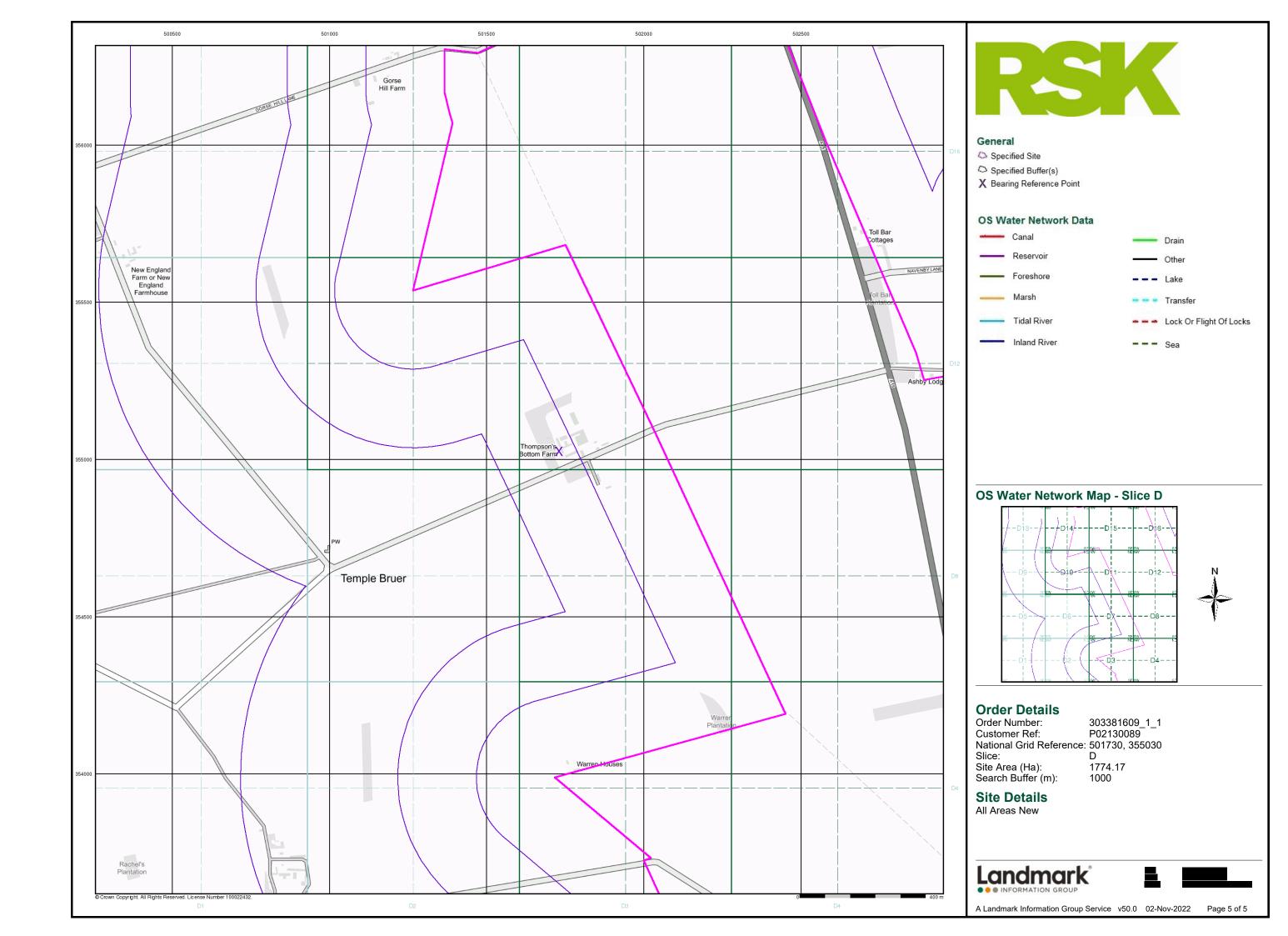














## **Envirocheck® Report:**

# Mining and Ground Stability Datasheet

#### **Order Details:**

Order Number:

304263548\_1\_1

**Customer Reference:** 

P02130089

**National Grid Reference:** 

501730, 355030

Slice:

D

Site Area (Ha):

1774.17

Search Buffer (m):

1000

#### **Site Details:**

All Areas New

#### **Client Details:**

Landmark Staff WEB Logins Imperium Imperial Way Reading Berkshire RG2 0TD





Page Number

3

4



Nepolt Section and Details	rage Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the or the existence of a data set in relation to the buffer selected.  For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cav Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data	ities Data, Historical Land
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of minimazards; and details of naturally formed cavities.  Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites a which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	2
The Historical Land Use Information (1:2,500) section contains data captured from analysis carr 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historic potentially contaminative.  For the purpose of this Envirocheck module, only historical data relating to mining and ground significant plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also in Features data set, which details various man-made and man-used underground spaces obtaine Britannica society.	ally, the land uses were ability has been included and actudes the Subterranean

Report Section and Details

The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses.

For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.

#### Ground Stability Data (1:50,000)

**Historical Land Use Information (1:10,000)** 

The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted

_	0.01.01.	
	Historical Map List	6

The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.

Data Currency	8
Data Suppliers	9
Useful Contacts	10

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

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

#### Report Version v53.0





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





Report Version v53.0



# **Mining and Natural Cavities Data**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Recorded Mine	eral Sites				
1	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Ashby Lodge Stone Pit Ashby De La Launde, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136054 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Limestone Located by supplier to within 10m	D12NE (NE)	0	1	502684 355424
	BGS Recorded Mine	eral Sites				
2	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	St Johns Gravel Pit Wellingore, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136048 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Sand and Gravel Located by supplier to within 10m	D5NE (W)	765	1	500772 354954
	BGS Recorded Mine	eral Sites				
3	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	St Johns Gravel Pit Wellingore, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136047 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Sand and Gravel Located by supplier to within 10m	D6NW (SW)	846	1	501098 354709
	<b>BGS Recorded Mine</b>	eral Sites				
4	Site Name: Location: Source: Reference: Type: Status: Operator: Operator Location: Periodic Type: Geology: Commodity: Positional Accuracy:	Wellingore Heath Gravel Pit Wellingore, Lincoln, Lincolnshire British Geological Survey, National Geoscience Information Service 136046 Opencast Ceased Unknown Operator Not Supplied Jurassic Upper Lincolnshire Limestone Member Sand and Gravel Located by supplier to within 10m	D9NW (NW)	950	1	500321 355630
	Coal Mining Affecte	d Areas				
	_	not be affected by coal mining				
	Non Coal Mining Ar	eas of Great Britain				



# **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: Pit (Disused) First Map Published 1979  Date: Pit (Disused) N/A  Date:	D12NE (NE)	0	-	502653 355418



# **Historical Land Use Information (1:10,000)**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	General Quarrying	l				
6	Use: Date of Mapping:	Not Supplied 1891 - 1956	D12NE (NE)	0	-	502680 355423
	General Quarrying	1				
7	Use: Date of Mapping:	Not Supplied 1891	D4NE (SE)	0	-	502927 354269
	Quarrying of sand	& clay, operation of sand & gravel pits				
8	Use: Date of Mapping:	Not Supplied 1890 - 1906	D5NE (W)	762	-	500793 354937
	Quarrying of sand	& clay, operation of sand & gravel pits				
9	Use: Date of Mapping:	Not Supplied 1890 - 1956	D6NW (SW)	831	-	501127 354698
	Quarrying of sand	& clay, operation of sand & gravel pits				
10	Use: Date of Mapping:	Not Supplied 1890	D9NW (NW)	947	-	500325 355633
	Potentially Infilled	Land (Non-Water)				
11	Use: Date of Mapping:	Unknown Filled Ground (Pit, quarry etc) 1985	D4NE (SE)	0	-	502927 354271
	Potentially Infilled	Land (Non-Water)				
12	Use: Date of Mapping:	Unknown Filled Ground (Pit, quarry etc) 1985	D5NE (W)	762	-	500793 354937
	Potentially Infilled	Land (Non-Water)				
13	Use: Date of Mapping:	Unknown Filled Ground (Pit, quarry etc) 1985	D6NW (SW)	831	-	501127 354698
	Potentially Infilled	Land (Non-Water)				
14	Use: Date of Mapping:	Unknown Filled Ground (Pit, quarry etc) 1985	D9NW (NW)	947	-	500325 355633



# **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.				
	Potential for Collapsible Ground Stability Hazards				
15	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
	Potential for Collapsible Ground Stability Hazards	(1444)			000021
16	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	501731 355000
	Potential for Compressible Ground Stability Hazards				
	Hazard Potential: No Hazard Source: No Hazard British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
	Potential for Compressible Ground Stability Hazards  Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	501731 355000
	Potential for Ground Dissolution Stability Hazards				
17	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(N)	0	1	501811 356729
	Potential for Ground Dissolution Stability Hazards				
18	Hazard Potential: Low	D11SW	0	1	501731
	Source: British Geological Survey, National Geoscience Information Service	(NW)			355027
19	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low	D11SW	0	1	501731
10	Source: British Geological Survey, National Geoscience Information Service	(S)	· ·	'	355000
20	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low	D3SE	0	1	502028
	Source: British Geological Survey, National Geoscience Information Service	(S)			353739
21	Potential for Ground Dissolution Stability Hazards  Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	D4SW (SE)	0	1	502364 353812
22	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low	D8SW	0	1	502372
	Source: British Geological Survey, National Geoscience Information Service	(SE)			354544
	Potential for Ground Dissolution Stability Hazards  Hazard Potential: No Hazard  Source: British Geological Survey, National Geoscience Information Service	(SE)	0	1	503207 354161
	Potential for Ground Dissolution Stability Hazards				
	Hazard Potential: No Hazard British Geological Survey, National Geoscience Information Service	D3SW (S)	118	1	501822 353665
	Potential for Landslide Ground Stability Hazards				
23	Hazard Potential: Very Low Source: Very Low British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
	Potential for Landslide Ground Stability Hazards				
24	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	501731 355000
	Potential for Running Sand Ground Stability Hazards	(0)			222000
25	Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D3SE (S)	0	1	502028 353739
26	Potential for Running Sand Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D3SE (S)	0	1	502153 353659
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: No Hazard Source: No Hazard British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027
	Potential for Running Sand Ground Stability Hazards  Hazard Potential: No Hazard Source: No Hazard British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	501731 355000
27	Potential for Shrinking or Swelling Clay Ground Stability Hazards  Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D3SE (S)	0	1	502153 353659

Page 4 of 10



# **Ground Stability Data (1:50,000)**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrini	king or Swelling Clay Ground Stability Hazards				
28	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	D3SE (S)	0	1	502028 353739
	Potential for Shrini	king or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	D11SW (S)	0	1	501731 355000
	Potential for Shrini	king or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	D11SW (NW)	0	1	501731 355027



## **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	TF0054	1979
Ordnance Survey Plan	TF0055	1979
Ordnance Survey Plan	TF0055	1979
Ordnance Survey Plan	TF0056	1979
Ordnance Survey Plan	TF0153	1979
Ordnance Survey Plan	TF0154	1979
Ordnance Survey Plan	TF0154	1979
Ordnance Survey Plan	TF0154	1979
Ordnance Survey Plan	TF0154	1979
Ordnance Survey Plan	TF0155	1979
Ordnance Survey Plan	TF0155	1979
Ordnance Survey Plan	TF0155	1979
Ordnance Survey Plan	TF0155	1979
Ordnance Survey Plan	TF0156	1979
Ordnance Survey Plan	TF0156	1979
Ordnance Survey Plan	TF0253	1979
Ordnance Survey Plan	TF0253	1979
Ordnance Survey Plan	TF0254	1979
Ordnance Survey Plan	TF0254	1979
Ordnance Survey Plan	TF0254	1979
Ordnance Survey Plan	TF0254	1979
Ordnance Survey Plan	TF0254	1979
Ordnance Survey Plan	TF0254	1979
Ordnance Survey Plan	TF0255	1979
Ordnance Survey Plan	TF0255	1979
Ordnance Survey Plan	TF0255	1979
Ordnance Survey Plan	TF0255	1979
Ordnance Survey Plan	TF0256	1980
Ordnance Survey Plan	TF0256	1980



## **Historical Map List**

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

1:10,560	Mapsheet	Published Date
Lincolnshire	086_SE	1890
Lincolnshire	096_NE	1890
Lincolnshire	087_SW	1891
Lincolnshire	097_NW	1891
Lincolnshire	096_NE	1905
Lincolnshire	086_SE	1906
Lincolnshire	087_SW	1906
Lincolnshire	097_NW	1906
Lincolnshire	086_SE	1947
Lincolnshire	096_NE	1947
Lincolnshire	097_NW	1950
Lincolnshire	087_SW	1951
Ordnance Survey Plan	TF05NW	1956
Ordnance Survey Plan	TF05SW	1956
1:10,000	Mapsheet	Published Date
Ordnance Survey Plan	TF05NW	1985
Ordnance Survey Plan	TF05SW	1985



## **Data Currency**

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	November 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)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	November 2020	As notified
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	April 2020	As notified
• •	April 2020	As notified
British Geological Survey - National Geoscience Information Service  Potential for Compressible Ground Stability Hazards  British Geological Survey - National Geoscience Information Service	April 2020 January 2019	As notified  As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service		
Potential for Compressible Ground Stability Hazards		
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service  Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified  As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Landslide Ground Stability Hazards	January 2019	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Running Sand Ground Stability Hazards	January 2019  January 2019  January 2019	As notified  As notified  As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service  Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service  Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service  Potential for Running Sand Ground Stability Hazards	January 2019 January 2019	As notified  As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Shrinking or Swelling Clay Ground Stability Hazards	January 2019  January 2019  January 2019  January 2019	As notified  As notified  As notified  As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Ground Dissolution Stability Hazards	January 2019  January 2019  January 2019	As notified  As notified  As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service Potential for Shrinking or Swelling Clay Ground Stability Hazards	January 2019  January 2019  January 2019  January 2019	As notified  As notified  As notified  As notified



## **Data Suppliers**

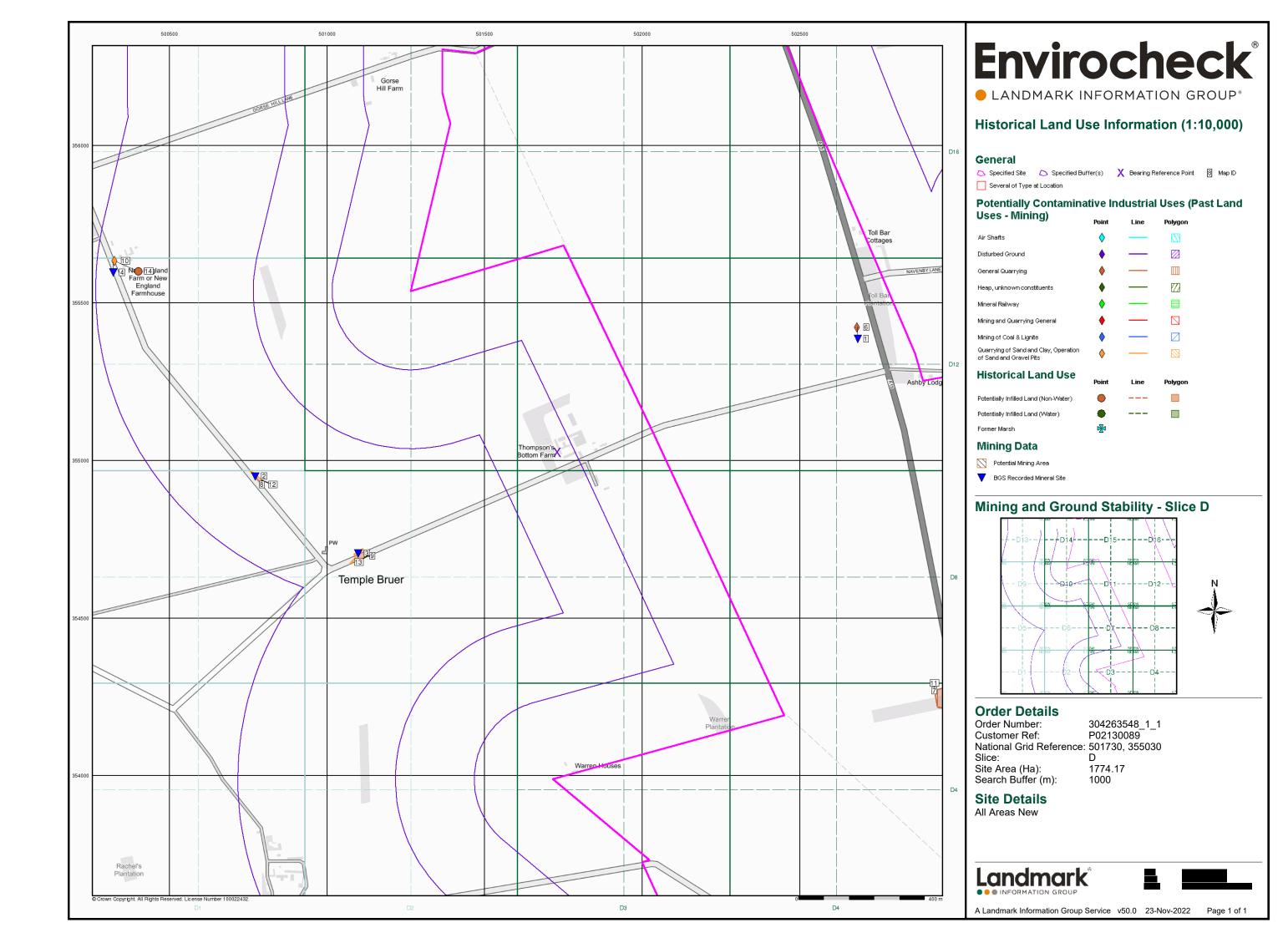
A selection of organisations who provide data within this report

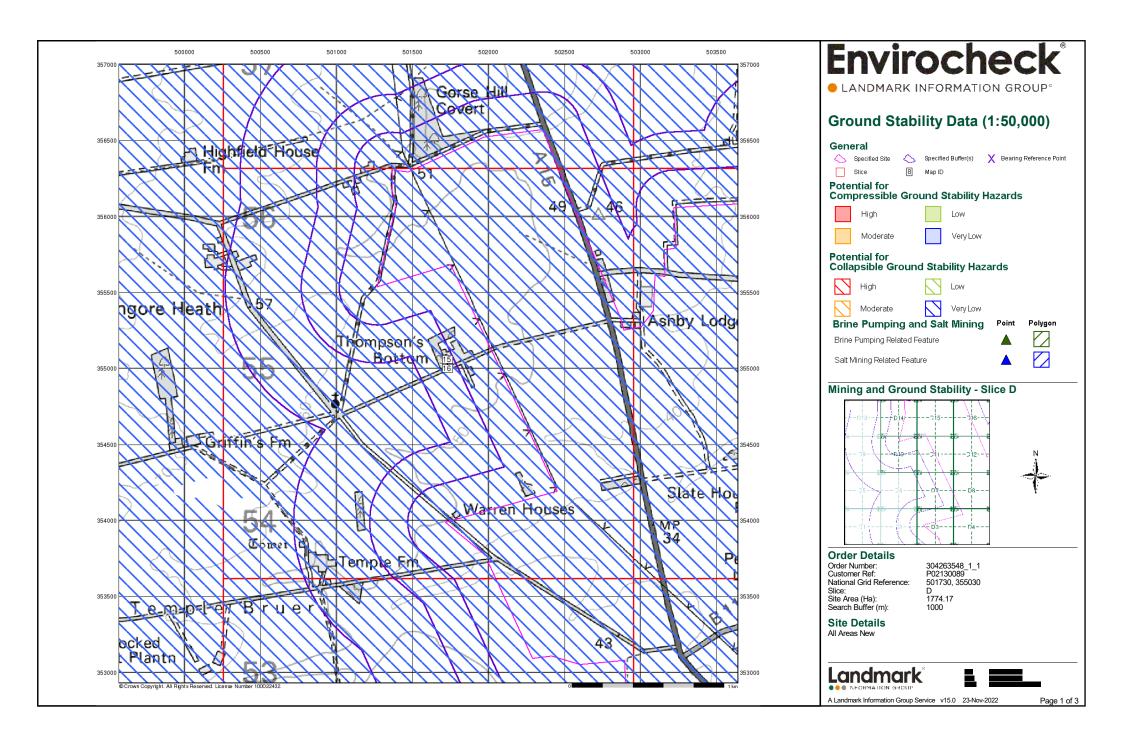
Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	The Coal Authority
Ove Arup	ARUP
Stantec UK Ltd	<b>Stantec</b>
Wardell Armstrong	wardell armstrong your earth our world
Johnson Poole & Bloomer	JPB

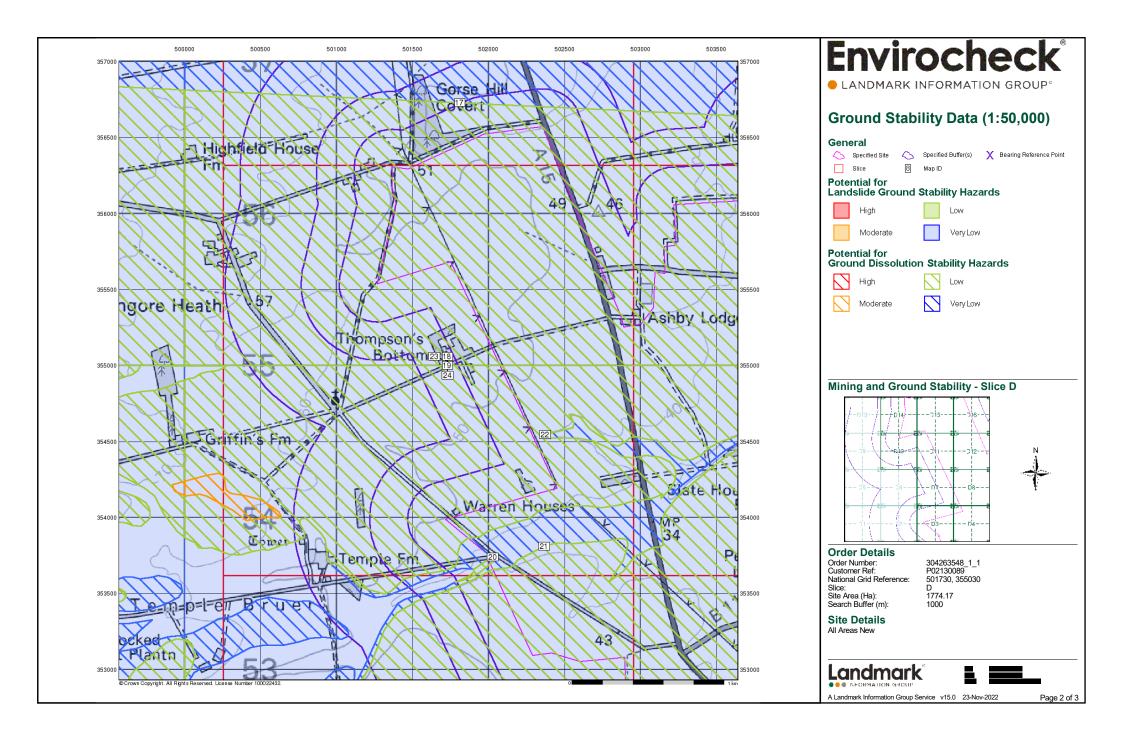


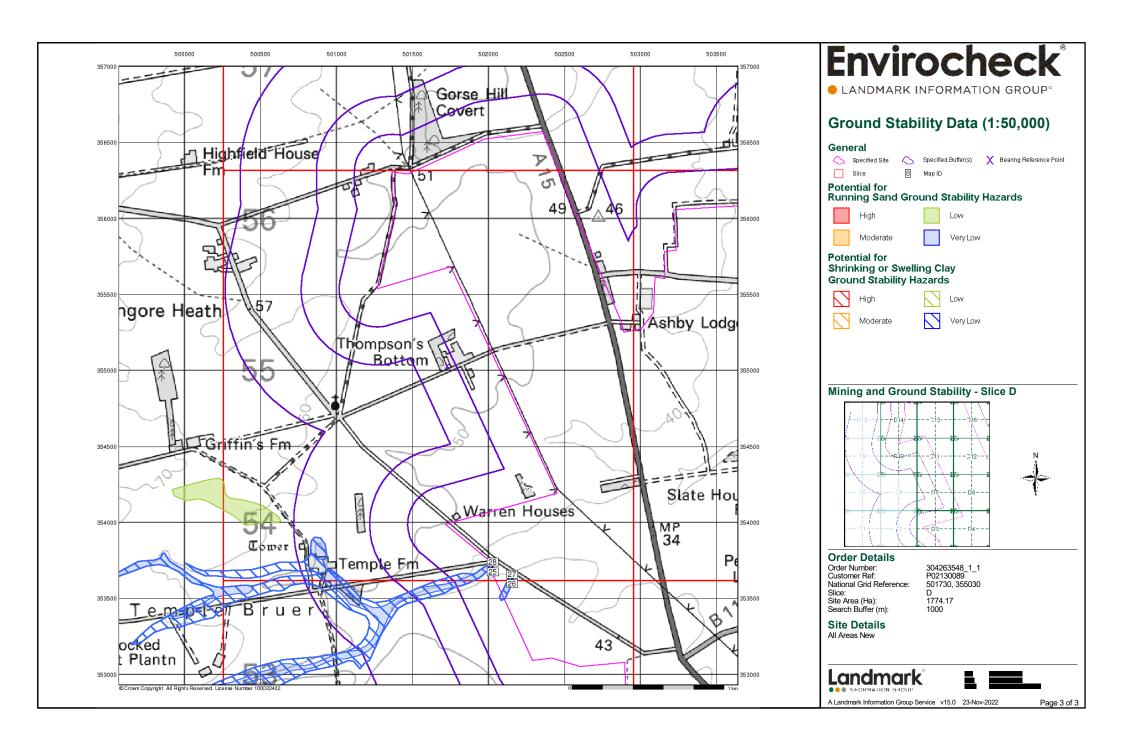
## **Useful Contacts**

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service  British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	



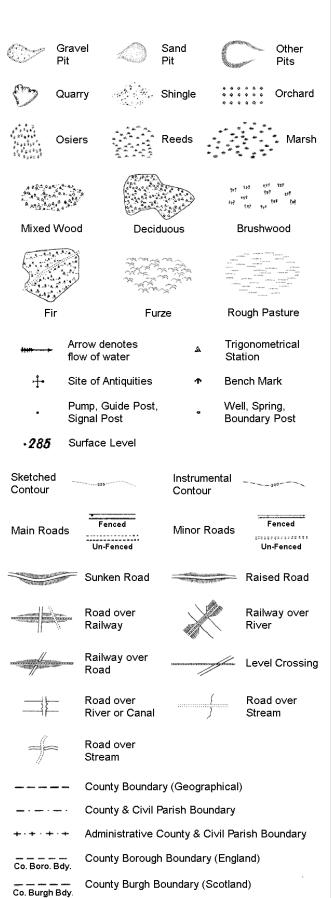






# **Historical Mapping Legends**

# **Ordnance Survey County Series 1:10,560**

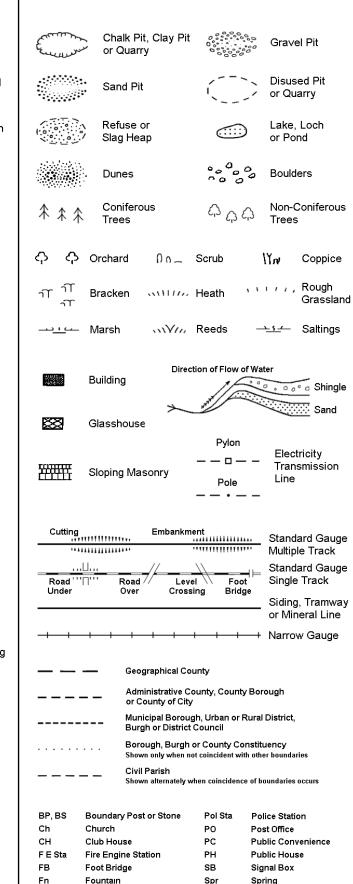


Rural District Boundary

····· Civil Parish Boundary

RD. Bdy.

