Tween Bridge Solar Farm

Environmental Statement
Appendix 9.1: Phase 1 Ground Conditions Desk Study reports for Land Parcels A to E
Part 9

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

APFP Regulation 5(2)(a)

Document Reference: 6.3.9.1

August 2025

Revision 1

1 Past land use

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

1.1 Historical industrial land uses

Records within 500m	9

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
A	159m S	Unspecified Ground Workings	1948	1521881

ID	Location	Land use	Dates present	Group ID
A	159m S	Unspecified Ground Workings	1904	1536569
A	163m S	Unspecified Ground Workings	1951	1513338
C	473m S	Old Sand Pit	1885	1540430
C	479m S	Old Sand Pit	1891	1465730
C	480m S	Unspecified Ground Workings	1951	1438861
C	483m S	Unspecified Ground Workings	1904	1513051
C	483m S	Unspecified Ground Workings	1948	1555906
C	486m S	Old Sand Pit	1885	1528362

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**2**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
B	472m W	Unspecified Tank	1978	240499
B	474m W	Unspecified Tank	1962	240498

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**0**

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m	0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

2.1 Historical industrial land uses

Records within 500m	10

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

Features are displayed on the Past land use - un-grouped map on **page 17 >**

ID	Location	Land Use	Date	Group ID
A	159m S	Unspecified Ground Workings	1948	1521881
A	159m S	Unspecified Ground Workings	1904	1536569
A	163m S	Unspecified Ground Workings	1951	1513338

ID	Location	Land Use	Date	Group ID
C	473m S	Old Sand Pit	1885	1540430
C	479m S	Old Sand Pit	1891	1465730
C	480m S	Unspecified Ground Workings	1951	1438861
C	483m S	Unspecified Ground Workings	1948	1555906
C	483m S	Unspecified Ground Workings	1904	1513051
C	486m S	Old Sand Pit	1885	1528362
C	497m S	Old Sand Pit	1885	1528362

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**2**

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

Features are displayed on the Past land use - un-grouped map on **page 17 >**

ID	Location	Land Use	Date	Group ID
B	472m W	Unspecified Tank	1978	240499
B	474m W	Unspecified Tank	1962	240498

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**0**

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

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

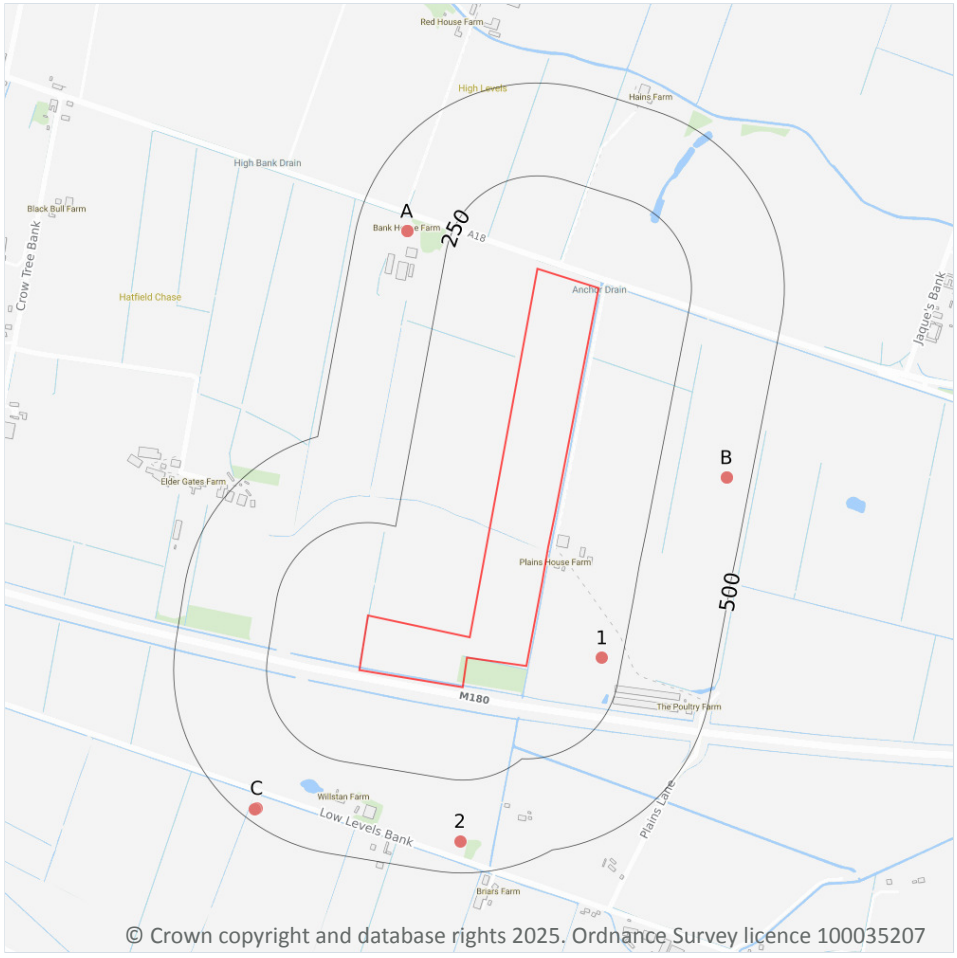
2.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	13

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

Features are displayed on the Waste and landfill map on **page 20 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	195m SE	Goodcop Farm Sandtoft Road Doncaster Dn8 5tb	EPR/HF0036RY /A001	Storing waste exemption	Non-agricultural waste only	Storage of sludge

ID	Location	Site	Reference	Category	Sub-Category	Description
A	366m N	Bank House Farm Scunthorpe Road Doncaster South Yorkshire Dn8 5sl	EPR/EE5288CR/A001	Disposing of waste exemption	Agricultural waste only	Burning waste in the open
A	366m N	Bank House Farm Scunthorpe Road Doncaster South Yorkshire Dn8 5sl	EPR/EE5288CR/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading waste on agricultural land to confer benefit
A	366m N	Bank House Farm Scunthorpe Road Doncaster South Yorkshire Dn8 5sl	EPR/EE5288CR/A001	Disposing of waste exemption	Agricultural waste only	Deposit of waste from dredging of inland waters
A	366m N	Bank House Farm Scunthorpe Road Doncaster South Yorkshire Dn8 5sl	EPR/EE5288CR/A001	Treating waste exemption	Agricultural waste only	Cleaning, washing, spraying or coating relevant waste
A	366m N	Bank House Farm Scunthorpe Road Doncaster South Yorkshire Dn8 5sl	EPR/EE5288CR/A001	Using waste exemption	Agricultural waste only	Incorporation of ash into soil
A	366m N	Bank House Farm Scunthorpe Road Doncaster South Yorkshire Dn8 5sl	EPR/EE5288CR/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
A	366m N	Bank House Farm Scunthorpe Road Doncaster South Yorkshire Dn8 5sl	EPR/EE5288CR/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste for a specified purpose
2	417m S	-	WEX291383	Storing waste exemption	On a farm	Storage of sludge
B	434m E	-	WEX349265	Storing waste exemption	On a farm	Storage of sludge
B	434m E	-	WEX350686	Storing waste exemption	On a farm	Storage of sludge
C	465m SW	-	WEX291380	Storing waste exemption	On a farm	Storage of sludge
C	471m SW	-	WEX390931	Storing waste exemption	On a farm	Storage of sludge

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

4 Current industrial land use

Site Outline

Search buffers in metres (m)

Part A(1) industrial activities

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

Pollution inventory substances

Pollution inventory waste transfers

4.1 Recent industrial land uses

Records within 250m	0

Current potentially contaminative industrial sites.

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	4

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

Features are displayed on the Current industrial land use map on **page 23 >**

ID	Location	Details	
A	347m SE	Operator: P.D. HOOK (BREEDERS) LIMITED Installation Name: Hatfield Farm Poultry Unit - EPR/HP3736UZ Process: ASSOCIATED PROCESS Permit Number: HP3736UZ Original Permit Number: HP3736UZ	EPR Reference: EPR/HP3736UZ Issue Date: 22/01/2021 Effective Date: 22/01/2021 Last date noted as effective: 29/10/2024 Status: Effective
A	347m SE	Operator: P.D. HOOK (BREEDERS) LIMITED Installation Name: Hatfield Farm Poultry Unit - EPR/HP3736UZ Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: HP3736UZ Original Permit Number: HP3736UZ	EPR Reference: EPR/HP3736UZ Issue Date: 22/01/2021 Effective Date: 22/01/2021 Last date noted as effective: 29/10/2024 Status: Effective
A	347m SE	Operator: P D Hook (Breeders) Ltd Installation Name: Hatfield Farm Poultry Unit - EPR/HP3736UZ Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: GP3106SR Original Permit Number: HP3736UZ	EPR Reference: - Issue Date: 22/01/2021 Effective Date: 22/01/2021 Last date noted as effective: 21/03/2023 Status: Effective

ID	Location	Details	
A	347m SE	Operator: P D Hook (Breeders) Ltd Installation Name: Hatfield Farm Poultry Unit - EPR/HP3736UZ Process: ASSOCIATED PROCESS Permit Number: GP3106SR Original Permit Number: HP3736UZ	EPR Reference: - Issue Date: 22/01/2021 Effective Date: 22/01/2021 Last date noted as effective: 21/03/2023 Status: Effective

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

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

Records within 500m	**0**

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	**0**

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	**3**

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

Features are displayed on the Current industrial land use map on **page 23 >**

ID	Location	Address	Details	
B	398m NW	BANKHOUSEFARM,THORNE LEVELS,THORNE,NRDONCASTER,YORKSHIRE,DN85SL	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: T/83/14334/TG Permit Version: 1 Receiving Water: UNDERGROUND STRATA	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 28/06/1974 Effective Date: 28/06/1974 Revocation Date: 13/12/2011

ID	Location	Address	Details	
B	398m NW	BANKHOUSEFARM,THORNE LEVELS,THORNE,NRDONCASTER,YORKSHIRE,DN85SL	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: T/83/14334/TG Permit Version: 2 Receiving Water: UNDERGROUND STRATA	Status: VARIED UNDER EPR 2010 Issue date: 14/12/2011 Effective Date: 14/12/2011 Revocation Date: -
1	419m NW	BANKHOUSEFARM,THORNE LEVELS,THORNE,NRDONCASTER,YORKSHIRE,DN85SL	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3/28/83/2630 Permit Version: 1 Receiving Water: UNDERGROUND STRATA	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 28/06/1974 Effective Date: 28/06/1974 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	**0**

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

4.15 Pollutant release to public sewer

Records within 500m	**0**

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	**0**

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.17 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	3

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

Features are displayed on the Current industrial land use map on **page 23 >**

ID	Location	Details	
C	409m SW	Incident Date: 29/07/2002 Incident Identification: 95203 Pollutant: Inert Materials and Wastes:Specific Waste Materials Pollutant Description: Construction and Demolition Materials and Wastes:Tyres	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
C	409m SW	Incident Date: 29/07/2002 Incident Identification: 95203 Pollutant: Specific Waste Materials Pollutant Description: Tyres	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
C	409m SW	Incident Date: 29/07/2002 Incident Identification: 95203 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	3

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

Features are displayed on the Current industrial land use map on **page 23 >**

ID: A, Location: 347m SE, Permit: HP3736UZ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Hatfield Farm Poultry Unit Plains Lane Sandtoft Road Lincolnshire DN8 5TQ
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Nitrogen oxides (NO and NO2) as NO2	100000kg	Below Reporting Threshold

ID: A, Location: 347m SE, Permit: HP3736UZ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Hatfield Farm Poultry Unit Plains Lane Sandtoft Road Lincolnshire DN8 5TQ
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Particulate matter - PM10	1000kg	1351kg

ID: A, Location: 347m SE, Permit: HP3736UZ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Hatfield Farm Poultry Unit Plains Lane Sandtoft Road Lincolnshire DN8 5TQ
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Ammonia	1000kg	11755kg

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

4.20 Pollution inventory waste transfers

Records within 500m	**1**

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

Features are displayed on the Current industrial land use map on **page 23 >**

ID: A, Location: 347m SE, Permit: HP3736UZ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Hatfield Farm Poultry Unit Plains Lane Sandtoft Road Lincolnshire DN8 5TQ
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	Below Reporting Threshold	Below Reporting Threshold	15 01 01	paper and cardboard packaging	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	Below Reporting Threshold	Below Reporting Threshold	15 01 02	plastic packaging	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	Below Reporting Threshold	Below Reporting Threshold	15 01 03	wooden packaging	No
D1	Deposit into or onto land (eg landfill, etc.)	Below Reporting Threshold	Below Reporting Threshold	15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	No
D1	Deposit into or onto land (eg landfill, etc.)	Below Reporting Threshold	Below Reporting Threshold	20 03 01	mixed municipal waste	No

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

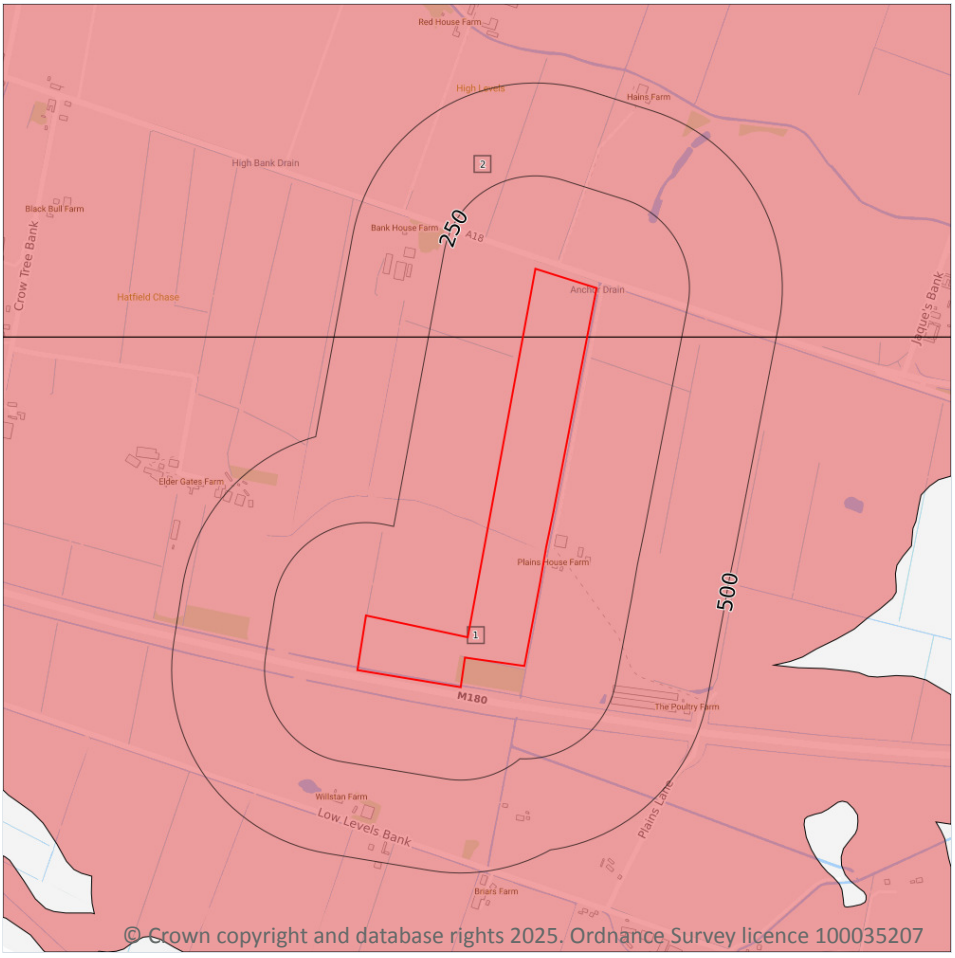
4.21 Pollution inventory radioactive waste

Records within 500m	**0**

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m	2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 31 >**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Bedrock aquifer

Site Outline

Search buffers in metres (m)

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

5.2 Bedrock aquifer

Records within 500m	2

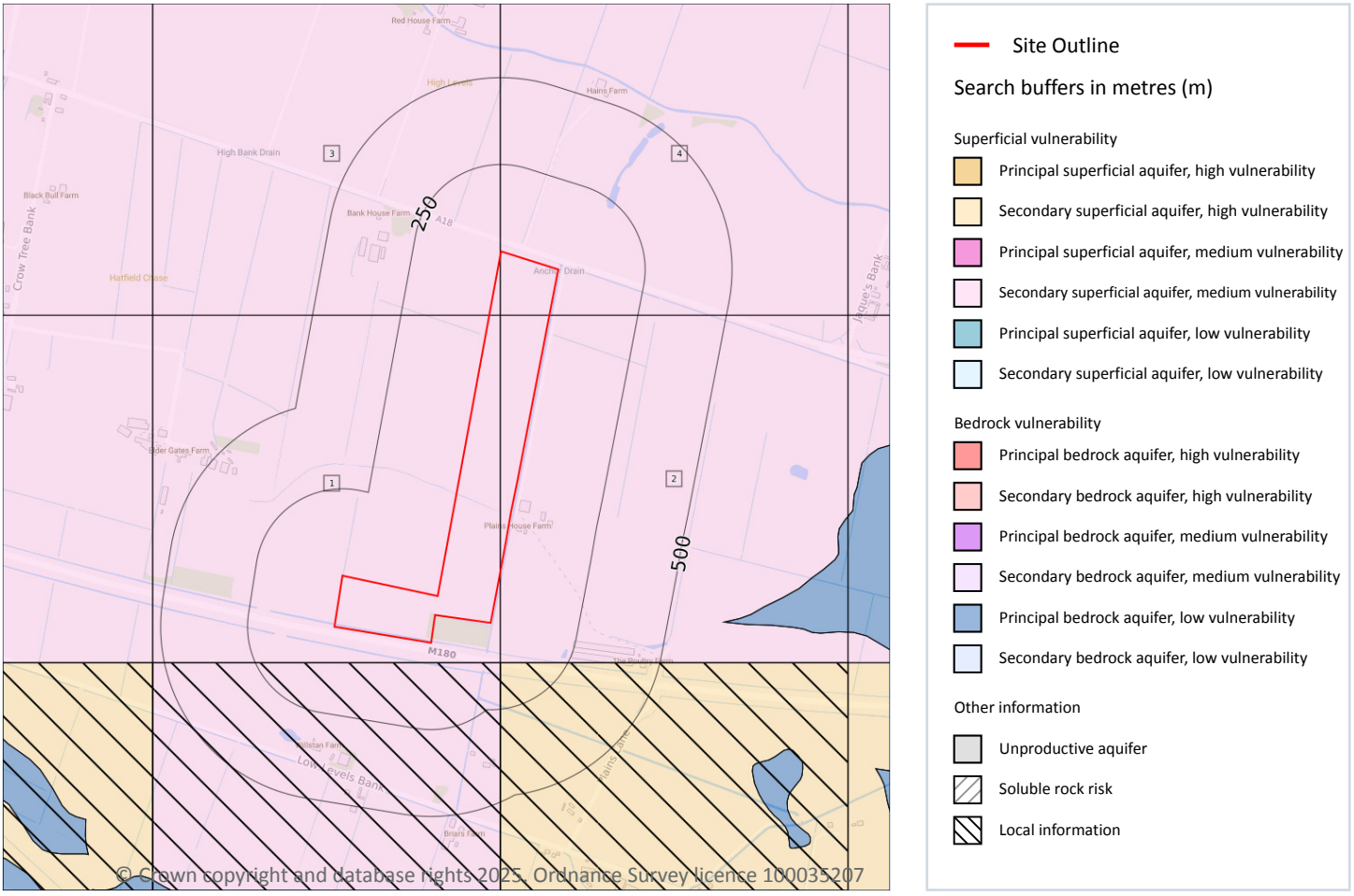
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 33 >**

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m	4

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 35 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
2	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
3	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
4	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

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

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

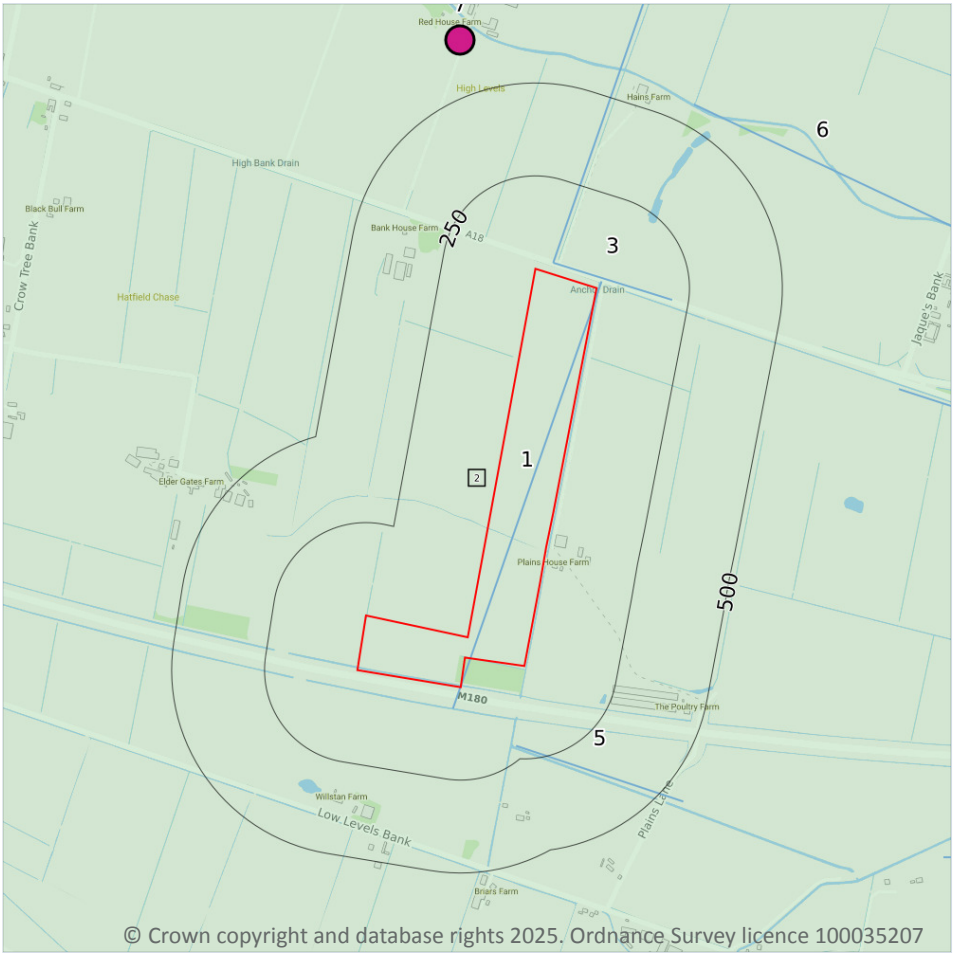
5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	6

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 37 >**

ID	Location	Details	
7	649m N	Status: Historical Licence No: 03/28/83/0016 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: RED HOUSE FARM - BOREHOLE Data Type: Point Name: B I & A ATKINSON Easting: 472800 Northing: 410800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 02/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	1138m W	Status: Historical Licence No: 03/28/83/0011 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: CROWTREE FARMS - BOREHOLE Data Type: Point Name: J TOWN & SONS Easting: 471500 Northing: 409700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 29/10/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	1314m NW	Status: Historical Licence No: 03/28/83/0023 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: GROVE FARM - BOREHOLE Data Type: Point Name: J S BROOKE AND SONS Easting: 471900 Northing: 410900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 13/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	1440m S	Status: Historical Licence No: 03/28/83/0019 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: LINDHOLME HALL - BOREHOLES Data Type: Point Name: M LYON AND SONS Easting: 472200 Northing: 407700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 06/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	1489m E	Status: Historical Licence No: 03/28/83/0090 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: DIRTNESS BRIDGE FARM,CROWLE - BOREHOLE Data Type: Point Name: CUNDALL Easting: 474600 Northing: 409700	Annual Volume (m^3): 5727.96 Max Daily Volume (m^3): 81.828 Original Application No: - Original Start Date: 07/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -

ID	Location	Details	
-	1516m SW	Status: Historical Licence No: 03/28/83/0220 Details: Process water Direct Source: Groundwater Midlands Region Point: HATFIELD MOORS - UNDERGROUND STRATA Data Type: Point Name: THE SCOTTS COMPANY (UK) LIMITED Easting: 471170 Northing: 408420	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 06/12/1994 Expiry Date: - Issue No: 100 Version Start Date: 14/12/1998 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**43**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 37 >**

ID	Location	Details	
1	**On site**	**Status: Active** **Licence No: 03/28/83/0066** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: DIRTNESS GROVES,CROWLE - ANCHOR DRAIN (2)** **Data Type: Line** **Name: J S BROOKE & SONS** **Easting: 473180** **Northing: 410150**	**Annual Volume (m^3): 15274.56** **Max Daily Volume (m^3): 545.52** **Original Application No: -** **Original Start Date: 04/03/1966** **Expiry Date: -** **Issue No: 101** **Version Start Date: 21/10/1999** **Version End Date: -**
3	30m N	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRNESS GROVES, CROWLE - ANCHOR DRAIN (1) Data Type: Line Name: J S BROOKE & SONS Easting: 473050 Northing: 410200	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -

ID	Location	Details	
4	30m N	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES, CROWLE - BLETCHERS DRAIN Data Type: Line Name: J S BROOKE & SONS Easting: 473050 Northing: 410200	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
5	216m S	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT SANDTOFT Data Type: Line Name: Maw Easting: 472950 Northing: 408900	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
6	559m NE	Status: Active Licence No: 03/28/83/0057 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BOATING DYKE DRAIN Data Type: Line Name: Bramhall Farming Ltd Easting: 473429 Northing: 410626	Annual Volume (m^3): 31000 Max Daily Volume (m^3): 818 Original Application No: NPS/WR/034997 Original Start Date: 18/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2022 Version End Date: -
8	850m E	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES,CROWLE - UNNAMED DRAIN (1) Data Type: Line Name: J S BROOKE & SONS Easting: 474630 Northing: 409650	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
-	944m S	Status: Active Licence No: 03/28/83/0115 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WILLOW LODGE FARM,THORNE - MOOR DRAIN Data Type: Line Name: ULLEY Easting: 473130 Northing: 407350	Annual Volume (m^3): 2273 Max Daily Volume (m^3): 545.5 Original Application No: NPS/WR/037084 Original Start Date: 30/11/1976 Expiry Date: - Issue No: 101 Version Start Date: 10/01/2022 Version End Date: -

ID	Location	Details	
-	978m NE	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - BOATING DYKE Data Type: Line Name: CUNDALL Easting: 474130 Northing: 410300	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 545.5 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
-	1056m SE	Status: Active Licence No: 03/28/83/0209 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT - HATFIELD WASTE DRAIN Data Type: Point Name: J T HOPKINS & SONS Easting: 473500 Northing: 408200	Annual Volume (m^3): 10000 Max Daily Volume (m^3): 550 Original Application No: - Original Start Date: 31/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2003 Version End Date: -
13	1240m SE	Status: Active Licence No: 03/28/83/0060 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT,YORKS - CATALINE DRAIN Data Type: Line Name: DENT Easting: 474100 Northing: 408600	Annual Volume (m^3): 3636.8 Max Daily Volume (m^3): 454.6 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
-	1351m NW	Status: Active Licence No: 03/28/83/0068 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: GROVE HOUSE CROWLE - BOATING DYKE POINT B Data Type: Point Name: J S BROOKE & SONS Easting: 472000 Northing: 411090	Annual Volume (m^3): 5437.02 Max Daily Volume (m^3): 909.2 Original Application No: - Original Start Date: 10/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
-	1372m SW	Status: Active Licence No: MD/028/0083/050 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: THE HATFIELD WASTE DRAIN Data Type: Line Name: Bibby Easting: 470910 Northing: 408517	Annual Volume (m^3): 760 Max Daily Volume (m^3): 42 Original Application No: NPS/WR/032906 Original Start Date: 17/01/2020 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 17/01/2020 Version End Date: -

ID	Location	Details	
-	1373m SW	Status: Historical Licence No: 03/28/83/0243 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT HATFIELD - THE HATFIELD WASTE DRAIN (REACH 2) Data Type: Line Name: BIBBY Easting: 469910 Northing: 408520	Annual Volume (m^3): 5000 Max Daily Volume (m^3): 275 Original Application No: - Original Start Date: 27/03/1998 Expiry Date: - Issue No: 101 Version Start Date: 24/03/1999 Version End Date: -
-	1373m SW	Status: Historical Licence No: 03/28/83/0243 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT HATFIELD - THE HATFIELD WASTE DRAIN (REACH 2) Data Type: Line Name: BIBBY Easting: 469910 Northing: 408520	Annual Volume (m^3): 5000 Max Daily Volume (m^3): 275 Original Application No: - Original Start Date: 27/03/1998 Expiry Date: - Issue No: 101 Version Start Date: 24/03/1999 Version End Date: -
-	1461m S	Status: Historical Licence No: 03/28/83/0273 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR, EPWORTH, DONCASTER-MOOR DRAIN Data Type: Line Name: TOOTHILL Easting: 473040 Northing: 407390	Annual Volume (m^3): 13301 Max Daily Volume (m^3): 1246 Original Application No: - Original Start Date: 04/11/2005 Expiry Date: - Issue No: 1 Version Start Date: 04/11/2005 Version End Date: -
-	1463m S	Status: Active Licence No: 03/28/83/0273 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR, EPWORTH, DONCASTER-MOOR DRAIN Data Type: Line Name: W G S Platt & Sons Easting: 473040 Northing: 407390	Annual Volume (m^3): 13301 Max Daily Volume (m^3): 1246 Original Application No: NPS/WR/009637 Original Start Date: 04/11/2005 Expiry Date: - Issue No: 3 Version Start Date: 04/01/2012 Version End Date: -

ID	Location	Details	
-	1463m S	Status: Active Licence No: 03/28/83/0061 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - MOOR DRAIN Data Type: Line Name: HINZ Easting: 473040 Northing: 407390	Annual Volume (m^3): 10870 Max Daily Volume (m^3): 324 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2002 Version End Date: -
-	1463m S	Status: Historical Licence No: 03/28/83/0226 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - MOOR DRAIN Data Type: Line Name: TRUSTEES OF THE VAN ZWANENBERG WEST HALE Easting: 473040 Northing: 407390	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 13/11/1995 Expiry Date: - Issue No: 100 Version Start Date: 15/05/1998 Version End Date: -
-	1464m E	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (3) Data Type: Line Name: Maw Easting: 474491 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
-	1464m E	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (3) Data Type: Line Name: Maw Easting: 474491 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	1526m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (2) Data Type: Line Name: Maw Easting: 474430 Northing: 408600	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -

ID	Location	Details	
-	1527m E	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - NORTH IDLE DRAIN Data Type: Line Name: CUNDALL Easting: 474540 Northing: 409190	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 545.5 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
-	1528m E	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES,CROWLE - NORTH IDLE DRAIN Data Type: Line Name: J S BROOKE & SONS Easting: 474500 Northing: 408870	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
-	1528m SE	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (2) Data Type: Line Name: Maw Easting: 474429 Northing: 408596	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
-	1528m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (2) Data Type: Line Name: Maw Easting: 474429 Northing: 408596	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	1533m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (3) Data Type: Line Name: Maw Easting: 474490 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -

ID	Location	Details	
-	1533m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - WOODCARR DRAIN Data Type: Line Name: Maw Easting: 474490 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	1534m SE	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - WOODCARR DRAIN Data Type: Line Name: Maw Easting: 474491 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
-	1534m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - WOODCARR DRAIN Data Type: Line Name: Maw Easting: 474491 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	1652m E	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - ANCHOR DRAIN Data Type: Line Name: CUNDALL Easting: 475370 Northing: 409900	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 545.5 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
-	1696m SE	Status: Active Licence No: 03/28/83/0060 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT,YORKS - NEW IDLE DRAIN Data Type: Line Name: DENT Easting: 474400 Northing: 408200	Annual Volume (m^3): 3636.8 Max Daily Volume (m^3): 454.6 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -

ID	Location	Details	
-	1701m E	Status: Active Licence No: 03/28/83/0255 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SMAQUE FARM - OLD RIVER DON Data Type: Point Name: J S BROOKE AND SONS Easting: 474860 Northing: 409970	Annual Volume (m^3): 15450 Max Daily Volume (m^3): 1100 Original Application No: A/28/83/130 Original Start Date: 28/01/2000 Expiry Date: - Issue No: 1 Version Start Date: 28/01/2000 Version End Date: -
-	1730m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (1) Data Type: Line Name: Maw Easting: 474210 Northing: 407450	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	1733m SE	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (1) Data Type: Line Name: Maw Easting: 474210 Northing: 407452	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
-	1733m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (1) Data Type: Line Name: Maw Easting: 474210 Northing: 407452	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	1841m E	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (1) Data Type: Point Name: H BARKER & SONS Easting: 475000 Northing: 410300	Annual Volume (m^3): 13638 Max Daily Volume (m^3): 1200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -

ID	Location	Details	
-	1870m NE	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (2) Data Type: Point Name: H BARKER & SONS Easting: 475000 Northing: 410500	Annual Volume (m^3): 13638 Max Daily Volume (m^3): 1200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
-	1891m E	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH ENGINE DRAIN Data Type: Line Name: Maw Easting: 475030 Northing: 409811	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
-	1891m E	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH ENGINE DRAIN Data Type: Line Name: Maw Easting: 475030 Northing: 409811	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	1891m E	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH ENGINE DRAIN Data Type: Line Name: Maw Easting: 475030 Northing: 409810	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	1893m SE	Status: Active Licence No: 03/28/83/0138 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT GRANGE - HATFIELD WASTE DRAIN Data Type: Point Name: T A WHITE & SONS Easting: 474800 Northing: 408620	Annual Volume (m^3): 4546 Max Daily Volume (m^3): 655 Original Application No: - Original Start Date: 27/05/1983 Expiry Date: - Issue No: 101 Version Start Date: 31/01/2007 Version End Date: -

ID	Location	Details	
-	1933m NW	Status: Active Licence No: 03/28/83/0068 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: GROVE HOUSE,CROWLE - BOATING DYKE POINT A Data Type: Point Name: J S BROOKE & SONS Easting: 471300 Northing: 411100	Annual Volume (m^3): 5437.02 Max Daily Volume (m^3): 909.2 Original Application No: - Original Start Date: 10/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
-	1942m N	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES,CROWLE - UNNAMED DRAIN (2) Data Type: Line Name: J S BROOKE & SONS Easting: 473700 Northing: 412000	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	**0**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

5.9 Source Protection Zones

Records within 500m	**1**

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 37 >**

ID	Location	Type	Description
2	**On site**	**3**	**Total catchment**

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

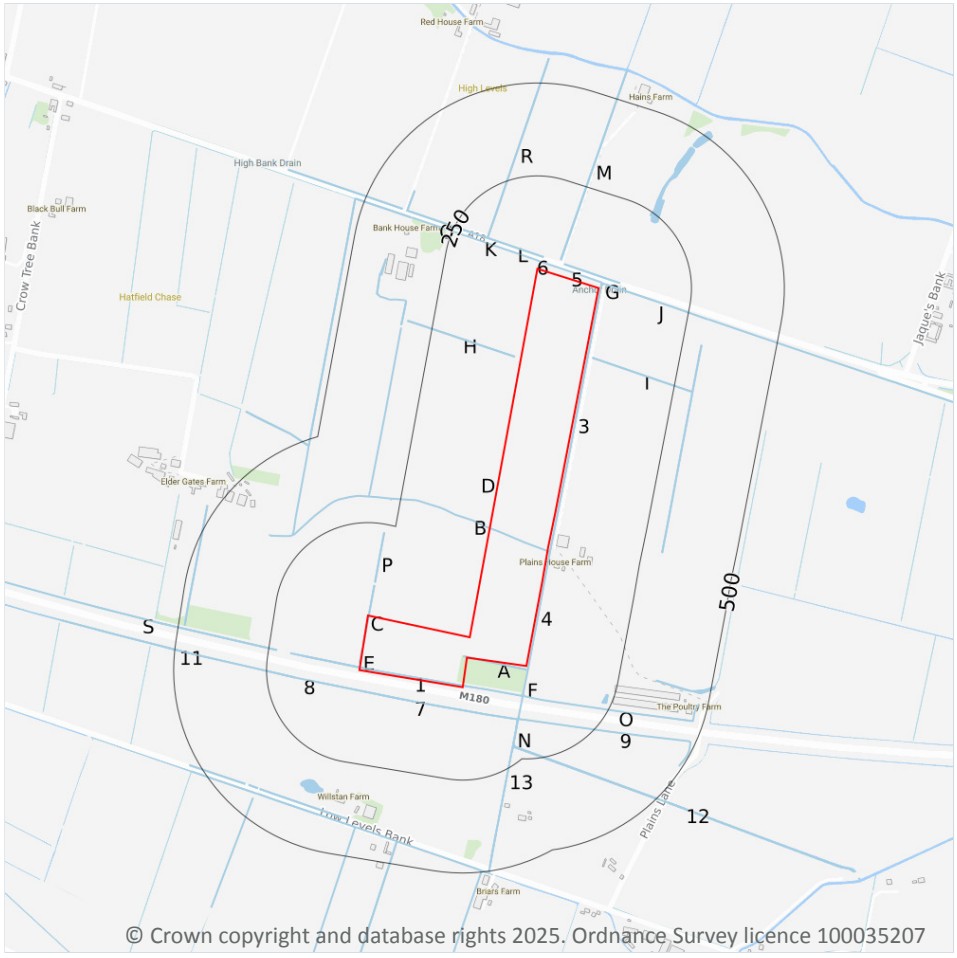
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	33

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

Features are displayed on the Hydrology map on **page 50 >**

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

ID	Location	Type of water feature	Ground level	Permanence	Name
A	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
B	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
C	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
E	1m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
3	6m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
4	6m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
F	11m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
5	16m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	High Bank Drain
G	16m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
H	17m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	19m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Anchor Drain
I	19m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	22m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain

ID	Location	Type of water feature	Ground level	Permanence	Name
6	25m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	High Bank Drain
K	28m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	High Bank Drain
G	31m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	35m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	43m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	54m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	80m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
O	80m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	82m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
P	91m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
8	142m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
9	144m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
N	145m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain

ID	Location	Type of water feature	Ground level	Permanence	Name
Q	158m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	158m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
11	173m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
12	209m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
13	209m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
S	227m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	16

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

Features are displayed on the Hydrology map on **page 50 >**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 50 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
D	**On site**	**River**	**Hatfield Waste Drain Catchment (trib of Torne/Three Rivers)**	**GB104028064330**	**Isle of Axholme**	**Idle and Torne**

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

6.4 WFD Surface water bodies

Records identified	**1**

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

Features are displayed on the Hydrology map on **page 50 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	937m S	River	Hatfield Waste Drain Catchment (trib of Torne/Three Rivers)	GB104028064330 ↗	Poor	Fail	Poor	2019

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

6.5 WFD Groundwater bodies

Records on site	**1**

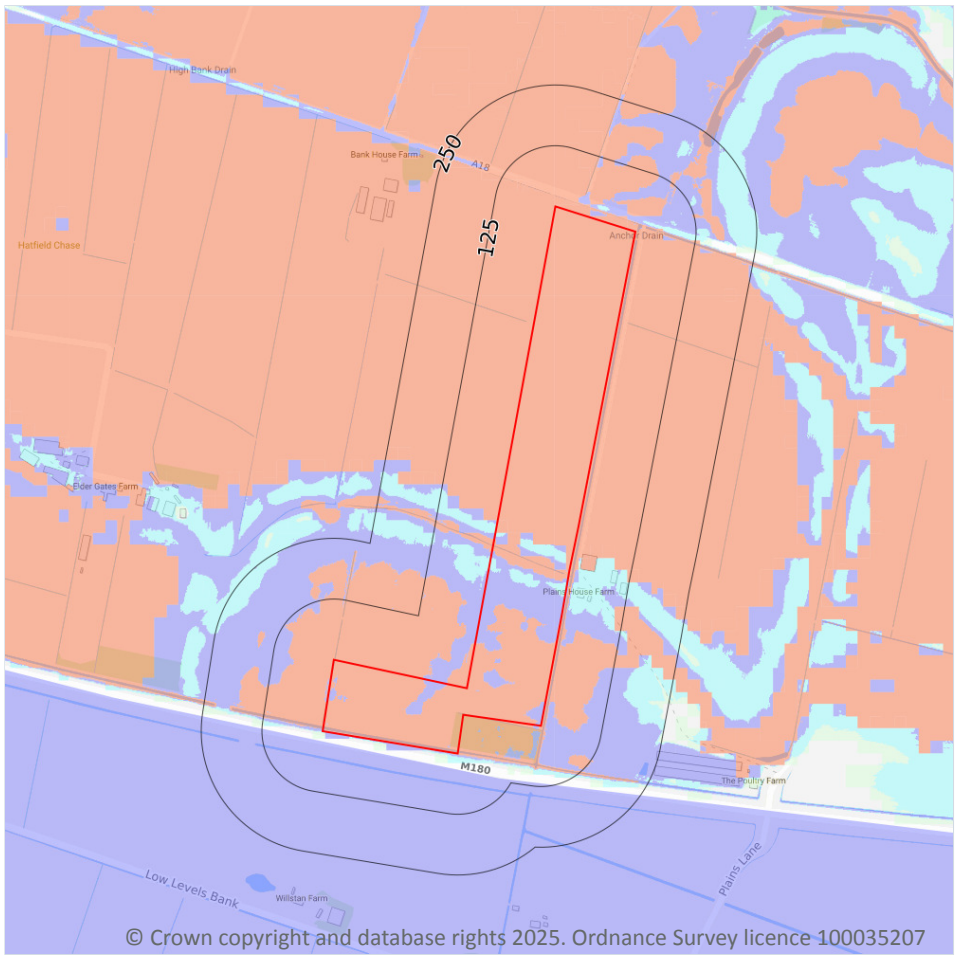
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 50 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
D	**On site**	**Idle Torne - PT Sandstone Nottinghamshire& Doncaster**	**GB40401G301500 ↗**	**Poor**	**Poor**	**Poor**	**2019**

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

7 River and coastal flooding



Site Outline

Search buffers in metres (m)

River and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m	23

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on **page 55 >**

Distance	Flood risk category
On site	**High**
0 - 50m	High

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

7.2 Historical Flood Events

Records within 250m	**0**

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

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

7.3 Flood Defences

Records within 250m	**0**

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	**0**

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

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

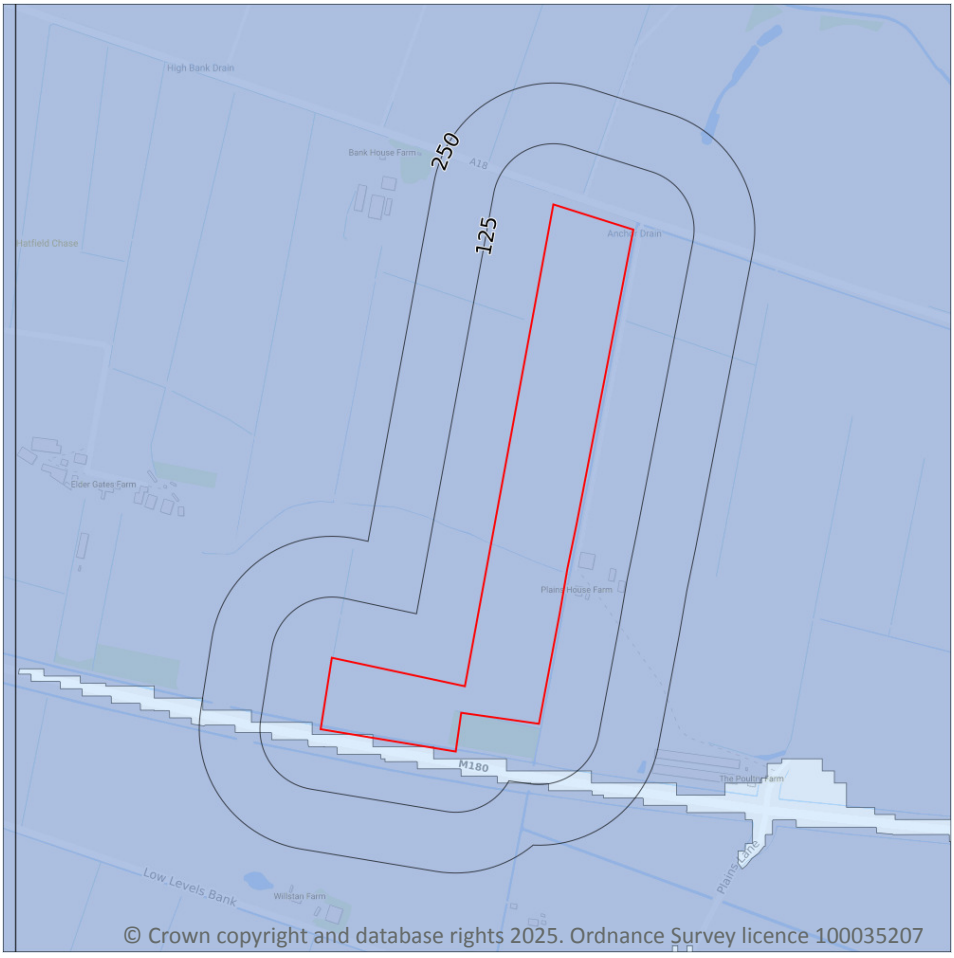
7.5 Flood Storage Areas

Records within 250m	**0**

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

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

River and coastal flooding - Flood Zones



Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

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

Features are displayed on the River and coastal flooding map on **page 55 >**

Location	Type
On site	**Zone 2 - (Fluvial /Tidal Models)**

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

7.7 Flood Zone 3

Records within 50m	1

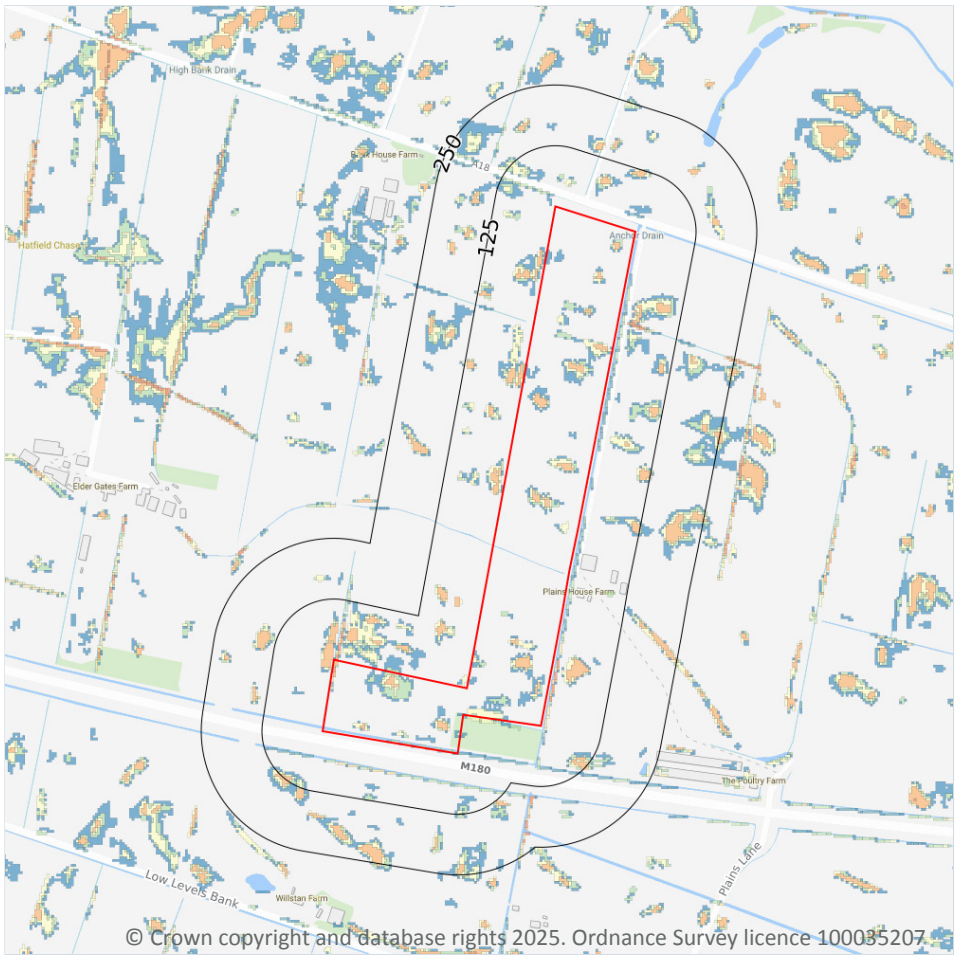
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 55 >**

Location	Type
On site	**Zone 3 - (Fluvial Models)**

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

8 Surface water flooding



Site Outline
Search buffers in metres (m)

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

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

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

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

8.1 Surface water flooding

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

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

Features are displayed on the Surface water flooding map on **page 59 >**

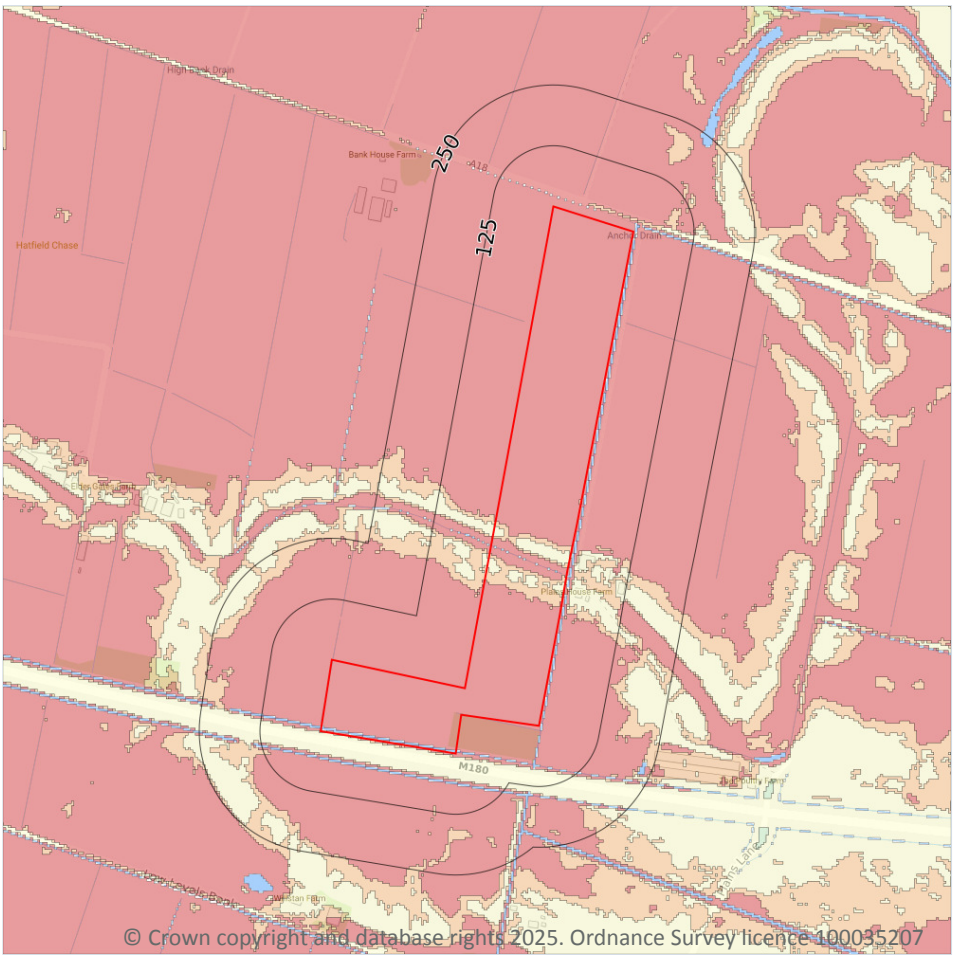
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



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9.1 Groundwater flooding

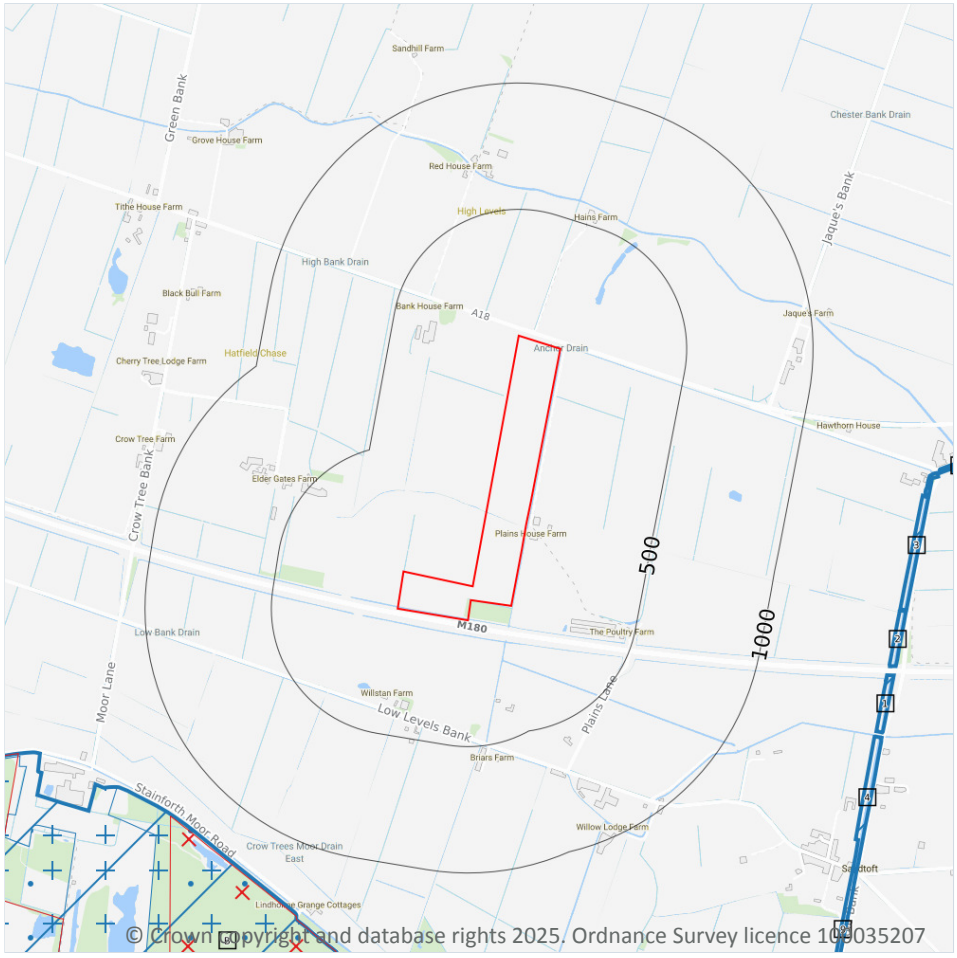
Highest risk on site	**High**
Highest risk within 50m	**High**

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

Features are displayed on the Groundwater flooding map on **page 61 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Special Areas of Conservation (SAC)

Special Protection Areas (SPA)

National Nature Reserves (NNR)

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	10

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 62 >**

ID	Location	Name	Data source
A	1191m SW	Hatfield Moors	Natural England

ID	Location	Name	Data source
1	1512m SE	Hatfield Chase Ditches	Natural England
2	1514m E	Hatfield Chase Ditches	Natural England
3	1516m E	Hatfield Chase Ditches	Natural England
4	1528m SE	Hatfield Chase Ditches	Natural England
6	1565m E	Hatfield Chase Ditches	Natural England
-	1637m E	Hatfield Chase Ditches	Natural England
9	1709m SE	Hatfield Chase Ditches	Natural England
-	1886m E	Hatfield Chase Ditches	Natural England
-	1969m SE	Hatfield Chase Ditches	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	1

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

Features are displayed on the Environmental designations map on **page 62 >**

ID	Location	Name	Features of interest	Habitat description	Data source
A	1191m SW	Hatfield Moor	Degraded raised bog.	Heath, Scrub, Maquis and Garrigue, Phygrana; Inland water bodies (Standing water, Running water); Other arable land; Bogs, Marshes, Water fringed vegetation, Fens; Broad-leaved deciduous woodland; Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Coniferous woodland	Natural England

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

10.4 Special Protection Areas (SPA)

Records within 2000m **2**

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

Features are displayed on the Environmental designations map on **page 62 >**

ID	Location	Name	Species of interest	Habitat description	Data source
B	1191m SW	Thorne & Hatfield Moors	European nightjar	Inland water bodies (Standing water, Running water); Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Broad-leaved deciduous woodland; Coniferous woodland; Bogs, Marshes, Water fringed vegetation, Fens; Heath, Scrub, Maquis and Garrigue, Phygrana	Natural England
5	1553m SW	Thorne & Hatfield Moors	European nightjar	Inland water bodies (Standing water, Running water); Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Broad-leaved deciduous woodland; Coniferous woodland; Bogs, Marshes, Water fringed vegetation, Fens; Heath, Scrub, Maquis and Garrigue, Phygrana	Natural England

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

10.5 National Nature Reserves (NNR)

Records within 2000m **2**

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

Features are displayed on the Environmental designations map on **page 62 >**

ID	Location	Name	Data source
B	1202m SW	Humberhead Peatlands	Natural England

ID	Location	Name	Data source
7	1607m SW	Humberhead Peatlands	Natural England

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	0

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

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	0

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

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

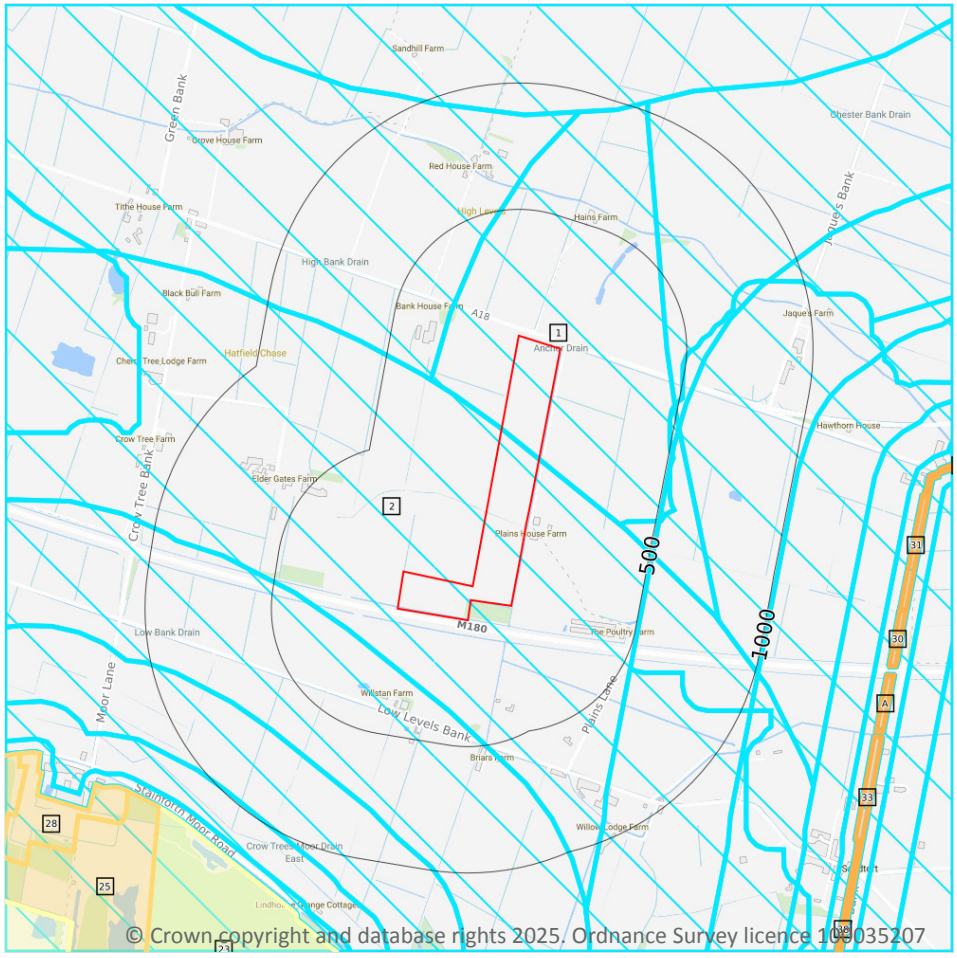
Records within 2000m	5

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

Location	Name	Type	NVZ ID	Status
On site	**R Torne / Three Rivers from Mother Dr to R Trent NVZ**	**Surface Water**	**351**	**Existing**
5m NE	North Soak Drain (trib of R Torne / Three Rivers) NVZ	Surface Water	352	Existing
528m SW	Nottinghamshire	Groundwater	40	Existing
925m NE	North Soak Drain (trib of R Torne / Three Rivers) NVZ	Surface Water	352	Existing
936m E	R Torne / Three Rivers from Mother Dr to R Trent NVZ	Surface Water	351	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	2

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 68 >**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**
2	On site	**Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Residential - Residential development of 50 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	14

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on **page 68 >**

ID: 23
Location: 1191m SW
SSSI name: Hatfield Moors
Unit name: Belton's Wood Spa
Broad habitat: Bogs - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Lowland heath	Favourable	12/04/2022
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - Recovering	30/07/2004
Invert. assemblage W312 sphagnum bog	Not Recorded	01/01/1900
Raised bog (lowland)	Unfavourable - Recovering	07/01/2021

ID: 25
Location: 1230m SW
SSSI name: Hatfield Moors
Unit name: Stainforth Moor East Spa
Broad habitat: Bogs - Lowland
Condition: Unfavourable - No change
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Lowland heath	Favourable	12/04/2022
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - No change	18/03/2013
Invert. assemblage W312 sphagnum bog	Unfavourable - No change	18/03/2013
Raised bog (lowland)	Unfavourable - No change	18/03/2013

ID: 28
Location: 1288m SW
SSSI name: Hatfield Moors
Unit name: Peat Works
Broad habitat: Bogs - Lowland
Condition: Unfavourable - No change
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Lowland heath	Favourable	12/04/2022
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - No change	15/11/2010

ID: A
Location: 1512m SE
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 30
Location: 1514m E
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 31
Location: 1516m E
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 33
Location: 1528m SE
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: B
Location: 1565m E
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: -
Location: 1637m E
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 36
Location: 1678m SW
SSSI name: Hatfield Moors
Unit name: Stainforth Moor North Spa
Broad habitat: Bogs - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Lowland heath	Favourable	12/04/2022
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - Recovering	06/03/2008
Invert. assemblage W312 sphagnum bog	Not Recorded	01/01/1900
Raised bog (lowland)	Unfavourable - Recovering	07/01/2021

ID: 38
Location: 1709m SE
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: -
Location: 1886m E
SSSI name: Hatfield Chase Ditches
Unit name: Ned - Dirtness Pumping Station To Belton Grange
Broad habitat: Standing Open Water And Canals
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Favourable	30/10/2018

ID: -
Location: 1958m SW
SSSI name: Hatfield Moors
Unit name: Stainforth Moor
Broad habitat: Bogs - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Lowland heath	Favourable	12/04/2022
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - Recovering	30/07/2004
Invert. assemblage W312 sphagnum bog	Not Recorded	01/01/1900
Raised bog (lowland)	Unfavourable - Recovering	07/01/2021

ID: -
Location: 1969m SE
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

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

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	0

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

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations

Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	2

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

Features are displayed on the Agricultural designations map on **page 77 >**

ID	Location	Classification	Description
1	**On site**	**Grade 2**	**Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.**
4	1m N	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	7

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

Features are displayed on the Agricultural designations map on **page 77 >**

ID	Location	Description	Reference	Application date
2	**On site**	**Selective Fell/Thin (Unconditional)**	**018/366/15-16**	**-**
3	**On site**	**Selective Fell/Thin (Unconditional)**	**018/366/15-16**	**-**
5	67m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
6	169m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
A	175m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-

ID	Location	Description	Reference	Application date
A	190m SW	Single Tree	018/366/15-16	-
7	220m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	**0**

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	**4**

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

Location	Reference	Scheme	Start Date	End Date
On site	**1446682**	**Countryside Stewardship (Middle Tier)**	**01/01/2023**	**31/12/2027**
8m S	1061406	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
146m S	1061406	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
214m S	1061406	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025

This data is sourced from Natural England.

13 Habitat designations

Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	**3**

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 80 >**

ID	Location	Main Habitat	Other habitats
1	**On site**	**Deciduous woodland**	**Main habitat: DWOOD (INV > 50%)**
2	29m N	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)
3	42m N	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability

Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m	2

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 82 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	SE70NW
2	On site	No coverage	Full	Full	No coverage	SE71SW

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground

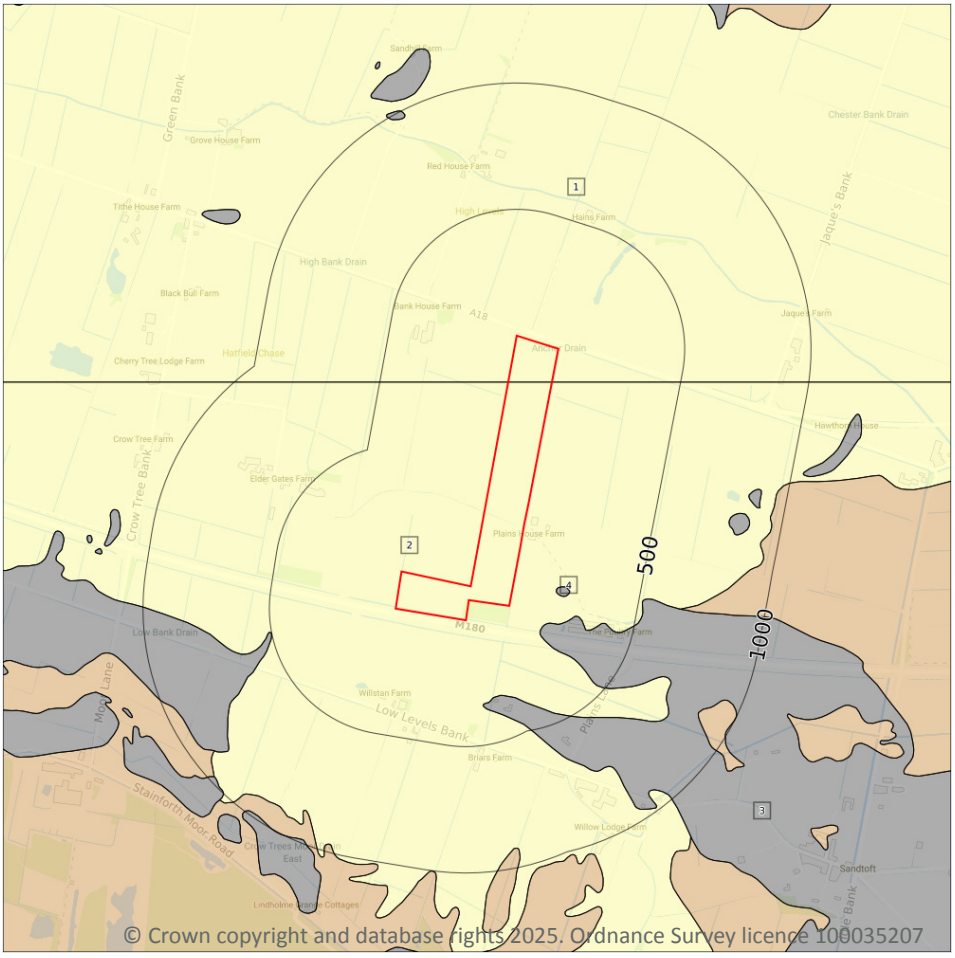
14.2 Artificial and made ground (10k)

Records within 500m	0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m **4**

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 84 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**ALV-XCZSV**	**Alluvium - Clay, Silt, Sand And Gravel**	**Clay, Silt, Sand And Gravel**
2	**On site**	**ALV-XCZSV**	**Alluvium - Clay, Silt, Sand And Gravel**	**Clay, Silt, Sand And Gravel**
3	156m S	BSA1-S	Blown Sand, 1 - Sand	Sand
4	172m SE	BSA1-S	Blown Sand, 1 - Sand	Sand

This data is sourced from the British Geological Survey.

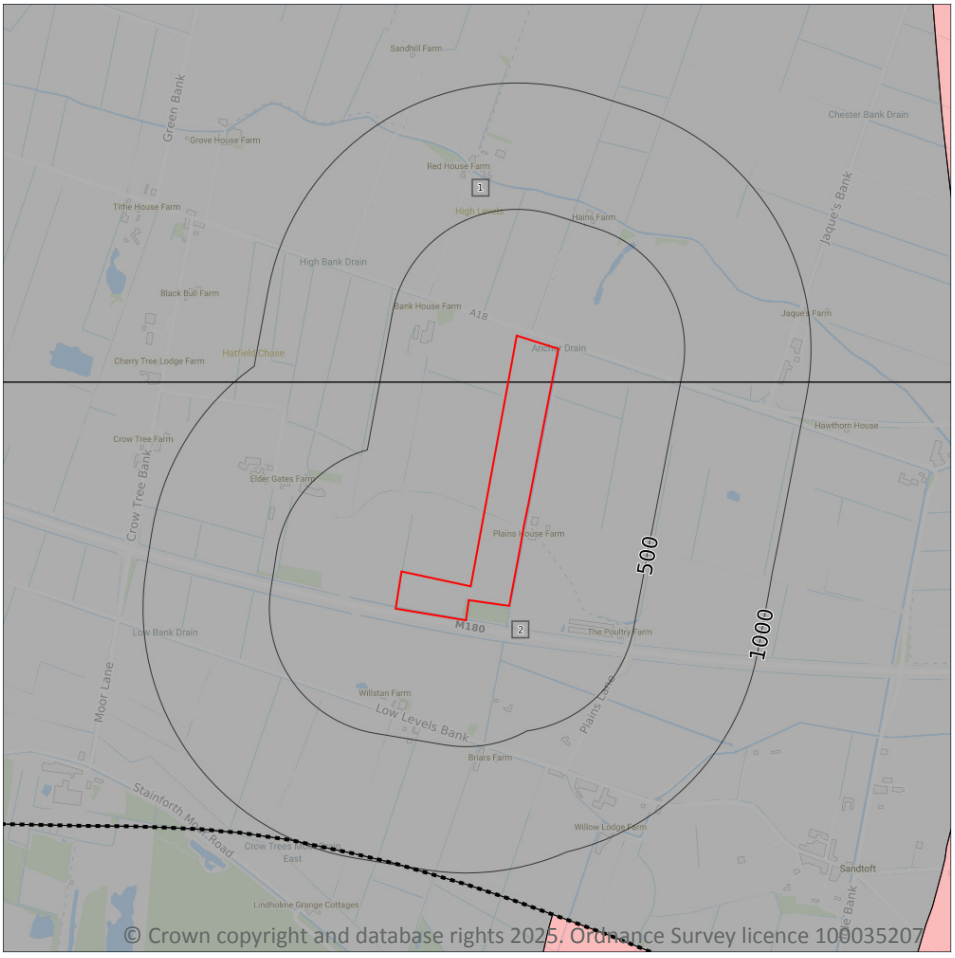
14.4 Landslip (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m	2

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 86 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**NTC-SDST**	**Nottingham Castle Sandstone Formation - Sandstone**	**Early Triassic Epoch**
2	**On site**	**NTC-SDST**	**Nottingham Castle Sandstone Formation - Sandstone**	**Early Triassic Epoch**

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability

Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 88 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**EW088_doncaster_v4**

This data is sourced from the British Geological Survey.

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

15.2 Artificial and made ground (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

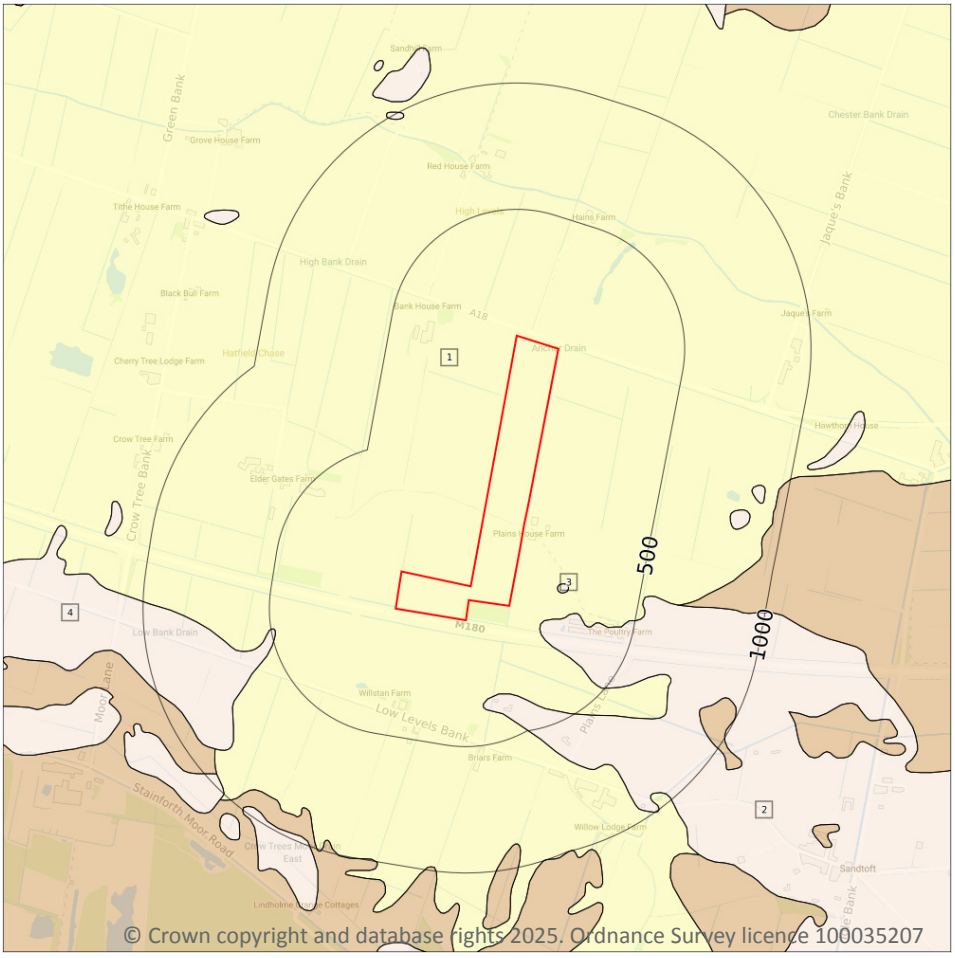
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m **4**

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 90 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**ALV-XCZSV**	**ALLUVIUM**	**CLAY, SILT, SAND AND GRAVEL**
2	144m S	SUTN-S	SUTTON SAND FORMATION	SAND
3	175m SE	SUTN-S	SUTTON SAND FORMATION	SAND
4	485m SW	SUTN-S	SUTTON SAND FORMATION	SAND

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	2

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

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock

Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m	1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 92 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**CHES-PESST**	**CHESTER FORMATION - SANDSTONE, PEBBLY (GRAVELLY)**	**OLENEKIAN**

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**High**	**Moderate**
On site	**Mixed**	**High**	**Moderate**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

16 Boreholes

Site Outline

Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m	1

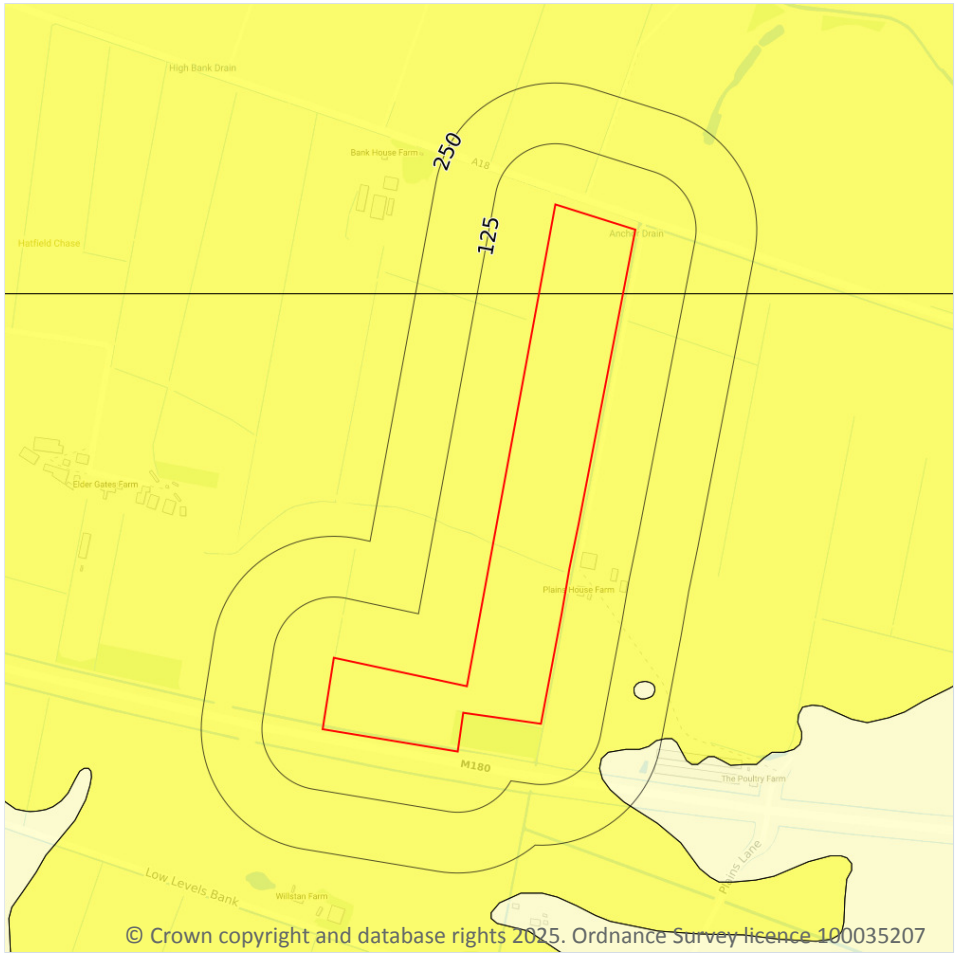
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

Features are displayed on the Boreholes map on **page 94 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	**On site**	**472990 409270**	**A18 THORNE/SCUNTHORPE 38**	**10.97**	**N**	**124542** ↗

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



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Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	1

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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 95 >**

Location	Hazard rating	Details
On site	**Very low**	**Ground conditions predominantly low plasticity.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands

Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

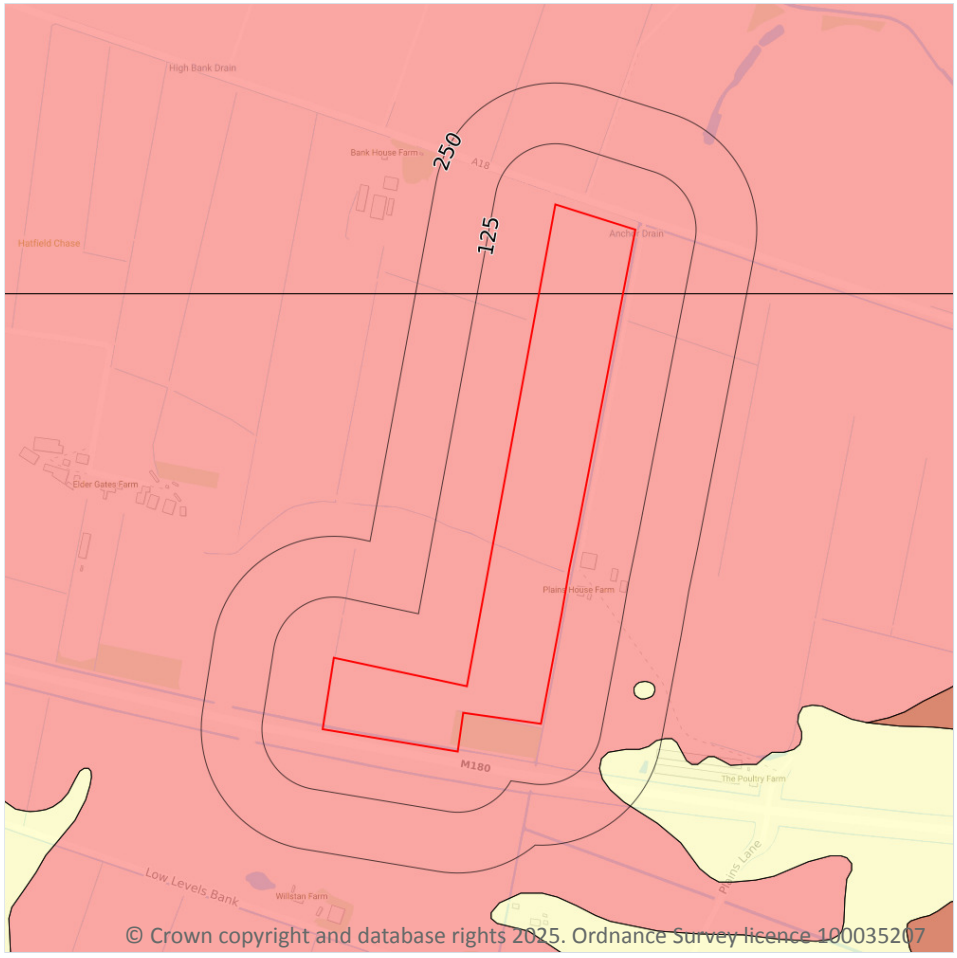
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 96 >**

Location	Hazard rating	Details
On site	**Low**	**Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



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Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	1

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

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 97 >**

Location	Hazard rating	Details
On site	**Moderate**	**Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits

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Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

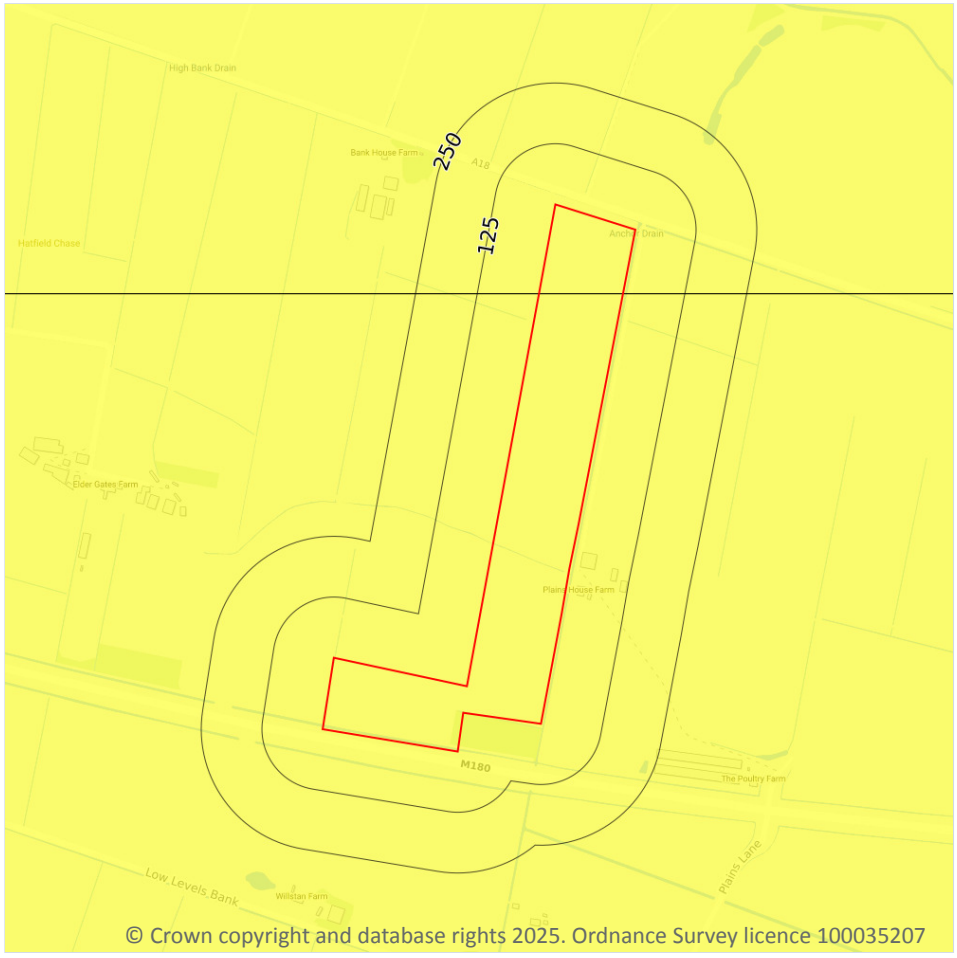
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 98 >**

Location	Hazard rating	Details
On site	**Negligible**	**Deposits with potential to collapse when loaded and saturated are believed not to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



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Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	1

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

Features are displayed on the Natural ground subsidence - Landslides map on **page 99 >**

Location	Hazard rating	Details
On site	**Very low**	**Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks

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Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 100 >**

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

This data is sourced from the British Geological Survey.