#### Ordnance Survey Plan 1:10,000



TCB

TCP

Telephone Call Box

Telephone Call Post

GP

**Guide Post** 

Mile Post

### 1:10,000 Raster Mapping

	Gravel Pit		Refuse tip or slag heap
	Rock	3 3	Rock (scattered)
	Boulders	0 0	Boulders (scattered)
	Shingle	Mud	Mud
Sand	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) District, Unitary,	• • • • •	Civil, parish or community boundary
	Metropolitan, London Borough boundary		Constituency boundary
۵ <sup>0</sup>	Area of wooded vegetation	φ <sup>Δ</sup>	Non-coniferous trees
۵ ۵	Non-coniferous trees (scattered)	**	Coniferous trees
<b>*</b>	Coniferous trees (scattered)	<u>ੋਂ</u>	Positioned tree
\$ \$ \$ \$	Orchard	* *	Coppice or Osiers
	Orchard Rough Grassland	& Saller	
ф ф "т,	Rough	W	or Osiers
φ φ	Rough Grassland	"" "" "" "" "" "" "" "" "" "" "" "" ""	or Osiers  Heath  Marsh, Salt
φ φ	Rough Grassland Scrub	"" "" "" "" "" "" "" "" "" "" "" "" ""	or Osiers Heath Marsh, Salt Marsh or Reeds
\$ \$	Rough Grassland Scrub Water feature Mean high	M	or Ösiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  Mean low
\$ \$	Rough Grassland  Scrub  Water feature  Mean high water (springs)  Telephone line	M	or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  Mean low water (springs)  Electricity transmission line
Φ Φ Φ ωτι, ωτι, ωτι, ωτι, ωτι, ωτι, ωτι, ωτι,	Rough Grassland  Scrub  Water feature  Mean high water (springs)  Telephone line (where shown)  Bench mark	MLW(S)	or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  Mean low water (springs)  Electricity transmission line (with poles) Triangulation
Φ Φ Φ ωτι, ωτι, ωτι, ωτι, ωτι, ωτι, ωτι, ωτι,	Rough Grassland  Scrub  Water feature  Mean high water (springs)  Telephone line (where shown)  Bench mark (where shown)  Point feature (e.g. Guide Post	MLW(S)	or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  Mean low water (springs)  Electricity transmission line (with poles)  Triangulation station  Pylon, flare stack

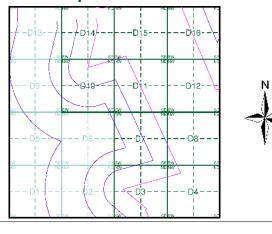
Building



## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:10,560	1887	2
Lincolnshire	1:10,560	1905 - 1906	3
Lincolnshire	1:10,560	1947 - 1951	4
Ordnance Survey Plan	1:10,000	1956	5
Ordnance Survey Plan	1:10,000	1985	6
10K Raster Mapping	1:10,000	2000	7
Street View	Variable		8

### **Historical Map - Slice D**



#### **Order Details**

Order Number: 303381609\_1\_1 Customer Ref: P02130089 National Grid Reference: 501730, 355030 Slice:

Site Area (Ha):

1774.17 Search Buffer (m): 1000

**Site Details** 

All Areas New

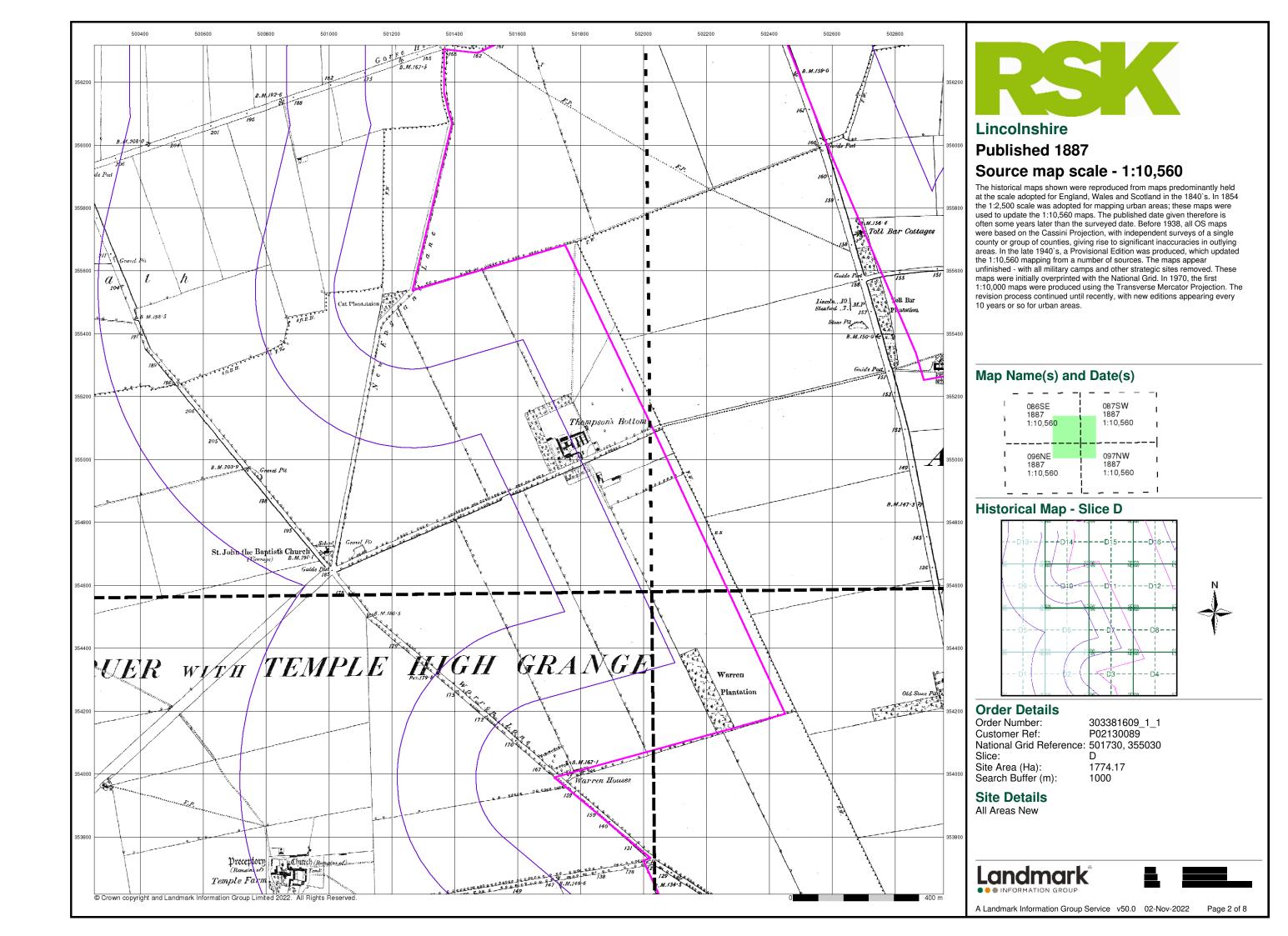


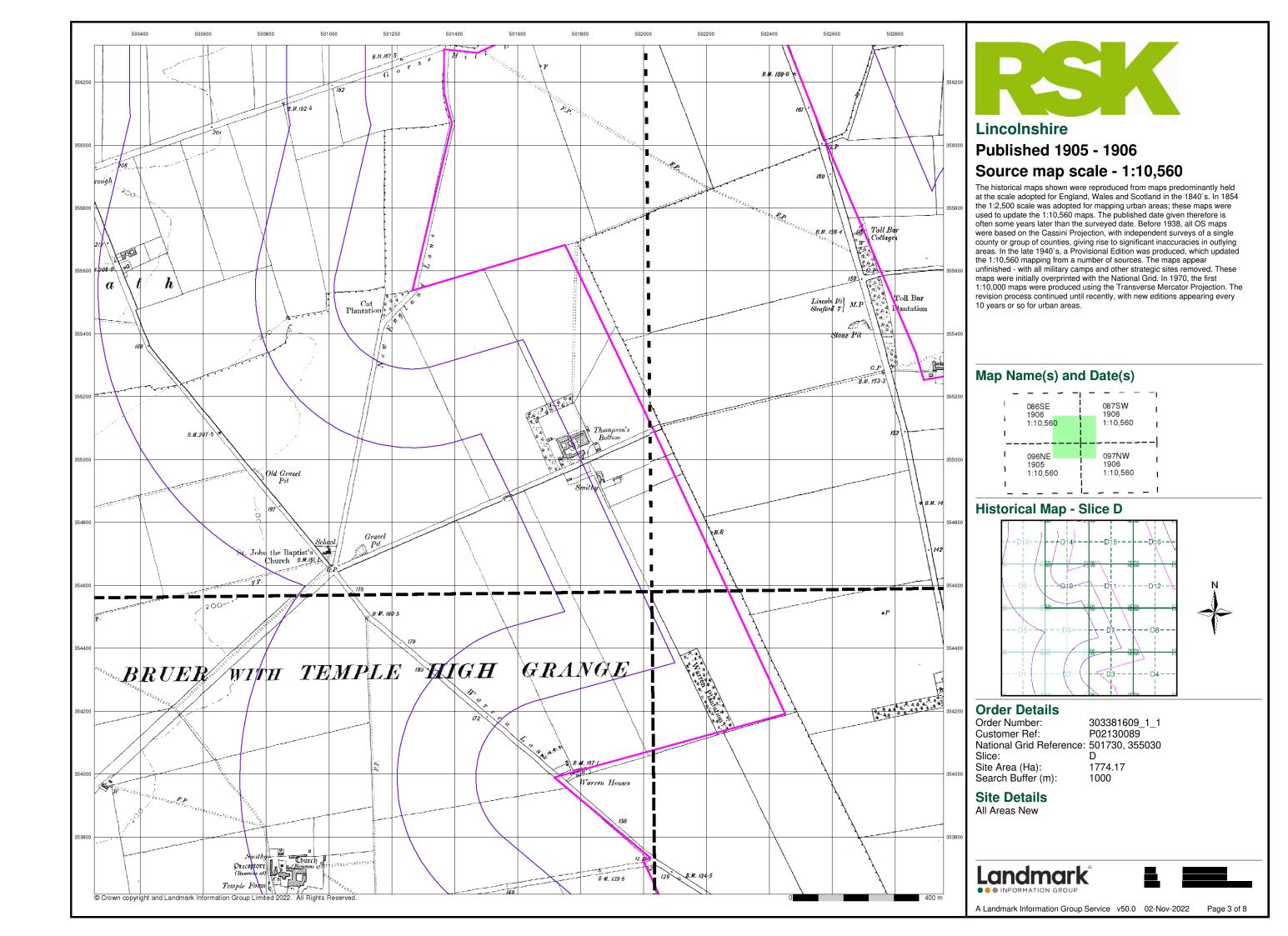


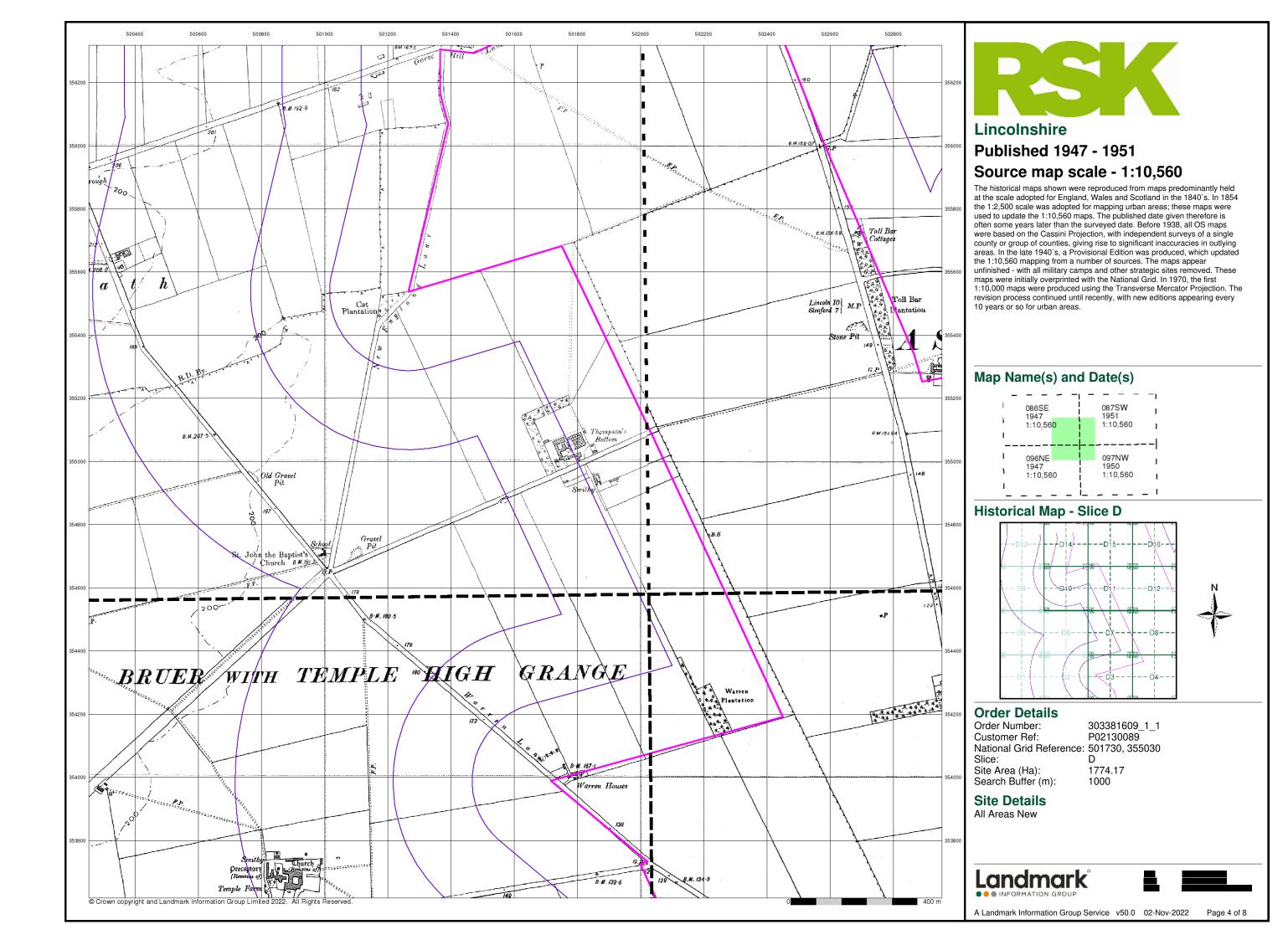


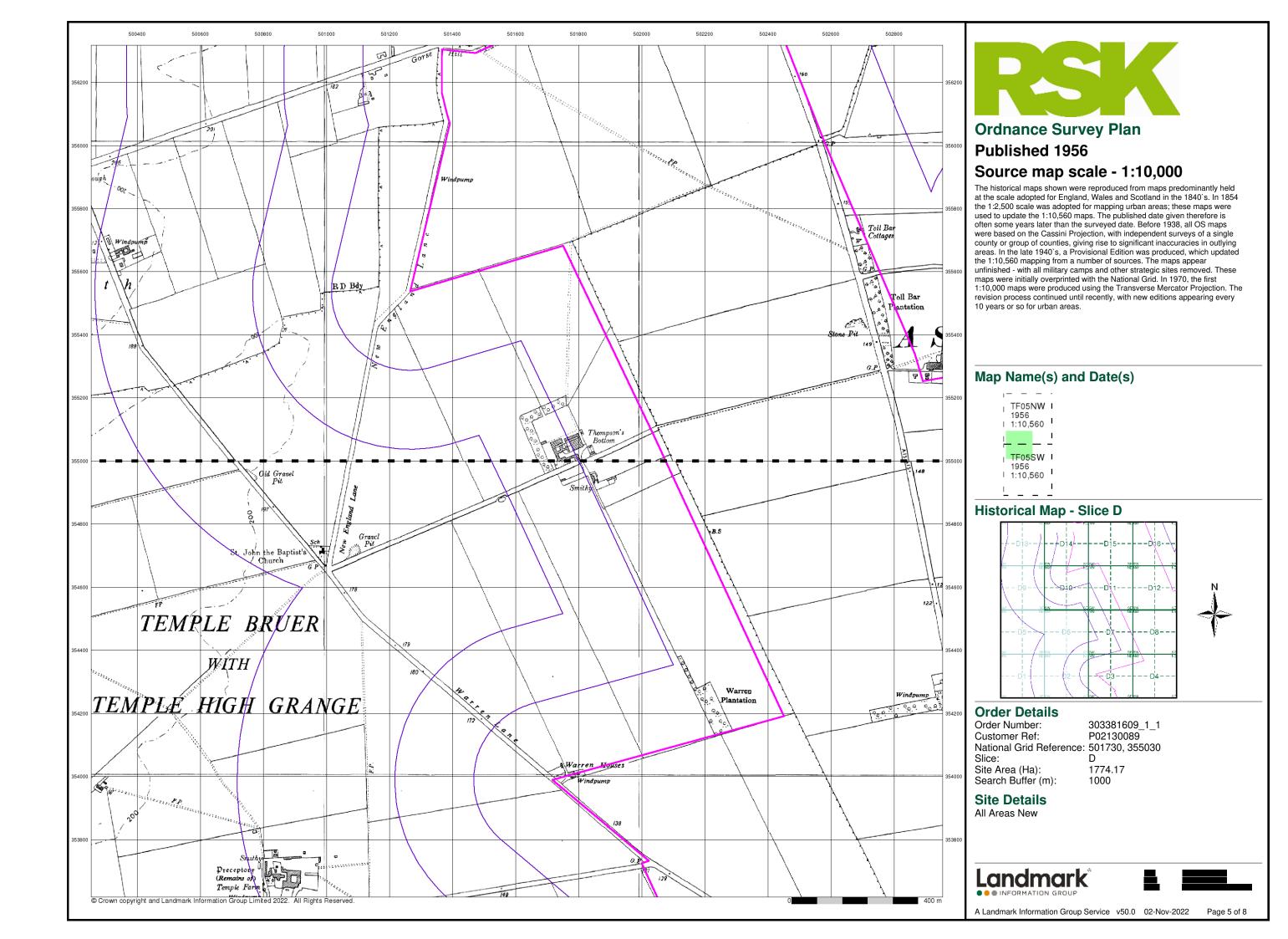
Page 1 of 8

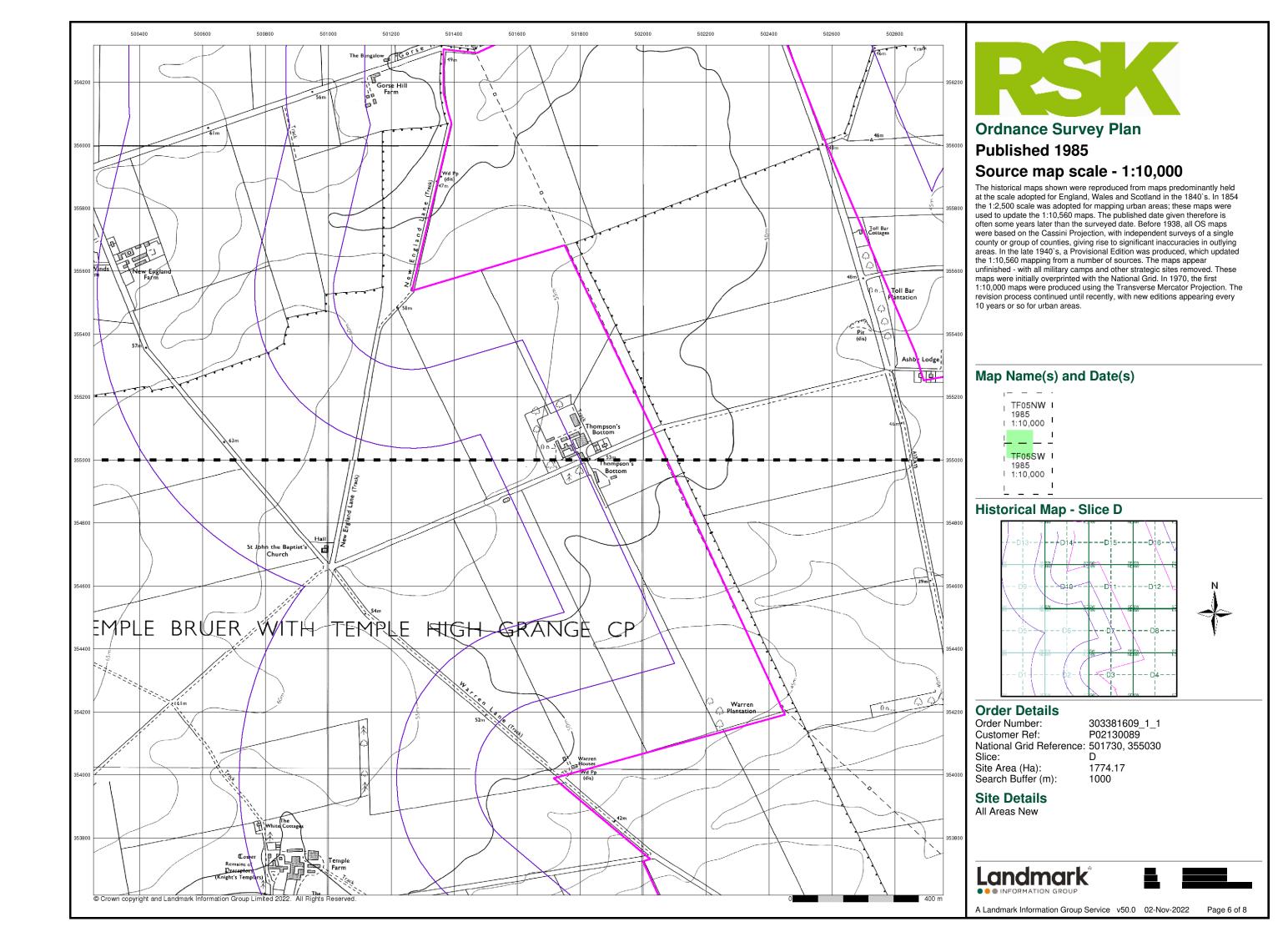
A Landmark Information Group Service v50.0 02-Nov-2022

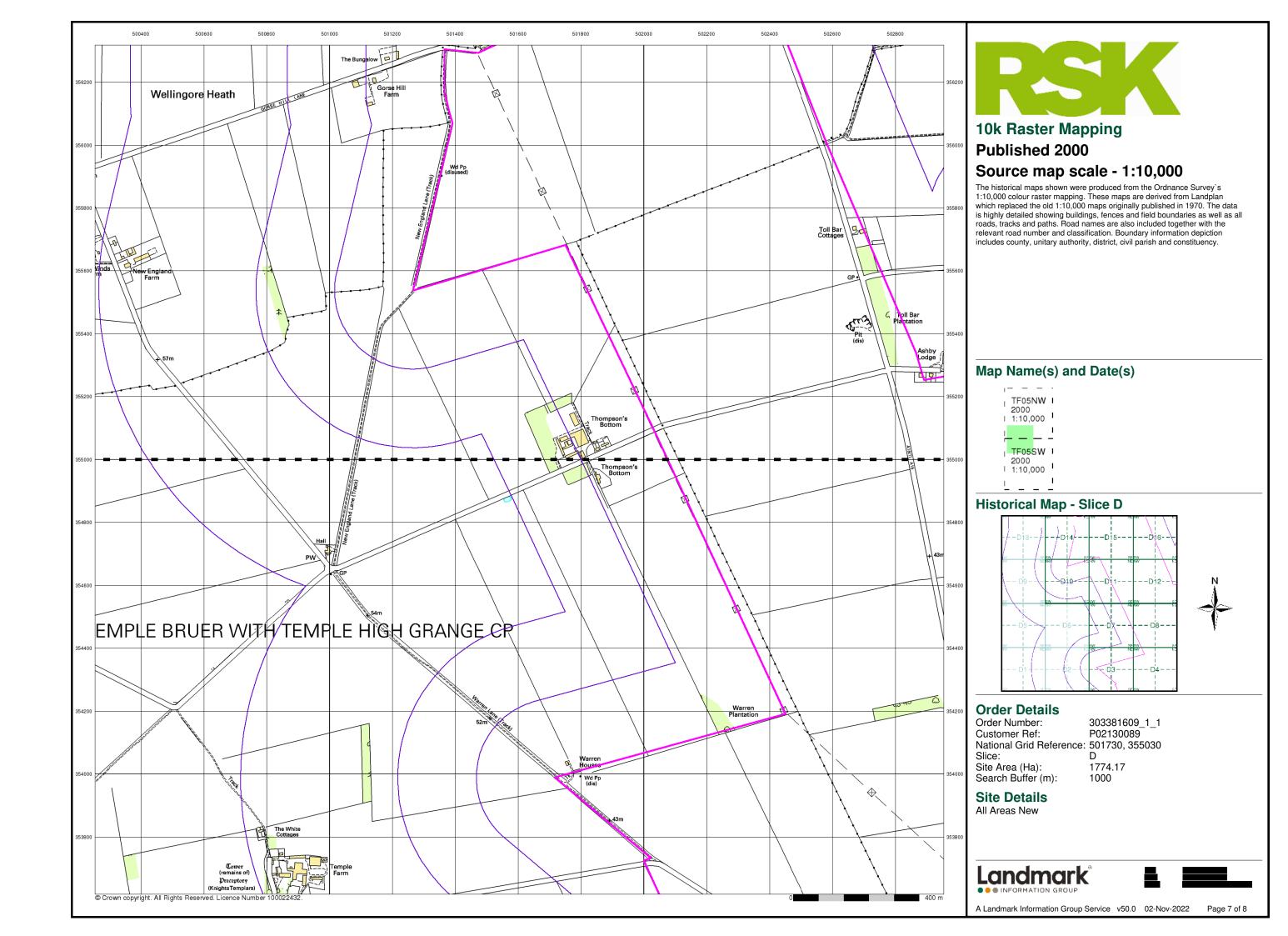


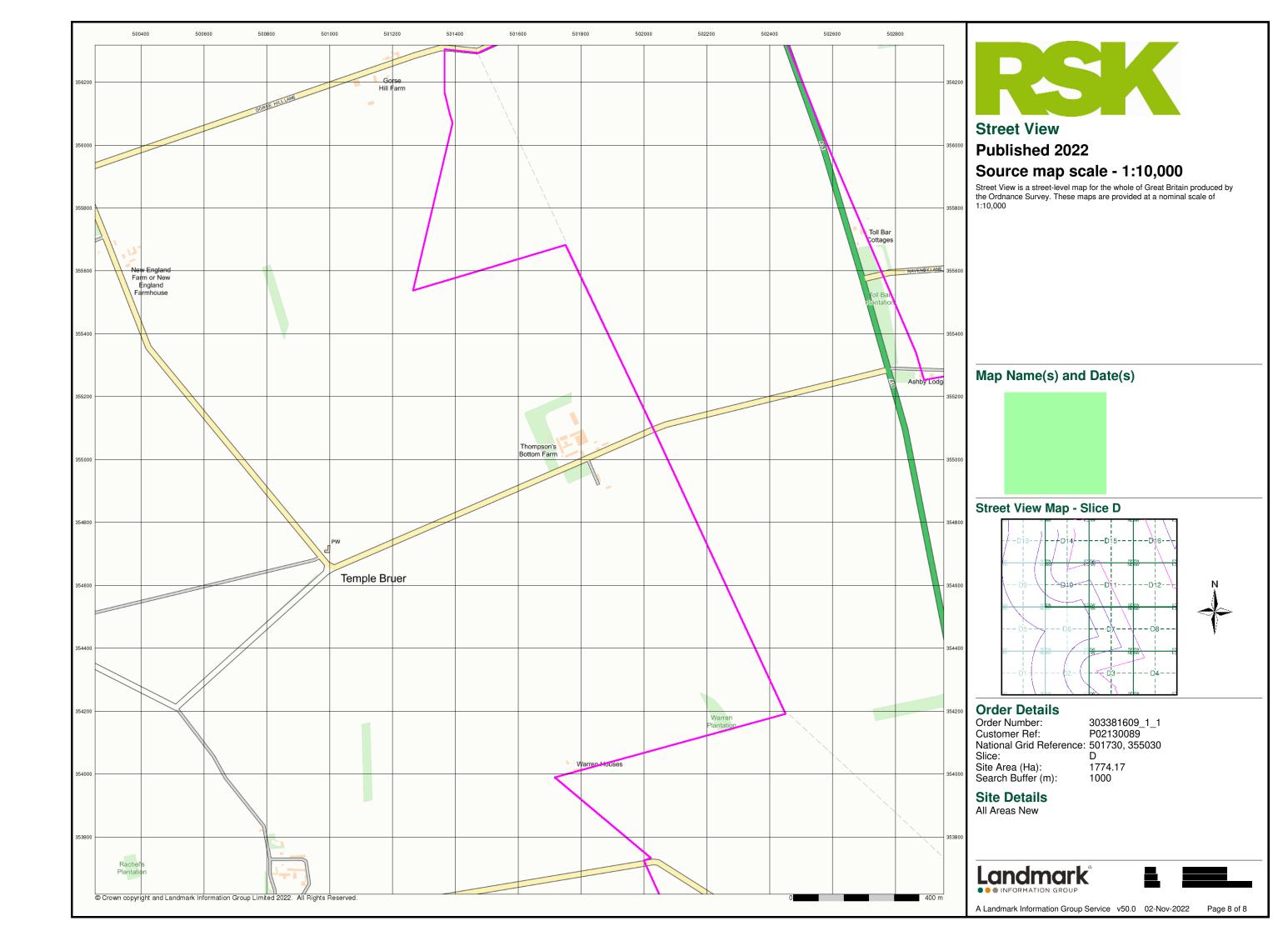




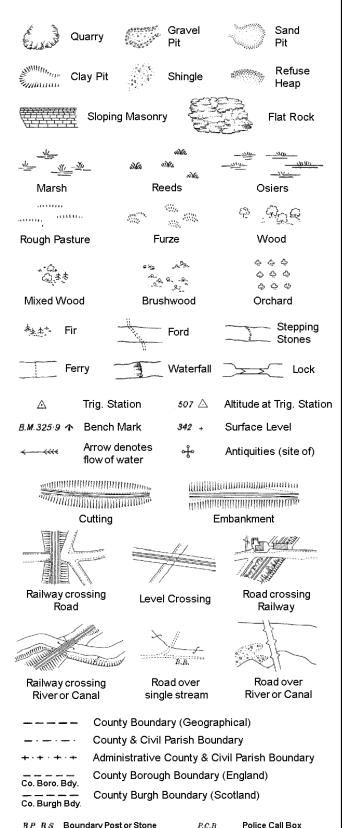








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



Pump

Sluice

Spring

Trough

Well

Signal Post

Telephone Call Box

S.P

Sl.

 $T_T$ 

T.C.B

B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

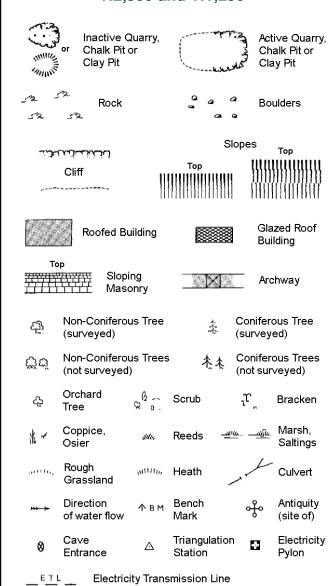
Mile Stone

M.P.M.R Mooring Post or Ring

Electricity Pylor

Guide Post or Board

#### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



#### Symbol marking point where boundary mereing changes Beer House Pillar, Pole or Post **Boundary Post or Stone** РО Post Office Capstan, Crane **Public Convenience** PH Chv Chimney **Public House** D Fn Drinking Fountain Pump EIP Electricity Pillar or Post SB, SB Signal Box or Bridge FAP Fire Alarm Pillar SP. SL Signal Post or Light FB Foot Bridge Spring Tank or Track Guide Post Τk Hydrant or Hydraulic TCB Telephone Call Box LC Level Crossing TCP Telephone Call Post Manhole Trough MP Mile Post or Mooring Post Wr Pt. W Water Point, Water Tap

County Boundary (Geographical)

Admin. County or County Bor. Boundary

GVC

Gas Governer

Mile Post or Mile Stone

**Guide Post** 

Manhole

Wd Pp

Wks

Wind Pump

Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

County & Civil Parish Boundary

Civil Parish Boundary

London Borough Boundary

Wd Pp

Wind Pump

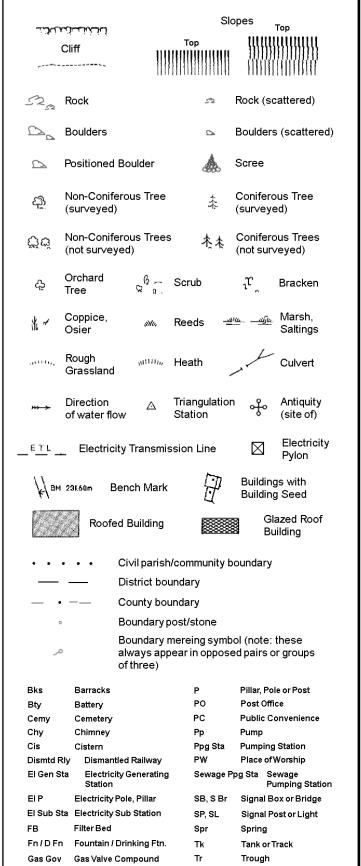
L B Bdy

MS

NTL

Normal Tidal Limit

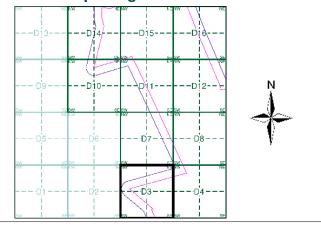
# 1:1,250



## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1887 - 1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment D3**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 501730, 355030 Slice: 1774.17

Site Area (Ha): Search Buffer (m):

#### **Site Details** All Areas New



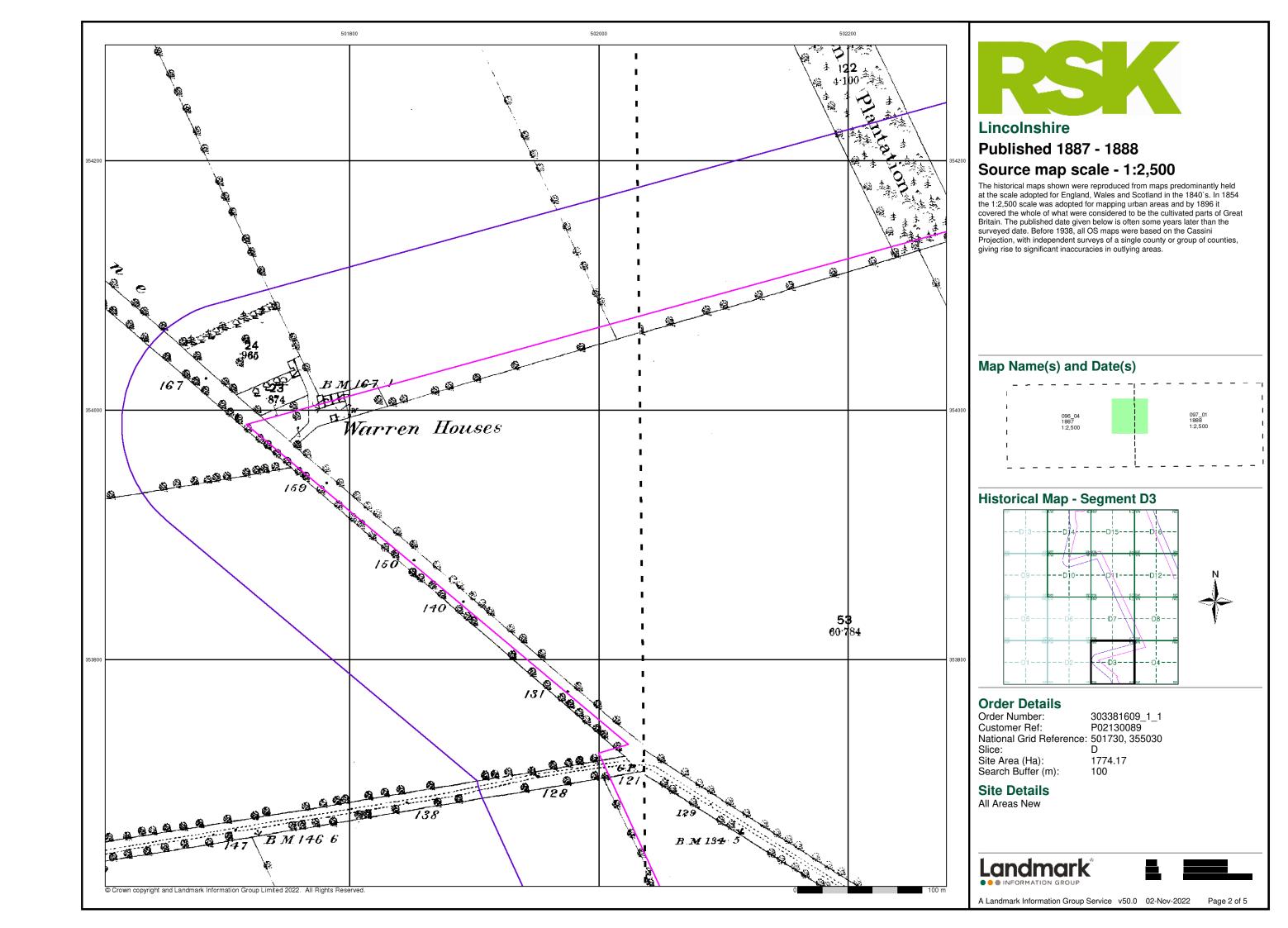


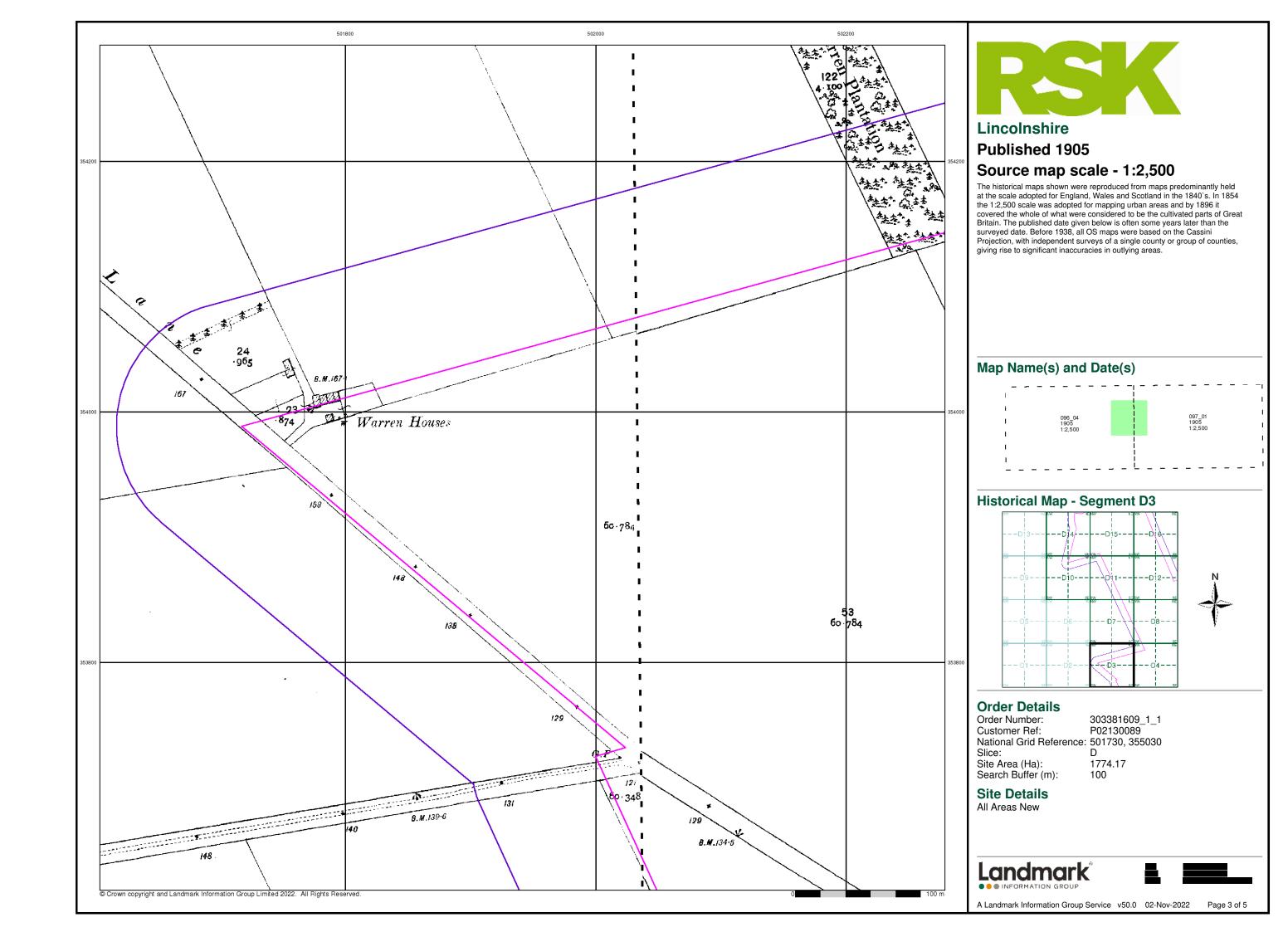


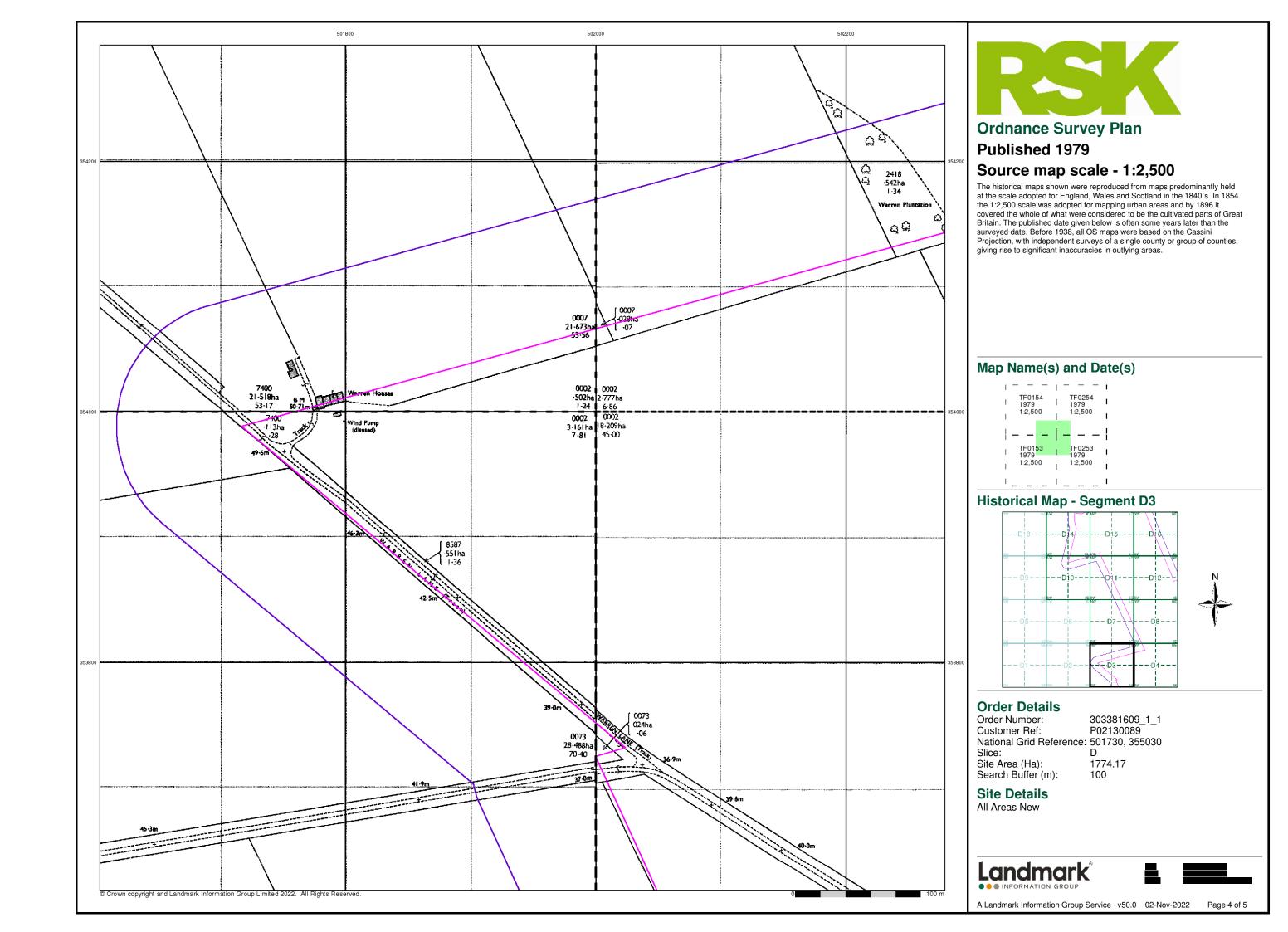
Page 1 of 5

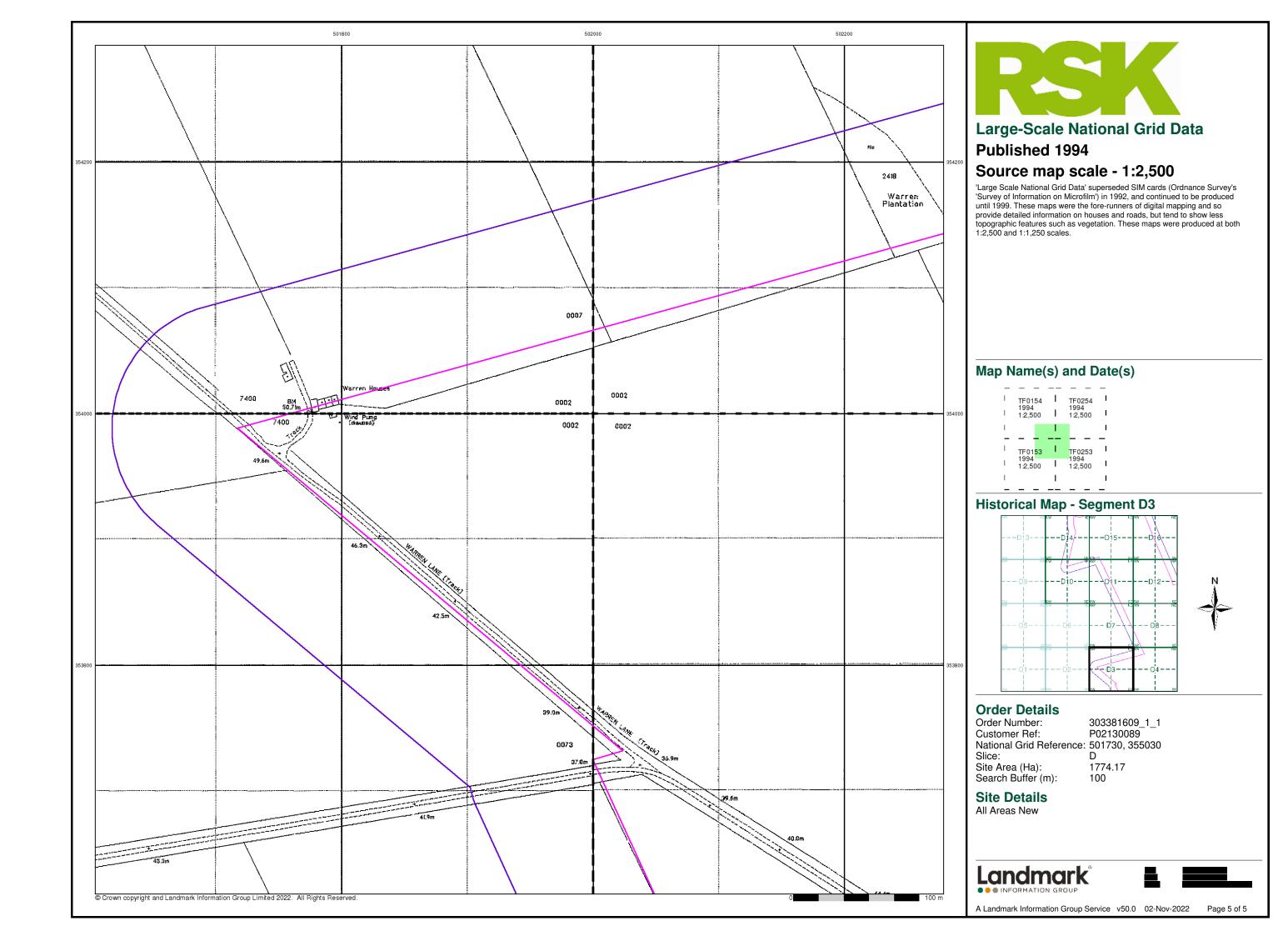
A Landmark Information Group Service v50.0 02-Nov-2022

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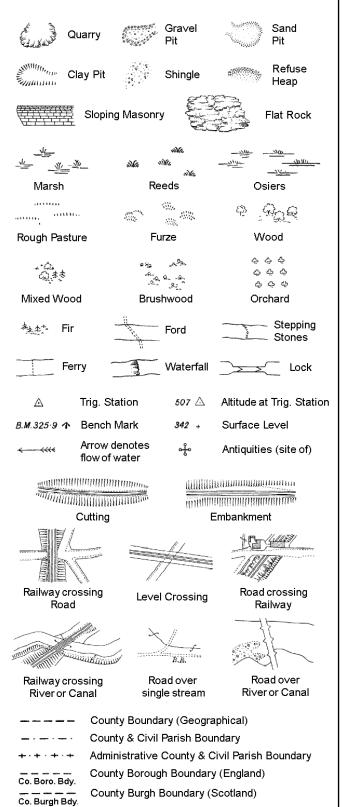








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

EP

F.B.

M.S

Bridle Road

Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

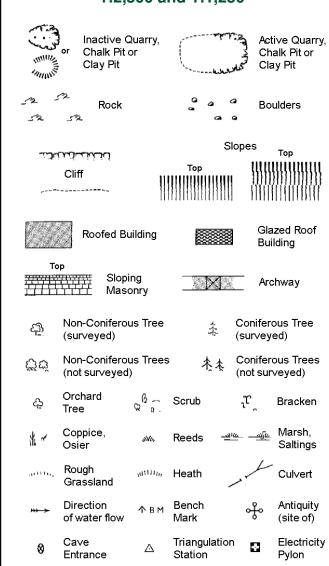
Well

S.P

Sl.

Tr:

#### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



**Electricity Transmission Line** 

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

ВН	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

# 1:1,250

			Slo	opes Top	
لانتابات		-	Гор	utanutann	
	Cliff	11111111	11111111111	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
,		1111111	1110111111111		
232	Rock		S	Rock (scattered)	
$\triangle_{\Delta}$	Boulders		<i>_</i>	Boulders (scattered)	
	Positioned	Boulder		Scree	
<u>ස</u> ු	Non-Conif (surveyed	erous Tree )	\$	Coniferous Tree (surveyed)	
ర్లోల్	Non-Conif (not surve	erous Trees yed)	<del></del> ሉ ሉ	Coniferous Trees (not surveyed)	
දා	Orchard Tree	çê a. Sc	rub	<sub>າ</sub> ຕຸ Bracken	
北~	Coppice, Osier	ow₀ Re	eds 🛥	<u>ும்</u> Marsh, Saltings	
artitu,	Rough Grassland	աստո, He	eath	Culvert	
<del>&gt;&gt;&gt;</del>	Direction of water flo		angulatior ation	Antiquity (site of)	
_ E <u>T</u> L _	Electric	city Transmissio	n Line	⊠ Electricity Pylon	
/ <del>/</del> BM	1 231.6úm E	Bench Mark		Buildings with Building Seed	
	Roofe	ed Building		Glazed Roof Building	
		Civil parish/co	mmunity b	oundary	
	. <u> </u>	District bound	-	,,	
	_		-		
	· - <u>-</u>	County bounds	<u></u>		
,	o .	Boundary post		1.4 4 41	
1	0	-		ol (note: these ed pairs or groups	
Bks	Barracks		Р	Pillar, Pole or Post	
Bty	Battery		PO	Post Office	
Cemy	Cemetery		PC	Public Convenience	
Chy	Chimney		Pp	Pump	
Cis Diemtel	Cistern	tlad Pailway	Ppg Sta PW	Pumping Station Place of Worship	
Dismtd F El Gen S	-	itled Railway ity Generating	Sewage P	•	
L. 3011 C	Station		OUTING F	Pumping Station	
EIP	-	Pole, Pillar	SB, S Br	Signal Box or Bridge	
	Sta Electricity	Sub Station	SP, SL	Signal Post or Light	
FB	Filter Bed		Spr	Spring	
Fn/DFi	n Fountain /	Drinking Ftn.	Tk T:-	Tank or Track	

Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

Tr

Wd Pp

Wks

Trough

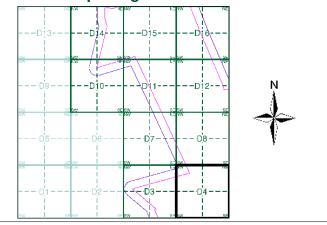
Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment D4**



#### **Order Details**

Order Number: 303381609\_1\_1 **Customer Ref:** P02130089 National Grid Reference: 501730, 355030 Slice: 1774.17

Site Area (Ha):

Search Buffer (m):

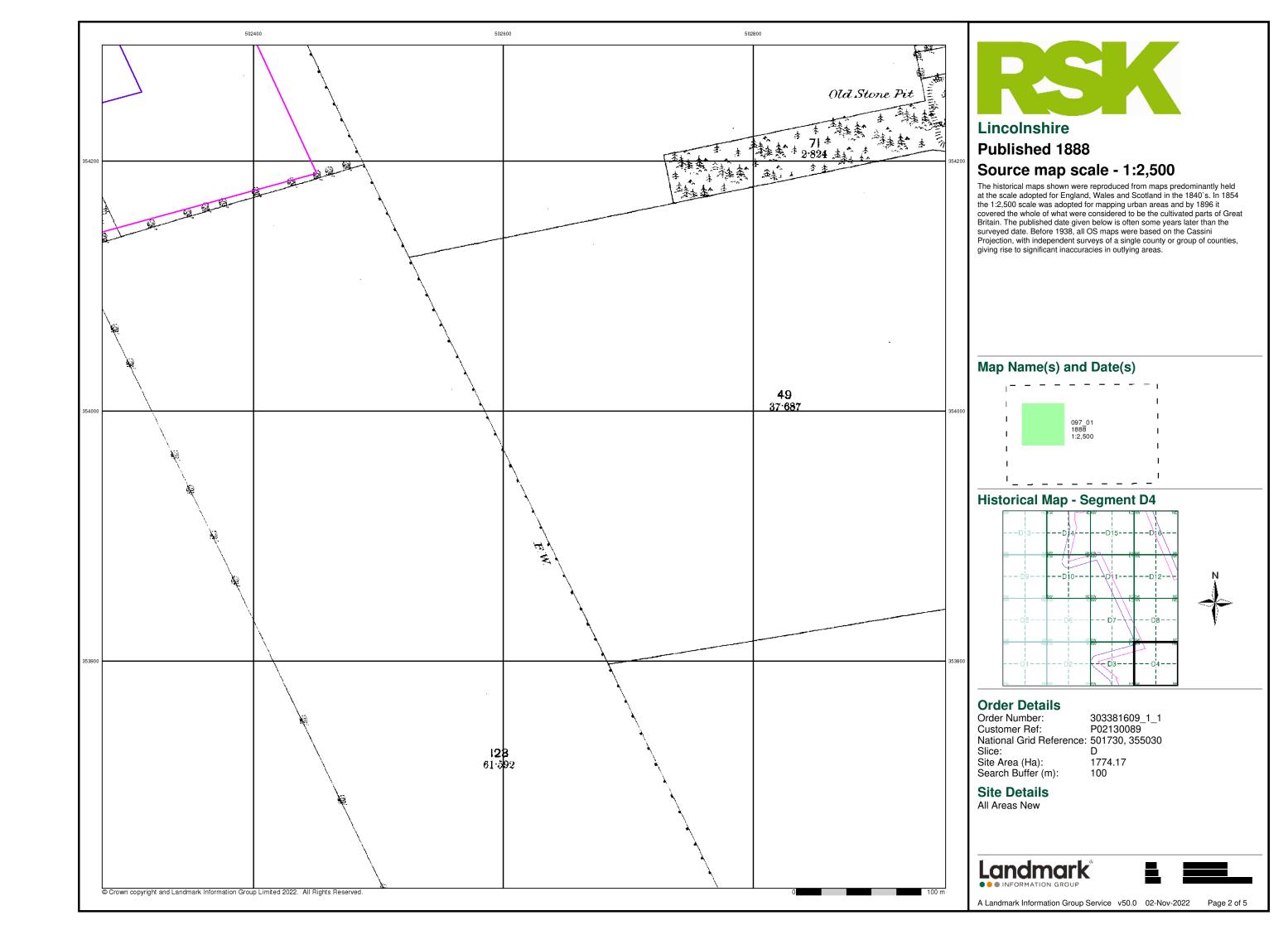
## **Site Details**

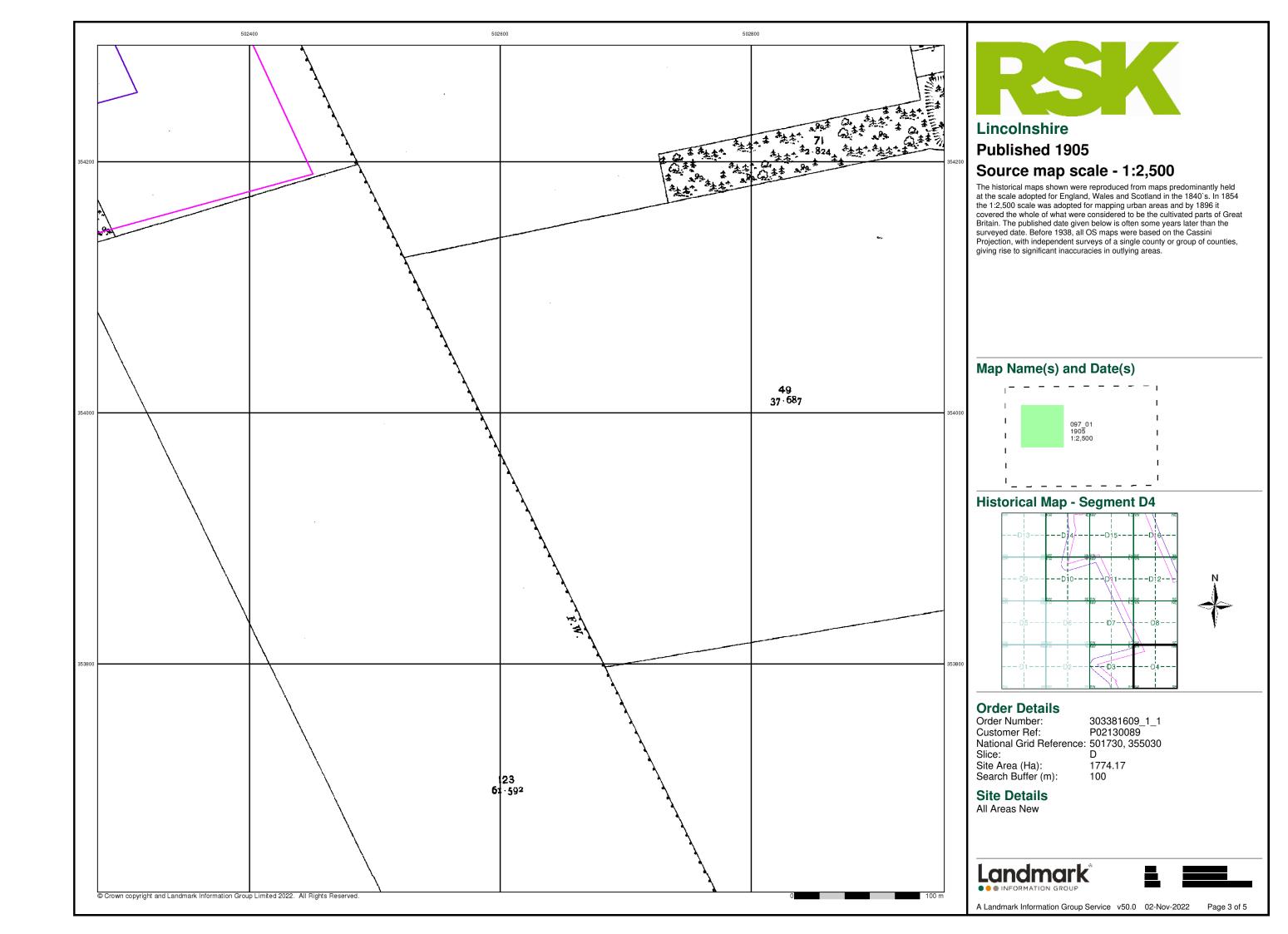
All Areas New

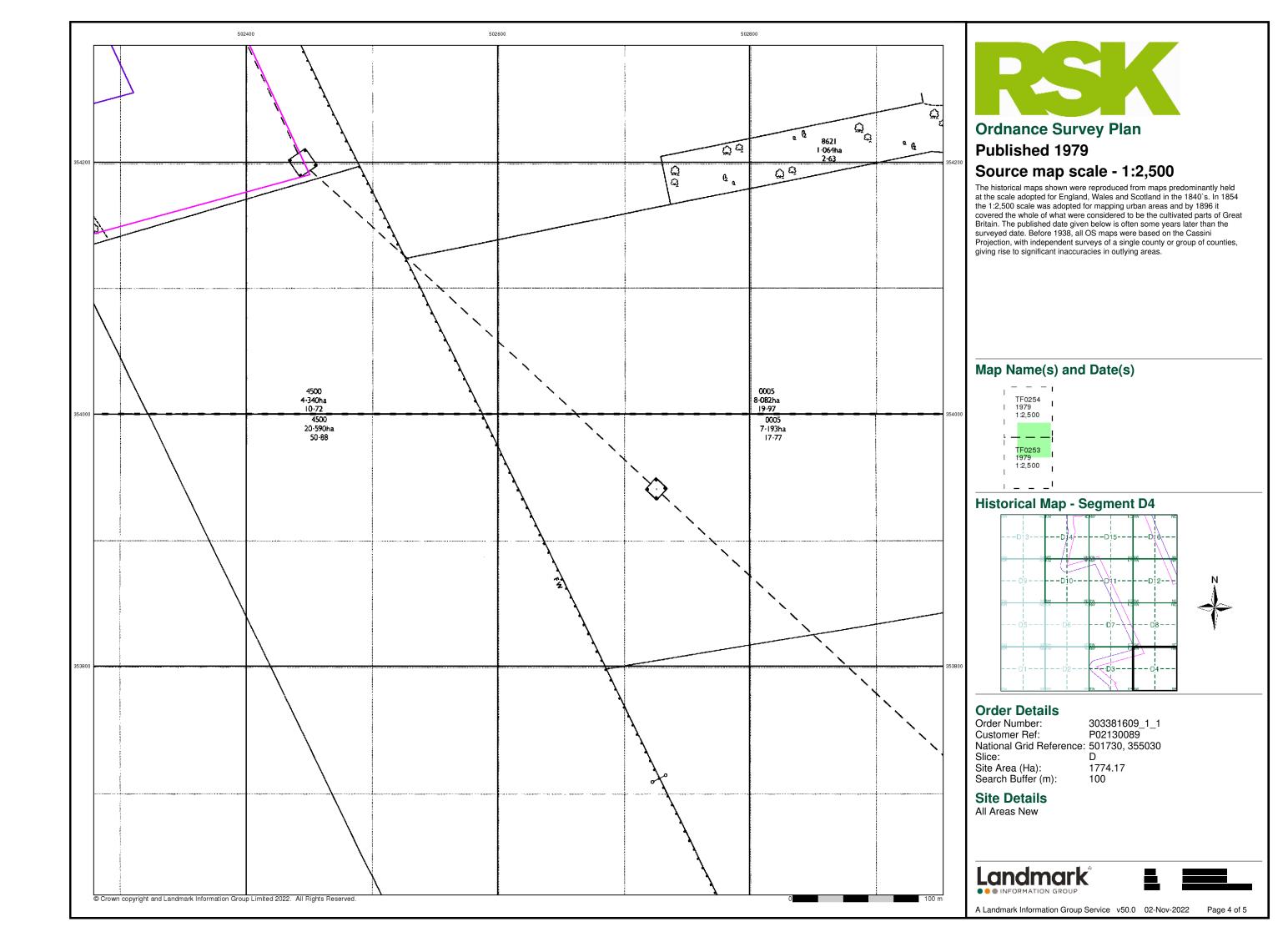


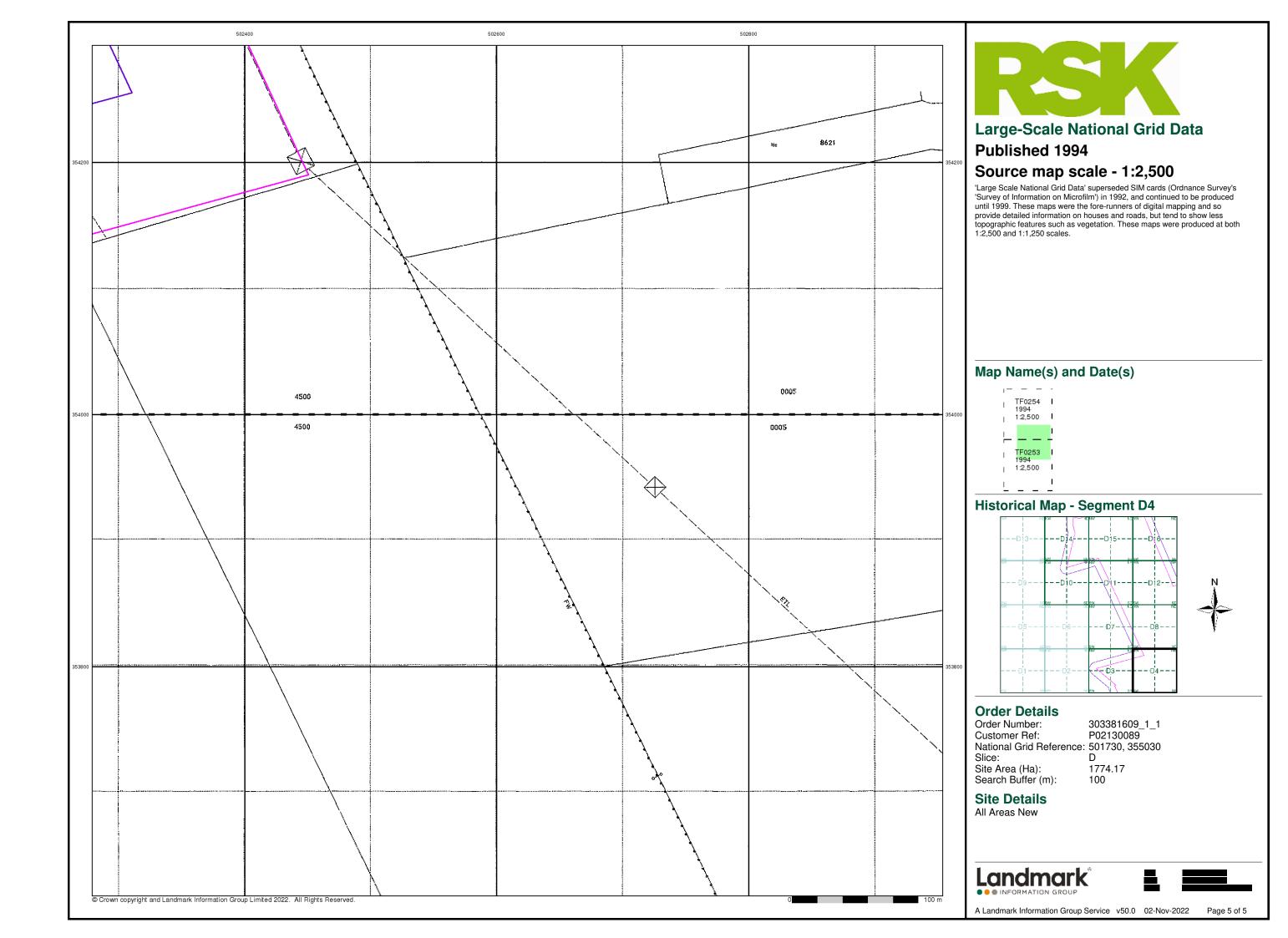




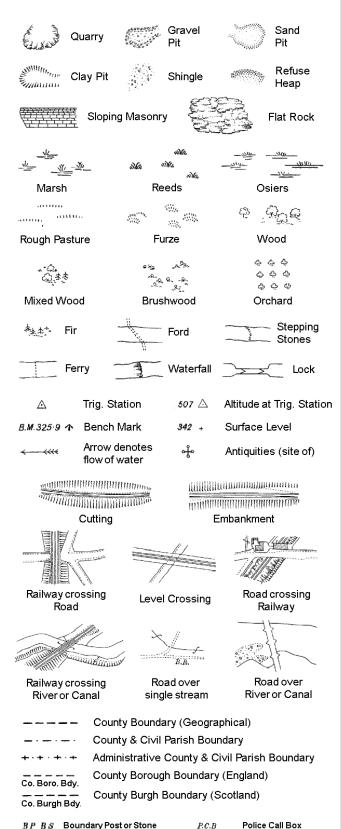








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



Pump

Sluice

Spring

Trough Well

Signal Post

Telephone Call Box

S.P

T.C.B

Sl.