18 Mining and ground workings

Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

Non Coal Mining

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

18.1 BritPits

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	3

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on **page 102 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	159m S	Unspecified Ground Workings	1948	1:10560
A	159m S	Unspecified Ground Workings	1904	1:10560
A	163m S	Unspecified Ground Workings	1951	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	1

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.

20 Radon

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20.1 Radon

Records on site	1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 109 >**

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

This data is sourced from the British Geological Survey and UK Health Security Agency.

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	13

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
23m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference ↗.

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Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Thorne

Order Details

Date: 03/03/2023

Your ref: Thorne

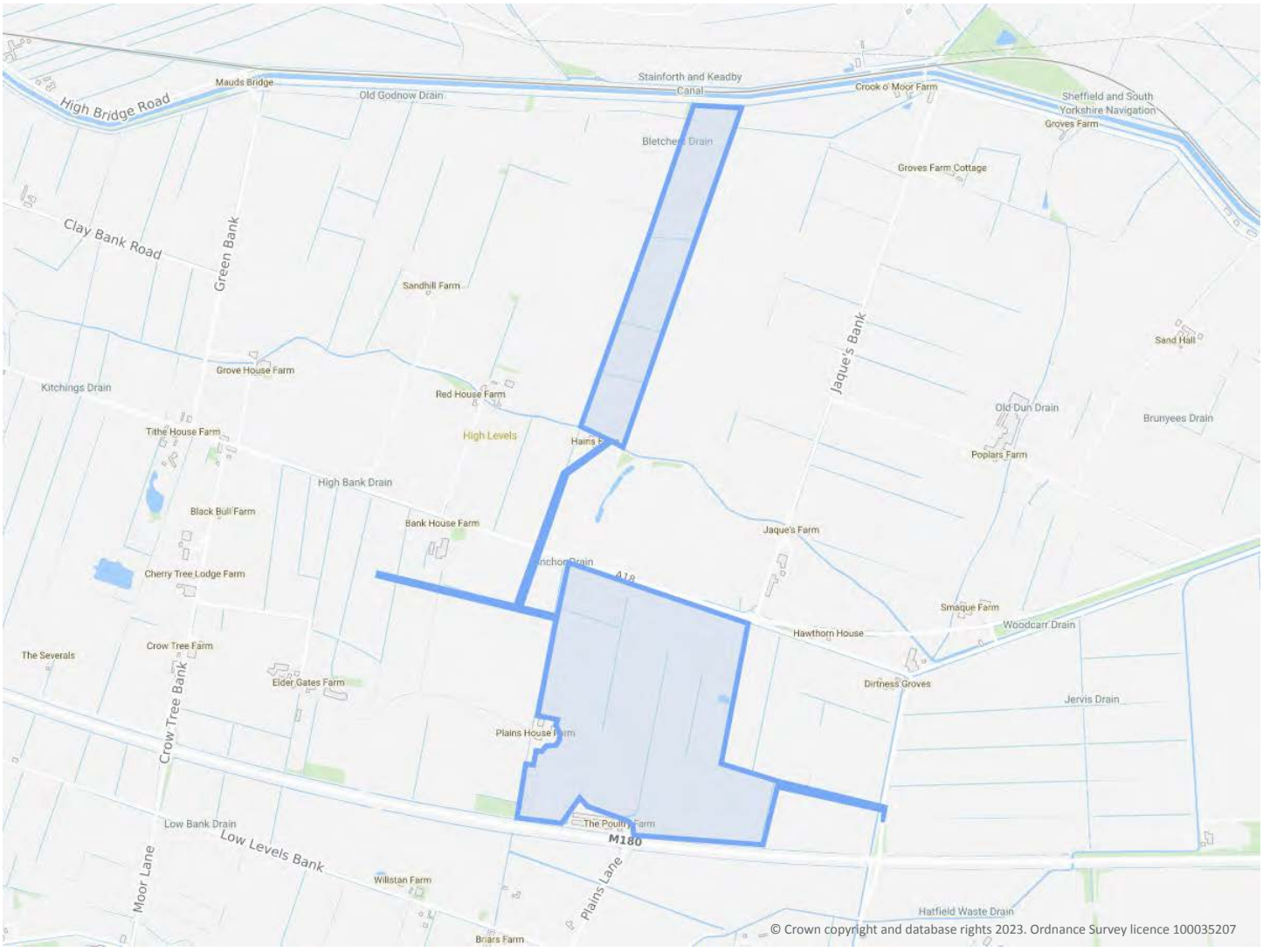
Our Ref: GSIP-2023-13386-12980_b

Site Details

Location: 473379 409757

Area: 121.24 ha

Authority: Doncaster Metropolitan Borough Council, North Lincolnshire Council



Summary of findings p. 2

OS MasterMap site plan N/A: >10ha

Aerial image p. 8

groundsure.com/insightuserguide

Contact us with any questions at:
info@groundsure.com
01273 257 755

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	0	0	3	23	-
15	1.2	Historical tanks	0	0	0	3	-
15	1.3	Historical energy features	0	0	0	0	-
15	1.4	Historical petrol stations	0	0	0	0	-
16	1.5	Historical garages	0	0	0	0	-
16	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
17	2.1	Historical industrial land uses	0	0	3	26	-
19	2.2	Historical tanks	0	0	0	5	-
19	2.3	Historical energy features	0	0	0	0	-
19	2.4	Historical petrol stations	0	0	0	0	-
20	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
21	3.1	Active or recent landfill	0	0	0	0	-
21	3.2	Historical landfill (BGS records)	0	0	0	0	-
22	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
22	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
22	3.5	Historical waste sites	0	0	0	0	-
22	3.6	Licensed waste sites	0	0	0	0	-
22	3.7	Waste exemptions	1	0	0	21	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
25	4.1	Recent industrial land uses	1	3	3	-	-
26	4.2	Current or recent petrol stations	0	0	0	0	-
26	4.3	Electricity cables	0	0	0	0	-
26	4.4	Gas pipelines	0	0	0	0	-
26	4.5	Sites determined as Contaminated Land	0	0	0	0	-

27	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
27	4.7	Regulated explosive sites	0	0	0	0	-
27	4.8	Hazardous substance storage/usage	0	0	0	0	-
27	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
27	**4.10**	**Licensed industrial activities (Part A(1))**	0	0	4	0	-
28	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
28	4.12	Radioactive Substance Authorisations	0	0	0	0	-
29	**4.13**	**Licensed Discharges to controlled waters**	0	0	2	4	-
30	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
30	4.15	Pollutant release to public sewer	0	0	0	0	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
30	4.17	List 2 Dangerous Substances	0	0	0	0	-
30	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	0	3	-
31	**4.19**	**Pollution inventory substances**	0	0	3	0	-
32	**4.20**	**Pollution inventory waste transfers**	0	0	1	0	-
33	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
34	**5.1**	**Superficial aquifer**	Identified (within 500m)				
36	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
38	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
41	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
41	**5.5**	**Groundwater vulnerability- local information**	Identified (within 0m)				
43	**5.6**	**Groundwater abstractions**	0	0	0	1	5
45	**5.7**	**Surface water abstractions**	6	3	8	5	43
58	5.8	Potable abstractions	0	0	0	0	0
59	**5.9**	**Source Protection Zones**	2	0	0	0	-
59	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
60	**6.1**	**Water Network (OS MasterMap)**	35	50	34	-	-

70	6.2	Surface water features	1	18	25	-	-
70	6.3	WFD Surface water body catchments	2	-	-	-	-
71	6.4	WFD Surface water bodies	1	2	0	-	-
71	6.5	WFD Groundwater bodies	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
72	7.1	Risk of flooding from rivers and the sea	High (within 50m)				
73	7.2	Historical Flood Events	0	0	0	-	-
73	7.3	Flood Defences	0	1	1	-	-
73	7.4	Areas Benefiting from Flood Defences	0	0	1	-	-
74	7.5	Flood Storage Areas	0	0	0	-	-
75	7.6	Flood Zone 2	Identified (within 50m)				
76	7.7	Flood Zone 3	Identified (within 50m)				
Page	Section	Surface water flooding					
77	8.1	Surface water flooding	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding					
79	9.1	Groundwater flooding	High (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
80	10.1	Sites of Special Scientific Interest (SSSI)	1	1	1	1	7
81	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
81	10.3	Special Areas of Conservation (SAC)	0	0	0	0	2
82	10.4	Special Protection Areas (SPA)	0	0	0	0	4
83	10.5	National Nature Reserves (NNR)	0	0	0	0	2
83	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
83	10.7	Designated Ancient Woodland	0	0	0	0	0
84	10.8	Biosphere Reserves	0	0	0	0	0
84	10.9	Forest Parks	0	0	0	0	0
84	10.10	Marine Conservation Zones	0	0	0	0	0
84	10.11	Green Belt	0	0	0	0	0
84	10.12	Proposed Ramsar sites	0	0	0	0	0

85	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
85	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
85	10.15	Nitrate Sensitive Areas	0	0	0	0	0
85	**10.16**	**Nitrate Vulnerable Zones**	3	0	1	0	3
87	**10.17**	**SSSI Impact Risk Zones**	16	-	-	-	-
95	**10.18**	**SSSI Units**	1	1	1	1	12
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
101	11.1	World Heritage Sites	0	0	0	-	-
101	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
101	11.3	National Parks	0	0	0	-	-
101	11.4	Listed Buildings	0	0	0	-	-
102	11.5	Conservation Areas	0	0	0	-	-
102	11.6	Scheduled Ancient Monuments	0	0	0	-	-
102	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
103	**12.1**	**Agricultural Land Classification**	Grade 2 (within 250m)				
104	12.2	Open Access Land	0	0	0	-	-
104	**12.3**	**Tree Felling Licences**	2	8	44	-	-
107	12.4	Environmental Stewardship Schemes	0	0	0	-	-
107	**12.5**	**Countryside Stewardship Schemes**	5	2	6	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
109	**13.1**	**Priority Habitat Inventory**	3	2	3	-	-
110	13.2	Habitat Networks	0	0	0	-	-
110	13.3	Open Mosaic Habitat	0	0	0	-	-
110	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
111	**14.1**	**10k Availability**	Identified (within 500m)				
112	14.2	Artificial and made ground (10k)	0	0	0	0	-
113	**14.3**	**Superficial geology (10k)**	8	1	6	2	-

114	14.4	Landslip (10k)	0	0	0	0	-
115	**14.5**	**Bedrock geology (10k)**	2	0	0	2	-
116	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
117	**15.1**	**50k Availability**	Identified (within 500m)				
118	15.2	Artificial and made ground (50k)	0	0	0	0	-
118	15.3	Artificial ground permeability (50k)	0	0	-	-	-
119	**15.4**	**Superficial geology (50k)**	7	1	6	1	-
120	**15.5**	**Superficial permeability (50k)**	Identified (within 50m)				
121	15.6	Landslip (50k)	0	0	0	0	-
121	15.7	Landslip permeability (50k)	None (within 50m)				
122	**15.8**	**Bedrock geology (50k)**	1	0	0	2	-
123	**15.9**	**Bedrock permeability (50k)**	Identified (within 50m)				
123	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
124	**16.1**	**BGS Boreholes**	1	1	17	-	-
Page	Section	Natural ground subsidence					
126	**17.1**	**Shrink swell clays**	Very low (within 50m)				
128	**17.2**	**Running sands**	Low (within 50m)				
130	**17.3**	**Compressible deposits**	High (within 50m)				
132	**17.4**	**Collapsible deposits**	Negligible (within 50m)				
133	**17.5**	**Landslides**	Very low (within 50m)				
134	**17.6**	**Ground dissolution of soluble rocks**	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
136	18.1	Natural cavities	0	0	0	0	-
137	**18.2**	**BritPits**	0	0	0	1	-
137	**18.3**	**Surface ground workings**	0	9	3	-	-
138	18.4	Underground workings	0	0	0	0	0
138	18.5	Historical Mineral Planning Areas	0	0	0	0	-

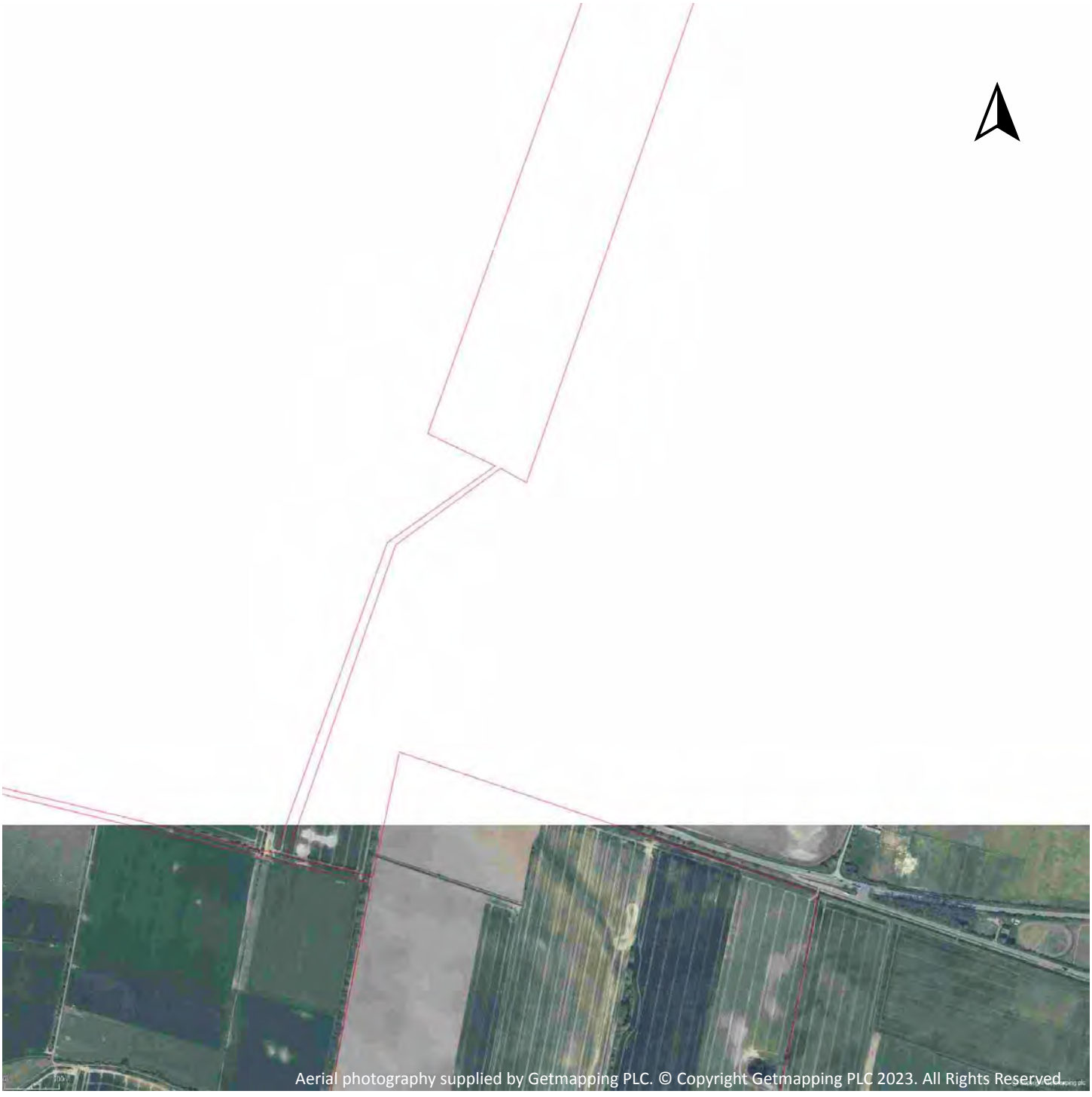
138	18.6	Non-coal mining	0	0	0	0	0
138	18.7	Mining cavities	0	0	0	0	0
139	18.8	JPB mining areas	None (within 0m)				
139	**18.9**	**Coal mining**	Identified (within 0m)				
139	18.10	Brine areas	None (within 0m)				
139	18.11	Gypsum areas	None (within 0m)				
139	18.12	Tin mining	None (within 0m)				
140	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
141	**19.1**	**Radon**	Less than 1% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
143	**20.1**	**BGS Estimated Background Soil Chemistry**	46	13	-	-	-
145	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
145	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
146	21.1	Underground railways (London)	0	0	0	-	-
146	21.2	Underground railways (Non-London)	0	0	0	-	-
147	21.3	Railway tunnels	0	0	0	-	-
147	21.4	Historical railway and tunnel features	0	0	0	-	-
147	21.5	Royal Mail tunnels	0	0	0	-	-
147	21.6	Historical railways	0	0	0	-	-
147	**21.7**	**Railways**	0	0	4	-	-
148	21.8	Crossrail 1	0	0	0	0	-
148	21.9	Crossrail 2	0	0	0	0	-
148	21.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 19/04/2021

Site Area: 121.24ha

Recent site history - 2019 aerial photograph

Capture Date: 20/10/2019

Site Area: 121.24ha

Recent site history - 2013 aerial photograph

Capture Date: 07/06/2013

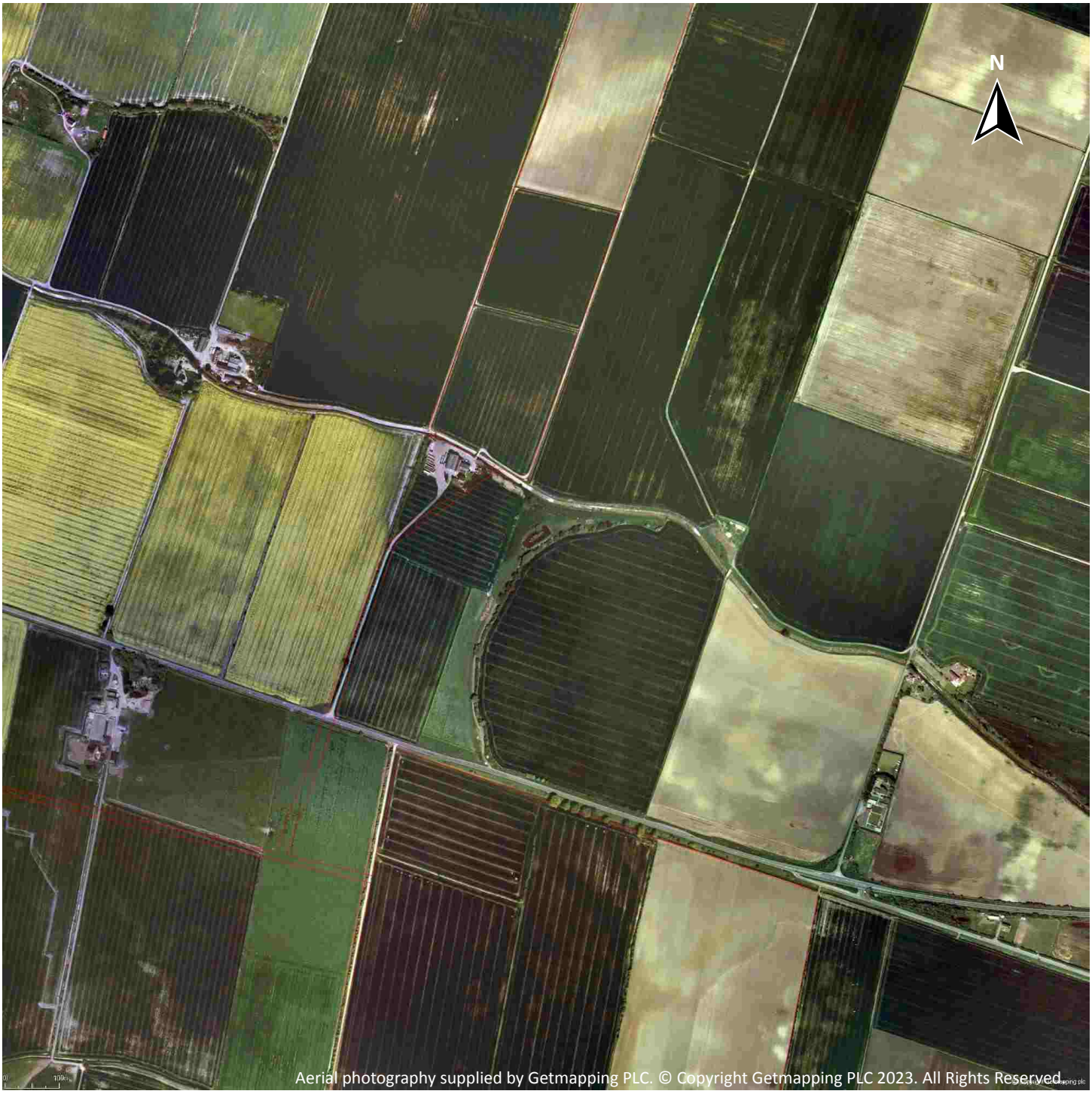
Site Area: 121.24ha

Recent site history - 2009 aerial photograph

Capture Date: 02/07/2009

Site Area: 121.24ha

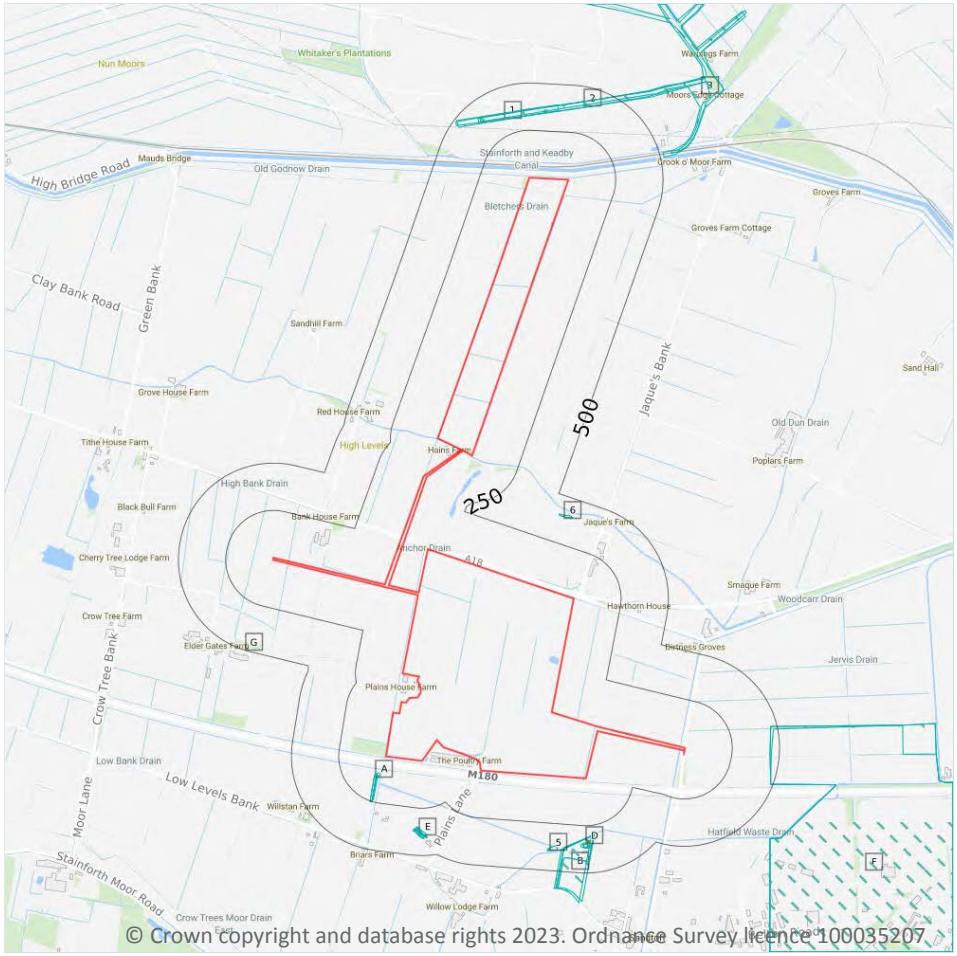
Recent site history - 1999 aerial photograph



Capture Date: 03/05/1999

Site Area: 121.24ha

1 Past land use



1.1 Historical industrial land uses

Records within 500m	26

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
A	96m SW	Unspecified Ground Workings	1951	1529778

ID	Location	Land use	Dates present	Group ID
A	108m SW	Unspecified Ground Workings	1948	1469068
A	108m SW	Unspecified Ground Workings	1904	1504142
B	300m S	Disused Sewage Works	1981	1420627
C	302m S	Sewage Works	1951	1423889
C	302m S	Unspecified Commercial/Industrial	1969	1465973
B	305m S	Unspecified Commercial/Industrial	1948	1556155
1	325m N	Tramway Sidings	1948	1503072
2	325m N	Tramway Sidings	1948	1481028
3	326m N	Tramway Sidings	1908	1476055
D	328m S	Filter Bed	1981	1411111
4	333m N	Tramway Sidings	1906	1472097
D	341m S	Unspecified Tanks	1951 - 1981	1532376
D	346m S	Unspecified Tanks	1948	1491439
D	347m S	Unspecified Tanks	1948	1533962
E	347m S	Old Sand Pit	1885	1522817
E	354m S	Unspecified Ground Workings	1951	1414629
E	361m S	Old Sand Pit	1891	1443165
E	361m S	Unspecified Ground Workings	1904	1494099
E	361m S	Unspecified Ground Workings	1948	1552287
E	362m S	Old Sand Pit	1885	1554270
5	367m S	Pumping Station	1981	1431656
6	391m NE	Unspecified Ground Workings	1948	1414573
F	450m SE	Disused Airfield	1973	1515280
F	450m SE	Disused Airfield	1982	1515583
F	458m SE	Airfield	1951	1420339

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	3

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
D	328m S	Tanks	1966 - 1983	241214
G	487m W	Unspecified Tank	1978	229358
G	488m W	Unspecified Tank	1961	229357

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	0

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

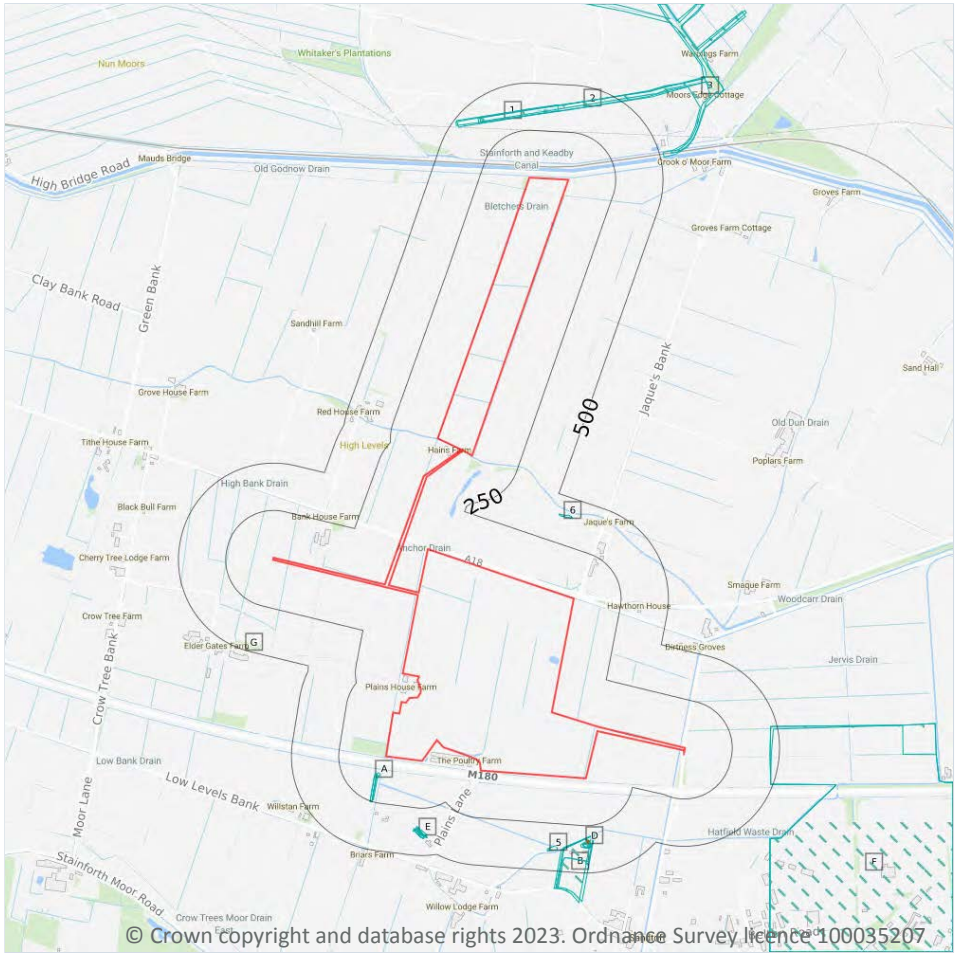
1.6 Historical military land

Records within 500m	0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped



2.1 Historical industrial land uses

Records within 500m	29

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

Features are displayed on the Past land use - un-grouped map on **page 17**

ID	Location	Land Use	Date	Group ID
A	96m SW	Unspecified Ground Workings	1951	1529778
A	108m SW	Unspecified Ground Workings	1948	1469068
A	108m SW	Unspecified Ground Workings	1904	1504142

ID	Location	Land Use	Date	Group ID
B	300m S	Disused Sewage Works	1981	1420627
C	302m S	Sewage Works	1951	1423889
C	302m S	Unspecified Commercial/Industrial	1969	1465973
B	305m S	Unspecified Commercial/Industrial	1948	1556155
1	325m N	Tramway Sidings	1948	1503072
2	325m N	Tramway Sidings	1948	1481028
3	326m N	Tramway Sidings	1908	1476055
D	328m S	Filter Bed	1981	1411111
4	333m N	Tramway Sidings	1906	1472097
D	341m S	Unspecified Tanks	1951	1532376
D	341m S	Unspecified Tanks	1969	1532376
D	341m S	Unspecified Tanks	1981	1532376
D	346m S	Unspecified Tanks	1948	1491439
D	347m S	Unspecified Tanks	1948	1533962
E	347m S	Old Sand Pit	1885	1522817
E	354m S	Unspecified Ground Workings	1951	1414629
E	361m S	Old Sand Pit	1891	1443165
E	361m S	Unspecified Ground Workings	1948	1552287
E	361m S	Unspecified Ground Workings	1904	1494099
E	362m S	Old Sand Pit	1885	1554270
5	367m S	Pumping Station	1981	1431656
E	370m S	Old Sand Pit	1885	1554270
6	391m NE	Unspecified Ground Workings	1948	1414573
F	450m SE	Disused Airfield	1973	1515280
F	450m SE	Disused Airfield	1982	1515583
F	458m SE	Airfield	1951	1420339

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	5

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

Features are displayed on the Past land use - un-grouped map on **page 17**

ID	Location	Land Use	Date	Group ID
D	328m S	Tanks	1983	241214
D	328m S	Tanks	1966	241214
D	329m S	Tanks	1978	241214
G	487m W	Unspecified Tank	1978	229358
G	488m W	Unspecified Tank	1961	229357

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

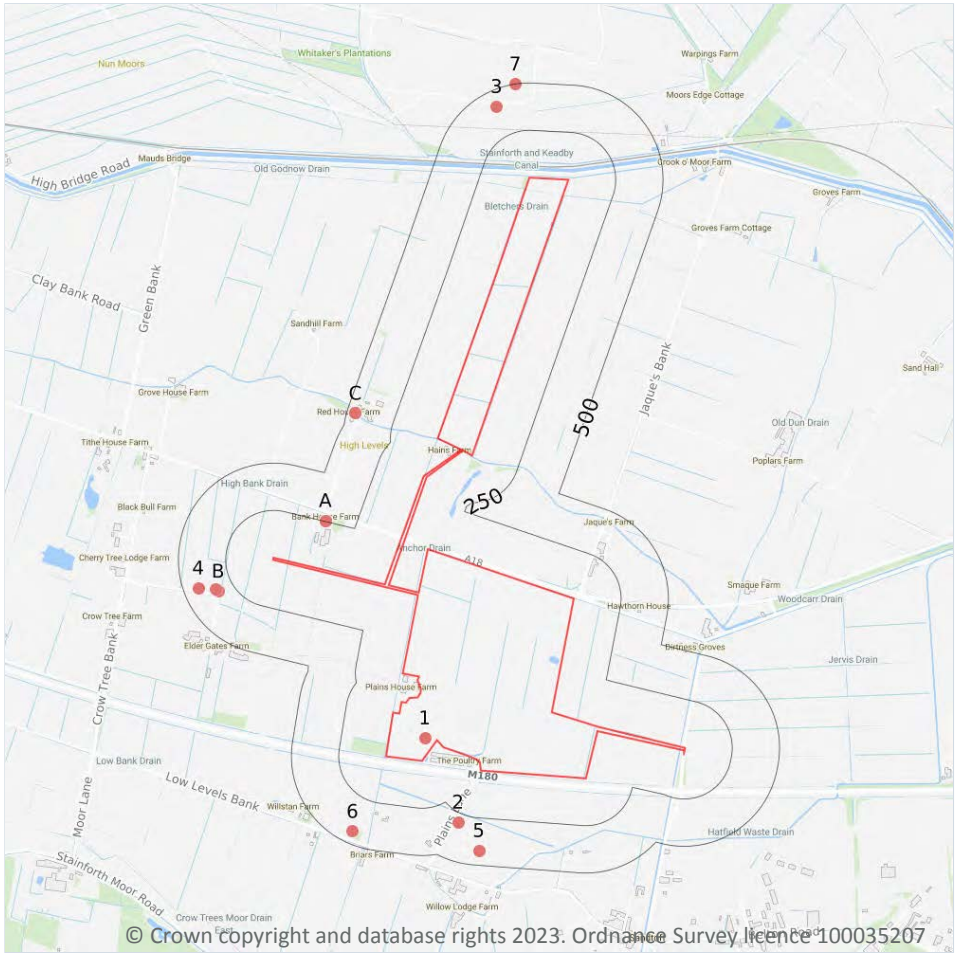
2.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	22

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

Features are displayed on the Waste and landfill map on **page 21**

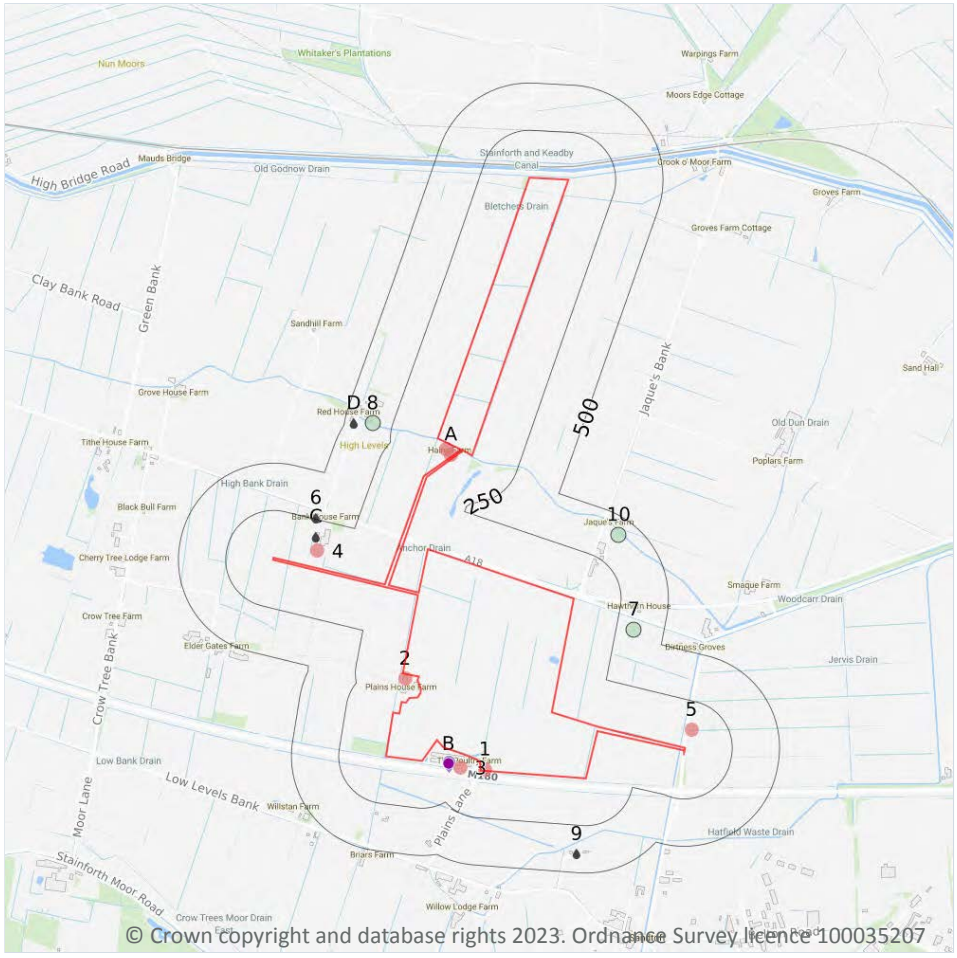
ID	Location	Site	Reference	Category	Sub-Category	Description
1	**On site**	**Goodcop Farm Sandtoft Road Doncaster DN8 5TB**	**EPR/HF0036RY/A001**	**Storing waste exemption**	**Non-Agricultural Waste Only**	**Storage of sludge**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	251m W	Bank House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SL	EPR/EE5288CR/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
A	251m W	Bank House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SL	EPR/EE5288CR/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
A	251m W	Bank House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SL	EPR/EE5288CR/A001	Treating waste exemption	Agricultural Waste Only	Cleaning, washing, spraying or coating relevant waste
A	251m W	Bank House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SL	EPR/EE5288CR/A001	Using waste exemption	Agricultural Waste Only	Incorporation of ash into soil
A	251m W	Bank House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SL	EPR/EE5288CR/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
A	251m W	Bank House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SL	EPR/EE5288CR/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading waste on agricultural land to confer benefit
A	251m W	Bank House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SL	EPR/EE5288CR/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste for a specified purpose
2	302m S	Goodcop Farm Sandtoft Road Doncaster DN8 5TB	EPR/HF0336RL/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of sludge
B	337m W	Slated House Farm, Hatfield Woodhouse, Doncaster, DN7 6NJ	WEX004841	Storing waste exemption	On a farm	Storage of sludge
B	343m W	Slatted House Farm, Hatfield Woodhouse, Doncaster, DN7 6NS	WEX135129	Storing waste exemption	On a farm	Storage of sludge
3	411m N	DAIRY FARM, EGLINS ROAD, THORNE, DONCASTER, DN8 5RX	WEX150258	Storing waste exemption	On a Farm	Storage of sludge

ID	Location	Site	Reference	Category	Sub-Category	Description
4	424m W	Slated House Farm, Hatfield Woodhouse, Doncaster, DN76NS	WEX089418	Storing waste exemption	On a farm	Storage of sludge
5	426m S	-	WEX299053	Storing waste exemption	On a Farm	Storage of sludge
6	438m SW	-	WEX291383	Storing waste exemption	On a Farm	Storage of sludge
C	455m NW	Red House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SJ	EPR/DF0237FF/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Deposit of waste from dredging of inland waters
C	455m NW	Red House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SJ	EPR/DF0237FF/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Burning waste in the open
C	455m NW	Red House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SJ	EPR/DF0237FF/A001	Treating waste exemption	Both agricultural and non-agricultural waste	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	455m NW	Red House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SJ	EPR/DF0237FF/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
C	455m NW	Red House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SJ	EPR/DF0237FF/A001	Using waste exemption	Both agricultural and non-agricultural waste	Burning of waste as a fuel in a small appliance
C	455m NW	Red House Farm Scunthorpe Road DONCASTER South Yorkshire DN8 5SJ	EPR/DF0237FF/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste for a specified purpose
7	497m N	DAIRY FARM, EGLINS ROAD, THORNE, DONCASTER, DN8 5RX	WEX086076	Storing waste exemption	On a farm	Storage of sludge

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

4 Current industrial land use



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4.1 Recent industrial land uses

Records within 250m **7**

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Mast**	**Lincolnshire, DN8**	**Telecommunications Features**	**Infrastructure and Facilities**
A	10m N	Pump	Lincolnshire, DN8	Water Pumping Stations	Industrial Features
2	26m SW	Apex Precision	Plains House Farm, High Levels Bank, Belton, Lincolnshire, DN8 5SN	Arms and Ammunition	Industrial Products

ID	Location	Company	Address	Activity	Category
A	29m N	L & J Price Transport	Haines Farm, High Levels Bank, Belton, Lincolnshire, DN8 5SJ	Distribution and Haulage	Transport, Storage and Delivery
3	70m S	The Poultry Farm	Lincolnshire, DN8	Poultry Farming, Equipment and Supplies	Farming
4	89m W	Slurry Bed	South Yorkshire, DN8	Waste Storage, Processing and Disposal	Infrastructure and Facilities
5	100m SE	Mast (Telecommunication)	Lincolnshire, DN9	Telecommunications Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	4

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Details	
B	75m S	Operator: P D HOOK (BREEDERS) LTD Installation Name: HATFIELD FARM POULTRY UNIT - EPR/HP3736UZ Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: GP3106SR Original Permit Number: HP3736UZ	EPR Reference: - Issue Date: 22/01/2021 Effective Date: 22/01/2021 Last date noted as effective: 01/12/2022 Status: EFFECTIVE
B	75m S	Operator: P D HOOK (BREEDERS) LTD Installation Name: HATFIELD FARM - EPR/HP3736UZ Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: HP3736UZ Original Permit Number: HP3736UZ	EPR Reference: - Issue Date: 21/12/2007 Effective Date: 21/12/2007 Last date noted as effective: 01/12/2022 Status: SUPERCEDED
B	75m S	Operator: P D HOOK (BREEDERS) LTD Installation Name: HATFIELD FARM POULTRY UNIT - EPR/HP3736UZ Process: ASSOCIATED PROCESS Permit Number: GP3106SR Original Permit Number: HP3736UZ	EPR Reference: - Issue Date: 22/01/2021 Effective Date: 22/01/2021 Last date noted as effective: 01/12/2022 Status: EFFECTIVE
B	75m S	Operator: P D HOOK (BREEDERS) LTD Installation Name: HATFIELD FARM - EPR/HP3736UZ Process: ASSOCIATED PROCESS Permit Number: HP3736UZ Original Permit Number: HP3736UZ	EPR Reference: - Issue Date: 21/12/2007 Effective Date: 21/12/2007 Last date noted as effective: 01/12/2022 Status: SUPERCEDED

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

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

Records within 500m	0

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	**6**

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Address	Details	
C	158m W	BANK HOUSE FARM, THORNE LEVELS, THORNE, NR DONCASTER, YORKSHIRE, DN8 5SL	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: T/83/14334/TG Permit Version: 1 Receiving Water: UNDERGROUND STRATA	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 28/06/1974 Effective Date: 28/06/1974 Revocation Date: 13/12/2011
C	158m W	BANK HOUSE FARM, THORNE LEVELS, THORNE, NR DONCASTER, YORKSHIRE, DN8 5SL	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: T/83/14334/TG Permit Version: 2 Receiving Water: UNDERGROUND STRATA	Status: VARIED UNDER EPR 2010 Issue date: 14/12/2011 Effective Date: 14/12/2011 Revocation Date: -
6	256m W	BANK HOUSE FARM, THORNE LEVELS, THORNE, NR DONCASTER, YORKSHIRE, DN8 5SL	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3/28/83/2630 Permit Version: 1 Receiving Water: UNDERGROUND STRATA	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 28/06/1974 Effective Date: 28/06/1974 Revocation Date: -
9	403m S	NETHERCOP FISH FARM CARAVAN SITE, THORNE ROAD, SANDTOFT, DONCASTER, YORKSHIRE, DN8 5SZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: EPRTB3795ET Permit Version: 1 Receiving Water: GROUNDWATER VIA DRAINAGE MOUND	Status: NEW ISSUED UNDER EPR 2010 Issue date: 20/08/2021 Effective Date: 20/08/2021 Revocation Date: -
D	451m NW	REDHOUSE FARM & COTTAGES, THORNE LEVELS, THORNE, DONCASTER, SOUTH YORKSHIRE, DN8 5SJ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: T/83/02135/S Permit Version: 1 Receiving Water: BOATING DYKE	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 02/01/1968 Effective Date: 02/01/1968 Revocation Date: -
D	451m NW	REDHOUSE FARM & COTTAGES, THORNE LEVELS, THORNE, DONCASTER, SOUTH YORKSHIRE, DN8 5SJ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: T/83/02135/S Permit Version: 1 Receiving Water: BOATING DYKE	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 02/01/1968 Effective Date: 02/01/1968 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.17 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	3

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Details	
7	342m E	Incident Date: 19/03/2002 Incident Identification: 64989 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
8	353m NW	Incident Date: 25/07/2001 Incident Identification: 18861 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
10	410m E	Incident Date: 24/07/2001 Incident Identification: 18760 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	**3**

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

Features are displayed on the Current industrial land use map on **page 25**

ID: B, Location: 75m S, Permit: HP3736UZ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Hatfield Farm Poultry Unit Plains Lane Sandtoft Road Lincolnshire DN8 5TQ
Sector: Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Particulate matter - PM10	1000kg	1364kg

ID: B, Location: 75m S, Permit: HP3736UZ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Hatfield Farm Poultry Unit Plains Lane Sandtoft Road Lincolnshire DN8 5TQ
Sector: Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Ammonia	1000kg	11867kg

ID: B, Location: 75m S, Permit: HP3736UZ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Hatfield Farm Poultry Unit Plains Lane Sandtoft Road Lincolnshire DN8 5TQ
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Nitrogen oxides (NO and NO2) as NO2	100000kg	Below Reporting Threshold

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

4.20 Pollution inventory waste transfers

Records within 500m	**1**

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

Features are displayed on the Current industrial land use map on **page 25**

ID: B, Location: 75m S, Permit: HP3736UZ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Hatfield Farm Poultry Unit Plains Lane Sandtoft Road Lincolnshire DN8 5TQ
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	-	Below Reporting Threshold	15 01 01	paper and cardboard packaging	0

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	-	Below Reporting Threshold	15 01 02	plastic packaging	0
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	-	Below Reporting Threshold	15 01 03	wooden packaging	0
D1	Deposit into or onto land (eg landfill, etc.)	-	Below Reporting Threshold	15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	0
D1	Deposit into or onto land (eg landfill, etc.)	-	Below Reporting Threshold	20 03 01	mixed municipal waste	0

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

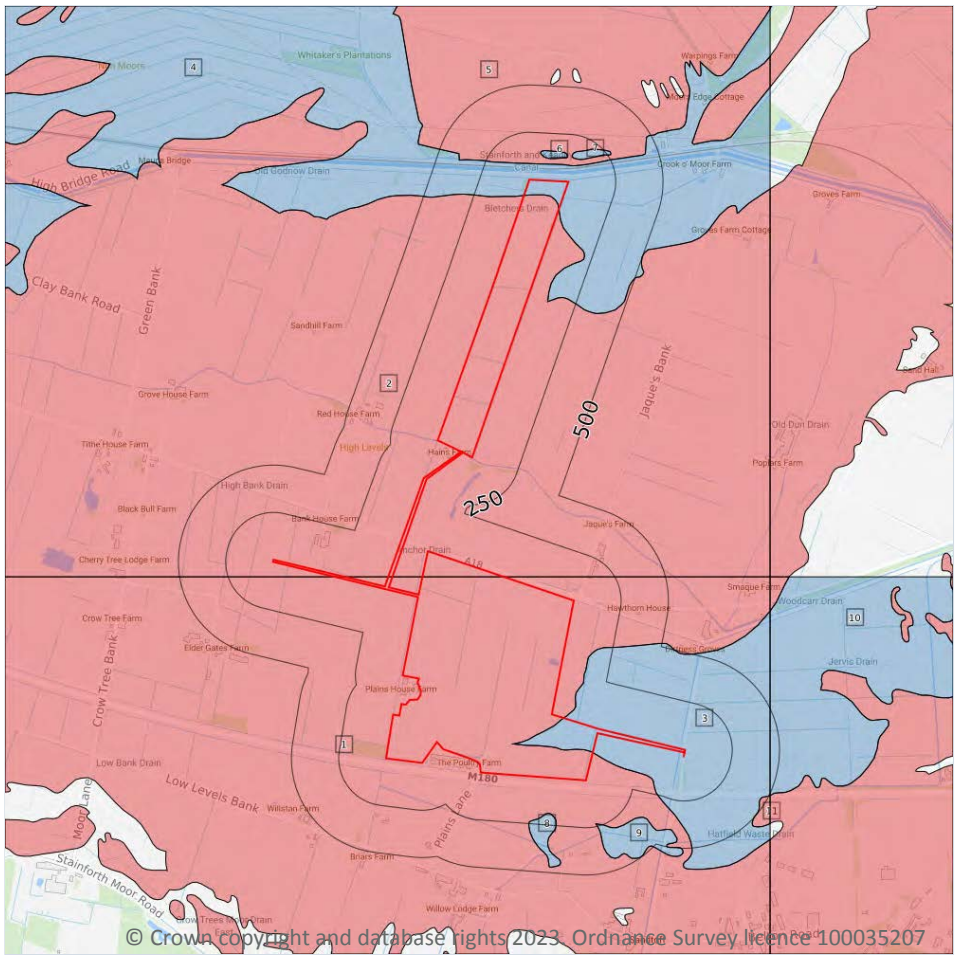
4.21 Pollution inventory radioactive waste

Records within 500m	**0**

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m	11

Aquifer status of groundwater held within superficial geology.

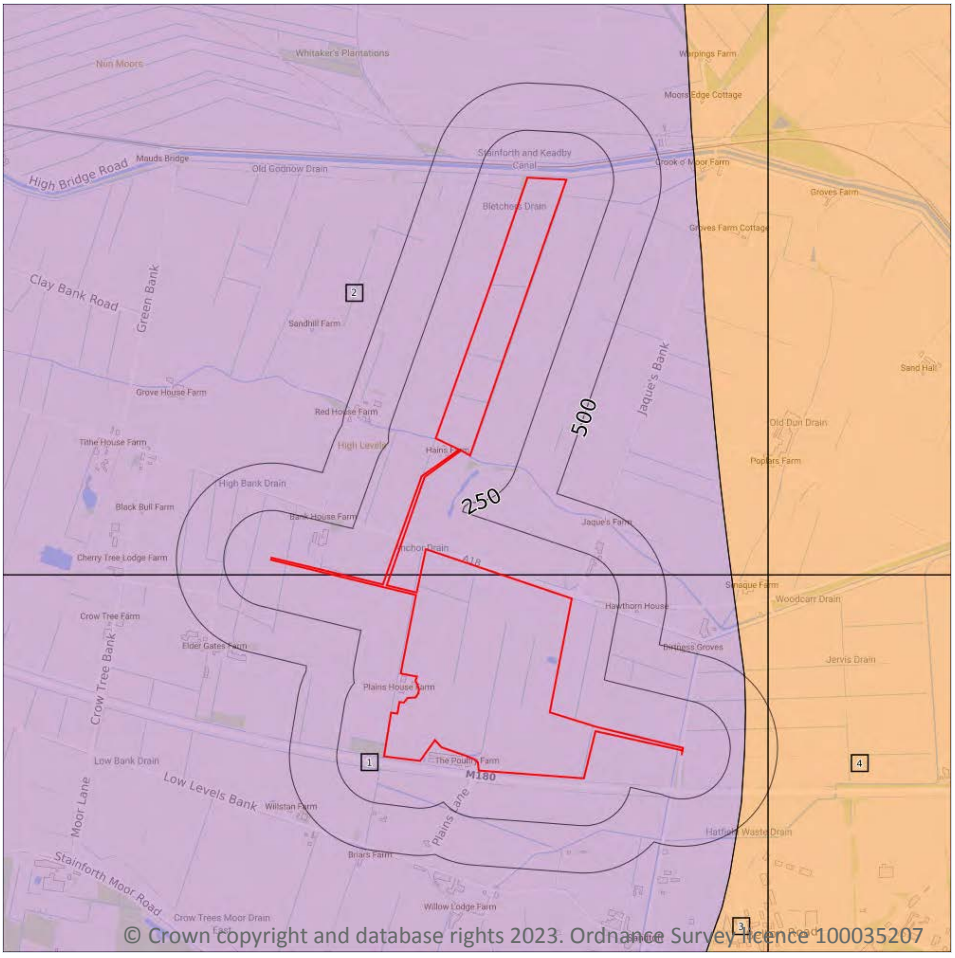
Features are displayed on the Hydrogeology map on **page 34**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
4	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
5	85m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
6	117m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
7	128m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
8	188m S	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
9	236m SE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
10	450m SE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
11	469m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

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

5.2 Bedrock aquifer

Records within 500m	4

Aquifer status of groundwater held within bedrock geology.

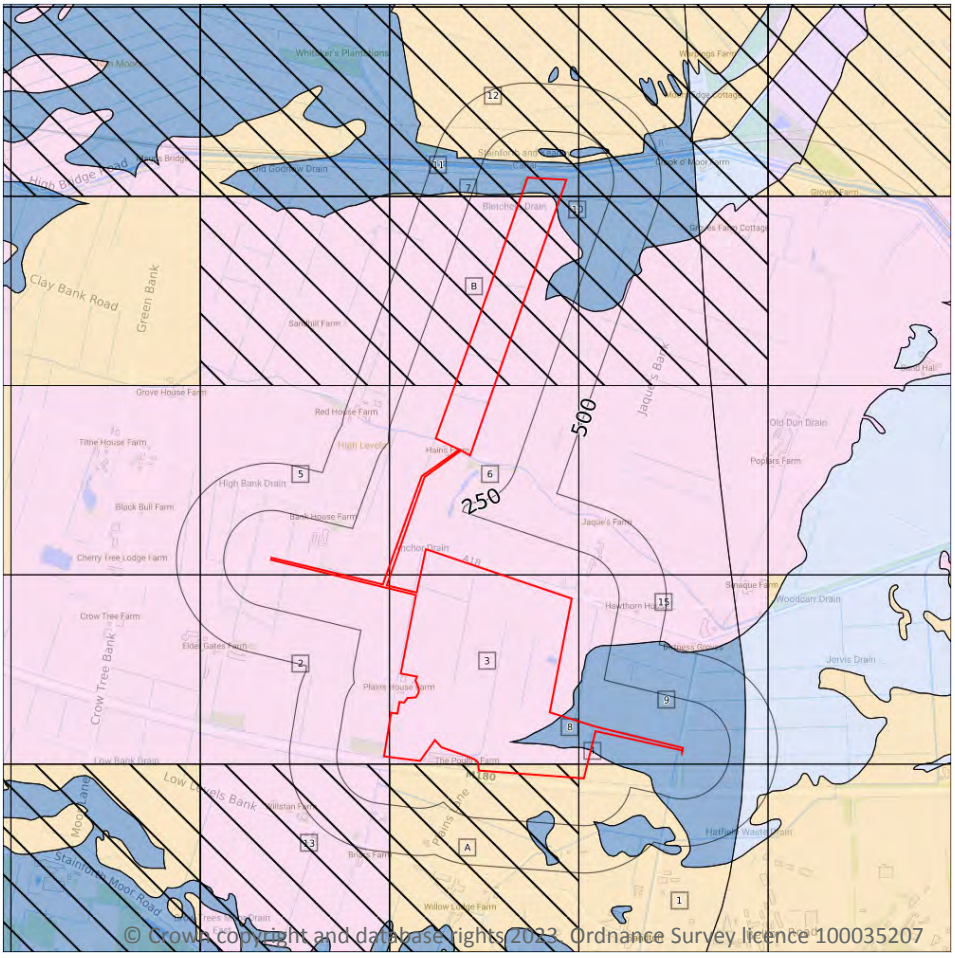
Features are displayed on the Bedrock aquifer map on **page 36**

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

ID	Location	Designation	Description
3	326m SE	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers
4	450m SE	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	15

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 38**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
3	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
4	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
5	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
6	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
7	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
8	On site	Summary Classification: Principal bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
9	On site	Summary Classification: Principal bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
10	On site	Summary Classification: Principal bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
11	On site	Summary Classification: Principal bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
A	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
B	**On site**	**Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: Intermediate Infiltration value: 40-70% Dilution value: <300mm/year**	**Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed**
13	37m SW	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
15	37m E	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

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

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

5.5 Groundwater vulnerability- local information

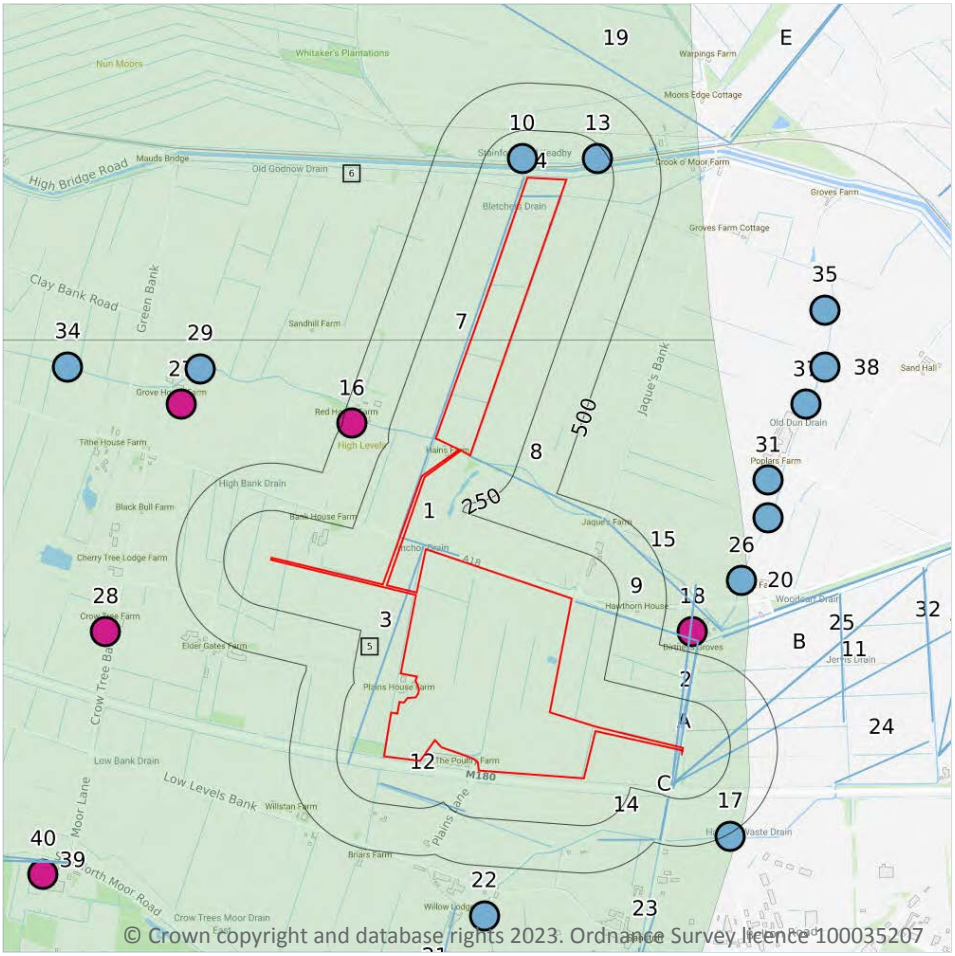
Records on site	3

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

ID	Summary	Additional information
12	**Increased vulnerability of aquifers due to limited protection by superficial deposits and a high water table**	**Local studies indicate a thin unsaturated zone and uncertainties in the extent and thickness of peat cover**
A	**Increased vulnerability of aquifers due to limited protection by superficial deposits and a high water table**	**Local studies indicate a thin unsaturated zone and uncertainties in the extent and thickness of peat cover**
B	**Increased vulnerability of aquifers due to limited protection by superficial deposits and a high water table**	**Local studies indicate a thin unsaturated zone and uncertainties in the extent and thickness of peat cover**

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

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	6

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 43**

ID	Location	Details	
16	451m NW	Status: Historical Licence No: 03/28/83/0016 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: RED HOUSE FARM - BOREHOLE Data Type: Point Name: B I & A ATKINSON Easting: 472800 Northing: 410800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 02/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
18	608m E	Status: Historical Licence No: 03/28/83/0090 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: DIRTNESS BRIDGE FARM,CROWLE - BOREHOLE Data Type: Point Name: CUNDALL Easting: 474600 Northing: 409700	Annual Volume (m^3): 5727.96 Max Daily Volume (m^3): 81.828 Original Application No: - Original Start Date: 07/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
27	939m NW	Status: Historical Licence No: 03/28/83/0023 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: GROVE FARM - BOREHOLE Data Type: Point Name: J S BROOKE AND SONS Easting: 471900 Northing: 410900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 13/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
28	952m W	Status: Historical Licence No: 03/28/83/0011 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: CROWTREE FARMS - BOREHOLE Data Type: Point Name: J TOWN & SONS Easting: 471500 Northing: 409700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 29/10/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	1546m SW	Status: Historical Licence No: 03/28/83/0019 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: LINDHOLME HALL - BOREHOLES Data Type: Point Name: M LYON AND SONS Easting: 472200 Northing: 407700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 06/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -

ID	Location	Details	
40	1905m SW	Status: Historical Licence No: 03/28/83/0220 Details: Process water Direct Source: Groundwater Midlands Region Point: HATFIELD MOORS - UNDERGROUND STRATA Data Type: Point Name: THE SCOTTS COMPANY (UK) LIMITED Easting: 471170 Northing: 408420	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 06/12/1994 Expiry Date: - Issue No: 100 Version Start Date: 14/12/1998 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**65**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 43**

ID	Location	Details	
1	**On site**	**Status: Active** **Licence No: 03/28/83/0066** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: DIRNESS GROVES, CROWLE - ANCHOR DRAIN (1)** **Data Type: Line** **Name: J S BROOKE & SONS** **Easting: 473050** **Northing: 410200**	**Annual Volume (m^3): 15,274.56** **Max Daily Volume (m^3): 545.52** **Original Application No: -** **Original Start Date: 04/03/1966** **Expiry Date: -** **Issue No: 101** **Version Start Date: 21/10/1999** **Version End Date: -**
2	**On site**	**Status: Active** **Licence No: 03/28/83/0066** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: DIRTNESS GROVES,CROWLE - NORTH IDLE DRAIN** **Data Type: Line** **Name: J S BROOKE & SONS** **Easting: 474500** **Northing: 408870**	**Annual Volume (m^3): 15,274.56** **Max Daily Volume (m^3): 545.52** **Original Application No: -** **Original Start Date: 04/03/1966** **Expiry Date: -** **Issue No: 101** **Version Start Date: 21/10/1999** **Version End Date: -**

ID	Location	Details	
3	**On site**	**Status: Active** **Licence No: 03/28/83/0066** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: DIRTNESS GROVES,CROWLE - ANCHOR DRAIN (2)** **Data Type: Line** **Name: J S BROOKE & SONS** **Easting: 473180** **Northing: 410150**	**Annual Volume (m^3): 15,274.56** **Max Daily Volume (m^3): 545.52** **Original Application No: -** **Original Start Date: 04/03/1966** **Expiry Date: -** **Issue No: 101** **Version Start Date: 21/10/1999** **Version End Date: -**
4	**On site**	**Status: Active** **Licence No: 03/28/83/0066** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: DIRTNESS GROVES,CROWLE - UNNAMED DRAIN (2)** **Data Type: Line** **Name: J S BROOKE & SONS** **Easting: 473700** **Northing: 412000**	**Annual Volume (m^3): 15,274.56** **Max Daily Volume (m^3): 545.52** **Original Application No: -** **Original Start Date: 04/03/1966** **Expiry Date: -** **Issue No: 101** **Version Start Date: 21/10/1999** **Version End Date: -**
A	**On site**	**Status: Historical** **Licence No: 03/28/83/0197** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: EPWORTH & BELTON - NORTH IDLE DRAIN (3)** **Data Type: Line** **Name: Maw** **Easting: 474491** **Northing: 408890**	**Annual Volume (m^3): 36363** **Max Daily Volume (m^3): 2273** **Original Application No: -** **Original Start Date: 07/02/1995** **Expiry Date: 31/03/2014** **Issue No: 103** **Version Start Date: 29/07/2010** **Version End Date: -**
A	**On site**	**Status: Active** **Licence No: MD/028/0083/005** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: EPWORTH & BELTON - NORTH IDLE DRAIN (3)** **Data Type: Line** **Name: Maw** **Easting: 474491** **Northing: 408890**	**Annual Volume (m^3): 36,363** **Max Daily Volume (m^3): 2,273** **Original Application No: NPS/WR/012485** **Original Start Date: 01/04/2014** **Expiry Date: 31/03/2026** **Issue No: 1** **Version Start Date: 13/04/2020** **Version End Date: -**
7	4m NW	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES, CROWLE - BLETCHERS DRAIN Data Type: Line Name: J S BROOKE & SONS Easting: 473050 Northing: 410200	Annual Volume (m^3): 15,274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -

ID	Location	Details	
8	5m N	Status: Active Licence No: 03/28/83/0057 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BOATING DYKE DRAIN Data Type: Line Name: Bramhall Farming Ltd Easting: 473429 Northing: 410626	Annual Volume (m^3): 31,000 Max Daily Volume (m^3): 818 Original Application No: NPS/WR/034997 Original Start Date: 18/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2022 Version End Date: -
9	19m E	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES,CROWLE - UNNAMED DRAIN (1) Data Type: Line Name: J S BROOKE & SONS Easting: 474630 Northing: 409650	Annual Volume (m^3): 15,274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
B	98m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - WOODCARR DRAIN Data Type: Line Name: Maw Easting: 474490 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
A	98m SE	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - NORTH IDLE DRAIN Data Type: Line Name: CUNDALL Easting: 474540 Northing: 409190	Annual Volume (m^3): 9,092 Max Daily Volume (m^3): 545.50 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
B	98m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - WOODCARR DRAIN Data Type: Line Name: Maw Easting: 474491 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -

ID	Location	Details	
B	98m SE	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - WOODCARR DRAIN Data Type: Line Name: Maw Easting: 474491 Northing: 408890	Annual Volume (m^3): 36,363 Max Daily Volume (m^3): 2,273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
10	105m N	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: NEW WARP FARM - THE NORTH SOAK DRAIN (2) Data Type: Point Name: H BARKER & SONS Easting: 473700 Northing: 412200	Annual Volume (m^3): 13,638 Max Daily Volume (m^3): 1,200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
11	127m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (3) Data Type: Line Name: Maw Easting: 474490 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
12	142m SW	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT SANDTOFT Data Type: Line Name: Maw Easting: 472950 Northing: 408900	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
13	200m N	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: NEW WARP FARM - THE NORTH SOAK DRAIN (1) Data Type: Point Name: H BARKER & SONS Easting: 474100 Northing: 412200	Annual Volume (m^3): 13,638 Max Daily Volume (m^3): 1,200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -

ID	Location	Details	
C	257m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (2) Data Type: Line Name: Maw Easting: 474430 Northing: 408600	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
C	261m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (2) Data Type: Line Name: Maw Easting: 474429 Northing: 408596	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
C	261m SE	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (2) Data Type: Line Name: Maw Easting: 474429 Northing: 408596	Annual Volume (m^3): 36,363 Max Daily Volume (m^3): 2,273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
14	332m SE	Status: Active Licence No: 03/28/83/0060 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT,YORKS - CATALINE DRAIN Data Type: Line Name: DENT Easting: 474100 Northing: 408600	Annual Volume (m^3): 3,636.80 Max Daily Volume (m^3): 454.60 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
15	423m E	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - BOATING DYKE Data Type: Line Name: CUNDALL Easting: 474130 Northing: 410300	Annual Volume (m^3): 9,092 Max Daily Volume (m^3): 545.50 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -

ID	Location	Details	
17	513m SE	Status: Active Licence No: 03/28/83/0138 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT GRANGE - HATFIELD WASTE DRAIN Data Type: Point Name: T A WHITE & SONS Easting: 474800 Northing: 408620	Annual Volume (m^3): 4,546 Max Daily Volume (m^3): 655 Original Application No: - Original Start Date: 27/05/1983 Expiry Date: - Issue No: 101 Version Start Date: 31/01/2007 Version End Date: -
19	615m N	Status: Historical Licence No: 03/28/83/0072 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: CROWLE - CROOK O'MOOR DRAIN (REACH) Data Type: Line Name: DAN ALBONE & SON LTD Easting: 474800 Northing: 412280	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 05/08/1997 Expiry Date: - Issue No: 100 Version Start Date: 16/01/1998 Version End Date: -
20	620m E	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - ANCHOR DRAIN Data Type: Line Name: CUNDALL Easting: 475370 Northing: 409900	Annual Volume (m^3): 9,092 Max Daily Volume (m^3): 545.50 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
21	726m S	Status: Active Licence No: 03/28/83/0115 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WILLOW LODGE FARM,THORNE - MOOR DRAIN Data Type: Line Name: ULLEY Easting: 473130 Northing: 407350	Annual Volume (m^3): 2,273 Max Daily Volume (m^3): 545.50 Original Application No: NPS/WR/037084 Original Start Date: 30/11/1976 Expiry Date: - Issue No: 101 Version Start Date: 10/01/2022 Version End Date: -
22	761m S	Status: Active Licence No: 03/28/83/0209 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT - HATFIELD WASTE DRAIN Data Type: Point Name: J T HOPKINS & SONS Easting: 473500 Northing: 408200	Annual Volume (m^3): 10,000 Max Daily Volume (m^3): 550 Original Application No: - Original Start Date: 31/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2003 Version End Date: -

ID	Location	Details	
23	815m SE	Status: Active Licence No: 03/28/83/0060 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT,YORKS - NEW IDLE DRAIN Data Type: Line Name: DENT Easting: 474400 Northing: 408200	Annual Volume (m^3): 3,636.80 Max Daily Volume (m^3): 454.60 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
24	820m SE	Status: Active Licence No: 03/28/83/0147 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SMAQUE FARM - CATALINE DRAIN Data Type: Line Name: J S BROOKE AND SONS Easting: 475350 Northing: 408900	Annual Volume (m^3): 15,450 Max Daily Volume (m^3): 1,100 Original Application No: - Original Start Date: 02/09/1985 Expiry Date: - Issue No: 101 Version Start Date: 27/01/2000 Version End Date: -
25	860m E	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - ANCHOR DYKE Data Type: Line Name: CUNDALL Easting: 475400 Northing: 409220	Annual Volume (m^3): 9,092 Max Daily Volume (m^3): 545.50 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
D	868m E	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH ENGINE DRAIN Data Type: Line Name: Maw Easting: 475030 Northing: 409810	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
D	869m E	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH ENGINE DRAIN Data Type: Line Name: Maw Easting: 475030 Northing: 409811	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -

ID	Location	Details	
D	869m E	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH ENGINE DRAIN Data Type: Line Name: Maw Easting: 475030 Northing: 409811	Annual Volume (m^3): 36,363 Max Daily Volume (m^3): 2,273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
E	886m NE	Status: Historical Licence No: 03/28/83/0072 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: CROWLE - CROOK O'MOOR DRAIN (REACH) Data Type: Line Name: DAN ALBONE & SON LTD Easting: 474800 Northing: 412280	Annual Volume (m^3): 31000 Max Daily Volume (m^3): 1000 Original Application No: - Original Start Date: 05/08/1997 Expiry Date: - Issue No: 101 Version Start Date: 30/05/2007 Version End Date: -
E	901m NE	Status: Active Licence No: 03/28/83/0072 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: CROWLE - CROOK O'MOOR DRAIN (REACH) Data Type: Line Name: DAN ALBONE & SON LTD Easting: 474805 Northing: 412320	Annual Volume (m^3): 31,000 Max Daily Volume (m^3): 1,000 Original Application No: NPS/WR/031598 Original Start Date: 05/08/1997 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2020 Version End Date: -
26	902m E	Status: Active Licence No: 03/28/83/0255 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SMAQUE FARM - OLD RIVER DON Data Type: Point Name: J S BROOKE AND SONS Easting: 474860 Northing: 409970	Annual Volume (m^3): 15,450 Max Daily Volume (m^3): 1,100 Original Application No: A/28/83/130 Original Start Date: 28/01/2000 Expiry Date: - Issue No: 1 Version Start Date: 28/01/2000 Version End Date: -
F	941m S	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (1) Data Type: Line Name: Maw Easting: 474210 Northing: 407450	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -

ID	Location	Details	
F	944m S	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (1) Data Type: Line Name: Maw Easting: 474210 Northing: 407452	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
F	944m S	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (1) Data Type: Line Name: Maw Easting: 474210 Northing: 407452	Annual Volume (m^3): 36,363 Max Daily Volume (m^3): 2,273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
29	1068m NW	Status: Active Licence No: 03/28/83/0068 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: GROVE HOUSE CROWLE - BOATING DYKE POINT B Data Type: Point Name: J S BROOKE & SONS Easting: 472000 Northing: 411090	Annual Volume (m^3): 5,437.02 Max Daily Volume (m^3): 909.20 Original Application No: - Original Start Date: 10/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
30	1121m E	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (1) Data Type: Point Name: H BARKER & SONS Easting: 475000 Northing: 410300	Annual Volume (m^3): 13,638 Max Daily Volume (m^3): 1,200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
31	1211m E	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (2) Data Type: Point Name: H BARKER & SONS Easting: 475000 Northing: 410500	Annual Volume (m^3): 13,638 Max Daily Volume (m^3): 1,200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -

ID	Location	Details	
32	1326m E	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - HATFIELD WASTE DRAIN Data Type: Line Name: CUNDALL Easting: 475870 Northing: 409220	Annual Volume (m^3): 9,092 Max Daily Volume (m^3): 545.50 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
G	1350m E	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - HATFIELD WASTE DRAIN Data Type: Line Name: Maw Easting: 475900 Northing: 409050	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
33	1350m E	Status: Active Licence No: 03/28/83/0201 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BELTON - HATFIELD WASTE DRAIN Data Type: Line Name: H BARKER & SONS Easting: 475900 Northing: 409040	Annual Volume (m^3): 45,000 Max Daily Volume (m^3): 2,945 Original Application No: - Original Start Date: 21/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 30/05/1995 Version End Date: -
G	1353m E	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - HATFIELD WASTE DRAIN Data Type: Line Name: Maw Easting: 475903 Northing: 409046	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
G	1353m E	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - HATFIELD WASTE DRAIN Data Type: Line Name: Maw Easting: 475903 Northing: 409046	Annual Volume (m^3): 36,363 Max Daily Volume (m^3): 2,273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -

ID	Location	Details	
-	1379m S	Status: Historical Licence No: 03/28/83/0273 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR, EPWORTH, DONCASTER-MOOR DRAIN Data Type: Line Name: TOOTHILL Easting: 473040 Northing: 407390	Annual Volume (m^3): 13301 Max Daily Volume (m^3): 1246 Original Application No: - Original Start Date: 04/11/2005 Expiry Date: - Issue No: 1 Version Start Date: 04/11/2005 Version End Date: -
-	1381m S	Status: Historical Licence No: 03/28/83/0226 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - MOOR DRAIN Data Type: Line Name: TRUSTEES OF THE VAN ZWANENBERG WEST HALE Easting: 473040 Northing: 407390	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 13/11/1995 Expiry Date: - Issue No: 100 Version Start Date: 15/05/1998 Version End Date: -
-	1381m S	Status: Active Licence No: 03/28/83/0273 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR, EPWORTH, DONCASTER-MOOR DRAIN Data Type: Line Name: W G S Platt & Sons Easting: 473040 Northing: 407390	Annual Volume (m^3): 13,301 Max Daily Volume (m^3): 1,246 Original Application No: NPS/WR/009637 Original Start Date: 04/11/2005 Expiry Date: - Issue No: 3 Version Start Date: 04/01/2012 Version End Date: -
-	1381m S	Status: Active Licence No: 03/28/83/0061 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - MOOR DRAIN Data Type: Line Name: HINZ Easting: 473040 Northing: 407390	Annual Volume (m^3): 10,870 Max Daily Volume (m^3): 324 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2002 Version End Date: -

ID	Location	Details	
34	1476m NW	Status: Active Licence No: 03/28/83/0068 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: GROVE HOUSE,CROWLE - BOATING DYKE POINT A Data Type: Point Name: J S BROOKE & SONS Easting: 471300 Northing: 411100	Annual Volume (m^3): 5,437.02 Max Daily Volume (m^3): 909.20 Original Application No: - Original Start Date: 10/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
35	1516m NE	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (5) Data Type: Point Name: H BARKER & SONS Easting: 475300 Northing: 411400	Annual Volume (m^3): 13,638 Max Daily Volume (m^3): 1,200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
37	1587m NE	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (3) Data Type: Point Name: H BARKER & SONS Easting: 475200 Northing: 410900	Annual Volume (m^3): 13,638 Max Daily Volume (m^3): 1,200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
38	1615m NE	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (4) Data Type: Point Name: H BARKER & SONS Easting: 475300 Northing: 411100	Annual Volume (m^3): 13,638 Max Daily Volume (m^3): 1,200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
-	1630m S	Status: Historical Licence No: 03/28/83/0226 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - NORTH IDLE DRAIN Data Type: Line Name: TRUSTEES OF THE VAN ZWANENBERG WEST HALE Easting: 474000 Northing: 406300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 13/11/1995 Expiry Date: - Issue No: 100 Version Start Date: 15/05/1998 Version End Date: -

ID	Location	Details	
-	1630m S	Status: Active Licence No: 03/28/83/0061 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - NORTH IDLE DRAIN Data Type: Line Name: HINZ Easting: 474000 Northing: 406300	Annual Volume (m^3): 10,870 Max Daily Volume (m^3): 324 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2002 Version End Date: -
-	1630m S	Status: Active Licence No: 03/28/83/0272 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - NORTH IDLE DRAIN Data Type: Line Name: G J MELLOR & PARTNERS Easting: 474000 Northing: 406300	Annual Volume (m^3): 51,739 Max Daily Volume (m^3): 1,246 Original Application No: A/28/83/145 Original Start Date: 17/10/2005 Expiry Date: - Issue No: 1 Version Start Date: 01/04/2006 Version End Date: -
39	1762m SW	Status: Active Licence No: MD/028/0083/050 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: THE HATFIELD WASTE DRAIN Data Type: Line Name: Bibby Easting: 470910 Northing: 408517	Annual Volume (m^3): 760 Max Daily Volume (m^3): 42 Original Application No: NPS/WR/032906 Original Start Date: 17/01/2020 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 17/01/2020 Version End Date: -
J	1762m SW	Status: Historical Licence No: 03/28/83/0243 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT HATFIELD - THE HATFIELD WASTE DRAIN (REACH 2) Data Type: Line Name: BIBBY Easting: 469910 Northing: 408520	Annual Volume (m^3): 5000 Max Daily Volume (m^3): 275 Original Application No: - Original Start Date: 27/03/1998 Expiry Date: - Issue No: 101 Version Start Date: 24/03/1999 Version End Date: -
J	1762m SW	Status: Historical Licence No: 03/28/83/0243 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT HATFIELD - THE HATFIELD WASTE DRAIN (REACH 2) Data Type: Line Name: BIBBY Easting: 469910 Northing: 408520	Annual Volume (m^3): 5,000 Max Daily Volume (m^3): 275 Original Application No: - Original Start Date: 27/03/1998 Expiry Date: - Issue No: 101 Version Start Date: 24/03/1999 Version End Date: -

ID	Location	Details	
-	1908m E	Status: Historical Licence No: 03/28/83/0057 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BELTON GRANGE - RIVER TORNE Data Type: Line Name: Bramhall Farming Ltd Easting: 476100 Northing: 410200	Annual Volume (m^3): 34,095 Max Daily Volume (m^3): 818 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2020 Version End Date: -
-	1935m E	Status: Active Licence No: 03/28/83/0057 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: HATFIELD WASTE DRAIN NEAR SANDTOFT Data Type: Line Name: Bramhall Farming Ltd Easting: 476150 Northing: 410175	Annual Volume (m^3): 31,000 Max Daily Volume (m^3): 818 Original Application No: NPS/WR/034997 Original Start Date: 18/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2022 Version End Date: -
L	1967m NE	Status: Historical Licence No: 03/28/84/0010 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: CROWLE - OLD RIVER DRAIN Data Type: Line Name: H BARKER & SONS Easting: 475900 Northing: 412000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 31/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 30/05/1995 Version End Date: -
L	1967m NE	Status: Active Licence No: 03/28/83/0259 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: CROWLE - OLD RIVER DRAIN Data Type: Line Name: DAN ALBONE & SON LTD Easting: 475900 Northing: 412000	Annual Volume (m^3): 24,000 Max Daily Volume (m^3): 2,945 Original Application No: NPS/WR/035308 Original Start Date: 21/11/2001 Expiry Date: - Issue No: 2 Version Start Date: 27/04/2021 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	**0**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

5.9 Source Protection Zones

Records within 500m	2

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 43**

ID	Location	Type	Description
5	**On site**	**3**	**Total catchment**
6	**On site**	**3**	**Total catchment**

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

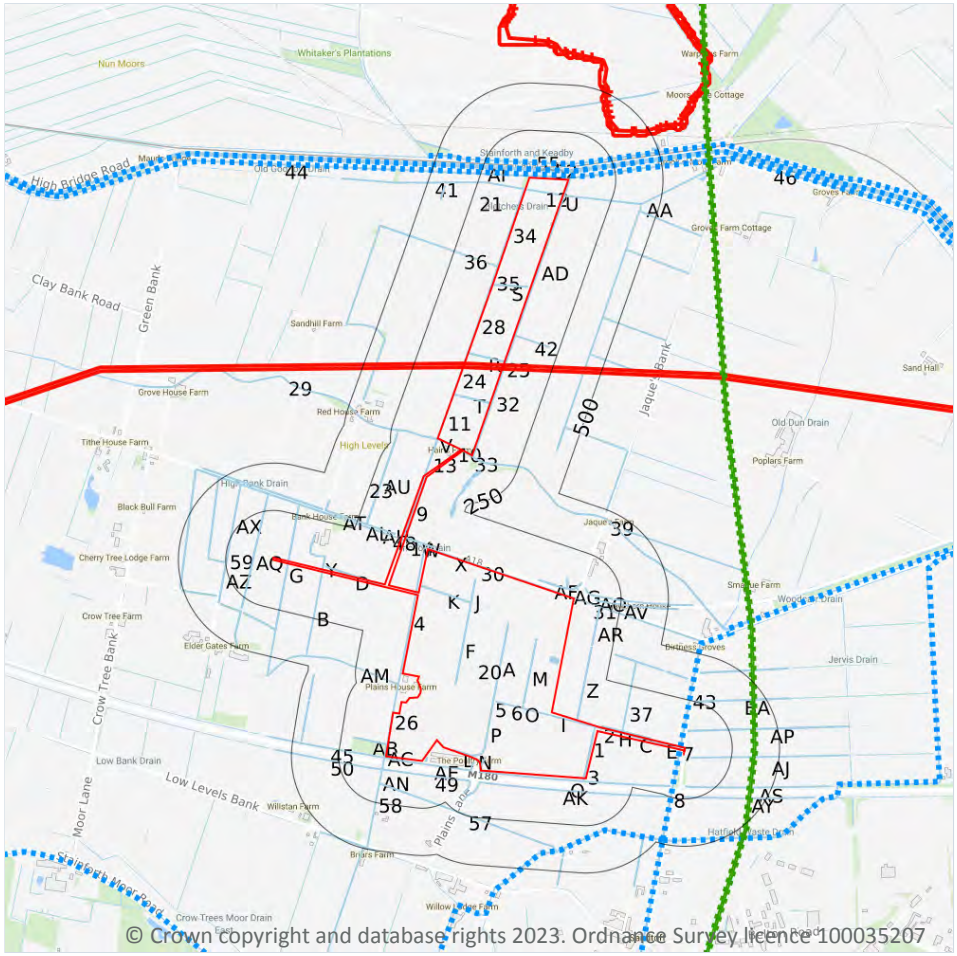
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



6.1 Water Network (OS MasterMap)

Records within 250m	119

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

Features are displayed on the Hydrology map on **page 60**

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

ID	Location	Type of water feature	Ground level	Permanence	Name
2	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
3	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
4	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
5	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
6	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	North Idle Drain
8	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	North Idle Drain
9	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
10	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Boating Dike Drain
11	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
12	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
13	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
14	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	High Bank Drain

ID	Location	Type of water feature	Ground level	Permanence	Name
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
N	On site	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
S	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
T	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
U	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
24	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
V	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
W	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
25	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
26	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain

ID	Location	Type of water feature	Ground level	Permanence	Name
V	2m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Boating Dike Drain
28	2m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
29	2m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Boating Dike Drain
X	2m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
30	2m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Anchor Drain
31	2m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
Y	3m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	4m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
U	4m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
AB	4m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AC	4m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
C	5m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Plains Drain
32	5m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
33	5m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
34	5m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
U	6m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
AD	6m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
35	6m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
36	6m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	7m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Plains Drain
37	7m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	7m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Plains Drain
39	7m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Boating Dike Drain
41	7m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Old Godnow Drain
U	7m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
42	8m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
AE	8m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
W	8m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Anchor Drain
43	8m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	North Idle Drain
AA	8m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bletchers Drain
44	9m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	South Soak Drain
AC	9m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
45	11m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AC	11m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
W	12m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
U	12m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	South Soak Drain
U	14m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
46	14m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	South Soak Drain
AF	33m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
AG	37m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AG	37m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AH	38m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AI	44m N	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Sheffield and South Yorkshire Navigation
AJ	46m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AG	49m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
48	56m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	High Bank Drain
AL	61m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	High Bank Drain
AG	61m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AM	62m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AK	62m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	62m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	62m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
Y	67m W	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	67m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	70m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
49	70m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
50	72m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AN	72m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
AO	79m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
52	81m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	North Soak Drain
AP	90m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
55	103m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AQ	106m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Y	114m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AO	117m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
Y	118m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AR	141m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
57	146m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
58	146m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
AS	181m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AT	198m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AU	198m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AV	205m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AV	212m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	240m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
59	240m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AZ	241m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AY	241m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
BA	249m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**44**

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

Features are displayed on the Hydrology map on **page 60**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	**2**

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

Features are displayed on the Hydrology map on **page 60**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
20	**On site**	**River**	**Hatfield Waste Drain Catchment (trib of Torne/Three Rivers)**	**GB104028064330**	**Isle of Axholme**	**Idle and Torne**
21	**On site**	**River**	**North Soak Drain Catchment (trib of Torne/Three Rivers)**	**GB104028064350**	**Isle of Axholme**	**Idle and Torne**

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

6.4 WFD Surface water bodies

Records identified	3

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

Features are displayed on the Hydrology map on **page 60**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
22	**On site**	**River**	**Hatfield Waste Drain Catchment (trib of Torne/Three Rivers)**	**GB104028064330**	**Poor**	**Fail**	**Poor**	**2019**
47	19m N	River	North Soak Drain Catchment (trib of Torne/Three Rivers)	GB104028064350	Moderate	Fail	Moderate	2019
AI	45m N	Canal	Sheffield and South Yorkshire Navigation (New Junction and Stainf	GB70410281	Moderate	Fail	Good	2019

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

6.5 WFD Groundwater bodies

Records on site	1

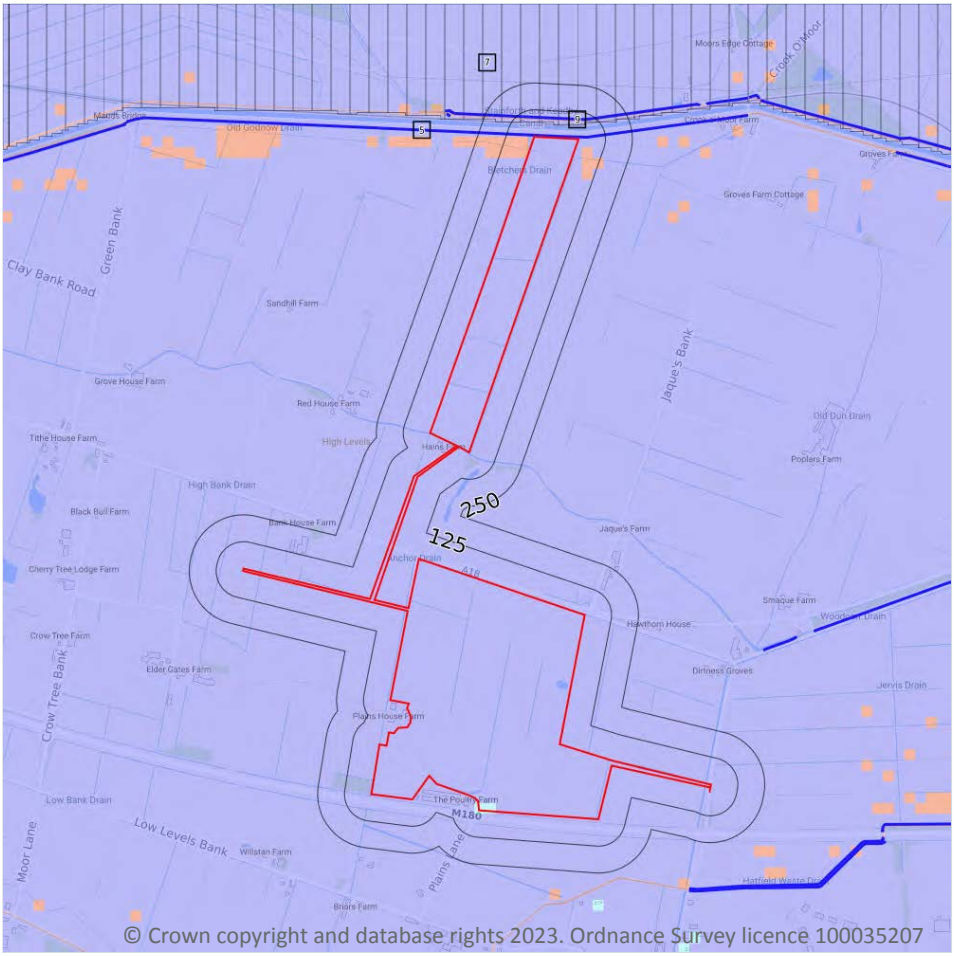
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 60**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
23	**On site**	**Idle Torne - PT Sandstone Nottinghamshire& Doncaster**	**GB40401G301500**	**Poor**	**Poor**	**Poor**	**2019**

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

7 River and coastal flooding



Site Outline

Search buffers in metres (m)

River and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m	5

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on **page 72**

Distance	Flood risk category
On site	**High**
0 - 50m	High

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

7.2 Historical Flood Events

Records within 250m	**0**

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

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

7.3 Flood Defences

Records within 250m	**2**

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

Features are displayed on the River and coastal flooding map on **page 72**

ID	Location	Update
5	7m N	08/11/2022
9	91m N	08/11/2022

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	**1**

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

Features are displayed on the River and coastal flooding map on **page 72**

ID	Location	
7	58m N	Area benefiting from flood defences

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

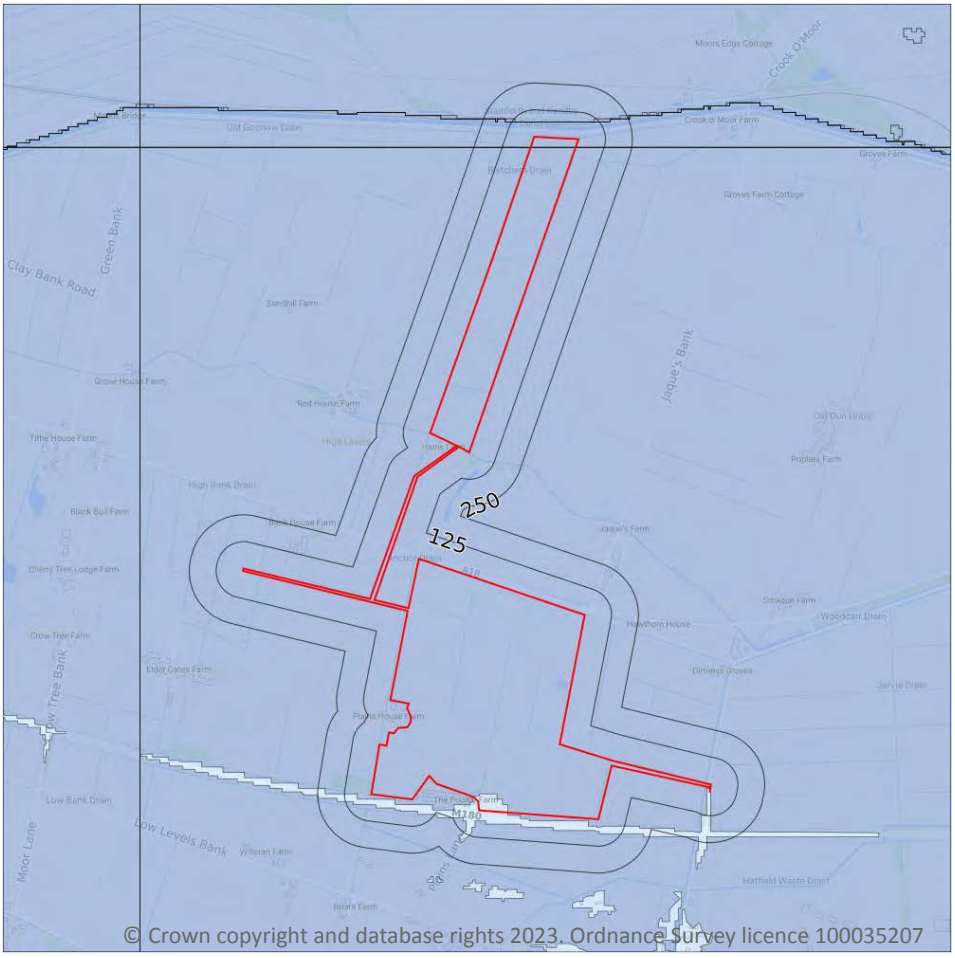
7.5 Flood Storage Areas

Records within 250m	**0**

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

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

River and coastal flooding - Flood Zones



Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

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

Features are displayed on the River and coastal flooding map on **page 72**

Location	Type
On site	**Zone 2 - (Fluvial /Tidal Models)**

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

7.7 Flood Zone 3

Records within 50m	1

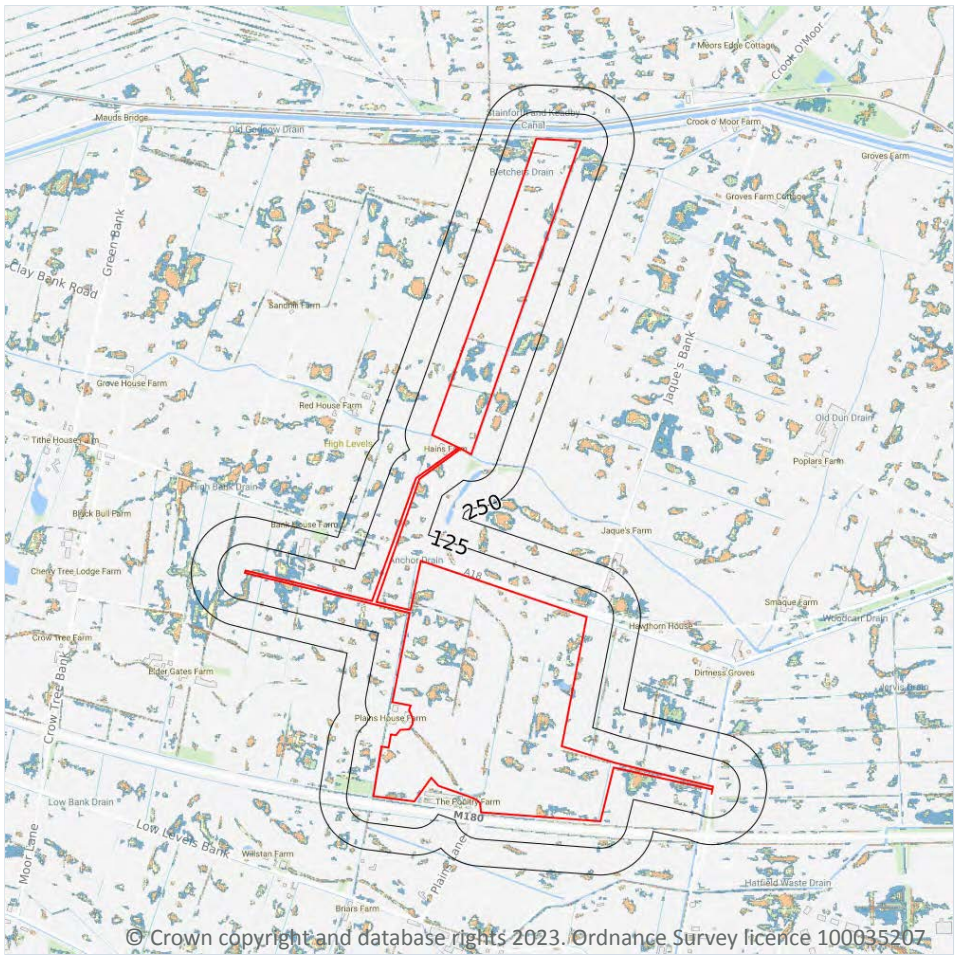
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 72**

Location	Type
On site	**Zone 3 - (Fluvial /Tidal Models)**

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

8 Surface water flooding



8.1 Surface water flooding

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

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

Features are displayed on the Surface water flooding map on **page 77**

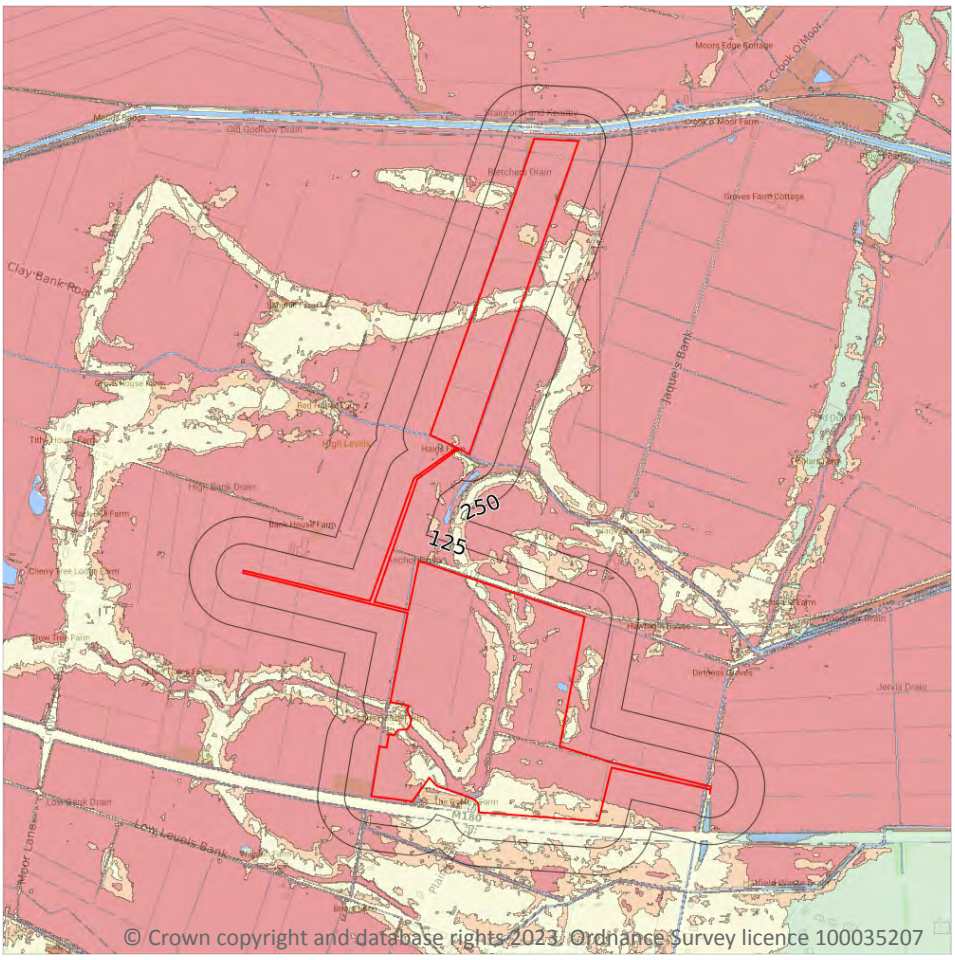
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Greater than 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

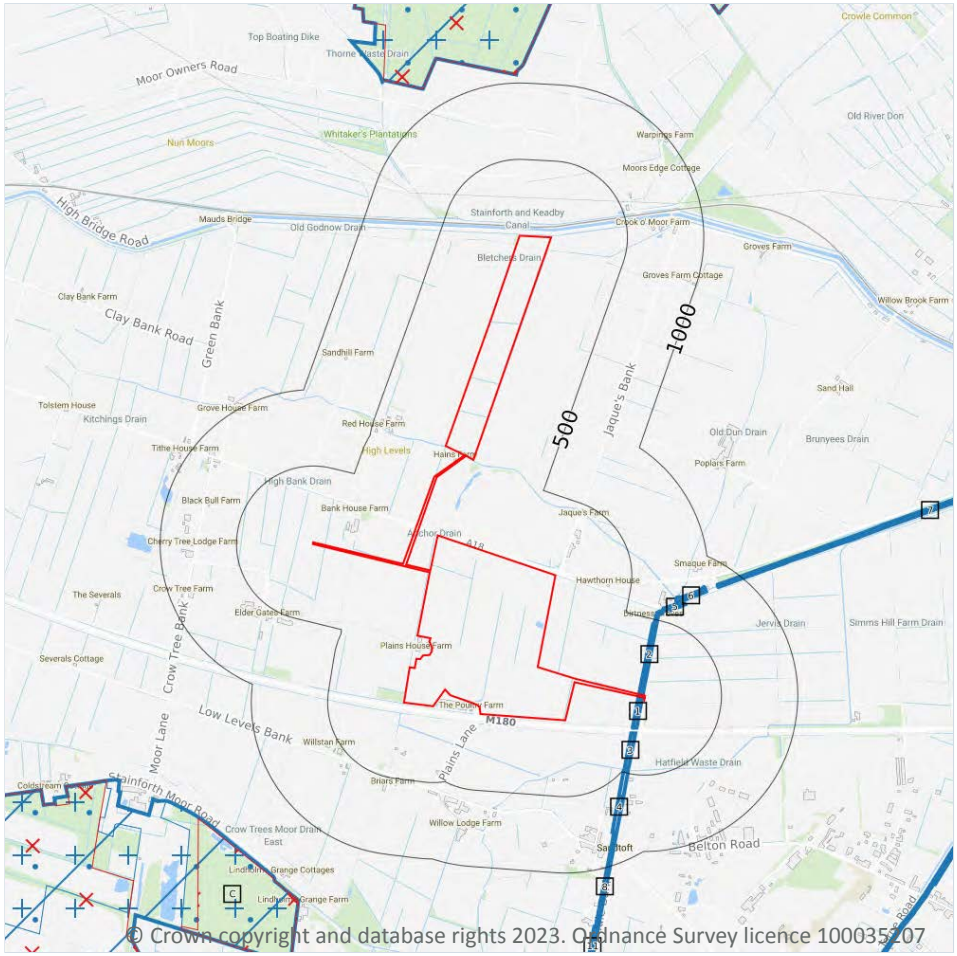
Highest risk on site	**High**
Highest risk within 50m	**High**

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

Features are displayed on the Groundwater flooding map on **page 79**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



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Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Special Areas of Conservation (SAC)

Special Protection Areas (SPA)

National Nature Reserves (NNR)

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	11

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 80**

ID	Location	Name	Data source
1	**On site**	**Hatfield Chase Ditches**	**Natural England**

ID	Location	Name	Data source
2	5m SE	Hatfield Chase Ditches	Natural England
3	234m SE	Hatfield Chase Ditches	Natural England
4	485m SE	Hatfield Chase Ditches	Natural England
5	568m E	Hatfield Chase Ditches	Natural England
6	642m E	Hatfield Chase Ditches	Natural England
7	858m E	Hatfield Chase Ditches	Natural England
8	907m SE	Hatfield Chase Ditches	Natural England
A	1055m N	Thorne, Crowle and Goole Moors	Natural England
11	1338m S	Hatfield Chase Ditches	Natural England
B	1424m SW	Hatfield Moors	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	**0**

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	**2**

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

Features are displayed on the Environmental designations map on **page 80**

ID	Location	Name	Features of interest	Habitat description	Data source
A	1055m N	Thorne Moor	Active raised bogs; Degraded raised bog.	Heath, Scrub, Maquis and Garrigue, Phygrana; Inland water bodies (Standing water, Running water); Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Broad-leaved deciduous woodland; Bogs, Marshes, Water fringed vegetation, Fens	Natural England
B	1424m SW	Hatfield Moor	Degraded raised bog.	Heath, Scrub, Maquis and Garrigue, Phygrana; Inland water bodies (Standing water, Running water); Other arable land; Bogs, Marshes, Water fringed vegetation, Fens; Broad-leaved deciduous woodland; Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Coniferous woodland	Natural England

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

10.4 Special Protection Areas (SPA)

Records within 2000m **4**

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

Features are displayed on the Environmental designations map on **page 80**

ID	Location	Name	Species of interest	Habitat description	Data source
9	1055m N	Thorne & Hatfield Moors	European nightjar	Inland water bodies (Standing water, Running water); Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Broad-leaved deciduous woodland; Coniferous woodland; Bogs, Marshes, Water fringed vegetation, Fens; Heath, Scrub, Maquis and Garrigue, Phygrana	Natural England
C	1424m SW	Thorne & Hatfield Moors	European nightjar	Inland water bodies (Standing water, Running water); Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Broad-leaved deciduous woodland; Coniferous woodland; Bogs, Marshes, Water fringed vegetation, Fens; Heath, Scrub, Maquis and Garrigue, Phygrana	Natural England
12	1834m NE	Thorne & Hatfield Moors	European nightjar	Inland water bodies (Standing water, Running water); Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Broad-leaved deciduous woodland; Coniferous woodland; Bogs, Marshes, Water fringed vegetation, Fens; Heath, Scrub, Maquis and Garrigue, Phygrana	Natural England

ID	Location	Name	Species of interest	Habitat description	Data source
13	1910m SW	Thorne & Hatfield Moors	European nightjar	Inland water bodies (Standing water, Running water); Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Broad-leaved deciduous woodland; Coniferous woodland; Bogs, Marshes, Water fringed vegetation, Fens; Heath, Scrub, Maquis and Garrigue, Phygrana	Natural England

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

10.5 National Nature Reserves (NNR)

Records within 2000m	**2**

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

Features are displayed on the Environmental designations map on **page 80**

ID	Location	Name	Data source
10	1055m N	Humberhead Peatlands	Natural England
C	1432m SW	Humberhead Peatlands	Natural England

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	**0**

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

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

10.7 Designated Ancient Woodland

Records within 2000m	**0**

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

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	0

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

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	7

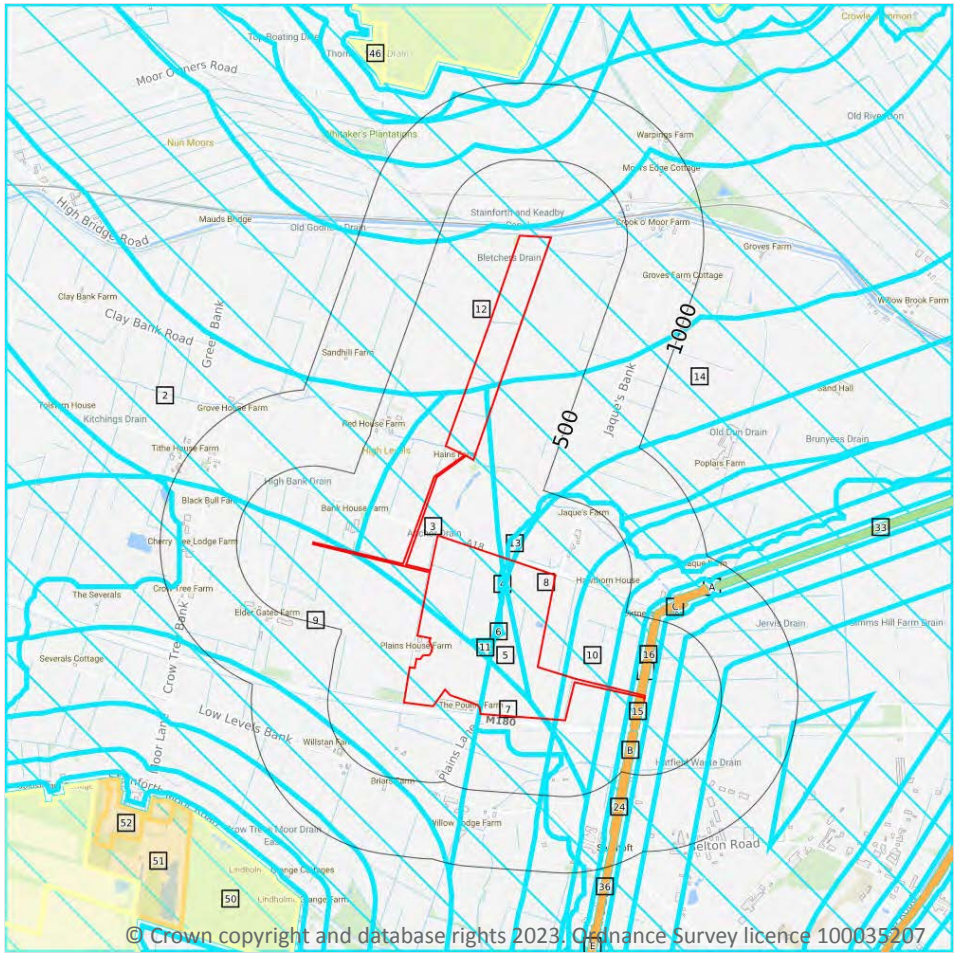
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	**R Torne / Three Rivers from Mother Dr to R Trent NVZ**	**Surface Water**	**351**	**Existing**

Location	Name	Type	NVZ ID	Status
On site	**R Torne / Three Rivers from Mother Dr to R Trent NVZ**	**Surface Water**	**351**	**Existing**
On site	**North Soak Drain (trib of R Torne / Three Rivers) NVZ**	**Surface Water**	**352**	**Existing**
158m N	North Soak Drain (trib of R Torne / Three Rivers) NVZ	Surface Water	352	Existing
924m SW	Nottinghamshire	Groundwater	40	Existing
1879m N	Swinefleet Warping Drain Source to River Ouse NVZ	Surface Water	281	Existing
1951m N	Swinefleet Warping Drain Source to River Ouse NVZ	Surface Water	281	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	16

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 87**

ID	Location	Type of developments requiring consultation
1	**On site**	**All applications - All planning applications.**

ID	Location	Type of developments requiring consultation
2	**On site**	**Infrastructure - Airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.**
3	**On site**	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**

ID	Location	Type of developments requiring consultation
4	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**
5	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**

ID	Location	Type of developments requiring consultation
6	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**
7	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 50 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**

ID	Location	Type of developments requiring consultation
8	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**
9	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Residential - Residential development of 50 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**

ID	Location	Type of developments requiring consultation
10	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any development that could cause air pollution (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores). Combustion - All general combustion processes. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management. Composting - Any composting proposal. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**
11	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**

ID	Location	Type of developments requiring consultation
12	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Residential - Residential development of 50 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**
13	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**

ID	Location	Type of developments requiring consultation
14	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**
A	On site	**All applications - All planning applications - except householder applications.**
A	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 50 units or more. Rural residential - Any residential development of 10 or more houses outside existing settlements/urban areas. Air pollution - Any development that could cause air pollution or dust either in its construction or operation (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores). Combustion - All general combustion processes. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management. Composting - Any composting proposal. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	16

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on **page 87**

ID: 15
Location: On site
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 16
Location: 5m SE
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: B
Location: 234m SE
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 24
Location: 485m SE
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: C
Location: 568m E
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: C
Location: 642m E
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 33
Location: 858m E
SSSI name: Hatfield Chase Ditches
Unit name: Ned - Dirtness Pumping Station To Belton Grange
Broad habitat: Standing Open Water And Canals
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Favourable	30/10/2018

ID: 36
Location: 907m SE
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 42
Location: 1055m N
SSSI name: Thorne, Crowle and Goole Moors
Unit name: Pony Bridge Wood
Broad habitat: Bogs - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Mixed: Lowland damp grassland, Lowland heath, Scrub, Woodland	Favourable	22/12/2021
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - Recovering	15/11/2010
Invert. assemblage W312 sphagnum bog	Unfavourable - Recovering	15/11/2010
Raised bog (lowland)	Unfavourable - Recovering	15/11/2010

ID: E
Location: 1338m S
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 46
Location: 1350m N
SSSI name: Thorne, Crowle and Goole Moors
Unit name: Burtwistle's Land
Broad habitat: Bogs - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Mixed: Lowland damp grassland, Lowland heath, Scrub, Woodland	Favourable	22/12/2021
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - Recovering	04/10/2010
Invert. assemblage W312 sphagnum bog	Unfavourable - Recovering	04/10/2010
Raised bog (lowland)	Unfavourable - Recovering	04/10/2010

ID: 50
Location: 1424m SW
SSSI name: Hatfield Moors
Unit name: Belton's Wood Spa
Broad habitat: Bogs - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Lowland heath	Favourable	12/04/2022
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - Recovering	30/07/2004
Invert. assemblage W312 sphagnum bog	Not Recorded	01/01/1900
Raised bog (lowland)	Unfavourable - Recovering	07/01/2021

ID: 51
Location: 1571m SW
SSSI name: Hatfield Moors
Unit name: Stainforth Moor East Spa
Broad habitat: Bogs - Lowland
Condition: Unfavourable - No change
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Lowland heath	Favourable	12/04/2022
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - No change	18/03/2013
Invert. assemblage W312 sphagnum bog	Unfavourable - No change	18/03/2013
Raised bog (lowland)	Unfavourable - No change	18/03/2013

ID: 52
Location: 1652m SW
SSSI name: Hatfield Moors
Unit name: Peat Works
Broad habitat: Bogs - Lowland
Condition: Unfavourable - No change
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Lowland heath	Favourable	12/04/2022
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - No change	15/11/2010

ID: 56
Location: 1834m NE
SSSI name: Thorne, Crowle and Goole Moors
Unit name: Crowle Southern Reserve
Broad habitat: Bogs - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015

Feature name	Feature condition	Date of assessment
Assemblages of breeding birds - Mixed: Lowland damp grassland, Lowland heath, Scrub, Woodland	Favourable	22/12/2021
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - Recovering	04/10/2012
Invert. assemblage W312 sphagnum bog	Unfavourable - Recovering	04/10/2012
Raised bog (lowland)	Unfavourable - Recovering	04/10/2012

ID: -
Location: 1966m N
SSSI name: Thorne, Crowle and Goole Moors
Unit name: Pony Bridge Marsh
Broad habitat: Bogs - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Nightjar, Caprimulgus europaeus	Favourable	01/12/2015
Assemblages of breeding birds - Mixed: Lowland damp grassland, Lowland heath, Scrub, Woodland	Favourable	22/12/2021
H7120 Degraded raised bogs (still capable of natural regeneration)	Unfavourable - Recovering	28/08/2012
Invert. assemblage W312 sphagnum bog	Unfavourable - Recovering	28/08/2012
Raised bog (lowland)	Unfavourable - Recovering	28/08/2012

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

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	0

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

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

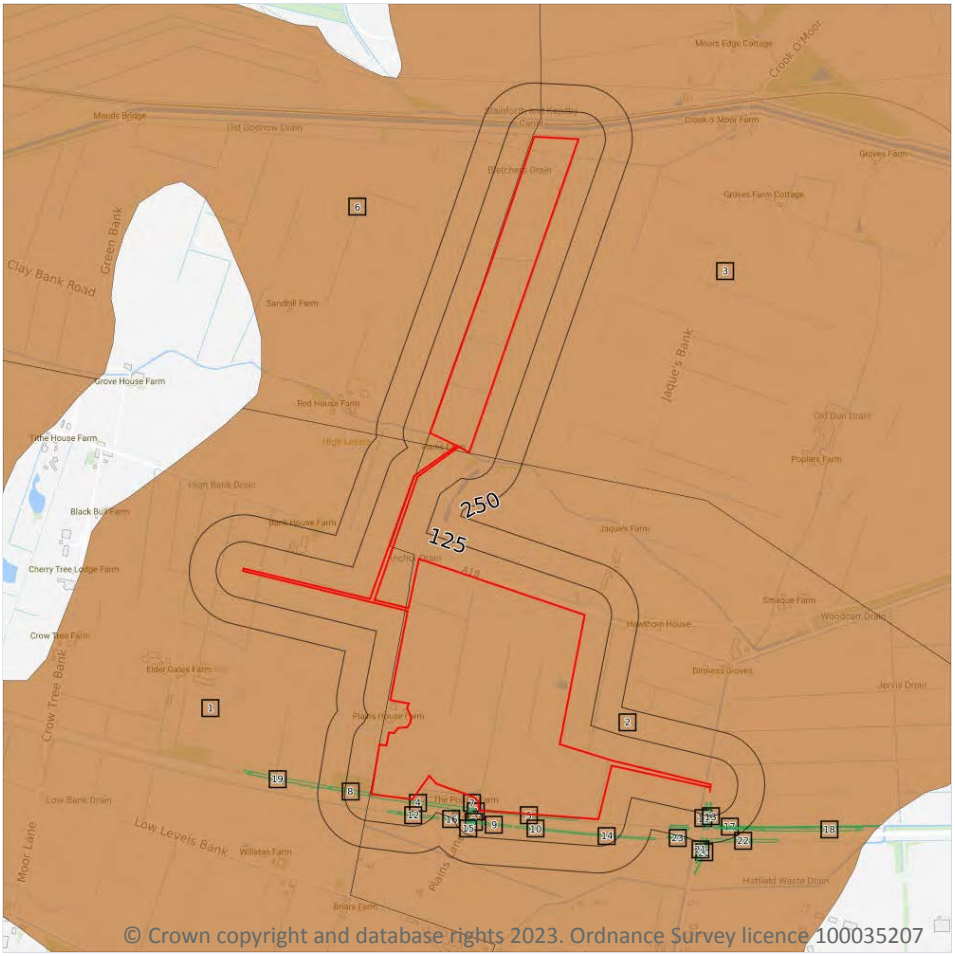
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	4

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

Features are displayed on the Agricultural designations map on **page 103**

ID	Location	Classification	Description
1	**On site**	**Grade 2**	**Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.**
2	**On site**	**Grade 2**	**Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.**
3	**On site**	**Grade 2**	**Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.**
6	3m N	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	54

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

Features are displayed on the Agricultural designations map on **page 103**

ID	Location	Description	Reference	Application date
4	**On site**	**Selective Fell/Thin (Unconditional)**	**018/366/15-16**	**-**
5	**On site**	**Selective Fell/Thin (Unconditional)**	**018/366/15-16**	**-**
A	11m S	Single Tree	018/366/15-16	-
A	12m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
7	12m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
8	13m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
A	29m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
A	40m S	Single Tree	018/366/15-16	-
B	47m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
B	50m S	Single Tree	018/366/15-16	-
B	51m S	Single Tree	018/366/15-16	-
B	52m S	Single Tree	018/366/15-16	-
9	54m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
B	55m S	Single Tree	018/366/15-16	-
B	55m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
B	58m S	Single Tree	018/366/15-16	-
B	58m S	Single Tree	018/366/15-16	-
10	59m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
B	62m S	Single Tree	018/366/15-16	-
11	64m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
B	64m S	Single Tree	018/366/15-16	-
12	65m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
13	65m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
14	66m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
B	67m S	Single Tree	018/366/15-16	-
B	69m S	Single Tree	018/366/15-16	-
B	71m S	Single Tree	018/366/15-16	-

ID	Location	Description	Reference	Application date
15	74m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
16	103m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
C	175m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
17	175m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
C	176m SE	Single Tree	018/366/15-16	-
C	179m SE	Single Tree	018/366/15-16	-
18	186m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
C	186m SE	Single Tree	018/366/15-16	-
C	190m SE	Single Tree	018/366/15-16	-
19	190m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
C	197m SE	Single Tree	018/366/15-16	-
D	197m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
C	201m SE	Single Tree	018/366/15-16	-
D	203m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
C	205m SE	Single Tree	018/366/15-16	-
C	210m SE	Single Tree	018/366/15-16	-
C	214m SE	Single Tree	018/366/15-16	-
C	218m SE	Single Tree	018/366/15-16	-
C	224m SE	Single Tree	018/366/15-16	-
C	228m SE	Single Tree	018/366/15-16	-
20	229m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
21	230m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
22	232m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
C	236m SE	Single Tree	018/366/15-16	-
C	242m SE	Single Tree	018/366/15-16	-
C	247m SE	Single Tree	018/366/15-16	-
23	248m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	13

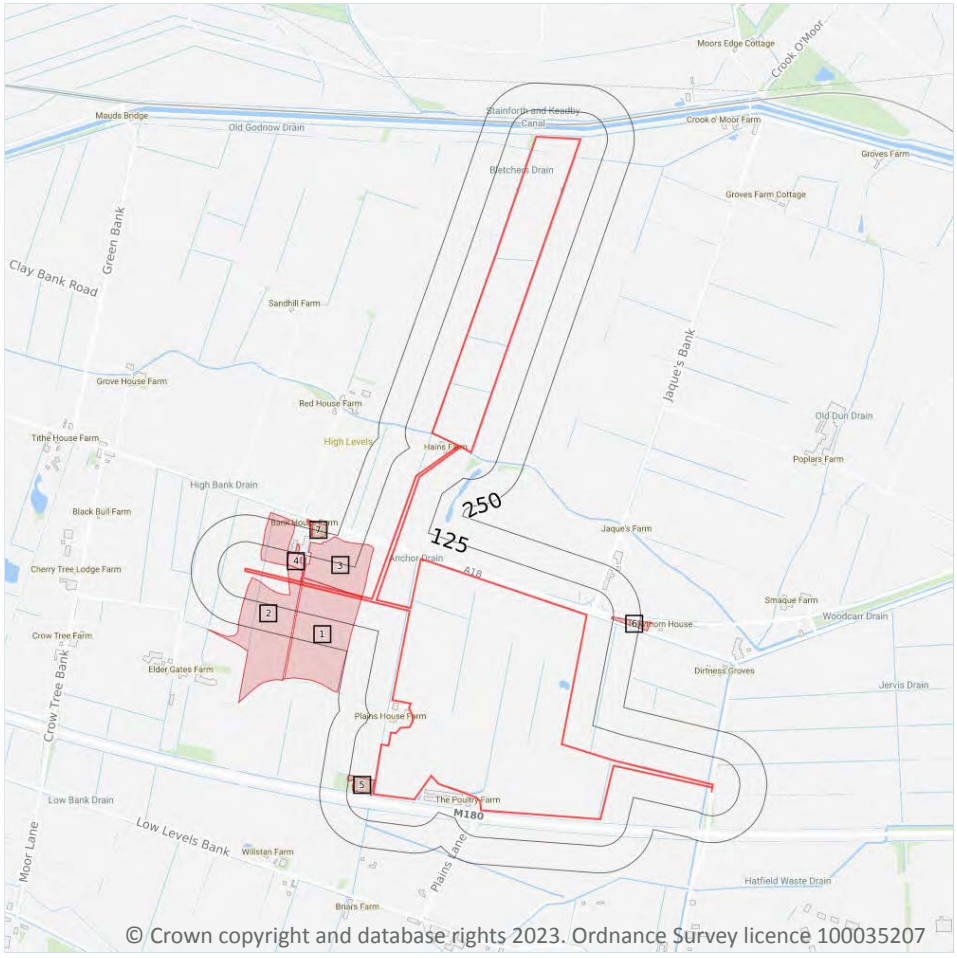
Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
On site	**489951**	**Countryside Stewardship (Middle Tier)**	**01/01/2018**	**31/12/2022**
On site	**489951**	**Countryside Stewardship (Middle Tier)**	**01/01/2018**	**31/12/2022**
On site	**489951**	**Countryside Stewardship (Middle Tier)**	**01/01/2018**	**31/12/2022**
On site	**489951**	**Countryside Stewardship (Middle Tier)**	**01/01/2018**	**31/12/2022**
On site	**1061406**	**Countryside Stewardship (Middle Tier)**	**01/01/2021**	**31/12/2025**
5m SE	489951	Countryside Stewardship (Middle Tier)	01/01/2018	31/12/2022
10m N	489951	Countryside Stewardship (Middle Tier)	01/01/2018	31/12/2022
68m S	1061406	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
72m W	489951	Countryside Stewardship (Middle Tier)	01/01/2018	31/12/2022
72m SW	1061406	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
88m N	828238	Countryside Stewardship (Middle Tier)	01/01/2020	31/12/2024

Location	Reference	Scheme	Start Date	End Date
91m SE	1056200	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
149m SW	1061406	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	8

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 109**

ID	Location	Main Habitat	Other habitats
1	**On site**	**Coastal and floodplain grazing marsh**	**Main habitat: CFPGM (INV > 50%)**
2	**On site**	**Coastal and floodplain grazing marsh**	**Main habitat: CFPGM (INV > 50%)**
3	**On site**	**Coastal and floodplain grazing marsh**	**Main habitat: CFPGM (INV > 50%)**
4	4m W	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	6m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	116m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	213m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	215m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	**0**

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	**0**

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

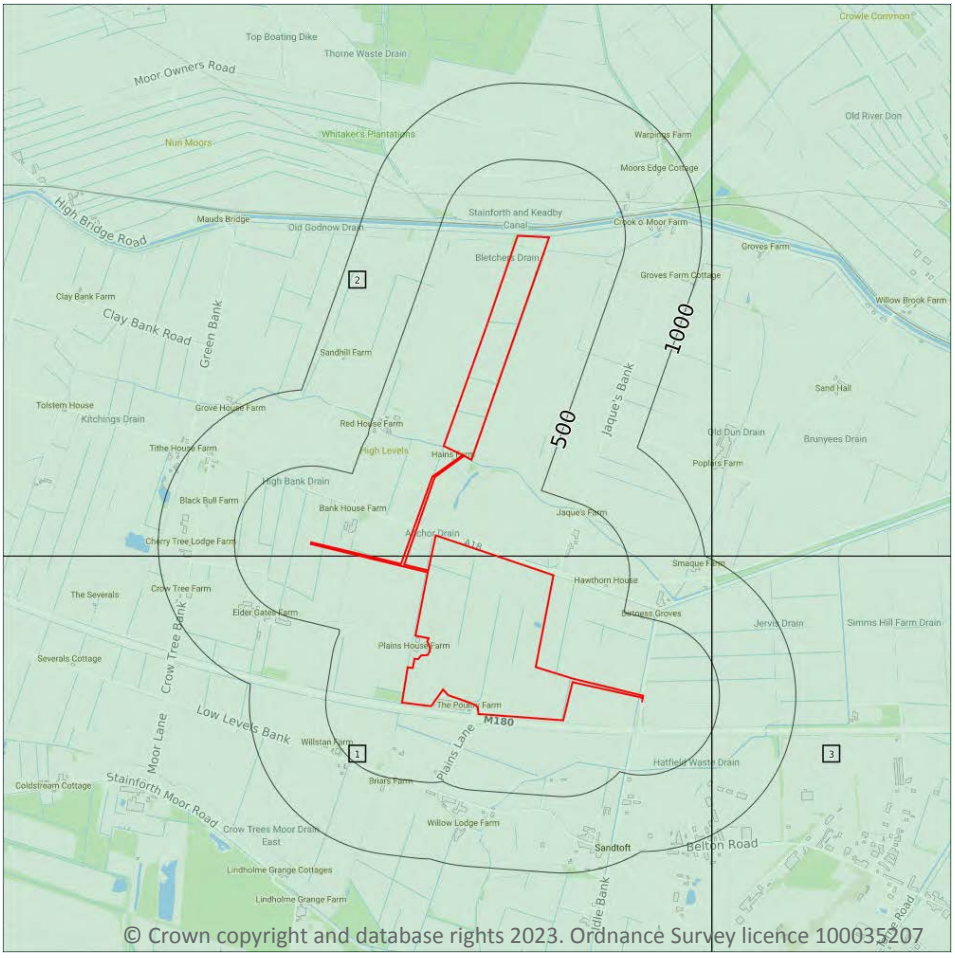
13.4 Limestone Pavement Orders

Records within 250m	**0**

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m	3

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 111**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**SE70NW**
2	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**SE71SW**
3	450m SE	No coverage	Full	Full	No coverage	SE70NE

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground

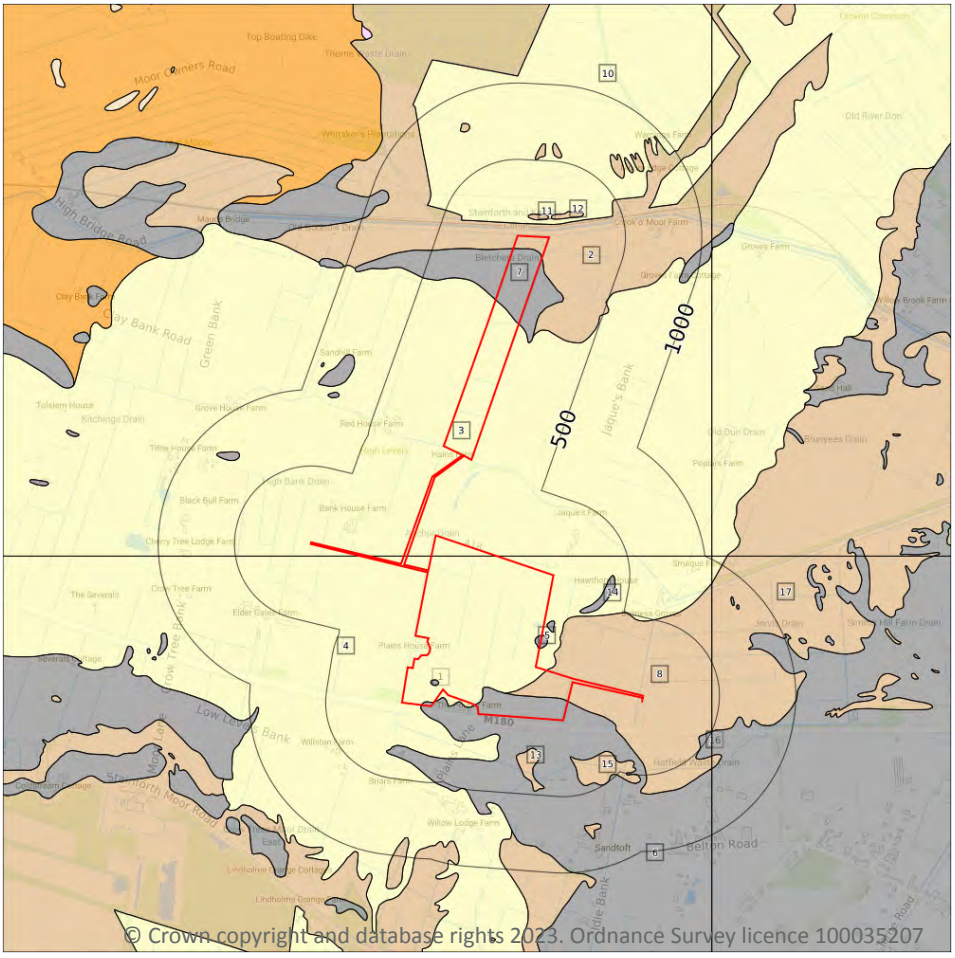
14.2 Artificial and made ground (10k)

Records within 500m	0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m **17**

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 113**

ID	Location	LEX Code	Description	Rock description
1	On site	BSA1-S	Blown Sand, 1 - Sand	Sand
2	On site	PEAT-P	Peat - Peat	Peat
3	On site	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
4	On site	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

ID	Location	LEX Code	Description	Rock description
5	**On site**	**BSA1-S**	**Blown Sand, 1 - Sand**	**Sand**
6	**On site**	**BSA1-S**	**Blown Sand, 1 - Sand**	**Sand**
7	**On site**	**BSA1-S**	**Blown Sand, 1 - Sand**	**Sand**
8	**On site**	**PEAT-P**	**Peat - Peat**	**Peat**
9	21m SE	BSA1-S	Blown Sand, 1 - Sand	Sand
10	82m N	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
11	111m N	PEAT-P	Peat - Peat	Peat
12	123m N	PEAT-P	Peat - Peat	Peat
13	198m S	PEAT-P	Peat - Peat	Peat
14	215m SE	BSA1-S	Blown Sand, 1 - Sand	Sand
15	244m SE	PEAT-P	Peat - Peat	Peat
16	448m SE	BSA1-S	Blown Sand, 1 - Sand	Sand
17	450m SE	PEAT-P	Peat - Peat	Peat

This data is sourced from the British Geological Survey.

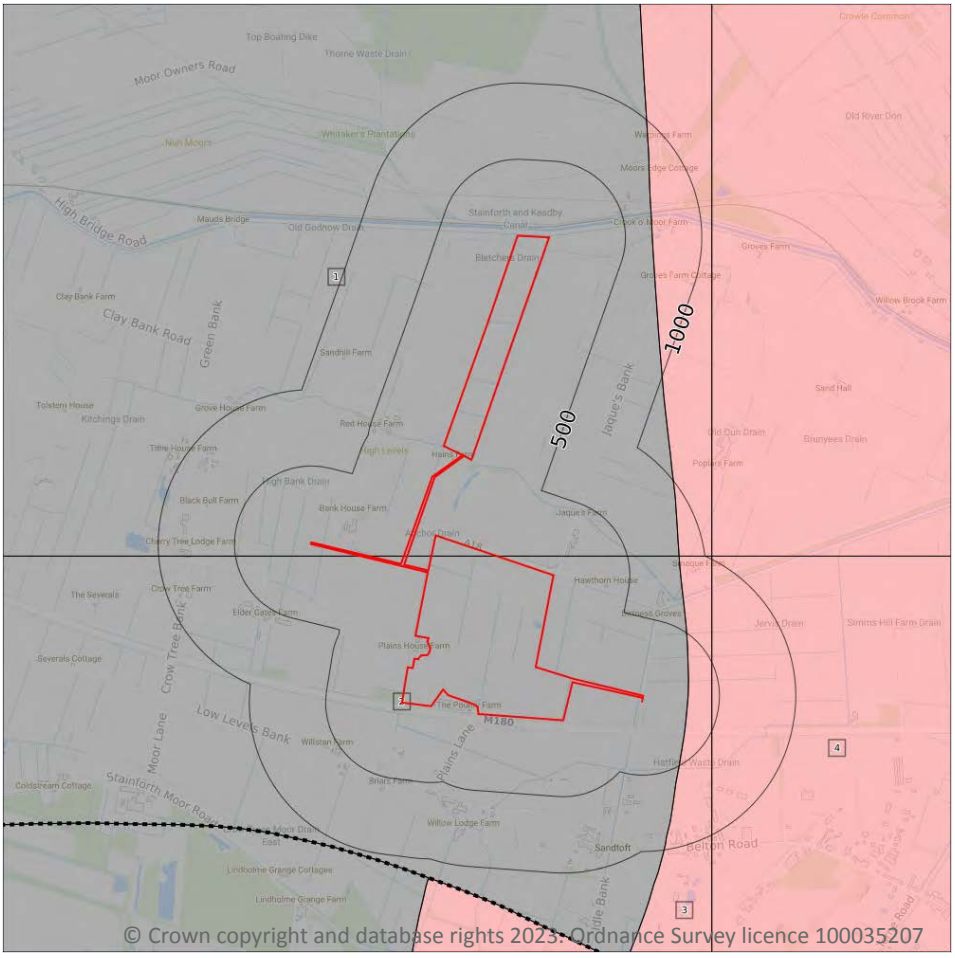
14.4 Landslip (10k)

Records within 500m	**0**

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m	4

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 115**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**NTC-SDST**	**Nottingham Castle Sandstone Formation - Sandstone**	**Early Triassic Epoch**
2	**On site**	**NTC-SDST**	**Nottingham Castle Sandstone Formation - Sandstone**	**Early Triassic Epoch**
3	294m SE	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian Age - Early Triassic Epoch
4	450m SE	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian Age - Early Triassic Epoch

This data is sourced from the British Geological Survey.

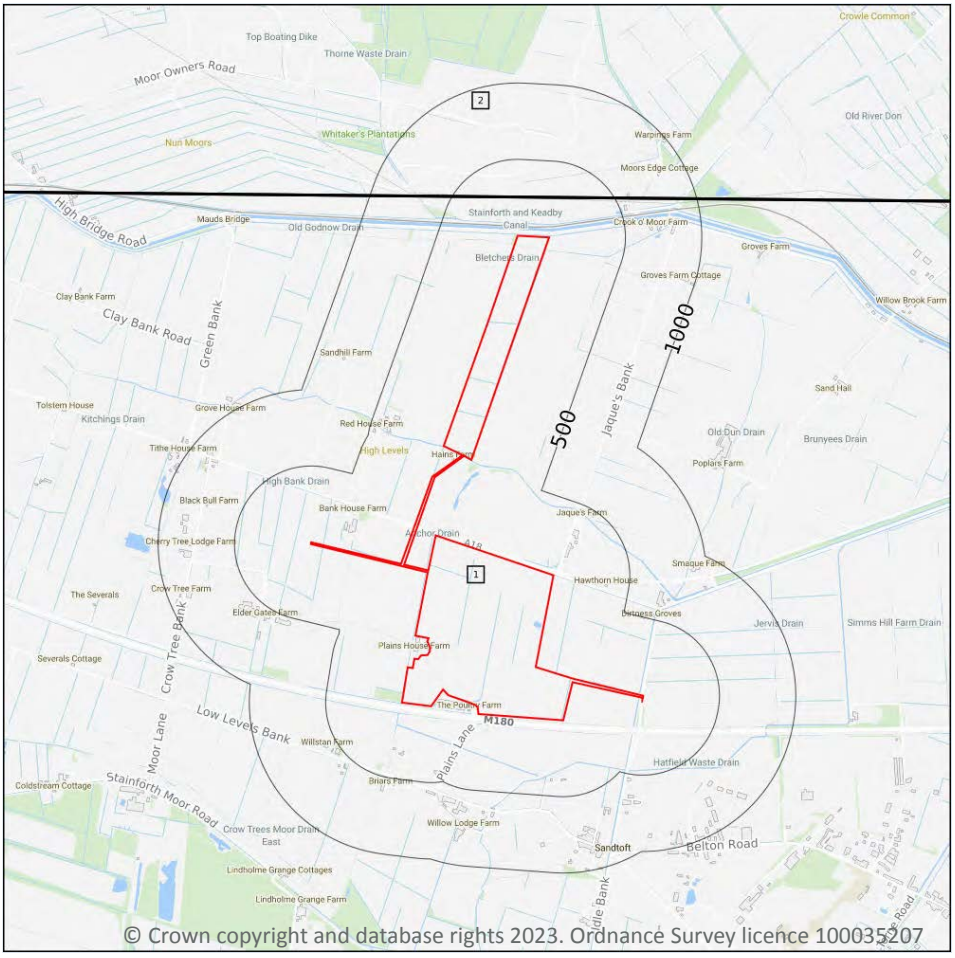
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	2

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 117**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**EW088_doncaster_v4**
2	253m N	No coverage	Full	Full	No coverage	EW079_goole_v4

This data is sourced from the British Geological Survey.

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

15.2 Artificial and made ground (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

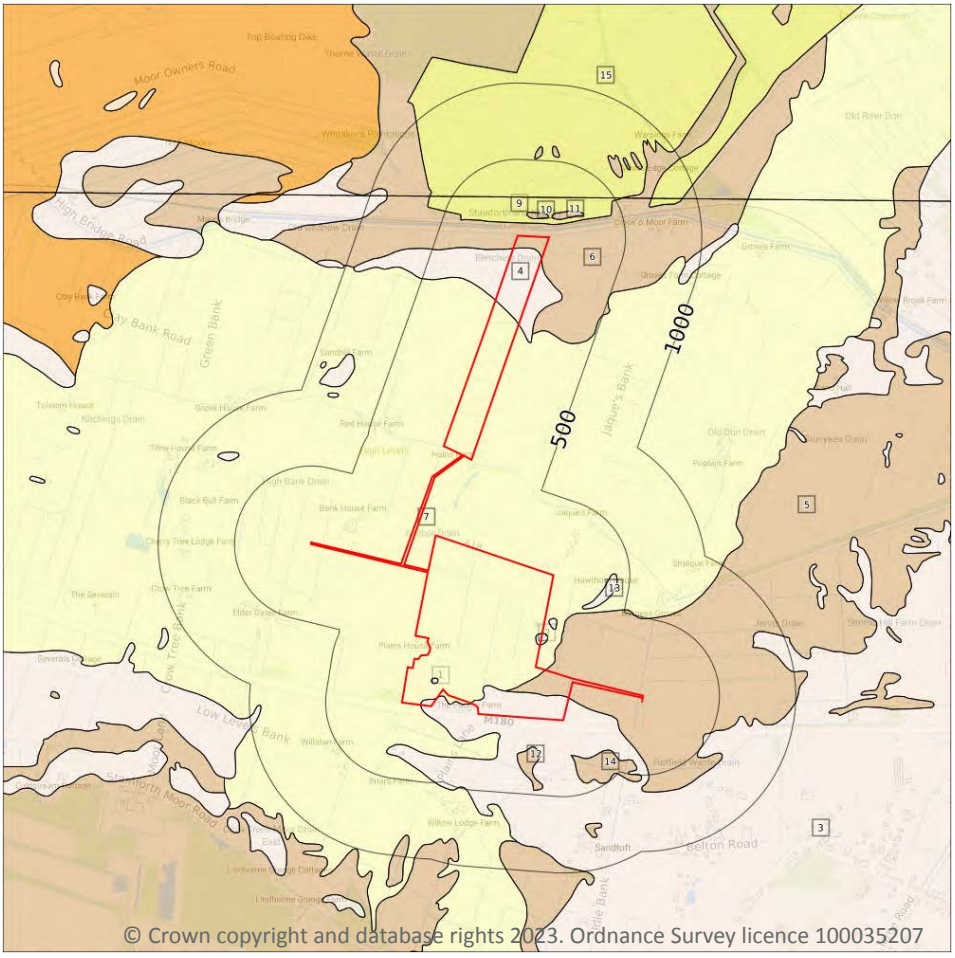
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



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Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m **15**

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 119**

ID	Location	LEX Code	Description	Rock description
1	On site	SUTN-S	SUTTON SAND FORMATION	SAND
2	On site	SUTN-S	SUTTON SAND FORMATION	SAND
3	On site	SUTN-S	SUTTON SAND FORMATION	SAND
4	On site	SUTN-S	SUTTON SAND FORMATION	SAND

ID	Location	LEX Code	Description	Rock description
5	**On site**	**PEAT-P**	**PEAT**	**PEAT**
6	**On site**	**PEAT-P**	**PEAT**	**PEAT**
7	**On site**	**ALV-XCZSV**	**ALLUVIUM**	**CLAY, SILT, SAND AND GRAVEL**
8	29m SE	SUTN-S	SUTTON SAND FORMATION	SAND
9	85m N	WARP-XCZ	WARP	CLAY AND SILT
10	117m N	PEAT-P	PEAT	PEAT
11	128m N	PEAT-P	PEAT	PEAT
12	188m S	PEAT-P	PEAT	PEAT
13	226m SE	SUTN-S	SUTTON SAND FORMATION	SAND
14	236m SE	PEAT-P	PEAT	PEAT
15	254m N	WARP-XCZ	WARP	CLAY AND SILT

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	**9**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**High**	**Very Low**
On site	**Intergranular**	**High**	**Very Low**
On site	**Intergranular**	**High**	**High**
On site	**Intergranular**	**High**	**High**
On site	**Intergranular**	**High**	**High**
On site	**Intergranular**	**High**	**High**
On site	**Mixed**	**Low**	**Very Low**
On site	**Mixed**	**Low**	**Very Low**
29m SE	Intergranular	High	High

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

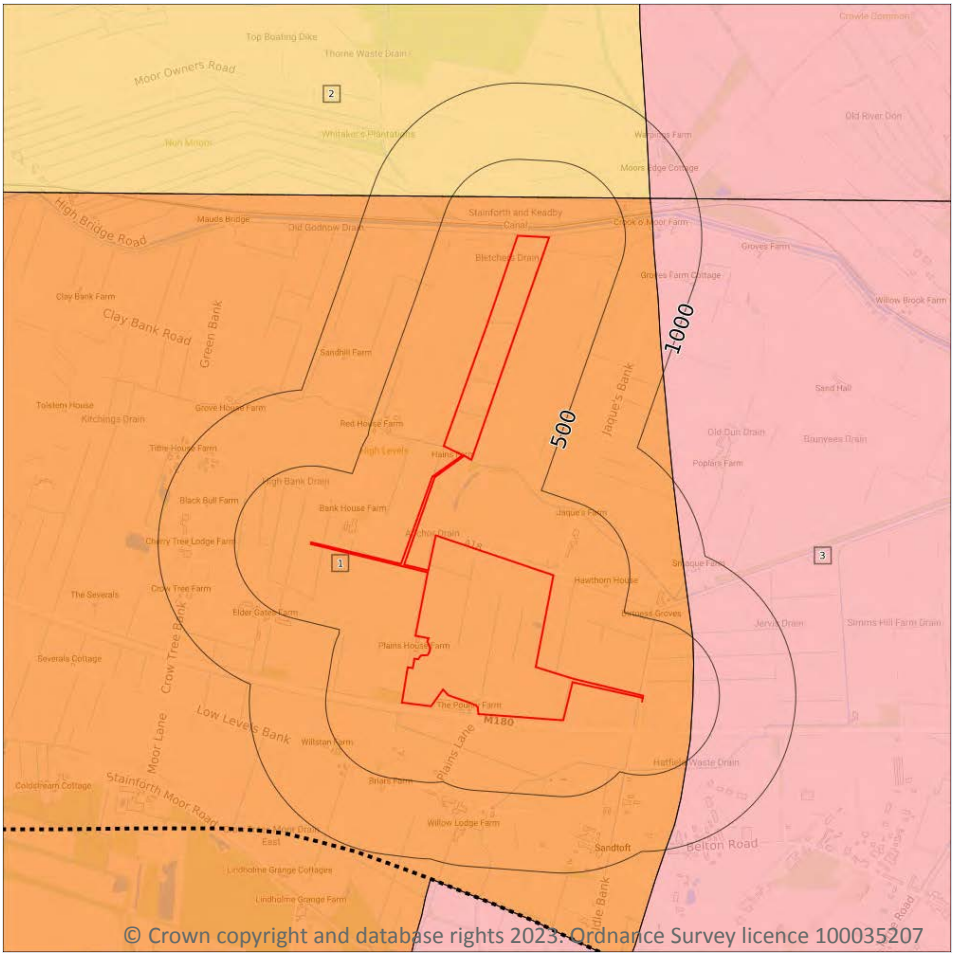
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m	3

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 122**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**CHES-PESST**	**CHESTER FORMATION - SANDSTONE, PEBBLY (GRAVELLY)**	**OLENEKIAN**
2	254m N	SSG-SDST	SHERWOOD SANDSTONE GROUP - SANDSTONE	-
3	326m SE	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**High**	**Moderate**
On site	**Mixed**	**High**	**Moderate**

This data is sourced from the British Geological Survey.

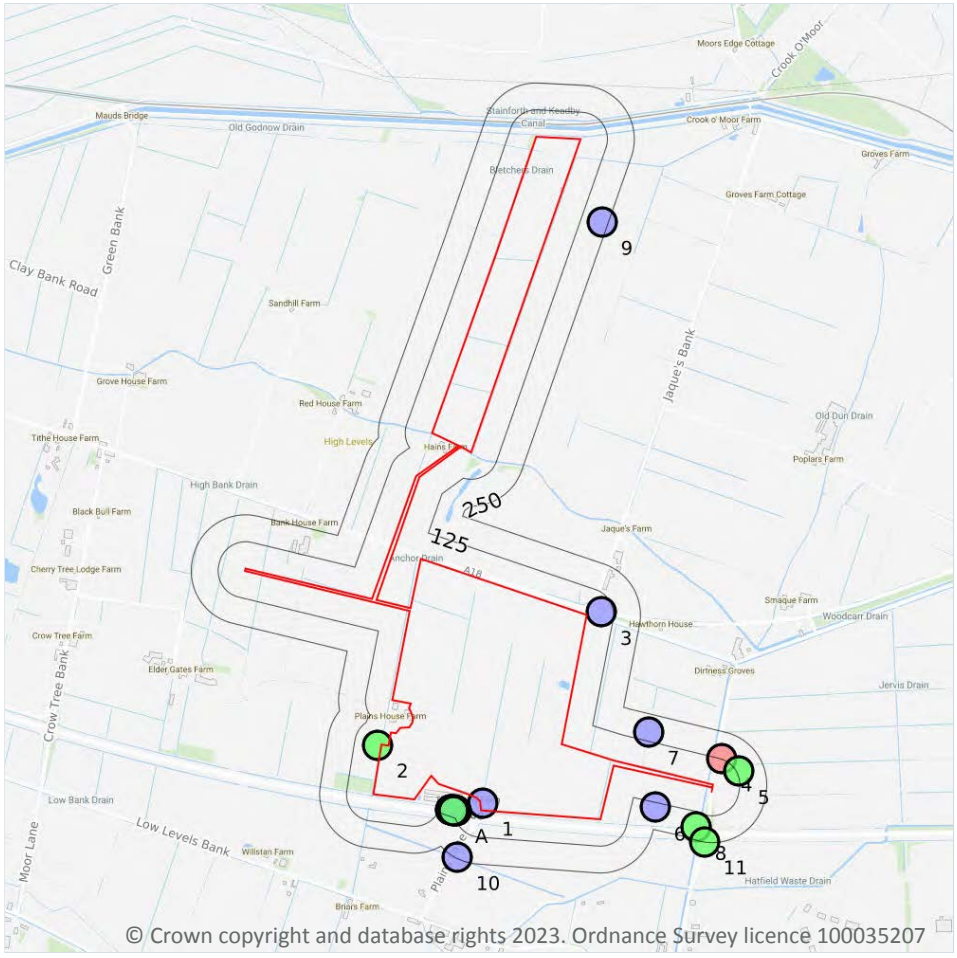
15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

16 Boreholes



Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m **19**

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

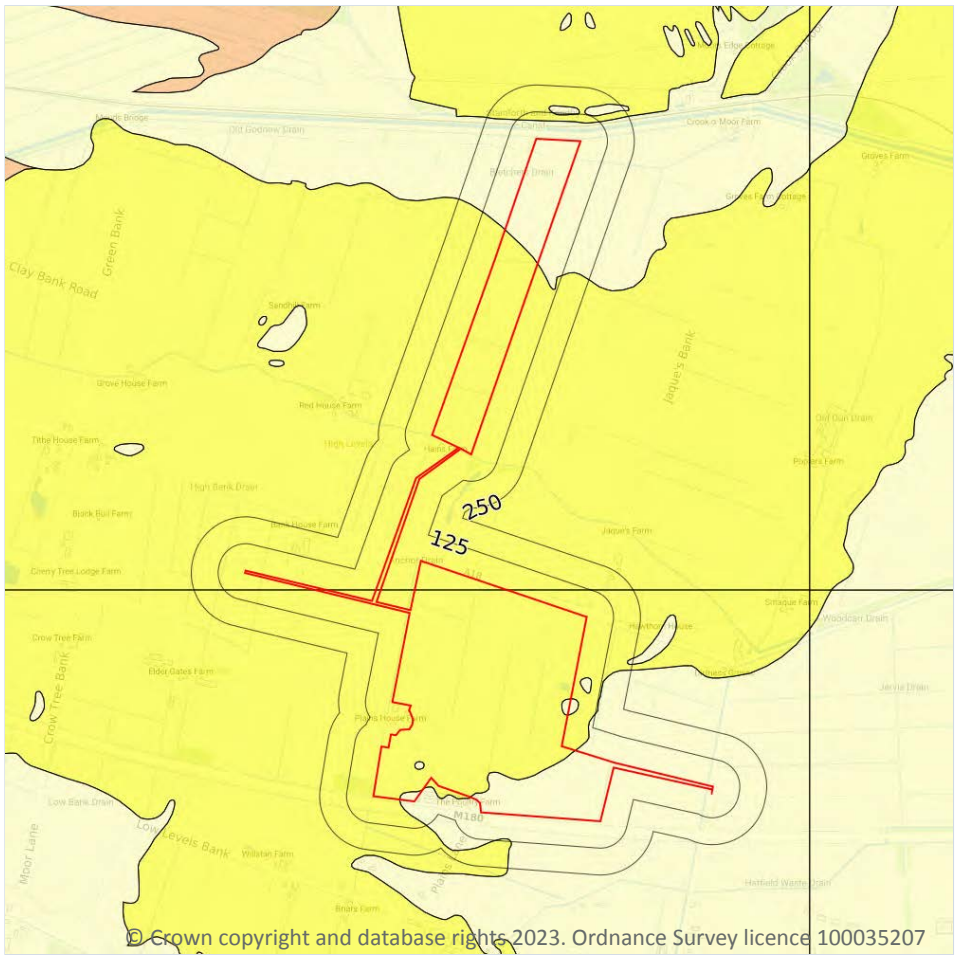
Features are displayed on the Boreholes map on **page 124**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	**On site**	**473480 409000**	**A18 THORNE/SCUNTHORPE 39**	**6.1**	**N**	**124543**
2	18m SW	472990 409270	A18 THORNE/SCUNTHORPE 38	10.97	N	124542
3	69m E	474030 409890	A18 THORNE/SCUNTHORPE 88	3.66	N	124550

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	89m S	473355 408966	M180 MP 6/7 Eastbound WS-05	1.5	N	20750405
A	89m S	473346 408969	M180 MP 6/7 Eastbound WS-04	1.5	N	20750404
A	91m S	473338 408970	M180 MP 6/7 Eastbound WS-01	1.4	N	20750401
A	91m S	473355 408964	M180 MP 6/7 Eastbound WS-06	2.0	N	20750406
A	95m S	473330 408969	M180 MP 6/7 Eastbound WS-02	1.6	N	20750402
A	97m S	473329 408967	M180 MP 6/7 Eastbound WS-03	2.0	N	20750403
A	97m S	473342 408962	M180 MP 6/7 Eastbound CC-01	0.37	N	20755930
A	97m S	473342 408962	M180 MP 6/7 Eastbound BH-01	15.0	N	20750400
4	127m SE	474590 409206	SANDTOFT BH	1025.2	N	124529
5	136m SE	474670 409150	DONCASTER 113	12.19	N	124582
6	148m SE	474280 408980	DONCASTER 219	9.14	N	124594
7	167m SE	474250 409330	DONCASTER 220	3.66	N	124595
8	192m SE	474470 408890	DONCASTER 112	12.19	N	124581
9	220m N	474033 411704	M180 PRELIM SURVEY	6.1	N	124806
10	243m S	473360 408750	A18 THORNE/SCUNTHORPE 85	6.1	N	124549
11	248m SE	474510 408820	A18 THORNE/SCUNTHORPE 40	12.49	N	124544

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



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Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	3

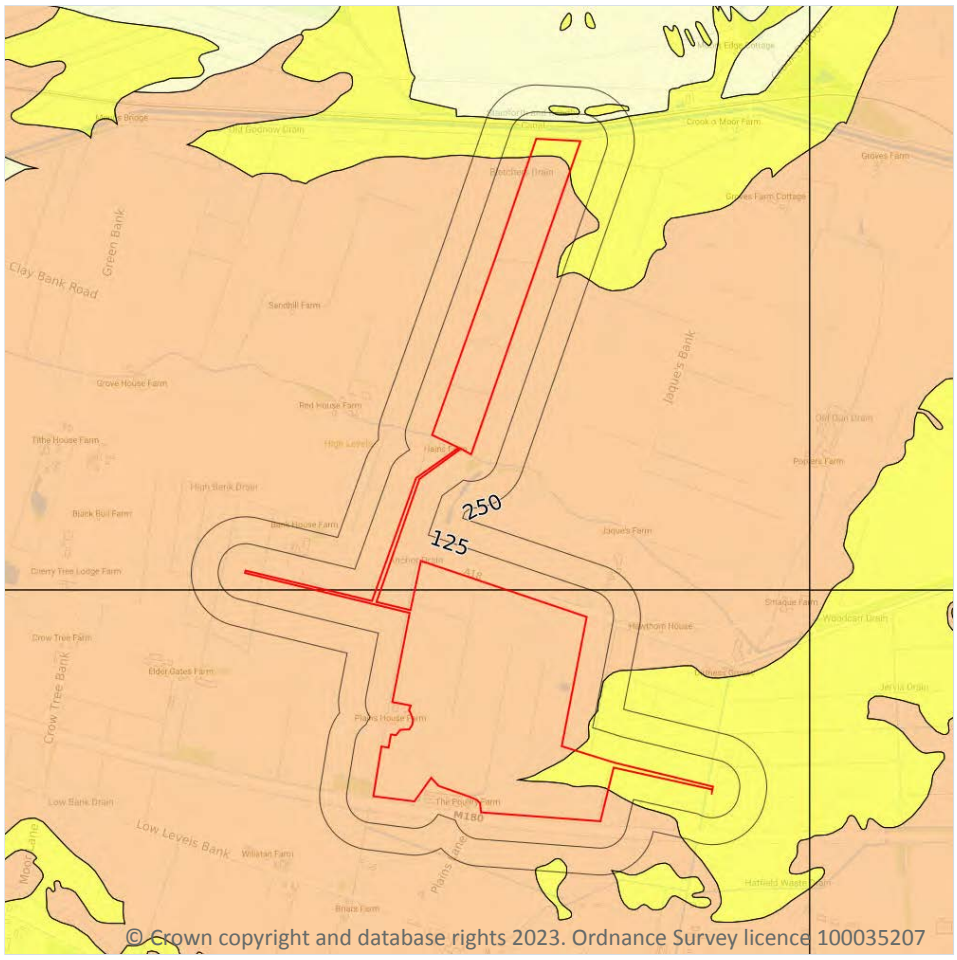
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 126**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
On site	**Very low**	**Ground conditions predominantly low plasticity.**
29m SE	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	2

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

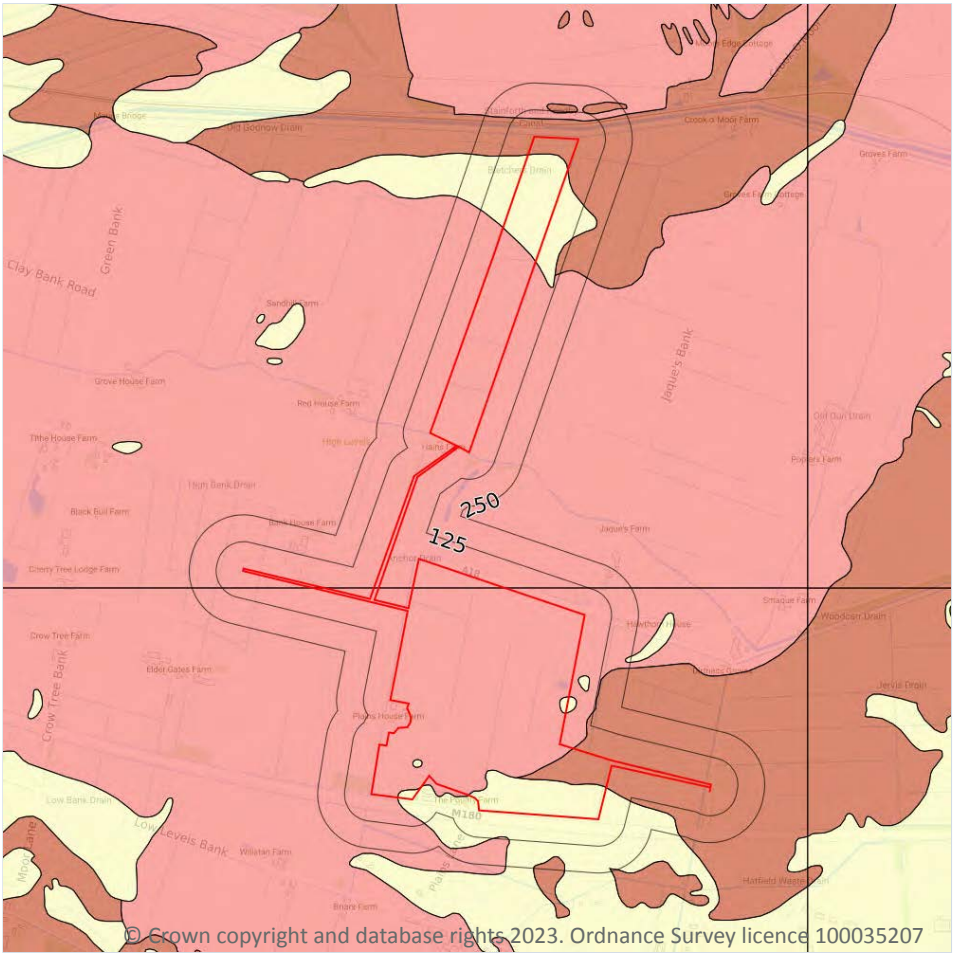
Features are displayed on the Natural ground subsidence - Running sands map on **page 128**

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

Location	Hazard rating	Details
On site	**Low**	**Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	4

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

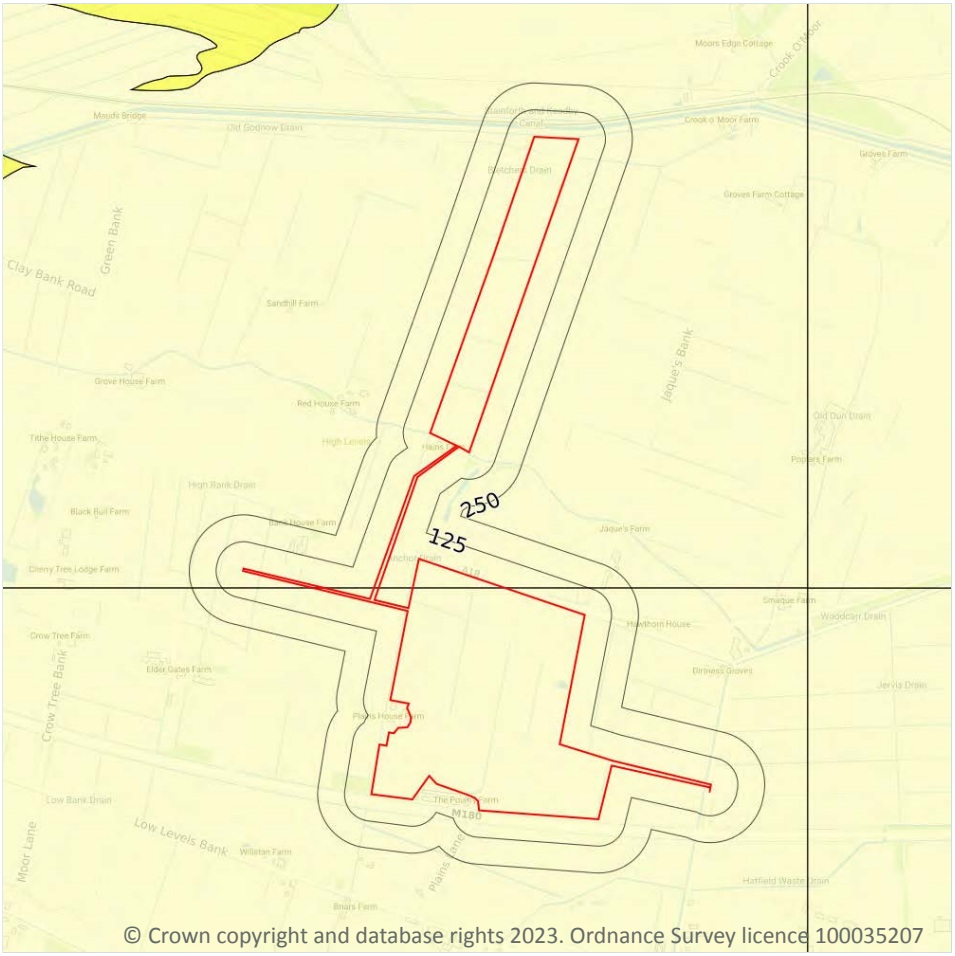
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 130**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
On site	**Moderate**	**Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.**