Tr:

B.R.

EP

F.B.

M.S

Bridle Road

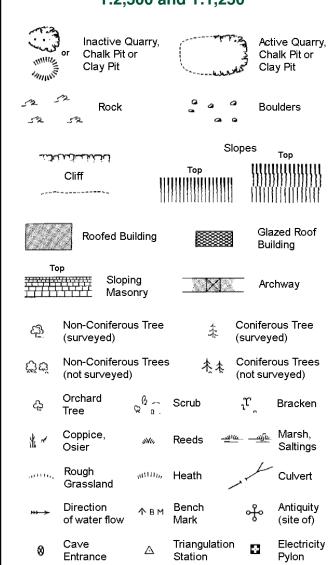
Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

#### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



**Electricity Transmission Line** 

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

_			
вн	Beer House	Р	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
EIP	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
н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
МН	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

# 1:1,250

_			Slo	pes	T
والماثند	للنبليات		Tan	1111111	Top
	Cliff	111111	Top 	1111111	111111111111
~~~ <del>~</del>		111111		- 1111111	111111111
3	Rock		7,5	Rock (so	cattered)
$\Box$	Boulders		<u>~</u>	Boulders	s (scattered)
$\Box$	Positioned	l Boulder		Scree	
<u>ක</u> ු	Non-Conit	erous Tree )	*	Conifero	
ਲੈਂਦੱ	Non-Conit (not surve	erous Trees yed)	<del></del> ተ	Conifero	ous Trees /eyed)
දා	Orchard Tree	Q a. S	crub	$^{j}\mathcal{U}_{}$	Bracken
* ~	Coppice, Osier	s¥u R	eeds 괵	<u> </u>	Marsh, Saltings
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Rough Grassland	<sub>и</sub> пп, Н	eath	1	Culvert
<del>&gt;&gt;&gt;</del>	Direction of water fl		riangulatior tation	, of	Antiquity (site of)
ETL _	_ Electric	city Transmissi	on Line	$\boxtimes$	Electricity Pylon
\ <sup>€</sup> / вм	231.60m	Bench Mark		Building Building	
	Roof	ed Building		81	azed Roof iilding
		Ci√il parish/c	ommunity b	oundany	
		•	=	Ouridar y	
		District bound	-		
_ •		County bound			
¢	•	Boundary pos			
£	>	Boundary me always appea of three)			
Bks	Barracks		Р	Pillar, Pol	le or Post
Bty	Battery		PO	Post Offi	
Cemy	Cemetery		PC	Public Co	onvenience
Chy	Chimney		Pp	Pump	
Cis	Cistern		Ppg Sta	Pumping	Station
Dismtd F	Rly Dismar	itled Railway	PW	Place of\	Worship
El Gen S	ta Electric Station	ity Generating	Sewage P		wage umping Station
EIP		Pole, Pillar	SB, S Br		ox or Bridge
	ta Electricity	•	SP, SL	_	ost or Light
FB	Filter Bed		Spr	Spring	
-	<del>-</del>				

Fn / D Fn Fountain / Drinking Ftn.

Gas Governer

**Guide Post** 

Manhole

GVC

Gas Valve Compound

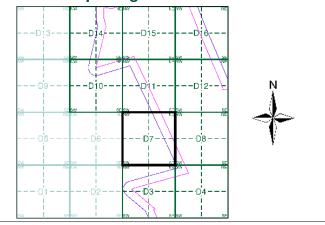
Mile Post or Mile Stone



## **Historical Mapping & Photography included:**

Pg
2
3
4
5

## **Historical Map - Segment D7**



#### **Order Details**

Order Number: 303381609\_1\_1 **Customer Ref:** P02130089 National Grid Reference: 501730, 355030 Slice: 1774.17 Site Area (Ha):

Search Buffer (m):

**Site Details** All Areas New

Tank or Track

Works (building or area)

Trough

Wind Pump Wr Pt. Wr T Water Point, Water Tap

Tr

Wd Pp

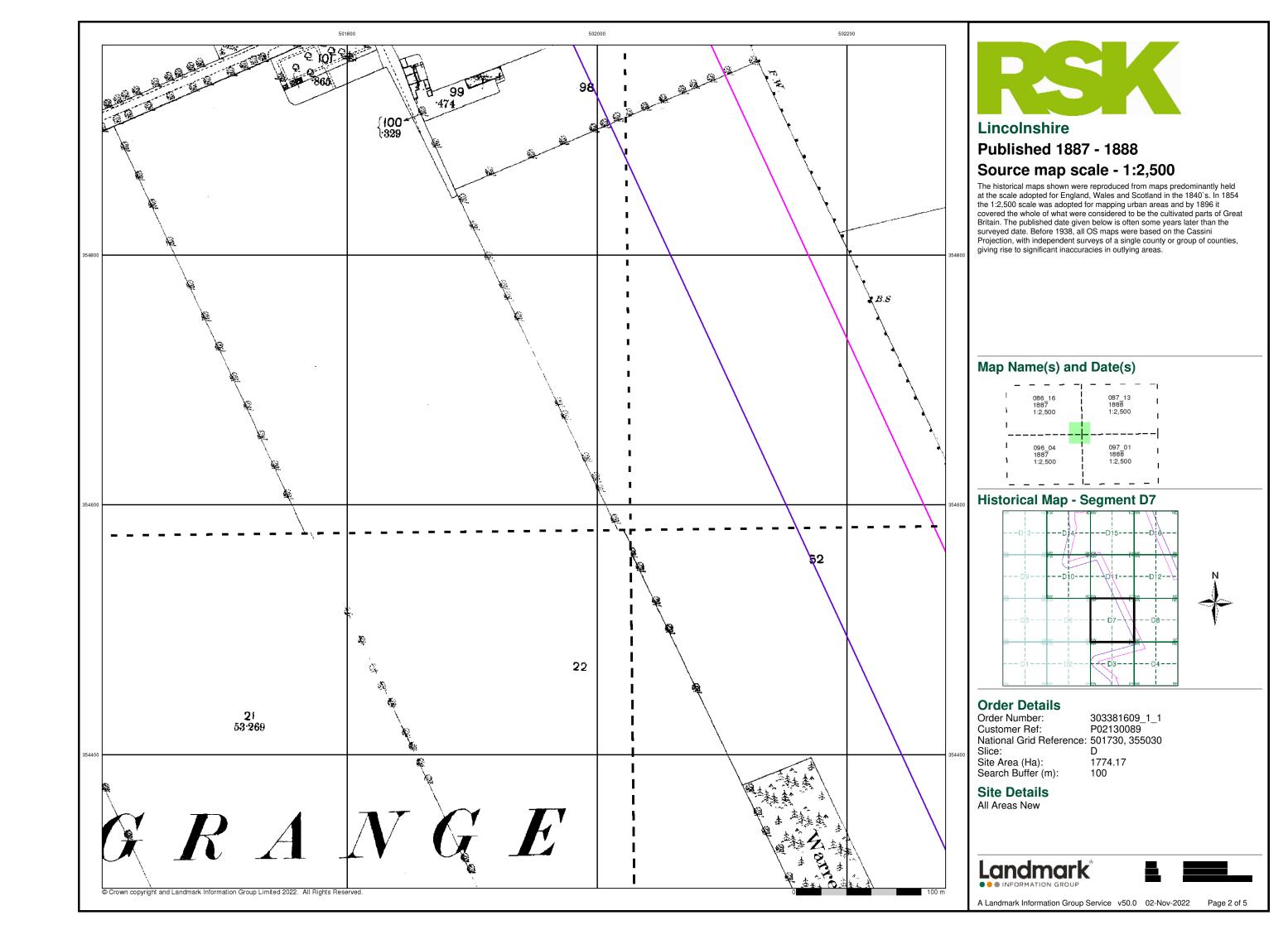
Wks

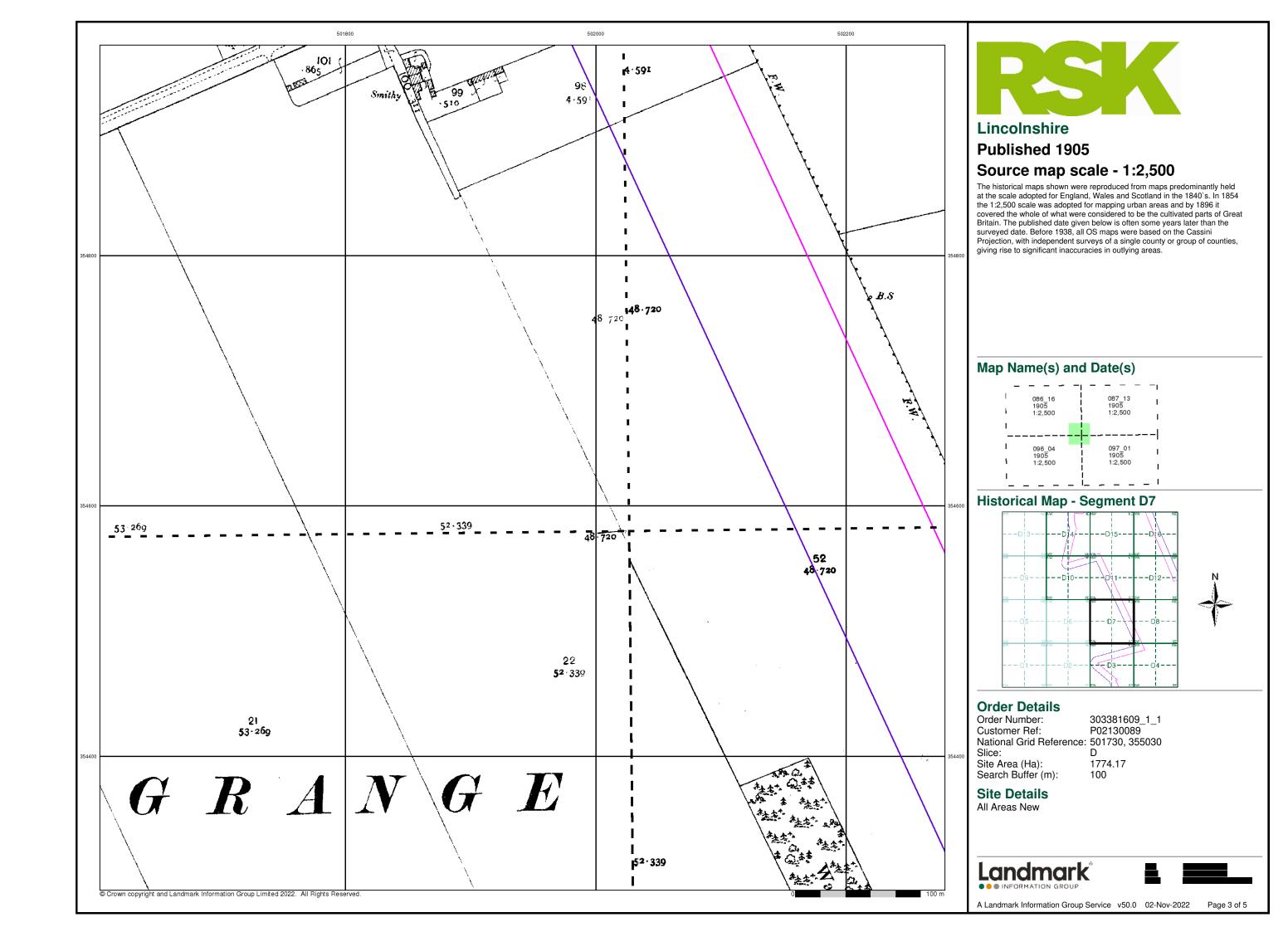


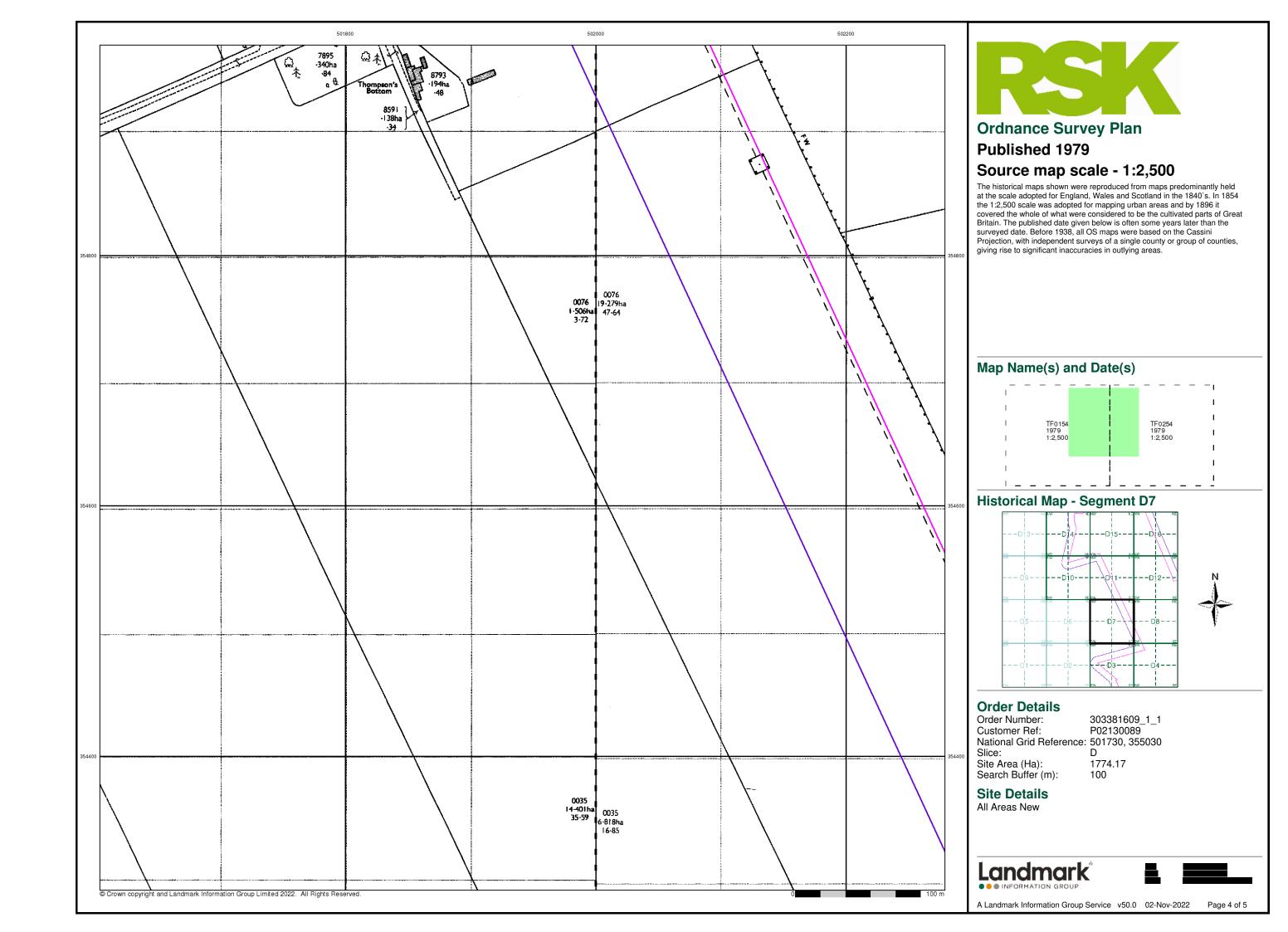


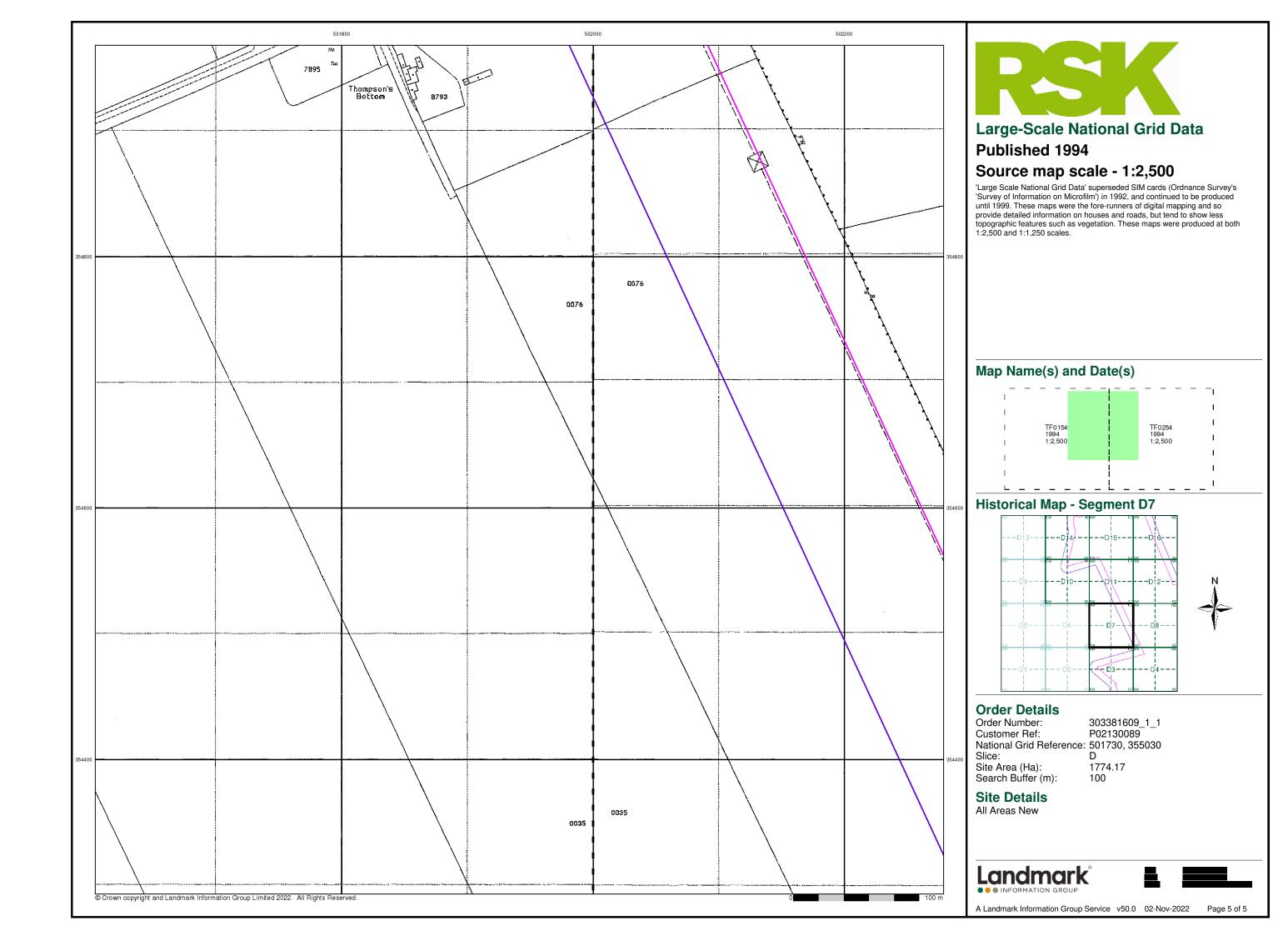


Page 1 of 5

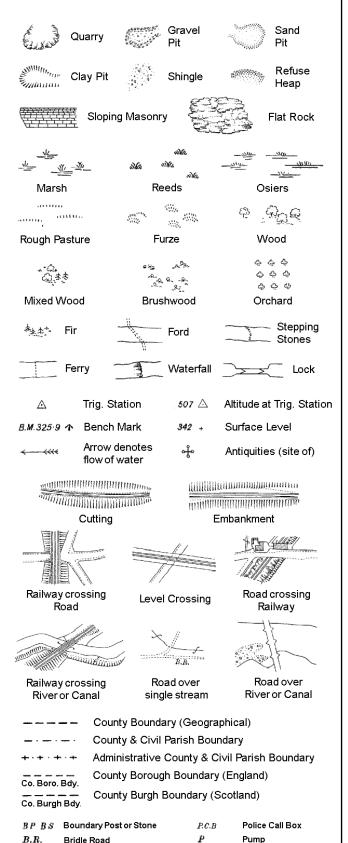








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



S.P

T.C.B