Location	Hazard rating	Details
On site	**High**	**Highly compressible strata present. Significant constraint on land use depending on thickness.**
29m SE	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



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Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

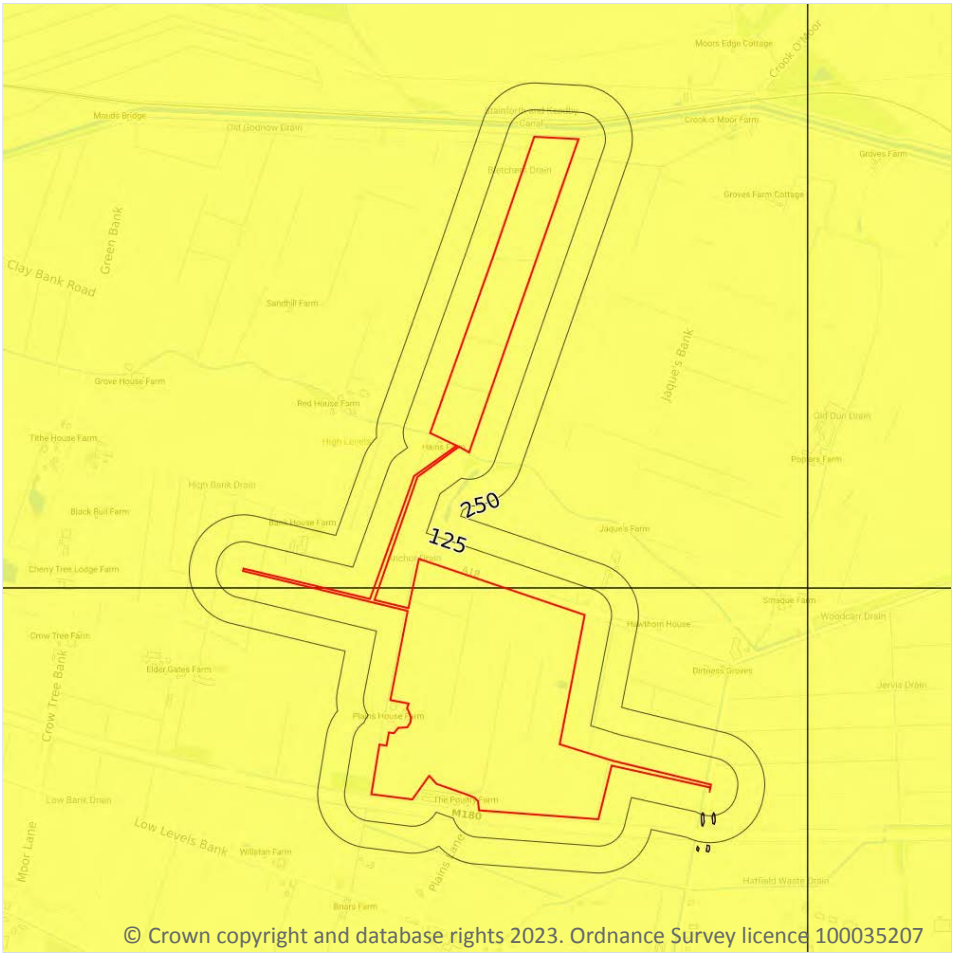
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 132**

Location	Hazard rating	Details
On site	**Negligible**	**Deposits with potential to collapse when loaded and saturated are believed not to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	1

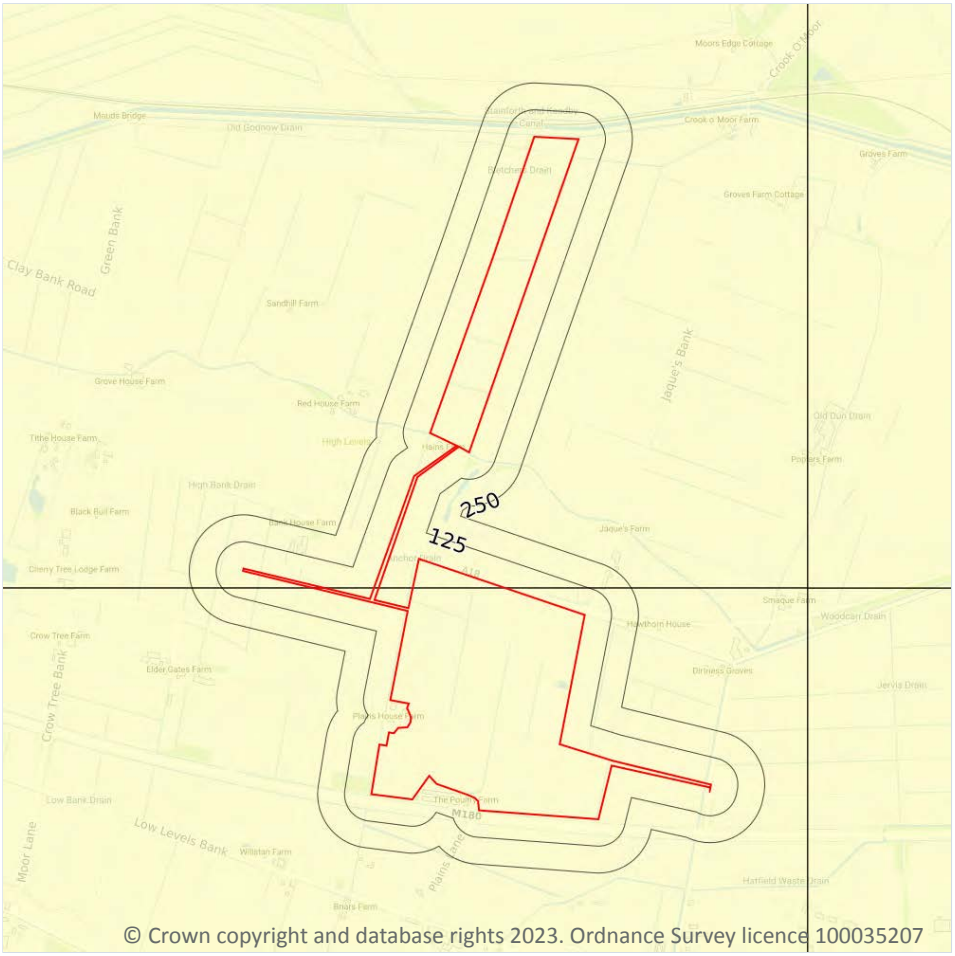
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 133**

Location	Hazard rating	Details
On site	**Very low**	**Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



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Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

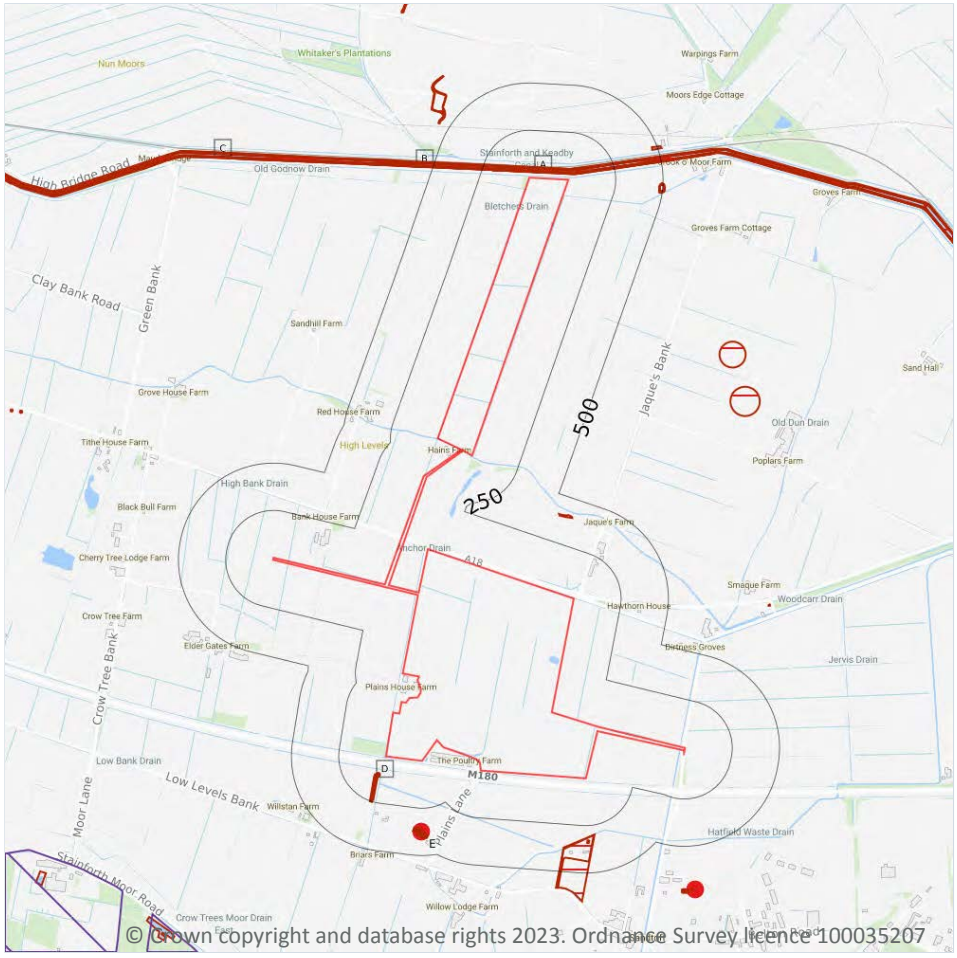
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 134**

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

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

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

Non Coal Mining

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

18.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m	1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 136**

ID	Location	Details	Description
E	375m S	Name: Brier Farm Sand Pit Address: Sandtoft, ISLE OF AXHOLME, Lincolnshire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	12

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 136**

ID	Location	Land Use	Year of mapping	Mapping scale
A	30m N	Canal	1885	1:10560
A	30m N	Canal	1904	1:10560
B	31m N	Canal	1948	1:10560
B	31m N	Canal	1891	1:10560
B	31m N	Canal	1908	1:10560
A	35m N	Canal	1908	1:10560
C	37m N	Canal	1968	1:10000
C	37m N	Canal	1955	1:10560
A	37m N	Canal	1948	1:10560
D	96m SW	Unspecified Ground Workings	1951	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
D	108m SW	Unspecified Ground Workings	1948	1:10560
D	108m SW	Unspecified Ground Workings	1904	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	**0**

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

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	**0**

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	**0**

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	**0**

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

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	1

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

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

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

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

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

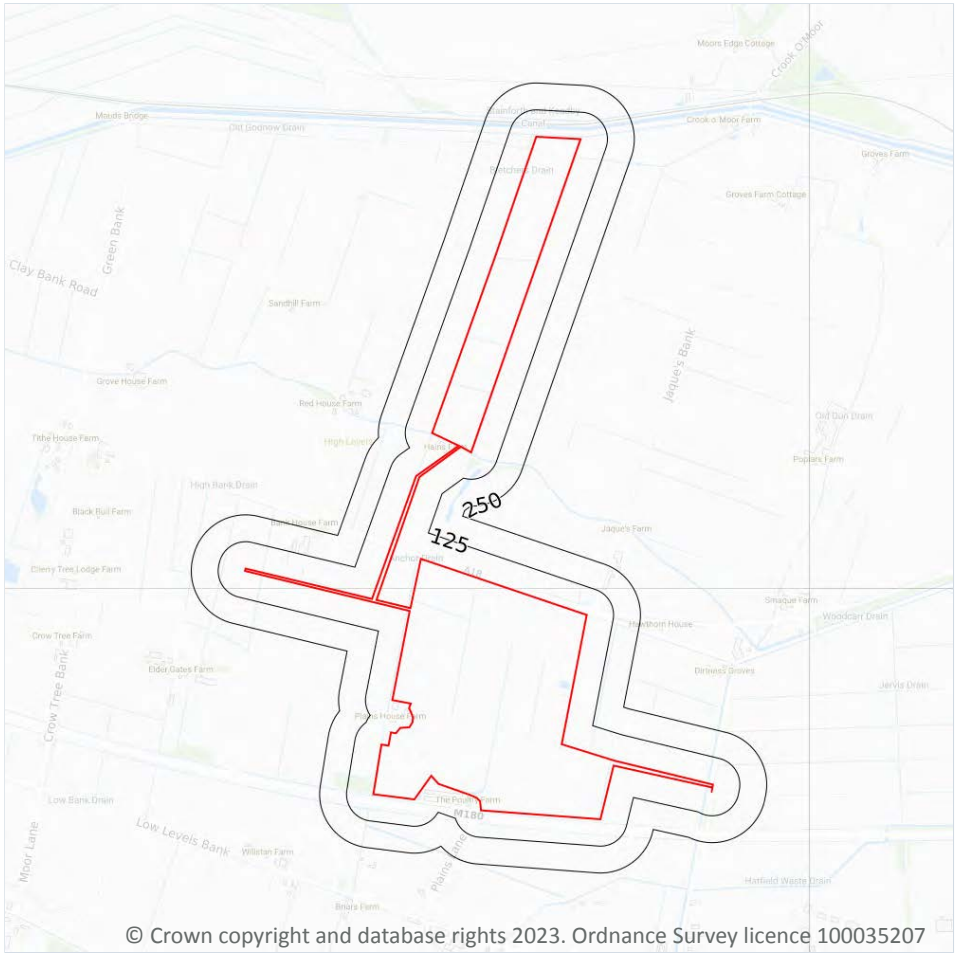
18.13 Clay mining

Records on site	0

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

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

19 Radon



Site Outline

Search buffers in metres (m)

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

19.1 Radon

Records on site	1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 141**

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

This data is sourced from the British Geological Survey and UK Health Security Agency.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m **59**

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
17m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
21m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
25m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
25m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
29m SE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
37m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
37m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
37m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
37m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
37m E	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
37m E	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
47m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
47m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

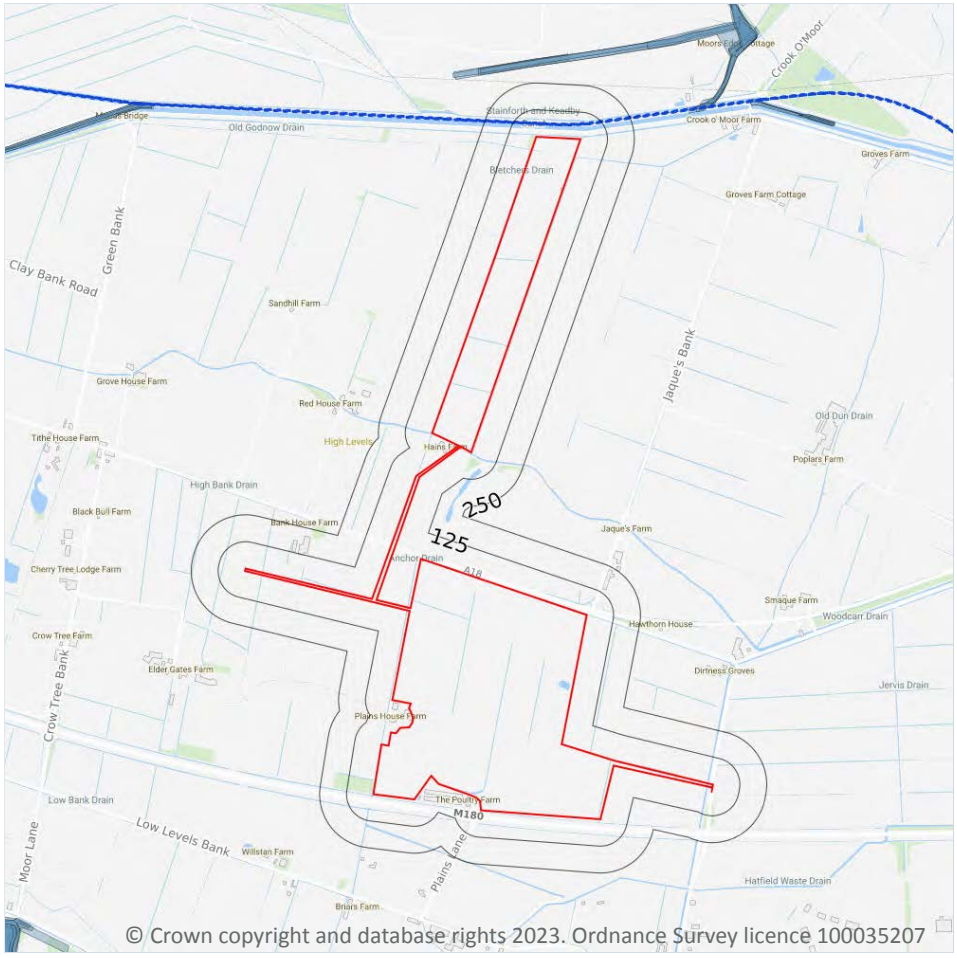
20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects



- Site Outline

Search buffers in metres (m)

- Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	4

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

Features are displayed on the Railway infrastructure and projects map on **page 146**

Location	Name	Type
60m N	South Humberside Main Line	rail
62m N	Not given	Multi Track
64m N	South Humberside Main Line	rail
78m N	Not given	Multi Track

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference.

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Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Tween Bridge Area E East

Order Details

Date: 04/03/2025

Your ref: P02159615

Our Ref: GS-36W-5XM-ZL4-XY1

Site Details

Location: 475275 409357

Area: 122.98 ha

Authority: North Lincolnshire Council ↗

Summary of findings p. 2 >

OS MasterMap site plan N/A: >10ha

Aerial image p. 9 >

Insight User Guide ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	3	4	4	0	-
15	1.2	Historical tanks	0	0	0	0	-
15 >	1.3 >	Historical energy features >	0	0	0	1	-
16	1.4	Historical petrol stations	0	0	0	0	-
16	1.5	Historical garages	0	0	0	0	-
16	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
17 >	2.1 >	Historical industrial land uses >	3	6	5	0	-
18	2.2	Historical tanks	0	0	0	0	-
18 >	2.3 >	Historical energy features >	0	0	0	1	-
19	2.4	Historical petrol stations	0	0	0	0	-
19	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
20	3.1	Active or recent landfill	0	0	0	0	-
20	3.2	Historical landfill (BGS records)	0	0	0	0	-
21	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
21	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
21	3.5	Historical waste sites	0	0	0	0	-
21 >	3.6 >	Licensed waste sites >	0	0	0	1	-
22 >	3.7 >	Waste exemptions >	0	6	9	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
24 >	4.1 >	Recent industrial land uses >	0	2	2	-	-
25	4.2	Current or recent petrol stations	0	0	0	0	-
25	4.3	Electricity cables	0	0	0	0	-
25	4.4	Gas pipelines	0	0	0	0	-
25	4.5	Sites determined as Contaminated Land	0	0	0	0	-

26	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
26	4.7	Regulated explosive sites	0	0	0	0	-
26	4.8	Hazardous substance storage/usage	0	0	0	0	-
26	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
26 >	4.10 >	Licensed industrial activities (Part A(1)) >	0	0	0	2	-
27 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	0	0	2	-
27	4.12	Radioactive Substance Authorisations	0	0	0	0	-
28 >	4.13 >	Licensed Discharges to controlled waters >	0	0	0	1	-
28	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
28	4.15	Pollutant release to public sewer	0	0	0	0	-
28	4.16	List 1 Dangerous Substances	0	0	0	0	-
29	4.17	List 2 Dangerous Substances	0	0	0	0	-
29 >	4.18 >	Pollution Incidents (EA/NRW) >	1	1	1	1	-
29 >	4.19 >	Pollution inventory substances >	0	0	0	2	-
30 >	4.20 >	Pollution inventory waste transfers >	0	0	0	1	-
31	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
32 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
34 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
36 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
39	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
40	5.5	Groundwater vulnerability- local information	None (within 0m)				
41 >	5.6 >	Groundwater abstractions >	0	0	1	0	0
42 >	5.7 >	Surface water abstractions >	9	13	5	3	49
58	5.8	Potable abstractions	0	0	0	0	0
58 >	5.9 >	Source Protection Zones >	1	0	0	0	-
59	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
60 >	6.1 >	Water Network (OS MasterMap) >	49	19	46	-	-

69 >	6.2 >	Surface water features >	1	11	36	-	-
70 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
70 >	6.4 >	WFD Surface water bodies >	1	0	0	-	-
71 >	6.5 >	WFD Groundwater bodies >	2	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
72 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
73	7.2	Historical Flood Events	0	0	0	-	-
73 >	7.3 >	Flood Defences >	3	7	0	-	-
74	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
74	7.5	Flood Storage Areas	0	0	0	-	-
75 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
76 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
77 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
79 >	9.1 >	Groundwater flooding >	High (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
80 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	1	4	1	1	5
81	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
81	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
82	10.4	Special Protection Areas (SPA)	0	0	0	0	0
82	10.5	National Nature Reserves (NNR)	0	0	0	0	0
82	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
82	10.7	Designated Ancient Woodland	0	0	0	0	0
82	10.8	Biosphere Reserves	0	0	0	0	0
83	10.9	Forest Parks	0	0	0	0	0
83	10.10	Marine Conservation Zones	0	0	0	0	0
83	10.11	Green Belt	0	0	0	0	0
83	10.12	Proposed Ramsar sites	0	0	0	0	0

83	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
84	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
84	10.15	Nitrate Sensitive Areas	0	0	0	0	0
84 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	1	2
85 >	10.17 >	SSSI Impact Risk Zones >	7	-	-	-	-
88 >	10.18 >	SSSI Units >	1	4	1	1	6
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
93	11.1	World Heritage Sites	0	0	0	-	-
94	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
94	11.3	National Parks	0	0	0	-	-
94 >	11.4 >	Listed Buildings >	0	1	1	-	-
95	11.5	Conservation Areas	0	0	0	-	-
95	11.6	Scheduled Ancient Monuments	0	0	0	-	-
95	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
96 >	12.1 >	Agricultural Land Classification >	Grade 2 (within 250m)				
97	12.2	Open Access Land	0	0	0	-	-
97 >	12.3 >	Tree Felling Licences >	8	9	10	-	-
99	12.4	Environmental Stewardship Schemes	0	0	0	-	-
99 >	12.5 >	Countryside Stewardship Schemes >	3	2	2	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
100 >	13.1 >	Priority Habitat Inventory >	0	3	2	-	-
101	13.2	Habitat Networks	0	0	0	-	-
101	13.3	Open Mosaic Habitat	0	0	0	-	-
101	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
102 >	14.1 >	10k Availability >	Identified (within 500m)				
104	14.2	Artificial and made ground (10k)	0	0	0	0	-
105 >	14.3 >	Superficial geology (10k) >	13	1	9	6	-

107	14.4	Landslip (10k)	0	0	0	0	-
108 >	14.5 >	Bedrock geology (10k) >	4	0	1	1	-
109	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
110 >	15.1 >	50k Availability >	Identified (within 500m)				
111	15.2	Artificial and made ground (50k)	0	0	0	0	-
111	15.3	Artificial ground permeability (50k)	0	0	-	-	-
112 >	15.4 >	Superficial geology (50k) >	5	0	1	3	-
113 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
113	15.6	Landslip (50k)	0	0	0	0	-
114	15.7	Landslip permeability (50k)	None (within 50m)				
115 >	15.8 >	Bedrock geology (50k) >	2	0	0	0	-
116 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
116	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
117 >	16.1 >	BGS Boreholes >	2	5	10	-	-
Page	Section	Natural ground subsidence >					
119 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
121 >	17.2 >	Running sands >	Low (within 50m)				
123 >	17.3 >	Compressible deposits >	High (within 50m)				
125 >	17.4 >	Collapsible deposits >	Negligible (within 50m)				
126 >	17.5 >	Landslides >	Low (within 50m)				
128 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
130	18.1	BritPits	0	0	0	0	-
131 >	18.2 >	Surface ground workings >	0	0	2	-	-
131	18.3	Underground workings	0	0	0	0	0
131	18.4	Underground mining extents	0	0	0	0	-
131	18.5	Historical Mineral Planning Areas	0	0	0	0	-

132	18.6	Non-coal mining	0	0	0	0	0
132	18.7	JPB mining areas	None (within 0m)				
132	18.8	The Coal Authority non-coal mining	0	0	0	0	-
132	18.9	Researched mining	0	0	0	0	-
133	18.10	Mining record office plans	0	0	0	0	-
133	18.11	BGS mine plans	0	0	0	0	-
133	18.12	Coal mining	None (within 0m)				
133	18.13	Brine areas	None (within 0m)				
133	18.14	Gypsum areas	None (within 0m)				
134	18.15	Tin mining	None (within 0m)				
134	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
135	19.1	Natural cavities	0	0	0	0	-
135	19.2	Mining cavities	0	0	0	0	0
135	19.3	Reported recent incidents	0	0	0	0	-
135	19.4	Historical incidents	0	0	0	0	-
Page	Section	**Radon** >					
137 >	**20.1** >	**Radon** >	Less than 1% (within 0m)				
Page	Section	**Soil chemistry** >	On site	0-50m	50-250m	250-500m	500-2000m
139 >	**21.1** >	**BGS Estimated Background Soil Chemistry** >	33	5	-	-	-
141	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
141	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
142	22.1	Underground railways (London)	0	0	0	-	-
142	22.2	Underground railways (Non-London)	0	0	0	-	-
142	22.3	Railway tunnels	0	0	0	-	-
142	22.4	Historical railway and tunnel features	0	0	0	-	-
142	22.5	Royal Mail tunnels	0	0	0	-	-
143	22.6	Historical railways	0	0	0	-	-

143	22.7	Railways	0	0	0	-	-
143	22.8	Crossrail 2	0	0	0	0	-
143	22.9	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 19/04/2021

Site Area: 122.98ha

Recent site history - 2019 aerial photograph

Capture Date: 20/10/2019

Site Area: 122.98ha

Recent site history - 2013 aerial photograph

Capture Date: 07/06/2013

Site Area: 122.98ha

Recent site history - 2009 aerial photograph

Capture Date: 11/09/2009

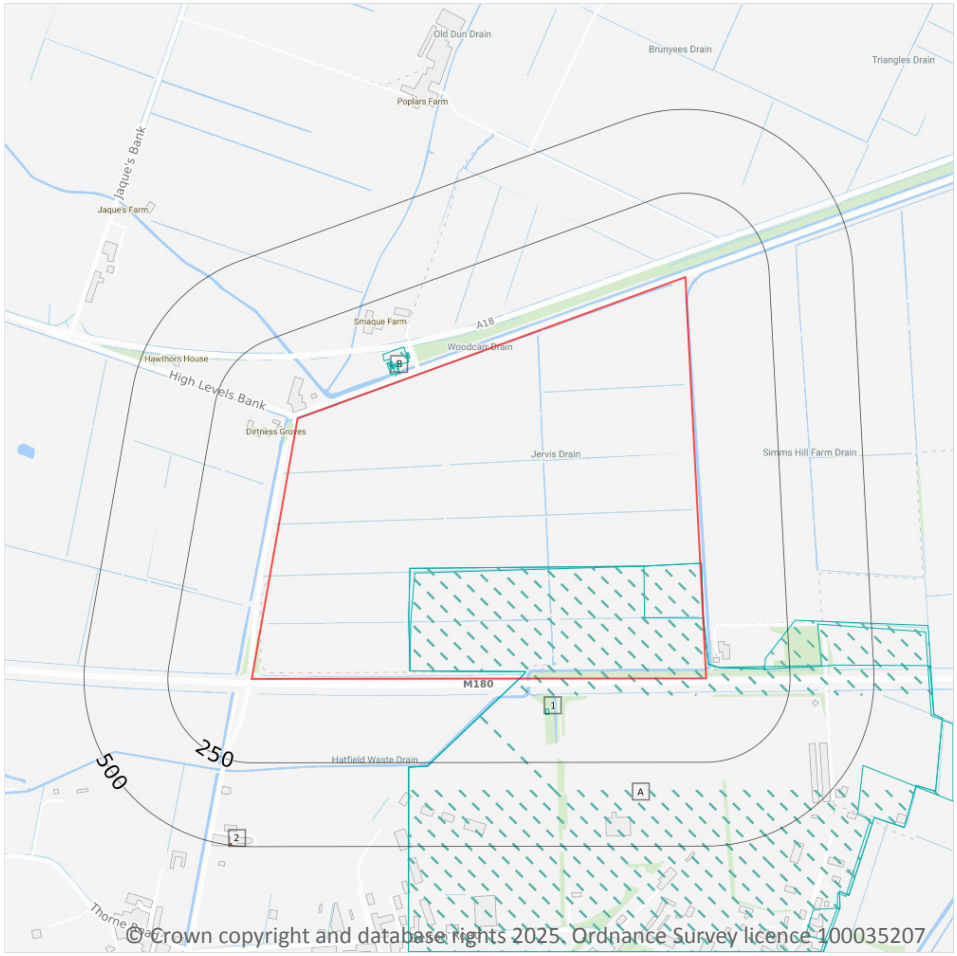
Site Area: 122.98ha

Recent site history - 1999 aerial photograph

Capture Date: 03/05/1999

Site Area: 122.98ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical energy features

1.1 Historical industrial land uses

Records within 500m	11

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Airfield**	**1951**	**1480916**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Disused Airfield**	**1973**	**1486560**
A	**On site**	**Disused Airfield**	**1982**	**1557084**
B	23m NW	Engine	1885	1582088
B	30m NW	Pumping Station	1969 - 1981	1548717
B	43m NW	Engine	1932	1491415
B	44m NW	Engine	1951	1571106
B	55m NW	Engine	1908	1500149
B	55m NW	Engine	1904	1549499
B	68m NW	Unspecified Level	1908	1576308
1	91m S	Pumping Station	1982	1480690

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**0**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**1**

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
2	494m SW	Electricity Substation	1985	143272

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

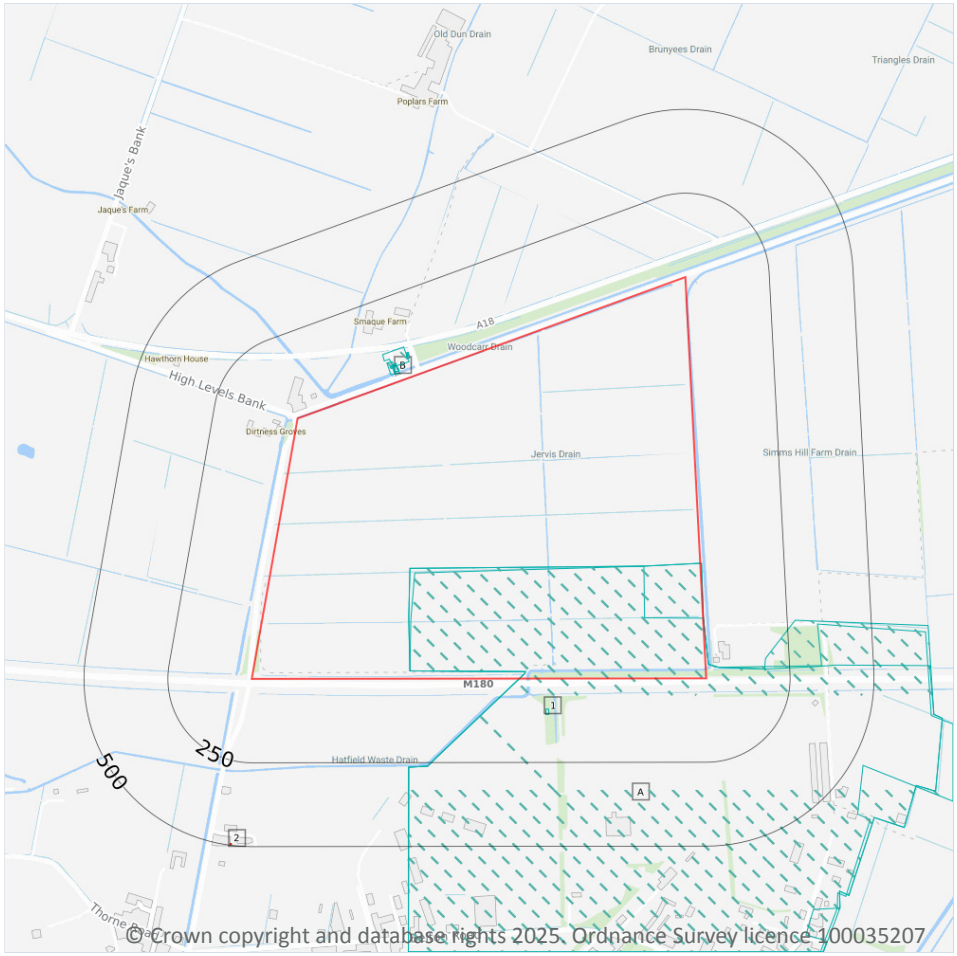
1.6 Historical military land

Records within 500m	0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical energy features

2.1 Historical industrial land uses

Records within 500m	14

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

Features are displayed on the Past land use - un-grouped map on **page 17 >**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Airfield**	**1951**	**1480916**
A	**On site**	**Disused Airfield**	**1973**	**1486560**
A	**On site**	**Disused Airfield**	**1982**	**1557084**

ID	Location	Land Use	Date	Group ID
B	23m NW	Engine	1885	1582088
B	26m NW	Engine	1885	1582088
B	30m NW	Pumping Station	1969	1548717
B	30m NW	Pumping Station	1981	1548717
B	43m NW	Engine	1932	1491415
B	44m NW	Engine	1951	1571106
B	55m NW	Engine	1908	1500149
B	55m NW	Engine	1904	1549499
B	68m NW	Unspecified Level	1908	1576308
B	68m NW	Unspecified Level	1908	1576308
1	91m S	Pumping Station	1982	1480690

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**0**

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

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**1**

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

Features are displayed on the Past land use - un-grouped map on **page 17 >**

ID	Location	Land Use	Date	Group ID
2	494m SW	Electricity Substation	1985	143272

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

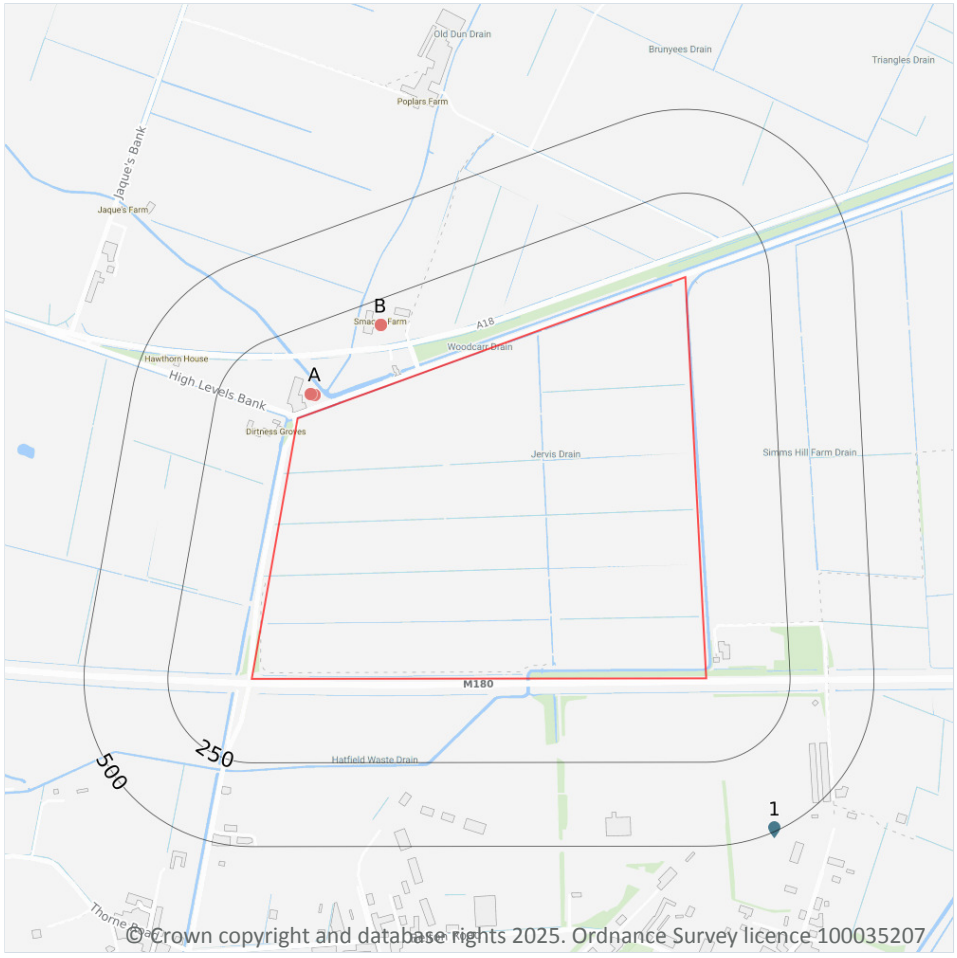
2.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Licensed waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	1

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

Features are displayed on the Waste and landfill map on **page 20 >**

ID	Location	Details		
1	495m SE	Site Name: Copart U K - Sandtoft Road Site Address: Land/premises At, Sandtoft Road, Belton, Doncaster, South Yorkshire, DN9 1PN Correspondence Address: -	Type of Site: Metal Recycling Site (Vehicle Dismantler) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 655649 EPR reference: EA/EPR/SP3690CJ Operator: Copart Uk Limited Waste Management licence No: 43459 Annual Tonnage: 5000	Issue Date: 15/02/2000 Effective Date: 15/02/2000 Modified: 15/02/2000 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

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

3.7 Waste exemptions

Records within 500m	15

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

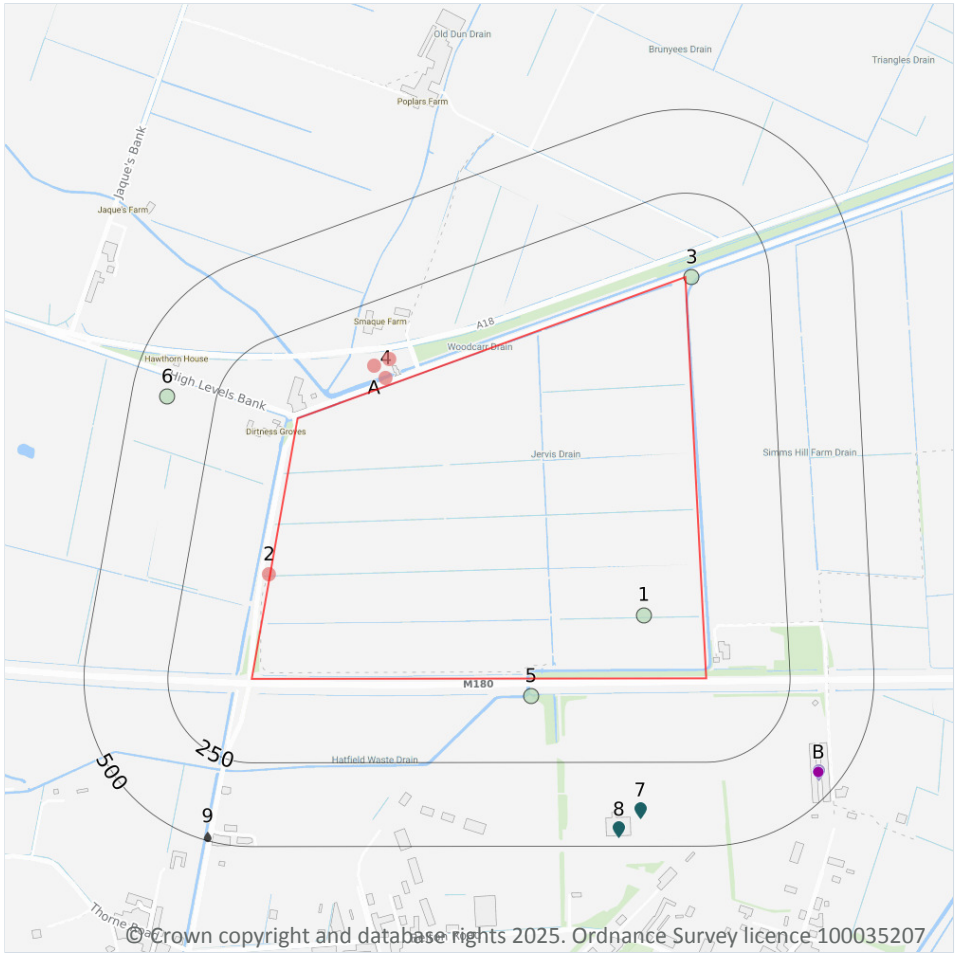
Features are displayed on the Waste and landfill map on **page 20 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	47m NW	Dirtness Grove Farm Crowle Dn17 4bp	EPR/EE5588CB/A001	Disposing of waste exemption	Agricultural waste only	Burning waste in the open
A	47m NW	Dirtness Grove Farm Crowle Dn17 4bp	EPR/EE5588CB/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading waste on agricultural land to confer benefit
A	47m NW	Dirtness Grove Farm Crowle Dn17 4bp	EPR/EE5588CB/A001	Disposing of waste exemption	Agricultural waste only	Deposit of waste from dredging of inland waters
A	47m NW	Dirtness Grove Farm Crowle Dn17 4bp	EPR/EE5588CB/A001	Treating waste exemption	Agricultural waste only	Cleaning, washing, spraying or coating relevant waste
A	47m NW	Dirtness Grove Farm Crowle Dn17 4bp	EPR/EE5588CB/A001	Using waste exemption	Agricultural waste only	Incorporation of ash into soil
A	47m NW	Dirtness Grove Farm Crowle Dn17 4bp	EPR/EE5588CB/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
A	53m NW	Dirtness Bridge Farm, Crowle, Scunthorpe, Dn17 4bp	WEX251170	Disposing of waste exemption	On a farm	Burning waste in the open
A	53m NW	Dirtness Bridge Farm, Crowle, Scunthorpe, Dn17 4bp	WEX107500	Disposing of waste exemption	On a farm	Burning waste in the open
B	173m NW	Smaque Farm, Crowle, Scunthorpe, Dn17 4bs	WEX125846	Disposing of waste exemption	On a farm	Burning waste in the open
B	177m NW	Smaque Farm Scunthorpe South Humberside Dn17 4bs	EPR/SF0636KZ/A001	Disposing of waste exemption	Agricultural waste only	Burning waste in the open

ID	Location	Site	Reference	Category	Sub-Category	Description
B	177m NW	Smaque Farm Scunthorpe South Humberside Dn17 4bs	EPR/SF0636KZ /A001	Using waste exemption	Agricultural waste only	Spreading waste on agricultural land to confer benefit
B	177m NW	Smaque Farm Scunthorpe South Humberside Dn17 4bs	EPR/SF0636KZ /A001	Treating waste exemption	Agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
B	177m NW	Smaque Farm Scunthorpe South Humberside Dn17 4bs	EPR/SF0636KZ /A001	Treating waste exemption	Agricultural waste only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
B	177m NW	Smaque Farm Scunthorpe South Humberside Dn17 4bs	EPR/SF0636KZ /A001	Using waste exemption	Agricultural waste only	Burning of waste as a fuel in a small appliance
B	177m NW	Smaque Farm Scunthorpe South Humberside Dn17 4bs	EPR/SF0636KZ /A001	Using waste exemption	Agricultural waste only	Use of waste for a specified purpose

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

4 Current industrial land use



Site Outline

Search buffers in metres (m)

- Recent industrial land uses
- Part A(1) industrial activities
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)
- Pollution inventory substances
- Pollution inventory waste transfers

4.1 Recent industrial land uses

Records within 250m	4

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 24 >**

ID	Location	Company	Address	Activity	Category
2	3m W	Mast (Telecommunication)	Lincolnshire, DN9	Telecommunications Features	Infrastructure and Facilities
4	22m NW	Slipway	Lincolnshire, DN17	Moorings and Unloading Facilities	Water

ID	Location	Company	Address	Activity	Category
A	69m NW	Dirtness Pumping Station	Lincolnshire, DN17	Water Pumping Stations	Industrial Features
A	73m NW	Electricity Sub Station	Lincolnshire, DN17	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	2

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

Features are displayed on the Current industrial land use map on **page 24 >**

ID	Location	Details	
B	436m SE	Operator: P.D. HOOK (BREEDERS) LIMITED Installation Name: Sandtoft Farm Poultry Unit - EPR/VP3536UQ Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: VP3536UQ Original Permit Number: VP3536UQ	EPR Reference: EPR/VP3536UQ Issue Date: 22/01/2021 Effective Date: 22/01/2021 Last date noted as effective: 29/10/2024 Status: Effective
B	436m SE	Operator: P D Hook (Breeders) Ltd Installation Name: Sandtoft Farm Poultry Unit - EPR/VP3536UQ Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: KP3806SZ Original Permit Number: VP3536UQ	EPR Reference: - Issue Date: 22/01/2021 Effective Date: 22/01/2021 Last date noted as effective: 21/03/2023 Status: Effective

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

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

Records within 500m **2**

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

Features are displayed on the Current industrial land use map on **page 24 >**

ID	Location	Address	Details	
7	394m SE	Technical Centre, Belton Road, Sandtoft, Belton, DN8 5SX	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
8	451m S	Gefco (UK) Limited, Belton Road, Sandtoft, DN8 5SX	Process: Respraying of Road Vehicles Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m **0**

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	1

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

Features are displayed on the Current industrial land use map on **page 24 >**

ID	Location	Address	Details	
9	488m SW	BELTONBELTOFTSANDTOFTPSEMEGOF,BELTONWOODHOUSEPSNO8,SANDTOFTPSNO7SANDTOFTPS,NO6&NO5,NLINCS	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: T/83/03493/O Permit Version: 1 Receiving Water: FOLLY DRAIN (TRIB)	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 06/03/1973 Effective Date: 06/03/1973 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.17 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	4

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

Features are displayed on the Current industrial land use map on **page 24 >**

ID	Location	Details	
1	**On site**	**Incident Date: 08/04/2003** **Incident Identification: 149568** **Pollutant: Oils and Fuel** **Pollutant Description: Other Oil or Fuel**	**Water Impact: Category 4 (No Impact)** **Land Impact: Category 3 (Minor)** **Air Impact: Category 4 (No Impact)**
3	19m NE	Incident Date: 01/04/2003 Incident Identification: 147865 Pollutant: Specific Waste Materials Pollutant Description: Household Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
5	53m S	Incident Date: 25/06/2021 Incident Identification: 1960130 Pollutant: Organic Chemicals/Products Pollutant Description: Paints and Varnishes	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6	394m W	Incident Date: 19/03/2002 Incident Identification: 64989 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	2

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

Features are displayed on the Current industrial land use map on **page 24 >**

ID: B, Location: 436m SE, Permit: VP3536UQ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Sandtoft Farm Poultry Unit Sandtoft Industrial Estate Belton Lincolnshire DN9 1PW
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Particulate matter - PM10	1000kg	1372kg

ID: B, Location: 436m SE, Permit: VP3536UQ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Sandtoft Farm Poultry Unit Sandtoft Industrial Estate Belton Lincolnshire DN9 1PW
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Ammonia	1000kg	11938kg

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

4.20 Pollution inventory waste transfers

Records within 500m	**1**

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

Features are displayed on the Current industrial land use map on **page 24 >**

ID: B, Location: 436m SE, Permit: VP3536UQ
Operator: P D Hook (Breeders) Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Sandtoft Farm Poultry Unit Sandtoft Industrial Estate Belton Lincolnshire DN9 1PW
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	Below Reporting Threshold	Below Reporting Threshold	15 01 01	paper and cardboard packaging	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	Below Reporting Threshold	Below Reporting Threshold	15 01 02	plastic packaging	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	Below Reporting Threshold	Below Reporting Threshold	15 01 03	wooden packaging	No
D1	Deposit into or onto land (eg landfill, etc.)	Below Reporting Threshold	Below Reporting Threshold	15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	No
D1	Deposit into or onto land (eg landfill, etc.)	Below Reporting Threshold	Below Reporting Threshold	20 03 01	mixed municipal waste	No

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

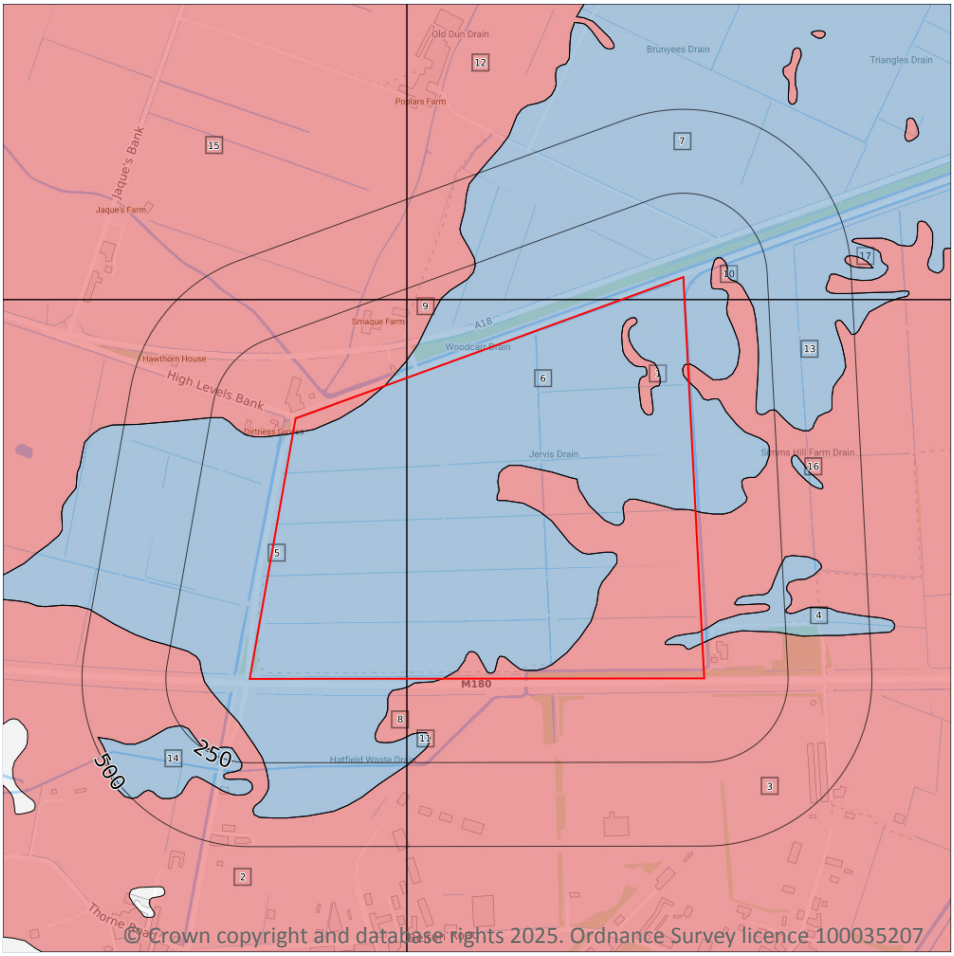
4.21 Pollution inventory radioactive waste

Records within 500m	**0**

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m	17

Aquifer status of groundwater held within superficial geology.

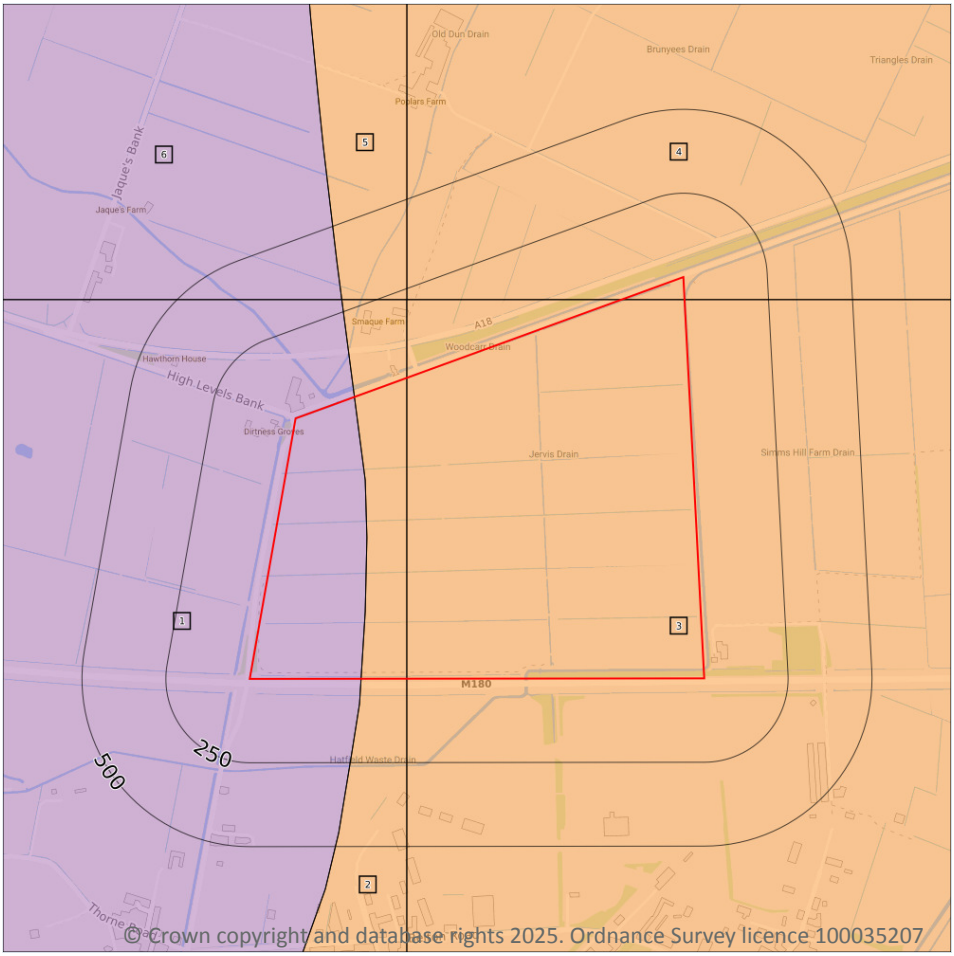
Features are displayed on the Hydrogeology map on **page 32 >**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
4	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
5	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
6	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
7	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
8	25m SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
9	49m NW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
10	81m NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
11	161m S	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
12	185m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
13	194m NE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
14	213m SW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
15	219m NW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
16	293m E	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
17	484m NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

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

5.2 Bedrock aquifer

Records within 500m	6

Aquifer status of groundwater held within bedrock geology.

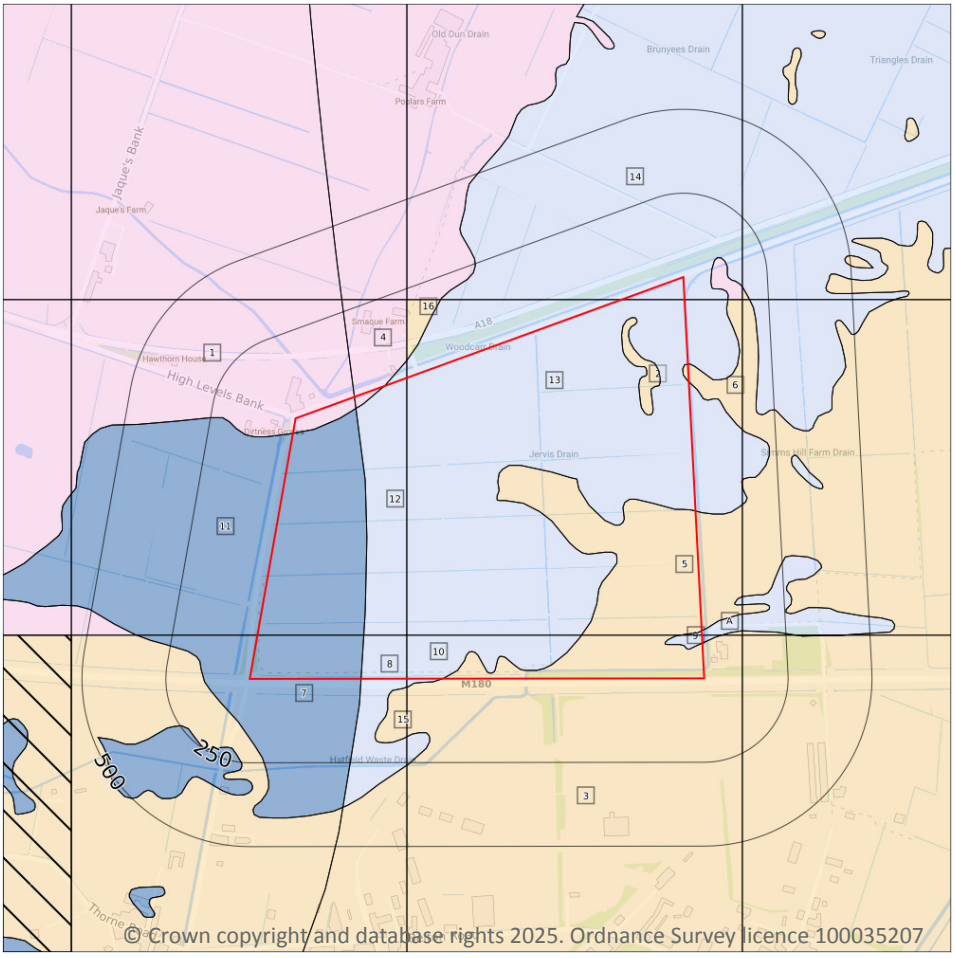
Features are displayed on the Bedrock aquifer map on **page 34 >**

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	On site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

ID	Location	Designation	Description
3	**On site**	**Secondary B**	**Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers**
4	**On site**	**Secondary B**	**Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers**
5	219m NW	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers
6	286m NW	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	17

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 36 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
3	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
4	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
5	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
6	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
7	On site	Summary Classification: Principal bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
8	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
9	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
10	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
11	On site	Summary Classification: Principal bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
12	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
13	**On site**	**Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer**	**Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year**	**Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
14	**On site**	**Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer**	**Leaching class: Intermediate Infiltration value: 40-70% Dilution value: <300mm/year**	**Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
A	**On site**	**Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer**	**Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year**	**Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
15	25m SW	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
16	49m NW	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	**0**

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

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

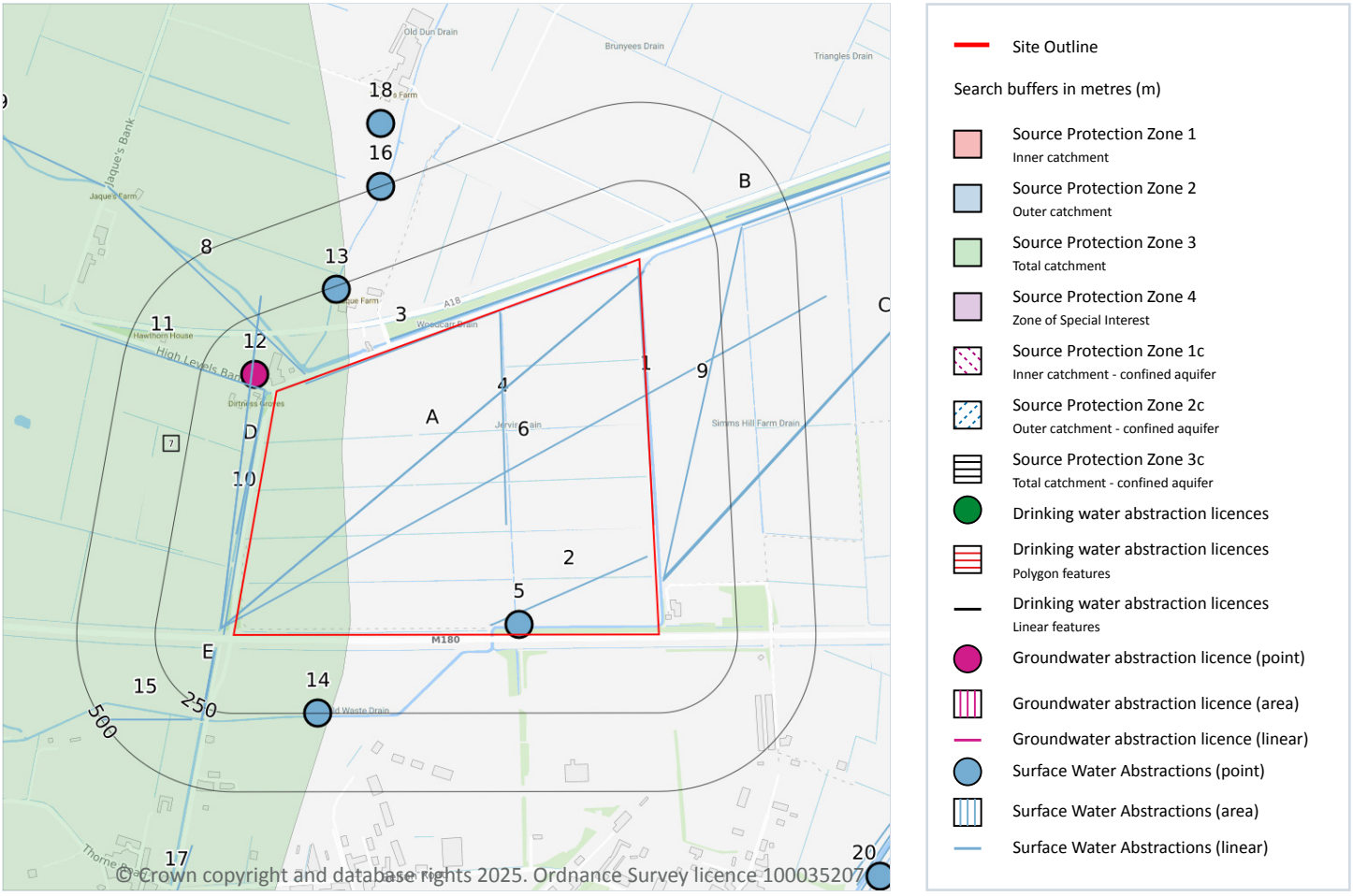
5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones



5.6 Groundwater abstractions

Records within 2000m	1

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

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

ID	Location	Details	
12	87m NW	Status: Historical Licence No: 03/28/83/0090 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: DIRTNESS BRIDGE FARM,CROWLE - BOREHOLE Data Type: Point Name: CUNDALL Easting: 474600 Northing: 409700	Annual Volume (m^3): 5727.96 Max Daily Volume (m^3): 81.828 Original Application No: - Original Start Date: 07/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**79**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

ID	Location	Details	
1	**On site**	**Status: Active** **Licence No: 03/28/83/0114** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: DIRTNESS BRIDGE FARM - HATFIELD WASTE DRAIN** **Data Type: Line** **Name: CUNDALL** **Easting: 475870** **Northing: 409220**	**Annual Volume (m^3): 9092** **Max Daily Volume (m^3): 545.5** **Original Application No: -** **Original Start Date: 30/11/1976** **Expiry Date: -** **Issue No: 100** **Version Start Date: 03/12/2018** **Version End Date: -**
2	**On site**	**Status: Active** **Licence No: 03/28/83/0147** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: SMAQUE FARM - CATALINE DRAIN** **Data Type: Line** **Name: J S BROOKE AND SONS** **Easting: 475350** **Northing: 408900**	**Annual Volume (m^3): 15450** **Max Daily Volume (m^3): 1100** **Original Application No: -** **Original Start Date: 02/09/1985** **Expiry Date: -** **Issue No: 101** **Version Start Date: 27/01/2000** **Version End Date: -**

ID	Location	Details	
3	On site	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - ANCHOR DRAIN Data Type: Line Name: CUNDALL Easting: 475370 Northing: 409900	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 545.5 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
4	On site	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - ANCHOR DYKE Data Type: Line Name: CUNDALL Easting: 475400 Northing: 409220	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 545.5 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
5	On site	Status: Active Licence No: MD/028/0083/032 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: Surface Water Midlands Region Point: POINT A HATFIELD WASTE DRAIN AT STANCHE BRIDGE Data Type: Point Name: ENVIRONMENT AGENCY Easting: 475441 Northing: 408904	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: NPS/NA/000818 Original Start Date: 22/12/2022 Expiry Date: 31/03/2038 Issue No: 1 Version Start Date: 22/12/2022 Version End Date: -
6	On site	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (3) Data Type: Line Name: Maw Easting: 474490 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
A	On site	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - WOODCARR DRAIN Data Type: Line Name: Maw Easting: 474491 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -

ID	Location	Details	
A	**On site**	**Status: Historical** **Licence No: 03/28/83/0197** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: EPWORTH & BELTON - WOODCARR DRAIN** **Data Type: Line** **Name: Maw** **Easting: 474490** **Northing: 408890**	**Annual Volume (m^3): 36363** **Max Daily Volume (m^3): 2273** **Original Application No: -** **Original Start Date: 07/02/1995** **Expiry Date: 31/03/2014** **Issue No: 103** **Version Start Date: 29/07/2010** **Version End Date: -**
A	**On site**	**Status: Historical** **Licence No: 03/28/83/0197** **Details: Spray Irrigation - Direct** **Direct Source: Surface Water Midlands Region** **Point: EPWORTH & BELTON - WOODCARR DRAIN** **Data Type: Line** **Name: Maw** **Easting: 474491** **Northing: 408890**	**Annual Volume (m^3): 36363** **Max Daily Volume (m^3): 2273** **Original Application No: -** **Original Start Date: 07/02/1995** **Expiry Date: 31/03/2014** **Issue No: 103** **Version Start Date: 29/07/2010** **Version End Date: -**
8	20m NW	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - BOATING DYKE Data Type: Line Name: CUNDALL Easting: 474130 Northing: 410300	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 545.5 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
9	23m SE	Status: Active Licence No: 03/28/83/0201 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BELTON - HATFIELD WASTE DRAIN Data Type: Line Name: H BARKER & SONS Easting: 475900 Northing: 409040	Annual Volume (m^3): 45000 Max Daily Volume (m^3): 2945 Original Application No: - Original Start Date: 21/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2024 Version End Date: -
B	23m NE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH ENGINE DRAIN Data Type: Line Name: Maw Easting: 475030 Northing: 409810	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -

ID	Location	Details	
C	23m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - HATFIELD WASTE DRAIN Data Type: Line Name: Maw Easting: 475900 Northing: 409050	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
B	23m NE	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH ENGINE DRAIN Data Type: Line Name: Maw Easting: 475030 Northing: 409811	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
B	23m NE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH ENGINE DRAIN Data Type: Line Name: Maw Easting: 475030 Northing: 409811	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
C	26m SE	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - HATFIELD WASTE DRAIN Data Type: Line Name: Maw Easting: 475903 Northing: 409046	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
C	26m SE	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - HATFIELD WASTE DRAIN Data Type: Line Name: Maw Easting: 475903 Northing: 409046	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -

ID	Location	Details	
10	31m SW	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES,CROWLE - NORTH IDLE DRAIN Data Type: Line Name: J S BROOKE & SONS Easting: 474500 Northing: 408870	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
D	35m NW	Status: Active Licence No: 03/28/83/0114 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS BRIDGE FARM - NORTH IDLE DRAIN Data Type: Line Name: CUNDALL Easting: 474540 Northing: 409190	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 545.5 Original Application No: - Original Start Date: 30/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
11	39m NW	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES,CROWLE - UNNAMED DRAIN (1) Data Type: Line Name: J S BROOKE & SONS Easting: 474630 Northing: 409650	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
D	44m SW	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (3) Data Type: Line Name: Maw Easting: 474491 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
D	44m SW	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (3) Data Type: Line Name: Maw Easting: 474491 Northing: 408890	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -

ID	Location	Details	
E	79m SW	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (2) Data Type: Line Name: Maw Easting: 474430 Northing: 408600	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
E	82m SW	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (2) Data Type: Line Name: Maw Easting: 474429 Northing: 408596	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
E	82m SW	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (2) Data Type: Line Name: Maw Easting: 474429 Northing: 408596	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
13	239m NW	Status: Active Licence No: 03/28/83/0255 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SMAQUE FARM - OLD RIVER DON Data Type: Point Name: J S BROOKE AND SONS Easting: 474860 Northing: 409970	Annual Volume (m^3): 15450 Max Daily Volume (m^3): 1100 Original Application No: A/28/83/130 Original Start Date: 28/01/2000 Expiry Date: - Issue No: 1 Version Start Date: 28/01/2000 Version End Date: -
14	250m SW	Status: Active Licence No: 03/28/83/0138 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT GRANGE - HATFIELD WASTE DRAIN Data Type: Point Name: T A WHITE & SONS Easting: 474800 Northing: 408620	Annual Volume (m^3): 4546 Max Daily Volume (m^3): 655 Original Application No: - Original Start Date: 27/05/1983 Expiry Date: - Issue No: 101 Version Start Date: 31/01/2007 Version End Date: -

ID	Location	Details	
15	300m SW	Status: Active Licence No: 03/28/83/0060 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT,YORKS - CATALINE DRAIN Data Type: Line Name: DENT Easting: 474100 Northing: 408600	Annual Volume (m^3): 3636.8 Max Daily Volume (m^3): 454.6 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
F	306m NE	Status: Historical Licence No: 03/28/83/0057 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BELTON GRANGE - RIVER TORNE Data Type: Line Name: Bramhall Farming Ltd Easting: 476100 Northing: 410200	Annual Volume (m^3): 34095 Max Daily Volume (m^3): 818 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2020 Version End Date: -
F	343m NE	Status: Active Licence No: 03/28/83/0057 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: HATFIELD WASTE DRAIN NEAR SANDTOFT Data Type: Line Name: Bramhall Farming Ltd Easting: 476150 Northing: 410175	Annual Volume (m^3): 31000 Max Daily Volume (m^3): 818 Original Application No: NPS/WR/034997 Original Start Date: 18/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2022 Version End Date: -
16	501m N	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (1) Data Type: Point Name: H BARKER & SONS Easting: 475000 Northing: 410300	Annual Volume (m^3): 13638 Max Daily Volume (m^3): 1200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
17	682m SW	Status: Active Licence No: 03/28/83/0060 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT,YORKS - NEW IDLE DRAIN Data Type: Line Name: DENT Easting: 474400 Northing: 408200	Annual Volume (m^3): 3636.8 Max Daily Volume (m^3): 454.6 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -

ID	Location	Details	
18	689m N	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (2) Data Type: Point Name: H BARKER & SONS Easting: 475000 Northing: 410500	Annual Volume (m^3): 13638 Max Daily Volume (m^3): 1200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
19	852m NW	Status: Active Licence No: 03/28/83/0057 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BOATING DYKE DRAIN Data Type: Line Name: Bramhall Farming Ltd Easting: 473429 Northing: 410626	Annual Volume (m^3): 31000 Max Daily Volume (m^3): 818 Original Application No: NPS/WR/034997 Original Start Date: 18/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2022 Version End Date: -
-	866m SW	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (1) Data Type: Line Name: Maw Easting: 474210 Northing: 407450	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	869m SW	Status: Active Licence No: MD/028/0083/005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (1) Data Type: Line Name: Maw Easting: 474210 Northing: 407452	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/012485 Original Start Date: 01/04/2014 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 13/04/2020 Version End Date: -
-	869m SW	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - NORTH IDLE DRAIN (1) Data Type: Line Name: Maw Easting: 474210 Northing: 407452	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -

ID	Location	Details	
H	951m SE	Status: Historical Licence No: 03/28/83/0057 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BELTON GRANGE - DOUBLE RIVERS Data Type: Line Name: Bramhall Farming Ltd Easting: 476500 Northing: 408100	Annual Volume (m^3): 34095 Max Daily Volume (m^3): 818 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2020 Version End Date: -
H	968m SE	Status: Active Licence No: MD/028/0083/059 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: RIVER TORNE NEAR BELTON Data Type: Line Name: Bramhall Farming Ltd Easting: 476517 Northing: 408072	Annual Volume (m^3): 31000 Max Daily Volume (m^3): 818 Original Application No: NPS/WR/035925 Original Start Date: 18/02/1966 Expiry Date: - Issue No: 1 Version Start Date: 01/04/2022 Version End Date: -
20	986m SE	Status: Active Licence No: 03/28/83/0195 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - RIVER TORNE (3) Data Type: Line Name: Bramhall Farming Ltd Easting: 476370 Northing: 407810	Annual Volume (m^3): 22727 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/031462 Original Start Date: 07/02/1995 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2020 Version End Date: -
-	996m N	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (3) Data Type: Point Name: H BARKER & SONS Easting: 475200 Northing: 410900	Annual Volume (m^3): 13638 Max Daily Volume (m^3): 1200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
22	1036m SE	Status: Active Licence No: 03/28/83/0195 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - SOUTH ENGINE DRAIN (3) Data Type: Line Name: Bramhall Farming Ltd Easting: 476420 Northing: 407800	Annual Volume (m^3): 22727 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/031462 Original Start Date: 07/02/1995 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2020 Version End Date: -

ID	Location	Details	
23	1044m SE	Status: Active Licence No: 03/28/83/0162 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WESTGATE,BELTON - SOUTH LEVEL ENGINE DRAIN Data Type: Point Name: T D & P A JOHNSON Easting: 476590 Northing: 408100	Annual Volume (m^3): 27250 Max Daily Volume (m^3): 1210 Original Application No: - Original Start Date: 27/02/1989 Expiry Date: - Issue No: 102 Version Start Date: 25/10/2006 Version End Date: -
-	1052m SE	Status: Active Licence No: 03/28/83/0195 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - RIVER TORNE (4) Data Type: Line Name: Bramhall Farming Ltd Easting: 476910 Northing: 408630	Annual Volume (m^3): 22727 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/031462 Original Start Date: 07/02/1995 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2020 Version End Date: -
-	1138m W	Status: Historical Licence No: 03/28/83/0197 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT SANDTOFT Data Type: Line Name: Maw Easting: 472950 Northing: 408900	Annual Volume (m^3): 36363 Max Daily Volume (m^3): 2273 Original Application No: - Original Start Date: 07/02/1995 Expiry Date: 31/03/2014 Issue No: 103 Version Start Date: 29/07/2010 Version End Date: -
-	1150m N	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (4) Data Type: Point Name: H BARKER & SONS Easting: 475300 Northing: 411100	Annual Volume (m^3): 13638 Max Daily Volume (m^3): 1200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
-	1230m SW	Status: Active Licence No: 03/28/83/0209 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SANDTOFT - HATFIELD WASTE DRAIN Data Type: Point Name: J T HOPKINS & SONS Easting: 473500 Northing: 408200	Annual Volume (m^3): 10000 Max Daily Volume (m^3): 550 Original Application No: - Original Start Date: 31/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2003 Version End Date: -

ID	Location	Details	
-	1334m SW	Status: Active Licence No: 03/28/83/0115 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WILLOW LODGE FARM,THORNE - MOOR DRAIN Data Type: Line Name: ULLEY Easting: 473130 Northing: 407350	Annual Volume (m^3): 2273 Max Daily Volume (m^3): 545.5 Original Application No: NPS/WR/037084 Original Start Date: 30/11/1976 Expiry Date: - Issue No: 101 Version Start Date: 10/01/2022 Version End Date: -
-	1376m W	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRNESS GROVES, CROWLE - ANCHOR DRAIN (1) Data Type: Line Name: J S BROOKE & SONS Easting: 473050 Northing: 410200	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
-	1432m N	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: POPLARS FARM - DUNN DRAIN (5) Data Type: Point Name: H BARKER & SONS Easting: 475300 Northing: 411400	Annual Volume (m^3): 13638 Max Daily Volume (m^3): 1200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
-	1463m NE	Status: Active Licence No: 03/28/83/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: GLEBE FARM - THE SOUTH SOAK DRAIN Data Type: Point Name: H BARKER & SONS Easting: 476300 Northing: 411450	Annual Volume (m^3): 13638 Max Daily Volume (m^3): 1200 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1982 Version End Date: -
-	1487m SE	Status: Active Licence No: 03/28/83/0120 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: NEAR EPWORTH - RIVER TORNE Data Type: Line Name: Wroot Farming Company Easting: 475680 Northing: 406600	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 455 Original Application No: NPS/WR/016016 Original Start Date: 18/10/1977 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2020 Version End Date: -

ID	Location	Details	
-	1506m SE	Status: Active Licence No: 03/28/83/0195 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - SOUTH ENGINE DRAIN (2) Data Type: Line Name: Bramhall Farming Ltd Easting: 475950 Northing: 406490	Annual Volume (m^3): 22727 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/031462 Original Start Date: 07/02/1995 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2020 Version End Date: -
-	1519m S	Status: Active Licence No: 03/28/83/0195 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - RIVER TORNE (2) Data Type: Line Name: Bramhall Farming Ltd Easting: 475730 Northing: 406740	Annual Volume (m^3): 22727 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/031462 Original Start Date: 07/02/1995 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2020 Version End Date: -
-	1524m SE	Status: Active Licence No: 03/28/83/0196 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: EPWORTH & BELTON - FOLLY DRAIN (2) Data Type: Line Name: TILLERS TURF COMPANY LTD Easting: 477060 Northing: 407740	Annual Volume (m^3): 9091 Max Daily Volume (m^3): 2273 Original Application No: NPS/WR/024914 Original Start Date: 07/02/1995 Expiry Date: - Issue No: 101 Version Start Date: 10/11/2016 Version End Date: -
-	1531m NE	Status: Historical Licence No: 03/28/84/0005 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SOUTH END FARM - NORTH SOAK DRAIN Data Type: Point Name: PROCTOR Easting: 476540 Northing: 411420	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 31/01/1985 Expiry Date: - Issue No: 100 Version Start Date: 31/01/1985 Version End Date: -
-	1531m NE	Status: Historical Licence No: 03/28/83/0266 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: SOUTH END FARM - NORTH SOAK DRAIN Data Type: Point Name: T C BREARS & SONS Easting: 476540 Northing: 411420	Annual Volume (m^3): 4440 Max Daily Volume (m^3): 264 Original Application No: - Original Start Date: 21/09/2001 Expiry Date: - Issue No: 2 Version Start Date: 01/04/2003 Version End Date: -

ID	Location	Details	
-	1541m NE	Status: Historical Licence No: 03/28/83/0254 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT CROWLE - STAINFORTH AND KEADBY CANAL Data Type: Line Name: BRITISH WATERWAYS BOARD Easting: 476800 Northing: 411260	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/05/2000 Expiry Date: 31/03/2008 Issue No: 1 Version Start Date: 17/05/2000 Version End Date: -
-	1553m NE	Status: Active Licence No: 03/28/83/0188 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: HIRST PRIORY - HATFIELD WASTE DRAIN Data Type: Line Name: Bramall Farming Ltd Easting: 477290 Northing: 410580	Annual Volume (m^3): 1455 Max Daily Volume (m^3): 153 Original Application No: 03/28/83/0188 Original Start Date: 28/05/1983 Expiry Date: - Issue No: 102 Version Start Date: 09/01/2024 Version End Date: -
-	1572m W	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES,CROWLE - ANCHOR DRAIN (2) Data Type: Line Name: J S BROOKE & SONS Easting: 473180 Northing: 410150	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -
-	1593m SE	Status: Historical Licence No: 03/28/83/0206 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WESTGATE - FOLLY DRAIN (POINT) Data Type: Point Name: BOWERS Easting: 477100 Northing: 407840	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 31/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 31/03/1994 Version End Date: -
-	1598m SE	Status: Historical Licence No: 03/28/83/0206 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WESTGATE - FOLLY DRAIN (REACH) Data Type: Line Name: BOWERS Easting: 477510 Northing: 408310	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 31/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 31/03/1994 Version End Date: -

ID	Location	Details	
-	1611m SW	Status: Active Licence No: 03/28/83/0061 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - NORTH IDLE DRAIN Data Type: Line Name: HINZ Easting: 474000 Northing: 406300	Annual Volume (m^3): 10870 Max Daily Volume (m^3): 324 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2002 Version End Date: -
-	1611m SW	Status: Active Licence No: 03/28/83/0272 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - NORTH IDLE DRAIN Data Type: Line Name: G J MELLOR & PARTNERS Easting: 474000 Northing: 406300	Annual Volume (m^3): 51739 Max Daily Volume (m^3): 1246 Original Application No: A/28/83/145 Original Start Date: 17/10/2005 Expiry Date: - Issue No: 1 Version Start Date: 01/04/2006 Version End Date: -
-	1611m SW	Status: Historical Licence No: 03/28/83/0226 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - NORTH IDLE DRAIN Data Type: Line Name: TRUSTEES OF THE VAN ZWANENBERG WEST HALE Easting: 474000 Northing: 406300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 13/11/1995 Expiry Date: - Issue No: 100 Version Start Date: 15/05/1998 Version End Date: -
-	1622m S	Status: Historical Licence No: 03/28/83/0126 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: AIRFIELD AT STOCKHOLES TURBARY - RIVER TORNE Data Type: Point Name: STEWART Easting: 475950 Northing: 407250	Annual Volume (m^3): 20457 Max Daily Volume (m^3): 655 Original Application No: - Original Start Date: 08/06/1979 Expiry Date: - Issue No: 100 Version Start Date: 08/06/1979 Version End Date: -
-	1711m W	Status: Active Licence No: 03/28/83/0066 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: DIRTNESS GROVES, CROWLE - BLETCHERS DRAIN Data Type: Line Name: J S BROOKE & SONS Easting: 473050 Northing: 410200	Annual Volume (m^3): 15274.56 Max Daily Volume (m^3): 545.52 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/10/1999 Version End Date: -

ID	Location	Details	
-	1731m SE	Status: Active Licence No: 03/28/83/0123 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: STOCKHOLES TURBARY - FOLLY DRAIN Data Type: Line Name: T D & P A JOHNSON Easting: 476730 Northing: 407360	Annual Volume (m^3): 50000 Max Daily Volume (m^3): 1210 Original Application No: - Original Start Date: 15/12/1977 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2024 Version End Date: -
-	1753m E	Status: Active Licence No: 03/28/83/0189 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: HIRST PARK PRIORY GOLF COURSE - RIVER TORNE Data Type: Line Name: Blinc Hirst Priory Limited Easting: 477600 Northing: 409670	Annual Volume (m^3): 12955 Max Daily Volume (m^3): 3993 Original Application No: NPS/WR/038341 Original Start Date: 28/05/1983 Expiry Date: - Issue No: 102 Version Start Date: 05/04/2023 Version End Date: -
-	1753m E	Status: Active Licence No: 03/28/83/0189 Details: Spray Irrigation - Storage Direct Source: Surface Water Midlands Region Point: HIRST PARK PRIORY GOLF COURSE - RIVER TORNE Data Type: Line Name: Blinc Hirst Priory Limited Easting: 477600 Northing: 409670	Annual Volume (m^3): 12955 Max Daily Volume (m^3): 3993 Original Application No: NPS/WR/038341 Original Start Date: 28/05/1983 Expiry Date: - Issue No: 102 Version Start Date: 05/04/2023 Version End Date: -
-	1792m SE	Status: Historical Licence No: 03/28/83/0181 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: STOCKHOLES TURBARY - FOLLY DRAIN Data Type: Point Name: TREWEEK Easting: 476670 Northing: 407260	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 30/03/1994 Expiry Date: - Issue No: 101 Version Start Date: 16/03/2005 Version End Date: -
-	1801m S	Status: Historical Licence No: 03/28/83/0207 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: STOCKHOLES TURBARY - SOUTH ENGINE DRAIN Data Type: Point Name: BOWERS Easting: 476150 Northing: 407090	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 31/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 31/03/1994 Version End Date: -

ID	Location	Details	
-	1877m SW	Status: Historical Licence No: 03/28/83/0273 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR, EPWORTH, DONCASTER-MOOR DRAIN Data Type: Line Name: TOOTHILL Easting: 473040 Northing: 407390	Annual Volume (m^3): 13301 Max Daily Volume (m^3): 1246 Original Application No: - Original Start Date: 04/11/2005 Expiry Date: - Issue No: 1 Version Start Date: 04/11/2005 Version End Date: -
-	1879m SW	Status: Active Licence No: 03/28/83/0273 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR, EPWORTH, DONCASTER-MOOR DRAIN Data Type: Line Name: W G S Platt & Sons Easting: 473040 Northing: 407390	Annual Volume (m^3): 13301 Max Daily Volume (m^3): 1246 Original Application No: NPS/WR/009637 Original Start Date: 04/11/2005 Expiry Date: - Issue No: 3 Version Start Date: 04/01/2012 Version End Date: -
-	1879m SW	Status: Active Licence No: 03/28/83/0061 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - MOOR DRAIN Data Type: Line Name: HINZ Easting: 473040 Northing: 407390	Annual Volume (m^3): 10870 Max Daily Volume (m^3): 324 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2002 Version End Date: -
-	1879m SW	Status: Historical Licence No: 03/28/83/0226 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: WEST CARR,EPWORTH - MOOR DRAIN Data Type: Line Name: TRUSTEES OF THE VAN ZWANENBERG WEST HALE Easting: 473040 Northing: 407390	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 13/11/1995 Expiry Date: - Issue No: 100 Version Start Date: 15/05/1998 Version End Date: -
-	1935m N	Status: Active Licence No: 03/28/83/0259 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: CROWLE - OLD RIVER DRAIN Data Type: Line Name: DAN ALBONE & SON LTD Easting: 475900 Northing: 412000	Annual Volume (m^3): 24000 Max Daily Volume (m^3): 2945 Original Application No: NPS/WR/035308 Original Start Date: 21/11/2001 Expiry Date: - Issue No: 2 Version Start Date: 27/04/2021 Version End Date: -

ID	Location	Details	
-	1935m N	Status: Historical Licence No: 03/28/84/0010 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: CROWLE - OLD RIVER DRAIN Data Type: Line Name: H BARKER & SONS Easting: 475900 Northing: 412000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 31/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 30/05/1995 Version End Date: -
-	1978m E	Status: Active Licence No: 03/28/83/0190 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BELTON PARISH - FOLLY DRAIN Data Type: Line Name: J J & D S STUBLEY LTD Easting: 477860 Northing: 408740	Annual Volume (m^3): 5819 Max Daily Volume (m^3): 611 Original Application No: - Original Start Date: 28/05/1993 Expiry Date: - Issue No: 100 Version Start Date: 28/05/1993 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

5.9 Source Protection Zones

Records within 500m	1

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

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

ID	Location	Type	Description
7	**On site**	**3**	**Total catchment**

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

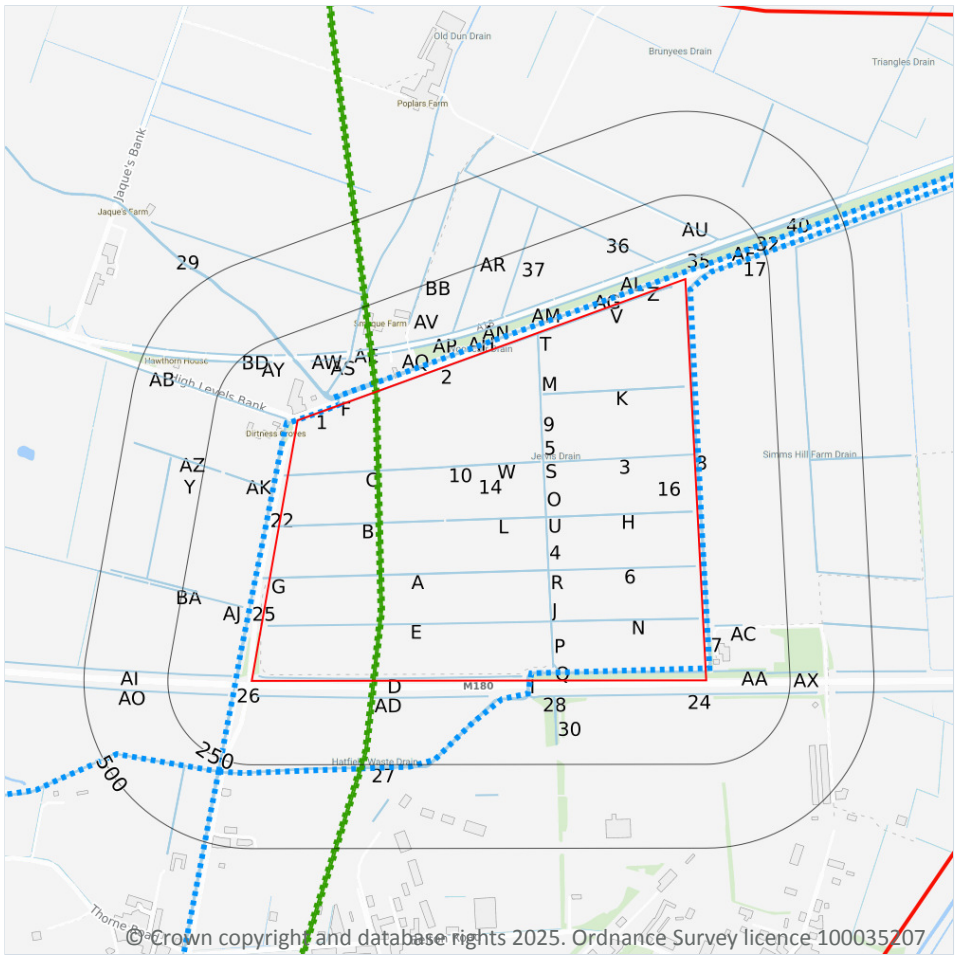
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



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Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	114

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

Features are displayed on the Hydrology map on **page 60 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
1	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Drain

ID	Location	Type of water feature	Ground level	Permanence	Name
2	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Drain
3	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Jervis Drain
4	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
5	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Jervis Drain
6	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hatfield Waste Drain
8	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Jervis Drain
9	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Jervis Drain
10	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
E	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	North Engine Drain
G	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hatfield Waste Drain
I	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
K	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Jervis Drain
N	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
P	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain

ID	Location	Type of water feature	Ground level	Permanence	Name
P	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
P	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
P	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
Q	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
Q	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
Q	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
Q	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
Q	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hatfield Waste Drain
R	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
R	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
R	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain
S	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Woodcarr Small Drain

ID	Location	Type of water feature	Ground level	Permanence	Name
S	**On site**	**Inland river not influenced by normal tidal action.**	**Underground**	**Watercourse contains water year round (in normal circumstances)**	**Woodcarr Small Drain**
T	**On site**	**Inland river not influenced by normal tidal action.**	**Underground**	**Watercourse contains water year round (in normal circumstances)**	**Jervis Drain**
T	**On site**	**Inland river not influenced by normal tidal action.**	**Underground**	**Watercourse contains water year round (in normal circumstances)**	**Woodcarr Drain**
T	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Jervis Drain**
T	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Woodcarr Drain**
U	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Woodcarr Small Drain**
U	**On site**	**Inland river not influenced by normal tidal action.**	**Underground**	**Watercourse contains water year round (in normal circumstances)**	**Woodcarr Small Drain**
V	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Woodcarr Drain**
W	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
17	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Hatfield Waste Drain**
G	4m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	21m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	North Engine Drain
AA	23m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
F	25m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Boating Dike Drain
22	28m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	North Idle Drain
AB	28m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Anchor Drain
AC	33m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
24	41m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
25	44m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	North Idle Drain
26	44m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	North Idle Drain
27	44m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hatfield Waste Drain
28	44m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
29	44m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Boating Dike Drain
AE	44m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Old Dun Drain
AD	45m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
30	47m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
Z	48m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AF	48m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AG	54m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
32	55m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AH	58m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AI	60m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AJ	63m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AK	68m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	74m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
35	75m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Z	76m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AL	76m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AG	77m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
36	78m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Brunyees and Turners Drain
AM	78m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AN	79m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AO	83m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
37	83m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AH	86m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AH	87m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AQ	87m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AH	88m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AP	88m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AH	95m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AE	96m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AR	105m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
AQ	106m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AS	124m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AE	124m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AF	134m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AS	142m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AU	149m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AF	153m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AF	154m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AV	159m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
40	162m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AW	171m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AW	173m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	178m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
AY	190m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AY	195m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AZ	198m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AV	203m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
BA	204m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BA	205m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Plains Drain
BB	206m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BD	208m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BD	230m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	48

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

Features are displayed on the Hydrology map on **page 60 >**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 60 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
14	**On site**	**River**	**Hatfield Waste Drain Catchment (trib of Torne/Three Rivers)**	**GB104028064330**	**Isle of Axholme**	**Idle and Torne**

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on **page 60 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
15	**On site**	**River**	**Hatfield Waste Drain Catchment (trib of Torne/Three Rivers)**	**GB104028064330 ↗**	**Poor**	**Fail**	**Poor**	**2019**

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

6.5 WFD Groundwater bodies

Records on site	2

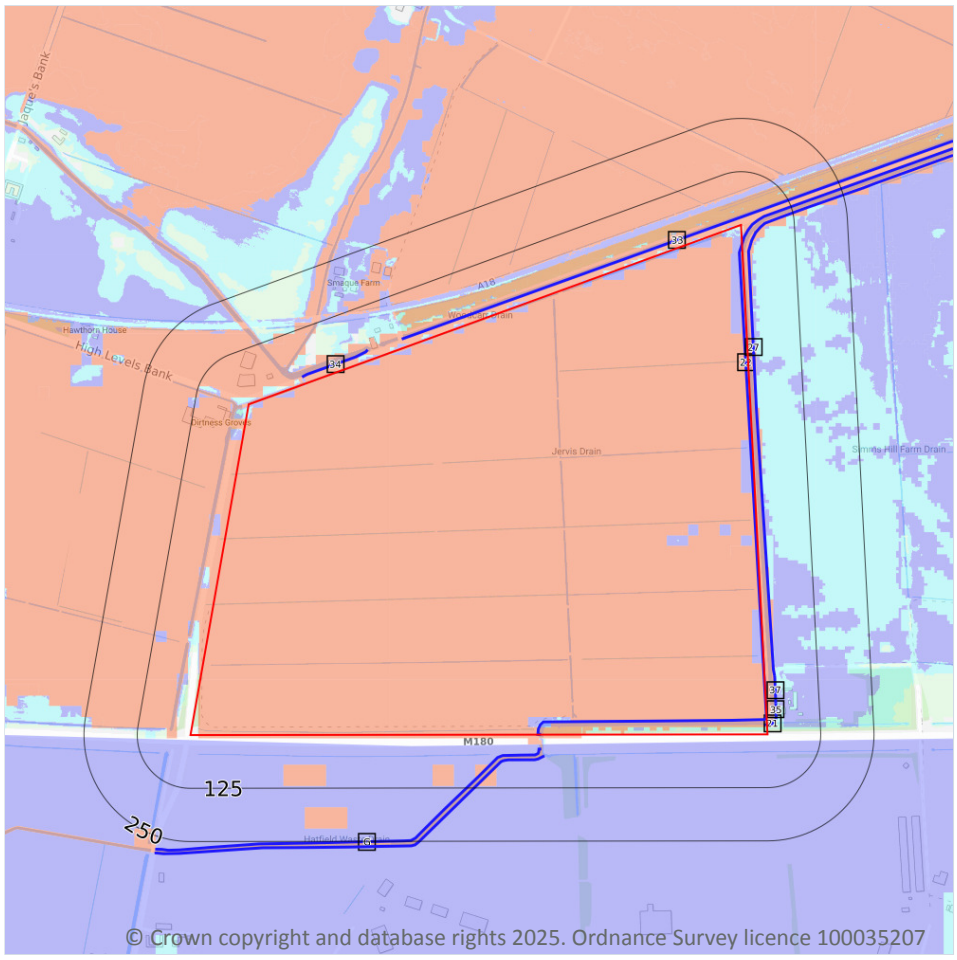
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 60 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
16	**On site**	**Idle Torne - Secondary Mudrocks**	**GB40402G992200** ↗	**Good**	**Good**	**Good**	**2019**
Y	**On site**	**Idle Torne - PT Sandstone Nottinghamshire& Doncaster**	**GB40401G301500** ↗	**Poor**	**Poor**	**Poor**	**2019**

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

7 River and coastal flooding



7.1 Risk of flooding from rivers and the sea

Records within 50m	51

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on **page 72 >**

Distance	Flood risk category
On site	**High**
0 - 50m	High

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

7.2 Historical Flood Events

Records within 250m	**0**

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

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

7.3 Flood Defences

Records within 250m	**10**

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

Features are displayed on the River and coastal flooding map on **page 72 >**

ID	Location	Update
21	**On site**	**08/11/2022**
22	**On site**	**08/11/2022**
A	**On site**	**08/11/2022**
27	14m NE	08/11/2022
33	17m NE	08/11/2022
34	17m NW	08/11/2022
35	22m SE	08/11/2022
37	23m SE	08/11/2022
G	34m S	08/11/2022
G	50m S	08/11/2022

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

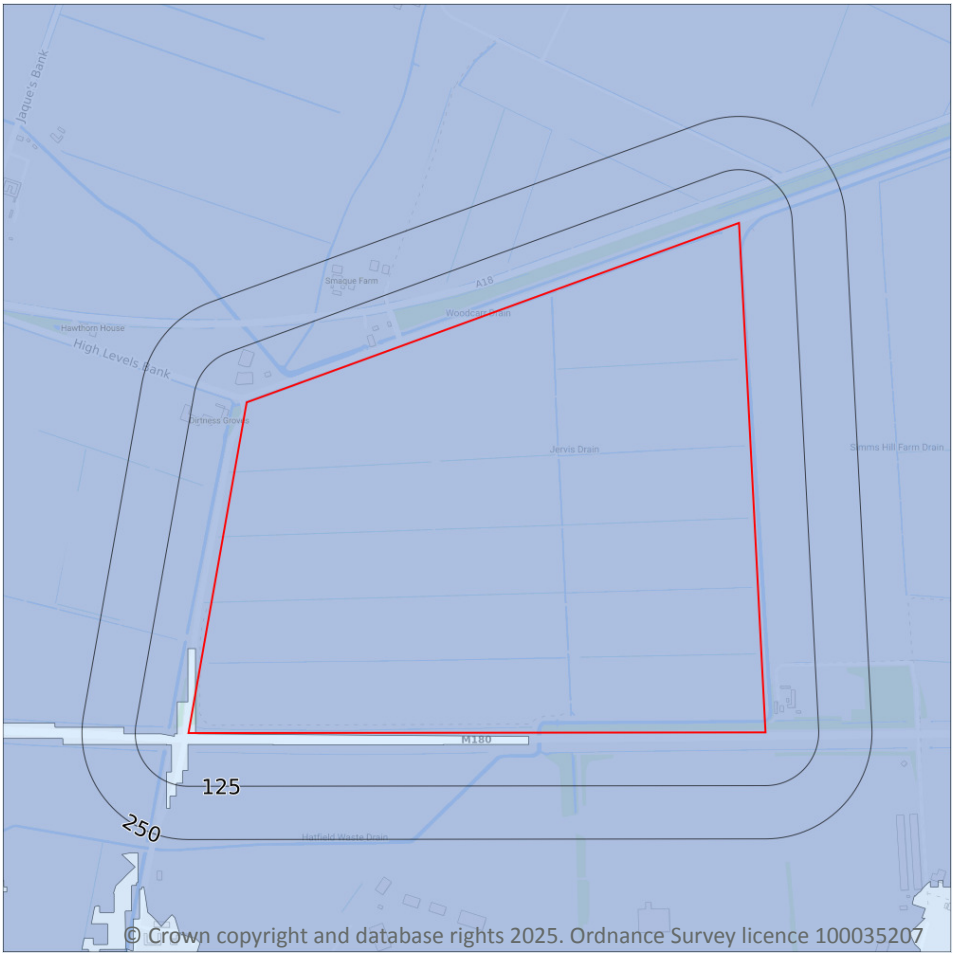
7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones



Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

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

Features are displayed on the River and coastal flooding map on **page 72 >**

Location	Type
On site	**Zone 2 - (Fluvial /Tidal Models)**

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

7.7 Flood Zone 3

Records within 50m	1

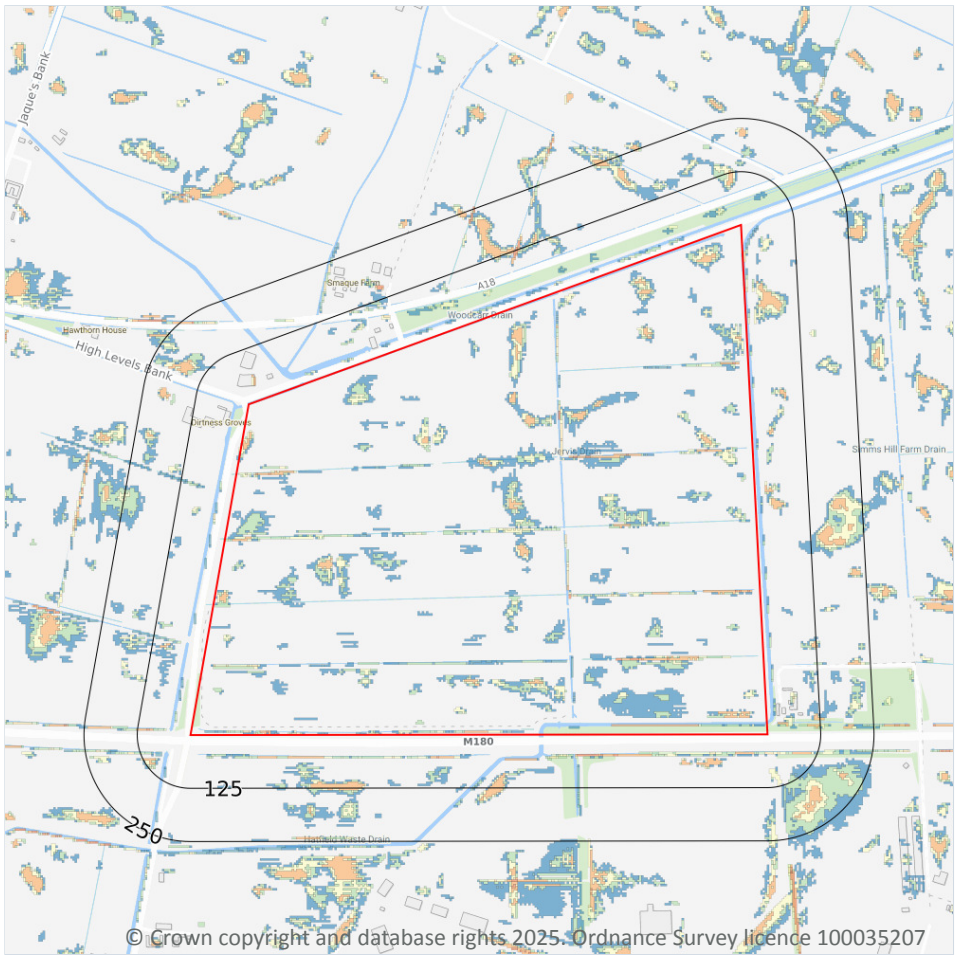
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 72 >**

Location	Type
On site	**Zone 3 - (Fluvial Models)**

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

8 Surface water flooding



Site Outline

Search buffers in metres (m)

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

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

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

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

8.1 Surface water flooding

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

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

Features are displayed on the Surface water flooding map on **page 77 >**

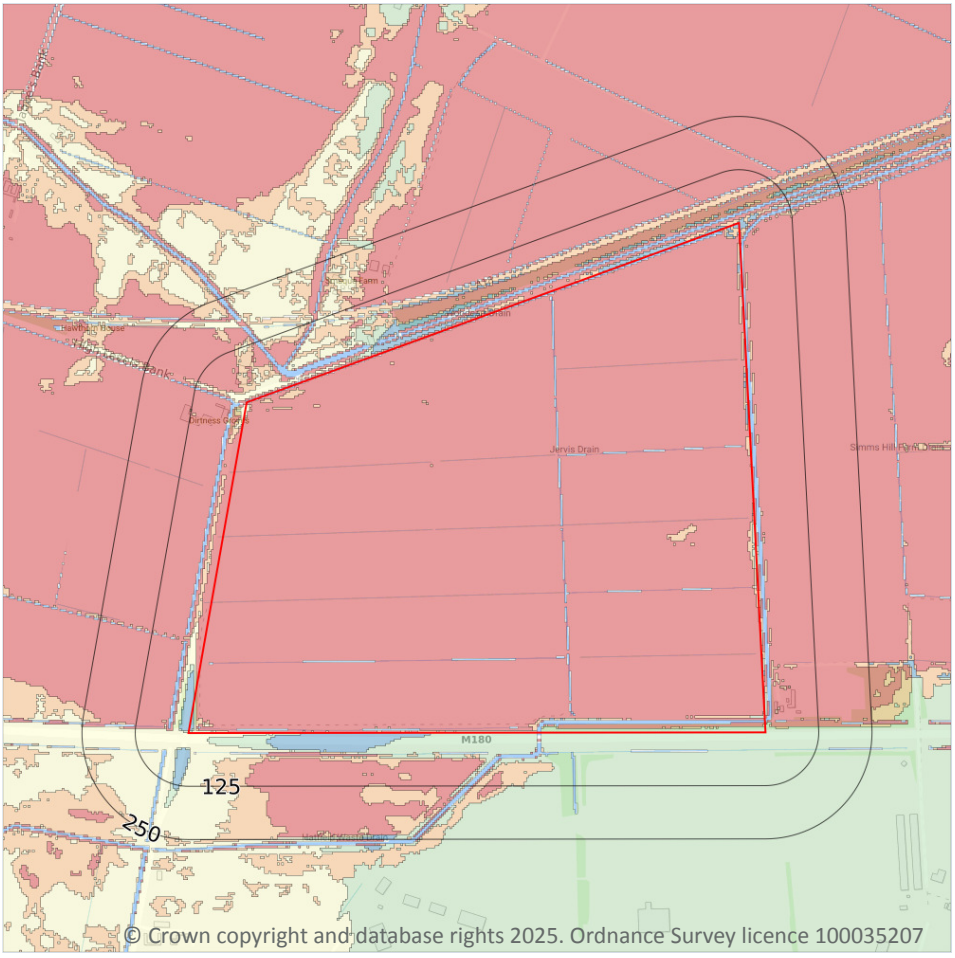
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

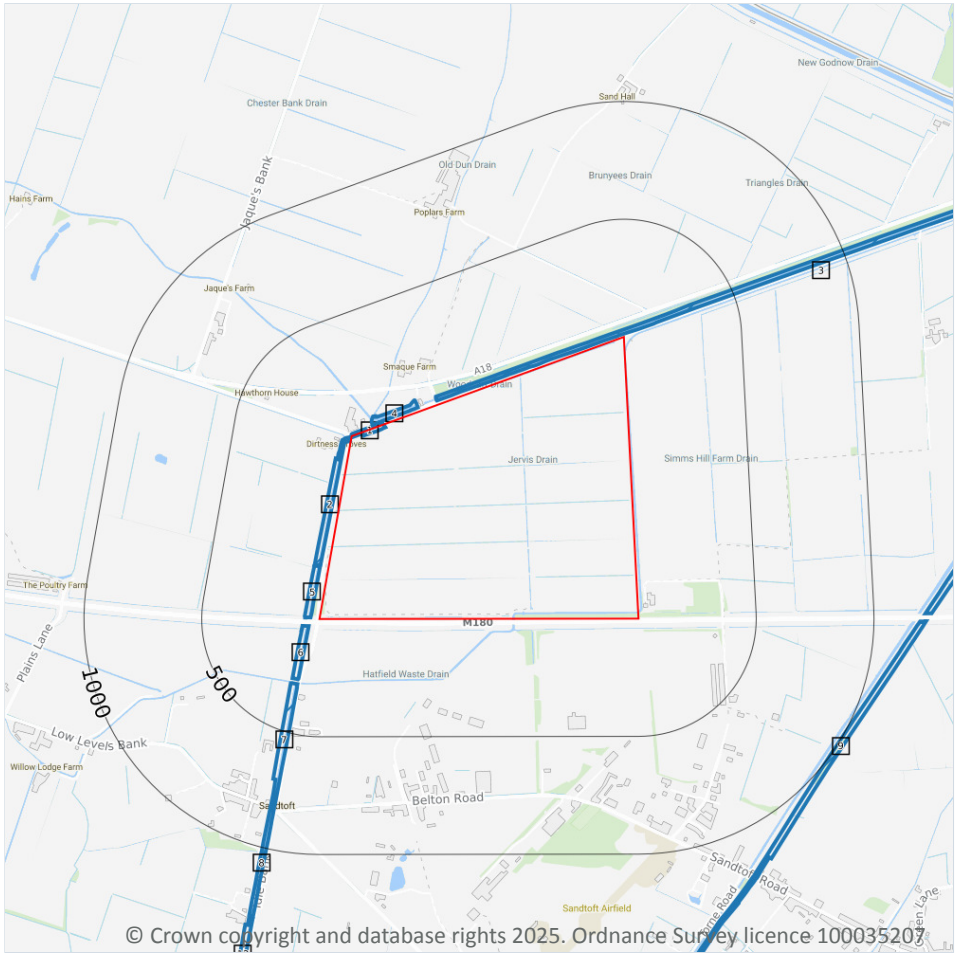
Highest risk on site	**High**
Highest risk within 50m	**High**

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

Features are displayed on the Groundwater flooding map on **page 79 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	12

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 80 >**

ID	Location	Name	Data source
1	**On site**	**Hatfield Chase Ditches**	**Natural England**

ID	Location	Name	Data source
2	3m NW	Hatfield Chase Ditches	Natural England
3	13m NE	Hatfield Chase Ditches	Natural England
4	15m NW	Hatfield Chase Ditches	Natural England
5	36m W	Hatfield Chase Ditches	Natural England
6	55m SW	Hatfield Chase Ditches	Natural England
7	292m SW	Hatfield Chase Ditches	Natural England
8	829m SW	Hatfield Chase Ditches	Natural England
9	999m SE	Hatfield Chase Ditches	Natural England
10	1202m SE	Hatfield Chase Ditches	Natural England
11	1219m E	Hatfield Chase Ditches	Natural England
12	1301m SW	Hatfield Chase Ditches	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	0

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

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	0

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

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

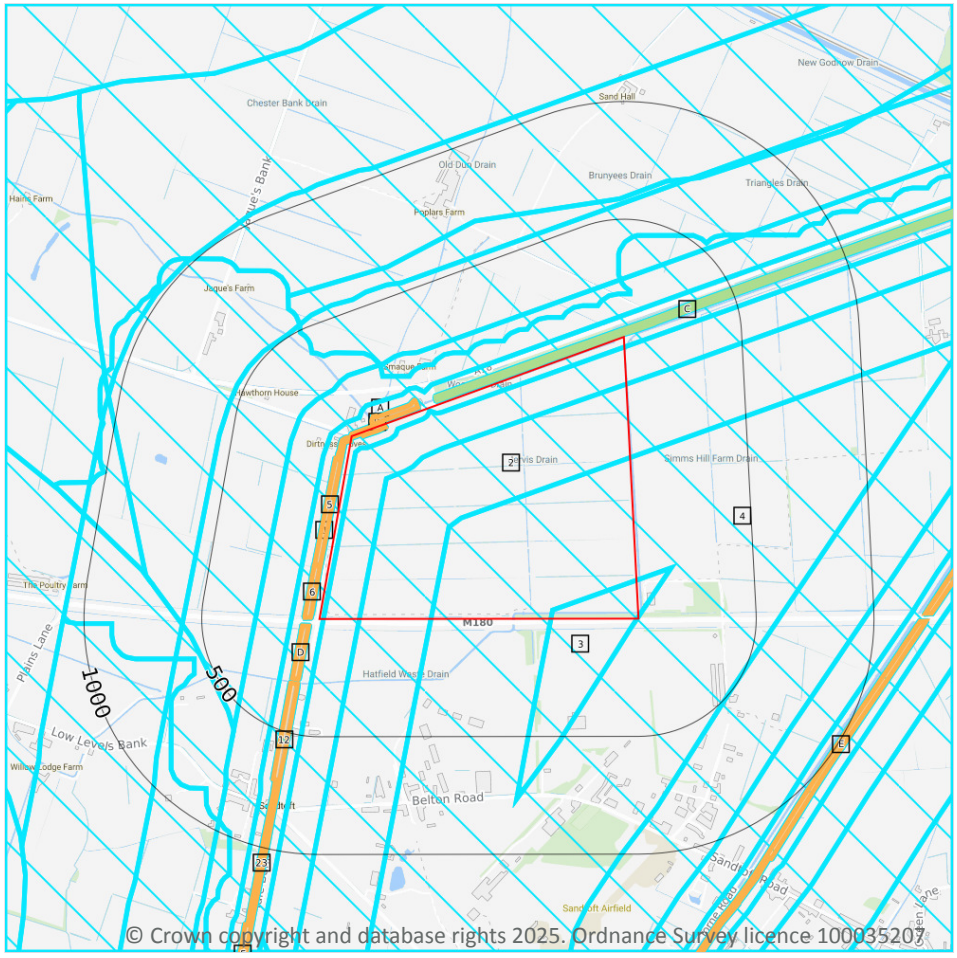
Records within 2000m	4

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

Location	Name	Type	NVZ ID	Status
On site	**R Torne / Three Rivers from Mother Dr to R Trent NVZ**	**Surface Water**	**351**	**Existing**
440m W	R Torne / Three Rivers from Mother Dr to R Trent NVZ	Surface Water	351	Existing
521m N	North Soak Drain (trib of R Torne / Three Rivers) NVZ	Surface Water	352	Existing
651m W	North Soak Drain (trib of R Torne / Three Rivers) NVZ	Surface Water	352	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	7

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 85 >**

ID	Location	Type of developments requiring consultation
1	**On site**	**All applications - ALL PLANNING APPLICATIONS.**

ID	Location	Type of developments requiring consultation
2	On site	**Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores). Combustion - All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management. Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**
3	On site	**Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**

ID	Location	Type of developments requiring consultation
4	On site	**Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**
A	On site	**All applications - ALL PLANNING APPLICATIONS - EXCEPT HOUSEHOLDER APPLICATIONS.**

ID	Location	Type of developments requiring consultation
A	**On site**	**Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.** **Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines.** **Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.** **Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.** **Residential - Residential development of 50 units or more.** **Rural residential - Any residential development of 10 or more houses outside existing settlements/urban areas.** **Air pollution - Any development that could cause AIR POLLUTION or DUST either in its construction or operation (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).** **Combustion - All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.** **Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.** **Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.** **Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream.** **Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**
B	**On site**	**All applications - ALL PLANNING APPLICATIONS.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	**13**

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on **page 85 >**

ID:	B
Location:	On site
SSSI name:	Hatfield Chase Ditches
Unit name:	Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat:	Standing Open Water And Canals
Condition:	Unfavourable - Declining
Reportable features:	

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 5
Location: 3m NW
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: C
Location: 13m NE
SSSI name: Hatfield Chase Ditches
Unit name: Ned - Dirtness Pumping Station To Belton Grange
Broad habitat: Standing Open Water And Canals
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Favourable	30/10/2018

ID: B
Location: 15m NW
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 6
Location: 36m W
SSSI name: Hatfield Chase Ditches
Unit name: Nid - M180 To Dirtness Pumping Station (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: D
Location: 55m SW
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 12
Location: 292m SW
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 23
Location: 829m SW
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: E
Location: 999m SE
SSSI name: Hatfield Chase Ditches
Unit name: South Engine Drain (5) (Ea)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 33
Location: 1202m SE
SSSI name: Hatfield Chase Ditches
Unit name: South Engine Drain (4) (Ea)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 35
Location: 1219m E
SSSI name: Hatfield Chase Ditches
Unit name: South Engine Drain (6) (Ea)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: F
Location: 1301m SW
SSSI name: Hatfield Chase Ditches
Unit name: North Idle Drain Gatehouse To M180 (Idb)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - Declining
Reportable features:

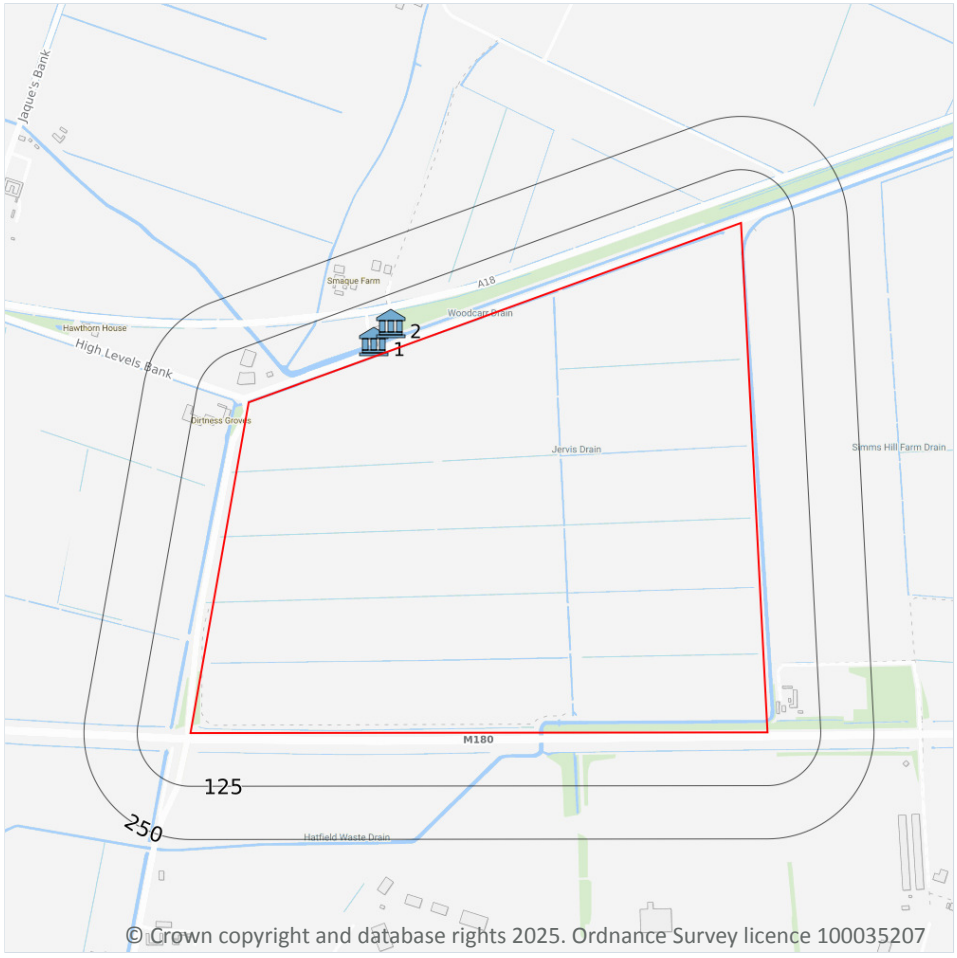
Feature name	Feature condition	Date of assessment
Ditches	Unfavourable - Declining	09/05/2017

ID: 37
Location: 1328m NE
SSSI name: Hatfield Chase Ditches
Unit name: Ned - Hirst Priory To Belton Grange (Ea)
Broad habitat: Standing Open Water And Canals
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Ditches	Favourable	30/10/2018

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	2

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

Features are displayed on the Visual and cultural designations map on **page 93 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	34m NW	Dirtness Pumping Station	II	1083284	10/09/1987
2	60m NW	Dirtness Cottage	II	1083285	10/09/1987

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

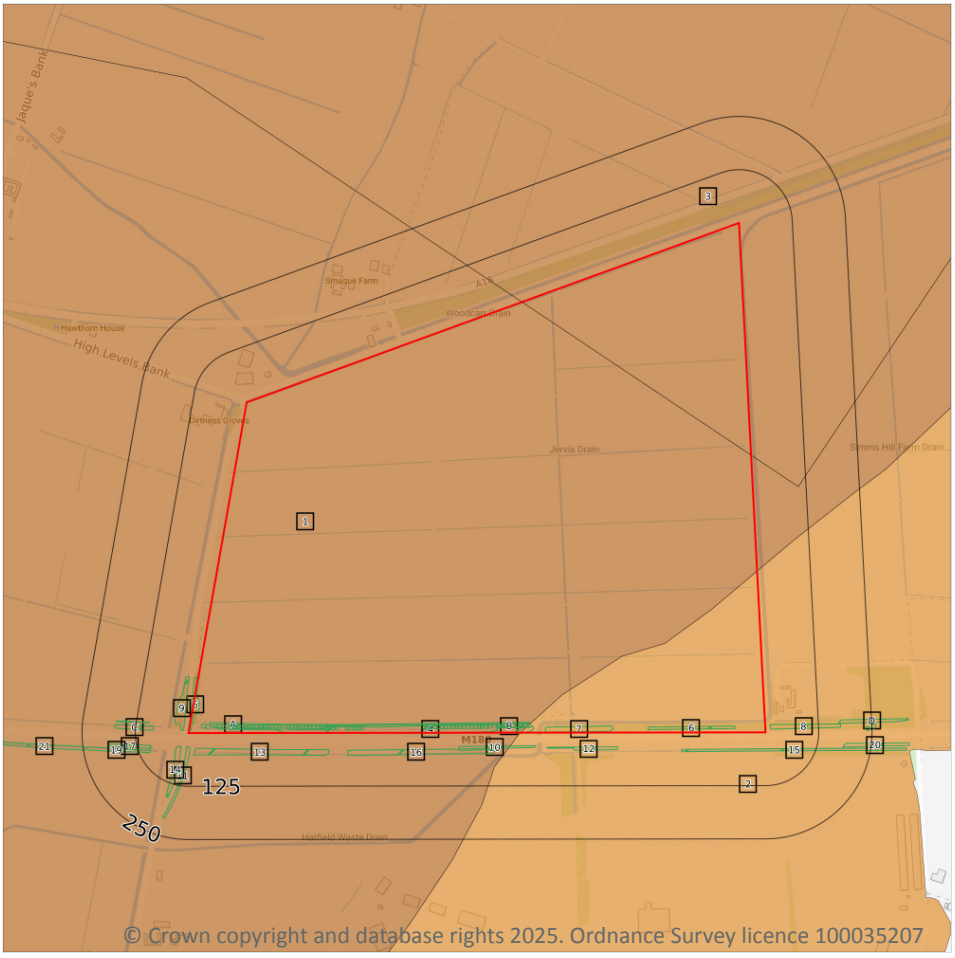
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	3

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

Features are displayed on the Agricultural designations map on **page 96 >**

ID	Location	Classification	Description
1	On site	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.
2	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.
3	On site	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	27

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

Features are displayed on the Agricultural designations map on **page 96 >**

ID	Location	Description	Reference	Application date
4	On site	Selective Fell/Thin (Unconditional)	018/366/15-16	-
5	On site	Selective Fell/Thin (Unconditional)	018/366/15-16	-
6	On site	Selective Fell/Thin (Unconditional)	018/366/15-16	-

ID	Location	Description	Reference	Application date
7	**On site**	**Selective Fell/Thin (Unconditional)**	**018/366/15-16**	**-**
A	**On site**	**Selective Fell/Thin (Unconditional)**	**018/366/15-16**	**-**
A	**On site**	**Single Tree**	**018/366/15-16**	**-**
B	**On site**	**Single Tree**	**018/366/15-16**	**-**
B	**On site**	**Selective Fell/Thin (Unconditional)**	**018/366/15-16**	**-**
8	12m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
9	13m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
10	31m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
11	32m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
12	34m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
13	36m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
14	36m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
15	38m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
16	39m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
C	83m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
17	93m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
18	96m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
C	98m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
19	99m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
D	173m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
20	185m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
D	235m SE	Single Tree	018/366/15-16	-
21	245m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
D	250m SE	Single Tree	018/366/15-16	-

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

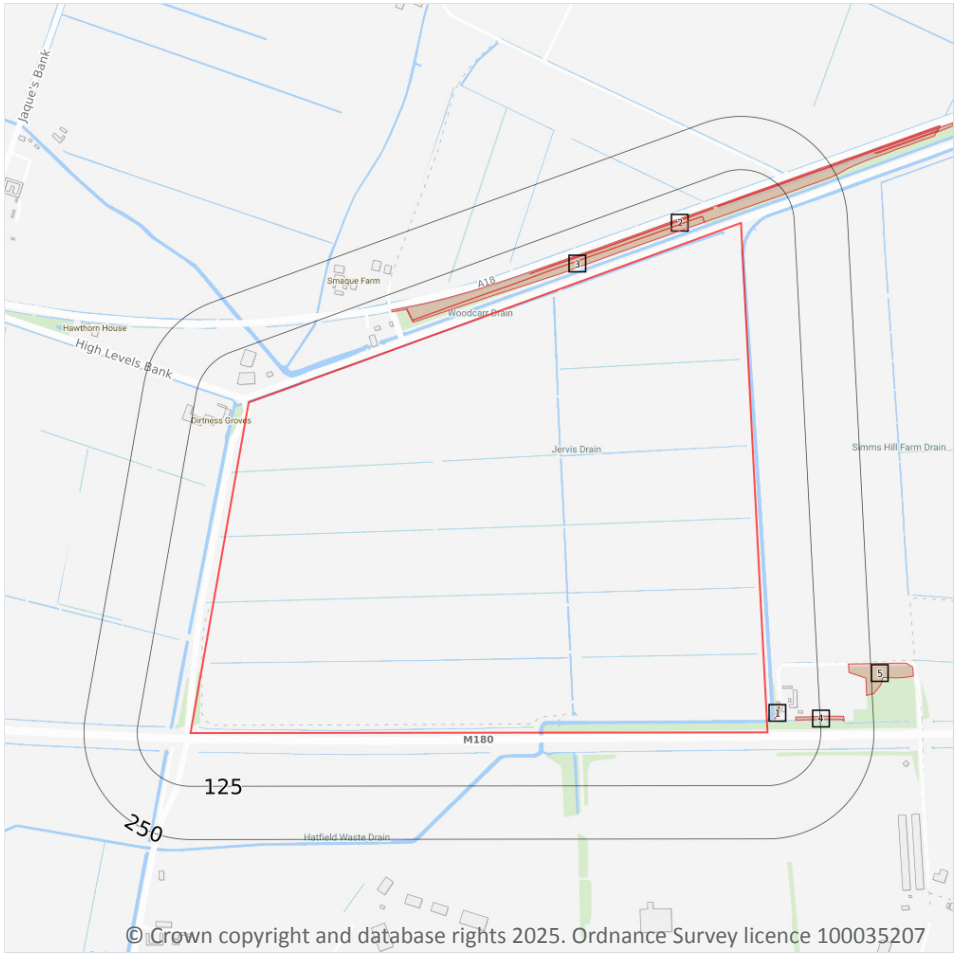
Records within 250m	7

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

Location	Reference	Scheme	Start Date	End Date
On site	**1056200**	**Countryside Stewardship (Middle Tier)**	**01/01/2021**	**31/12/2025**
On site	**1515686**	**Countryside Stewardship (Middle Tier)**	**01/01/2024**	**31/12/2028**
On site	**1446682**	**Countryside Stewardship (Middle Tier)**	**01/01/2023**	**31/12/2027**
41m W	1446682	Countryside Stewardship (Middle Tier)	01/01/2023	31/12/2027
48m W	1446682	Countryside Stewardship (Middle Tier)	01/01/2023	31/12/2027
78m SW	1061406	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
106m NW	1267052	Countryside Stewardship (Middle Tier)	01/01/2022	31/12/2026

This data is sourced from Natural England.

13 Habitat designations



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Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	5

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 100 >**

ID	Location	Main Habitat	Other habitats
1	18m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	30m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	31m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	68m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	198m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

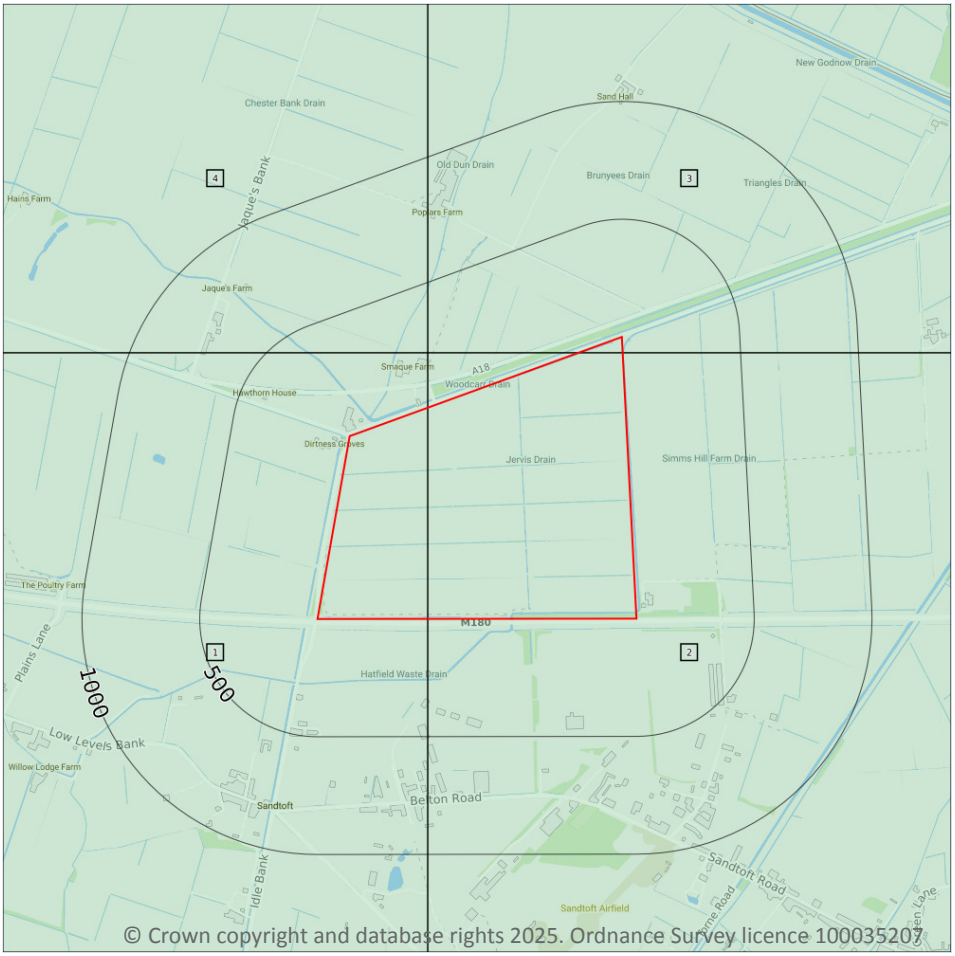
13.4 Limestone Pavement Orders

Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m	4

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 102 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**SE70NW**
2	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**SE70NE**
3	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**SE71SE**
4	219m NW	No coverage	Full	Full	No coverage	SE71SW

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground

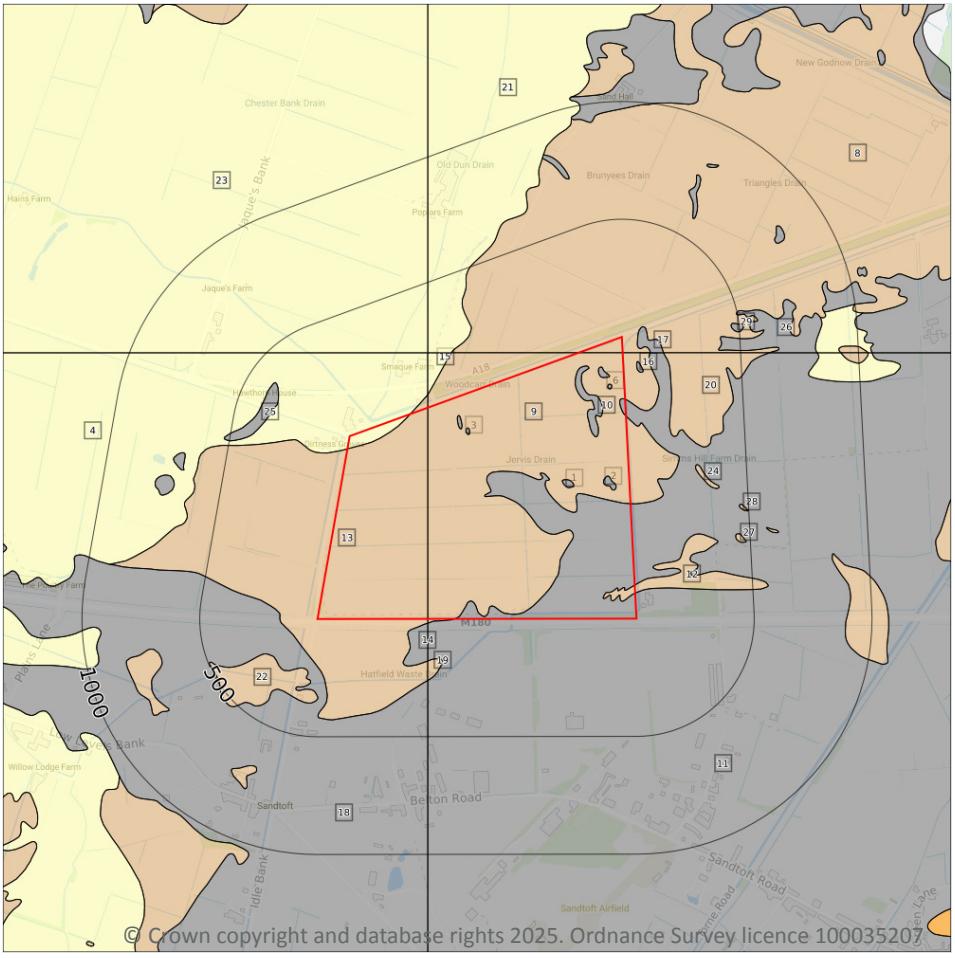
14.2 Artificial and made ground (10k)

Records within 500m	0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m	29

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 105 >**

ID	Location	LEX Code	Description	Rock description
1	On site	BSA1-S	Blown Sand, 1 - Sand	Sand
2	On site	BSA1-S	Blown Sand, 1 - Sand	Sand
3	On site	BSA1-S	Blown Sand, 1 - Sand	Sand
4	On site	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

ID	Location	LEX Code	Description	Rock description
5	**On site**	**BSA1-S**	**Blown Sand, 1 - Sand**	**Sand**
6	**On site**	**BSA1-S**	**Blown Sand, 1 - Sand**	**Sand**
7	**On site**	**BSA1-S**	**Blown Sand, 1 - Sand**	**Sand**
8	**On site**	**PEAT-P**	**Peat - Peat**	**Peat**
9	**On site**	**PEAT-P**	**Peat - Peat**	**Peat**
10	**On site**	**BSA1-S**	**Blown Sand, 1 - Sand**	**Sand**
11	**On site**	**BSA1-S**	**Blown Sand, 1 - Sand**	**Sand**
12	**On site**	**PEAT-P**	**Peat - Peat**	**Peat**
13	**On site**	**PEAT-P**	**Peat - Peat**	**Peat**
14	19m SW	BSA1-S	Blown Sand, 1 - Sand	Sand
15	52m NW	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
16	57m NE	BSA1-S	Blown Sand, 1 - Sand	Sand
17	64m NE	BSA1-S	Blown Sand, 1 - Sand	Sand
18	123m SW	BSA1-S	Blown Sand, 1 - Sand	Sand
19	169m S	PEAT-P	Peat - Peat	Peat
20	173m NE	PEAT-P	Peat - Peat	Peat
21	185m N	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
22	217m SW	PEAT-P	Peat - Peat	Peat
23	219m NW	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
24	284m E	PEAT-P	Peat - Peat	Peat
25	335m NW	BSA1-S	Blown Sand, 1 - Sand	Sand
26	408m NE	BSA1-S	Blown Sand, 1 - Sand	Sand
27	439m E	PEAT-P	Peat - Peat	Peat
28	462m E	PEAT-P	Peat - Peat	Peat
29	466m NE	BSA1-S	Blown Sand, 1 - Sand	Sand

This data is sourced from the British Geological Survey.

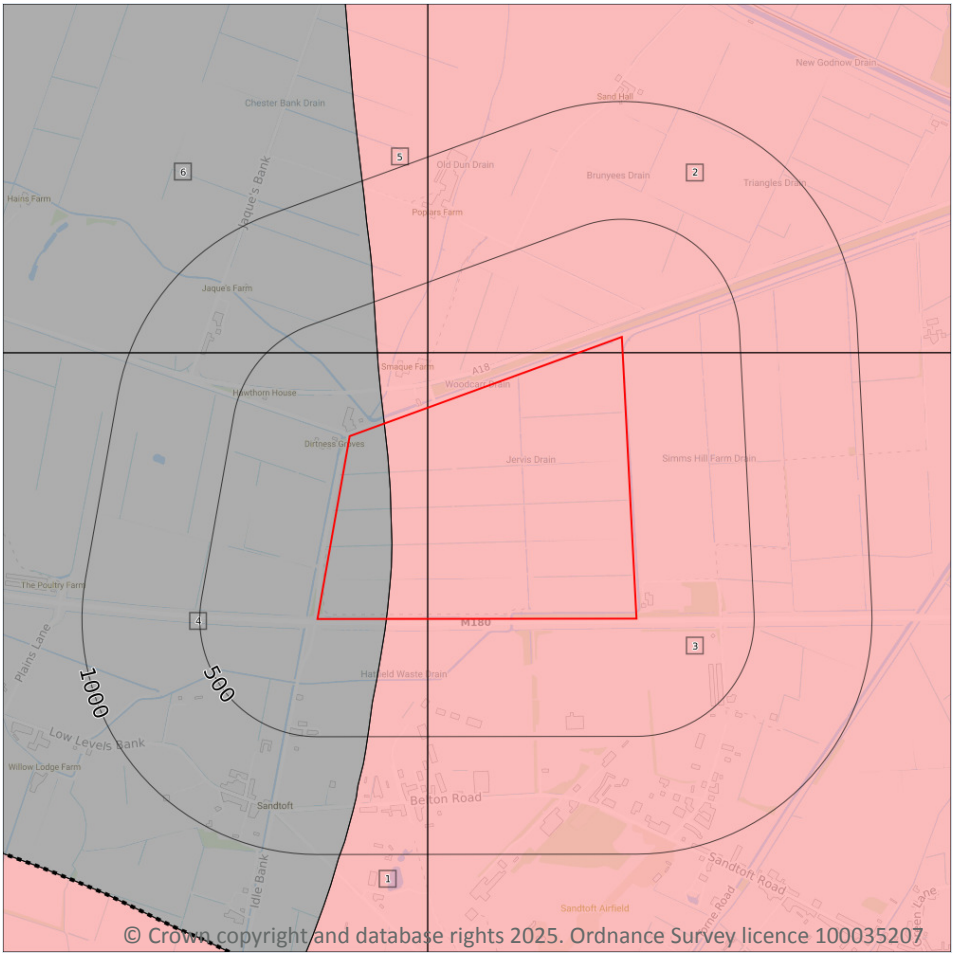
14.4 Landslip (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m	6

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 108 >**

ID	Location	LEX Code	Description	Rock age
1	On site	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian Age - Early Triassic Epoch
2	On site	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian Age - Early Triassic Epoch

ID	Location	LEX Code	Description	Rock age
3	**On site**	**MMG-MDST**	**Mercia Mudstone Group - Mudstone**	**Rhaetian Age - Early Triassic Epoch**
4	**On site**	**NTC-SDST**	**Nottingham Castle Sandstone Formation - Sandstone**	**Early Triassic Epoch**
5	219m NW	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian Age - Early Triassic Epoch
6	292m NW	NTC-SDST	Nottingham Castle Sandstone Formation - Sandstone	Early Triassic Epoch

This data is sourced from the British Geological Survey.

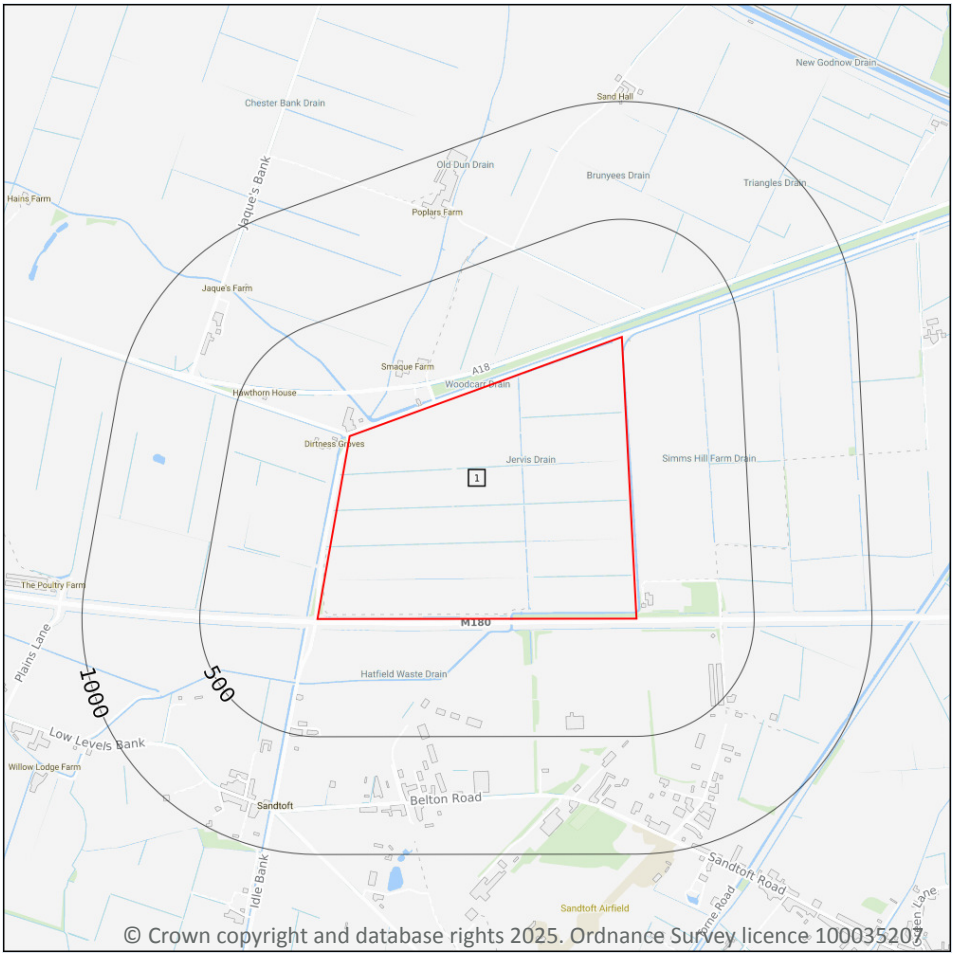
14.6 Bedrock faults and other linear features (10k)

Records within 500m	**0**

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 110 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW088_doncaster_v4

This data is sourced from the British Geological Survey.

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

15.2 Artificial and made ground (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

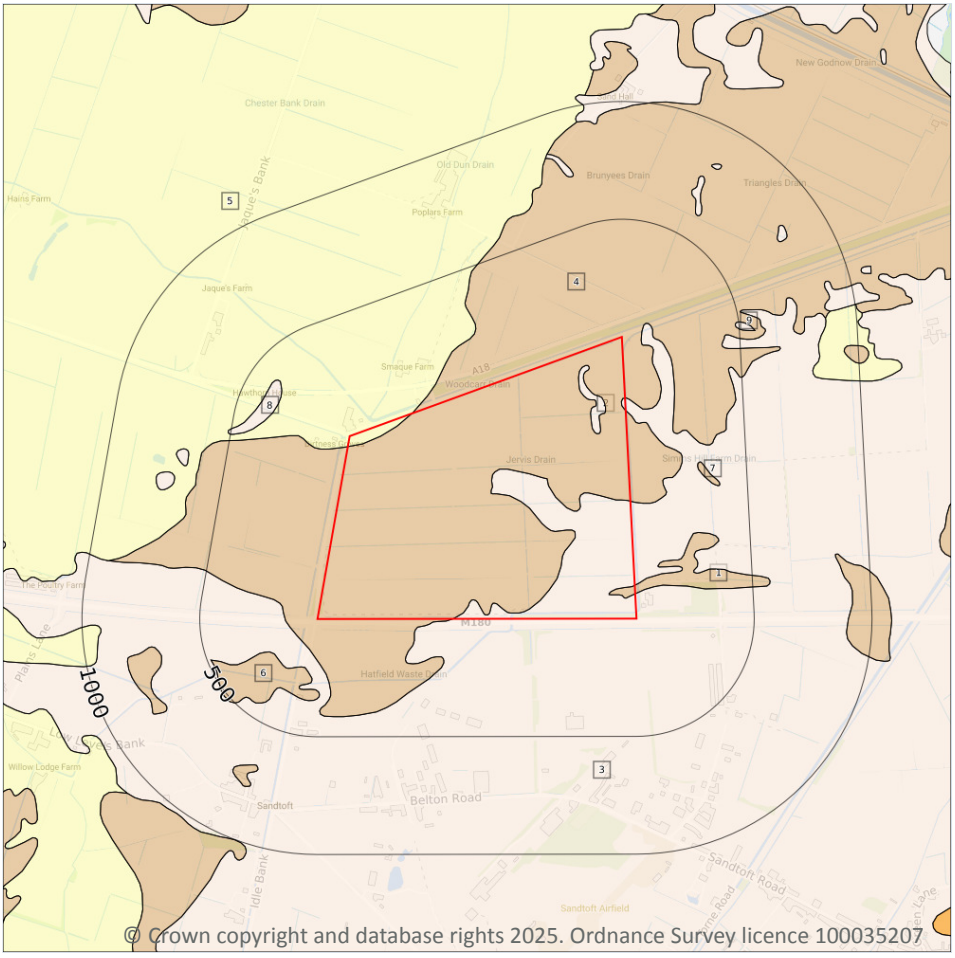
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



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Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m **9**

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 112 >**

ID	Location	LEX Code	Description	Rock description
1	On site	PEAT-P	PEAT	PEAT
2	On site	SUTN-S	SUTTON SAND FORMATION	SAND
3	On site	SUTN-S	SUTTON SAND FORMATION	SAND
4	On site	PEAT-P	PEAT	PEAT

ID	Location	LEX Code	Description	Rock description
5	**On site**	**ALV-XCZSV**	**ALLUVIUM**	**CLAY, SILT, SAND AND GRAVEL**
6	213m SW	PEAT-P	PEAT	PEAT
7	293m E	PEAT-P	PEAT	PEAT
8	333m NW	SUTN-S	SUTTON SAND FORMATION	SAND
9	484m NE	SUTN-S	SUTTON SAND FORMATION	SAND

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	**9**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**High**	**Very Low**
On site	**Intergranular**	**High**	**High**
On site	**Intergranular**	**High**	**High**
On site	**Mixed**	**Low**	**Very Low**
On site	**Mixed**	**Low**	**Very Low**
On site	**Mixed**	**Low**	**Very Low**
On site	**Mixed**	**Low**	**Very Low**
25m SW	Intergranular	High	High
49m NW	Intergranular	High	Very Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	**0**

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

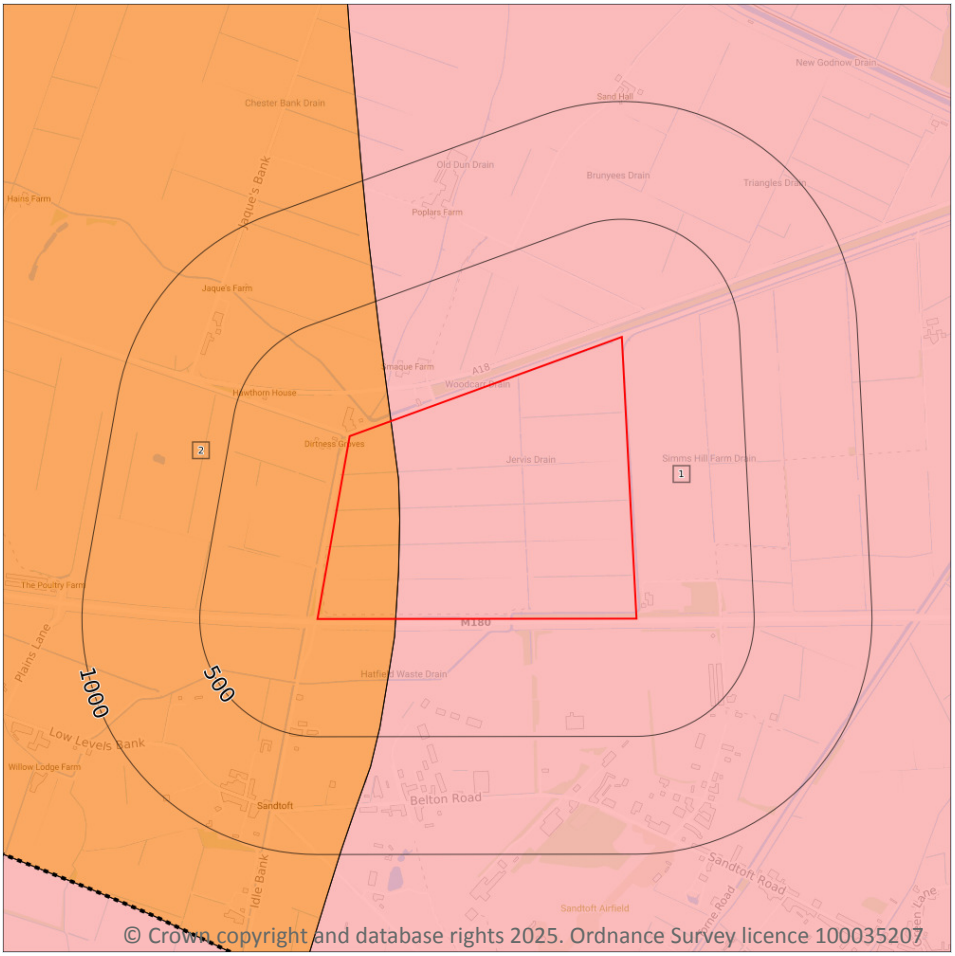
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m	2

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 115 >**

ID	Location	LEX Code	Description	Rock age
1	On site	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-
2	On site	CHES-PESST	CHESTER FORMATION - SANDSTONE, PEBBLY (GRAVELLY)	OLENEKIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	4

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

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

This data is sourced from the British Geological Survey.

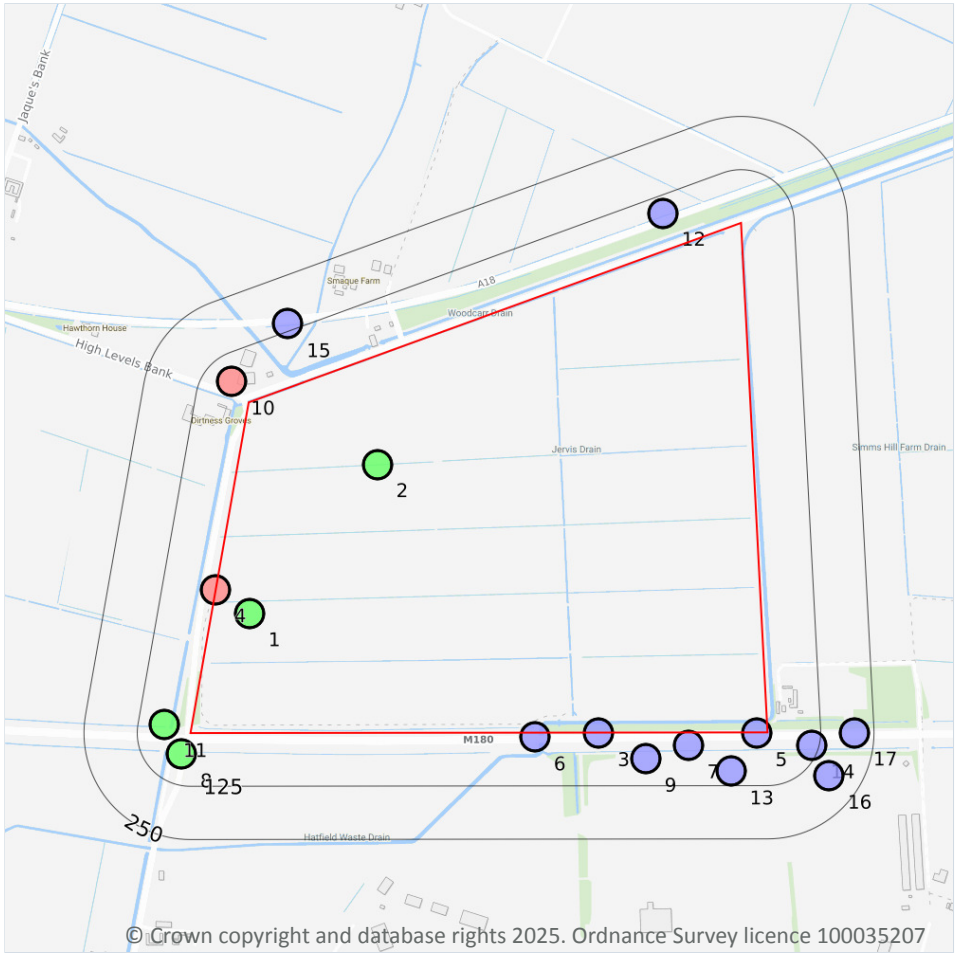
15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

16 Boreholes



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Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m	17

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

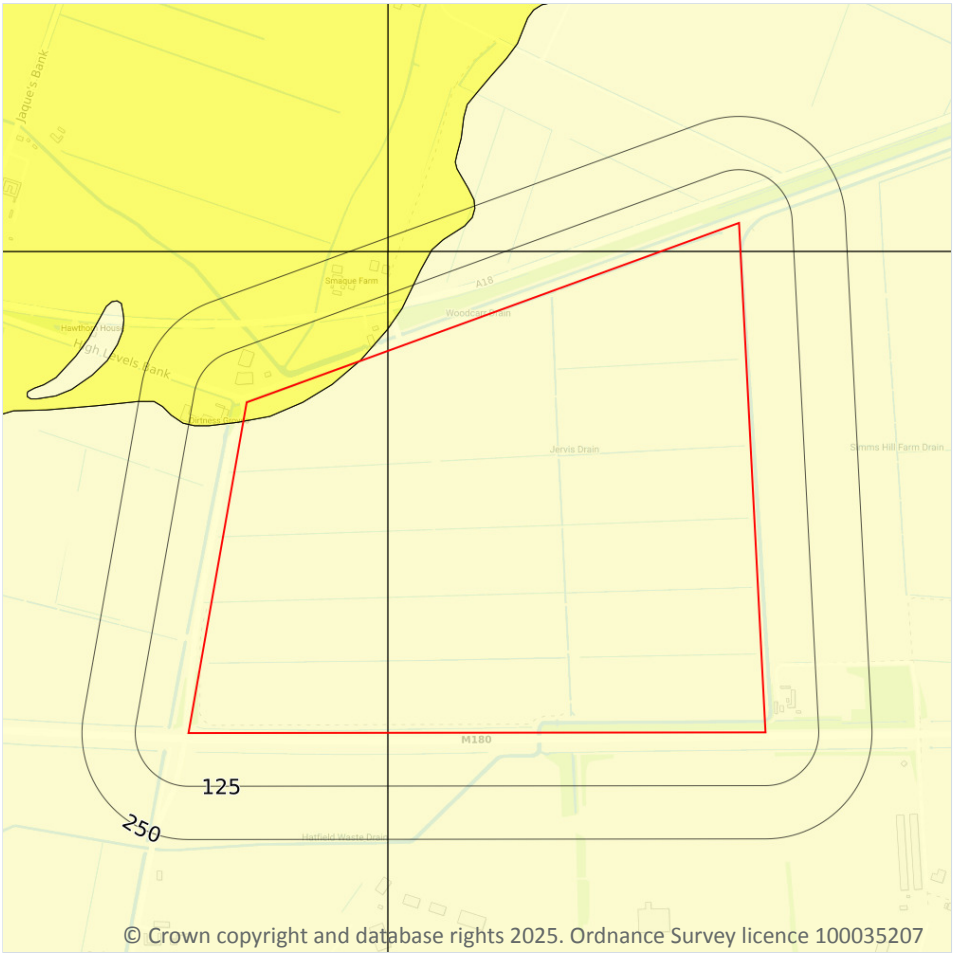
Features are displayed on the Boreholes map on **page 117 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	**On site**	**474670 409150**	**DONCASTER 113**	**12.19**	**N**	**124582**
2	**On site**	**474970 409500**	**DONCASTER 114**	**12.19**	**N**	**124583**
3	1m SE	475490 408870	M180 THORNE-SCUNTHORPE BHR107	4.0	N	124496

ID	Location	Grid reference	Name	Length	Confidential	Web link
4	1m W	474590 409206	SANDTOFT BH	1025.2	N	124529 ↗
5	1m SE	475860 408870	SOUTH HUMBERSIDE M180 C3	4.0	N	124469 ↗
6	11m S	475340 408860	A18 THORNE/SCUNTHORPE 41	3.05	N	124464 ↗
7	31m SE	475700 408840	M180 THORNE-SCUNTHORPE BHR109	4.0	N	124498 ↗
8	54m SW	474510 408820	A18 THORNE/SCUNTHORPE 40	12.49	N	124544 ↗
9	61m SE	475600 408810	M180 THORNE-SCUNTHORPE BHR108	3.7	N	124497 ↗
10	63m NW	474629 409695	DIRTNESS BRIDGE FARM CROWLE	71.63	N	124522 ↗
11	64m SW	474470 408890	DONCASTER 112	12.19	N	124581 ↗
12	85m NE	475640 410090	A18 SCUNTHORPE 90	4.87	N	124768 ↗
13	91m SE	475800 408780	M180 THORNE-SCUNTHORPE BHR110	4.0	N	124499 ↗
14	108m SE	475990 408840	SOUTH HUMBERSIDE M180 C4	4.0	N	124470 ↗
15	142m NW	474760 409830	A18 THORNE/SCUNTHORPE 89	6.1	N	124551 ↗
16	176m SE	476030 408770	A18 THORNE/SCUNTHORPE 42	6.1	N	124465 ↗
17	204m SE	476090 408870	SOUTH HUMBERSIDE M180 C5	3.0	N	124471 ↗

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



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Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	3

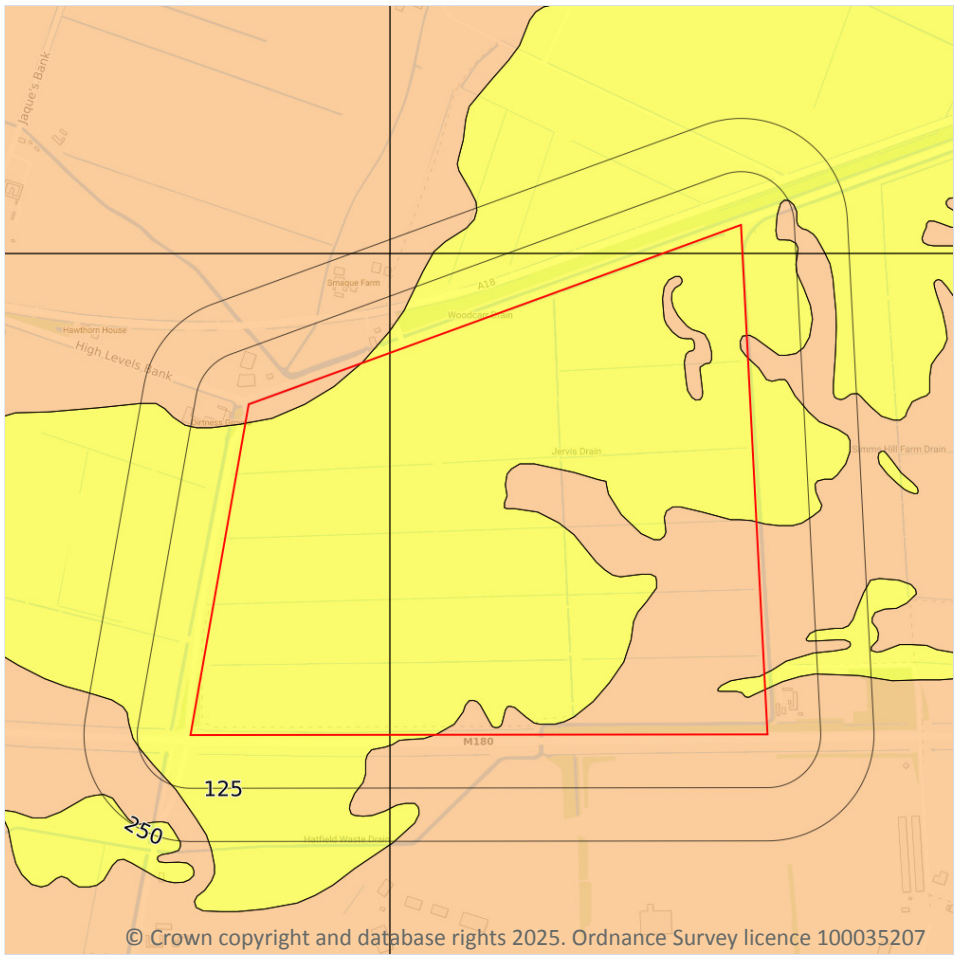
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 119 >**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
On site	**Very low**	**Ground conditions predominantly low plasticity.**
49m NW	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	4

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

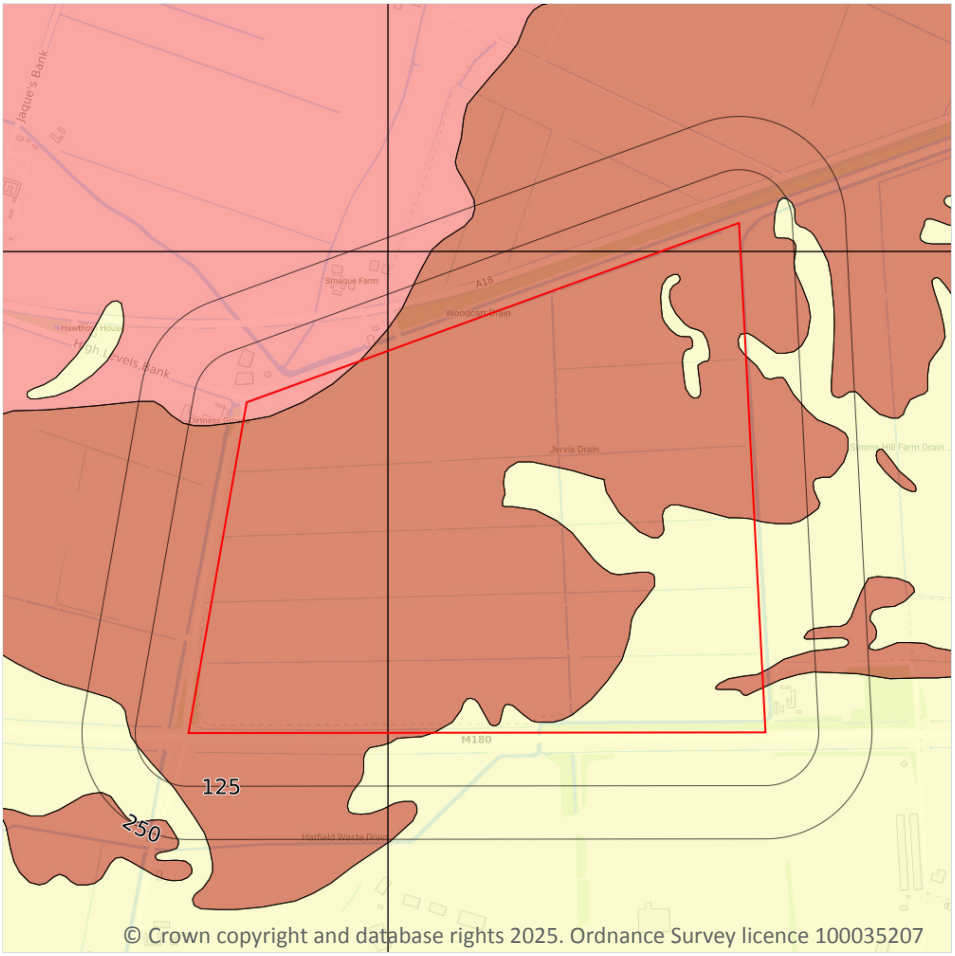
Features are displayed on the Natural ground subsidence - Running sands map on **page 121 >**

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

Location	Hazard rating	Details
On site	**Low**	**Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.**
25m SW	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.
49m NW	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	5

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

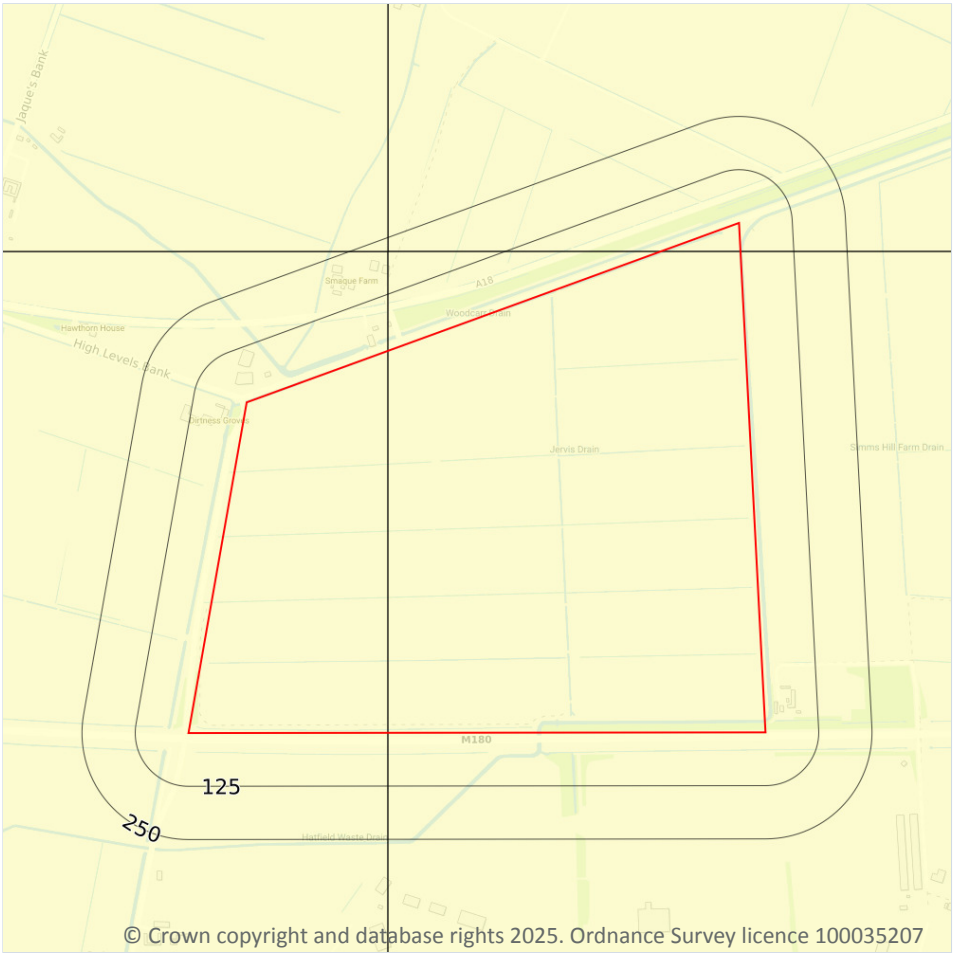
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 123 >**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
On site	**Moderate**	**Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.**

Location	Hazard rating	Details
On site	**High**	**Highly compressible strata present. Significant constraint on land use depending on thickness.**
25m SW	Negligible	Compressible strata are not thought to occur.
49m NW	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

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

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 125 >**

Location	Hazard rating	Details
On site	**Negligible**	**Deposits with potential to collapse when loaded and saturated are believed not to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides

Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	3

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

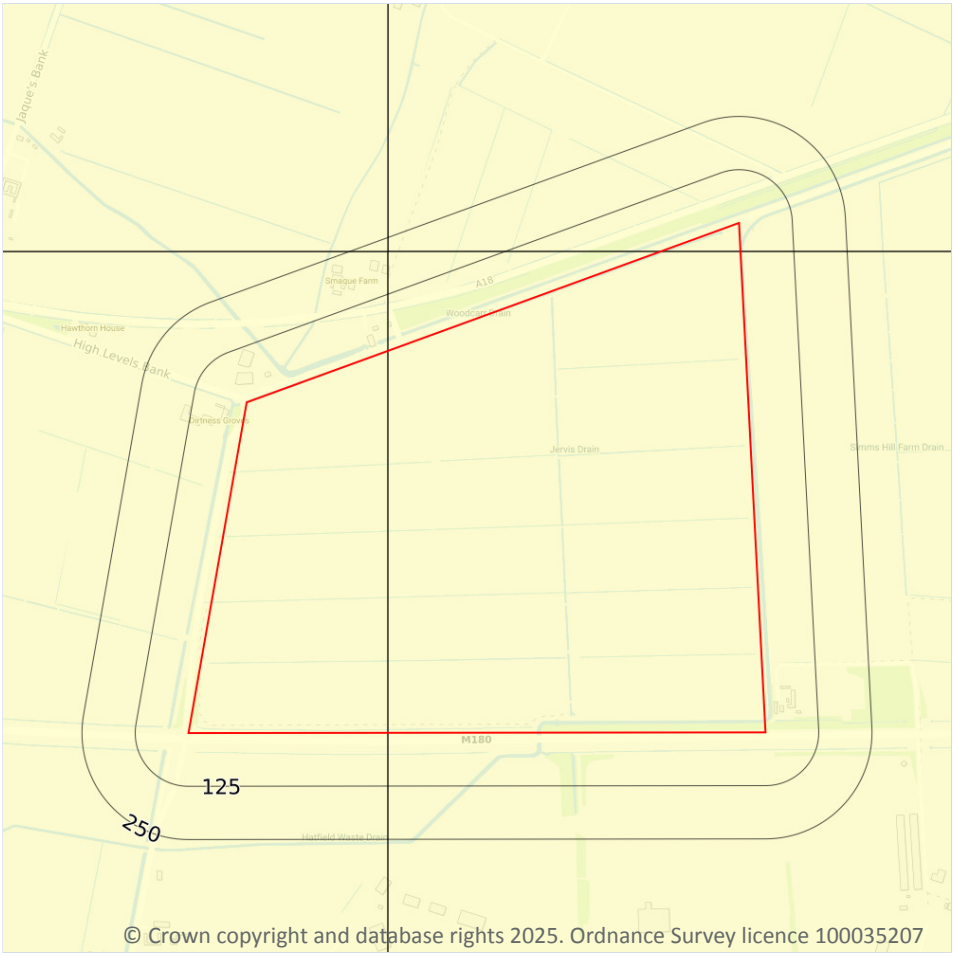
Features are displayed on the Natural ground subsidence - Landslides map on **page 126 >**

Location	Hazard rating	Details
On site	**Very low**	**Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.**

Location	Hazard rating	Details
On site	**Low**	**Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.**
20m SW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



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Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

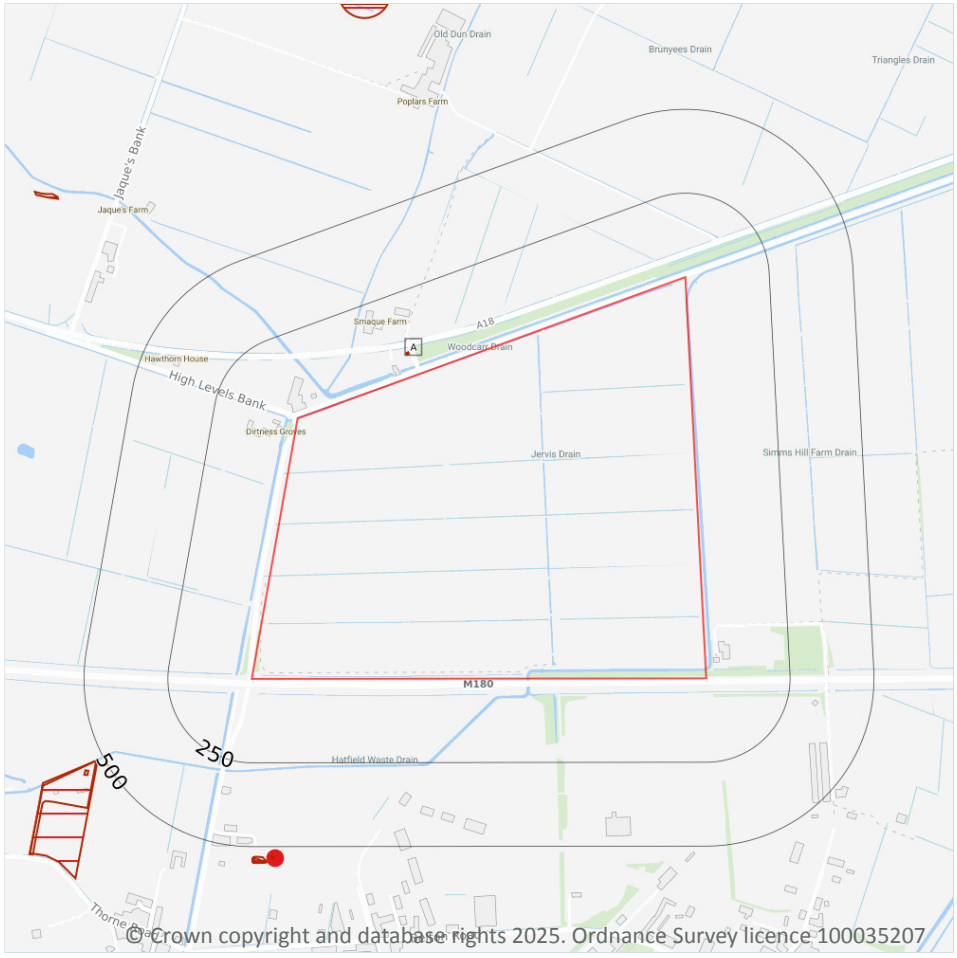
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 128 >**

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

This data is sourced from the British Geological Survey.