 $T_{T}$ 

Sl.

Electricity Pylor

Guide Post or Board

Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

E.P

F.B.

M.S

Signal Post

Telephone Call Box

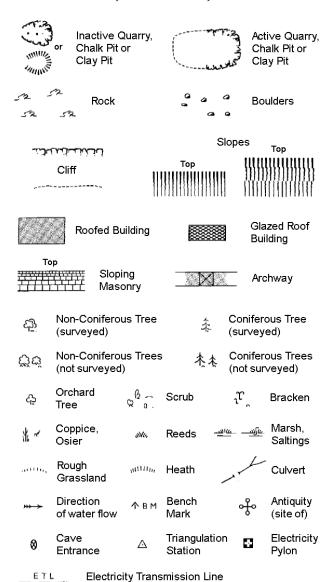
Sluice

Spring

Trough

Well

#### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 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

,			
вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Fn/DFn

GVC

MP, MS

Fountain / Drinking Ftn.

Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

Tk

Tr

Wd Pp

Wks

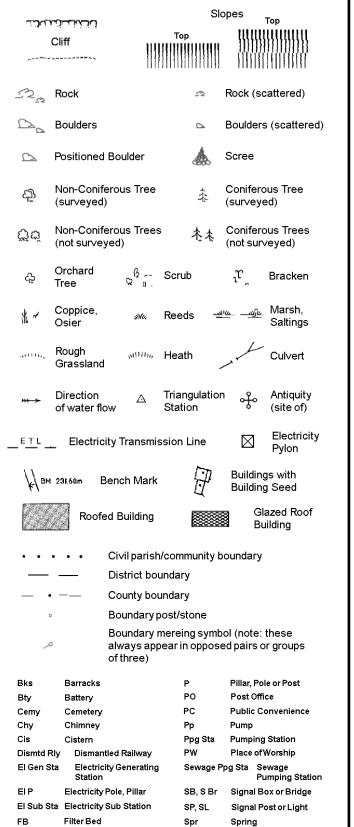
Tank or Track

Trough

Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

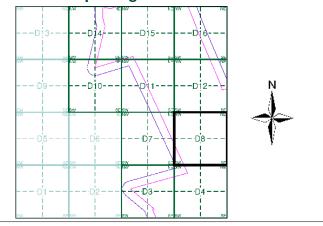
# 1:1,250



## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment D8**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 501730, 355030 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 100

## **Site Details**

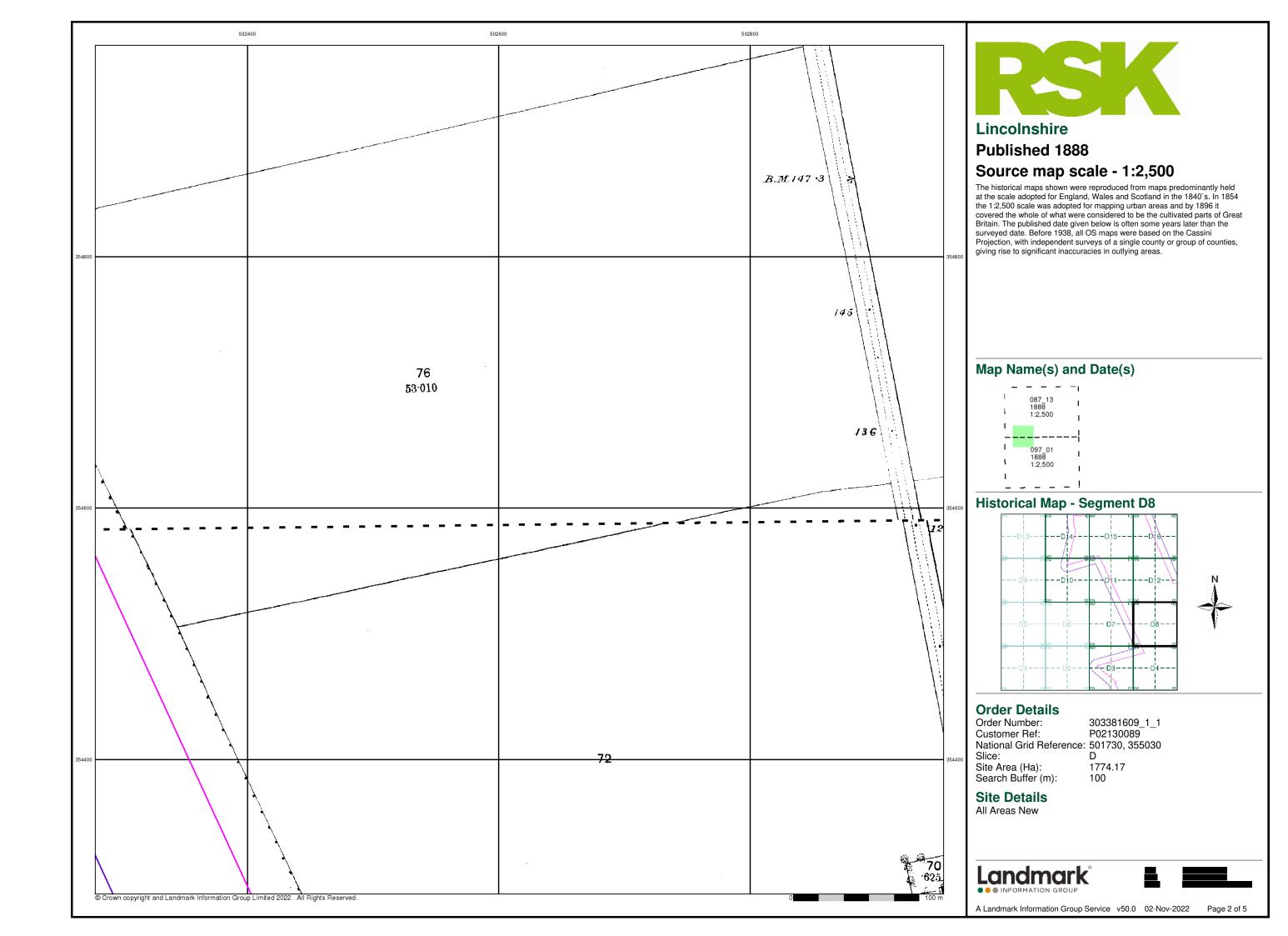
All Areas New

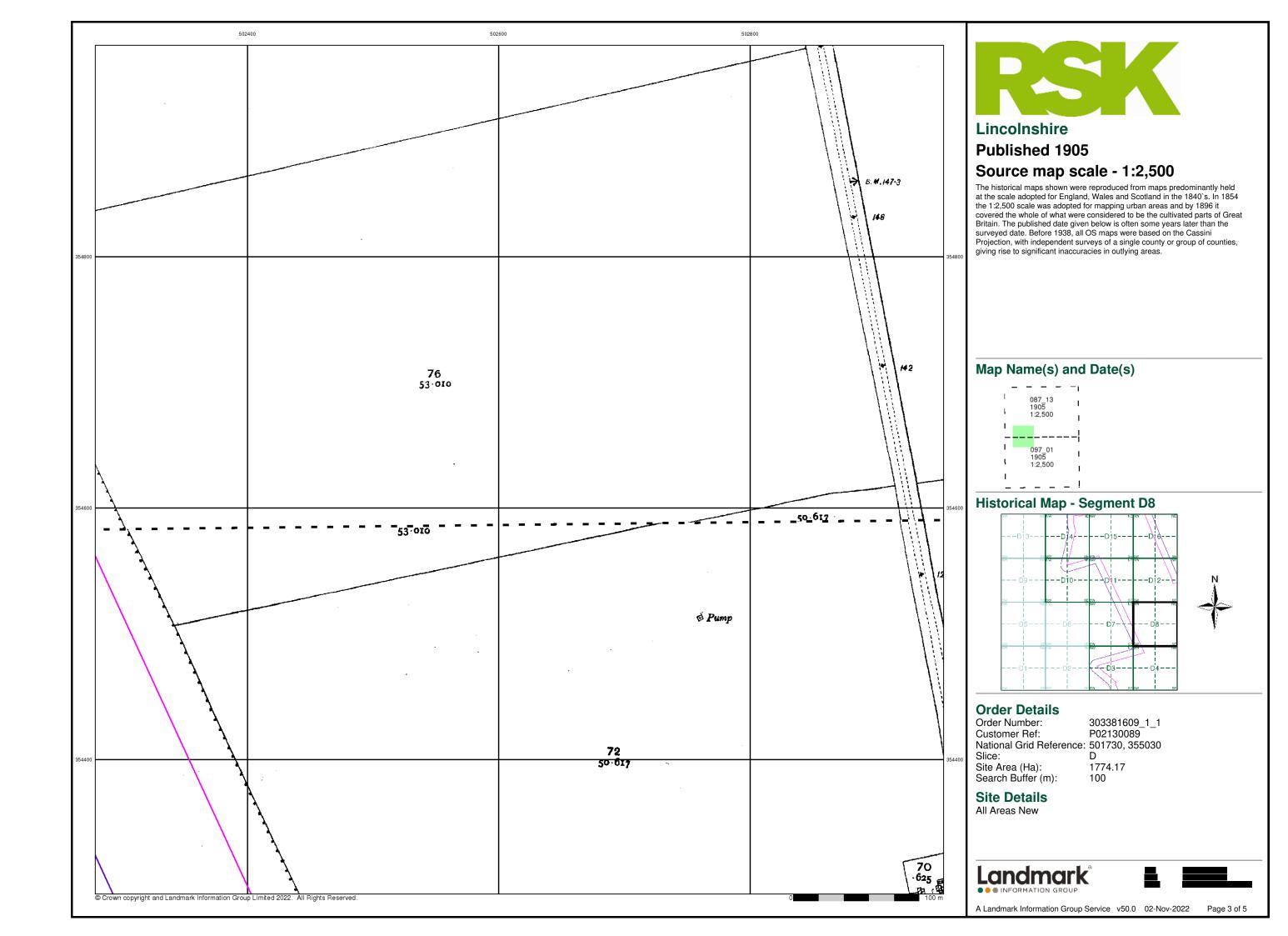


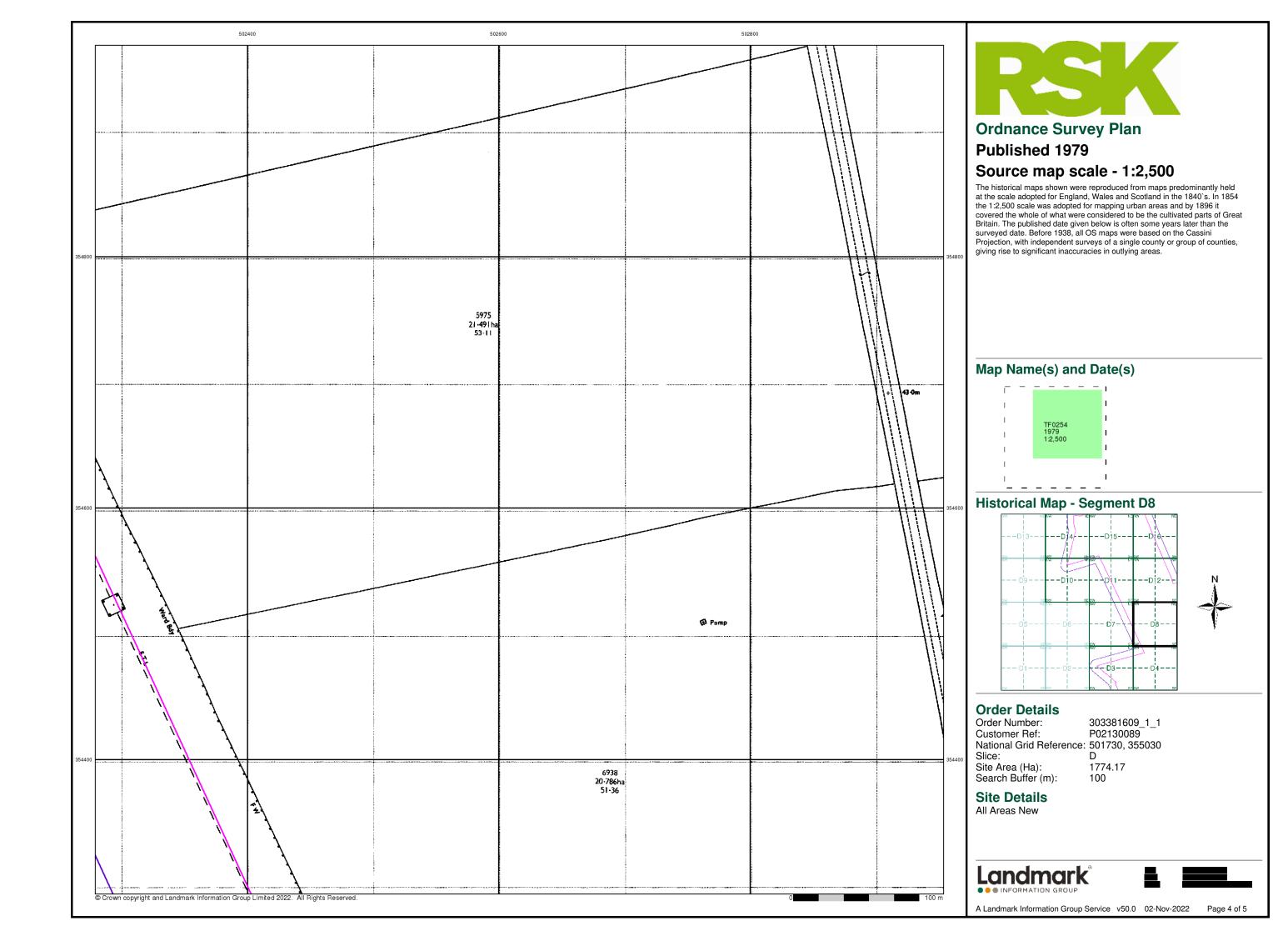


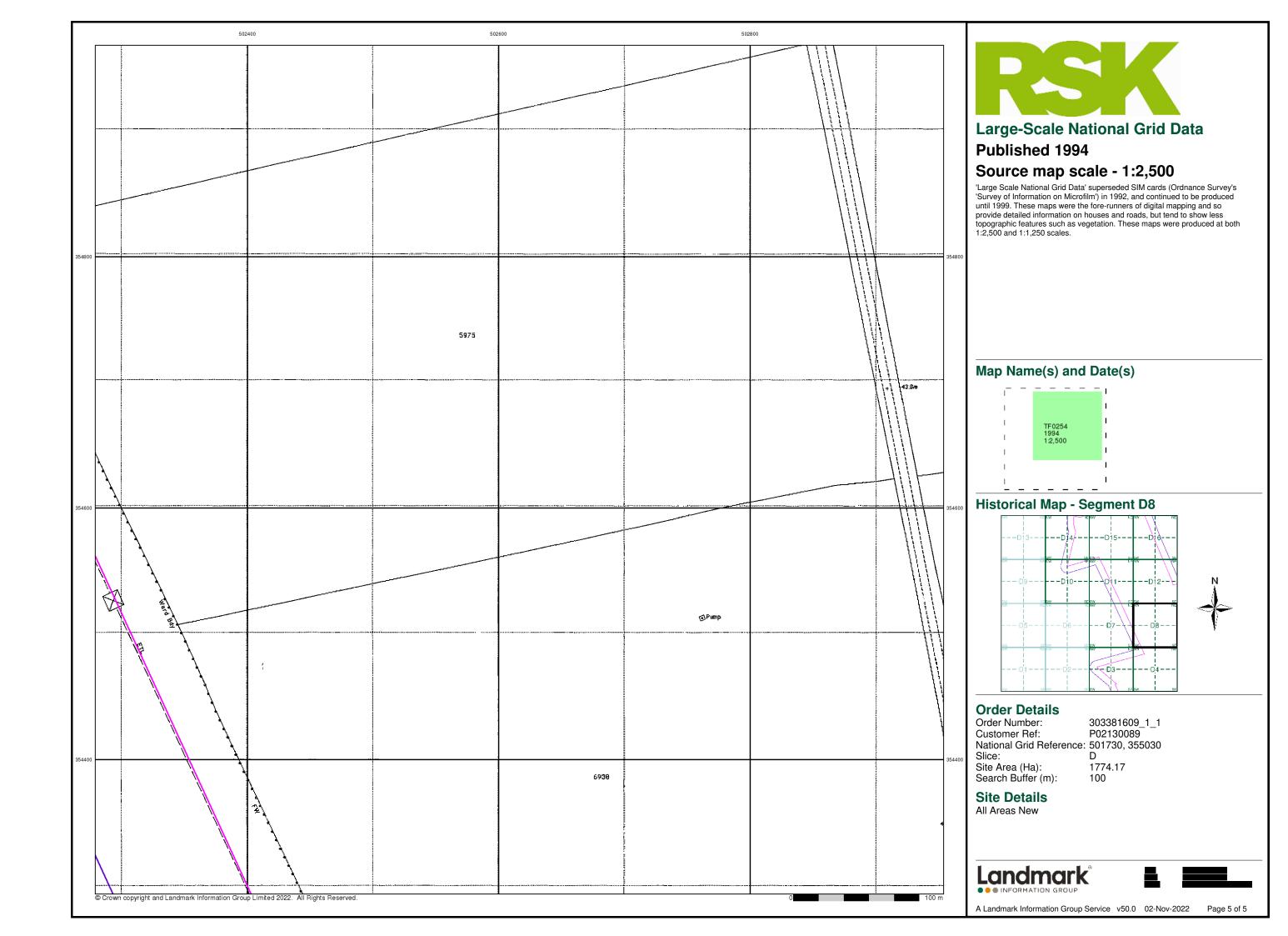


Page 1 of 5

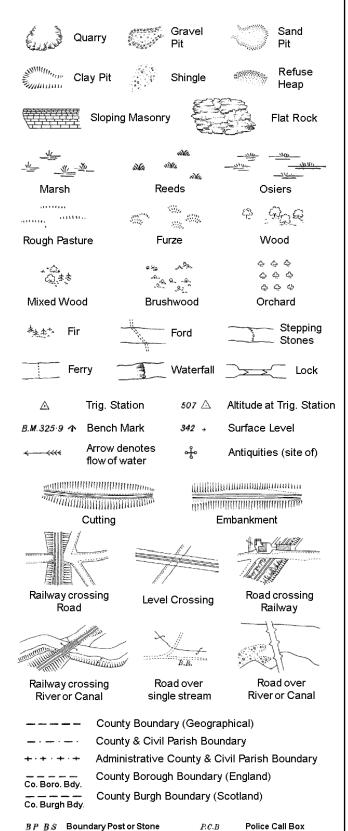








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



Pump

Sluice

Spring

Trough

Well

Signal Post

Telephone Call Box

S.P

T.C.B

 $T_{T}$ 

Sl.

B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

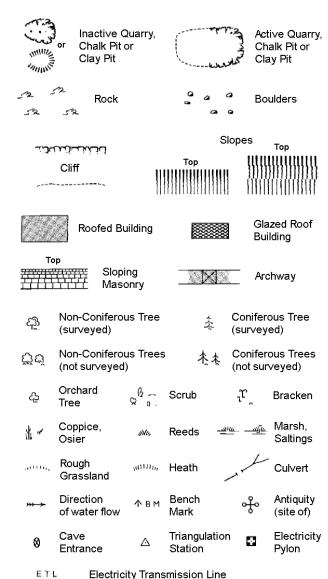
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

#### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250

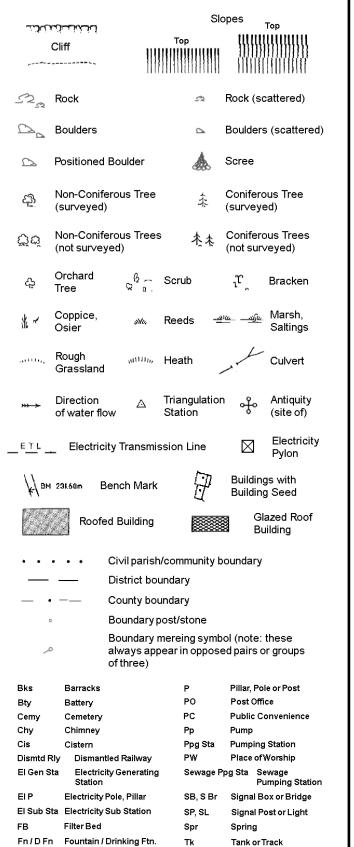


# **Electricity Transmission Line**

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

вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

# 1:1,250



Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

MP, MS

Tr

Wd Pp

Wks

Trough

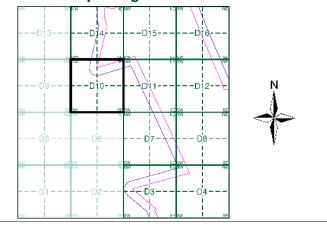
Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1887	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment D10**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 501730, 355030 Slice: 1774.17

Site Area (Ha): Search Buffer (m):

#### **Site Details** All Areas New



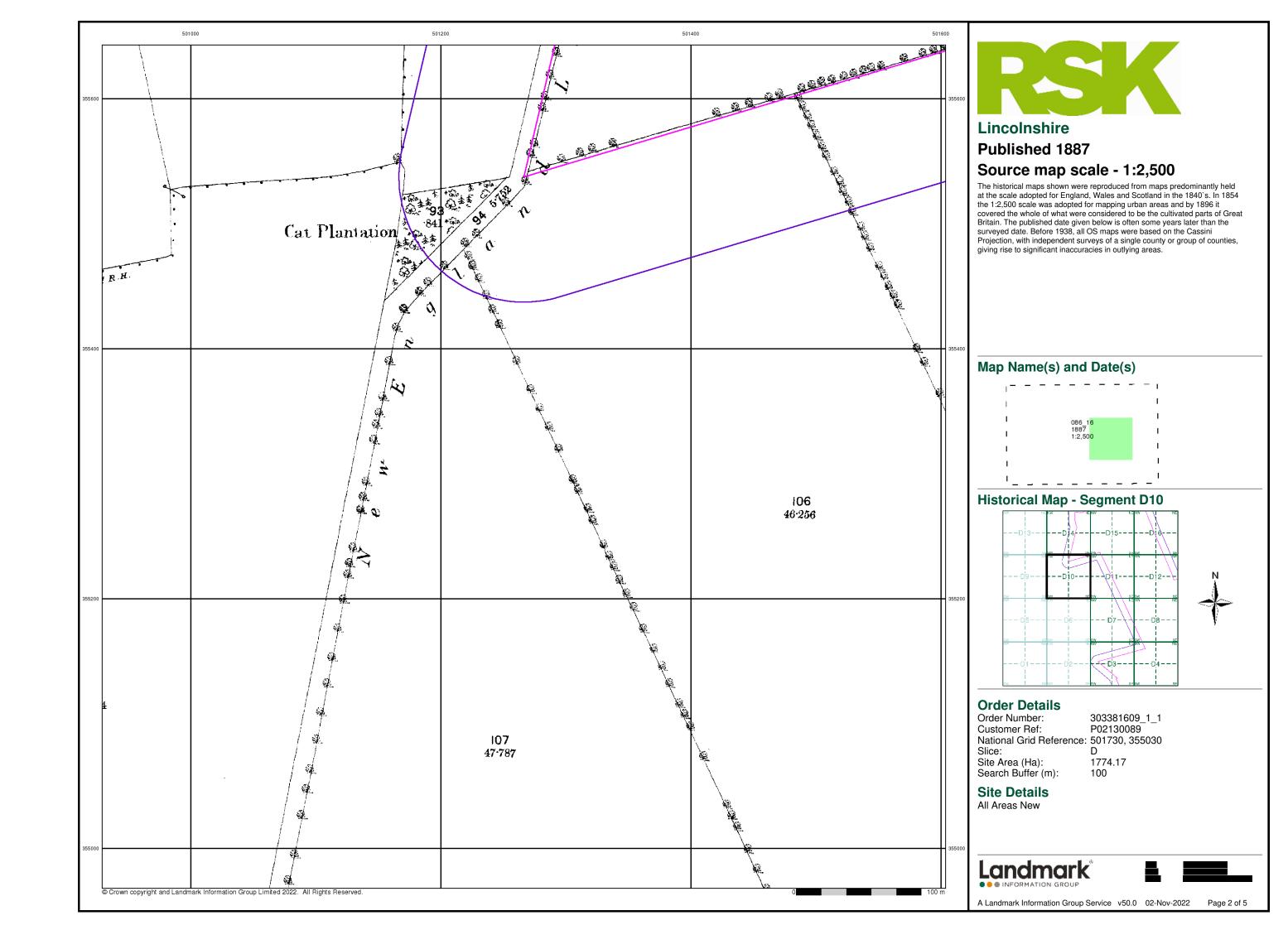


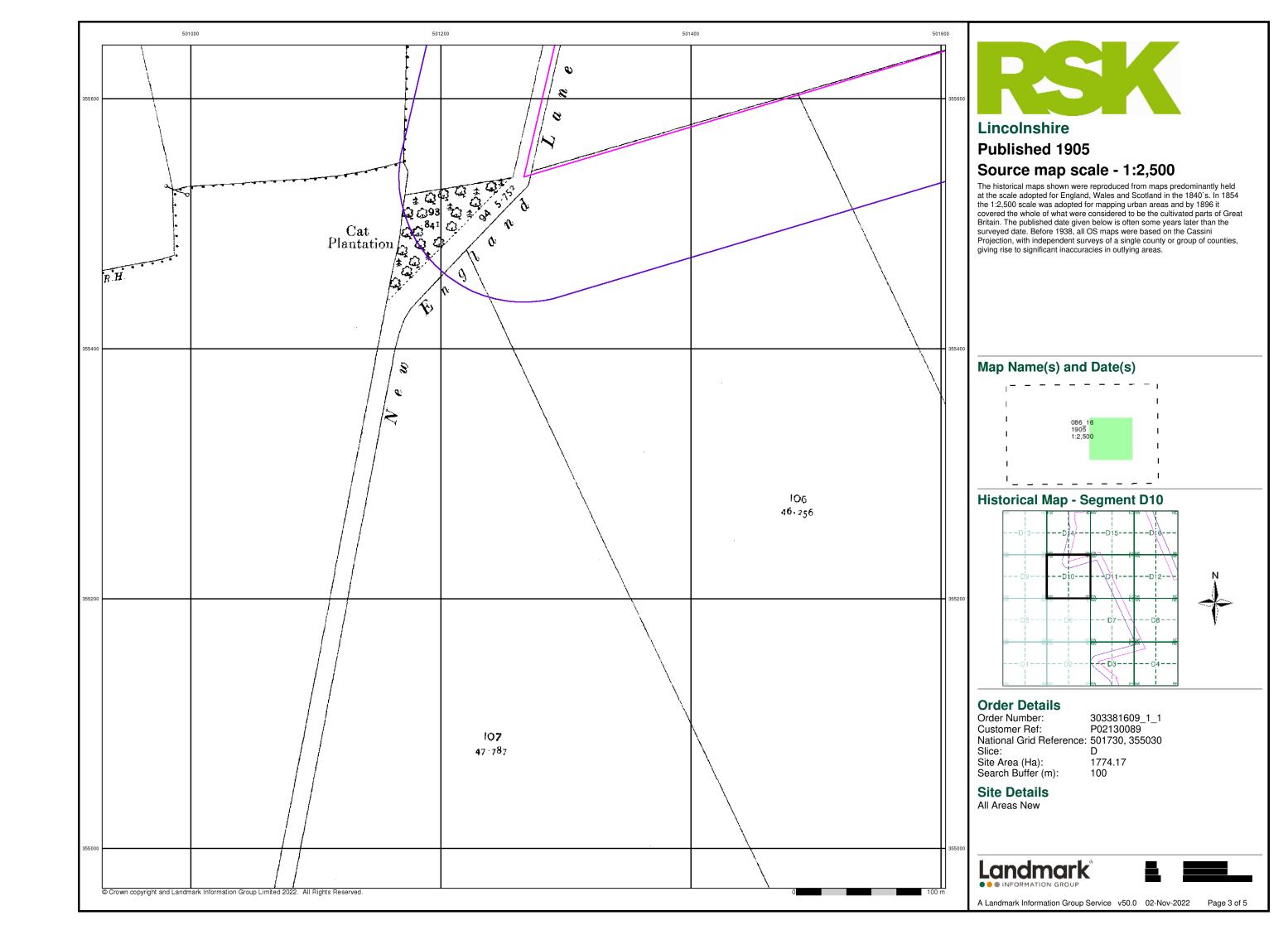


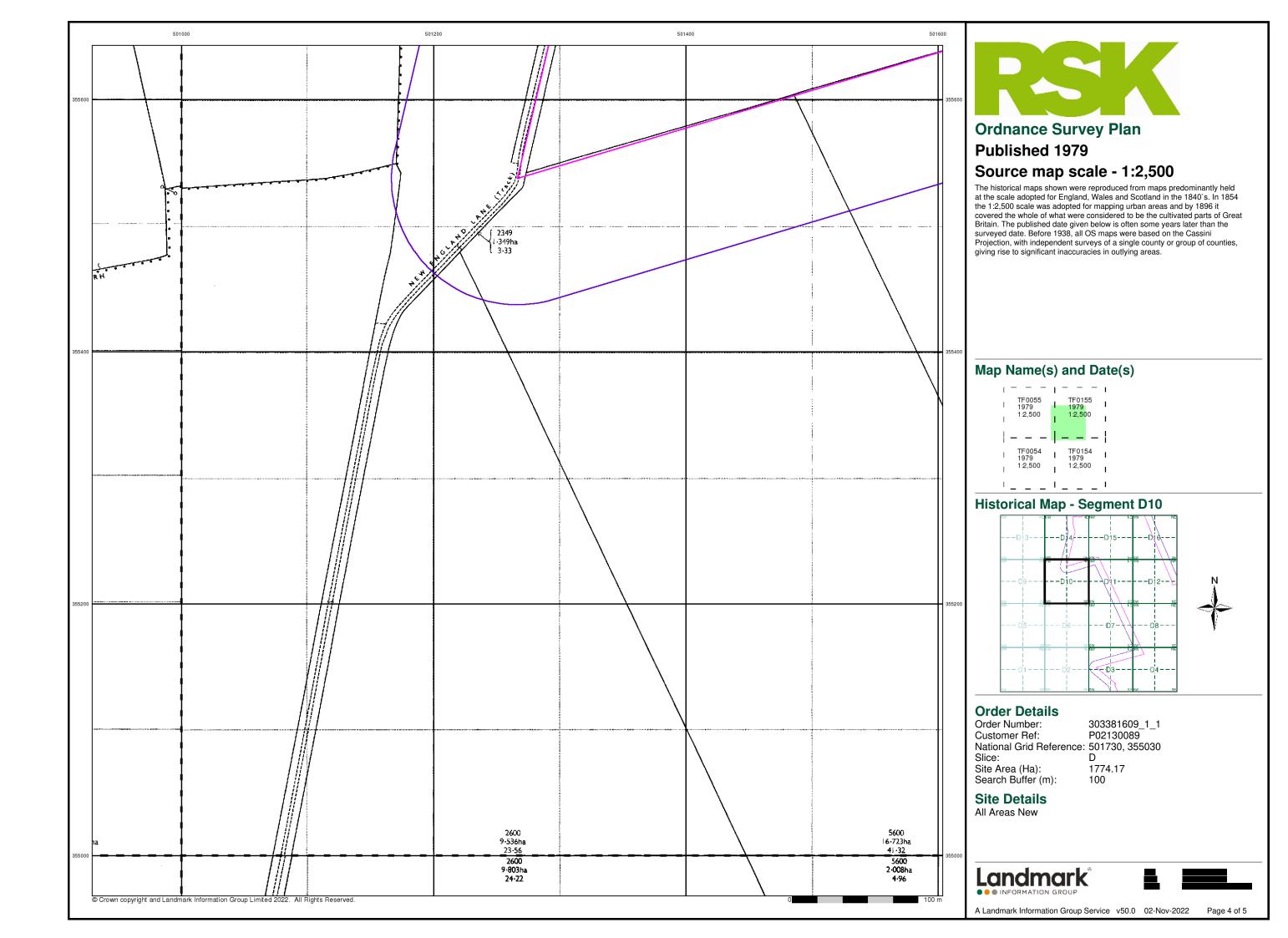
Page 1 of 5

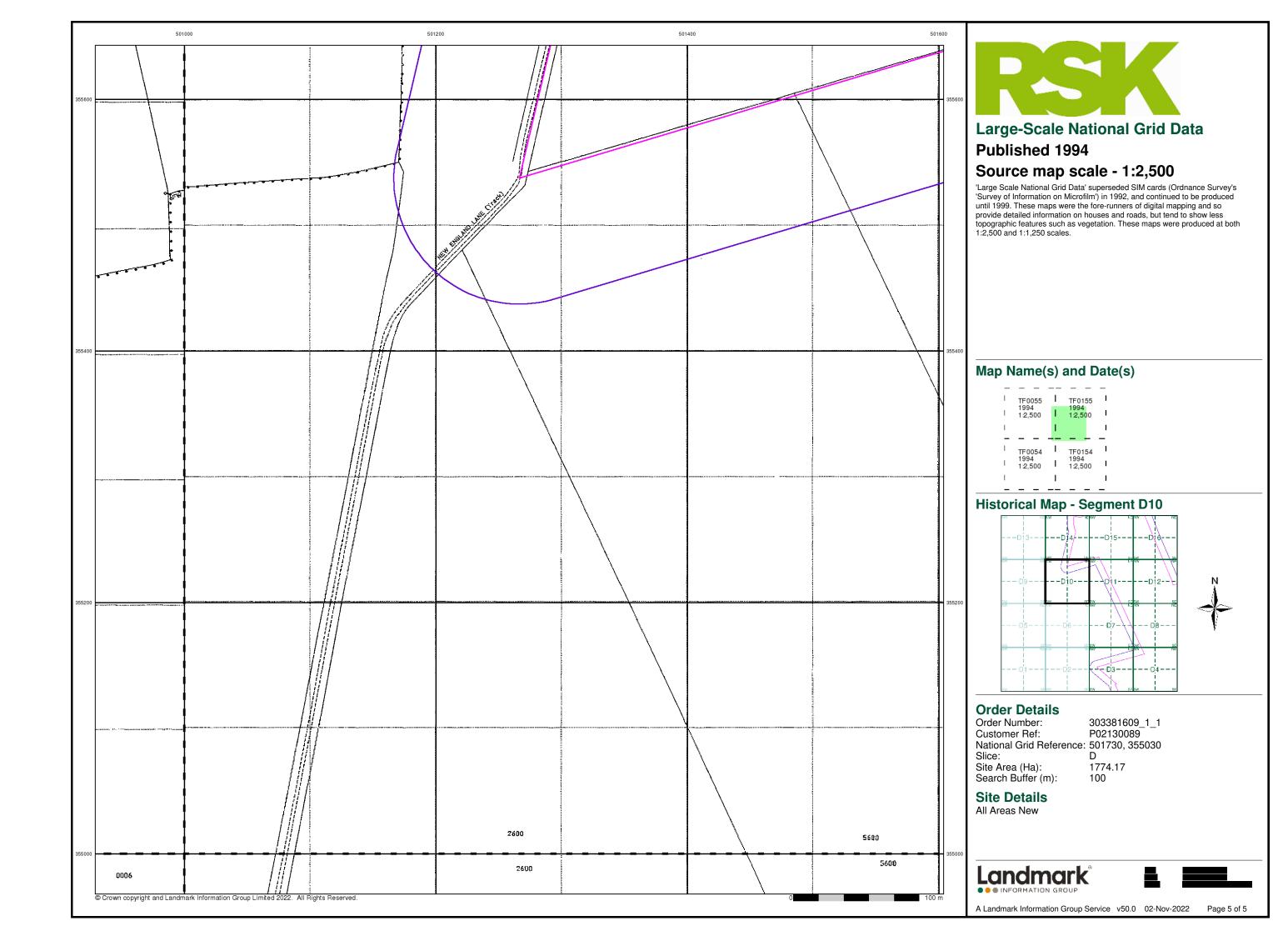
A Landmark Information Group Service v50.0 02-Nov-2022

100

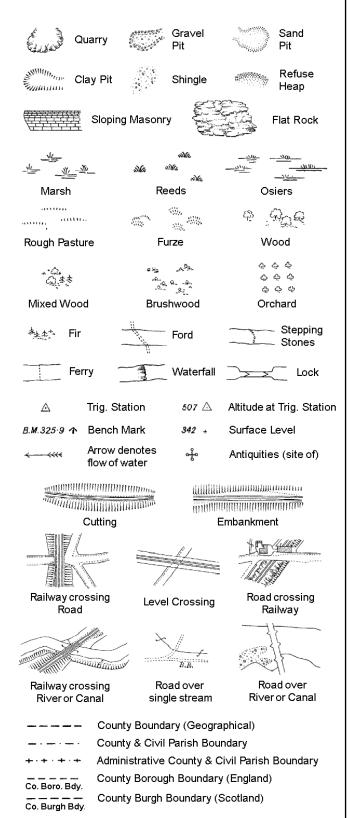








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

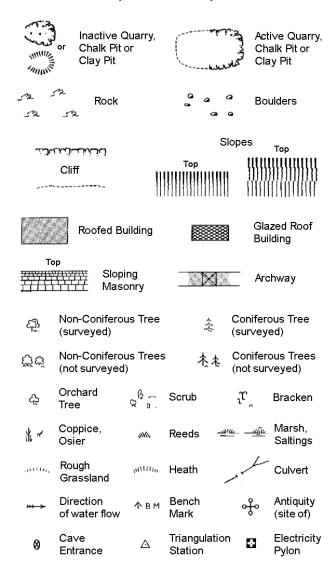
S.P

T.C.B

Sl.

 $T_{T}$ 

#### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250

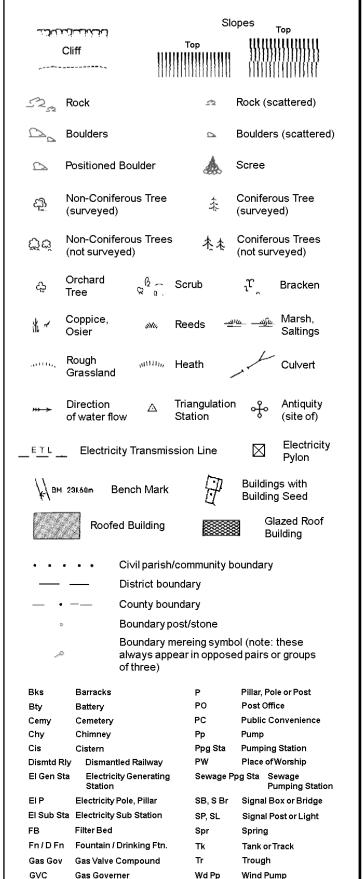


**Electricity Transmission Line** 

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

,			
вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

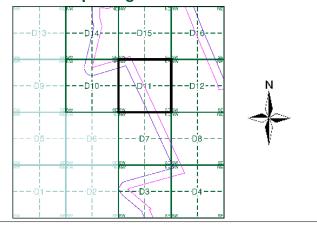
# 1:1,250



## **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1887 - 1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment D11**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 501730, 355030 Slice:

Site Area (Ha):

1774.17 Search Buffer (m): 100

#### **Site Details** All Areas New

Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

Wks

**Guide Post** 

Mile Post or Mile Stone

Manhole

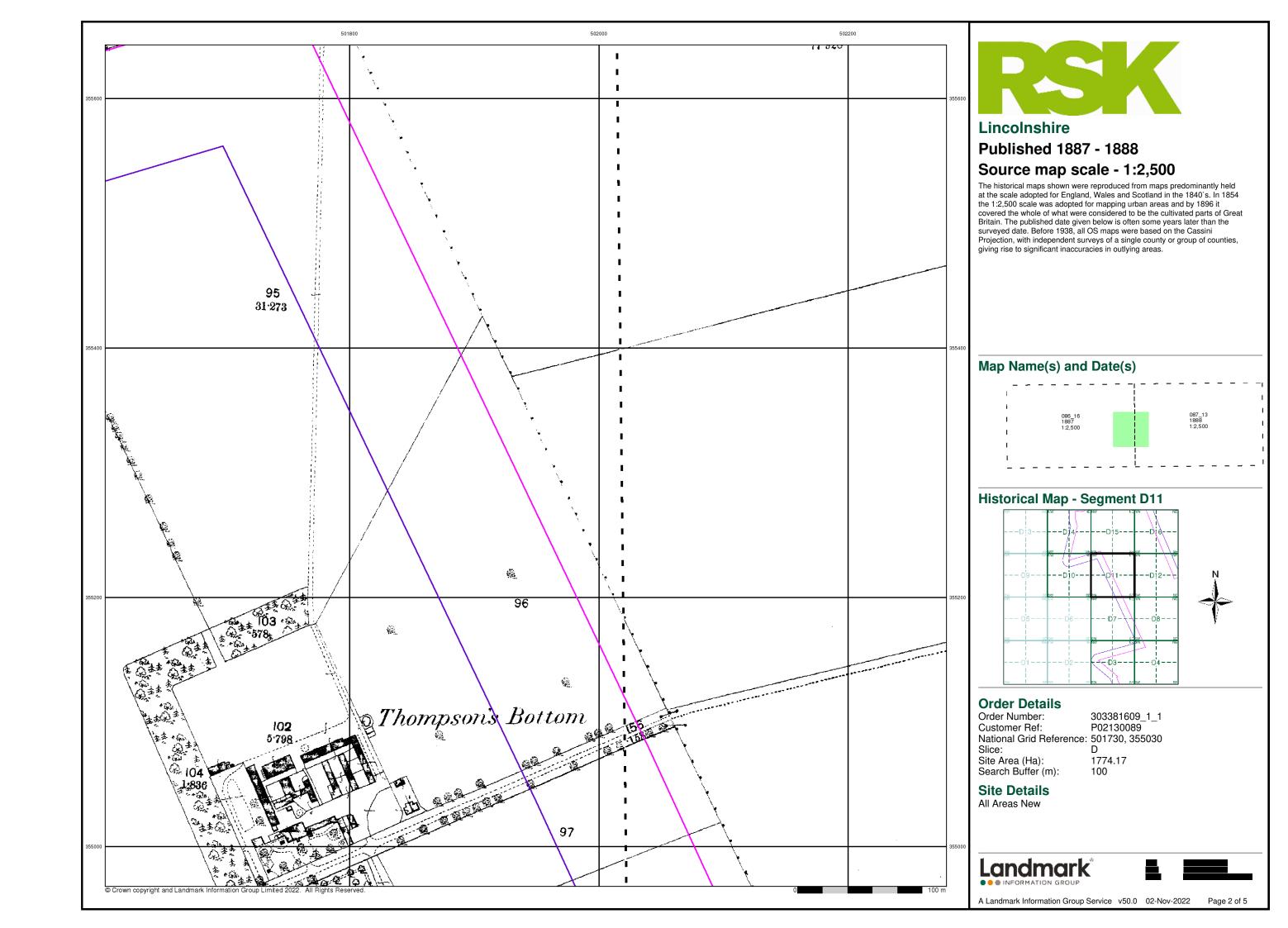
MP, MS

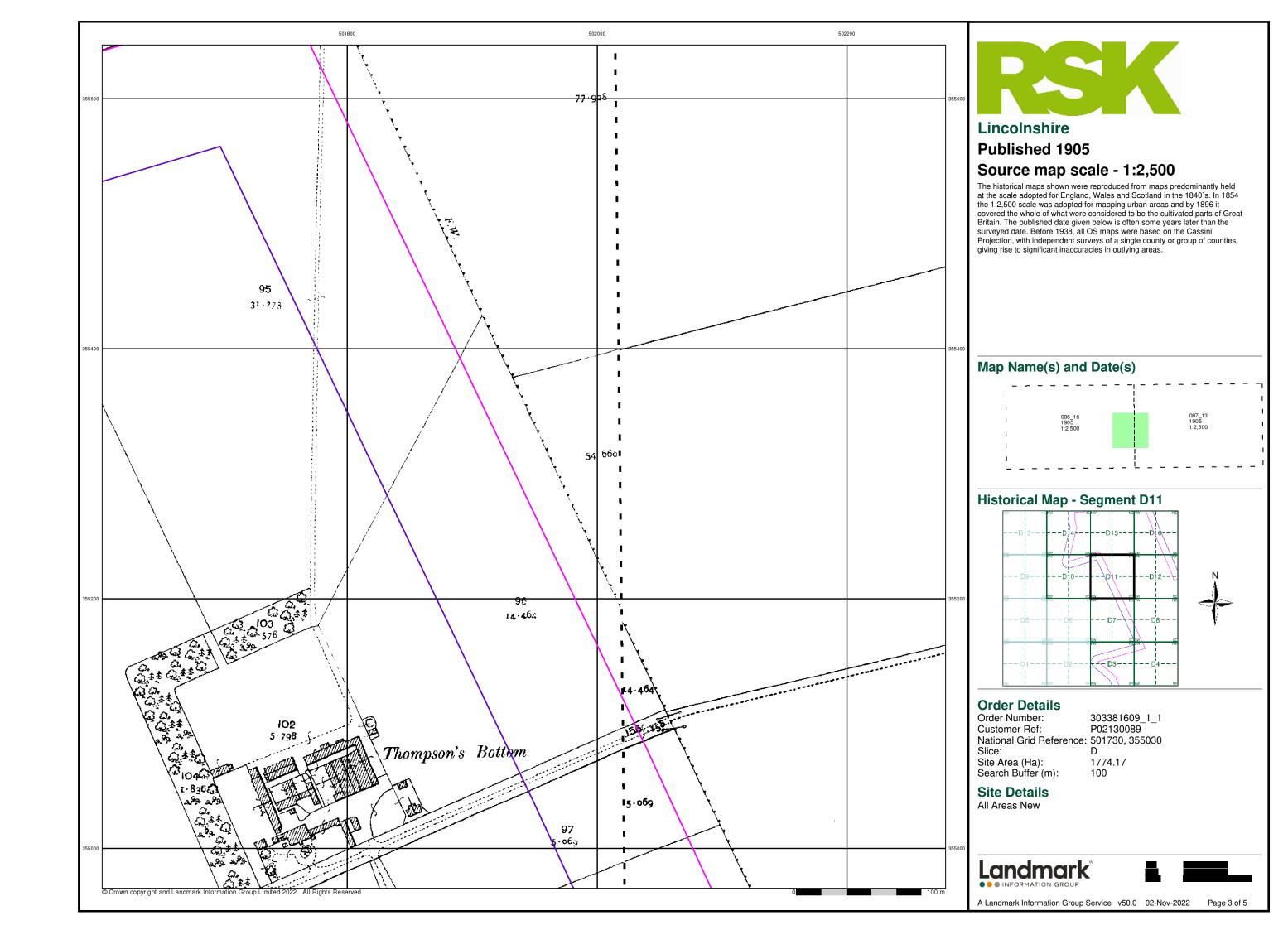
Landmark

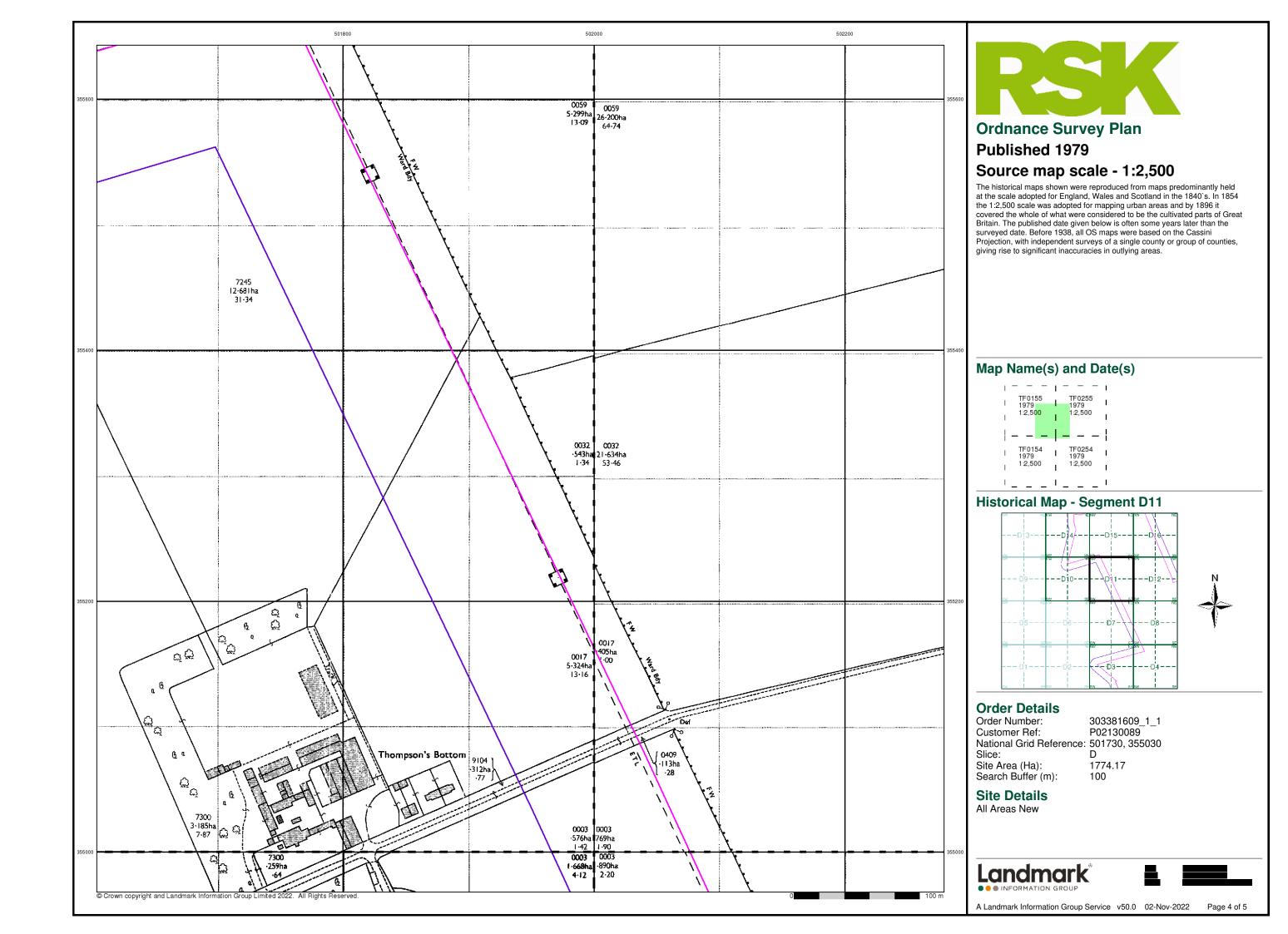


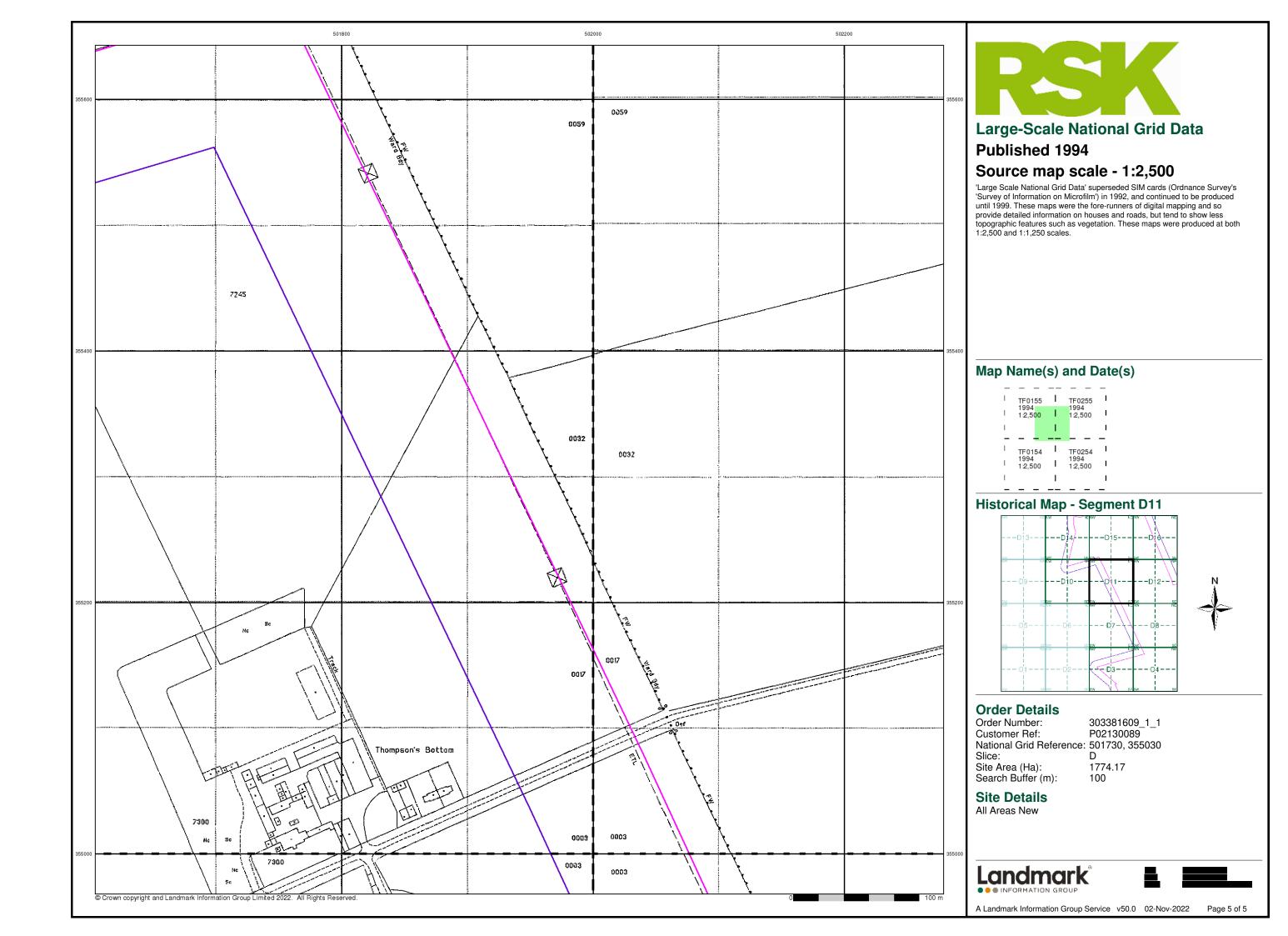


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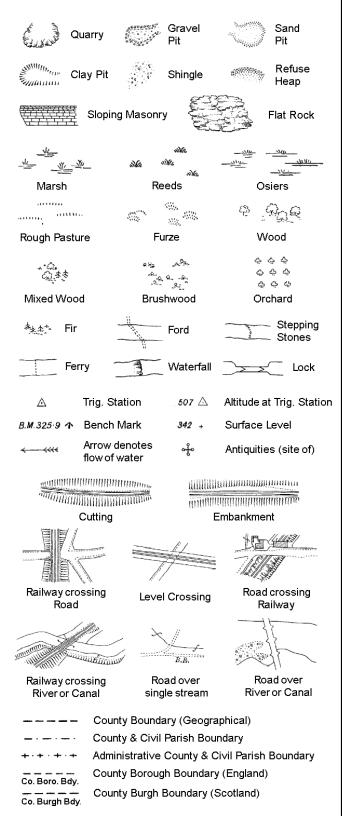








### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

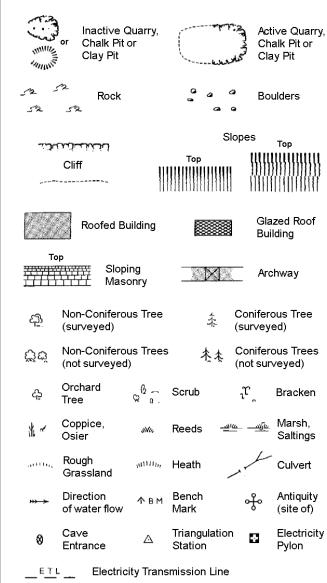
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

#### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



24.	illereilig chai	iyes	
ВН	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

County Boundary (Geographical)

Admin. County or County Bor. Boundary

Symbol marking point where boundary

County & Civil Parish Boundary

Civil Parish Boundary

mereing changes

London Borough Boundary

L B Bdy

~

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

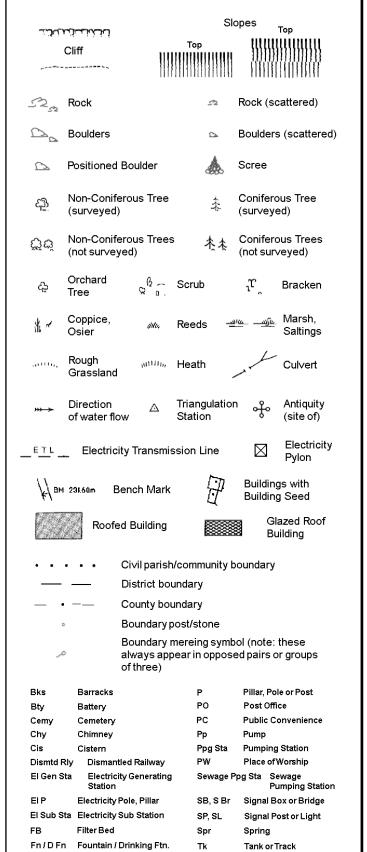
S.P

T.C.B

Sl.

 $T_{T}$ 

# 1:1,250



Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

MP, MS

Tr

Wd Pp

Wks

Trough

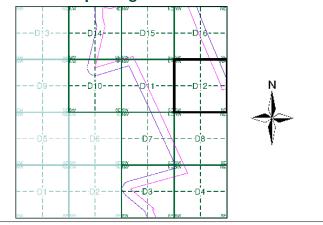
Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

### **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

## **Historical Map - Segment D12**



#### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 501730, 355030 Slice: 1774.17 Site Area (Ha):

100

Search Buffer (m):

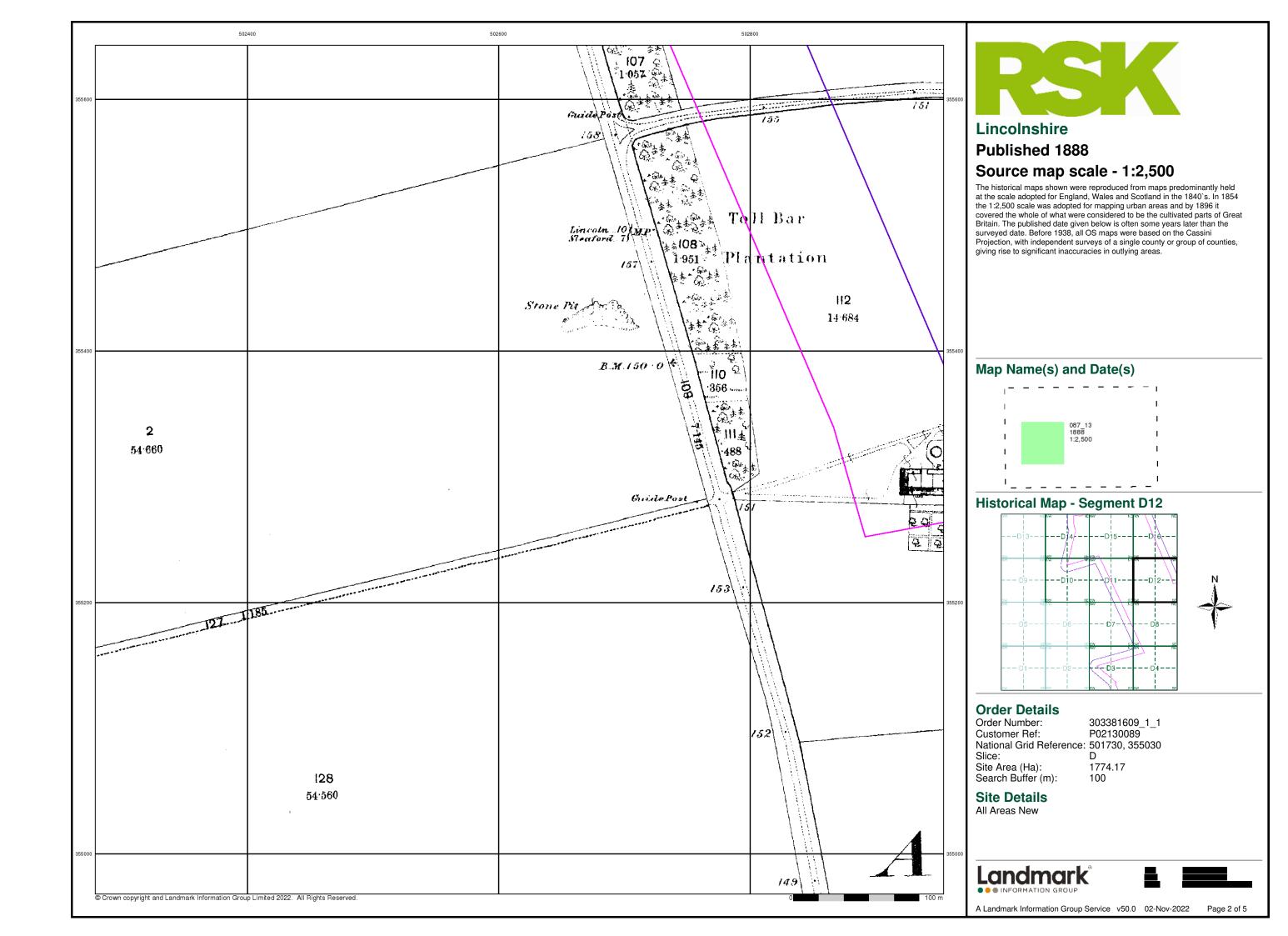
#### **Site Details** All Areas New

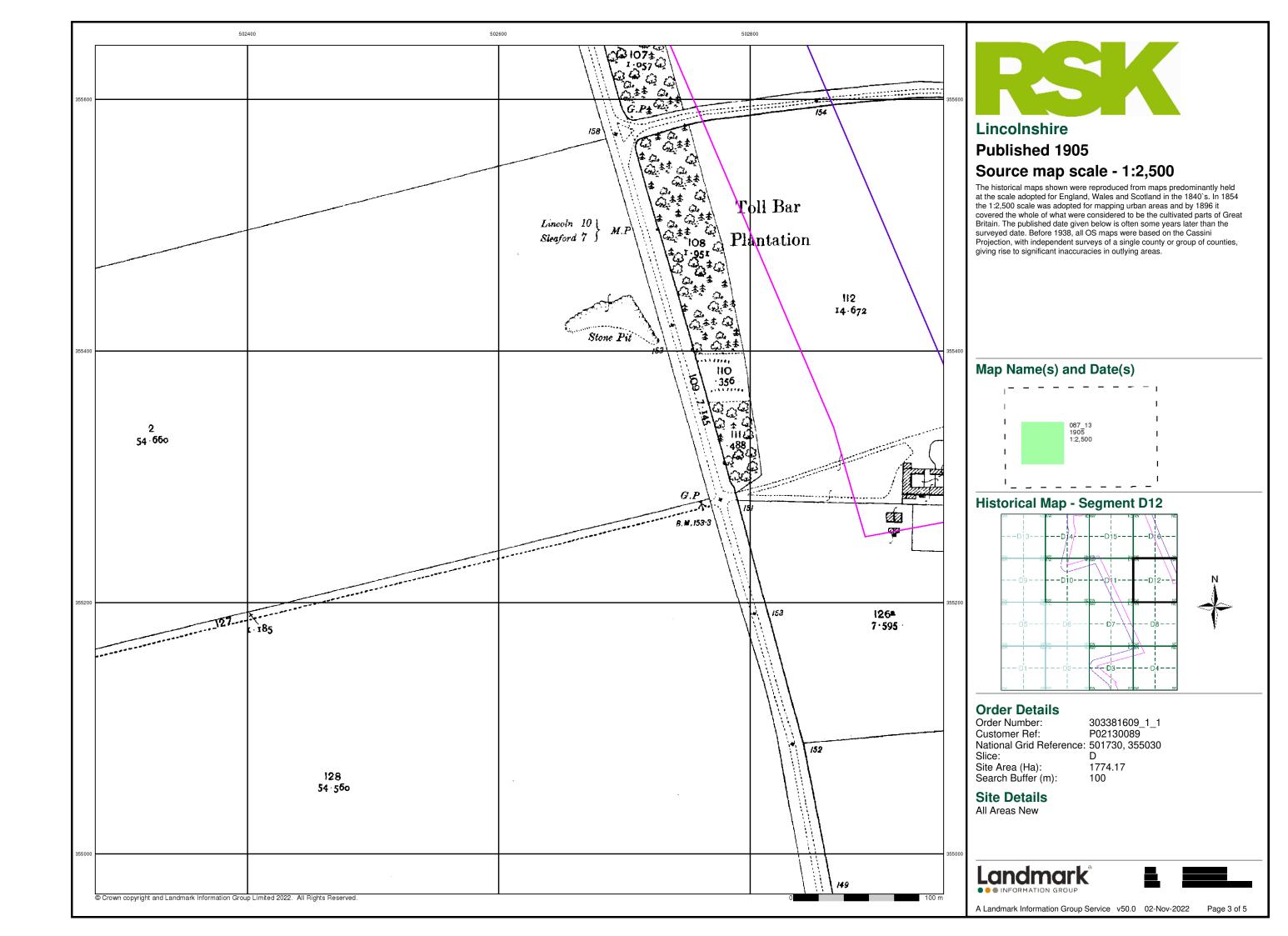


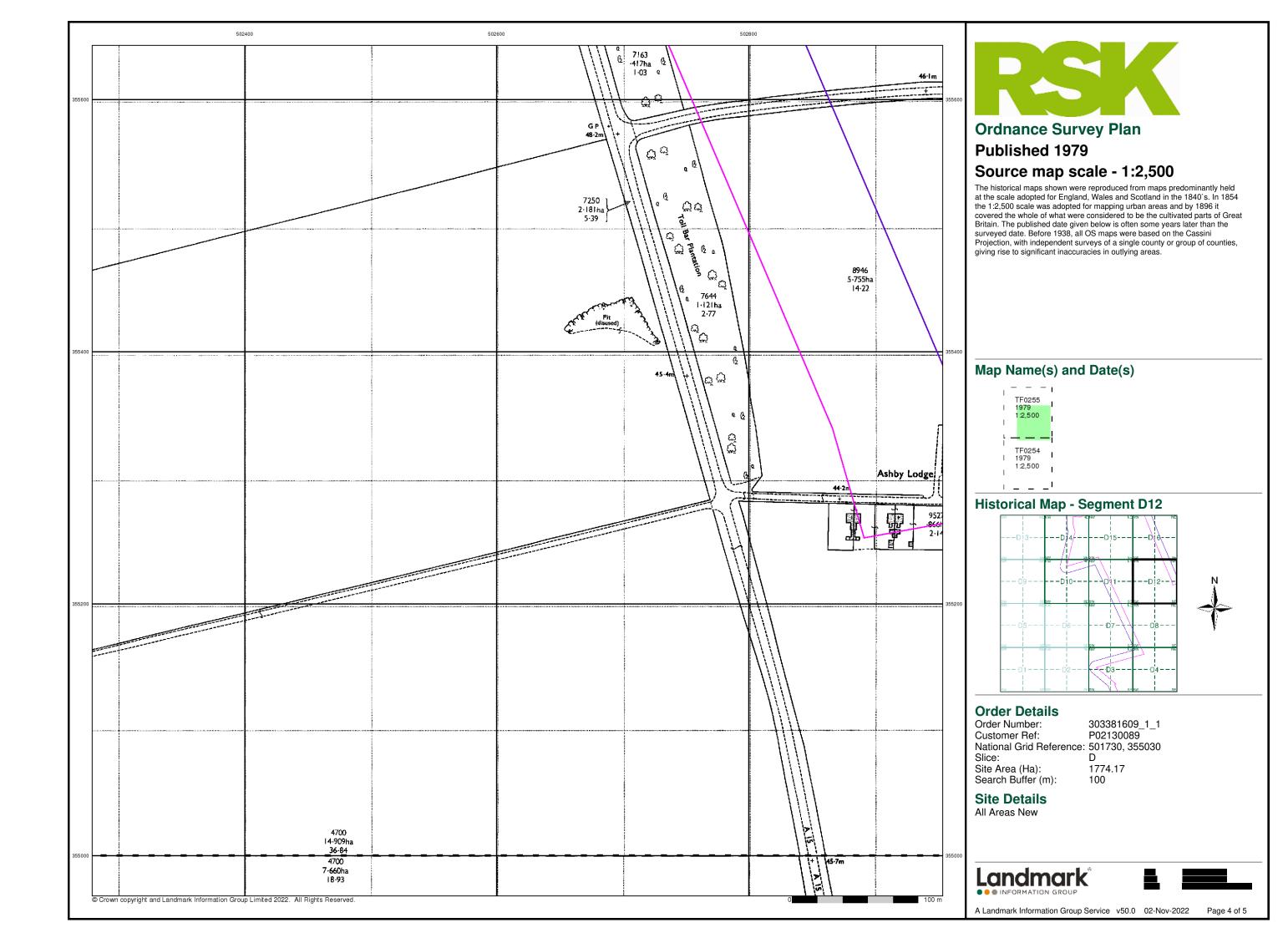


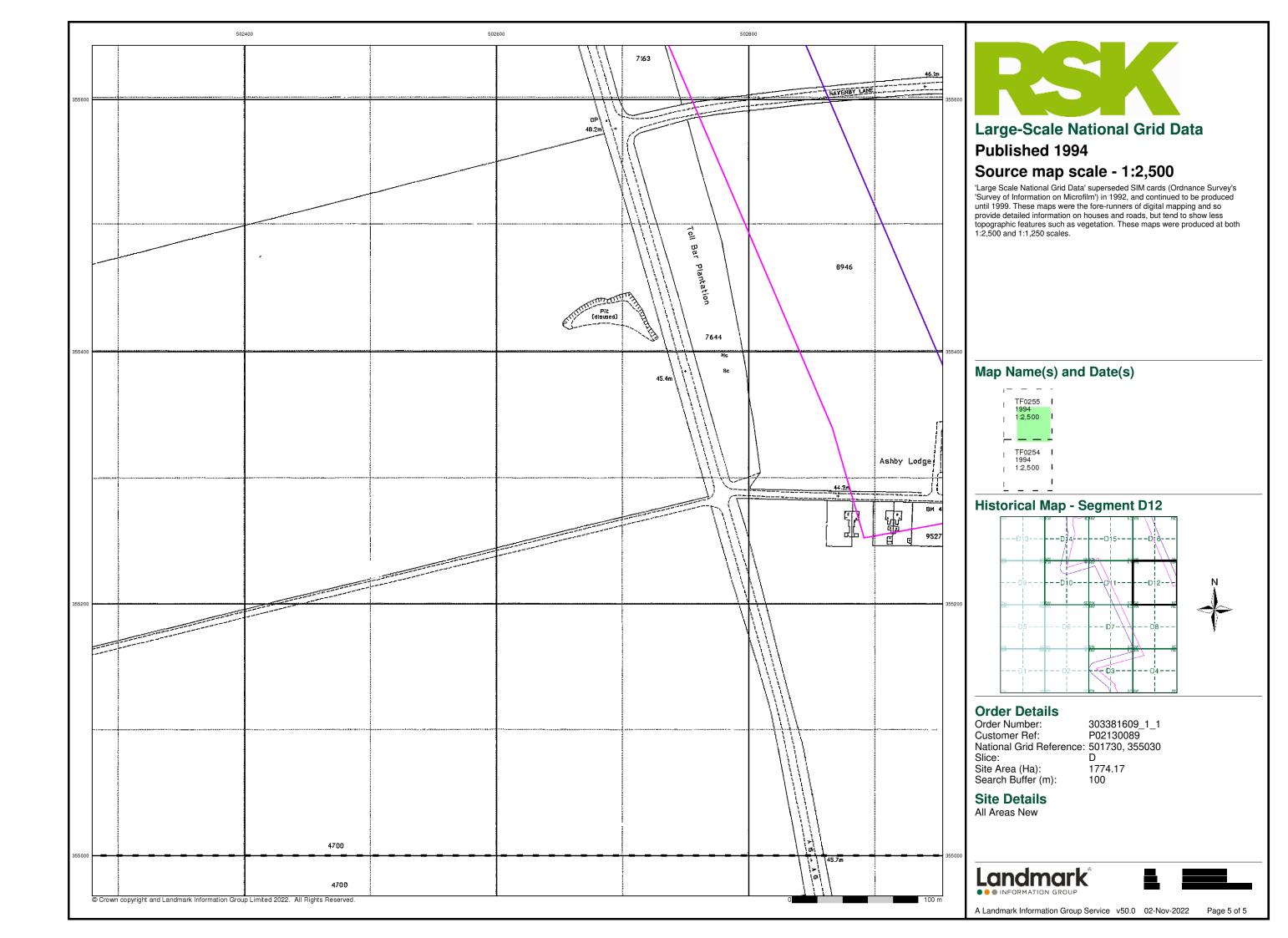


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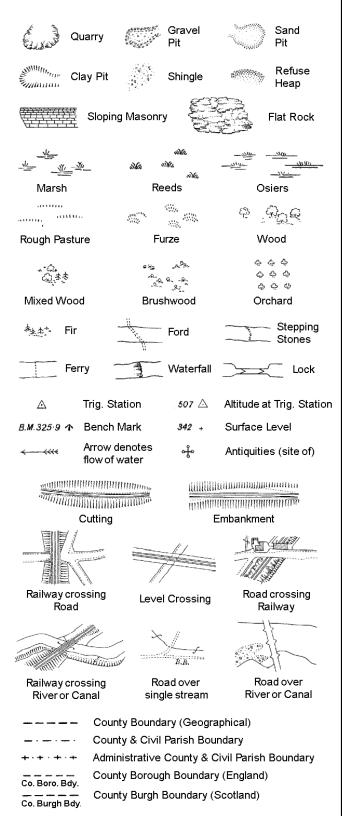






## **Historical Mapping Legends**

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



B.R.

EP

F.B.

M.S

Bridle Road

Foot Bridge

Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

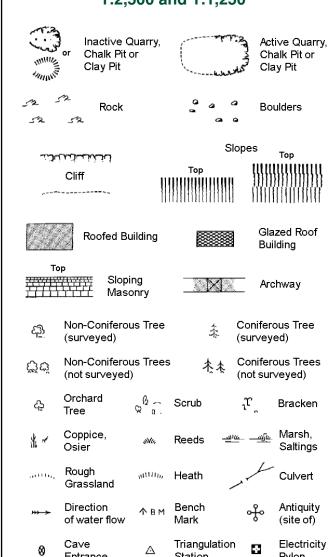
Well

S.P

Sl.

Tr:

### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



E T L	Electricity Transmission Line

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

вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

# 1:1,250

**********************			Slopes	Тор
Clift		Тор	<b>313 (13)</b>	
523	Rock	B	Rock (so	cattered)
$\triangle_{\alpha}$	Boulders	Δ	Boulders	s (scattered)
	Positioned Boulde	r 🎄	Scree	
<u> 원</u>	Non-Coniferous To (surveyed)	ree ‡	Conifero	ous Tree ed)
ජීජ	Non-Coniferous To (not surveyed)	rees 🎄	Conifero	ous Trees /eyed)