18 Mining and ground workings



Site Outline

Search buffers in metres (m)

BritPits

Surface ground workings

Underground workings

Underground mining extents

Historical mineral planning areas

TCA non-coal mining

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	2

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on **page 130 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	68m NW	Unspecified Level	1908	1:10560
A	68m NW	Unspecified Level	1908	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.

20 Radon

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Site Outline

Search buffers in metres (m)

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

20.1 Radon

Records on site	1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 137 >**

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

This data is sourced from the British Geological Survey and UK Health Security Agency.

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	38

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**20 - 40 mg/kg**	**15 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
25m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
32m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
48m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
48m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
49m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	**0**

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	**0**

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

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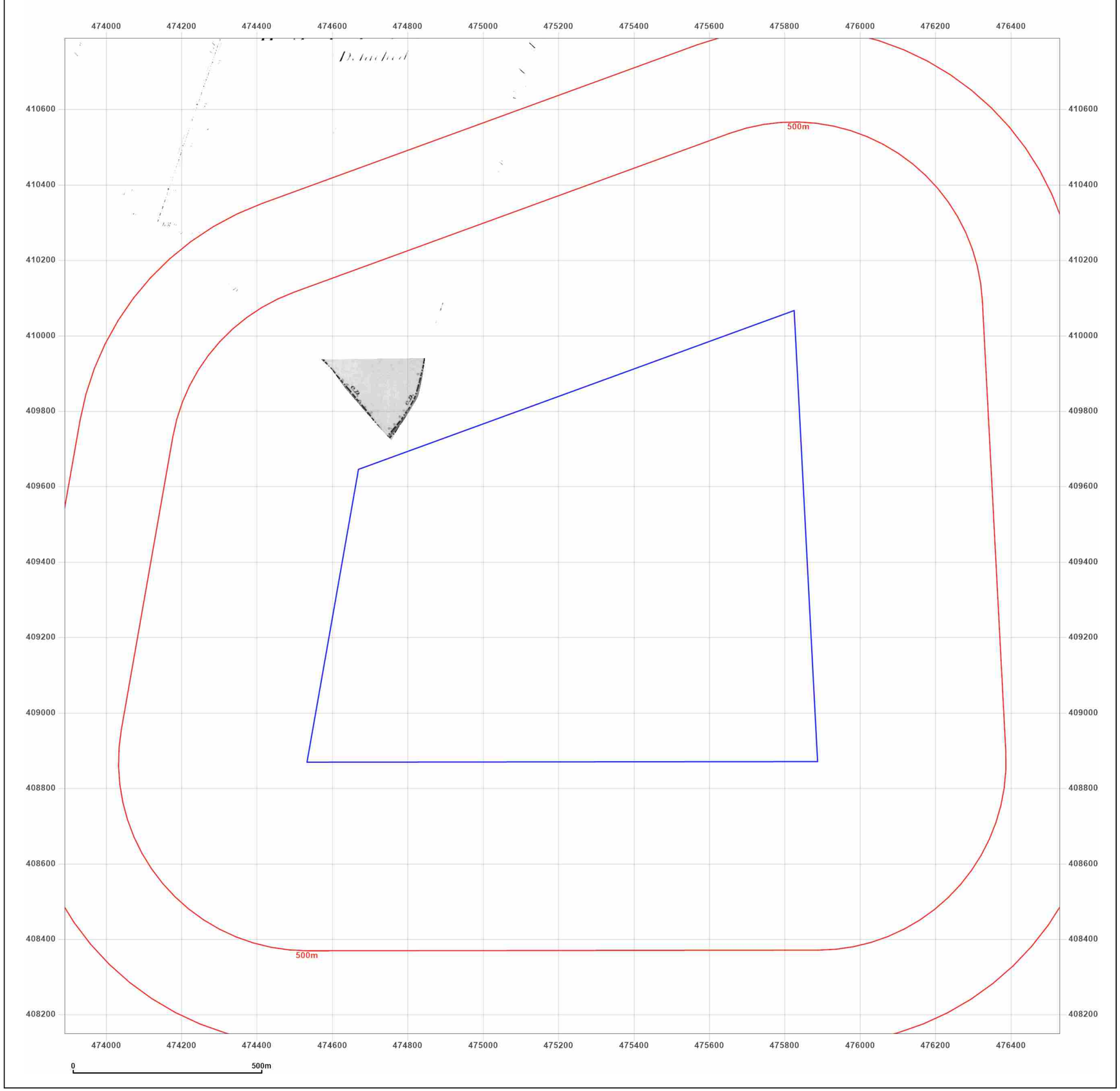

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Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1853**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1849
Revised N/A
Edition 1853
Copyright N/A
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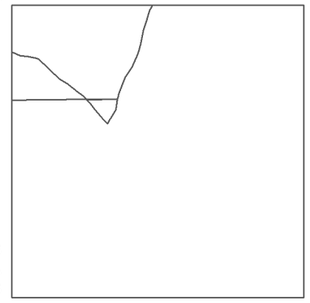

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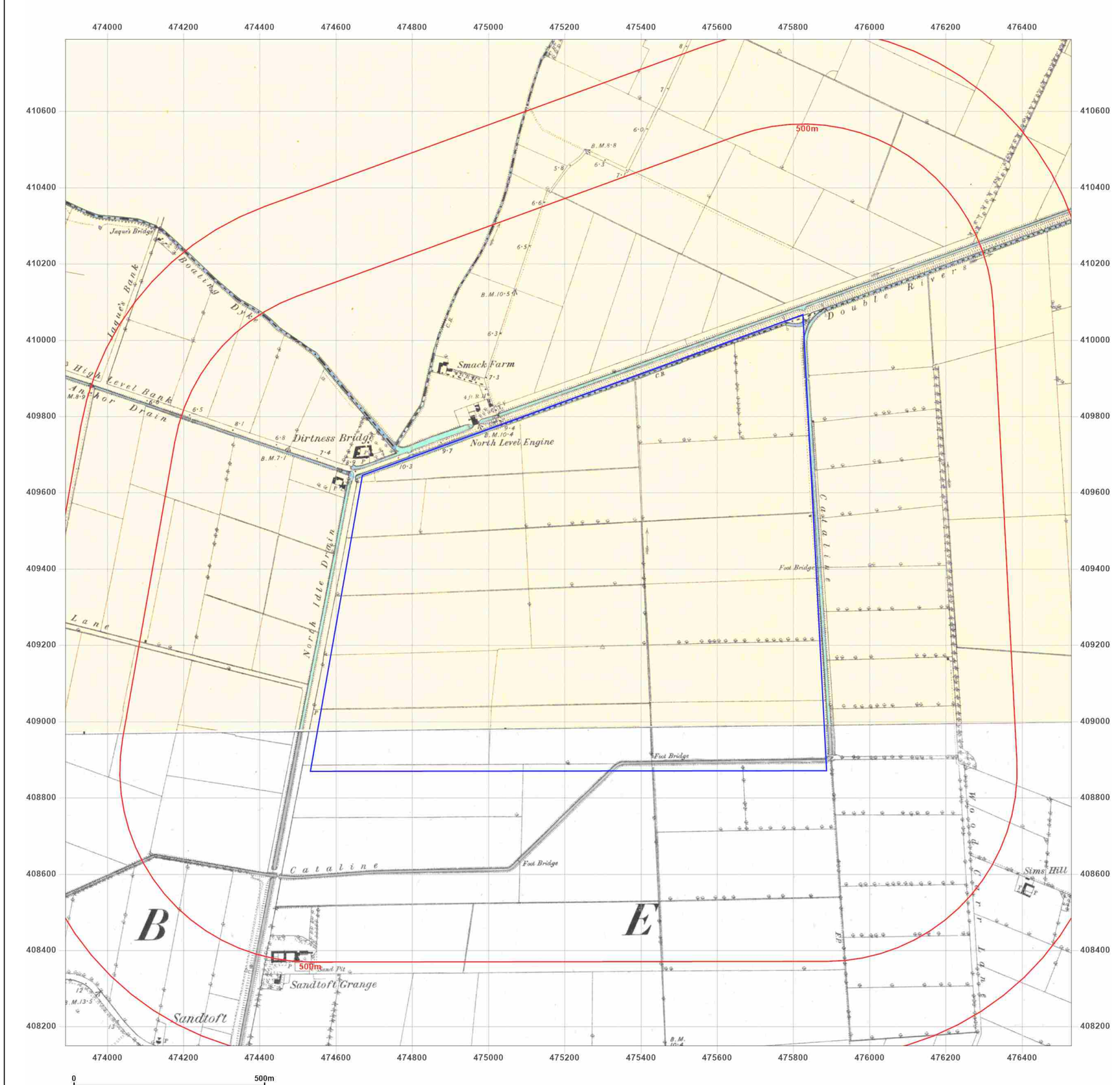

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Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1885**

Scale: 1:10,560

Printed at: 1:10,560

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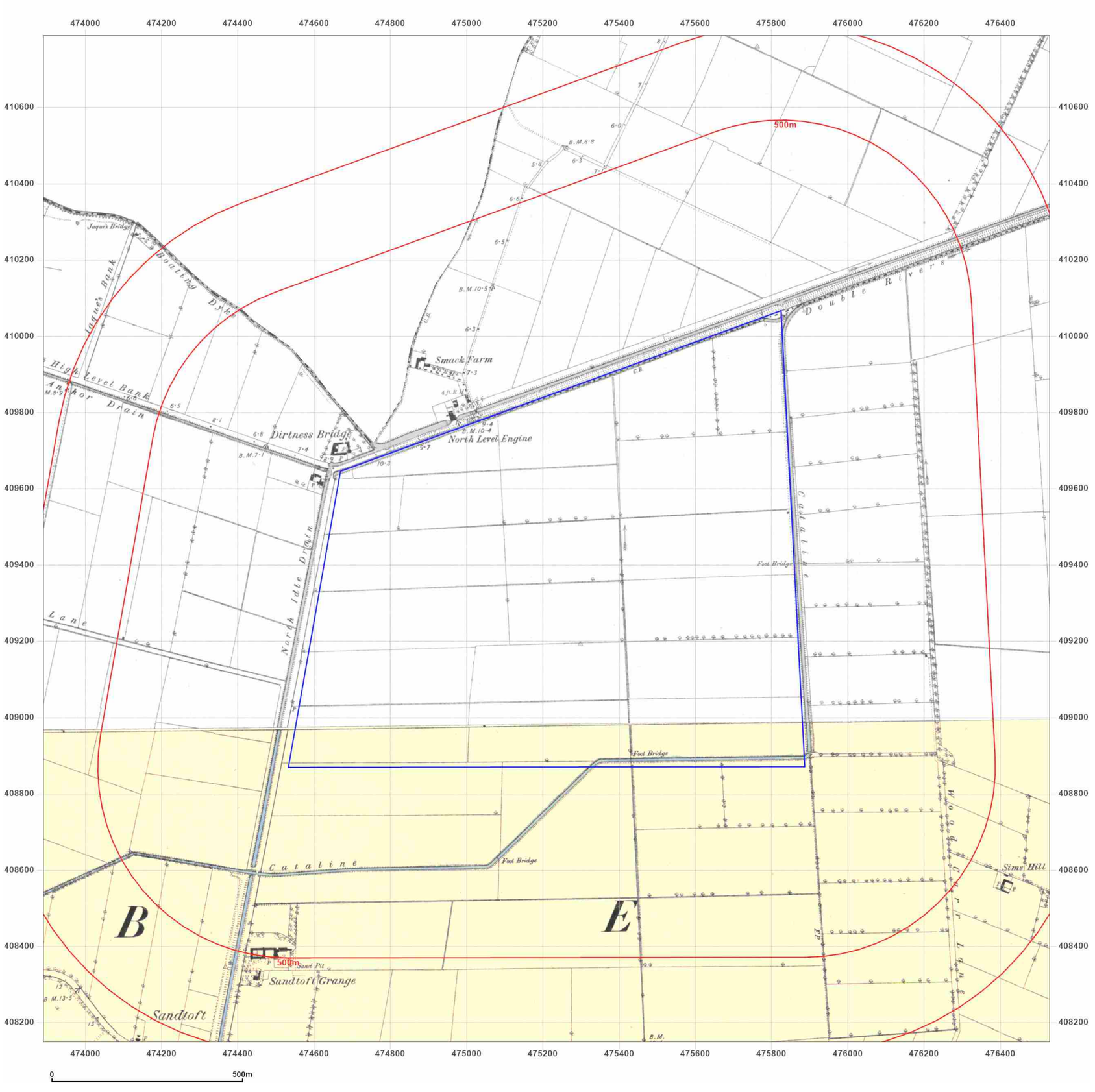

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Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1885**

Scale: 1:10,560

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Revised 1885
Edition N/A
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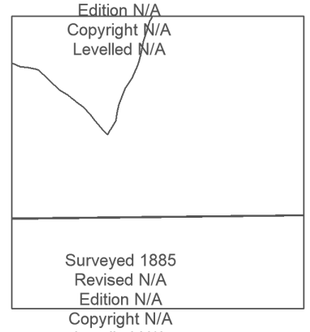

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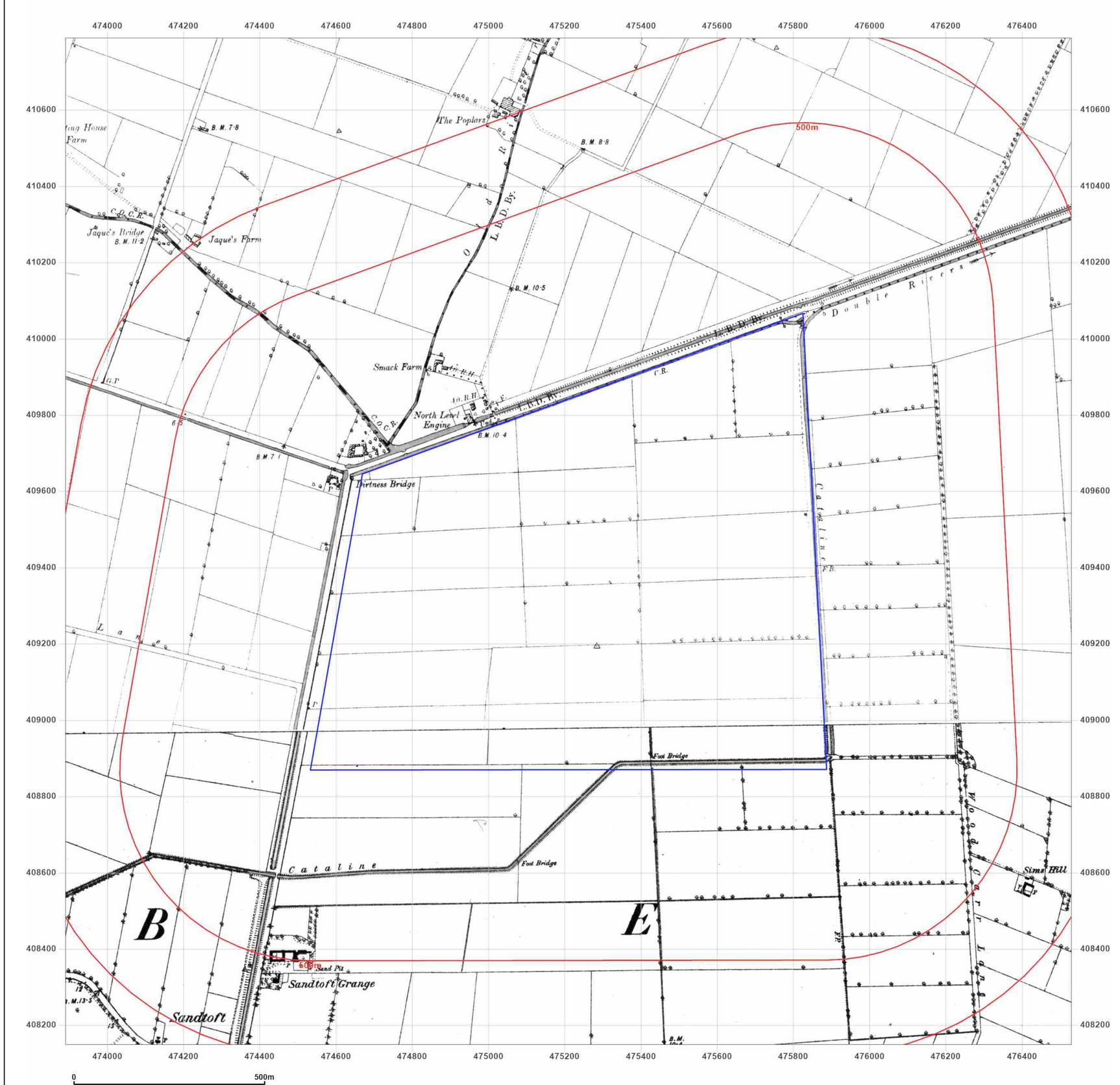

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Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1885**

Scale: 1:10,560

Printed at: 1:10,560

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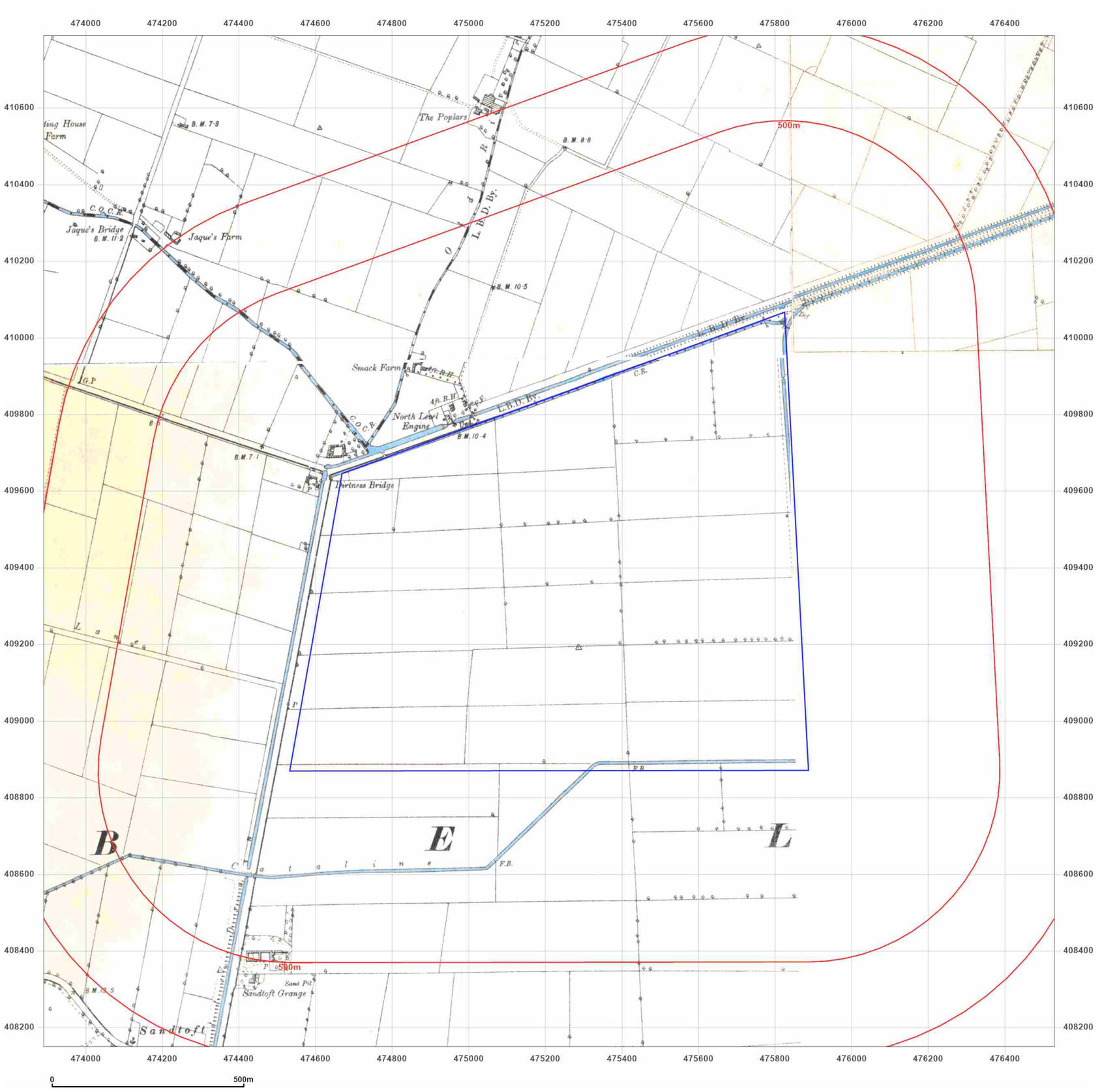

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Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

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

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

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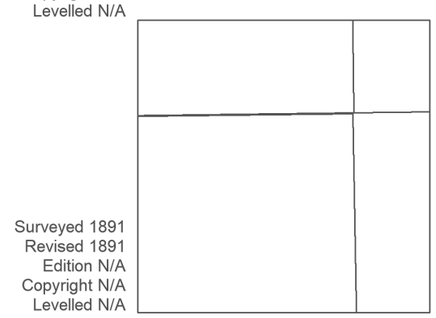
Levelled N/A



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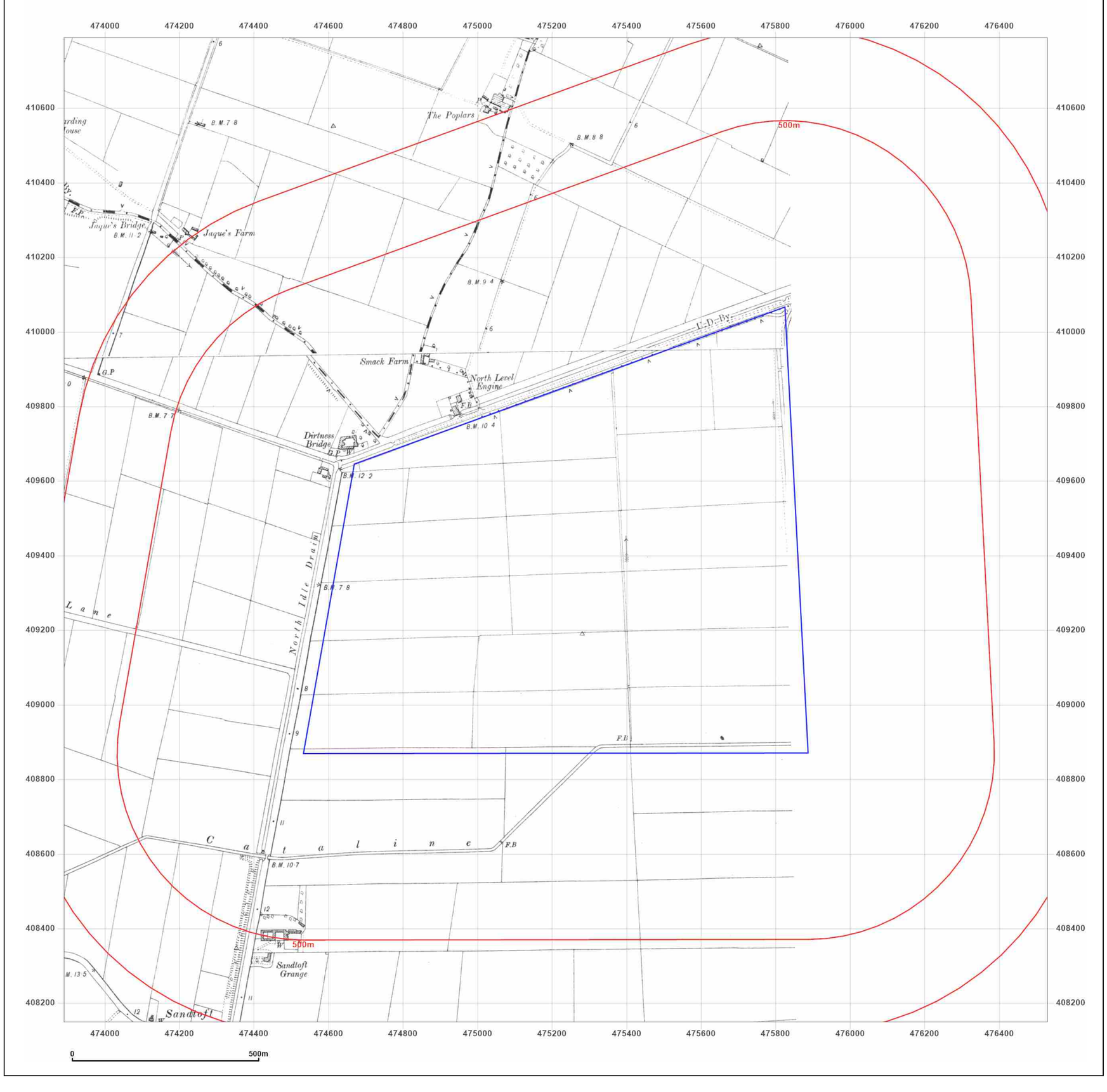

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Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1904**

Scale: 1:10,560

Printed at: 1:10,560

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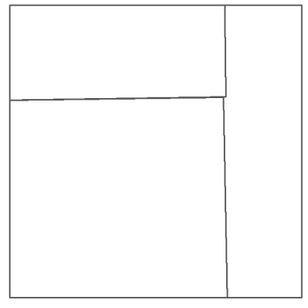
Surveyed 1891
Revised 1904
Edition N/A
Copyright N/A
Levelled N/A



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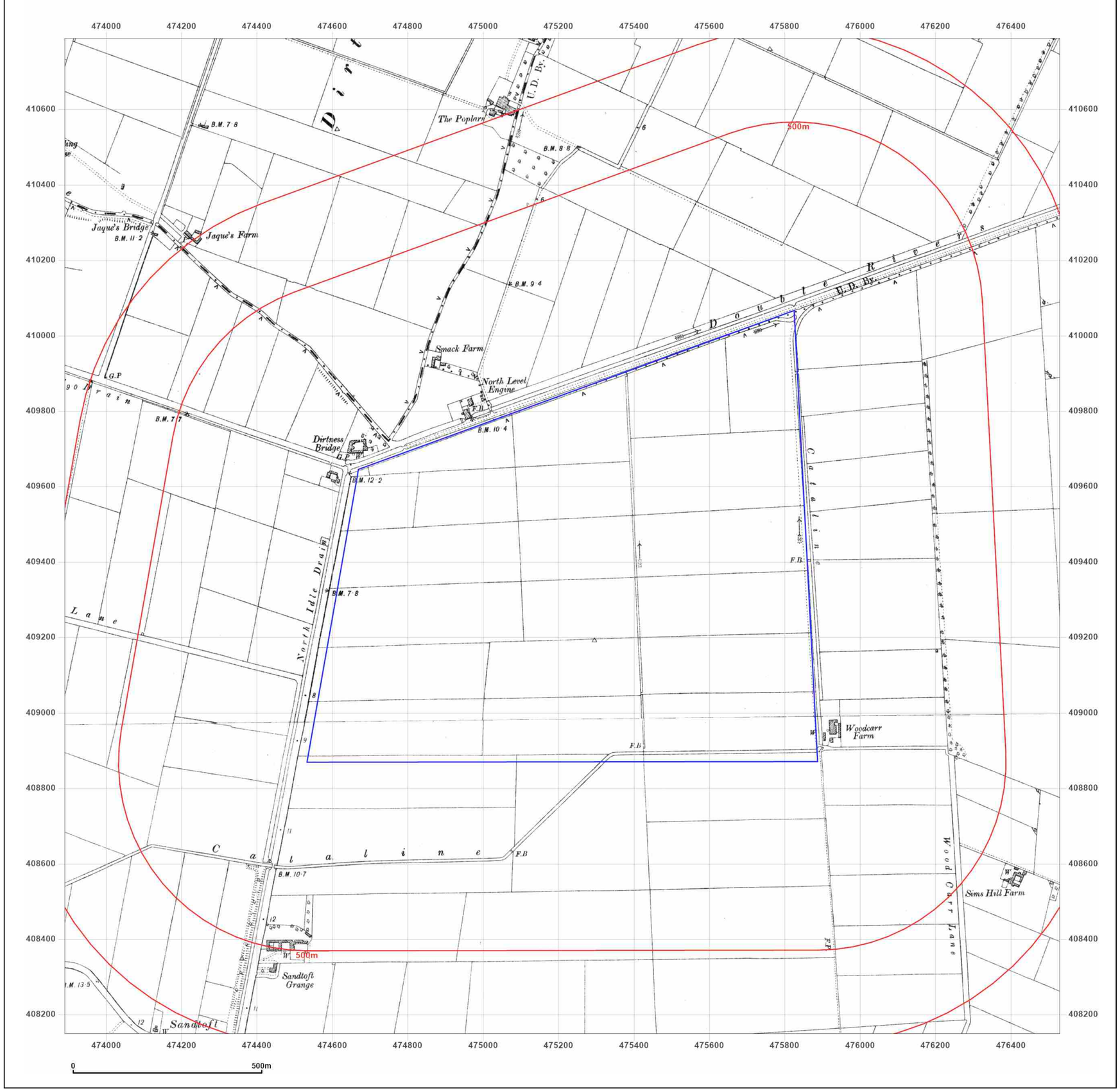

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Site Details:

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Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1904**

Scale: 1:10,560

Printed at: 1:10,560

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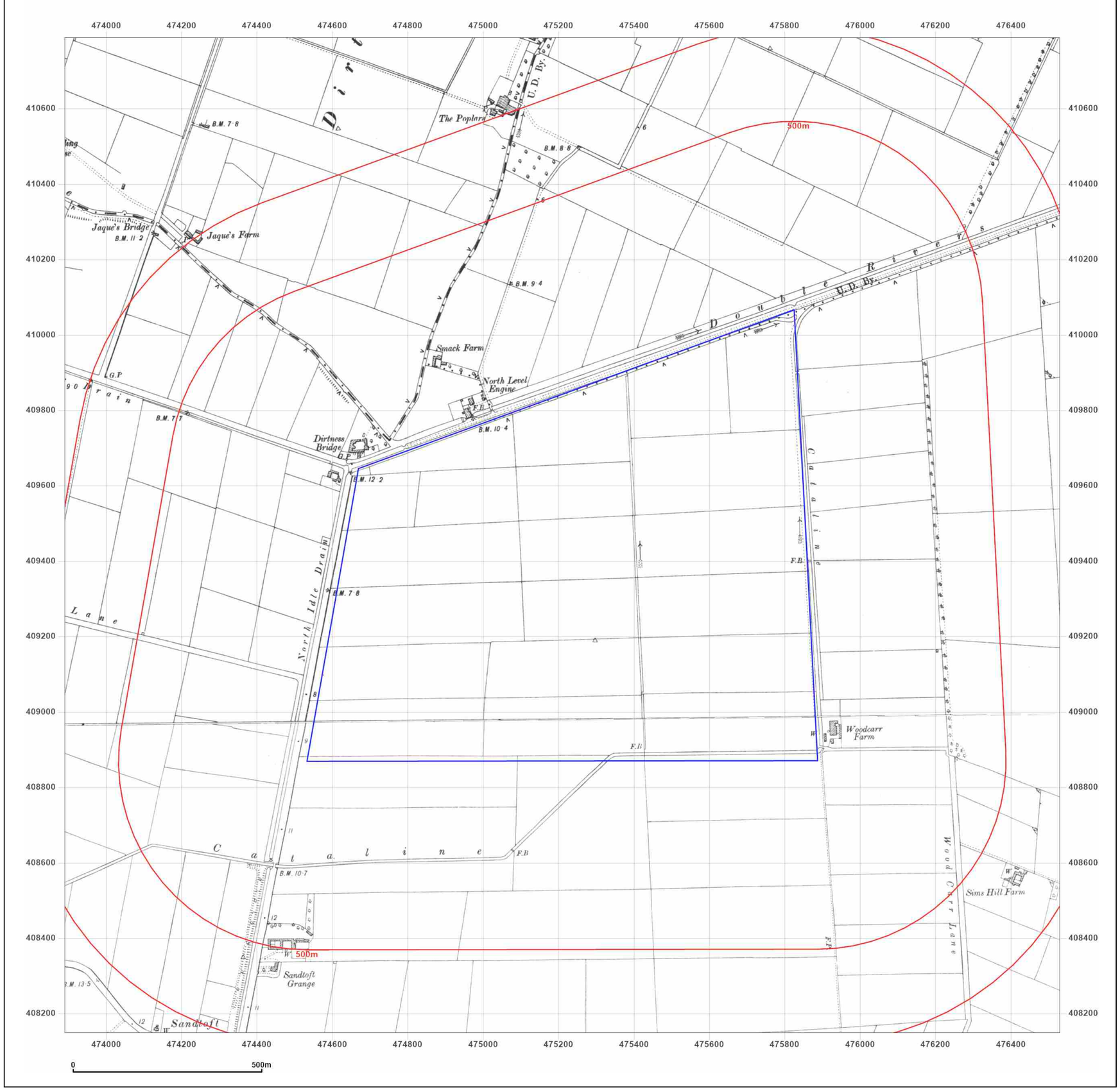

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1905-1908**

Scale: 1:10,560

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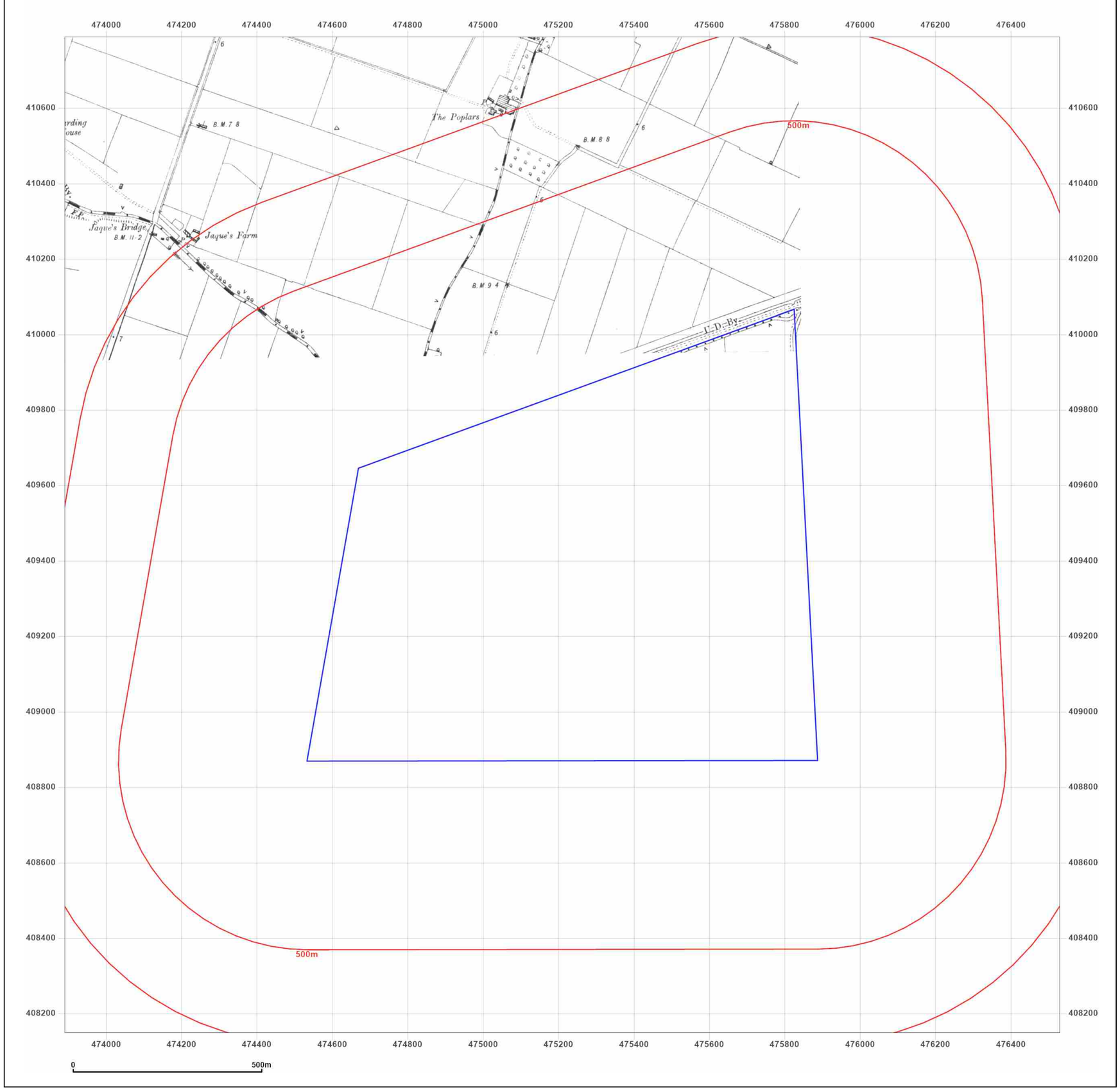

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Site Details:

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Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1908**

Scale: 1:10,560

Printed at: 1:10,560

N
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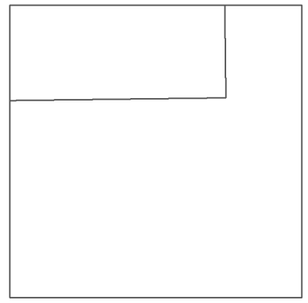
Surveyed 1850
Revised 1908
Edition 1908
Copyright N/A
Levelled N/A



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Production date: 04 March 2025

Map legend available at:
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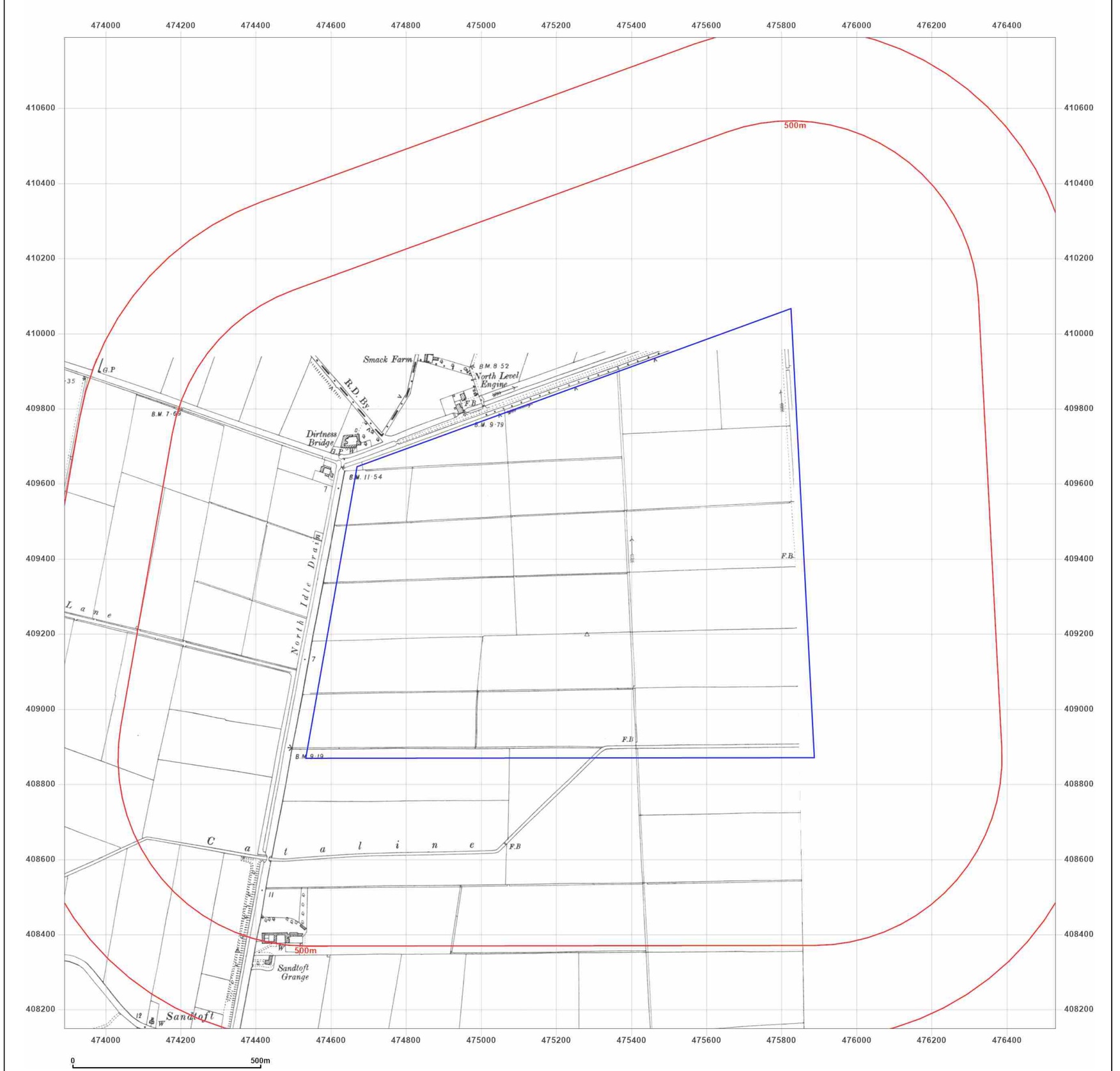

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1932**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1850
Revised 1932
Edition 1932
Copyright N/A
Levelled N/A

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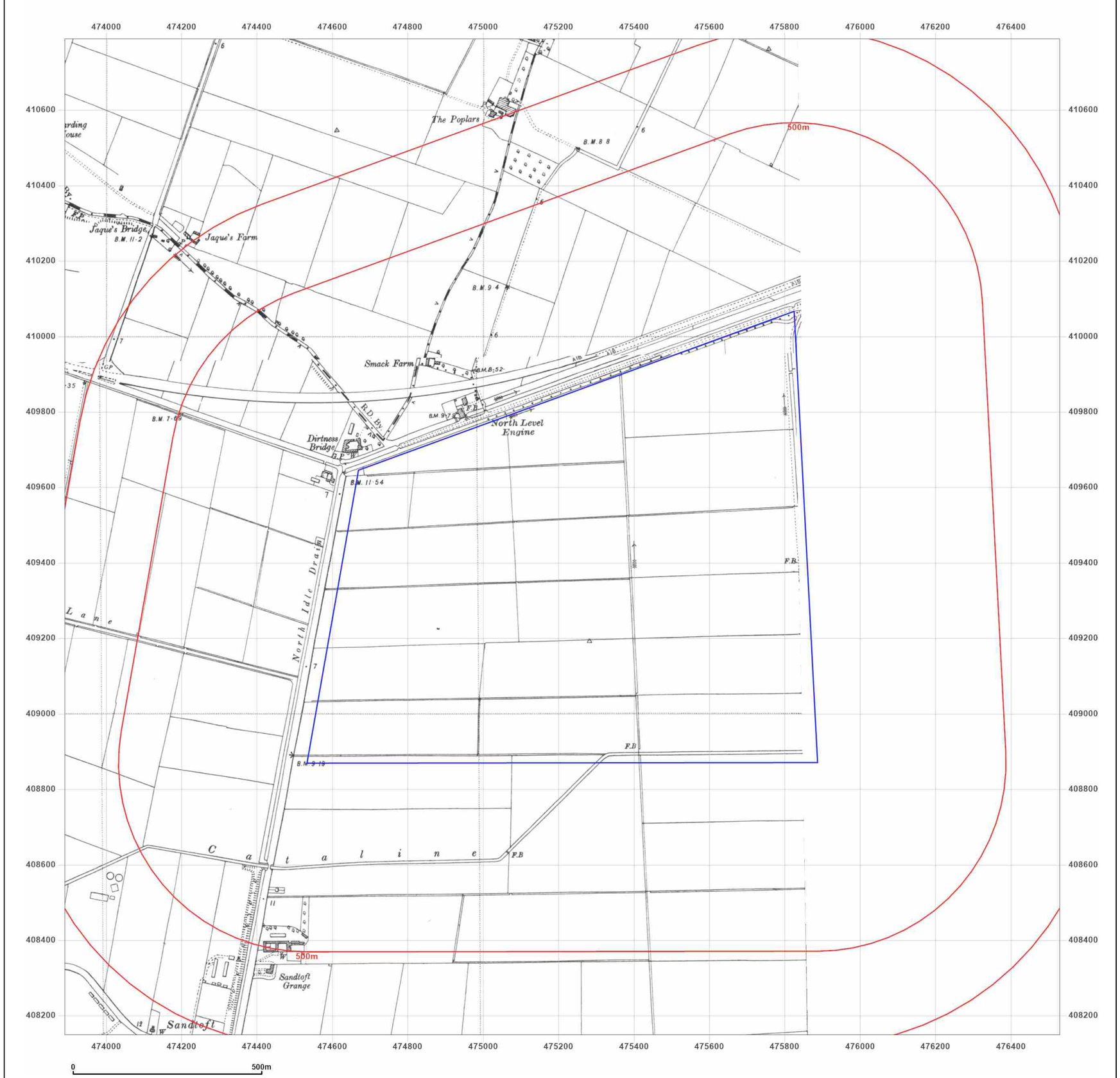

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

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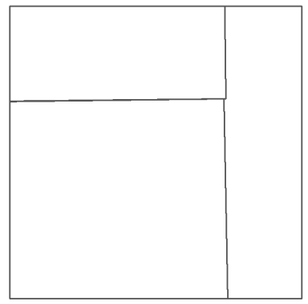
Surveyed 1850
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1850
Revised 1948
Edition N/A
Copyright N/A
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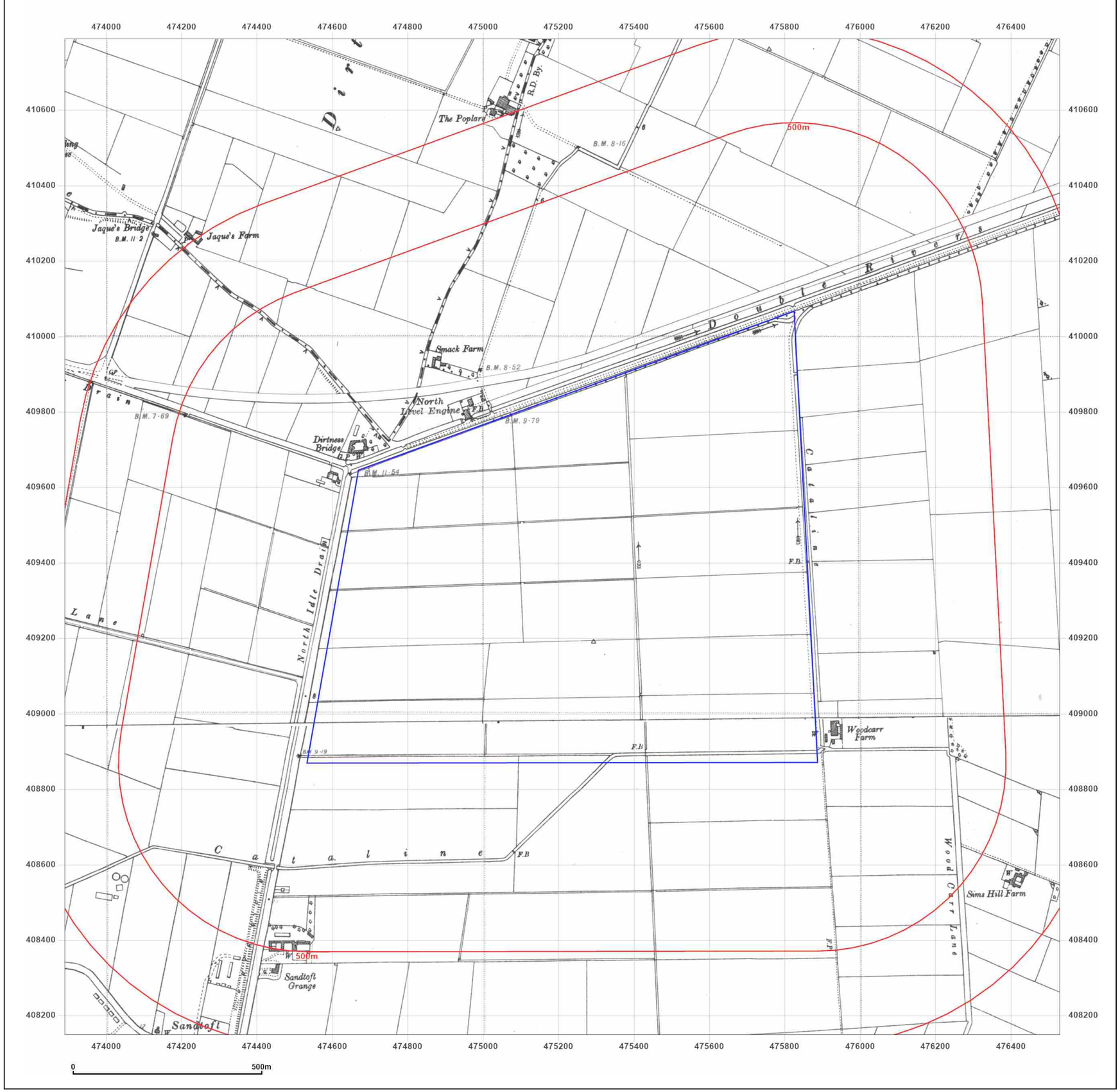

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1885
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1885
Revised 1948
Edition N/A
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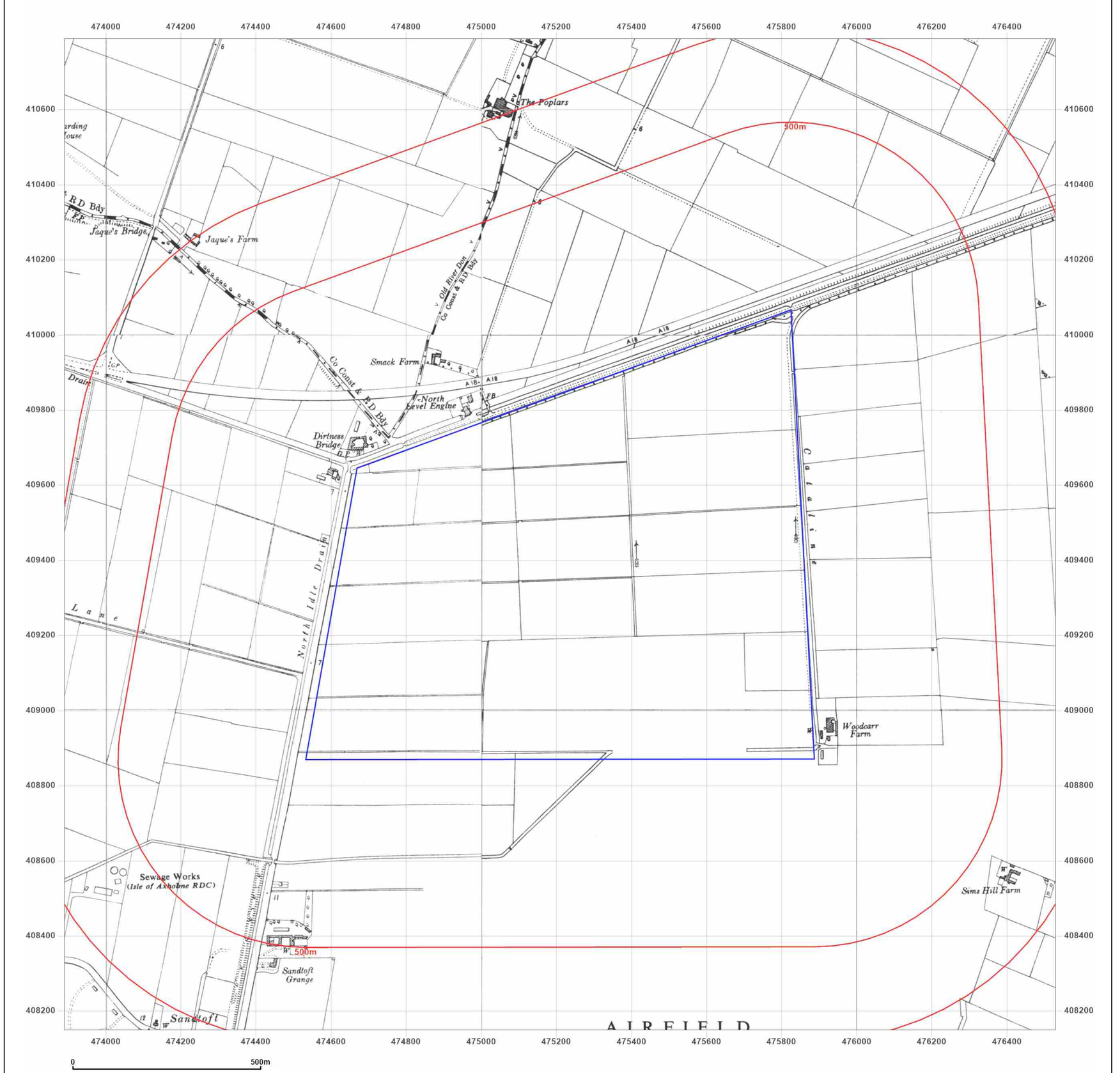

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: Provisional

Map date: **1951-1955**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed N/A
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
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Levelled N/A

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Revised 1951
Edition N/A
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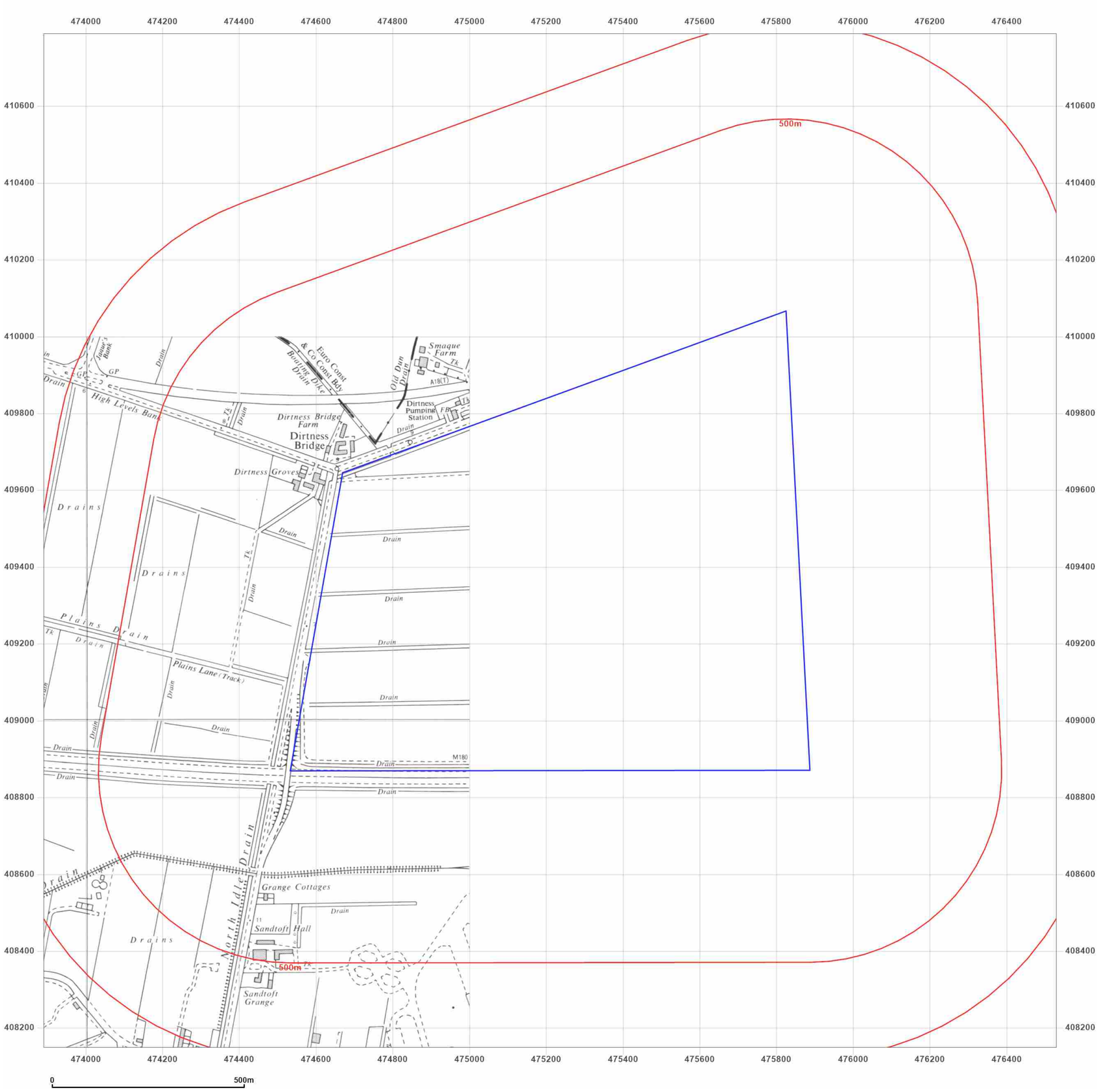

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: Provisional
Map date: **1969**
Scale: 1:10,560
Printed at: 1:10,560

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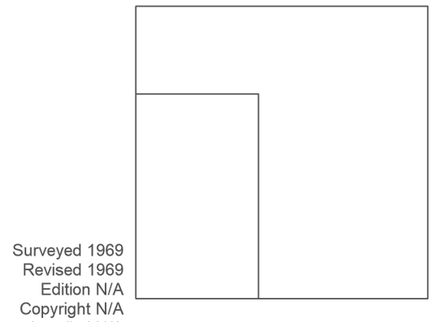

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Revised 1969
Edition N/A
Copyright N/A
Levelled N/A

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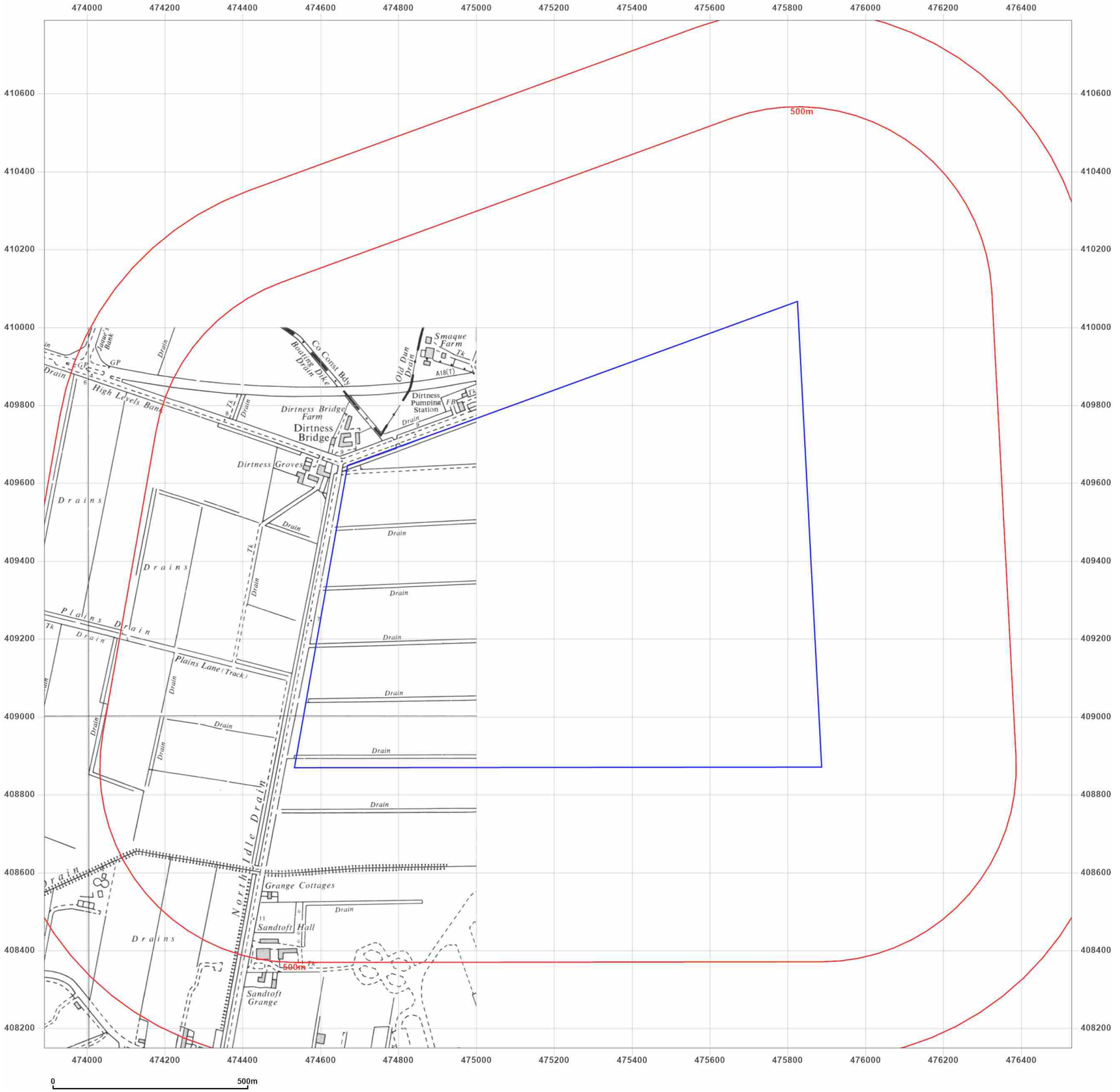

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: Provisional
Map date: **1969**
Scale: 1:10,560
Printed at: 1:10,560

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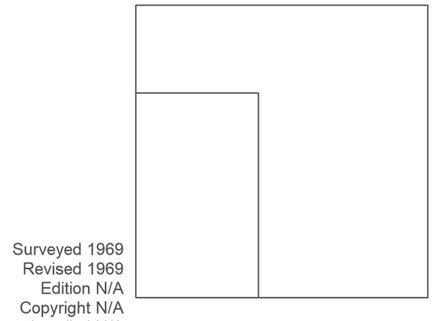

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Revised 1969
Edition N/A
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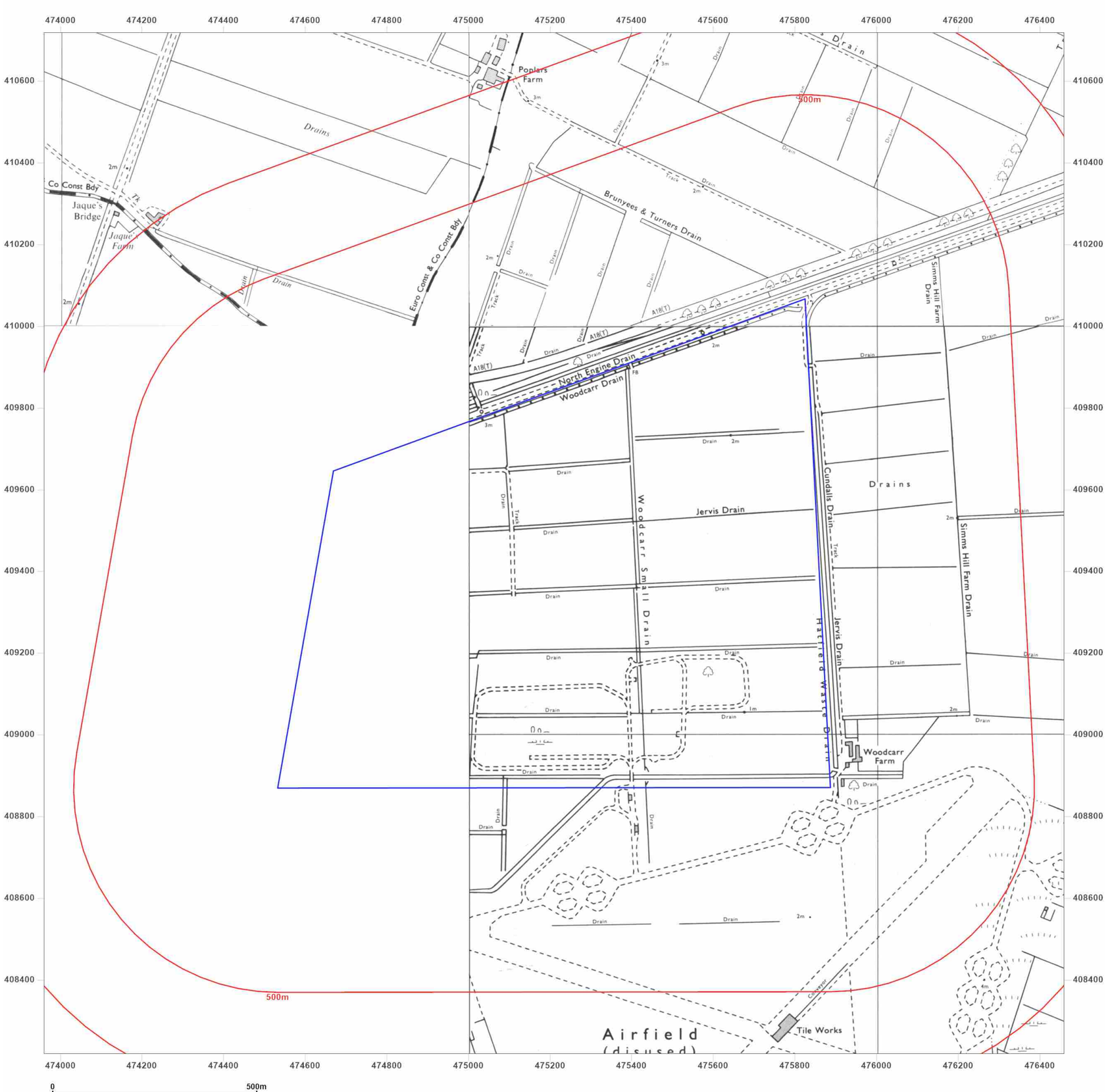

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: National Grid

Map date: **1968-1973**

Scale: 1:10,000

Printed at: 1:10,000

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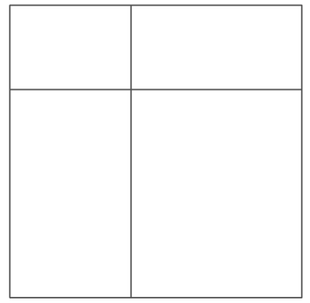
Surveyed 1966
Revised 1968
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A



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Revised 1973
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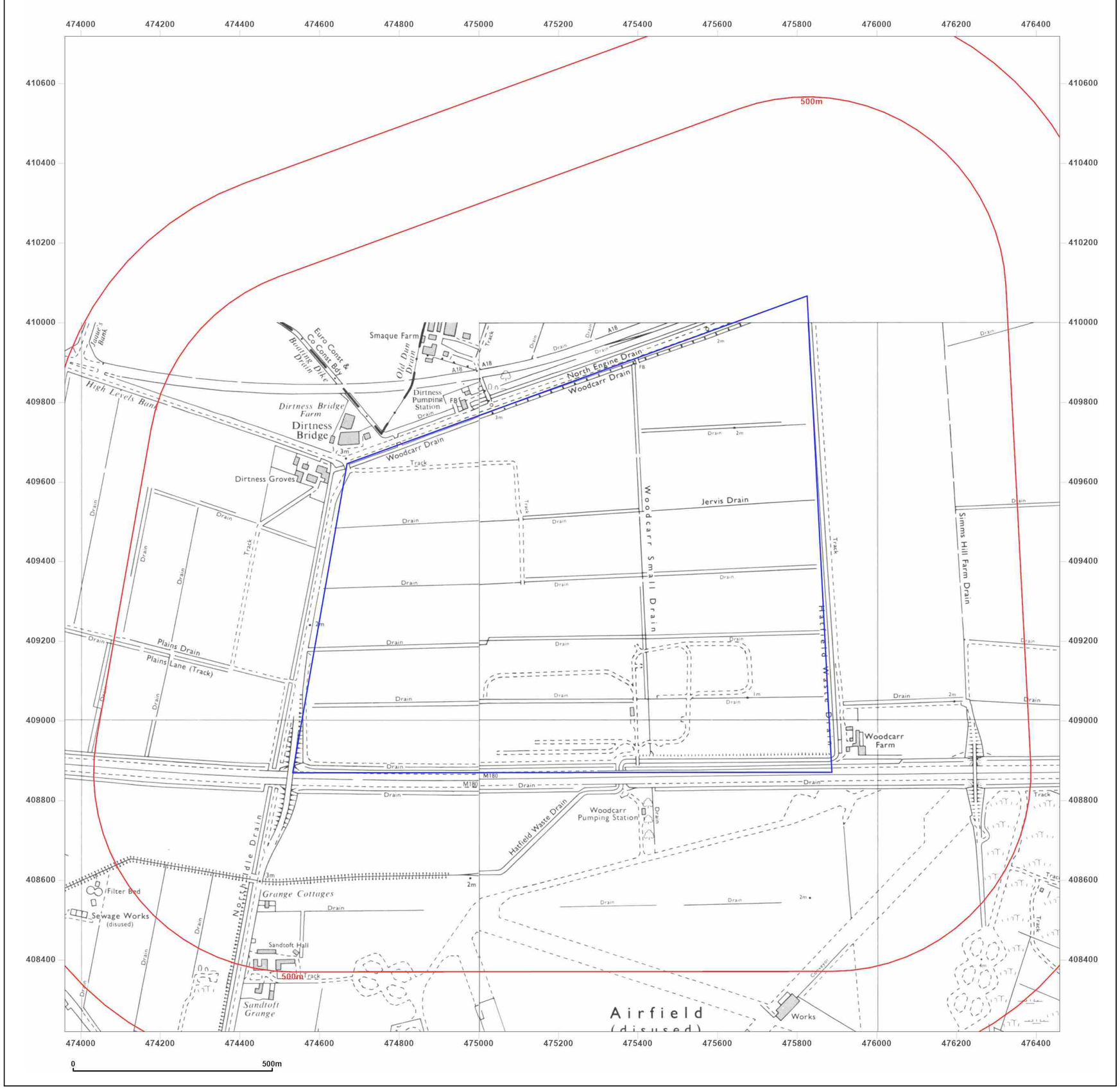

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: National Grid

Map date: **1981-1982**

Scale: 1:10,000

Printed at: 1:10,000

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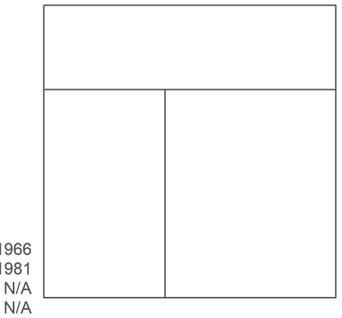

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Revised 1981
Edition N/A
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Surveyed 1981
Revised 1982
Edition N/A
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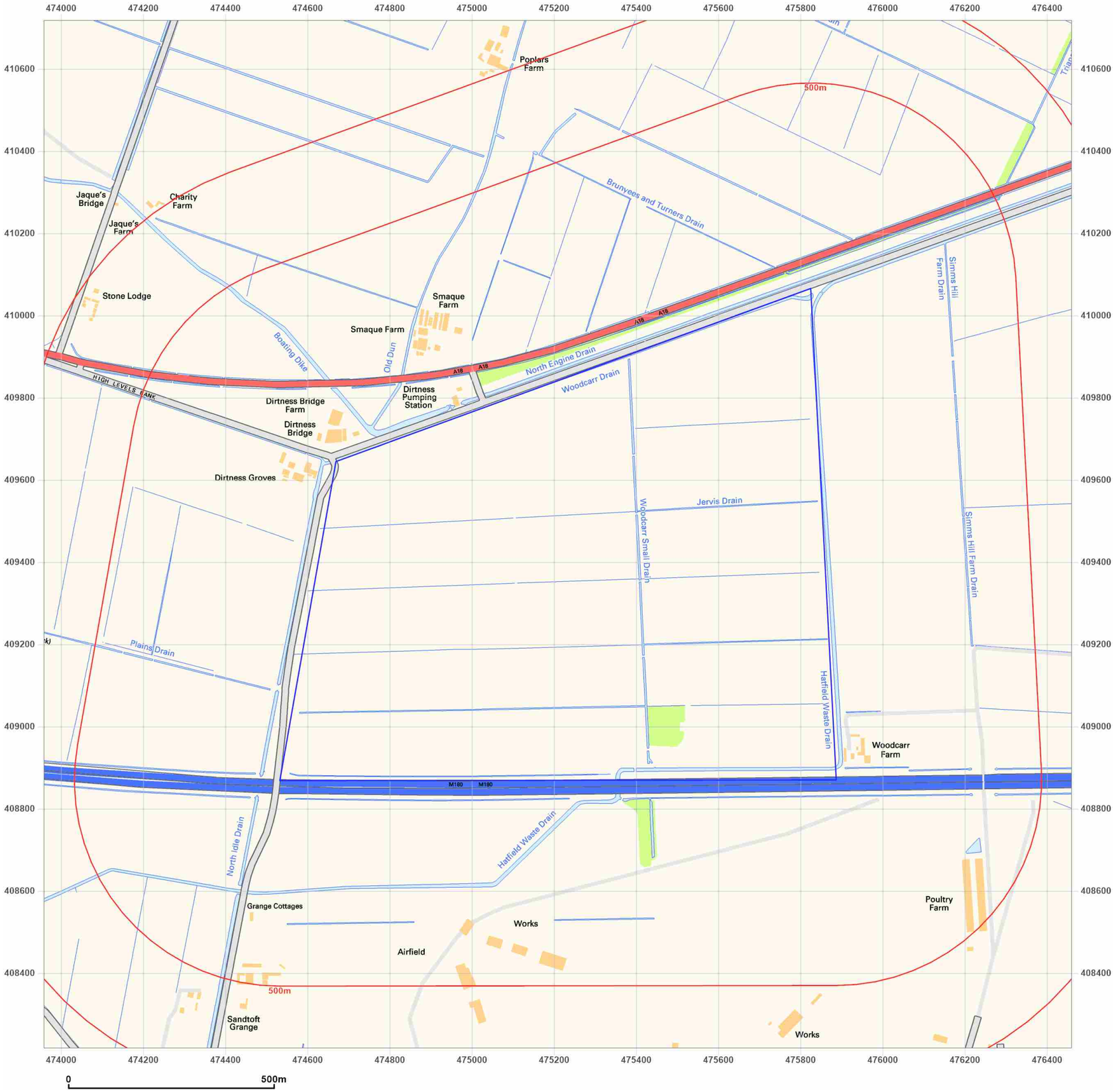

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

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2001

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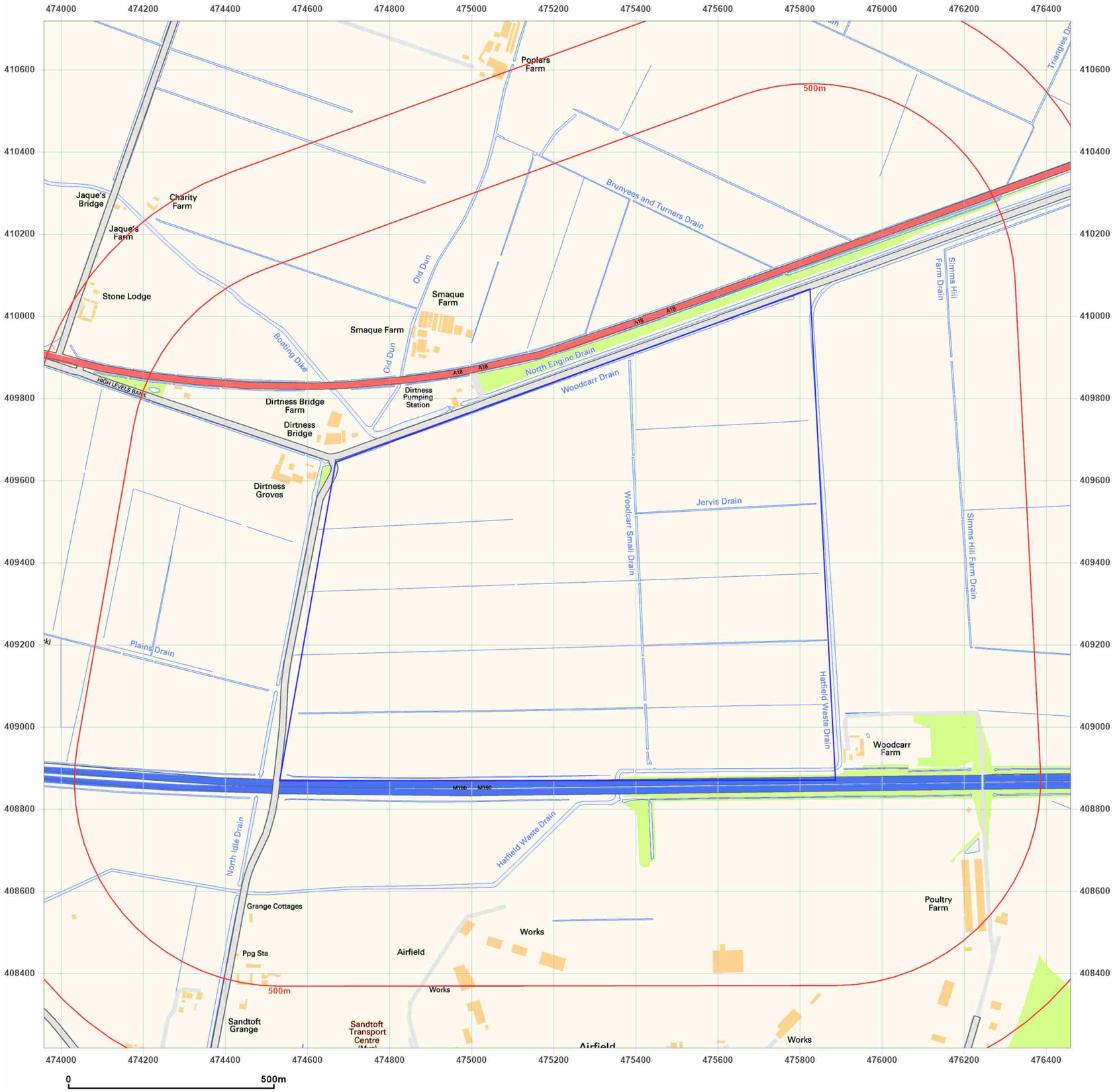

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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2010

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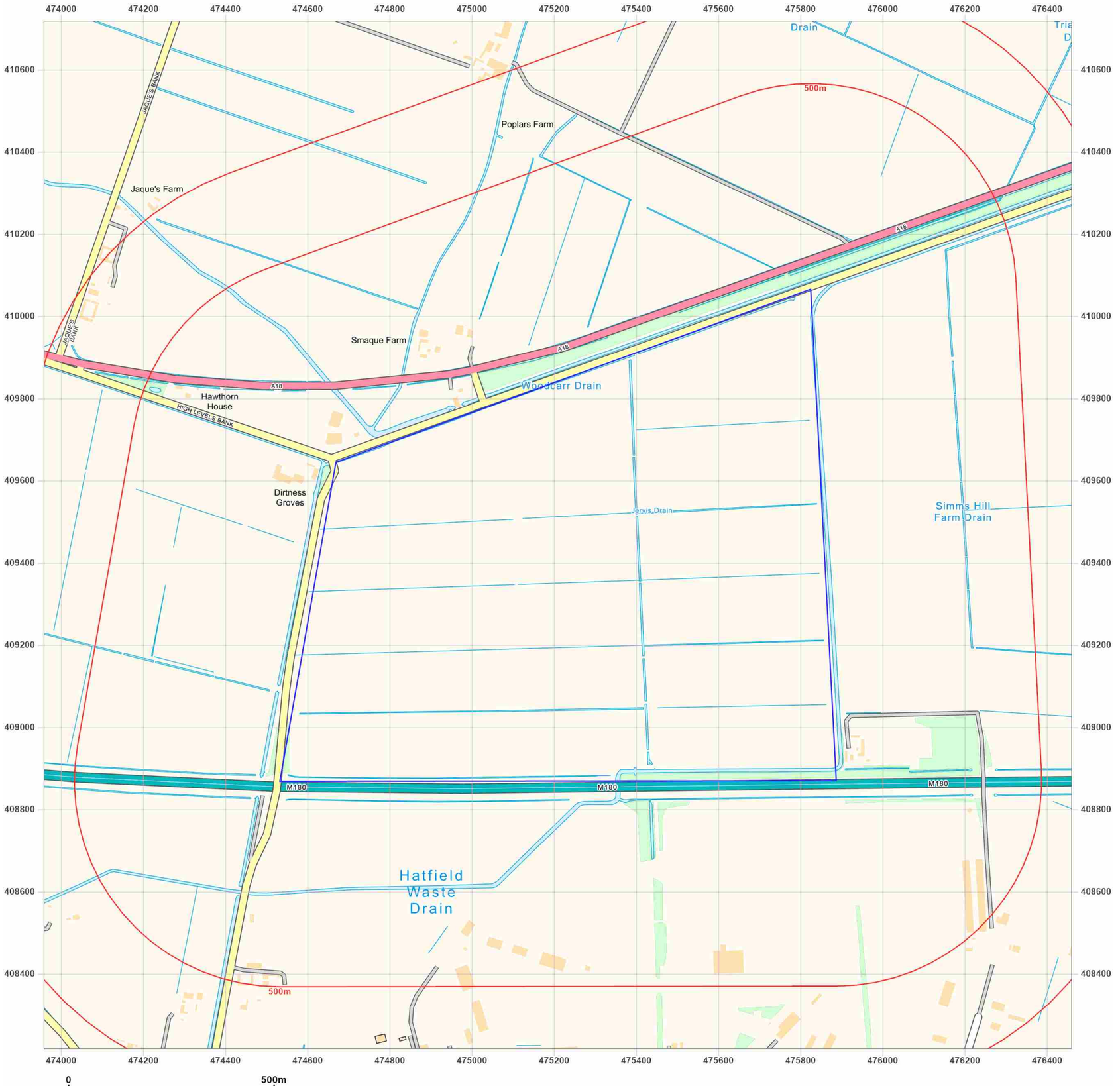

Groundsure INSIGHTS

Site Details:

Tween Bridge Area E East

Client Ref: P02159615
Report Ref: GS-W46-M12-UY5-ISS
Grid Ref: 475209, 409468

Map Name: National Grid

Map date: **2025**

Scale: 1:10,000

Printed at: 1:10,000

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Appendix E
THIRD PARTY DATA

British Geological Survey

BGS ID: 124456 : BGS Reference: SE70NE2
British National Grid (27700) : 477083,409904

Sited on LINCS 17 NW(E) by occupier. No further details
J. Shelton 29:IV:48

BELTON GRANGE
CROWLE
SCUNTHORPE
LINCS

SE 70 NE 2 7709091

PARTICULARS OF 3" BOREHOLE (sunk in 1913) AT BELTON GRANGE FARM, TWO MILES DUE SOUTH OF CROWLE.

One-inch (New Series) Sheet 88 O.S. 1" 86

Blownsand ? 25' Drift on Keuper Marl	Soil	13' 0"	
	Red Sandy clay	23'0"	36'0"
	Red Marl with Gypsum layers.	178'0"	214'0"
Bunter Sst.	Soft Grey Sandstone	6'0"	220'0"
RDB 13/2/76.	Grey Sandstone Rock.	62'0"	282'0" Boring stopped.

The boring is lined with tubes to a depth of 223'0" and water was tapped at 214'0" and rose to 5'6" from the surface.

During a twenty four hours pumping test at the rate of 700 gallons per hour, the water level fell to 15'0" from the surface after two hours pumping and remained at that level during the remainder of the test.

ANALYSIS OF WATER.

Total solid matter dried at 100°	96 grains per gallon.
Combined chlorine	13°5 do do
Free Ammonia	°09 parts per million.
Albuminoid Ammonia	°01 do do
Nitrites	Absent.
Nitrogen as Nitrates	°01 grains per gallon.
Total hardness (Clarke's Scale)	52°
Permanent hardness	47°

PHYSICAL EXAMINATION.

Contains slight sediment from borehole, settles perfectly bright, clear, and colourless - free from odour.

I am of opinion that this water is fit for drinking purposes. Its "hardness" is very excessive.

(Signed) C.M. BATTLE.

LINCOLN. Feb. 24th 1914.

Waterworks Engineer's Office,
LINCOLN. OCT. 29th 1915.

Communicated by
C. Gordon
Waterworks Engineer

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 124456 : BGS Reference: SE70NE2
British National Grid (27700) : 477083,409904

Sited on Lincs 87 NW(4) by enquiry. No further details
J. Swallow 29.IV.48

BELTON GRANGE,
CROWLE
SCUNTHORPE
LINCS

SE70NE/2
SE 70NE 7708 0989

88 SE70/11

PARTICULARS OF 3" BOREHOLE (sunk in 1913) AT BELTON GRANGE FARM,
TWO MILES DUE SOUTH OF CROWLE. 110

Bearings from Ordnance Survey Sheet 88 O.S. 1 inch

Blown Sand ?25' Drift	Soil	13' 0"		
	Red Sandy clay	23'0"	36'0"	
Keuper Marl	Red Marl with Gypsum layers.	178'0"	214'0"	
Bunter Sst	Soft Grey Sandstone	6'0"	220'0"	
RSB 13/2/76.	Grey Sandstone Rock.	62'0"	282'0"	Boring stopped.

The boring is lined with tubes to a depth of 223'0" and water was tapped at 214'0" and rose to 5'6" from the surface.

During a twenty four hours pumping test at the rate of 700 gallons per hour, the water level fell to 15'0" from the surface after two hours pumping and remained at that level during the remainder of the test.

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Total solid matter dried at 100°	96 grains per gallon.
Combined chlorine	13°5 do do
Free Ammonia	°09 parts per million.
Albuminoid Ammonia	°01 do do
Nitrites	Absent.
Nitrogen as Nitrates	°01 grains per gallon.
Total hardness (Clarke's Scale)	52°
Permanent hardness	47°

PHYSICAL EXAMINATION.

Contains slight sediment from borehole, settles perfectly bright, clear, and colourless - free from odour.

I am of opinion that this water is fit for drinking purposes. Its "hardness" is very excessive.

(Signed) C.M. BATTLE.

LINCOLN. Feb. 24th 1914.

Waterworks Engineer's Office,
LINCOLN. OCT. 29th 1915.

Communicated by
C. Horobin
Waterworks Engineer.

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 124476 : BGS Reference: SE70NE22
British National Grid (27700) : 476840,408890

N.180 Alternative Line

BOREHOLE No. AND LOCATION	DEPTH From	DEPTH To	SOIL DESCRIPTION	SAMPLES Depth	SAMPLES Test and Result
0.14 Cheshire Earth Auger. 31.10.74. SE70NE 22 7684 0889.	0.00	0.30	Topsoil.		
	0.30	2.00	Soft wet red brown very sandy CLAY.	0.70 - 0.80	Fm 33
				1.00 - 1.40	Fm 30 LL 29 PL 20 PI 9
				FI 0-27 27-54 54-107 107-214 214-428	Mv / Cv 0.15 0.09 0.10 0.04 0.03
	2.00	2.50	Soft red brown silty fine SAND.		
			End of borehole 2.5 m. Borehole caving in below 1.0 m, water encountered at 1.5 m.		
0.15 Cheshire Earth Auger. 28.10.74. NOT SITED.	0.00	0.60	Sandy topsoil.		
	0.60	1.00	Yellow brown and red mottled fine and medium SAND with pockets of topsoil at 0.9 m i.e. disturbed ground.	0.60 - 0.80	Fm 14
	1.00	1.20	Laminated fine SAND.	1.20 - 1.40	Fm 22 LL 24 PL 18 PI 6
	1.20	1.40	Soft red-brown sandy silty CLAY.		
	1.40	3.30	Moist red brown slightly clayey compact SAND.	1.80 - 2.00	Fm 26
	3.30	4.00	Soft to firm brown silty CLAY with some fine sand.	3.30 - 3.40	Fm 26 LL 40 PL 21 PI 19
				3.60 - 4.00	Fm 29 Cu 51 Øu 0 DD 1610 m 27
				FI 0-54 54-107 107-214 214-428 428-856	Mv / Cv 16.1 0.19 / 3.5 0.07 / 11.2 0.05 / 9.1 0.04 / 4.8
			Water encountered at 1.5 m. Hole caving in below 3.0 m. End of borehole 4.0 m.		

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

NATIONAL COAL BOARD

DONCASTER AREA

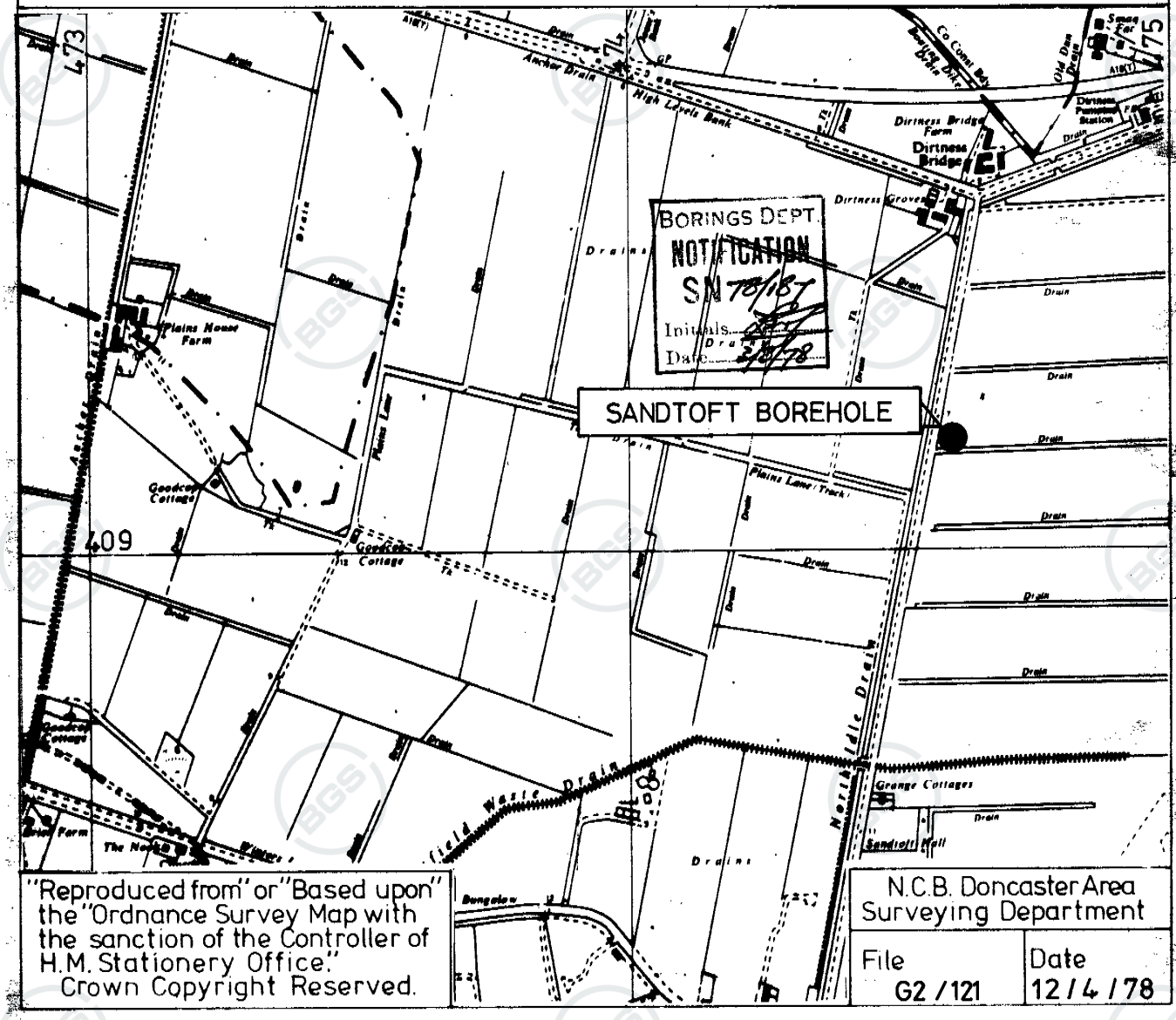
SE 70 NW 13

SANDTOFT BOREHOLE

SANDTOFT

SCALE — 1/10560

SHEET SE. 70 N.W.



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N.C.B. Doncaster Area Surveying Department

File	Date
G2 / 121	12 / 4 / 78

Bored from Surface

National Grid Coordinates E 474590·5 N 409206·5

Levels: Ground Level 1·188 m. A.O.D

Boring Datum 3·958 m. A.O.D

6 inch Map	B.H. regd No.	6 inch Map	B.H. regd No.
(County, Sheet & Qtr.)		SE 70 NW (Nat. Grid Sheet & Qtr.)	204

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

FORM P 70
SERIES 580

Section of SANDTOFT Borehole

Purpose Exploration for coal

Exact Site NGR SE/74590/09206

Level at which bore commenced relative to O.D. 3.96 m (driller's datum)

Date of sinking or boring July 1978

Sinker or borer Kenting Drilling Services Ltd.

6-INCH MAP	B/H REGD. No.
Yorks. 278 NE (County, Sheet and Qtr.)	204
SE 70 NW / 3 (Nat. Grid, Sheet & Qtr.)	

Attach tracing from a map or sketch map if possible

Cores, other than coal, examined by M. Robinson. No cores taken from surface to 580 m.

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	Driller's datum to ground level	2	77	2	77
	Soil		63	3	40
Drift	Light brown sandy clay	4	60	8	00
	Red-brown sandstone	134	10	142	10
	Red marl		90	143	00
Bunter Sandstone	Red-brown sandstone	78	10	221	10
	Red marl		80	221	90
	Red-brown sandstone	95	60	317	50
	Sandstone with marl bands	25	40	342	90
	Red-brown marl	13	90	356	80
	White anhydrite	7	80	364	60
Upper Permian Marl	Red marl	10	20	374	80
	Marl and anhydrite	4	00	378	80
	Anhydrite	2	00	380	80
	Limestone	4	50	385	30
Upper Magnesian Limestone	Marl and limestone	2	00	387	30
	Limestone	16	90	404	20
	Mainly red-brown marl with gypsum and anhydrite bands with some grey marl	30	90	435	10
Middle Permian Marl	Anhydrite	2	90	438	00
	Marl with anhydrite bands	6	20	444	20
Lower Magnesian Limestone	Limestone	71	40	515	60
Lower Permian Marl	Mudstone with high gamma level		80	516	40
Basal Permian Sands	Sandstone	3	80	520	20
	Sandstone	13	30	533	50
ACKWORTH ROCK (16.8 m)	Siltstone	1	20	534	70
	Sandstone	2	30	537	00
	Mudstone	10	10	547	10
	Siltstone	1	00	548	10
	Mudstone	1	00	549	10
	Inferior COAL		30	549	40
	Mainly siltstone	2	10	551	50
	Mudstone		80	552	30
	?Ironstone		80	553	10
	Mudstone	6	30	559	40
	Sandstone and siltstone	3	40	562	80
	Siltstone	1	40	564	20
?SHAFTON MARINE BAND	Mudstone	3	90	568	10
	COAL		50	568	60
	Mainly mudstone	11	40	580	00
	Dark grey finely micaceous silty mudstone with rootlets		28	580	28

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Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
MEXBOROUGH ROCK (28.42 m)	Ripple-bedded grey sandstone with dark and purple micaceous layers		77	581	05
	Dark grey micaceous silty mudstone with frequent ripple-bedded sandy layers and occasional purple patches	3	75	584	80
	Interlayered sandstone and siltstone with inclined purple micaceous laminae	1	10	585	90
	Grey cemented siltstone		30	586	20
	Grey fine-grained sandstone with small-scale cross-bedded dark micaceous layers, strongly cemented below 587.24 m, purple siltstone breccia 14 cm at base	3	66	589	86
	Grey medium-grained sandstone with inclined dark and purple layers, cross-bedded below 599.20 m	16	64	606	50
	Black coaly mudstone with red oxidised layers		03	606	53
	Irregularly interlayered purple silty mudstone with Calamites and sandstone		12	606	65
	Grey sandstone with dark grey and purple micaceous layers		60	607	25
	Strongly cemented coarse-grained sandstone, 10 cm conglomerate with red oxidised ironstone pebbles at 608.63 m	1	46	608	71
	COAL, oxidised with purple muddy layers		07	608	78
	Fawn-grey, leached mudstone-seatearth with listrics, rootlets and Stigmaria		39	609	17
	Black mudstone with plant straps		03	609	20
	Grey mudstone-seatearth with listrics, oxidised ironstone nodules and rootlets		12	609	32
	Grey slightly silty mudstone-seatearth with occasional grey-green patches and rootlets		68	610	00
	Mottled grey and grey-green silty mudstone with occasional rootlets		95	610	95
	Grey micaceous siltstone with occasional rootlets		55	611	50
	Grey, finely micaceous silty mudstone with frequent Calamites	1	40	612	90
	Grey siltstone with much comminuted plant debris		80	613	70
	Grey silty mudstone with much comminuted plant debris and occasional Calamites	1	20	614	90
	Grey siltstone with micaceous partings, much comminuted plant debris and scattered Calamites	3	52	618	42
	Grey micaceous silty mudstone with scattered Calamites, Annularia and occasional small ironstone nodules	1	38	619	80
	Interlayered, ripple-bedded sandstone and siltstone		60	620	40
	Grey silty mudstone with scattered Calamites and Neuropteris	2	40	622	80
	Grey silty mudstone with some irregular inclined planty mudstone bands and thin ironstone layers		20	623	00
	Strong light grey medium-grained sandstone with occasional coaly laminae, thin coal scars at 631.07 m	9	47	632	47
	Grey micaceous silty mudstone with sandy layers and plant debris		28	632	75
	Light grey fine-grained sandstone with occasional dark micaceous laminae and sideritic layers		67	633	42
	Grey silty mudstone with frequent ripple-bedded sandy lenses and coarser dark micaceous partings	2	98	636	40

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Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW /3	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~*	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~*	DEPTH cm ~~or in~~*
	Grey siltstone with convoluted sandstone layers		35	636	75
	Grey fine-grained micaceous siltstone, inclined (10°) contact at base		15	636	90
	COAL		08	636	98
	Light grey fine-grained sandstone with ripple-bedded dark silty layers		31	637	29
GLASSHOUGHTON ROCK (31.95 m)	COAL		01	637	30
	Light grey fine-grained sandstone with irregular fine silty layers and ironstone nodules		03	637	33
	Pale grey-green mudstone-seatearth with sandy lenses at top, ironstone nodules, listrics and rootlets below		25	637	58
	Tough cemented siliceous grey-green siltstone-seatearth with rootlets	1	02	638	60
	Grey-green siltstone with rootlets and micaceous partings		70	639	30
	Grey siltstone with sandy layers and lenses		24	639	54
	Light grey medium-grained sandstone with occasional carbonaceous and micaceous laminae, ripple-bedded silty mudstone and sandstone 30 cm at 645.70 m	15	41	654	95
	Smooth grey mudstone with listrics and rootlets		20	655	15
	Grey mudstone with ironstone bands and rootlets		38	655	53
	Dark grey mudstone with coal streaks and plant straps		03	655	56
	Grey mudstone-seatearth with listrics and rootlets		30	655	86
	Grey-brown mudstone-seatearth with listrics and rootlets		24	656	10
	Light grey-green mudstone-seatearth with listrics, ironstone nodules and rootlets		40	656	50
	Light grey-green silty mudstone-seatearth with sphaerosiderite nodules and rootlets		30	656	80
	Light grey-green mudstone-seatearth with listrics and rootlets		17	656	97
	Dark grey, finely micaceous slightly silty mudstone with pyritised rootlets		04	657	01
HOUGHTON THIN	COAL with a little pyrites 31 cm COAL with thin bright bands 12 cm COAL with fusain partings 8 cm		51	657	52
	Dark grey mudstone-seatearth with coal streaks and rootlets		15	657	67
	Grey mudstone-seatearth with listrics and rootlets		38	658	05
	Grey micaceous silty mudstone-seatearth with ironstone nodules and rootlets		16	658	21
	Strong grey siltstone-seatearth with dark micaceous partings, ironstone nodules and rootlets		25	658	46
	Interlayered, ripple-bedded siltstone and sandstone with ironstone nodules and rootlets		24	658	70
	Light grey sandstone with ripple-bedded dark micaceous partings and rootlets		20	658	90
	Grey siltstone with comminuted plant debris		57	659	47
	Light grey sandstone with ripple-bedded dark micaceous partings		22	659	69
	Grey silty mudstone with occasional sandy laminae, frequent plant debris	1	36	661	05

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SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~*	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~*	DEPTH cm ~~or in~~*
	Grey mudstone with frequent thin ironstone layers, abu dant trace fossils and occasional Naiadites below 661.50 m, abundant Anthracosia at base	1	02	662	07
	Dark grey micaceous siltstone with frequent Anthracosia, occasional Naiadites and Spirorbis		94	663	01
	Dark grey, finely micaceous silty mudstone with frequent Anthracosia		25	663	26
	Dark grey, finely micaceous silty mudstone with frequent partings of abundant Naiadites		74	664	00
	Dark grey, finely micaceous mudstone with frequent partings of abundant Naiadites, occasional Anthracosia	1	23	665	23
	Smooth grey mudstone with frequent thin ironstone layers, Planolites, fucoids, foraminifera and occasional pyritised faecal pellets	7	97	673	20
MANSFIELD MARINE BAND	Smooth dark grey shale with abundant Serpuloides, foraminifera and occasional fucoid markings, Lingula at 673.44 m with fish scale, and occasionally below		35	673	55
	Black silty mudstone crowded with Serpuloides		07	673	62
	Mainly ferruginous siltstone banded with dark grey silty mudstone crowded with Serpuloides, occasional fucoids and Lingula		12	673	74
	Pale green-grey siltstone, oblique contact at base		46	674	20
	Pale green-grey mudstone with sphaerosiderite patches and occasional rootlets		50	674	70
	Pale green-grey sandstone with occasional sideritic layers	1	75	676	45
	Light grey medium-grained sandstone with some sideritic wisps	5	21	681	66
	Grey mudstone		54	682	20
	Dark grey shale		10	682	30
	Canneloid shale with pyritised plant straps		03	682	33
	Interbanded grey and dark grey mudstone with Cordaites		13	682	46
WHEATWORTH	CANNEL 1 cm COAL 6 cm		07	682	53
	Dark grey mudstone with coal streaks and planty partings with Cordaites and wide plant straps		10	682	63
	Grey silty mudstone with Cordaites and Neuropteris	1	80	684	43
	Grey siltstone with scattered plant debris, including Neuropteris		97	685	40
	Interlayered, ripple-bedded siltstone and sandstone	1	90	687	30
	Grey micaceous silty mudstone with occasional plant debris	1	10	688	40
	Grey silty mudstone with irregular sandstone wedges		40	688	80
	Pale grey sandstone		40	689	20
	Interlayered, ripple-bedded siltstone and sandstone with micaceous partings	2	14	691	34
	Light grey medium-grained sandstone, some coaly layers near top	1	86	693	20
	Grey micaceous siltstone with occasional sandy layers		35	693	55
	Light grey medium-grained sandstone		25	693	80

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Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW /3	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~	DEPTH cm ~~or in~~*
	Banded siltstone and sandstone with Cordaites		85	694	65
OAKS ROCK (27.90 m)	Grey silty mudstone with occasional sandy layers and plant debris	1	65	696	30
	Grey mudstone with occasional sandy lenses and plant debris	2	29	698	59
	Light grey medium-grained sandstone with carbonaceous wisps		46	699	05
	Grey mudstone with scattered plant fragments	1	67	700	72
	Interbanded sandstone, siltstone and mudstone		63	701	35
	Grey silty mudstone with coarse micaceous partings and plant debris		19	701	54
	Light grey medium-grained sandstone with occasional thin planty mudstone bands and dark micaceous partings to 705 m, small-scale cross-bedding below, poorly cemented and porous from 708 to 711.60 m, well-cemented below, 10 cm conglomerate at base	10	79	712	33
	Grey silty mudstone with coarse micaceous partings and comminuted plant debris		57	712	90
	Grey mudstone with occasional thin ironstone bands and trace fossils		64	713	54
	Smooth grey shale with thin ironstone layers and pyritised Anthracosia		56	714	10
	Dark grey slightly silty shale with thin dark ironstone bands, occasional pyritised Anthracosia and sparse fish debris		50	714	60
	Smooth grey shale		40	715	00
	Irregularly interlayered dark grey micaceous siltstone and lenticular sandstone, coal streaks near base		06	715	06
	Inferior COAL with bright streaks		04	715	10
	Dark grey micaceous silty mudstone-seatearth with rootlets and Stigmaria		03	715	13
	Strong grey-brown silty mudstone-seatearth with rootlets		11	715	24
	Grey-brown mudstone-seatearth with listrics and rootlets		18	715	42
	Grey-brown siltstone-seatearth with rootlets		25	715	67
	Grey-brown silty mudstone-seatearth with rootlets		13	715	80
	Mottled grey-brown and green mudstone-seatearth with listrics, sphaerosiderite and rootlets		54	716	34
NEWHILL	Very inferior COAL, some bright streaks 2 cm				
	COAL 33 cm		35	716	69
	Carbonaceous shale		04	716	73
	Fawn-grey mudstone-seatearth with listrics and rootlets		56	717	29
	Fawn-grey siltstone-seatearth with rootlets		10	717	39
	Dark grey silty mudstone-seatearth with rootlets		31	717	70
	Grey mudstone-seatearth with occasional thin ironstone lenses and rootlets	1	30	719	00
	Interlayered ripple-bedded silty mudstone and sandstone with scattered rootlets	3	82	722	82
	Grey silty mudstone with frequent sandy layers and lenses		89	723	71
	Smooth grey colour-banded shaly mudstone with frequent diffused ironstone bands and layers, some listricated mussel impressions below 728.16 m	6	92	730	63
	Smooth dark grey shale with pyritised debris		17	730	80

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Form P 71
SERIES 680

Section of SANDTOFT BOREHOLE

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ~~ft~~	THICKNESS cm or ~~ins~~	DEPTH m or ~~ft~~	DEPTH cm or ~~ins~~
MELTONFIELD	COAL 12 cm				
	Grey mudstone-seatearth with coal streaks 2 cm				
	COAL with fusain partings, a little pyrites 46.5 cm		75	731	55
	Fusainous COAL 2.5 cm				
	Dark grey mudstone-seatearth with coal band 8.5 cm				
	Inferior COAL 3.5 cm				
	Coaly mudstone with much pyrites		05	731	60
	Weak grey mudstone-seatearth with listrics and rootlets		20	731	80
	Dark grey mudstone with coal streaks, plant straps and rootlets		03	731	83
	Grey mudstone-seatearth with listrics and rootlets		09	731	92
	Light grey fine-grained sandstone with irregular siltstone layers, ironstone nodules and rootlets		21	732	13
	Grey silty mudstone-seatearth with coarser micaceous layers, sandy layers and lenses, ironstone nodules, rootlets		24	732	37
	Mainly fine-grained grey sandstone with irregular siltstone layers, occasional carbonaceous layers and partings		63	733	00
	Interlaminated siltstone and sandstone with dark micaceous partings		54	733	54
	Grey silty mudstone with plant debris and rootlets		36	733	90
	COAL		02	733	92
	Carbonaceous mudstone with coal streaks and plant straps		02	733	94
	Weak grey mudstone-seatearth with listrics and rootlets		16	734	10
	Grey mudstone-seatearth with listrics and rootlets		30	734	40
	Interlayered dark grey mudstone-seatearth and inferior coal		20	734	60
	Tough cemented fine-grained light grey sandstone with irregular silty layers		60	735	20
	Grey silty mudstone with many thin ripple-bedded sandy lenses, scattered rootlets	1	75	736	95
	Grey mudstone with many thin ripple-bedded sandy lenses		47	737	42
	Grey mudstone with Anthracosia and Naiadites		28	737	70
	Dark grey micaceous silty mudstone with abundant Anthracosia, Naiadites and Spirorbis, occasional shelly ironstone lenses		20	737	90
	Smooth grey shaly mudstone with a few ironstone lenses, occasional Anthracosia below 738.75 m	1	04	738	94
	Dark grey micaceous silty mudstone with occasional ironstone layers, abundant Anthracosia, Naiadites and Spirorbis, pyritised below 740.16 m, fish debris at base	1	46	740	40
TWO FOOT	COAL 21 cm				
	Coaly mudstone 1 cm		43	740	83
	COAL 21 cm				
	Grey-brown mudstone-seatearth with listrics and rootlets		42	741	25
	Grey-brown silty mudstone-seatearth with ironstone nodules and rootlets		41	741	66

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SERIES 880

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~*	DEPTH cm ~~or in~~*
	Grey siltstone-seatearth with sandy lenses and rootlets		24	741	90
	Grey mudstone with sandy lenses, ironstone nodules, rootlets and Stigmaria		99	742	89
	Ironstone		05	742	94
	Grey mudstone with listric rootlet impressions	1	32	744	26
	Pale grey mudstone with ironstone nodules, rootlets and abundant plant fragments, including Neuropteris and Cordaites		17	744	43
WINTER	Inferior dirty COAL 4 cm Dark grey mudstone with coal streaks and planty partings 3 cm Pale grey mudstone with rootlets and Cordaites 9 cm COAL 5 cm Interlayered inferior COAL and mudstone 4 cm Grey mudstone-seatearth, rootlets 8 cm Finely interlaminated coal and carbonaceous mudstone 19 cm Inferior dull COAL 2 cm		54	744	97
	Coaly mudstone-seatearth, rootlets		05	745	02
	Grey mudstone-seatearth with listrics, rootlets and coaly mudstone bands		08	745	10
	Grey siltstone-seatearth with sandy layers and rootlets		05	745	15
	Irregularly interbanded sandstone and siltstone with convoluted bedding	2	05	747	20
	Light grey fine-grained sandstone with some ripple-bedded silty layers, convoluted bedding in bottom 10 cm		90	748	10
	Interlayered, ripple-bedded siltstone and sandstone		53	748	63
	Grey silty mudstone with occasional fine sandy lenses	2	66	751	29
	Grey slightly silty mudstone with occasional diffuse ironstone bands	1	45	752	74
	Smooth grey shaly mudstone		17	752	91
	Black shale with a few Naiadites and occasional fusainous debris		02	752	93
	COAL 9 cm Inferior COAL 2 cm		11	753	04
	Coaly mudstone with coal streaks		01	753	05
	Grey and dark grey mudstone-seatearth with listrics and rootlets		48	753	53
	COAL 16 cm Inferior COAL with dirt layers 3 cm		19	753	72
	Grey listricated mudstone-seatearth with rootlets		31	754	03
	Thinly interlayered ripple-bedded siltstone and sandstone with rootlets	1	37	755	40
	Light grey fine-grained sandstone with small-scale cross-bedded silty layers	1	10	756	50
	Light grey fine-grained sandstone, strong and well-cemented	1	36	757	86
	Interlayered, ripple-bedded siltstone and sandstone		64	758	50
	Light grey, strongly cemented fine-grained sandstone with delicate small-scale cross-bedding	8	30	766	80
	Interlayered, cross-bedded sandstone and siltstone with irregular erosive contact at base		54	767	34
	Grey fine-grained siltstone with irregular sandy layers		22	767	56

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Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ft*	THICKNESS cm or in*	DEPTH m or ft*	DEPTH cm or in*
HIGH HAZEL of HATFIELD	COAL 46 cm				
	Grey mudstone-seatearth,				
	listrics and rootlets 28 cm	1	21	768	77
	Dark grey shaly mudstone,				
	carbonaceous near base 7 cm				
	COAL 40 cm				
	Rather immature grey mudstone-seatearth with				
	rootlets and Stigmaria		37	769	14
	Grey silty mudstone with rootlets		37	769	51
	Grey mudstone with rootlets, becoming				
	seatearth near base		19	769	70
	Strong grey slightly silty mudstone-				
	seatearth with rootlets		02	769	72
	Friable grey mudstone-seatearth		03	769	75
	Dark grey mudstone-seatearth		02	769	77
	COAL 39.5 cm				
	COAL with fibrous pyrites 10.5 cm		50	770	27
	Rather weak, khaki-grey listricated				
	mudstone-seatearth with rootlets		47	770	74
	Grey silty mudstone-seatearth with				
	rootlets		05	770	79
	Grey cemented sandstone with rootlets		08	770	87
	Grey siltstone-seatearth with irregular				
	sandy layers and rootlets		45	771	32
	Grey siltstone with ripple-bedded sandy				
	lenses, occasional large ironstone nodules				
	and rootlets		68	772	00
	Grey silty mudstone with thin ripple-bedded				
	sandy lenses, rootlets near top		64	772	64
	Grey mudstone with occasional plant debris		68	773	32
	Strong grey siltstone, cemented in parts,				
	sandstone bands and pouches from 774.22 to				
	774.80 m	3	30	776	62
	Grey silty mudstone with occasional				
	ironstone bands	1	80	778	42
	Grey mudstone with occasional ironstone				
	bands and sparse small Anthracosia	1	76	780	18
	Smooth grey shaly mudstone with ironstone				
	bands		95	781	13
	Dark grey shale		03	781	16
KENT'S THIN	Inferior COAL 1 cm				
	Grey mudstone-seatearth with				
	coal layers 4 cm				
	Inferior COAL 2 cm		10	781	26
	Coaly mudstone-seatearth 1 cm				
	Inferior COAL 2 cm				
	Dark grey mudstone-seatearth		17	781	43
	Light grey fine-grained cemented sandstone-				
	seatearth with rootlets		39	781	82
	Grey siltstone-seatearth with sandy laminae,				
	ironstone nodules and rootlets		30	782	12
	Tough cemented siltstone		21	782	33
	Grey silty mudstone with occasional thin				
	sandy lenses and rootlets		80	783	13
	Grey mudstone with occasional diffuse				
	ironstone bands	1	17	784	30
	Grey friable mudstone with abundant				
	Anthracosia		07	784	37
	Grey mudstone with Anthracosia and plant				
	debris		13	784	50
	Grey siltstone with rootlets		10	784	60
	Light grey, fine-grained, extremely hard				
	cemented sandstone with plants		90	785	50
	Light grey fine-grained sandstone with small-				
	scale cross-bedding		75	786	25

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SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW/3	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~*	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~*	DEPTH cm ~~or in~~*
	Grey mudstone with occasional coarser silty layers and scattered Anthracosia		93	787	18
	Grey smooth shaly mudstone with ironstone lenses and frequent Anthracosia		14	787	32
	Grey slightly silty mudstone with occasional ironstone bands and scattered Anthracosia		94	788	26
	Banded siltstone and sandstone with small-scale cross-bedding	1	44	789	70
	Grey siltstone with occasional ripple-bedded sandy layers and a few Calamites	3	50	793	20
	Interlayered, ripple-bedded siltstone and sandstone with dark micaceous partings		62	793	82
	Grey silty mudstone with occasional ripple-bedded sandy lenses		40	794	22
	Light grey fine-grained sandstone with ripple-bedded dark micaceous partings		22	794	44
	Grey mudstone		66	795	10
	Smooth grey mudstone with occasional thin ironstone bands and sparse Naiadites	1	34	796	44
	Smooth grey shaly mudstone, occasional ironstone lenses, a few listricated Anthracosia		64	797	08
	Dark grey smooth shaly mudstone with abundant brown shelled Anthracosia and occasional Spirorbis		01	797	09
	Black shaly mudstone with abundant Anthracosia		02	797	11
	Dark grey shelly ironstone with abundant brown shelled Anthracosia		01	797	12
	Dark grey silty mudstone with white shelled Naiadites		02	797	14
	Grey mudstone with trace fossils		19	797	33
	Dark grey finely micaceous slightly silty mudstone with plant debris and rootlets, occasionally pyritised		27	797	60
KENT'S THICK	Inferior COAL with sandy inclusions 12 cm Cemented sandstone 1 cm Inferior COAL with sandy inclusions 13 cm COAL 50 cm		76	798	36
	Grey siltstone-seatearth with rootlets		36	798	72
	Grey silty mudstone-seatearth with rootlets		50	799	22
	Grey mudstone-seatearth with rootlets		42	799	64
	Ironstone		05	799	69
	Grey siltstone with sandy layers and rootlets		14	799	83
	Interbanded siltstone and sandstone	1	12	800	95
	Grey silty mudstone with ripple-bedded sandy lenses and rootlets		55	801	50
	Irregularly interbanded sandstone and siltstone with contorted bedding near top and small-scale cross-bedding below		50	802	00
	Grey siltstone with ripple-bedded sandy lenses	1	16	803	16
	Light grey fine-grained massive sandstone, strongly cemented with some delicate small-scale cross-bedding, irregular erosive contact at base	5	79	808	95
	COAL with a little pyrites		20	809	15
	Weak grey mudstone-seatearth with listrics, rootlets and Stigmaria		15	809	30
	Strong grey siltstone-seatearth with nodular sandstone layers and rootlets		20	809	50
	Grey silty mudstone-seatearth with many fine sandy layers, rootlets		75	810	25
	Strong, cemented, grey siltstone with contorted sandy layers		25	810	50

YPU. 918

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
ES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW /3	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	Interlayered siltstone and sandstone with small-scale cross-bedding	2	65	813	15
	Dark grey micaceous silty mudstone with abundant Anthracosia and occasional pyritised rootlets		49	813	64
	Dark grey micaceous mudstone with Lepidodendron, rootlets, Naiadites and Anthracosia		25	813	89
	Smooth grey shaly mudstone with occasional ironstone bands, some plant debris including Calamites	2	95	816	84
	Black shale with coal streaks and occasional megaspores		01	816	85
? DULL SEAM	Inferior dull COAL, thin sandy lenses at top		04	816	89
	Black coaly mudstone-seatearth with coal streaks and rootlets		11	817	00
	Light grey-green listricated mudstone-seatearth with some darker layers and rootlets		61	817	61
	Black coaly mudstone-seatearth with coal layers and rootlets		03	817	64
BARNSLEY RIDER	Interlayered inferior COAL and dark grey mudstone 3 cm; Dark grey coaly mudstone-seatearth with coal layers and rootlets 7 cm; Coaly mudstone with some pyrites 1 cm; Inferior COAL 15 cm; Coaly mudstone with pyrite lens 3 cm; Inferior COAL with dirt partings 20 cm		49	818	13
	Dark grey mudstone-seatearth with rootlets		01	818	14
	Coaly mudstone		03	818	17
	Weak grey mudstone-seatearth with listrics and rootlets		58	818	75
	Dark grey mudstone-seatearth with coal streaks and rootlets		04	818	79
	Grey mudstone-seatearth with rootlets and listrics		07	818	86
? "DAY BED"	Interlayered inferior bright and dull COAL 8 cm; Very inferior dull COAL 2 cm		10	818	96
	Grey silty mudstone-seatearth with rootlets		37	819	33
	Grey, ferruginous, cemented siltstone-seatearth with rootlets		24	819	57
	Grey mudstone-seatearth with listrics and rootlets		60	820	17
	Grey silty mudstone-seatearth with rootlets		13	820	30
	Grey siltstone-seatearth with some irregular sandy lenses, ironstone nodules and rootlets		35	820	65
	Massive lenticular ironstone band		15	820	80
	Grey silty mudstone with ironstone nodules and rootlets		43	821	23
	Grey mudstone-seatearth with listrics and rootlets		75	821	98
	Dark grey mudstone-seatearth with coal streaks and rootlets		11	822	09
	Grey mudstone-seatearth with rootlets		21	822	30
	Grey silty mudstone with ironstone nodules, rootlets and Stigmaria		32	822	62
	Grey mudstone with rootlets		10	822	72
	Grey silty mudstone with occasional rootlets, frequent Neuropteris near bottom		55	823	27
	Grey mudstone-seatearth with listrics and rootlets		02	823	29
	Very inferior COAL		04	823	33

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British Geological Survey

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Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	Grey silty mudstone-seatearth with irregular sandy layers and rootlets		27	823	60
	Irregularly interlayered siltstone and sandstone with scattered plants		25	823	85
	Lenticular ironstone band		10	823	95
	Grey silty mudstone with plants including Neuropteris and Pinnularia		29	824	24
	Mainly grey silty mudstone with sandstone bands and frequent plants, including Neuropteris, Cordaites and Pinnularia	1	53	825	77
	Grey mudstone with some sandstone bands (up to 10 cm) and occasional silty bands, frequent plants including Cordaites, Pecopteris, Sphenophyllum, Neuropteris and Annularia	1	33	827	10
	Grey mudstone with occasional ironstone nodules and frequent small Cordaites		43	827	53
	Rather weak dark grey mudstone with many listricated planty partings containing Sigillaria		06	827	59
	Coaly mudstone with coal layers		03	827	62
	Grey mudstone-seatearth with listrics, coal streaks and rootlets, pyrite lens at top		10	827	72
	Dark grey mudstone with coal streaks and many coalified planty partings		14	827	86
	Dark grey mudstone-seatearth with listrics and rootlets		26	828	12
	Dark grey mudstone with coal streaks and many coalified planty partings		02	828	14
	Grey mudstone, frequent listricated partings with Sigillaria		12	828	26
	Grey mudstone-seatearth with listrics and rootlets		06	828	32
	Dark grey mudstone with abundant Cordaites and occasional Lepidodendron		06	828	38
	Grey mudstone-seatearth with listrics and rootlets		09	828	47
	Dark grey mudstone with coal streaks and coalified planty partings		09	828	56
	Black carbonaceous mudstone with coal streaks and pyrite lenses		03	828	59
BARNSLEY	COAL 60.5 cm Inferior COAL 2 cm COAL 2.5 cm Inferior dull COAL 2 cm COAL, some pyrites 3 cm Dull COAL 19 cm COAL 17 cm	1	06	829	65
	Strong grey siltstone-seatearth with rootlets		17	829	82
	Extremely tough cemented grey siltstone-seatearth with rootlets, coal 2 cm at 830.17 m		40	830	22
	Grey silty mudstone-seatearth with rootlets		08	830	30
	Grey siltstone-seatearth with rootlets		06	830	36
	Irregularly interlayered sandstone and siltstone-seatearth with rootlets		64	831	00
	Strong grey siltstone with rootlets		26	831	26
	Light grey, fine-grained sandstone, some ripple-bedded silty layers		66	831	92
	Grey siltstone with occasional ripple-bedded sandy layers, occasional rootlets	1	08	833	00
	Smooth grey shaly mudstone with thin ironstone bands and lenses	2	10	835	10
	Dark grey shaly mudstone with frequent Anthracosia, occasional Naiadites and Spirorbis		57	835	67

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British Geological Survey

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British National Grid (27700) : 474590,409206

Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~*	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~*	DEPTH cm ~~or in~~*
	Black shale with abundant Anthracosia, Spirorbis and Naiadites		09	835	76
	Grey mudstone with trace fossils and occasional Naiadites		17	835	93
	Dark grey mudstone with Naiadites		07	836	00
	Sub-canneloid shale with abundant Naiadites fragments and occasional Anthracosia		02	836	02
	CANNEL with abundant brown shelled Anthracosia, some Naiadites at top		03	836	05
	Black shelly mudstone, crowded with brown shelled Anthracosia		05	836	10
	Black silty mudstone with Anthracosia, a few Naiadites and fish scale		10	836	20
	Inferior CANNEL with Naiadites		01	836	21
	Black silty mudstone with rootlets		01	836	22
	Dark grey silty mudstone-seatearth with rootlets		10	836	32
	Grey mudstone-seatearth with listrics and rootlets		36	836	68
	Coaly mudstone-seatearth with coal layers and rootlets		02	836	70
	Very inferior COAL with dirt layers 5 cm Inferior COAL 10 cm				
	Dark grey mudstone-seatearth with listrics and rootlets 5 cm Very inferior COAL 4 cm Inferior COAL 4 cm		28	836	98
	Dark grey slightly silty mudstone-seatearth with plants and pyritised rootlets		10	837	08
	Dark grey mudstone-seatearth with listrics and rootlets		13	837	21
	Grey mudstone-seatearth with listrics and rootlets		12	837	33
	Alternating bands (3 cm) of dark grey planty mudstone and grey mudstone-seatearth		29	837	62
	Grey mudstone-seatearth, slightly silty in parts with rootlets		78	838	40
	Grey mudstone with ironstone nodules, rootlets, scattered Lepidodendron and Neuropteris	1	29	839	69
	Interlayered, ripple-bedded siltstone and sandstone	1	67	841	36
	Interlaminated, ripple-bedded siltstone and sandstone		84	842	20
	Grey silty mudstone with occasional fine sandy laminae and thin ironstone bands	1	60	843	80
	Grey mudstone with occasional thin ironstone bands		78	844	58
	Smooth grey shaly mudstone with thin dark layers and frequent thin ironstone layers		52	845	10
	Dark grey shale with Naiadites and Anthracosia		05	845	15
	COAL		04	845	19
	Canneloid shale with irregular pyritic ironstone nodules, some Naiadites fragments, abundant Naiadites and Carbonita at 845.30 m		14	845	33
	Canneloid shale with many white shelled Carbonita, occasional Naiadites fragments and fish scales, abundant Naiadites with fish at 845.37 m		07	845	40
DUNSIL	COAL		15	845	55
	Black shaly mudstone with irregular dark ironstone nodules, some pyritised rootlets		07	845	62
	Black mudstone-seatearth with listrics, ironstone nodules and rootlets		06	845	68

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British Geological Survey

BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~*	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~*	DEPTH cm ~~or in~~*
	Grey, rather immature mudstone-seatearth with listrics and rootlets		41	846	09
	Grey and dark grey mudstone with listric rootlet impressions		96	847	05
	Grey mudstone with rootlet markings		90	847	95
	Dark grey shaly mudstone with many thin ironstone layers, frequent Anthracosia, some pyritised		45	848	40
	Black slightly silty mudstone with abundant pale brown shelled Anthracosia		14	848	54
	Dark grey shale with occasional ironstone bands and frequent Anthracosia		44	848	98
	Black shale with abundant pale brown shelled Anthracosia		02	849	00
	Dark grey shale with Anthracosia and Naiadites		10	849	10
	Dark grey shaly mudstone with occasional pyritised stringers		90	850	00
	Dark grey shale with Naiadites and Spirorbis		02	850	02
	Canneloid shale with Naiadites and fish		02	850	04
	CANNEL		07	850	11
	Canneloid shale with Naiadites fragments		02	850	13
	Canneloid shale with fish debris and occasional Carbonita		04	850	17
	Carbonaceous shale with ironstone layers, some Naiadites fragments		03	850	20
	Grey listricated mudstone-seatearth, some coal layers, rootlets		10	850	30
	COAL 5 cm Grey mudstone-seatearth with rootlets 11 cm COAL 8 cm Coaly mudstone 2 cm Grey mudstone-seatearth with rootlets 4 cm COAL 9 cm		39	850	69
	Grey mudstone-seatearth with rootlets		48	851	17
	Grey silty mudstone-seatearth with rootlets		11	851	28
	Irregularly interlayered siltstone and sandstone-seatearth with rootlets		60	851	88
	Grey silty mudstone with some sandy layers and occasional rootlets		67	852	55
	Mainly grey siltstone with occasional sandstone bands and some sandy pouches	1	05	853	60
	Grey silty mudstone with occasional thin sandy lenses and a few ironstone bands		64	854	24
	Grey slightly silty mudstone		38	854	62
	Massive ironstone		13	854	75
	Grey slightly silty mudstone with occasional ironstone bands		65	855	40
	Smooth grey shaly mudstone		34	855	74
	Smooth grey shaly mudstone with Anthracosia and Spirorbis, 5 cm shelly ironstone at 855.82 m, frequent Anthracosia with Naiadites below		17	855	91
	Dark grey mudstone with abundant Anthracosia		06	855	97
	COAL		03	856	00
	Dark grey, weak mudstone-seatearth with listrics, coal streaks and rootlets		07	856	07
	Weak grey mudstone-seatearth with listrics, coal streaks and rootlets		08	856	15
	Strong grey siltstone-seatearth with rootlets, some pyritised		45	856	60
	Strong grey siltstone with rootlets		37	856	97
	Light grey fine-grained sandstone with irregular silty layers and rootlets		63	857	60

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British Geological Survey

BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	Grey silty mudstone with rootlets and Lepidostrobus		14	857	74
	Coaly mudstone with many coal layers and plants		03	857	77
	Grey mudstone-seatearth with rootlets		13	857	90
	Irregularly interlayered siltstone and sandstone with rootlets		10	858	00
	Light grey fine-grained sandstone with small-scale cross-bedding		70	858	70
	Interlayered, ripple-bedded siltstone and sandstone		63	859	33
	Light grey fine-grained sandstone with small-scale cross-bedding	1	21	860	54
	Grey slightly silty mudstone with ironstone bands, some plant debris		78	861	32
	Smooth grey shaly mudstone with frequent Anthracosia and Naiadites, some pyritised, occasional Spirorbis		48	861	80
	Shelly ironstone with Anthracosia		03	861	83
	Smooth grey shaly mudstone with abundant Anthracosia, scattered Naiadites and Spirorbis		21	862	04
	Dark grey shale with abundant Anthracosia, Naiadites and Spirorbis		03	862	07
	Black silty mudstone with Lepidodendron		01	862	08
SWALLOW WOOD marker	Dull COAL 4 cm COAL 3 cm		07	862	15
	Light grey-brown mudstone-seatearth with rootlets		03	862	18
	Pale grey-brown, strong silty mudstone-seatearth with rootlets		22	862	40
	Light grey fine-grained, massive cemented sandstone with Stigmaria, some irregular nodular banding		78	863	18
	Light grey fine-grained sandstone with small-scale cross-bedding	2	12	865	30
	Interlaminated, ripple-bedded siltstone and sandstone	2	04	867	34
	Grey mudstone, silty in parts, with occasional ironstone bands and sparse Anthracosia		49	867	83
	Smooth grey shaly mudstone with frequent Anthracosia		28	868	11
	Black slightly silty shale with Naiadites, Spirorbis and a few fish scales		07	868	18
	Smooth, very dark grey mudstone with abundant Anthracosia, occasional Naiadites and Spirorbis		50	868	68
	Smooth black shale with abundant Naiadites fragments and fish scales, some Spirorbis		05	868	73
SWALLOW WOOD	COAL 39.5 cm Inferior COAL 3.5 cm		43	869	16
	Friable pale grey-green mudstone-seatearth with listrics and rootlets		06	869	22
	Pale grey-green silty mudstone-seatearth with rootlets		08	869	30
	Light grey, fine-grained massive sandstone, rootlets at top, small-scale cross-bedding below 872 m	3	60	872	90
	Grey siltstone with ripple-drifted sandy bands	1	10	874	00
	Grey silty mudstone		64	874	64
	Grey siltstone		36	875	00
	Interlayered, ripple-bedded siltstone and sandstone		40	875	40
	Grey silty mudstone		32	875	72

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British Geological Survey

BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ft*	THICKNESS cm or in*	DEPTH m or ft*	DEPTH cm or in*
	Interlayered, ripple-bedded siltstone and sandstone		31	876	03
	Ironstone		03	876	06
	Black shale, canneloid in bottom 3 cm		10	876	16
	Grey silty mudstone with pyritised rootlets		28	876	44
	Strong well-cemented, light grey, fine-grained sandstone with small-scale cross-bedding	2	73	879	17
	Interlayered siltstone and sandstone with small-scale cross-bedding	1	08	880	25
	Dark grey shale with pyritised debris, Naiadites at base		37	880	62
	Grey mudstone with ironstone bands		90	881	52
	Grey silty mudstone		26	881	78
	Grey mudstone with thick ironstone bands	1	94	883	72
	Smooth grey shaly mudstone with occasional thin ironstone layers, a few plant fragments, Spirorbis near base		43	884	15
HAIGH MOOR	Dull COAL 1.5 cm COAL 3 cm Carbonaceous mudstone 2 cm Inferior COAL 3 cm Grey mudstone-seatearth 13.5 cm Carbonaceous mudstone-seatearth 3 cm Inferior COAL with pyrites 2.5 cm COAL 25.5 cm Inferior pyritic fusain 2 cm COAL with pyrites 5 cm		61	884	76
	Pale grey-green mudstone-seatearth with listrics and rootlets		19	884	95
	Pale grey-green silty mudstone-seatearth with rootlets		10	885	05
	Pale grey-green mudstone-seatearth with listrics and rootlets		15	885	20
	Grey silty mudstone-seatearth with rootlets		14	885	34
	Grey silty mudstone with ironstone lenses and rootlets	1	18	886	52
	Grey siltstone with rootlets		43	886	95
	Grey silty mudstone with ironstone nodules and rootlets		55	887	50
	Grey mudstone with plants, including Cordaites, Mariopteris, Calamites, Annularia and Lepidodendron		10	887	60
	COAL 4 cm Grey mudstone-seatearth with rootlets 5 cm Inferior COAL 2 cm		11	887	71
	Grey planty mudstone with coal streaks		04	887	75
	Grey mudstone-seatearth with rootlets		15	887	90
	Grey silty mudstone with rootlets		25	888	15
	Grey mudstone with rootlets		61	888	76
	COAL		01	888	77
	Grey mudstone with thin ironstone layers and plant debris		06	888	83
	Grey mudstone-seatearth with listrics and rootlets		17	889	00
	Interlayered coal and mudstone		02	889	02
	Grey mudstone-seatearth with listrics and rootlets		24	889	26
	COAL 2 cm Inferior COAL with dirt layers 5 cm		07	889	33
	Dark grey planty mudstone with many coalified planty partings		05	889	38
	Dark grey mudstone-seatearth with pyritised rootlets		09	889	47

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British Geological Survey

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British National Grid (27700) : 474590,409206

Form P 71
SERIES 880

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~	DEPTH cm ~~or in~~*
	Grey mudstone-seatearth with pyritised rootlets		02	889	49
	Dark grey silty mudstone with pyritised rootlets		13	889	62
	Dark grey siltstone with pyritised rootlets		01	889	63
	COAL		05	889	68
	Grey mudstone-seatearth with ironstone nodules, listrics and rootlets		35	890	03
	Irregularly interlayered siltstone and sandstone with animal bones and rootlets		17	890	20
	Grey mudstone with rootlets		25	890	45
	Interlaminated siltstone and sandstone with rootlets		20	890	65
	Smooth grey shaly mudstone with scattered ironstone layers and nodules, frequent rootlets	1	00	891	65
	Shelly ironstone band with Anthracosia		03	891	68
	Dark grey mudstone with abundant brown shelled Anthracosia		22	891	90
	Grey mudstone with Anthracosia, some pyritised		13	892	03
	Grey mudstone		25	892	28
	Grey shaly mudstone		27	892	55
	Dark grey mudstone with Anthracosia and abundant plant debris		02	892	57
	Smooth grey mudstone with abundant Calamites		26	892	83
	Mainly fine-grained sandstone with silty layers and pouch structures		25	893	08
	Grey silty mudstone		19	893	27
	Irregularly intermixed sandstone and siltstone with pouch structures		22	893	49
	Grey siltstone		18	893	67
	Smooth grey shaly mudstone with Anthracosia near base		43	894	10
	Grey silty mudstone with some irregular sandy layers	1	70	895	80
	Interlayered silty mudstone and sandstone with small-scale cross-bedding	4	28	900	08
	Smooth grey shaly mudstone with occasional ironstone layers and lenses, scattered Anthracosia, Naiadites and Spirorbis below 900.40 m, some pyritised	1	17	901	25
	Smooth dark grey shaly mudstone with abundant Anthracosia		03	901	28
	Ironstone		04	901	32
	Grey shaly mudstone		27	901	59
	Black shale with some pyritised debris and many fish scales, especially at base		05	901	64
	COAL		09	901	73
	Carbonaceous silty shale with pyritised rootlets		08	901	81
	Interbanded dark grey micaceous siltstone with pyritised rootlets, and grey sandstone		16	901	97
	Grey siltstone with occasional sandy lenses, rootlets and Stigmaria		83	902	80
	Grey siltstone with occasional thin ripple-bedded sandy lenses	2	07	904	87
	Smooth grey shaly mudstone with Cordaites at base		63	905	50
	Strong, cemented, dark grey calcareous mudstone with cone-in-cone structure and calcite veins		32	905	82
	Grey mudstone	1	33	907	15
	Grey silty mudstone	1	45	908	60

YPU. 918

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British Geological Survey

BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ft*	THICKNESS cm or in*	DEPTH m or ft*	DEPTH cm or in*
	Grey mudstone with occasional ironstone bands	1	20	909	80
	Smooth grey shaly mudstone		77	910	57
	Smooth grey shaly mudstone with Anthracosia and Naiadites		09	910	66
	Dark grey mudstone with abundant Anthracosia and Spirorbis		01	910	67
	Dark grey shelly ironstone with abundant Anthracosia		03	910	70
	Dark grey shaly mudstone with Anthracosia and Spirorbis		03	910	73
	Dark grey shaly mudstone, a few Anthracosia		08	910	81
	COAL 13 cm				
	Coaly mudstone with coal layers 6 cm		29	911	10
	COAL 2 cm				
	Grey mudstone-seatearth 1 cm				
	COAL 7 cm				
	Grey mudstone-seatearth with listrics and rootlets		06	911	16
	Irregularly bedded light grey fine-grained sandstone-seatearth		25	911	41
	Light grey, fine-grained sandstone, with small-scale cross-bedding		56	911	97
	Grey slightly silty mudstone with thin sandy lenses and rootlets		08	912	05
	Massive light grey sandy siltstone with sandy pouches		24	912	29
	Grey siltstone with sandy lenses		19	912	48
	Grey silty mudstone with occasional thin sandy lenses		44	912	92
	Smooth grey shaly mudstone with scattered listric rootlet markings	1	27	914	19
	Smooth grey shaly mudstone with abundant Anthracosia		04	914	23
	Shelly ironstone with Anthracosia		04	914	27
	Grey mudstone, slightly silty in parts		68	914	95
	Grey shaly mudstone		35	915	30
	Dark grey shaly mudstone with abundant Anthracosia		13	915	43
	Grey mudstone with occasional Cordaites		11	915	54
	Ironstone band		06	915	60
	Smooth grey mudstone with sandy lenses and scattered Anthracosia		95	916	55
	Smooth grey shaly mudstone with occasional ironstone layers, frequent Anthracosia with Naiadites and Spirorbis		86	917	41
	Dark grey shaly mudstone with abundant Anthracosia		03	917	44
	Dark grey shelly ironstone with calcitised Anthracosia		04	917	48
	Black micaceous silty mudstone with Anthracosia and Naiadites, abundant near base		19	917	67
	Grey mudstone with Anthracosia		43	918	10
	Dark grey mudstone with frequent Anthracosia and Naiadites		20	918	30
	Grey mudstone with scattered Anthracosia, Naiadites and Spirorbis		50	918	80
	Dark grey micaceous silty mudstone with Anthracosia, Naiadites and Spirorbis		03	918	83
	Dark grey shelly ironstone with calcitised Anthracosia		06	918	89
	Dark grey micaceous silty mudstone with occasional Anthracosia and a few Naiadites fragments, scattered pyritised debris at base		31	919	20

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BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	Grey silty mudstone with sandstone bands, scattered ironstone nodules and rootlets. Cordaites below 919.85 m	2	40	921	60
	Light grey, fine-grained sandstone with small-scale cross-bedding, cemented in top 40 cm and bottom 30 cm	1	10	922	70
	Grey silty mudstone with ripple-bedded sandy lenses		25	922	95
	Grey mudstone		13	923	08
	Grey, fine-grained sandstone with convoluted bedding in top 40 cm, small-scale cross-bedding below		84	923	92
	Smooth grey mudstone with ironstone bands and occasional thin ripple-bedded sandy lenses		95	924	87
	Grey cemented massive siltstone		22	925	09
	Light grey, fine-grained sandstone with convoluted bedding at top, small-scale cross-bedding below		46	925	55
	Grey silty mudstone		11	925	66
	Smooth grey shaly mudstone with occasional ironstone bands		81	926	47
	Grey silty mudstone with occasional ironstone bands		53	927	00
	Smooth grey mudstone, shaly in parts with occasional ironstone bands. Anthracosia and Naiadites to 929.50 m	3	90	930	90
	Smooth grey shaly mudstone, Anthracosia near base		61	931	51
	Black micaceous siltstone		09	931	60
CLAY CROSS MARINE BAND	Black micaceous silty mudstone with fish scales and a few Lingula fragments		04	931	64
	Light grey-green mudstone-seatearth with rootlets		06	931	70
	Light grey-green cemented siliceous siltstone-seatearth with rootlets		10	931	80
	Grey silty mudstone-seatearth with irregular nodular sandy layers and rootlets		35	932	15
	Grey silty mudstone with rootlets and occasional plants near base	1	02	933	17
	Grey shaly mudstone with abundant plant debris		72	933	89
JOAN	Inferior COAL 2 cm Grey-green mudstone-seatearth with listrics and rootlets 3 cm Dark grey planty mudstone with coal streaks 2 cm Pale grey mudstone-seatearth with listrics and rootlets 4 cm Interlayered coal and mudstone-seatearth 3 cm Inferior COAL 1 cm Grey mudstone-seatearth 7 cm Carbonaceous mudstone with many coal streaks and rootlets 5 cm COAL 14 cm		41	934	30
	Dark grey mudstone-seatearth with rootlets		17	934	47
	Weak grey mudstone-seatearth with listrics and rootlets		37	934	84
	Grey silty mudstone-seatearth with rootlets		12	934	96
	Grey-brown ferruginous siltstone-seatearth with rootlets		11	935	07
	Grey silty mudstone-seatearth with rootlets		11	935	18
	Massive lenticular ironstone bands		19	935	37
	Massive grey silty mudstone with occasional rootlets	1	09	936	46

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Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	Grey siltstone	1	14	937	60
	Grey silty mudstone with occasional Calamites	1	40	939	00
	Grey silty mudstone with occasional ripple-bedded sandy bands and lenses, frequent Calamites	1	73	940	73
	Interlayered ripple-bedded silty mudstone and sandstone with occasional Calamites	1	13	941	86
	Grey mudstone with ironstone bands and occasional ripple-bedded sandy layers		68	942	54
	Grey fine-grained sandstone with many fine carbonaceous filaments		33	942	87
	Grey-green, rather massive silty mudstone-seatearth with sphaerosiderite and rootlets		31	943	18
	Grey sandstone with fine carbonaceous filaments		08	943	26
	Grey-green mudstone-seatearth with sphaerosiderite and rootlets		39	943	65
	Grey fine-grained sandstone with silty layers and fine carbonaceous laminae		09	943	74
	Grey silty mudstone with wavy fine sandy layers and carbonaceous partings with abundant plant debris		24	943	98
FLOCKTON THICK	Inferior COAL with pyrites 9.5 cm Dark grey shaly mudstone with coal streaks 14.5 cm COAL 40 cm Grey mudstone-seatearth 3 cm COAL 68 cm Dark grey mudstone-seatearth with thin coal bands 11 cm Inferior COAL 22 cm Dark grey mudstone-seatearth 6 cm Inferior COAL 3 cm Missing core: Inferior COAL 7 cm; Dirt 13 cm Dark grey mudstone-seatearth with coal streaks 7 cm COAL with pyrites near base 15 cm	2	19	946	17
	Lenticular pyrite band with coal streaks		02	946	19
	Grey silty mudstone-seatearth with rootlets		23	946	42
	Grey silty mudstone with frequent ripple-bedded sandy layers and rootlets		64	947	06
	Grey silty mudstone with occasional ripple-bedded sandy layers and rootlets	1	46	948	52
	Interlayered ripple-bedded silty mudstone and sandstone with dark micaceous partings and plant debris		30	948	82
	Grey mudstone with occasional ironstone bands, some plant debris	2	00	950	82
	Smooth grey shaly mudstone with occasional ironstone bands, some plant debris and scattered listricated Carbonicola impressions	1	22	952	04
	Dark grey shaly mudstone		03	952	07
	Dark grey, finely micaceous silty shale with fish scales and debris		02	952	09
FLOCKTON THIN	COAL 1 cm Dark grey mudstone-seatearth with listrics, coal streaks and rootlets 6 cm COAL 1 cm Dark grey mudstone with many fine coal laminae 5 cm COAL with pyrites 30 cm		43	952	52

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BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~	DEPTH cm ~~or in~~*
	Weak grey-green mudstone-seatearth with listrics, sphaerosiderite and rootlets		65	953	17
	Grey-green mudstone-seatearth with listrics, much sphaerosiderite and rootlets		83	954	00
	Grey-green silty mudstone with rootlets		50	954	50
	Grey silty mudstone		40	954	90
	Grey, immature mudstone-seatearth with rootlets		48	955	38
	Strong massive sphaerosiderite, some irregular silty mudstone layers and pyrite nodules		22	955	60
	Weak grey mudstone-seatearth with listrics and large sphaerosiderite nodules		66	956	26
	Dark grey silty mudstone		12	956	38
	Grey silty mudstone		37	956	75
	Dark grey silty mudstone		09	956	84
	Dark grey shaly mudstone		05	956	89
	Grey mudstone with some coarser silty partings		53	957	42
	Interlayered, ripple-bedded silty mudstone and sandstone	1	12	958	54
	Grey silty mudstone with fine sandy laminae		30	958	84
	Grey mudstone with plant fragments		05	958	89
FENTON	Inferior streaky COAL 3 cm Dark grey mudstone-seatearth with listrics, coal streaks and rootlets 6 cm COAL 4 cm		13	959	02
	Dark grey silty mudstone-seatearth with coal streaks and rootlets		03	959	05
	Grey silty mudstone-seatearth with rootlets		10	959	15
	Grey siltstone-seatearth with sandy layers and rootlets		10	959	25
	Grey mudstone-seatearth with rootlets		18	959	43
	COAL 16 cm Inferior COAL 3 cm		19	959	62
	Grey mudstone-seatearth with listrics, ironstone nodules and rootlets, some darker coaly layers from 961.27 to 961.46 m and 962.67 to 963.07 m	3	58	963	20
	Grey silty mudstone-seatearth with rootlets		09	963	29
	CORE not recovered		41	963	70
	Grey slightly silty mudstone-seatearth with rootlets		89	964	59
	Dark grey mudstone-seatearth with coal streaks and rootlets		03	964	62
	Grey mudstone-seatearth with listrics, rootlets and Sigillaria		13	964	75
	Dark grey mudstone with many coal streaks and Sigillaria		03	964	78
	Dark grey mudstone with Sigillaria		02	964	80
	Grey mudstone-seatearth with listrics and rootlets		02	964	82
	Dark grey mudstone-seatearth with many coal layers and rootlets		10	964	92
	Weak grey mudstone-seatearth with listrics and rootlets		86	965	78
	Grey siltstone-seatearth with irregular sandy layers and rootlets		40	966	18
PARKGATE ROCK (5.30 m)	Irregularly interlayered silty mudstone, siltstone and sandstone, some ripple-bedding, ironstone nodules and rootlets	1	04	967	22
	Light grey, fine-grained, ripple-bedded sandstone		21	967	43
	Interlayered ripple-bedded silty mudstone and sandstone		35	967	78

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British Geological Survey

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Form P 71
[illegible] 880

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~*	THICKNESS cm ~~or ins~~*	DEPTH m ~~or ft~~*	DEPTH cm ~~or ins~~*
	Light grey fine-grained sandstone with some small-scale cross-bedding	3	58	971	36
	Grey siltstone with thin ripple-bedded sandy lenses		10	971	46
	Light grey, fine-grained sandstone		02	971	48
PARKGATE	COAL with pyrites 25 cm Missing core - mudstone on logs 12 cm Grey mudstone-seatearth, listrics, rootlets 31 cm COAL with dull band and pyrites 33 cm	1	01	972	49
	Dull coaly dirt		02	972	51
	Weak fawn mudstone-seatearth with listrics and rootlets		83	973	34
	Weak grey mudstone-seatearth with listrics and rootlets		08	973	42
	Inferior COAL with pyrites		18	973	60
	Dark grey mudstone with coal streaks and plant straps		03	973	63
	Weak grey mudstone-seatearth with listrics and rootlets		31	973	94
	Grey mudstone with rootlets		16	974	10
	Grey silty mudstone with occasional sandy lenses, diffuse ironstone bands and sparse rootlets	1	86	975	96
	Interlayered, ripple-bedded siltstone and sandstone	1	84	977	80
	Grey silty mudstone with occasional fine sandy lenses and diffuse ironstone bands		57	978	37
	Finely interlayered, ripple-bedded siltstone and sandstone		41	978	78
	COAL		06	978	84
	Grey mudstone-seatearth with listrics and rootlets		38	979	22
	Smooth grey mudstone with rootlets and occasional ironstone lenses	1	78	981	00
	Smooth grey mudstone with iron-filled rootlets		75	981	75
	Grey mudstone with plant debris		09	981	84
	COAL 11 cm Fusain with pyrite lens 3 cm COAL 5 cm Grey mudstone-seatearth 1 cm COAL 3 cm		23	982	07
	Grey siltstone-seatearth with rootlets		07	982	14
	Light grey, fine-grained sandstone-seatearth with irregular silty layers and rootlets		46	982	60
	Light grey, fine-grained sandstone with frequent ripple-bedded silty layers	1	95	984	55
	Interlayered, ripple-bedded siltstone and sandstone with dark micaceous partings		60	985	15
	Grey silty mudstone with frequent thin ripple-bedded sandy lenses, solid, iron-filled Carbonicola at 985.60 m		55	985	70
	Grey mudstone with occasional Carbonicola, Naiadites at base		42	986	12
	Smooth grey shaly mudstone with scattered solid, iron-filled Carbonicola		98	987	10
	Black, slightly silty, finely micaceous mudstone with Carbonicola at top, Naiadites fragments below		06	987	16
THORNCLIFFE	COAL 4 cm Carbonaceous mudstone 1 cm Dark mudstone-seatearth with coal streaks and rootlets 5 cm COAL, some inferior layers 9 cm		19	987	35

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British Geological Survey

BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
SERIES 880

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m ~~or ft~~*	THICKNESS cm ~~or in~~*	DEPTH m ~~or ft~~*	DEPTH cm ~~or in~~*
	Grey mudstone-seatearth with listrics and rootlets		47	987	82
	Grey mudstone with ironstone nodules, rootlets and Calamites		46	988	28
	Grey silty mudstone with Calamites		12	988	40
	Interlaminated siltstone and sandstone with occasional rootlets	1	60	990	00
	Light grey, fine-grained sandstone with occasional silty bands, cross-bedded	1	05	991	05
	Grey siltstone		70	991	75
	Grey silty mudstone	2	37	994	12
	Smooth grey mudstone	1	44	995	56
	Dark grey shaly mudstone		18	995	74
	Dark grey, finely micaceous slightly silty mudstone		10	995	84
	Dark grey mudstone with occasional plant fragments and Naiadites		40	996	24
	Grey mudstone with ironstone bands		15	996	39
	Black shale with abundant calcitised Carbonicola and Geisina, some fish scales near top		13	996	52
	Dark grey, finely micaceous silty mudstone with Naiadites fragments		11	996	63
	Grey mudstone		11	996	74
	Dark grey shale with Carbonicola and Geisina		03	996	77
	Grey slightly silty mudstone with trace fossils		26	997	03
	Canneloid shale		02	997	05
	Dark grey, finely micaceous, slightly silty mudstone		09	997	14
	Grey mudstone		14	997	28
	Dark grey, finely micaceous, slightly silty mudstone with Cordaites and occasional Naiadites		16	997	44
	Grey slightly silty mudstone with trace fossils		07	997	51
	Dark grey shale with Carbonicola and Geisina		24	997	75
	Dark grey micaceous silty mudstone with occasional Naiadites		12	997	87
	Dark grey mudstone, micaceous and silty in parts, with occasional Carbonicola and Geisina near top, scattered plant debris and trace fossils below	1	06	998	93
	Smooth grey shaly mudstone with Carbonicola		62	999	55
	Black shale crowded with calcitised Carbonicola and abundant Geisina		25	999	80
	Black shale with abundant Carbonicola and Geisina		04	999	84
	Dark grey mudstone with abundant Naiadites, some Geisina, fish at base		01	999	85
	Dark grey micaceous silty mudstone with coalified plant debris		03	999	88
	COAL 5 cm Carbonaceous mudstone with coal streaks 1 cm Dark grey mudstone 1 cm Inferior COAL 1 cm		08	999	96
	Dark grey mudstone-seatearth with listrics and rootlets		07	1000	03
	Weak grey mudstone-seatearth with listrics and rootlets		22	1000	25
WHEATLEY LIME	Dark grey mudstone-seatearth with listrics, fine coal threads and rootlets		08	1000	33
	COAL 4 cm Grey mudstone-seatearth 1 cm Inferior dull COAL 5 cm		10	1000	43

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BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	Grey silty mudstone-seatearth with some sandy layers and rootlets		37	1000	80
	Grey mudstone-seatearth with listrics and rootlets		33	1001	13
	COAL with medial pyrite lens		15	1001	28
	Black shale with Stigmaria		08	1001	36
	Grey silty mudstone-seatearth with rootlets		17	1001	53
	Grey mudstone-seatearth with rootlets, some pyritised, occasional ironstone nodules near base		71	1002	24
	Grey siltstone with thin ripple-bedded sandy lenses and rootlets		28	1002	52
	Smooth grey shaly mudstone with rootlets		69	1003	21
	Smooth dark grey shale with large listric rootlet impressions		32	1003	53
	COAL		06	1003	59
	Dark grey mudstone with coal streaks, rootlets and Stigmaria		12	1003	71
	Grey mudstone-seatearth with rootlets		24	1003	95
	Grey mudstone with rootlets and coalified Sigillaria		11	1004	06
	Dark grey mudstone-seatearth, occasional coal streaks, rootlets		18	1004	24
MIDDLETON ELEVEN YARDS	COAL 20 cm Carbonaceous mudstone 3 cm Grey mudstone-seatearth 1 cm Inferior COAL 4 cm		28	1004	52
	Dark grey mudstone with coalified plant straps		02	1004	54
	Interlayered, ripple-bedded siltstone and sandstone with rootlets	1	11	1005	65
	Grey silty mudstone with rootlets, a few sandy bands	1	59	1007	24
	Interlayered, ripple-bedded siltstone and sandstone		81	1008	05
	Grey siltstone with ripple-bedded sandy lenses	1	05	1009	10
	Grey silty mudstone	1	37	1010	47
	Grey mudstone, silty in parts		32	1010	79
	Grey siltstone, some comminuted plant debris		16	1010	95
	Smooth grey shaly mudstone with occasional ironstone bands	1	07	1012	02
	Smooth dark grey shale with ironstone lenses		05	1012	07
	Carbonaceous mudstone with rootlets		12	1012	19
TOP SILKSTONE = BLOCKING	Inferior COAL with pyrites near top		30	1012	49
	Light grey, fine-grained sandstone-seatearth with irregular silty layers and rootlets		33	1012	82
	Grey siltstone-seatearth		09	1012	91
	Light grey, fine-grained sandstone with some ripple-bedded silty layers	1	14	1014	05
	Grey siltstone with irregular sandy layers		38	1014	43
	Light grey, fine-grained sandstone		20	1014	63
	Grey siltstone with occasional ripple-bedded sandy layers		62	1015	25
	Tough cemented siltstone		62	1015	87
	Grey siltstone with ripple-bedded sandy lenses		63	1016	50
	Smooth grey mudstone, silty in parts, with frequent trace fossils	1	66	1018	16
	Smooth grey shaly mudstone with trace fossils, Carbonicola at 1018.50 m		54	1018	70
	Strong canky, ferruginous, calcareous mudstone with cone-in-cone structures and frequent Curvirimula in bottom 10 cm		20	1018	90

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British Geological Survey

BGS ID: 124529 : BGS Reference: SE70NW13
British National Grid (27700) : 474590,409206

Form P 71
SERIES 680

Section of SANDTOFT Borehole

6 - INCH MAP	B/H
Yorks. 278 NE	
SE 70 NW 13	

* Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
LOW "ESTHERIA" BAND	Smooth grey shaly mudstone with "Estheria" at top, scattered below, frequent near base	2	11	1021	01
	Dark grey slightly silty mudstone with "Estheria", fish at base		02	1021	03
	Dark grey micaceous silty mudstone with plant debris		23	1021	26
	Dark grey micaceous siltstone with thin sandy lenses		74	1022	00
	Black micaceous silty mudstone with frequent Carbonita		55	1022	55
	Black slightly silty shale with Geisina, occasional fish scales and debris		48	1023	03
	Smooth black shale with large Carbonicola		03	1023	06
	Dark grey ironstone with large Carbonicola		02	1023	08
	Grey mudstone with ironstone bands, oblique contact at top	2	08	1025	16
	CORE LEFT DOWN		04	1025	20
	BOTTOM OF BOREHOLE				

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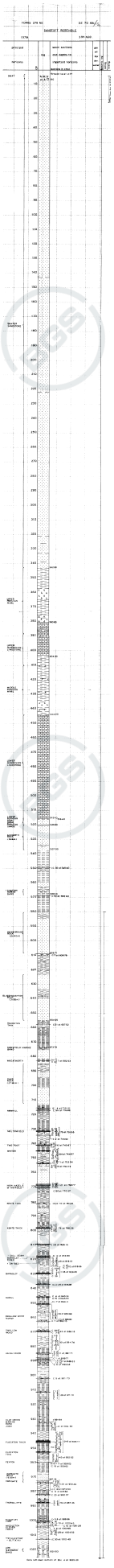

British Geological Survey

BGS ID: 124542 : BGS Reference: SE70NW26
British National Grid (27700) : 472990,409270

Cementation Ground Engineering — soil mechanics department

BOREHOLE No. 28

CONTRACT	A.18 - SCUNTHORPE	REPORT No.	7468/SF0
Bored for	North Eastern Road Construction Unit	Ground Level	4.9 O.D.
Site Address	Thorne, Yorkshire.	Boring Commenced / Completed	15.7.69 / 16.7.69
Type and Dia. of Boring	Shell and Auger - 8" diameter		SE70NW 26

Water Strikes	Water Levels Recorded During Boring									
1. 6'0"	Hole Depth	-	9'0"	27'9"	36'0"					
2. 22'0"	Casing Depth	34'0"	8'0"	27'0"	34'0"					
3.	Water Level	-	Nil	21'0"	32'0"					

Remarks

Scale 1 inch = 5 ft.