දා	Orchard 6 Tree ♀	Scrub	'پر ّ	Bracken
* ~	Coppice, and Osier	n, Reeds	<u>-11)(r. –11)(r.</u>	Marsh, Saltings
acette,	Rough "װ Grassland	un, Heath	1	Culvert
<b>&gt;&gt;&gt;→</b>	Direction 2 of water flow	∆ Triangula Station	tion 🕂	Antiquity (site of)
E_TL	_ Electricity Tran	smission Line	$\boxtimes$	Electricity Pylon
/ <del>/</del> / вм	231.60m Bench M	lark	) Building Building	
	Roofed Build	ing	2000	azed Roof uilding
	· · · Civil pa	ırish/communi	tv boundarv	
		: boundary	, ,	
_ •	—— County	boundary		
٥	Bounda	ary post/stone		
	Boundary mereing symbol (note: these			
٥	always of three	appear in opp e)	osed pairs o	or groups
Bks	Barracks	P		le or Post
Bty Cemy	Battery Cemetery	PO PC	Post Offi Public C	ce onvenience
Cemy Chy	Cemetery Chimney	Pp Pp	Public C	OUAGUIGUCA
Cis	Cistern	Ppg S	•	Station
Dismtd R	tly Dismantled Railw	ray PW	Place of	Worship
El Gen S	ta Electricity Genera Station	ating Sewa		ewage umping Station
EIP	Electricity Pole, Pilla	ar SB, S	Br Signal B	ox or Bridge
El Sub S	ta Electricity Sub Stati	on SP, SL	. Signal P	ost or Light
FB	Filter Bed	Spr	Spring	
Fn / D Fn	Fountain / Drinking	Ftn. Tk	Tank or 1	Track

Gas Valve Compound

Mile Post or Mile Stone

Gas Governer

**Guide Post** 

Manhole

GVC

Trough

Wind Pump Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

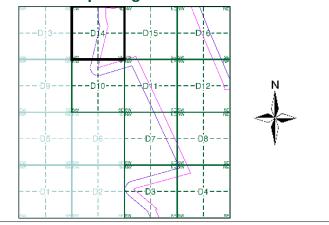
Wd Pp

Wks

### **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1887	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979	4
Large-Scale National Grid Data	1:2,500	1994	5

### **Historical Map - Segment D14**



### **Order Details**

Order Number: 303381609\_1\_1 **Customer Ref:** P02130089 National Grid Reference: 501730, 355030 Slice:

1774.17 Site Area (Ha): Search Buffer (m):

### **Site Details**

All Areas New

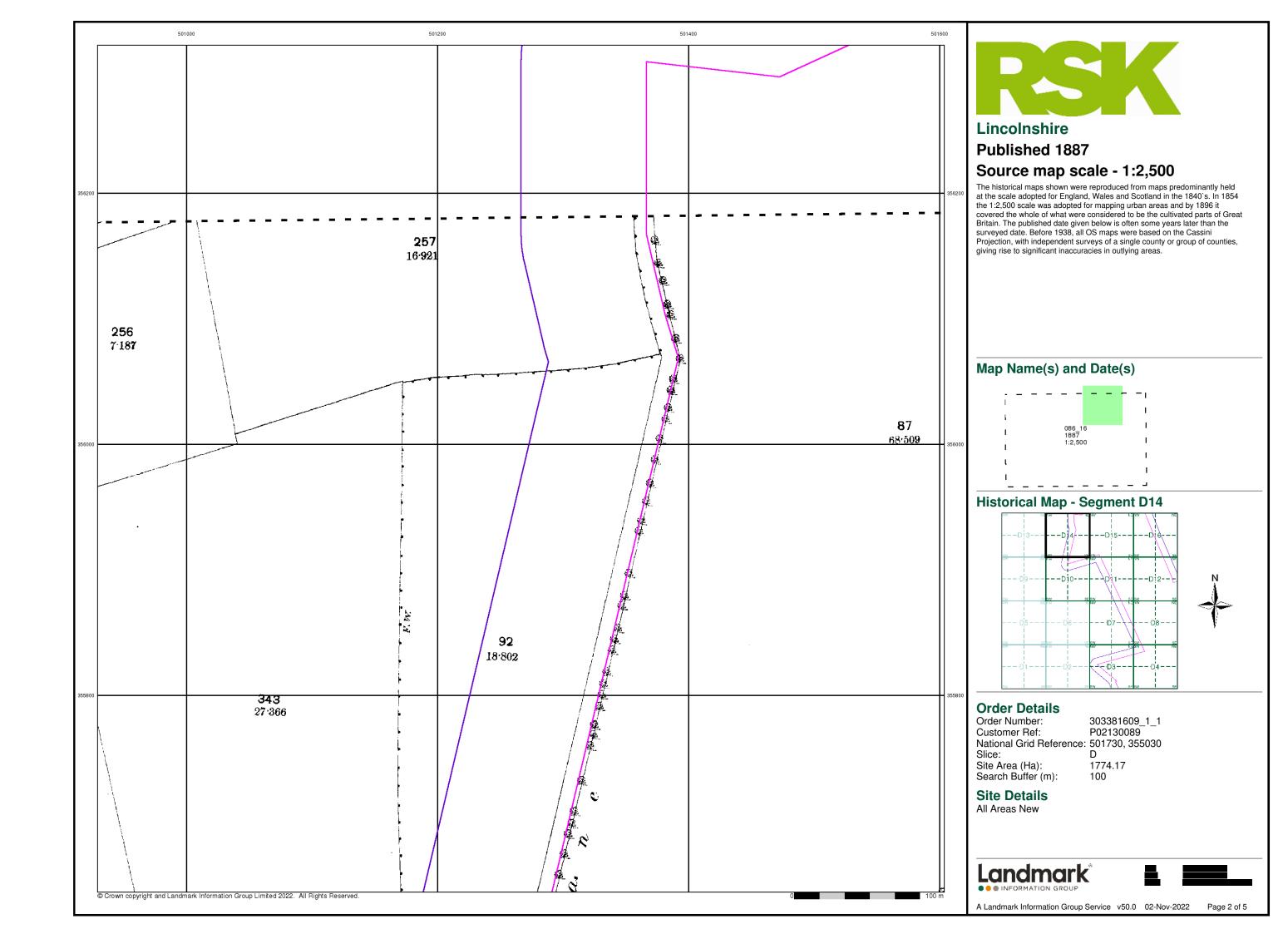


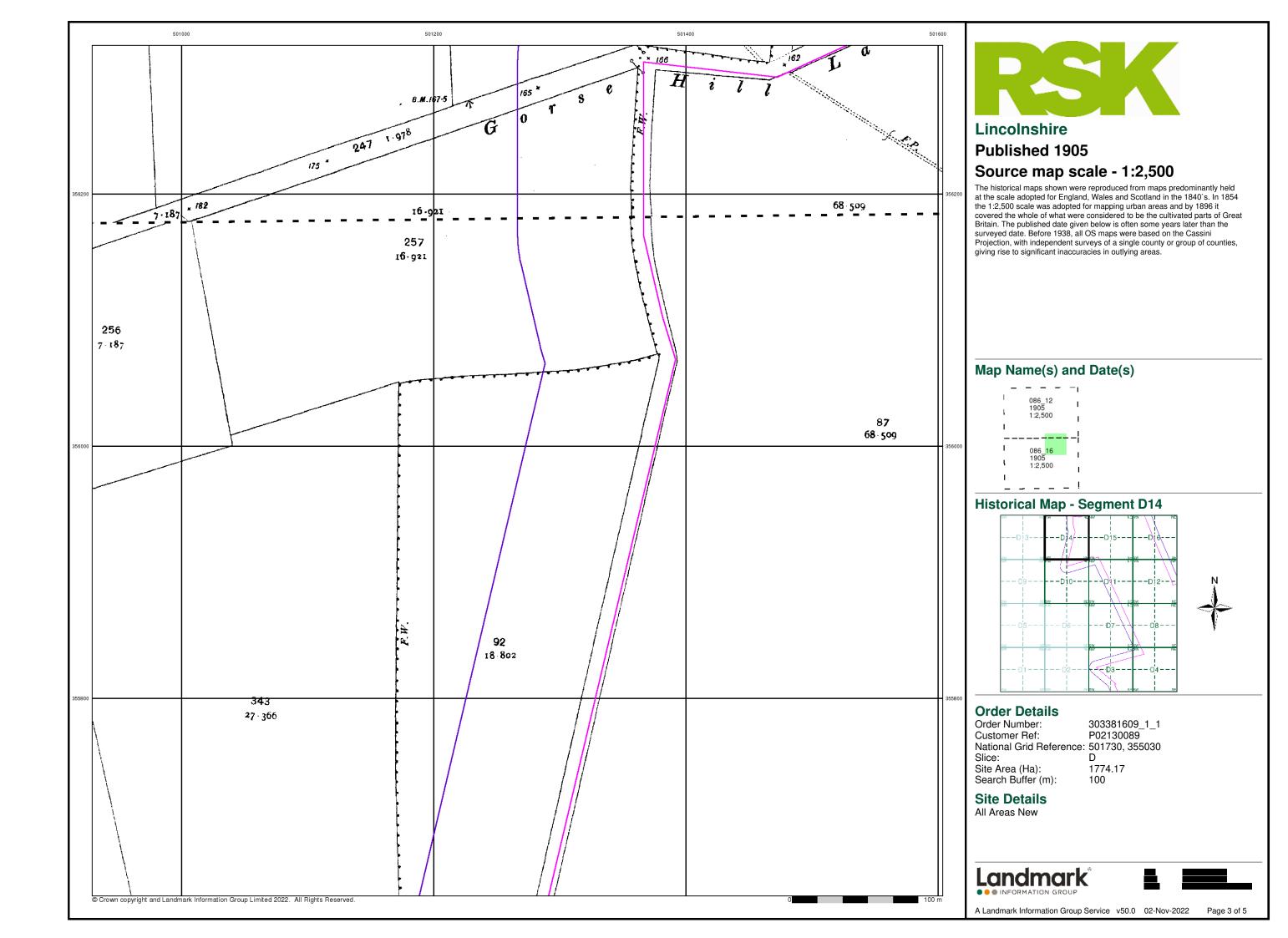


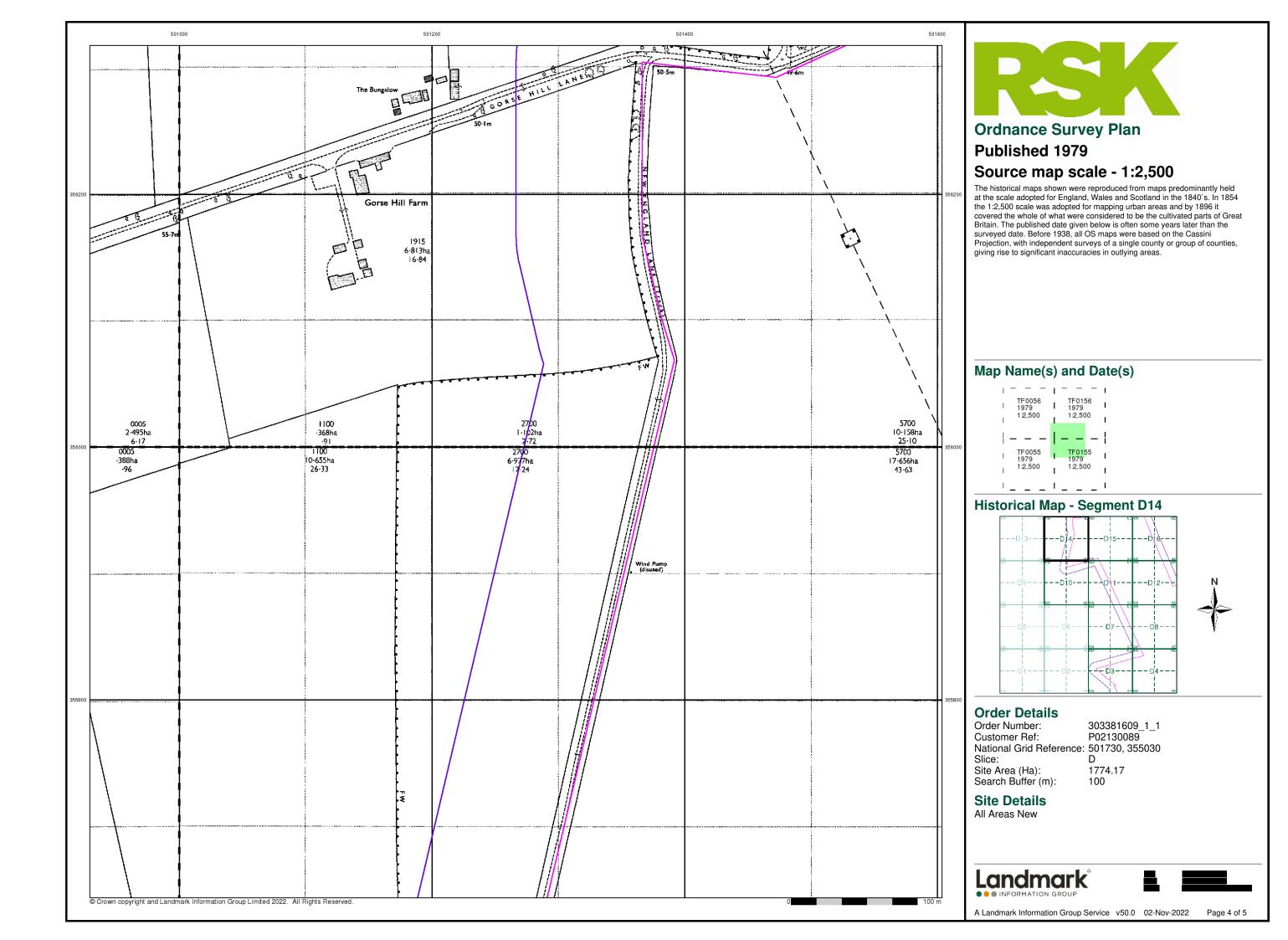


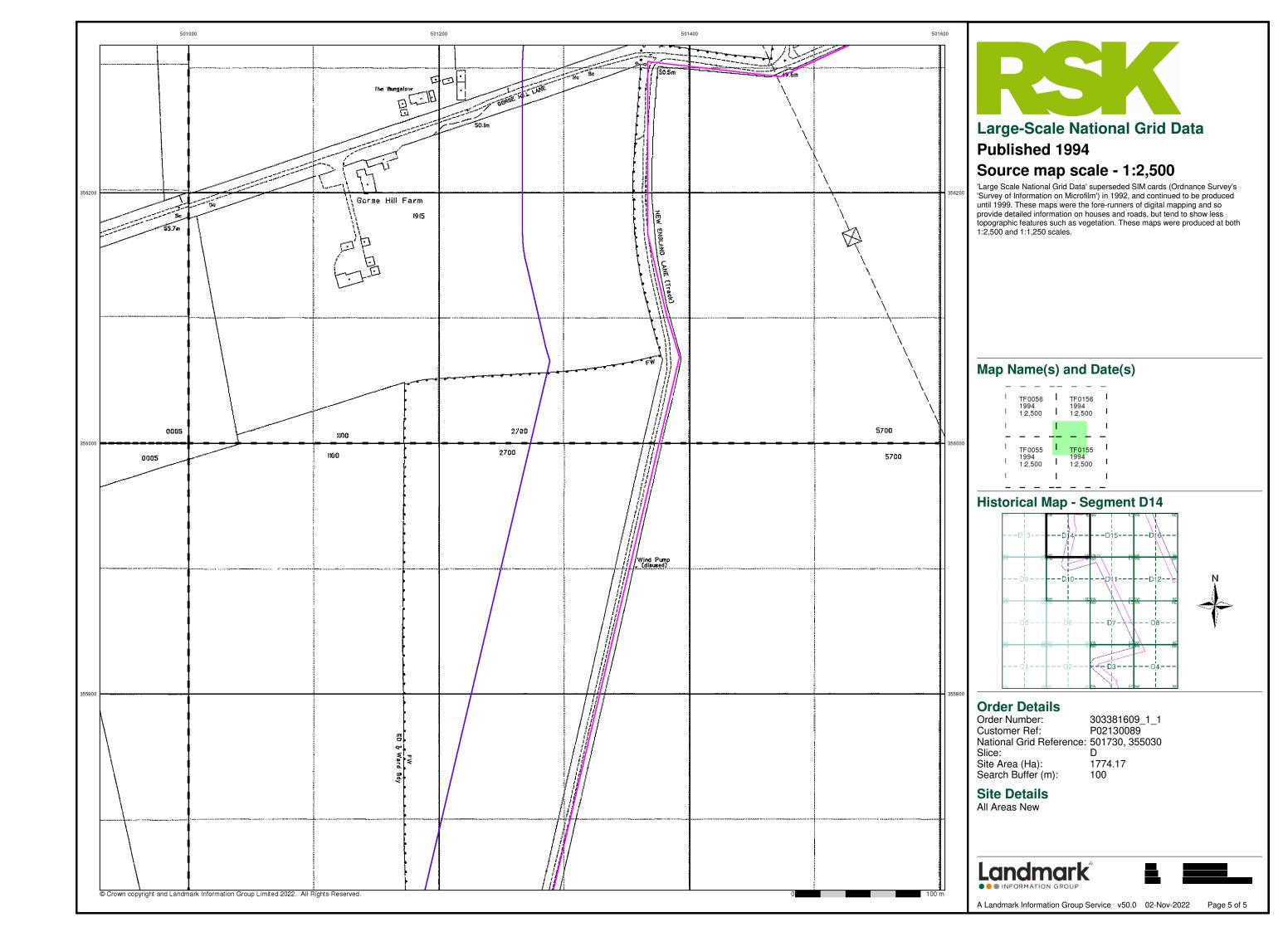
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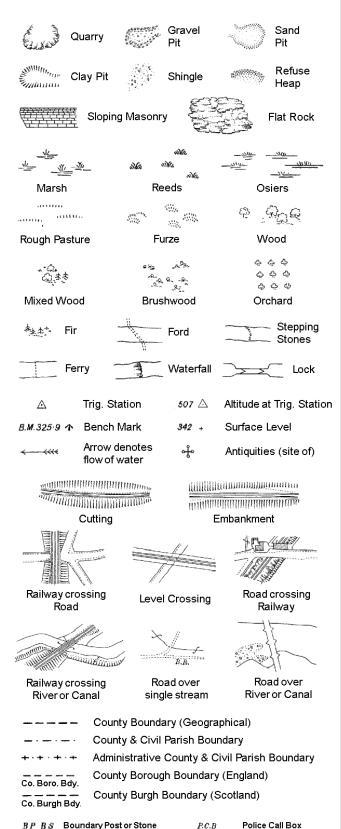






### **Historical Mapping Legends**

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



Pump

Sluice

Spring

Trough Well

Signal Post

Telephone Call Box

S.P

T.C.B

Sl.

 $T_{T}$ 

B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

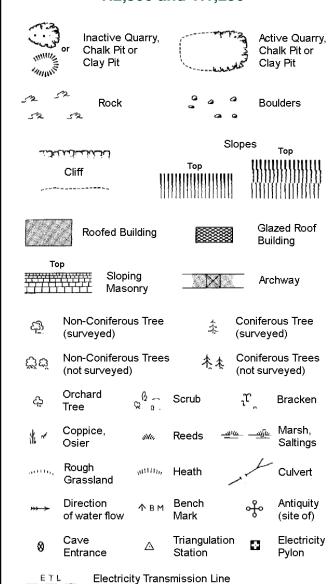
Mile Stone

M.P.M.R. Mooring Post or Ring

Electricity Pylor

Guide Post or Board

### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 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

вн	Beer House	Р	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
EIP	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
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

GVC

GP

Gas Governer

Mile Post or Mile Stone

**Guide Post** 

Manhole

Wd Pp

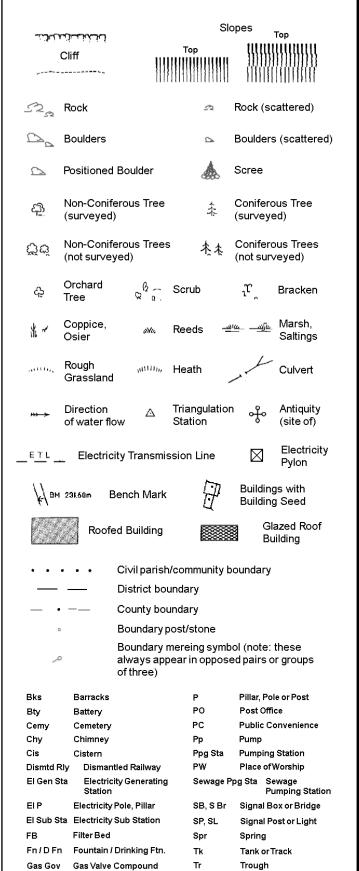
Wks

Wind Pump

Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

# 1:1,250

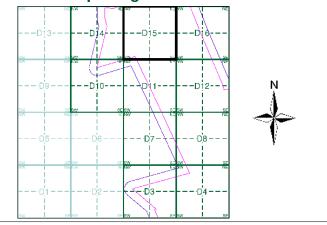




### **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1887 - 1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979 - 1980	4
Large-Scale National Grid Data	1:2,500	1994	5

### **Historical Map - Segment D15**



### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 501730, 355030 Slice:

1774.17 Site Area (Ha): Search Buffer (m): 100

### **Site Details** All Areas New

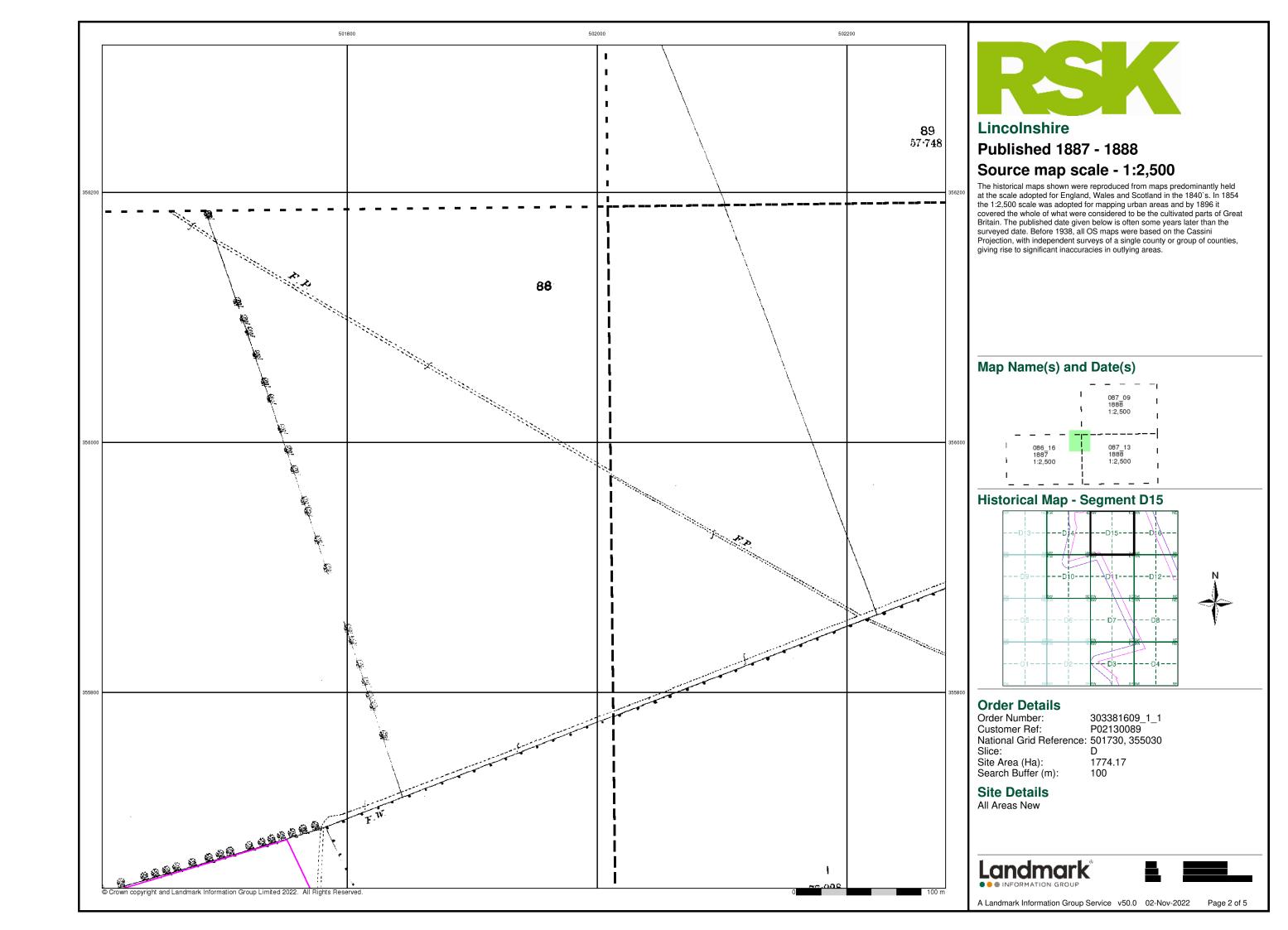
Landmark

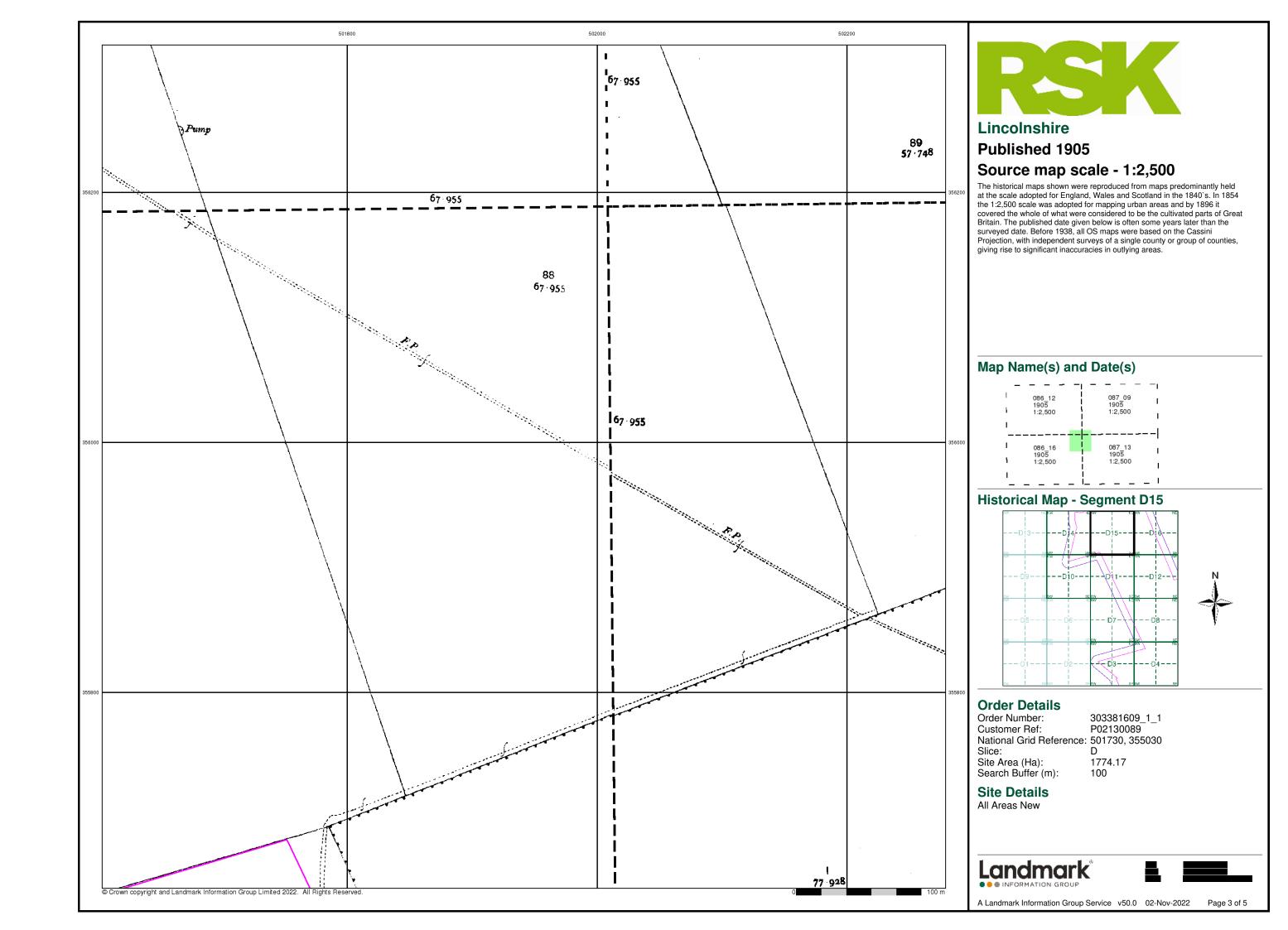


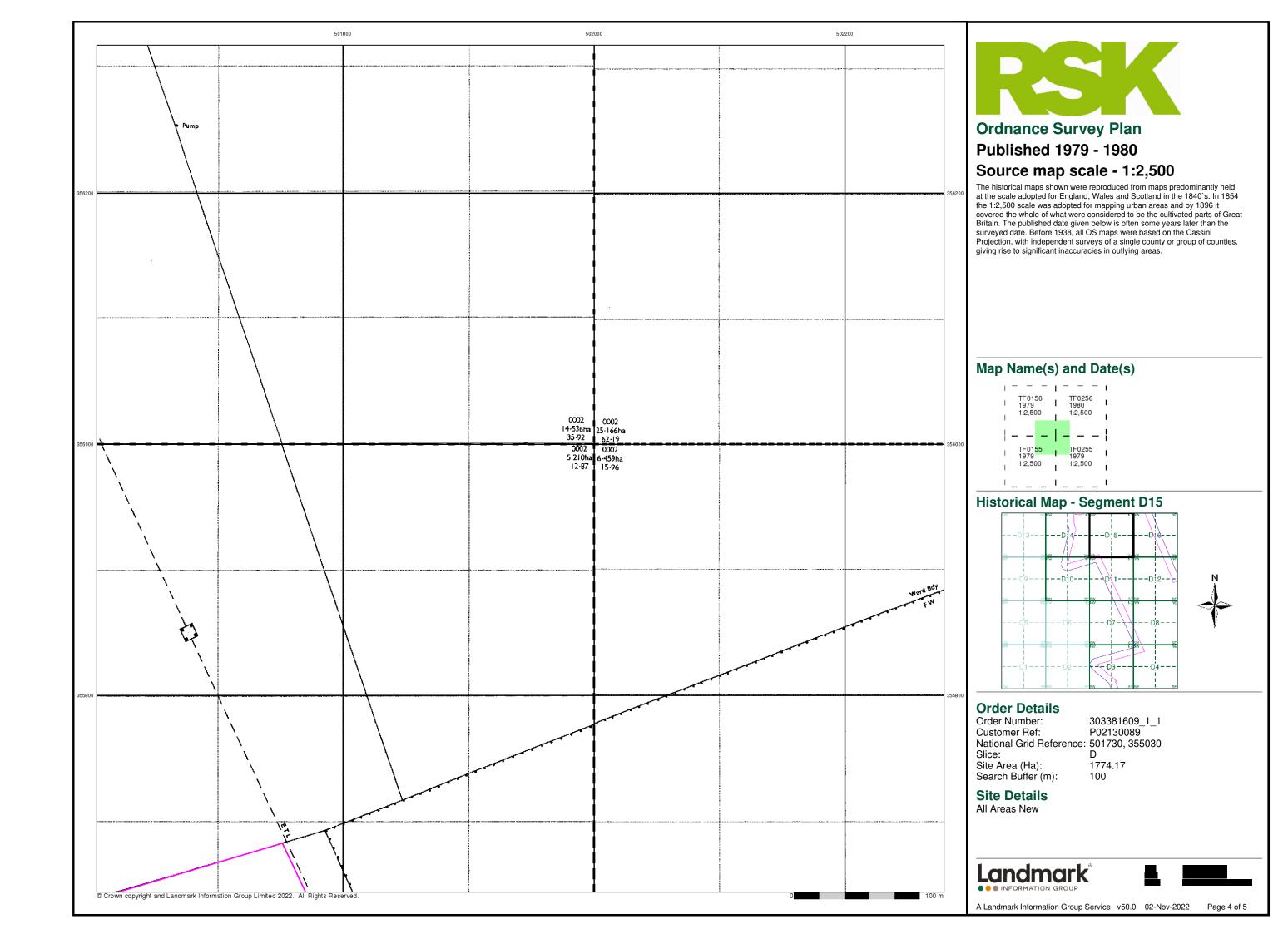


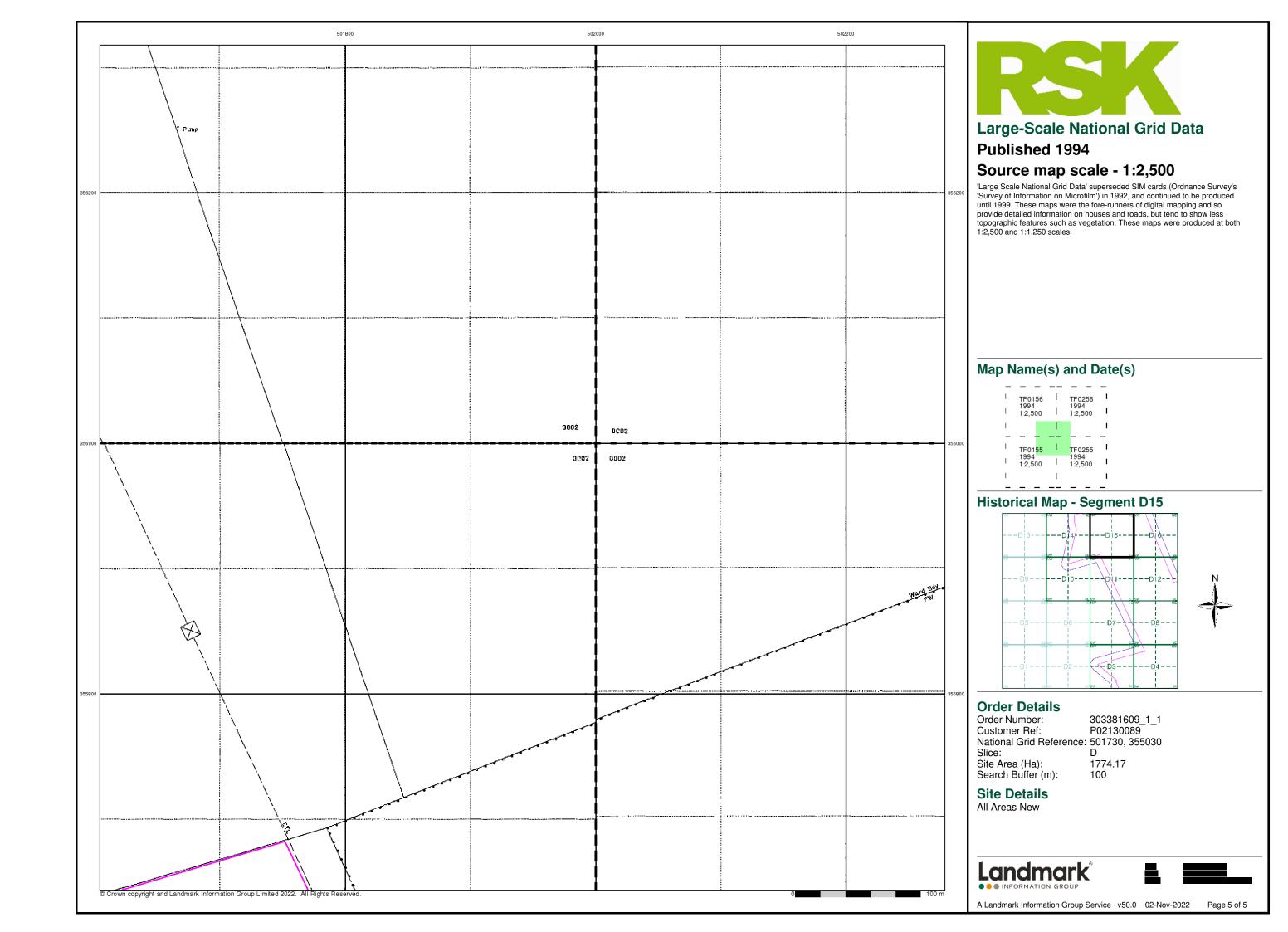
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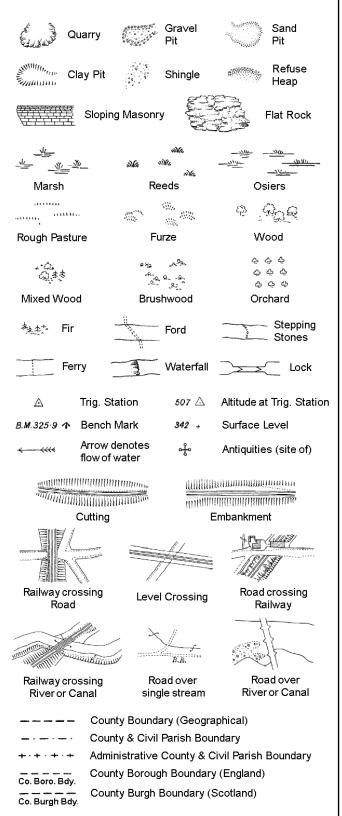






### **Historical Mapping Legends**

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



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

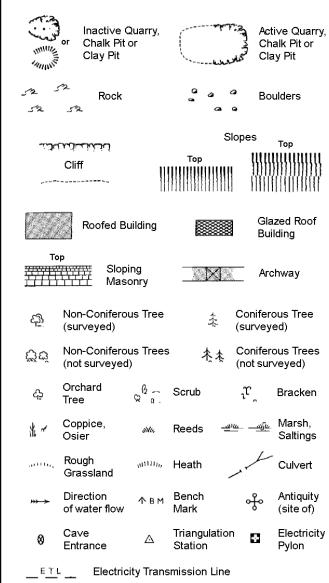
Mile Stone

M.P.M.R Mooring Post or Ring

Electricity Pylor

Guide Post or Board

### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



County Boundary (Geographical)

Admin. County or County Bor. Boundary

Symbol marking point where boundary

Pillar, Pole or Post

**Public Convenience** 

Signal Box or Bridge

Signal Post or Light

Telephone Call Box

Telephone Call Post

Water Point, Water Tap

GVC

Gas Governer

Mile Post or Mile Stone

**Guide Post** 

Manhole

Wd Pp

Wks

Wind Pump

Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

Post Office

**Public House** 

Pump

Spring

Trough

Wind Pump

Tank or Track

County & Civil Parish Boundary

Civil Parish Boundary

mereing changes

London Borough Boundary

РО

PH

SB, SB

SP. SL

Τk

TCB

TCP

Wr Pt. W

Wd Pp

L B Bdy

Chv

D Fn

EIP

FAP

FB

LC

MP

MS

NTL

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

S.P

Sl.

 $T_T$ 

T.C.B

Beer House

Chimney

Capstan, Crane

Drinking Fountain

Fire Alarm Pillar

Level Crossing

Normal Tidal Limit

Foot Bridge

Guide Post

Manhole

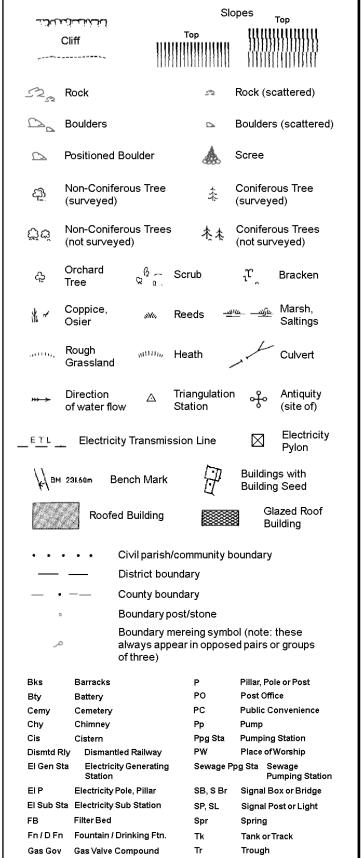
Electricity Pillar or Post

Hydrant or Hydraulic

Mile Post or Mooring Post

**Boundary Post or Stone** 

# 1:1,250

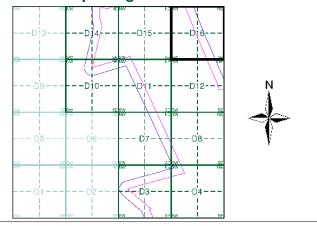




### **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Lincolnshire	1:2,500	1888	2
Lincolnshire	1:2,500	1905	3
Ordnance Survey Plan	1:2,500	1979 - 1980	4
Large-Scale National Grid Data	1:2,500	1994	5

### **Historical Map - Segment D16**



### **Order Details**

Order Number: 303381609\_1\_1 P02130089 **Customer Ref:** National Grid Reference: 501730, 355030 Slice:

Site Area (Ha):

1774.17 Search Buffer (m): 100

**Site Details** All Areas New

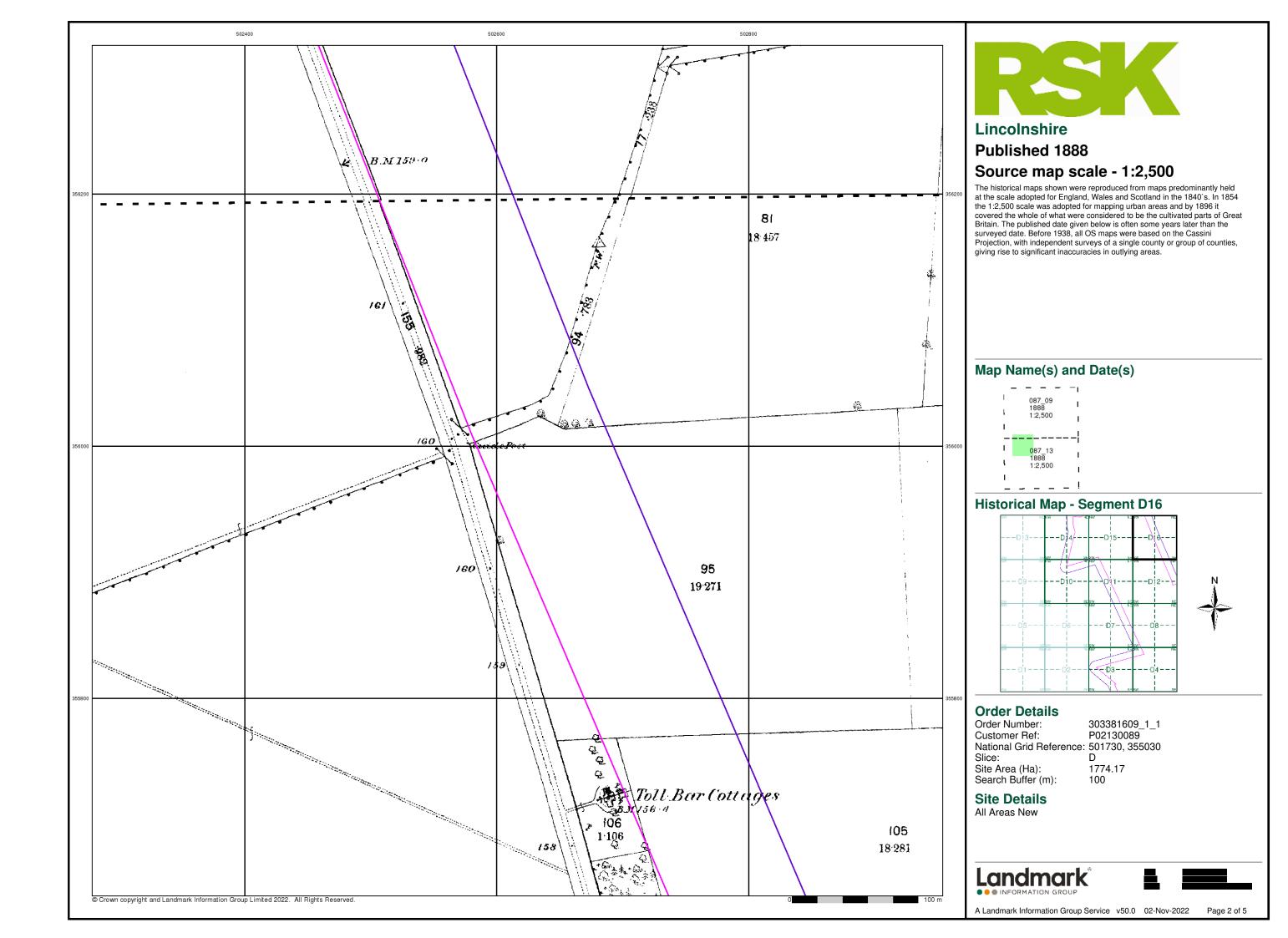


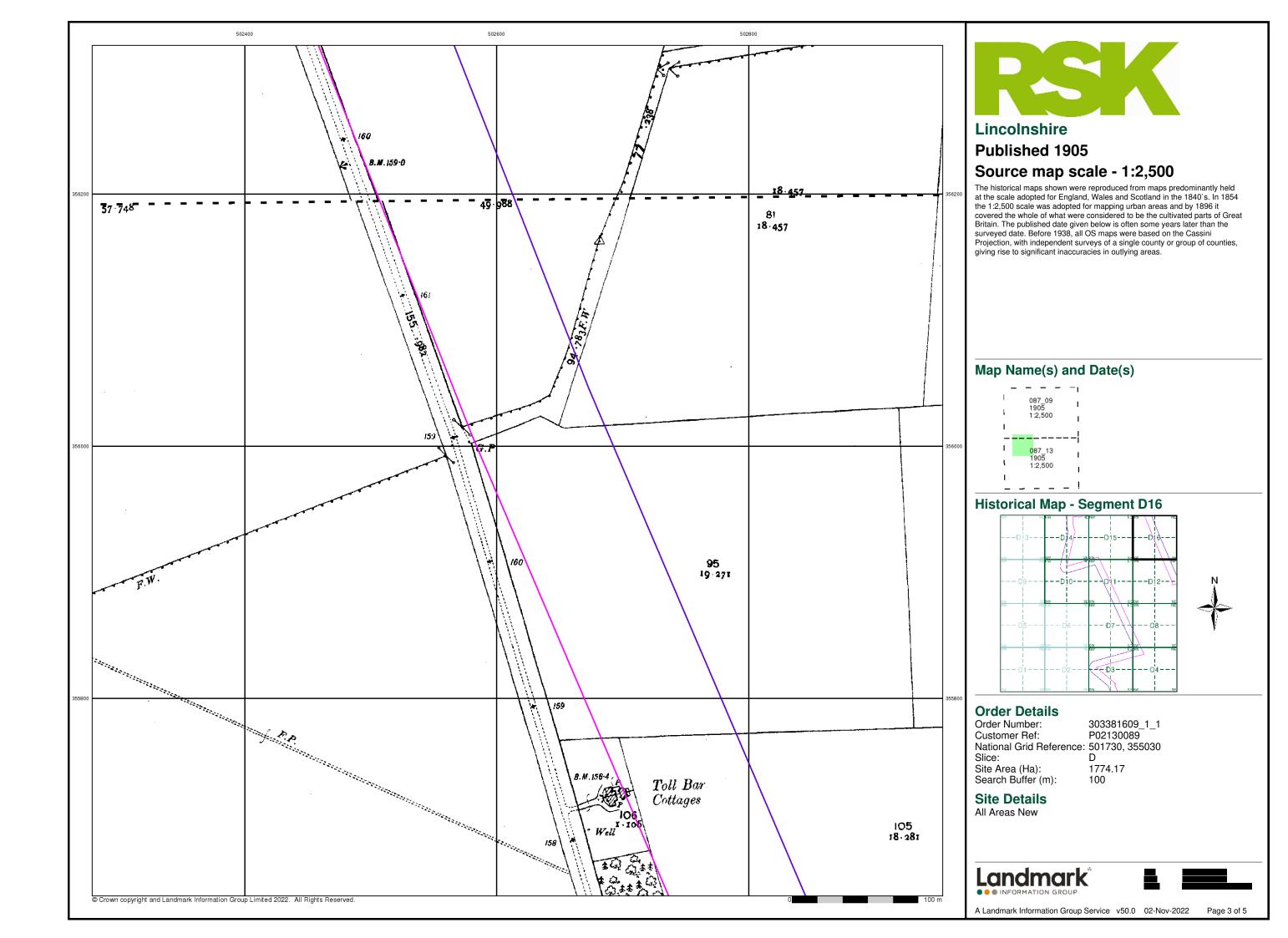


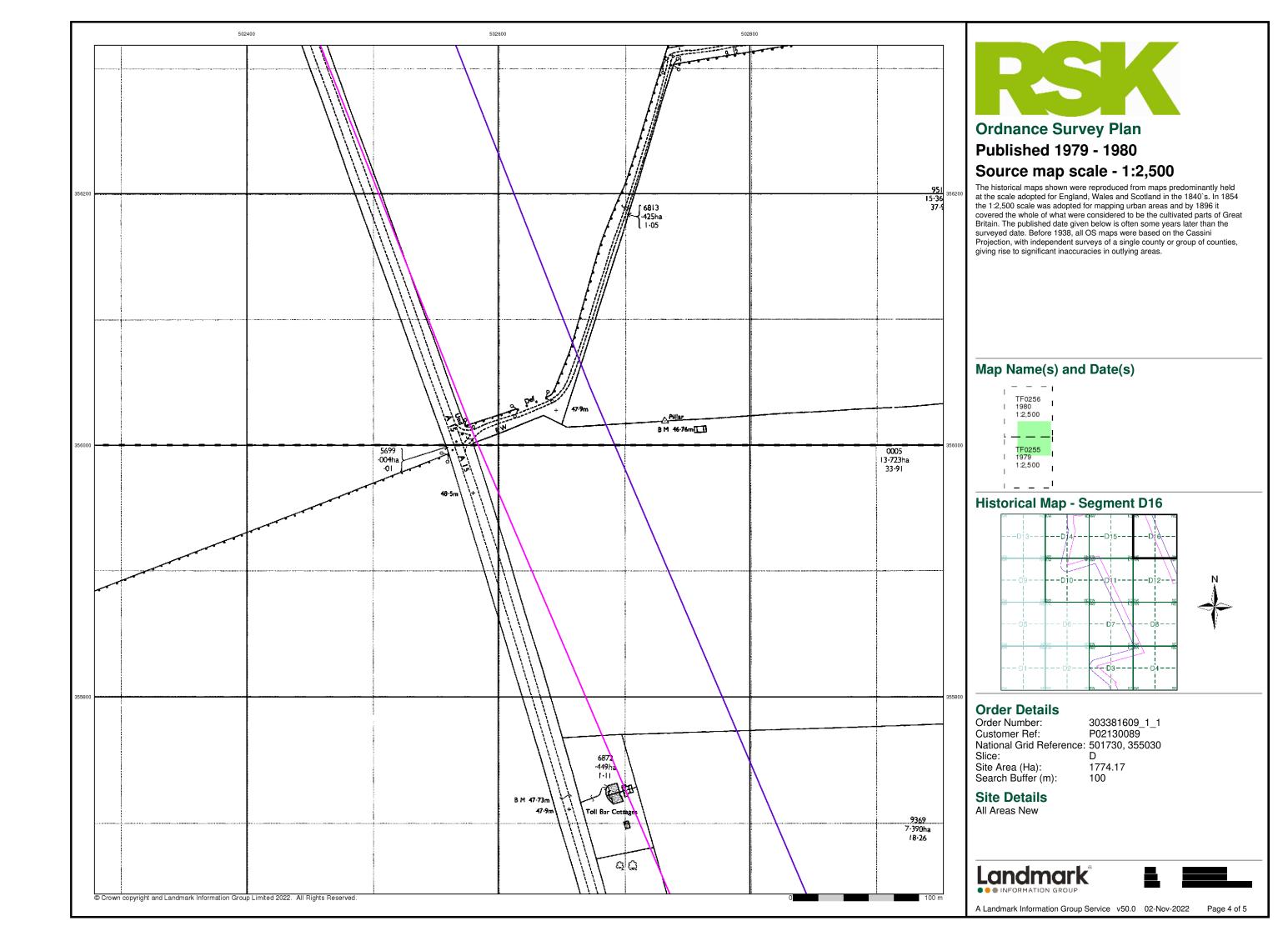


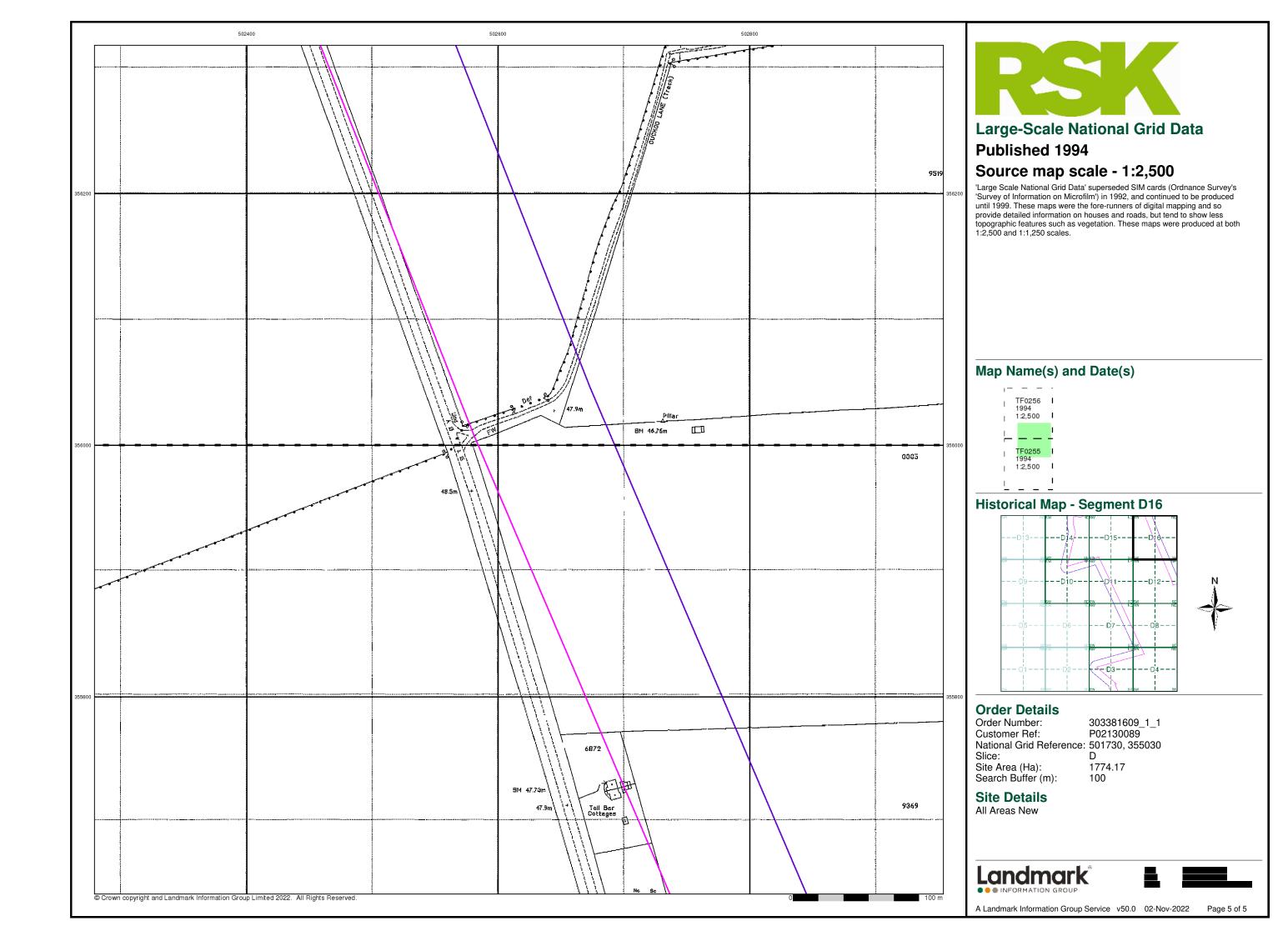
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