Description	Depth	Legend	Ref. No.	Type	Depth	N blows/ft
Top soil	1'3"		7759	J	1'0"	
			7760	J	2'0"	
Soft grey/brown peaty clay			7761	U	3'6" - 5'0"	
			7762	J	7'0"	
			7763	U	8'6" - 10'0"	
			7764	J	12'0"	
	12'6"		7765	U	13'6" - 15'0"	
Soft brown peat			7766	J	17'0"	
			7767	U	18'6" - 20'0"	
			7768	J	22'0"	
	23'0"		7769	U	23'6" - 25'0"	
Firm brown very silty clay with lenses of silt and sand.			7770	J	27'0"	
			7772	U	28'6" - 30'0"	
			7773	J	32'0"	
	33'0"		7774	J	33'6"	
Medium-dense brown sand			7775	J	35'0"	
	36'0"		7771	W	(22'0")	

Code: U—Undisturbed Sample D—Large Disturbed Sample J—Jar Sample W—Water Sample

Note.—Unless classification tests have been made and the results are included in this Report, the descriptions of strata given above have been obtained by inspection in accordance with British Standard Code of Practice CP 2001 (1957) Site Investigations. To ensure agreement as to interpretation, clients are requested to check

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British Geological Survey

BGS ID: 124543 : BGS Reference: SE70NW27
British National Grid (27700) : 473480,409000

Cementation Ground Engineering — **soil mechanics department**

BOREHOLE No. 59

CONTRACT: A.18 – SCUNTHORPE	REPORT No. 7468/SLQ
Bored for: North Eastern Road Construction Unit	Ground Level: 10.3 O.D.
Site Address: Thorne, Yorkshire.	Boring Commenced: 15.7.69 / Boring Completed: 15.7.69
Type and Dia. of Boring: Shell and Auger – 5" diameter	SE70NW 27

Water Strikes	Water Levels Recorded During Boring									
1. None	Hole Depth	–								
2.	Casing Depth	20'0"								
3.	Water Level	–								

Remarks

Scale 1 inch = 5 ft.

Description	Depth	Legend	Ref. No.	Type	Depth	N blows/ft
Top soil	1'6"		5817	J	1'6"	
Medium – dense brown sand			5818	J	3'6"	55
			5819	J	5'6"	
			5820	J	8'6"	45
			5821	J	12'6"	
	15'0"					
Stiff brown very silty clay with lenses of silt and fine sand			5822	U	15'6"–15'0"	
			5823	J	17'6"	
			5824	U	18'6"–20'0"	
	20'0"					

Code: U—Undisturbed Sample D—Large Disturbed Sample J—Jar Sample W—Water Sample

Notes.—Unless classification tests have been made and the results are included in this Report, the descriptions of strata given above have been obtained by inspection

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Appendix F
TECHNICAL BACKGROUND

Desk Study

Aquifer designation and Source protection zones (England and Wales)

Principal aquifer: layers of rock or drift deposit that have high intergranular and/or fracture permeability (usually providing a high level of water storage). They may support water supply and/or river base flow on a strategic scale.

Secondary A aquifer: permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

Secondary B aquifer: predominantly lower permeability layers that may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

Secondary undifferentiated aquifer: it has not been possible to attribute either a category A or B to a rock type. In most cases this means that it was previously designated as both a minor and non-aquifer in different locations owing to the variable characteristics.

Unproductive strata: low permeability with negligible significance for water supply or river base flow.

The EA generally adopts a three-fold classification of source protection zones (SPZ) surround abstractions for public water supply. The Site is situated in an area defined as follows:

- Zone 1 or the 'inner protection zone' is located immediately adjacent to the groundwater source and is based on a 50-day travel time from any point below the water table to the source. It is designed to protect against the effects of human activity and biological/chemical contaminants that may have an immediate effect on the source
- Zone 2 or the 'outer protection zone' is defined by a 400-day travel time from a point below the water table to the source. The travel time is designed to provide delay and attenuation of slowly degrading pollutants
- Zone 3 or the 'total catchment' is the area around the source within which all groundwater recharge is presumed to be discharged at the source.

Future climate change considerations

Several data sources, based on UKCP18 data, are available with which climate change projections can be viewed. These are detailed in the following table. In order to enable a consistent approach in our risk assessment we have based our initial assessment on data available for RCP8.5 data for the far future (2080s) for an initial conservative risk screen.

Climate change induced effect	Source	Notes	Comment
Temperature	**https://uk-cri.org**	RCP 8.5 average temperature maps for far future (2071-2100), UKCP18 Regional, median, 12 x 12 km spatial resolution	Anticipated to be conservative. It has been assumed that a change of +/- 5% is unlikely to have a significant impact
Rainfall/ recharge	**https://uk-cri.org**	RCP 8.5 annual rainfall for far future (2017-2100), UKCP18 Regional, median, 12 x	Anticipated to be conservative. It is anticipated that a change of +/- 5% is unlikely to have a significant impact for all sites. If a site is located in an urban

Climate change induced effect	Source	Notes	Comment
		12 km or Local Authority spatial resolution	area away from sensitive dependent receptors then a change of +/- 10% is unlikely to have a significant impact.
Flood risk maps for England/ Wales/ Scotland	https://check-long-term-flood-risk.service.gov.uk/risk (England), **https://flood-map-for-planning.naturalresources.wales** (Wales), https://map.sepa.org.uk/floodmaps/FloodRisk/FutureFloodMaps (Scotland)	Future flood maps are only available for England and Scotland.	Identify areas likely to be affected or at an increased risk from future flooding
Coastal erosion	**https://www.gov.uk/check-coastal-erosion-management-in-your-area** (England), **https://naturalresources.wales/flooding/check-your-coastal-erosion-risk-national-coastal-erosion-risk-management-map/?lang=en** (Wales), https://www.dynamiccoast.com/webmaps (Scotland)		Predicted coastal erosion rates. Includes for potential future scenarios to show how erosion may increase with rising sea levels because of climate change based on UKCP18 projections for a high missions scenario.
Shrink and swell potential	BGS Geoindex layer for GeoClimate UKCP18	GeoClimate UKCP18 (2030 to 2070)	Impossible, possible or probable that foundations will be affected by increased clay-shrink-swell

Preliminary risk assessment methodology

LCRM outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. An outline conceptual model should be formed at the preliminary risk assessment stage that collates all the existing information pertaining to a site in text, tabular or diagrammatic form. The outline conceptual model identifies potentially complete (termed possible) contaminant linkages (contaminant–pathway–receptor) and is used as the basis for the design of the site investigation. The outline conceptual model is updated as further information becomes available, for example as a result of the site investigation.

Production of a conceptual model requires an assessment of risk to be made. Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the likelihood and the consequences of an event must be taken into account when assessing risk. RSK has adopted guidance provided in CIRIA C552 for use in the production of conceptual models.

The likelihood of an event can be classified on a four-point system using the following terms and definitions based on CIRIA C552:

- highly likely: the event appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution
- likely: it is probable that an event will occur or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term

- low likelihood: circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term
- unlikely: circumstances are such that it is improbable the event would occur even in the long term.

RSK also adopt a 'very unlikely' probability to account for where there may be increased certainty over whether an event is probable in the long term.

The severity can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to severity are:

- severe: short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short-term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000)
- medium: chronic damage to human health ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem
- mild: pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures or the environment
- minor: harm, not necessarily significant, but that could result in financial loss or expenditure to resolve. Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services.

Once the probability of an event occurring and its consequences have been classified, a risk category can be assigned according to the following:

		Consequences			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**Highly likely**	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very low	Very low
	Very Unlikely	Low	Very Low	Negligible	Negligible

Definitions of these risk categories are as follows together with an assessment of the further work that may be required:

- very high: there is a high probability that severe harm could occur or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability; urgent investigation and remediation are likely to be required

- high: harm is likely to occur. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required. Remedial works may be necessary in the short term and are likely over the long term
- moderate: it is possible that harm could arise, but it is unlikely that the harm would be severe and it is more likely that the harm would be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term
- low: it is possible that harm could occur, but it is likely that if realised this harm would at worst normally be mild
- very low: there is a low possibility that harm could occur and if realised the harm is unlikely to be severe.

Pegasus Group

Tween Bridge Solar Farm – Area E Biodiversity Mitigation Area

Phase 1 Desk Study

12081-R06(01)

RSK GEOSCIENCES

August 2025

RSK GENERAL NOTES

Project No.: 12081

Title: Phase 1 Desk Study: Tween Bridge Solar Farm – Area E Biodiversity Mitigation Area, Thorne , South Yorkshire, DN8 5SF

Client: Pegasus Group

Date: August 2025

Office: RSK Environment Limited, Fourways House, 57 Hilton Street, Manchester, M1 2EJ. Tel 0161 2362757

Status: Final Version

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01	22/08/25	Revision to site boundary	Alex Smiles	Emma Hobbs

RSK Environment Limited (RSK) has prepared this report for the sole use of the client, showing reasonable skill and care, for the intended purposes as stated in the agreement under which this work was completed. The report may not be relied upon by any other party without the express agreement of the client and RSK. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by RSK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

This work has been undertaken in accordance with the quality management system of RSK Environment Ltd. No part of this report may be copied or duplicated without the express permission of RSK and the party for whom it was prepared.

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

CONTENTS

1 EXECUTIVE SUMMARY 1
2 INTRODUCTION 3
2.1 Commissioning 3
2.2 Objectives 3
2.3 Scope of works 3
2.4 Existing reports 4
2.5 Sustainability considerations 4
2.6 Limitations 4
3 SITE DETAILS 6
3.1 Site location 6
3.2 Site description 6
3.3 Surrounding land uses 6
3.4 Proposed development plans 7
4 DESK-BASED ASSESSMENT 8
4.1 Site history 8
4.2 Information from environmental database report 10
4.3 Information from regulatory authorities 15
4.4 Site geology 15
4.5 Mining and quarrying 16
4.6 Hydrogeology 17
4.7 Hydrology 18
4.8 Sensitive land uses 19
4.9 Future climate change impacts 19
5 SITE RECONNAISSANCE FINDINGS 21
6 PRELIMINARY GEOTECHNICAL CONSTRAINTS 22
6.1 Design class 22
6.2 Preliminary geotechnical hazards assessment 22
7 INITIAL CONCEPTUAL SITE MODEL 26
7.1 Potential soil, soil vapour and groundwater linkages 26
7.2 Potential ground gas linkages 28
7.3 Preliminary risk assessment 29
7.4 Data gaps and uncertainties 34
8 CONCLUSIONS AND RECOMMENDATIONS 35
8.1 Geo-environmental assessment 35
8.2 Geotechnical assessment 36
8.3 Recommendations 36
REFERENCES 38

FIGURES

Figure 1 Site location plan
Figure 2 Site layout plan

APPENDICES

Appendix A	Service constraints
Appendix B	Project-related sustainability considerations
Appendix C	Development drawings
Appendix D	Environmental database report
Appendix E	Third party data
Appendix F	Technical Background

1 EXECUTIVE SUMMARY

Commissioning and purpose of assessment	RSK Environment Limited (RSK) was commissioned by Pegasus Group to carry out a Phase 1 Desk Study of the land at Tween Bridge, Thorne, South Yorkshire, DN8 5SF, at approximate grid reference 471579 413695. The overall aim of the project was to assess geo-environmental and geotechnical constraints to the proposed development to inform the Ground Conditions element of an Environmental Impact Assessment (EIA).
DESK-BASED ASSESSMENT	
Site description and proposed development	The site currently comprises agricultural activities and occupies an area of 684.9 hectares. The proposed development is for a ground mounted solar photovoltaic electricity generating scheme covering approximately 1300 hectares over six 'areas' labelled Area A to Area E. This report presents information relating to Area E Biodiversity Mitigation Area which forms a small separate land parcel to the east of Parcel E.
History of site and surrounding area	The site was formerly used for agricultural purposes, with two infilled unspecified pits on site thought to associated to the former Railway, Tramway and Sidings across the site. The main contaminative land uses on-site and in the surrounding are likely to be associated with agricultural and farming activity. Former on-site contaminative sources include the Axeholme Joint Railway which ran north to south across the site with associated Hagglane Sidings, and tramway running west to east across the site. Off-site potentially contaminative activities pertain to a Peat Turbary approximately 200 m southwest. Significant potential sources of ground gas generation have been identified associated with a historic landfill which accepted inert, industrial and commercial waste in 1980s, a slurry bed and anaerobic digestion plant.
Previous site investigation (SI) reports	There are no previous SI reports available.
Geology and environmental setting	The site is underlain by Sutton Sand Formation across the eastern portion, northwest and southwest corner of the site and Alluvium across the centre and east of the site. There is a proportion of Hemingbrough Glaciolacustrine Formation superficial deposits indicated in the southwest corner. There is a portion of the northwest corner comprised of Peat. The site is underlain by the Mercia Group Bedrock Formation. The site is understood to be predominantly soft standing, although made ground is likely to be present associated with infilled ground areas and access roads. Groundwater flow is expected to follow a west-to-east gradient across the site, broadly aligned with the Folly Drain and South Engine Drain, The environmental database report indicates that the western half of Site F is located within a Radon Affected area whereby 1-3% of homes are above the radon Action Level of 200 Bq m-3. Environmental receptors identified comprise: • Groundwater within Secondary A Aquifers associated with Sutton Sand Formation.

	• Groundwater within Secondary B aquifer associated with the Mercia Mudstone Bedrock Group. • The River Torne (partially defines the northern boundary, flowing west to east). • The Three Rivers system and drainage network on-site (i.e. extending northeast off-site toward the River Trent). • The River Trent, located approximately 200 m east of the site, flowing northward. • Hatfield Chase Ditches (SSSI) on-site and 10 m NW
Geotechnical constraints assessment	• Highly compressible and low bearing capacity soils, (including peat and soft clay). • Silt-rich soils susceptible to rapid loss of strength in wet conditions. • Running sand at and below water table associated to the Sutton Sand formation. • Ground subject to or at risk from coastal or river erosion. The River Torne runs through the site therefore, areas may require special protection/stabilisation measures. • Filled and made ground. • The southeast area of the site appears to be raised to around 10 m in the area of the South Engine and Folly drain, which may affect ground engineering and foundation design and construction.
Initial conceptual site model (CSM) and preliminary risk assessment (PRA)	Potentially complete contaminant linkages identified with a risk estimate of moderate to low or above include: • Moderate: On-site and offsite made ground, sludge beds, inert landfill and anaerobic digestion plant – Direct oral ingestion, inhalation and dermal contact with soil and soil-derived dust - Current and future construction/maintenance workers. • Moderate: On-site and offsite ground gas sources - Accumulation of ground gas leading to explosion or asphyxiation - Current and future construction/maintenance workers. • Moderate/Low: On-site made ground, sludge beds, inert landfill and anaerobic digestion plant – Groundwater in the underlying Secondary A aquifers – Leaching to groundwater. • Moderate/Low: On-site made ground, sludge beds, inert landfill and anaerobic digestion plant – Surface water within drainage ditches and River Torne – Migration via runoff through drainage and lateral migration of groundwater. Uncertainties and data gaps have been identified in the CSM at desk study stage and should be considered in the design of future intrusive investigation if proposed.
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.	

2 INTRODUCTION

2.1 Commissioning

RSK Environment Limited (RSK) were engaged by Pegasus Group, herein referred to as the 'Client', to carry out a phase 1 Desk Study at the land at Tween Bridge, Thorne, South Yorkshire DN8 5SF.

The proposed development is for a ground mounted solar photovoltaic electricity generating scheme covering approximately 1300 hectares over six land parcels labelled Area A to Area E.

This report presents information relating to a small land parcel to the east of Area E known as Area E Biodiversity Mitigation Area of the development. Despite the environmental database covering a wider site boundary, the only relevant assessment area of this document is the area noted as 'Parcel E- Biodiversity Mitigation Area presented in **Figure 2**.

The works were undertaken by means of RSK fee proposal reference 12081 TL01 (01) dated 19 March 2025 including RSK Standard Terms and Conditions which forms the appointment between ourselves and the Client.

References in this report to 'we', 'us', or 'our' shall mean RSK Geosciences a trading name of RSK Environment Limited (company no.SC115530) at registered address 65 Sussex Street, Glasgow, G41 1DX.

The site location is provided in **Figure 1** and the site layout boundary to which this report refers is presented in **Figure 2**.

The report should be read and used in accordance with the limitations and constraints identified in the report text, and at **Appendix A – Service Constraints**.

2.2 Objectives

The site is being considered for development for industrial use as a solar farm.

The objective of the work is:

- To identify contamination and geotechnical constraints to the proposed development.
- To develop a baseline assessment of contamination and geotechnical data to support the Ground Condition elements of an Environmental Impact Assessment (EIA).

2.3 Scope of works

The scope of works 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, 2023) and in general accordance with BS 10175: 2011 + A2 2017 (BSI, 2017). It is also compliant with relevant planning policy and guidance, i.e. national planning frameworks and policies.

The scope of works for the assessment has included the following:

- Obtain and review all historical, local authority, geological, permitting and other statutory records for the site via the purchase of a Groundsure site report.
- Review and summarise the most salient points from these records into a factual account of site conditions such that an appreciation of the sites history, environmental setting and geological characteristics can be obtained.
- Where available, review and briefly summarise any ground investigation information for the site.
- Collate a preliminary conceptual model of the site within which geo-environmental and geotechnical risks are considered and rated in accordance with the EA LCRM methodology.
- Recommendations for further investigations, if required.
- Produce factual and interpretive Preliminary Risk Assessment Report (this report).

2.4 Existing reports

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

2.5 Sustainability considerations

One of RSK's guiding principles is 'promoting the concept of sustainability in all that we do'. The RSK Group Second Nature 2030 Sustainability Strategy (RSK, 2023) confirms our commitment to embedding sustainability throughout our business and creating lasting positive impact for our planet and its people by delivering sustainability in all that we do.

This is supported by RSK Geosciences' Sustainability Policy, which sets our aspiration to provide industry-leading site assessment services to our clients to achieve more sustainable and climate resilient development and to support circular economy, decarbonisation and nature-based solutions. We also recognise that we have a responsibility to reduce our own business-related emissions. In this way our business activities are aligned with and contribute to meeting several of the UN Sustainable Development Goals (SDGs), as well as supporting pathways to net zero and circular economy.

Sustainability considerations have therefore been taken into account during the design, planning and implementation stages of the project as described in this report. Our approach prioritises sustainability by integrating Sustainable Management Practices (SMPs) across the project lifecycle, to reduce our project-related emissions and help our client achieve more sustainable outcomes for their projects. SMPs were originally published by CL:AIRE (CL:AIRE, 2021a) and further developed by RSK Geosciences as an in-house tool. Further detail is provided in **Appendix B**.

Where applicable, consideration has been made throughout this report to align the recommendations with circular economy, sustainable development and climate resilience.

2.6 Limitations

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

This report was prepared in accordance with good practice guidance and available datasets at the time of issue. Consideration should be considered in the light of changes in legislation, statutory requirements, or industry practices subsequent to the date of issue.

The opinions expressed in this report, and the comments and recommendations given, are based on the information obtained from the desk assessment. No intrusive investigations have been undertaken to confirm the actual ground conditions and hence the environmental status of the site.

The study aims to principally 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.

Although asbestos may not have been encountered as part of these works, asbestos could be present in soil in discrete areas and may be encountered in future ground investigation.

A detailed survey of invasive plant species is outside the scope of this investigation therefore detailed comments with regards to such species have been omitted from this report.

The comments given in this report and the opinions expressed are primarily based on third party data and investigations, while RSK have undertaken a review of the information provided RSK cannot be held liable for the quality of the data provided. There may be conditions pertaining to the site that have not been disclosed by the investigations and therefore could not be taken into account.

A Site Reconnaissance was not conducted for this site due to time constraints and the availability of satellite data.

3 SITE DETAILS

3.1 Site location

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

Table 1 Site location details

Site name	Tween Bridge Solar Farm
Full site address and Post code	Thorne, South Yorkshire, DN8 5SF
National Grid reference (centre of site)	473282, 411225

3.2 Site description

The site boundary and current site layout are shown on **Figure 2**.

The site is irregular in shape and covers approximately 685 ha. The site consists of agricultural land parcels forming North Moor interspersed with isolated farmsteads. The Tween Bridge Wind Farm occupies the eastern portion of the site. The site is surrounded by extensive agricultural land.

The land lies at 1 – 11 meters above Ordnance Datum (m AOD) and is extensively drained by numerous ditches. The Stainforth and Keadby Canal (Sheffield and South Yorkshire Navigation), running east-west, is located approximately 270 m north, accompanied by the Thorne South railway line, which runs parallel to the canal. The canal is flanked by the North and South Soak Drains, while the site itself is traversed by a network of roads and dikes.

3.3 Surrounding land uses

The site is located in Doncaster, within a predominantly agricultural setting. Immediate surrounding land uses are described in **Table 2**.

Table 2 Surrounding land uses

North	The site is bordered by the River Torne and the South Engine Drain. The A18 generally bounds the north of the site in exception to the northeast which is bounded by the Three Rivers. Ealand is located approximately 200 m north. Agricultural fields are located immediately north of the site.
East	The east of the site is bounded by agricultural fields in Derrythorpe and the River Trent is located approximately 200 m east to the site.
South	Agricultural fields bound the south of the site, the Folly Drain bounds the southeast of the site, with the M180 bounding the western portion of the southern boundary.
West	The River Torne and the South Engine Drain bound the west of the site. The west of the site is surrounded by agricultural fields.

3.4 Proposed development plans

The proposed development comprises the construction, operation, maintenance and decommissioning of a ground mounted solar farm with an intended design capacity of over 50 MWp (megawatts peak), and a battery energy storage facility with an export/import connection to the National Grid.

The scheme is likely to include the following key works, the indicative locations of some of which are shown on RWE Figure 2.2: Indicative Operational Layout Plan (Rev 1) dated August 2025 included in **Appendix C**.

- Solar PV modules and associated mounting structures.
- On-site supporting equipment including inverters, transformers and switchgear.
- A battery energy storage system (BESS), indicatively split into four separate compounds. They would each be located next to one of the seven on-site 33kv/132kV substations.
- The solar PV modules and BESS would be connected to one of the seven on-site 33kV/132kV substation compounds. These are necessary to step up the voltage of the electricity delivered by the solar PV modules from 33 kV to 132 kV for onward transmission to the RWE on-site 400 kV Substation.
- Works to establish environmental and ecological mitigation and enhancement measures.
- Upgrades to existing tracks/roads and creation of new access tracks and site entrances.
- Directional drilling for cable works for various crossing including: drainage ditches, canal, railway, and the M180.
- Culverts and upgrades to existing culverts.
- Fencing and Security Measures.
- Permissive pathways and bird viewing gallery.
- Temporary development during the construction phase of the Scheme including construction compounds, parking and temporary access roadways to facilitate access to all parts of the site.

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

4 DESK-BASED ASSESSMENT

The desk-based assessment was designed to generally meet the objectives of a preliminary or Phase 1 investigation, as defined by BS 10175:2011+A2:2017 (BSI, 2017) and BS 5930:2015, and is set in context of a Tier 1 preliminary risk assessment as defined in LCRM.

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 distance from the site may also have been considered.

4.1 Site history

4.1.1 Historical development record

The development history of the site and surrounding area based upon assessment of historical plans and records is detailed in **Table 3** and **Table 4**, respectively.

The historical maps reviewed are shown within the environmental database report in **Appendix D**.

Table 3 Summary of historical development on site

Date from	Date to	Historical Land Use (on-site)	Area of site
1885	2025	Agricultural fields divided by drains running north and south and east to west.	All
1885	1890	An Aviary	Northwest
1885	2025	The River Torne also referred to as 'Double Rivers' and 'North Engine Drain' runs generally east to west, intersecting the northwest and northeast corner of the site. It is indicated to flow eastwards.	North
1885	2025	The South Soak Drain also referred to as 'Folly Drain/Hatfield Waste Drain' runs generally east to west, intersecting the northwest corner of the site and running near to the northern boundary. It is indicated to flow eastwards.	North and west
1885	2025	A167 runs north to south across the northwest corner of the site.	Northwest
1885	2025	Folly Drain running south to north intercepts the southwest corner of the site.	Southwest
1885	2025	The Double Rivers partially bounds the northeast corner of the site, New Torne River also partially intersects the northeast corner.	Northeast
1885	2025	Warping Drain runs west to east across the south of the site.	Southeast
1906	1982	Axholme Joint Railway runs north to south across near to the centre of the site, with Hagglane. With Sidings denoted at the centre of the southern	South

		boundary. The railway was referred to as disused in 1973.	
1951	1968	A tramway is denoted to run west to east across the south of the site.	South
2010	2025	Six ponds	Northwest
2010	2025	Golf course	Northwest

Table 4 Summary of historical development in the vicinity of the site

Date from	Date to	Historical Land Use (off-site)	Distance (m) and orientation
1885	2025	The site is surrounded by agricultural fields and farms.	0 m all directions
1885	2015	Belton Grange (residential area).	300 m west
1885	2025	Hirst Priory with an associated Well.	0 m west (of northwest corner)
1885	2025	The River Torne also referred to as 'Double Rivers' and 'North Engine Drain' runs generally east to west, intersecting the northwest corner of the site and runs parallel to the northern boundary. It is indicated to flow eastwards.	0 m south
1885	2025	Stainforth and Keadby Canal.	250 m north
1885	2001	Brick and Tile Works with associated clay pits, later became part of Clearwater Lake until present (2025).	400 m north
1885	2025	Hagg Lane now 'A161' bounds the southwest corner of the site.	0 m south
1885	2025	The southern portion of the western boundary is bounded by the South Engine Drain.	0 m west
1885	2025	Big Turbary (peat extraction).	200 m southwest
1885	2025	Moody drain and folly drain bound the southwest corner of the site.	0 m south
1973	2025	Construction of A161 cross the northern boundary.	0 m north
1938	1968	Pumping House	400 m northeast
1968	2001	Sluices	400 m northeast
1982	2025	Construction of M180 bounding the west of the southern boundary.	20 m south
1982	2025	Pond (previous railway siding area)	0 m south

Historical maps indicate that the site has been drained by a network of rectilinear subsidiary drains since the 1880s, facilitating its long-standing use as agricultural land. The River Torne also referred to as 'Double Rivers' and 'North Engine Drain' runs generally east to west, intersecting the

northwest and northeast corner of the site. It is indicated to flow eastwards. A railway line with sidings and a tramway were present on site in the centre and south of the site. The site has more recently been used as a golf course containing ponds.

The key potential contaminative land uses identified from the available historical maps include:

- On-site:
  - Possible made ground associated roadways and tramway.
  - Railway sidings.
- Off-site:
  - Made ground resulting from development and demolition of the brick and tile works to the north.
  - Possible made ground associated with the peat works located southwest of the site.
  - Possible made ground associated with construction of the M180 roadway immediately south of the site.

4.1.2 Unexploded ordnance

A review of publicly available unexploded ordnance (UXO) risk maps indicates that the site is located in an area with low potential for wartime bombs to be present (Zetica, 2025).

However, two World War II airfields were located outside the study area. RAF Linholme (Hatfield Woodhouse) was located c. four miles south of Thorne, east of the A614, with Bomber Command, training and radar functions. It was later used as a gliding club and by 1985 became HM Prison Lindholme.

While the majority of RAF Sandtoft was located south of the M180, a bomb store area extended near Woodcarr Small Drain, with potential ordnance storage bunkers identified at 475550, 409150. Anecdotal reports suggest several WWII air crashes occurred in the vicinity, including a Lancaster bomber, though its exact location remains unclear. Heritage Environment Records indicate two possible crash sites within the site boundary at Lover's Ground and the Old River Don, with accounts suggesting the wreckage sank into the peat.

Given these historical factors, a detailed UXO risk assessment of the site and its surrounding area is recommended prior to construction.

4.2 Information from environmental database report

Relevant environmental permits and incidents detailed within the environmental database report (see **Appendix D**) are summarised below in **Table 5**.

Table 5 Summary of environmental permits, landfills and incidents

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Agency and hydrological				
Environmental permits – incorporating Environmental Permitting Regulations (EPR) and/ or Pollution Prevention and Control (PPC) permits; former Integrated Pollution Controls (IPC), Local Authority Pollution Control (LAPC)	0	0	0	-
Enforcement and prohibition notices	0	0	0	-
Pollution incidents to controlled waters, Prosecutions relating to controlled waters, Substantiated pollution incident register, Water Industry Act referrals	3	3	5	**On-site:** Pollutant – Specific Waste Material/Tarry Wastes, Incident date – 23/12/2002, Land impact – Category 3 (Minor), ref. 127423. Pollutant – n/a, Incident Date – 13/08/2004, Water impact – Category 2 (Significant), ref. 259187. Pollutant – n/a, Incident date – 30/07/2019, Water Impact – Category 2 (Significant), ref. 1724198. **Off-site <250 m:** 65 m W, Pollutant – n/a, Incident date – 06/08/2002, Water impact – Category 3 (Minor), ref. 98004.
Discharge consents	0	1	4	**Off-site <250 m:** 60 m NW, Effluent type – Trade discharges site drainage, Receiving water – Tributary of South Soak Drain, Issue date – 10/09/1975, Revocation date – 28/05/2019, Status – Revoked under EPR 2010, ref. T/83/07041/T. **Off-site >250 m:** 345 m NW, Effluent type – Sewage discharges

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
				final/treated effluent – not water company, Receiving water – South Soak Drain, Issue date – 12/12/1961, Revocation date – n/a, Status – PRE NRA Legislation where issue date 01/09/1989, ref. T/83/00892/S.
Registered radioactive substances	0	0	0	-
Landfill and waste				
Active landfills	0	0	0	-
Historic/closed landfills	1	0	0	**On-site:** South Side of Crowle Bank Road, Althorpe. Operator: Alf Kitchen Plant Hire, Waste Type – Inert, Industrial, Commercial, Household, Special and Liquid sludge, License issued – 17/05/1982, License surrendered – 07/10/1989, ref. JK/10645, 2/710/81, A127, 55/19/0127.
Other waste management licences	8	153	64	**On-site:** North Moor Farm, Operator - Rockscape Energy Ltd, Type – On-farm anaerobic digestion (farm waste only), Size – 25000 tonnes, Issue date – 09/11/2016, Expiry date – unknown, Status – issued, ref. A/EPR/AB3708XX. Waste Exemptions, North Moor Farm Scunthorpe South Humberside DN17 4DA and Hirstwood Farm, Crowle, Scunthorpe,

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
				DN17 4BU, Treating, disposing and storage of waste on a farm, storage of sludge etc., ref. i.e. WEX352036.
Potentially in-filled land (pit, quarry, pond, marsh, river, stream, dock etc)	10	10	-	**On-site:** Pond, 1951 Pond,1982 Unspecified Pit, 1948 Unspecified Pit, 1906 Unspecified Pit, 1948 Unspecified Pit, 1905 Pond, 1973 Pond, 1982 Pond, 1885 Pond, 1973 **Off-site <250 m:** 37 m SW, Pond, 1885 39 m SW, Pond, 1885 106 m SW, Cuttings, 1982 236 m NW, Canal, 1951 237 m NW, Canal, 1951 237 m NW, Canal, 1973 237 m NW, Canal, 1885
Hazardous substances/industrial land uses				
Control of Major Accident Hazards (COMAH) sites	0	0	0	-
Explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning hazardous substance consents/ enforcements	0	0	0	-

Data type	Entries on-site	Entries <250 m from site	Entries >250 m from site of relevance	Details
Contaminated land Part 2A register entries and notices	2	0	0	**On-site:** Operator - Rockscape Energy Ltd, Installation Name – North Moor Farm, Process – Recovery or a mix of recovery and disposal of >75 T/D non-hazardous waste (>100 T/D if only AD) involving biological treatment, Issue date – 09/11/2016, Last date noted as effective – 29/10/2024, ref. EPR/AB3708XX.
Fuel station entries	0	1	0	**Off-site <250 m to site:** 55 m NW, Junction 2 A18, A161, Crowle, Scunthorpe, North Lincolnshire, DN17 4DD, Status – 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.				

4.2.1 Contemporary trade directory entries

Active potentially contaminative land uses identified in the contemporary trade directory and with potential to affect the site are identified as:

- North Moor Farm AD Plant (on site).
- Anaerobic digestion (BEIS) for energy production (onsite).
- Rockscape Ltd with electronic equipment, three electricity sub-stations and slurry bed(onsite).
- Sutton Power Engineering (25 m west).
- Electrical Equipment Repair and Servicing (25 m west).
- D W Forklift Services Ltd (90 m northwest).
- Pumping Station (205 m east).

4.3 Information from regulatory authorities

4.3.1 Planning records

No planning records held by the Local Authority Planning Department pertaining to the site and relevant to the current assessment were identified under the North Lincolnshire Council Planning Portal.

4.3.2 Site services

Obtaining a full set of service plans was outside the scope of this report.

Buried utility services and their backfill can represent a constraint to development and act as preferential migration pathways for gas, vapour or groundwater towards a receptor.

It is understood that a network of drains are located across the site including Hatfield Waste Drain which is currently understood to be a rainwater drain however, if found to be a sewerage drain further investigation is required to understand its condition and assessment of contaminant spills on or near the site into the water drainage network.

4.4 Site geology

4.4.1 Anticipated geological sequence

Published records (British Geological Survey, 2025) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in **Table 6**.

There are eight publicly available BGS historical boreholes located on the site, a selection of which are presented in **Appendix E**.

Table 6 Site geology

Strata	Strata	Description	Depth (m)
Area E Biodiversity Mitigation Area *(based on eight on-site BGS boreholes)*	Topsoil/Subsoil	Sandy and loamy	GL to 1.1
	Made Ground	Fill	0.0 – 1.5
	Blown/Sutton Sand Formation	Loose grey/brown silty sand	0.2 – 4.0 to 2.5 – 5.2
	Peat (in the east)	Soft brown clayey peat over fibrous peat	0.4 – 7.2
	Hemingbrough Formation	Soft to firm laminated brown clay with silt and clayey silt	0.6 – 5.2 to 5.8 – 7.0
	Hemingbrough/Concealed sand and gravel	Clayey fine sand and rounded gravel	7.0 – 12.1 to 8.0 – 13.0
	Mercia Mudstone Group	Red/grey mudstone	6.7 – 16.7
Relevant information sources: BGS Geoindex ☐ BGS borehole logs ☒ Previous SI reports ☐			
A relatively high water table identified between approximately 0.7 m and 3.35 m below ground level (bgl), based on British Geological Survey (BGS) borehole data.			

4.4.2 Peat

Thick peat deposits occur to the west on Hatfield Moor and to the northwest on Thorne Moors, which were exploited for centuries by block cutting, and more recently by surface milling. Peat working has also taken place at Crowle Moor (northwest of Area E Biodiversity Mitigation Area) and from historic maps there is evidence of nearby workings within 200 m of Area E Biodiversity Mitigation Area at 'Big Turbary'.

Peat thickness encountered in BGS historic boreholes in the east of the site range between 0.5 m and 6.8 m. In the south of the site it is likely that peaty soils are present in former river channels and the remainder is likely degraded or masked by Alluvium.

The deposits are the remains of lowland raised bog, or raised mire fenland, extending beyond the designated conservation moorland. The deposits lie both within and beneath the Alluvium, in areas flanking the deep incised river courses, in particular due to poor drainage and waterlogging in the late Flandrian period.

Peat stability will therefore require consideration during detailed design at any specific locations where intrusive investigation proves a sufficient peat thickness would be intersected by the proposed construction (e.g. new accesses, structures).

4.4.3 Radon

The environmental database report indicates that the west half of Site F is located within a Radon Affected area whereby 1-3% of homes are above the radon Action Level of 200 Bq m-3. The radon data used in production of the ukradon.org indicative atlas comes from measurements in homes and the maps indicate the likely extent of the local radon hazard in all buildings.

The environmental database report indicates that the east half of Site F is not located within a radon 'Affected Area' and therefore radon protection measures are not considered to be necessary in the construction of non-domestic buildings in this area.

In Radon Affected areas (western half of the site) it is recommended by the Health and Safety Executive that radon protection measures are incorporated into the design of commercial premises to reduce exposure to future site workers and visitors. The monitoring of radon is also recommended by HSE to inform occupational exposure risk assessments.

4.5 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. An initial site appraisal has been carried out based on the information provided on the Mining Remediation Authority Interactive Viewer of the UK Coalfield areas and the commercial environmental databased report for information on non-coal mining.

4.5.1 Coal mining area

Use of the Mining Remediation Authority interactive viewer indicates the site lies outside their Coal Mining Reporting Area and therefore no further assessment of coal mining issues is required within this report.

4.5.2 Areas of other (rock or mineral) mining

The environmental database report identified several unspecified pits on the site dating from 1905-1906 and 1948. Any further information about these pits and the extractable materials that were taken from is unknown.

4.6 Hydrogeology

A summary of the hydrogeological setting of the site, with respect to the anticipated geological sequence set out in Section 4.5 is presented below in **Table 7**.

Table 7 Summary of hydrogeological setting

Condition	Description
Aquifer characteristics	The Sutton Sand Formation is designated as a Secondary A Aquifer, while the peat and Hemingbrough Glaciolacustrine Formation are classified as Unproductive Strata, offering negligible contribution to water supply or base flow. The Mercia Mudstone Group also forms a Secondary A Aquifer, with limited groundwater storage and yield potential, primarily associated with localised fissuring, thin permeable horizons, and weathered zones. Groundwater vulnerability within the Secondary Superficial Aquifers is assessed as medium to high in the central and eastern portions of the site, while the western portion exhibits very low vulnerability due to the presence of unproductive strata, including peat and laminated silt/clay deposits. Although the presence of low-permeability clay and peat at shallow depths may restrict vertical migration, it may also facilitate lateral movement of shallow groundwater, potentially increasing the risk of contaminant dispersion if mobile contaminants are present.
Depth to groundwater and flow	The anticipated groundwater table lies between approximately 0.7 m and 3.35 m below ground level (bgl), based on British Geological Survey (BGS) borehole data. In areas adjacent to drainage ditches, groundwater levels may be locally depressed due to drainage influence. Groundwater flow is expected to follow a west-to-east gradient across the site, broadly aligned with the Folly Drain and South Engine Drain, which run parallel to each other and generally follow the course of the River Torne to the north, ultimately discharging toward the River Trent. It is also likely that shallow water may be present in any made ground deposits present on-site.
Rising groundwater levels	Areas within the site are anticipated to contain peat, as indicated by BGS. Groundwater levels in these areas may fluctuate due to several influencing factors, including increased precipitation, land management practices such as blocking drainage ditches or rewetting initiatives, and natural hydrological changes that alter flow patterns into the peatland.
Groundwater recharge/ attenuation	As the site is predominantly unsurfaced, water is expected to drain directly into the ground. The high organic content and fibrous nature of peat naturally slows water movement, functioning as a buffer that regulates flow, stabilises groundwater levels, and helps mitigate downstream flooding.
Historical implications for hydrogeology	A review of GeoIndex 2025 data confirms the presence of boreholes across the study site. Dewatering activities associated with these installations have the potential to

Condition	Description
	disrupt natural groundwater flow, leading to lowered water tables, an increased risk of subsidence, and altered surface water drainage patterns. The site is also influenced by an extensive historic drainage network, including the Folly Drain and South Engine Drain, which form part of a 17th-century land reclamation scheme designed to drain low-lying peatland and alluvial terrain. This system has likely lowered the natural water table in shallow deposits and imposed a west-to-east directional influence on shallow groundwater flow, enhancing lateral movement across the site.
Licensed groundwater abstractions	The environmental database report confirms that there are no active groundwater abstractions within a 1 km radius of the site. However, three historical abstractions were recorded approximately 999 m northeast, associated with dewatering activities from underground strata at Keadby Power Station.
Source protection zones	Information available in the Envirocheck report/MAGIC website indicates that the site does not lie within a currently designated groundwater Source Protection Zone (SPZ).

4.7 Hydrology

A summary of the hydrology within the site area is summarised in **Table 8**.

Table 8 Summary of hydrology in site area

Condition	Description
Surface watercourses/ features	Key watercourses influencing the site include: • Folly Drain and South Engine Drain, which run parallel in a west-to-east direction across the northern portion of the site. • The River Torne, which partially defines the northern boundary, flowing west to east. • The Three Rivers system, extending northeast off-site toward the River Trent. • The River Trent, located approximately 200 m east of the site, flowing northward.
Surface water abstractions	The environmental database identifies 42 licensed surface water abstractions within a 1 km radius of the site, 17 of which are located on-site and are primarily used for spray irrigation.
Site drainage	The Folly Drain and South Engine Drain flow parallel from west to east, converging with the River Torne at Pilfrey Junction. From this point, combined flows, including inputs from the off-site Hatfield Waste Drain and North Engine Drain, are conveyed via the Three Rivers system to the Keadby pumping station, located over 1 km northeast of the site, before final discharge into the River Trent. This low-lying district has undergone continuous artificial modifications to its natural drainage system for centuries, as widely documented in historical records. The landscape is characterised by an extensive network of drainage ditches, forming a rectilinear grid of interconnected water channels. Over time, significant alterations, including the excavation of additional drainage ditches and dykes and localised field drainage enhancements, have been necessary to manage flooding, regulate surface water runoff, and support agricultural productivity, both historically and in modern land use.

Condition	Description
Preliminary flood risk assessment	According to EA Flood Map for Planning data, the site is classified as Flood Zone 3 for river and sea flooding, indicating a high annual probability of flooding, exceeding 3.3%. While a flood risk assessment is not included in this report, considerations for long-term flood risks are addressed in Section 4.10.

4.8 Sensitive land uses

Table 9 provides a summary of any environmentally sensitive areas identified within 250 m of the site based on the environmental database report and satellite imagery.

Table 9 Environmentally sensitive areas

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	-	-
National designations – Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), ancient woodland	Yes	**On-site:** Hatfield Chase Ditches (SSSI) **Off-site:** 10 m NW, 79 m W, Hatfield Chase Ditches (SSSI) 92 m NW, 316 m NW, Crowle Borrow Pits (SSSI)	Yes Topography of the surrounding area is generally flat, there is a network of connecting drainage ditches through these SSSI areas.
Local designations – Local Nature Reserve, Site of Importance for Nature Conservation (SINC)	No	-	-
Nearest high sensitivity development, e.g. residential	Yes	Occasional residential cottages, nearest 5 m E and W	Yes Topography of the surrounding area is generally flat, there is a network of connecting drainage ditches through these SSSI areas.

4.9 Future climate change impacts

In accordance with planning policies and guidance (e.g. LCRM), there is a need to consider the effects of future climate change and associated *extreme weather events* (EWE) on the CSM and identified potential contaminant linkages, along with the implications for risk assessment and *remediation*. Further background details are provided in **Appendix B**.

Table 10 contains a preliminary assessment of future projected climate change impacts that may be relevant to the site. As all parts of the UK are projected to experience temperature rises so this is not included in the table. Cascading effects of temperature rise are considered via changes in precipitation, flood, heatwaves and drought. This is based on a 'reasonable worse case' scenario. Where considered necessary, qualitative consideration of climate change is provided for specific linkages in the risk assessment and as an uncertainty in the CSM.

Extreme weather has historically occurred and will always occur in the UK. Extreme weather can include extremes of precipitation, heat, drought and cold. As a result of climate change extreme is anticipated to become more intense and frequent across the UK.

RSK considers that sites that are likely to be more susceptible to climate change effects to be those located on or near to the coast and at risk of coastal flooding, or erosion and those located within the flood plain.

Table 6 Potentially relevant future projected climate change and EWE site impacts

Climate impact risk factors	Relevant to site?	Discussion
Projected significant changes in annual infiltration rates (+7.70 or -25.00%)	Y	Potential mitigating factors which may reduce the significance of effects: • Ground cover (the majority of the site is covered by soft standing) • Network of drainage ditches transecting across the site
Future flood risk areas due to river and coastal flooding	Y	The River Torne runs across the site flowing eastwards to the River Trent 200 m east, both rivers are tidally influenced. The yearly chance of flooding based on current climate is assessed as low. The yearly chance of flooding projected between 2036 and 2069 as a result of climate change is assessed to be medium. The overall long term flood risk is anticipated to increase as a result of climate change.
Future surface water flood risk (i.e. due to inundation of drainage systems)	Y	The yearly chance of flooding based on current climate is assessed as very low. The yearly chance of flooding projected between 2040 and 2060 as a result of climate change is assessed to be very low. The overall long term flood risk is anticipated to stay the same as a result of climate change.

Further details on climate risk screening are provided in **Appendix B**.

5 SITE RECONNAISSANCE FINDINGS

A site reconnaissance survey has not been undertaken by RSK, as a previous survey was conducted by Intégrale in early November 2022. Using desk based information, it is evident that the majority of the site has remained unchanged since that time. Additionally, time constraints associated with the current project scope limited the feasibility of conducting an updated survey.

6 PRELIMINARY GEOTECHNICAL CONSTRAINTS

6.1 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 Category 1 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.

6.2 Preliminary geotechnical hazards assessment

A summary of commonly occurring geotechnical hazards associated with the anticipated geology outlined in Section 4.5 above is given in **Table 11** together with an assessment of whether the site may be affected by each of the stated hazards.

Table 7 Summary of preliminary geotechnical risks that may affect site

Hazard category	Hazard status based on desk study findings and proposed development		Engineering considerations if hazard affects site
	Could be present and/or affect site	Unlikely to be present and/or affect site	
Sudden lateral changes in ground conditions	☐	☒	-
Shrinkable clay soils[1)]	☒	☐	Although the majority of the site is categorised as having a very low to negligible clay shrink swell risk, there is an area of moderate clay shrink swell risk to the southwest of the site associated to the Hemingbrough

Hazard category	Hazard status based on desk study findings and proposed development		Engineering considerations if hazard affects site
	Could be present and/or affect site	Unlikely to be present and/or affect site	
			Glaciolacustrine Formation deposits. Design here to NHBC Standards Chapter 4 or similar.
Highly compressible and low bearing capacity soils, (including peat and soft clay)	☒	☐	The east of the site and an area of the southwest is subjected to a Moderate compressible deposit risk associated to the Hemingbrough Glaciolacustrine Formation and Alluvium deposits. There are areas of high compressible deposit risk at the northeast corner of the site and at the southern and western boundary associated to Peat. The rest of the eastern portion of the site is classified as having Negligible compressible deposit risk. Likely to affect ground engineering and foundation design and construction in areas of high to moderate risk areas.
Silt-rich soils susceptible to rapid loss of strength in wet conditions[1)]	☒	☐	Likely present within the Hemingbrough Glaciolacustrine Formation in the southwest corner of the site and Alluvium across the centre of the site. Likely to affect ground engineering and foundation design and construction.
Running sand at and below water table	☒	☐	There is an area in the northwest of the site which is at high risk to running sands associated to the Sutton Sand formation, the rest of the site is deemed as low to negligible risk to running sands. Likely to affect ground engineering and foundation design and construction.
Karstic dissolution features (including 'swallow holes' in Chalk terrain) [1)]	☐	☒	-
Evaporite dissolution features and/or subsidence [1)]	☐	☒	-
Ground subject to or at risk from landslides[1)]	☐	☒	-

Hazard category	Hazard status based on desk study findings and proposed development		Engineering considerations if hazard affects site
	Could be present and/or affect site	Unlikely to be present and/or affect site	
Ground subject to peri-glacial valley cambering with gulls possibly present	☐	☒	-
Ground subject to or at risk from coastal or river erosion[1)]	☒	☐	The River Torne runs through the site therefore, areas may require special protection/stabilisation measures.
High groundwater table (including waterlogged ground) [1)]	☒	☐	A relatively high water table identified between approximately 0.7 m and 3.35 m below ground level (bgl), based on British Geological Survey (BGS) borehole data.
Rising groundwater table due to diminishing abstraction in urban areas [1)]	☐	☒	-
Geological faults, fissures and break lines	☐	☒	-
Underground mining including shafts and adits (e.g. coal, mineral)	☐	☒	-
Effects of extreme temperature (e.g. cold stores or brick kilns/furnaces)	☐	☒	-
Existing sub-structures (e.g. tunnels, foundations, basements, and adjacent sub-structures)	☐	☒	-
Filled and made ground (including embankments, infilled ponds and quarries)	☒	☐	Infill of former railway and tramway. Likely to affect ground engineering and foundation design and construction.
Adverse ground chemistry (including expansive slags and weathering of sulphides to sulphates)	☒	☐	Infill of former railway and tramway with fill material unknown. May affect ground engineering and foundation design and construction
Site topography, including presence of steep slopes	☒	☐	The southeast area of the site appears to be raised to around 10 m in the area of the South Engine and Folly drain, which may affect ground engineering and foundation design and construction
Note: Seismicity is not included in the above table as this is not normally a design consideration in the UK.			

Hazard category	Hazard status based on desk study findings and proposed development		Engineering considerations if hazard affects site
	Could be present and/or affect site	Unlikely to be present and/or affect site	
[1)] The potential for these geohazards to impact the site may be exacerbated by climate change related fluctuations in temperature and precipitation.			
There is a Grade 2 listed bridge structure in the western area of the site, consideration and management of the potential damage plant vehicles may cause driving over this structure should be taken and managed. Evaluation of the structural competency of this bridge should be taken.			

7 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 realised where a contaminant source, pathway and receptor are all in place, referred to as a 'contaminant linkage'.

In line with LCRM (Environment Agency, 2023) 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.

The conceptual site model has been considered in context of the proposed development of a Solar Plant as understood at the time of writing this report. Should the site development proposals change, the CSM and the associated contaminant linkages identified may need to be revised.

7.1 Potential soil, soil vapour and groundwater linkages

7.1.1 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 12**.

Table 8 Potential sources of soil and groundwater contamination

Potential sources	Contaminants of concern
On-site	
Made ground (i.e. fill material associated to unspecified pits Tramway and Sidings and four infilled ponds)	Unknown fill material but potentially including brick, ash and clinker and containing toxic and phytotoxic metals, inorganics, polycyclic aromatic hydrocarbons (PAHs), asbestos. Petroleum hydrocarbons, herbicides.
Sludge associated within slurry bed	Ammoniacal nitrogen, chloride, inorganic and organic contaminants, PFAS and other POPs, heavy metals, asbestos, bisphenols, pathogens, petroleum hydrocarbons, PAHs and herbicides.
Landfill – inert, industrial and commercial waste (1980s)	Inert municipal waste. Landfill leachate including ammoniacal nitrogen, chloride, inorganic and organic contaminants, PFAS and other POPs, heavy metals, bisphenols and pathogens.
North Moor Farm AD Plant, Anaerobic digestion (BEIS) for energy production, (c.2010s to present)	Ammoniacal nitrogen, chloride, inorganic and organic contaminants, PFAS and other POPs, heavy metals, bisphenols and pathogens.

Potential sources	Contaminants of concern
Electricity substations	PCBs, Toxic and heavy metals, particulate matter (PM), sulphur dioxide (SO_2), nitrogen oxides (No_x).
Off-site	
Made ground (infill of historic ponds and cuttings 1885 – 1982)	Unknown fill material but potentially including brick, ash and clinker and containing toxic and phytotoxic metals, inorganics, polycyclic aromatic hydrocarbons (PAHs), asbestos. Petroleum hydrocarbons, herbicides.
Current industrial activities - Sutton Power Engineering 25 m W/Forklift Services Ltd 90 m.	Petroleum hydrocarbons, chlorinated solvents, toxic and phytotoxic metals, asbestos.
Pumping Station 205 m E.	Heavy metals, microbial bacteria, polychlorinated biphenyls (PCBs), persistent organic pollutants (POPs), treatment chemicals
Historic Brick and Tiles work (289 m NW, 1885-1948).	Petroleum hydrocarbons, chlorinated solvents, toxic and phytotoxic metals, asbestos.

7.1.2 Sensitive receptors

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

- Construction workers (during installation or maintenance, and eventually decommissioning).
- Groundwater in the secondary A superficial aquifers (Sutton Sand Formation and Alluvium).
- Surface water within the drainage ditches and watercourses throughout the site (River Torne and The Three Rivers river network.
- Solar scheme infrastructure (including solar array cabling throughout the site, substations and inverter stations at specific locations, battery energy storage system compound and building materials i.e., buried concrete and services).
- Hatfield Chase Ditches (SSSI) on-site and 10 m NW.

7.1.3 Potential contaminant pathways

Exposure pathways applicable to human health receptors include:

- Direct ingestion, inhalation and dermal contact with soil and soil-derived dust.
- Vapour migration followed by outdoor inhalation.

Pathways applicable to environmental receptors include:

- Direct contact of foundations/services with contamination in soil and/or groundwater.
- Leaching from soil followed by migration in groundwater.
- Migration via run-off through drainage.
- Discharge to surface water.

7.2 Potential ground gas linkages

7.2.1 Ground gas generation potential

Potential ground gas sources identified for the site and surrounding are shown in **Table 13**.

Table 9 Potential ground gas sources (excludes mine gas)

Potential sources	Indicative ground gas generation potential (CIEH, 2008)	Additional information
On-site		
Made ground (i.e. fill material associated to unspecified pits Tramway and Sidings and four infilled ponds)	Very Low	Very low due to age of deposits
Storage of sludge on-site i.e. Slurry bed.	Moderate	
Landfill of inert, industrial, commercial, household, special and liquid sludge (c. 1980s)	Moderate	
Off-site		
Made ground with low degradable organic content (e.g. up to 5% organic material and no easily degradable waste).	Very low	Made ground associated with pond and cutting infill

Given the anticipated ground conditions set out above, potential sources of ground gas generation have been identified associated on-site with a former landfill which accepted sludge waste, the storage of sludge associated predominantly to agricultural activity with a slurry bed recorded on the site and anaerobic digestion i.e. at North Moor Farm. Furthermore, infilled made ground on-site is a potential gas risk associated to unspecified pits thought to be associated to the former Railway, Tramway and sidings across the site. Off-site potential ground gas sources include ponds, storage of sludge predominantly associated with agricultural activity, former unknown cuttings and a turbary.

The prevalence and thickness of infilled and made ground is unknown as well as the contaminant status of the site.

7.2.2 Sensitive receptors and ground gas 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:

- Construction/maintenance workers - migration and ingress of ground gases into confined spaces (i.e., substations, control rooms) followed by explosion/asphyxiation.
- Future structures and services - migration and ingress of ground gases into confined spaces followed by explosion.

It is understood that the site will not be permanently staffed and structures will not be manned apart from infrequent and short duration maintenance use. Therefore, excavations during the

construction works, and any service trenches and manholes, are the only viable spaces that could permit the build-up of any ground gases present and present a risk to human health.

Construction workers should undertake appropriate risk assessments and risks should be managed through health and safety procedures and the use of PPE.

7.3 Preliminary risk assessment

The preliminary risk assessment findings and potentially complete contaminant linkages are shown in **Table 14**.

The risk classification is based on the combination of hazard consequence and probability using a risk matrix from CIRIA C552 (Rudland et al., 2001). The requirement for a preliminary qualitative risk assessment is in accordance with LCRM (Environment Agency, 2023). A summary of the risk assessment process is in **Appendix F**.

Table 10 Risk estimation for potentially complete contaminant linkages

Potential source	Potential receptor	Possible pathway	Likelihood	Severity	Risk Rating	Justification
Made ground (i.e. fill material associated to unspecified pits, Tramway and Sidings and four infilled ponds) Sludge associated within slurry bed Inert landfill (1980s) Anaerobic digestion (BEIS) for energy production plant Electricity substations Natural strata – peat and alluvium	Current and future construction/ maintenance workers	Direct oral ingestion, inhalation and dermal contact with soil and soil-derived dust	Likely	Medium	Moderate	RSK are unaware of any previous site investigations undertaken across the site, therefore the contamination status of the underlying ground is unknown. The underlying geological strata and thickness is unknown and conceptual at this stage as is, the water levels across the site, impacting the likelihood of contaminant migration across the site. Made ground associated with an historic landfill in the east of the site, together with evidence of infilled pits and railway sidings indicates that the presence of contaminants within made ground is likely. Exposure to chemical constituents over short timeframes is considered to pose a medium severity risk. Given the shallow nature of the proposed earthworks and the use of appropriate PPE during construction, the overall risk to site workers is considered to be low. Despite this, further site investigation is prudent to understand the contaminant, geological and water level status of the underlying site.
		Accumulation of ground gas leading to explosion or asphyxiation	Low-likelihood	Severe	Moderate	The potential for ground gas generation from both infilled materials, the landfill and natural soils on-site remains uncertain; however, the low degradable organic content anticipated within the natural soil strata suggests a limited capacity for significant gas production. Additionally, the historic infilling of unspecified pits and the landfill, estimated to have occurred over 50 years ago, further reduces the likelihood of ongoing gas generation, as most degradable material would have decomposed or stabilised over time. While the potential

Potential source	Potential receptor	Possible pathway	Likelihood	Severity	Risk Rating	Justification
						consequences of hazardous ground gas can be severe, the site's predominantly outdoor usage, coupled with the nature of the proposed development - which involves solar panel installations with shallow construction depths - minimises the risk of gas accumulation. Furthermore, access to site structures is expected to be infrequent and short in duration, significantly limiting the possibility of a viable pathway for gas migration.
	Groundwater (Secondary A aquifer)	Leaching to groundwater and vertical migration to deeper aquifer	Low Likelihood	Mild	Low	Groundwater within the secondary A aquifer is classified as having medium to high vulnerability, with no active licensed groundwater abstraction identified within 1 km of the site. Additionally, the site does not lie within a SPZ. Despite this, the minimal groundworks required for the installation of the solar arrays are considered to pose a negligible risk of causing or increasing leaching, even if contaminated soils are present at shallow depths. Any contamination present in the east of the site associated with the historic landfill has been present on site for many years and is therefore likely to have already leached to underlying groundwater.
	Surface water (drainage network, River Torne and The Three Rivers network)	Leaching to groundwater followed by migration in groundwater and migration via runoff through drainage	Low Likelihood	Medium	Moderate/low	The extensive network of drainage ditches across the site presents a potential pathway for the migration of contaminants from shallow soils and fine sediment-laden surface water runoff, particularly during periods of heavy rainfall or ground disturbance associated with solar construction activities. However, during future use, runoff is unlikely throughout the array area due to the presence of topsoil. Any contamination from historic landfill has been present on site for many
	Hatfield Chase Ditches (SSSI)					

Potential source	Potential receptor	Possible pathway	Likelihood	Severity	Risk Rating	Justification
						years and is therefore likely to have already leached to underlying groundwater and migrated.
	Solar scheme infrastructure	Direct contact with soils/groundwater and migration of combustible	Low likelihood	Medium	Moderate/Low	RSK are unaware of any previous site investigations across the site therefore the contamination status of the underlying ground is unknown. There is anticipated to be a proportion of infilled made ground associated to former in filled pits and historic landfill on-site, The likelihood that contamination within the sites shallow soils would exist in concentrations significant enough to result in damage to the infrastructure positioned beneath the site is low. However, further site investigation is prudent to understand the contaminant, geological and water level status of the underlying site.
Off-site sources						
Made ground (infill of historic ponds and cuttings 1885 – 1982) Current industrial activities <100 m west of site Pumping station 200 m east	Current and future construction/ maintenance workers	Direct oral ingestion, inhalation and dermal contact with soil and soil-derived dust	Low likelihood	Medium	Moderate/low	Potential residual contaminants may remain from historical infilling and industrial activities however buried and compacted soil reduce dust generation. Vegetation cover further minimises dermal contact and inhalation risks.
		Accumulation of ground gas leading to explosion or asphyxiation	Very Unlikely	Severe	Low	The potential for ground gas generation from offsite sources remains uncertain; however, the low degradable organic content anticipated within the natural soil strata suggests a limited capacity for significant gas production. While the potential consequences of hazardous ground gas can be severe, the site's predominantly outdoor usage, coupled with the nature of the proposed development—which involves solar panel

Potential source	Potential receptor	Possible pathway	Likelihood	Severity	Risk Rating	Justification
Historic brick and tile works 300 m northwest Natural strata – peat and alluvium						installations with shallow construction depths—minimises the risk of gas accumulation. Furthermore, access to site structures is expected to be infrequent and short in duration, significantly limiting the possibility of a viable pathway for gas migration.

Risk matrix		Consequences			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very low	Very low
	Very Unlikely	Low	Very Low	Negligible	Negligible

Potentially complete contaminant linkages with a potential risk of moderate to low or higher comprise:

- Moderate: On-site and offsite made ground, sludge beds, inert landfill and anaerobic digestion plant – Direct oral ingestion, inhalation and dermal contact with soil and soil-derived dust - Current and future construction/maintenance workers.
- Moderate: On-site and offsite ground gas sources - Accumulation of ground gas leading to explosion or asphyxiation - Current and future construction/maintenance workers.
- Moderate/Low: On-site made ground, sludge beds, inert landfill and anaerobic digestion plant – Groundwater in the underlying Secondary A aquifers – Leaching to groundwater.
- Moderate/Low: On-site made ground, sludge beds, inert landfill and anaerobic digestion plant – Surface water within drainage ditches and River Torne – Migration via runoff through drainage and lateral migration of groundwater.

In line with LCRM, these potentially complete contaminant linkages need to be assessed further through an appropriate scope of site investigation and mitigation incorporated into the development as may be appropriate.

7.4 Data gaps and uncertainties

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

- Gaps in available historical OS maps.
- A site walkover was not undertaken for the site due to access to satellite imagery and time constraints.
- There are no previous investigations available for the site, therefore no information on actual ground conditions and the contamination status of the site at this stage.
- Groundwater depth and flow direction are conceptual at this stage.
- Potential uncertainties relating to climate change and potential effects on contaminant sources, including changes to chemical properties/behaviour in solid, liquid, vapour or gaseous phases, physical changes to source zone, changes to microbial behaviour or deposition of contaminants from off-site sources.
- Potential uncertainties relating to climate change and potential effects on pathways and receptors, including changes to hydrogeological or hydrological conditions (including sea level rise/tidal effects), changes to proximity of receptor, changes to indoor/outdoor exposure pathways, predicted increases in extreme weather events (e.g. affecting risks such as those associated with ground or mine gas).

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8 CONCLUSIONS AND RECOMMENDATIONS

8.1 Geo-environmental assessment

The key findings of the geo-environmental assessment are as follows:

- The site currently comprises agricultural activities and occupies an area of 684.9 hectares. The site was formerly used for agricultural purposes, with two infilled unspecified pits on site thought to be associated with the former Railway, Tramway and Sidings across the site. More recently the site was used as a golf course.
- The main contaminative land uses on-site and in the surrounding are likely to be associated with agricultural and farming activity. Former on-site contaminative sources include a historic landfill active between 1982 and 1989 accepting inert, industrial and commercial waste in the east of the site, the Axeholme Joint Railway which ran north to south across the site with associated Hagglane Sidings, and tramway running west to east across the site. Off-site potentially contaminative activities pertain to a Peat Turbary approximately 200 m southwest.
- Significant potential sources of ground gas generation have been identified associated with a historic landfill which accepted inert, industrial and commercial waste in 1980s, a slurry bed and anaerobic digestion plant.
- No previous site investigations have been carried out at the site. Geology at the site is anticipated to be topsoil overlying loose silty sand to approximately 5.2 m bgl, further underlain by localised peat deposits to 7.2 m bgl. Soft to firm clays of the Hemingbrough Formation underlay peat deposit and are further underlain by mudstone of the Mercia Mudstone Group at depths between 6.7 m and 16.7 m bgl.
- A potential contaminant linkage has been identified associated with shallow soil contamination and ground gas sources and the risk to human health. To mitigate this risk, appropriate recommendations for a site investigation have been made.
- Groundwater flow is expected to follow a west-to-east gradient across the site, broadly aligned with the Folly Drain and South Engine Drain.
- The environmental database report indicates that the western half of Site F is located within a Radon Affected area whereby 1-3% of homes are above the radon Action Level of 200 Bq m-3.
- The site is situated within a moderate/low risk environmental setting, with several designated sensitive land uses in close proximity, including a Site of Special Scientific Interest (SSSI) onsite. While these designations indicate ecological sensitivity, the limited disturbance associated with the proposed solar farm development significantly reduces the potential for viable contamination pathways affecting these areas.
- There are several watercourse on site (River Torne and Three Rivers network) along with a network of drainage ditches running east to west. A potential contaminant linkage has been identified concerning contaminants migrating via runoff through the site's extensive network of drainage ditches. To mitigate this risk, appropriate recommendations will be provided to manage surface water runoff and minimise any potential environmental impact.

8.2 Geotechnical assessment

The key findings of the geotechnical assessment are as follows:

- Highly compressible and low bearing capacity soils, (including peat and soft clay).
- Silt-rich soils susceptible to rapid loss of strength in wet conditions.
- Running sand at and below water table associated to the Sutton Sand formation.
- Ground subject to or at risk from coastal or river erosion. The River Torne runs through the site therefore, areas may require special protection/stabilisation measures.
- Filled and made ground.
- The southeast area of the site appears to be raised to around 10 m in the area of the South Engine and Folly drain, which may affect ground engineering and foundation design and construction.

8.3 Recommendations

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

- Targeted peat probing at selected locations where peat deposits are anticipated, carried out along transverse alignment to assess geotechnical stability and environmental characteristics to help determine foundation requirements if necessary.
- Targeted intrusive investigation in areas of suspected made ground to investigate the spatial extent of made ground/fill material and depth profile of any deposits and the natural strata. Associated soil and groundwater sampling to take place as part of the investigation.
- Development of a Construction Environmental Management Plan (CEMP) to effectively control and manage surface water runoff during construction activities. The scheme design should incorporate buffer zones and restricted access areas along drainage ditches and watercourses to reduce the potential for contamination migration.
- Implementation of best working practices to minimise ground disturbance, particularly in critical areas where soil conditions may be susceptible to degradation. Heavy traffic movement should be limited during unfavourable weather conditions to prevent soil poaching, over-compaction, rutting, and sediment-laden runoff mobilisation. To mitigate these risks, the use of protective cover systems or track matting on primary haulage routes should be integrated into construction planning.

A further Phase 2 Ground Investigation should be undertaken at the site to confirm the ground conditions underneath the site, to confirm the water level across the site and confirm the contaminant status of the ground and the contaminant linkages identified within the CSM. The investigation should comprise of:

- Trial pits and shallow boreholes across the site to confirm the ground conditions underneath the site, thickness of strata including made ground and peat deposits and delineate these areas. Understanding the geological profile of the site will help to confirm or disprove the contaminant migration pathways and contaminant linkages identified within the CSM.
- Environmental sampling and laboratory analysis should be undertaken in these areas at differing depths to determine the contamination status across the site and confirm or disprove the CSM.

- Appropriate in-situ testing and laboratory geotechnical sampling should be undertaken to understand the ground properties on-site and determine if any ground improvement is required for the proposed development.
- Groundwater and gas monitoring wells should be installed, with monitoring and sampling undertaken across the site to understand the groundwater level variations across the site and gas regime.

The results of the Phase 2 Ground Investigation should be analysed and interpreted within a Phase 2 Report to determine if a Phase 3 Remediation plan is required for the site and its proposed end-use.

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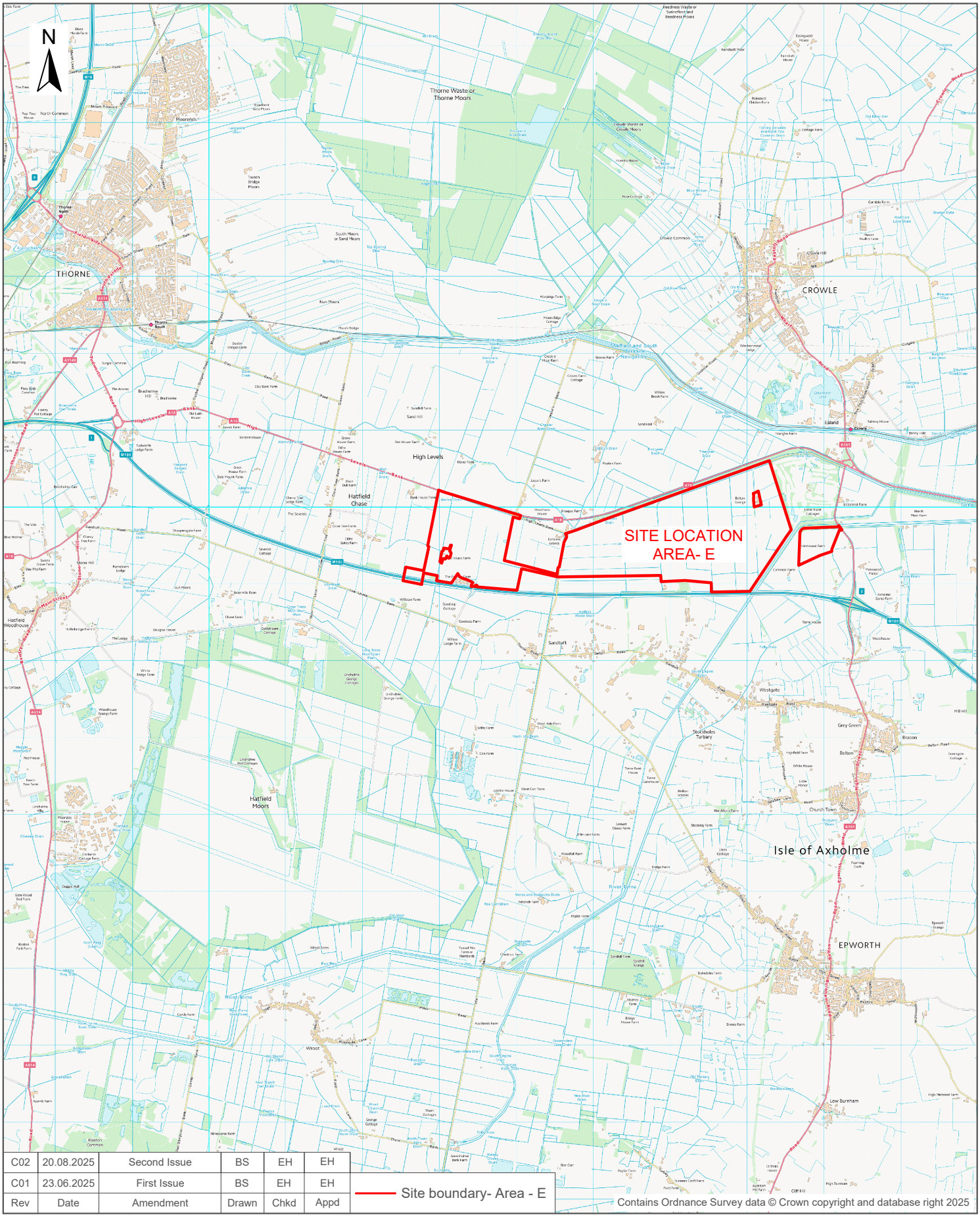
FIGURES

Figure 1 SITE LOCATION PLAN



Rev	Date	Amendment	Drawn	Chkd	Appd
C02	20.08.2025	Second Issue	BS	EH	EH
C01	23.06.2025	First Issue	BS	EH	EH

Site boundary- Area - E

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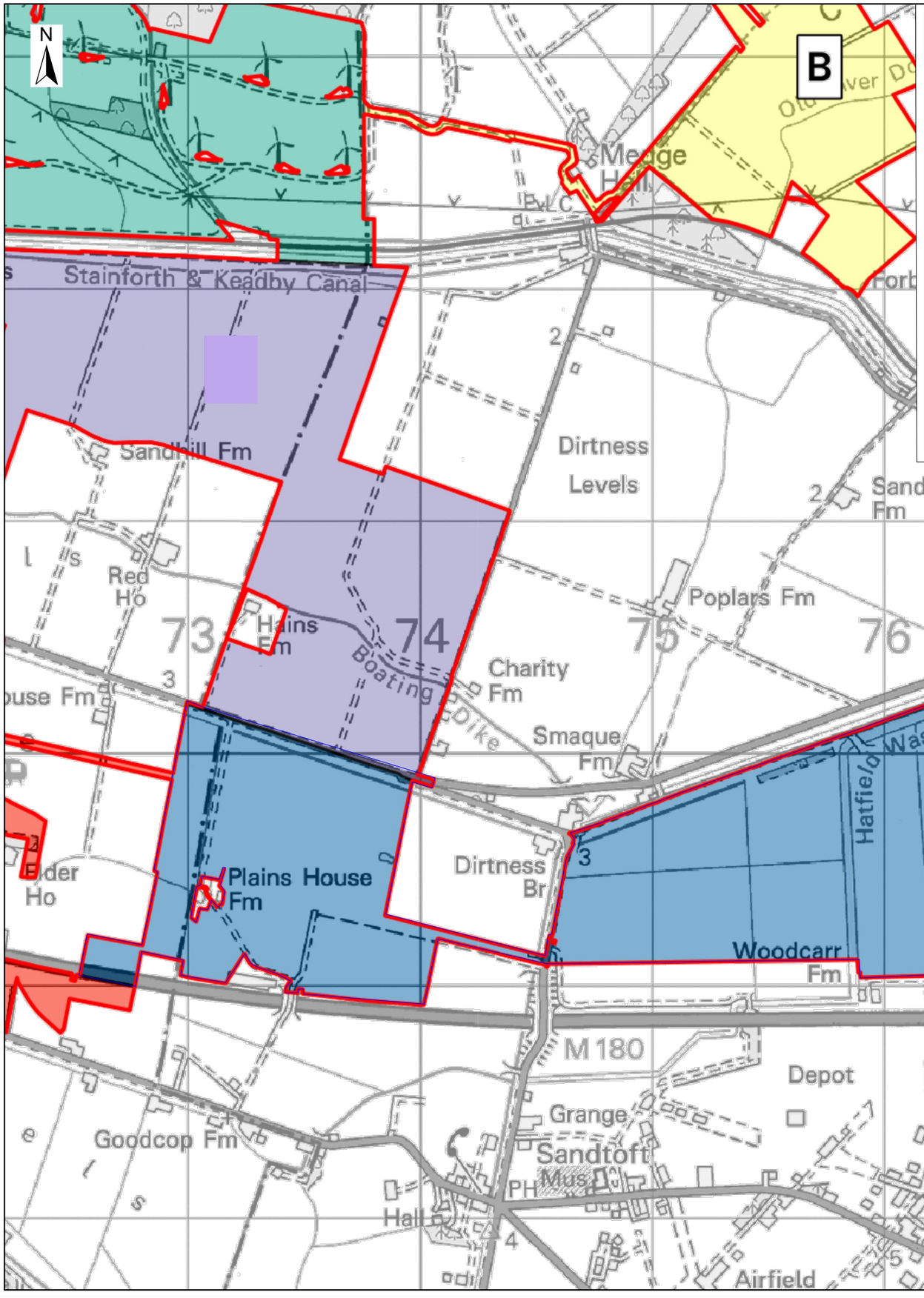
Client: Pegasus Group

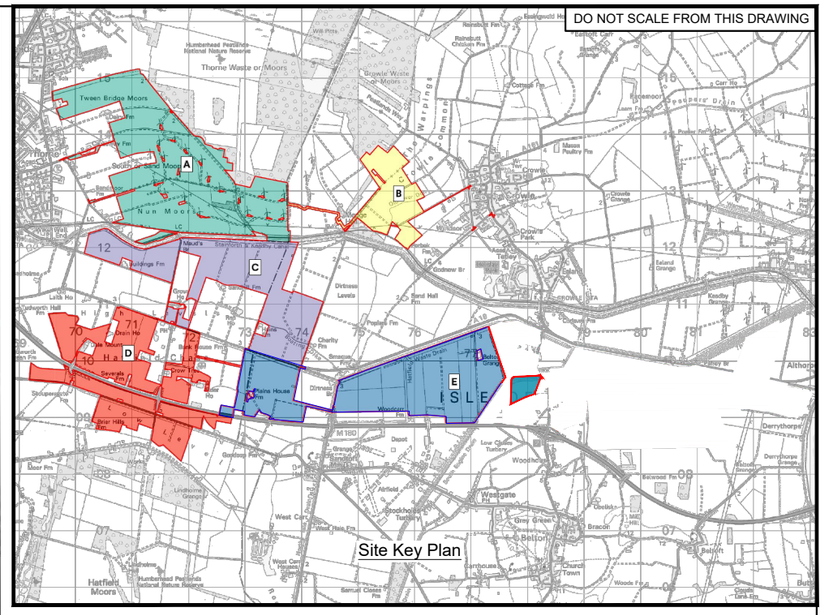
Project Name: Tween Bridge Solar Farm

Description: Site Location - Area - E

Dimension	Size	Scale	Geolocation	Project ID	Drawing no.	Rev	File name
m	A4	NTS	475875,409645	12081	11104	C02	12081-MA-111-XX-D-G-11104-C02

Figure 2 SITE LAYOUT PLAN





LEGEND

Site boundary

Notes:

Base plan provided by Client
Drawing Ref.: P21-3484_EN_0024_C - LAND PARCEL PLAN.pdf

Rev	Date	Amendment	Drawn	Chkd	Appd
C02	20.08.2025	Second Issue	BS	EH	EH
C01	23.06.2025	First Issue	BS	EH	EH

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Client: Pegasus Group

Project Name: Tween Bridge Solar Farm

Description: Area Boundary Plan - Area - E

Project ID	Drawing no.	Revision
12801	11204	C02

File name: 12081-MA-112-XX-D-G-11204-C02

Dimensions	Scale	Size
m	NTS	A3

APPENDICES

APPENDIX A
SERVICE CONSTRAINTS

1. Service Constraints

1.1. This Report (the “Report”) and any study, inspection, investigation, sampling, testing and or interpretation carried out in connection with the Report (together the "Services") were compiled and carried out by RSK Environment Limited (RSK) trading as Carbon Zero Consulting, Leap Environmental or RSK Geosciences, for the Client named in the first paragraph of the Report (the "Client") in accordance with the terms of an RSK Fee Proposal including RSK Environment Standard Terms and Conditions (the “Appointment”) between RSK and the Client, unless otherwise stated in the first paragraph of the Report. The Services were performed by RSK with the reasonable skill and care ordinarily exercised by a geo-environmental consultant at the time the Services were performed. Nothing in this Report shall be construed as imposing any fitness for purpose obligation. 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.

1.2 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. RSK shall not be liable in respect of any action or proceedings arising out of or in connection with this Report whether in contract, in tort, for breach of statutory duty or otherwise after the expiry of six (6) years from either (i) the date of the Report or (ii) such earlier date as prescribed by law, unless varied in the terms of the Appointment.

1.3 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 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 geo-environmental consultant and/or lawyer.

1.4 The Client shall not, without the prior written consent of RSK, assign, transfer, charge, mortgage, subcontract, or deal in any other manner with all or any of the benefits provided in this Report. Unless specified in the Appointment, RSK shall not be obliged to assign the benefit of the Report whether by collateral warranty, third party rights pursuant to the Contracts (Rights of Third Parties) Act 1999, letter of reliance or otherwise. If RSK agrees to any assignment of the benefit of this Report, in whatever form, benefits to third parties through collateral warranties, third party rights or letters of reliance shall not be provided unless a fee for each right, warranty or letter is agreed. The form of wording used in the warranty or letter shall be provided by RSK for agreement by the Client. Any reasonable changes to the form of wording will be implemented by mutual agreement, however the terms in the warranty or letter cannot offer the third party any greater benefit than the Appointment offered to the Client.

1.5 It is the understanding of RSK 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 the review and advice of RSK shall be at the Client's sole and own risk. RSK shall not be liable for any use of this Report for any purpose other than that for which it was provided.

1.6 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.

1.7 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 Appointment 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, fuel storage, persistent bio-accumulative or toxic chemicals (including PFAS and related compounds) or other radioactive or hazardous materials, unless specifically identified in the Services.

1.8 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 desk based publicly available 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 and the limitations below:

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.

d. The Client has identified in writing to RSK, the information, reports, findings, surveys and preliminary works RSK may not rely upon when providing 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 Appointment between the Client and RSK.

1.9 Any site drawing(s) provided in this Report is (are) not meant to be an accurate base plan for scale measurement 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 accurate setting out and should be considered indicative only.

1.10 Should RSK be requested to review the Report after the date of issue of this Report, RSK shall be entitled to additional payment at the existing rates, or such other terms as agreed between RSK and the Client.

2. Service Constraints where the Report provides an intrusive assessment of ground conditions:

2.1 The intrusive environmental ground investigation aspects of the Services are a limited sampling of soil from 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 agreed 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 (not tested) are not present.

2.2 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. The extent of the exploratory holes, laboratory testing and monitoring undertaken may have been restricted due to a number of factors including accessibility, the presence of buried or overhead services, current development, site usage, timescales or the Client's specification. The exploratory holes only assess a small proportion of the site area with respect to the site as a whole, and as such may only provide an indicative assessment of ground conditions on site. 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. The presence of hotspots of undisclosed contamination or exceptional and unforeseen ground conditions cannot be discounted.

2.3 Where the Services include Investigation of an exploratory nature or relating to physical ground works, any costings and prices provided in the Report are estimated and provided for guidance purposes only. The actual cost and time quantities shall be remeasured and shall be dependent upon the ground or other conditions, constraints present, and number and depth of the investigation locations, which shall influence the number of samples and tests required, and the quantities of soil being classified.

2.4 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. However, this Report does not constitute an asbestos survey. On this basis, the presence of asbestos on site cannot be discounted and a full asbestos survey should be undertaken.

2.5 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. Eurocode 7 gives guidance on the type of sampling, sample quality, number and spacing of intrusive investigations, and number of laboratory tests required. It is intended that the Geotechnical Information section of this Report will fulfil the general requirements of the Ground Investigation Report as set out in section 6 of Eurocode7, although this is subject to the restrictions imposed on the investigation, as listed above. For geotechnical design, Eurocode 7 requires the Geotechnical Design Report to address both the geotechnical and structural aspects of the geotechnical design for both the limit and serviceability states. The Geotechnical Appraisal section of this Report will not meet the requirements of a Geotechnical Design Report (GDR) and should therefore be used for preliminary guidance only.

3. Service Constraints where the Report relates to Surface Water Management:

3.1 The Surface Water Management Inspection (SWMI) Report, documents provided, observations, actions, and recommendations, with respect to the management of potential pollution issues to surface waters, made during the site Inspection visit, are those present at the time of the visit, and may not represent those recorded by others on the same day.

3.2 The comments given in this Report and the opinions expressed are based on the weather, ground and ground water 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 inspection and therefore could not be taken into account. In addition, groundwater levels and flows, may vary from those Reported due to seasonal, or other, effects and the limitations stated in the data should be recognised.

3.3 RSK places a degree of dependence upon oral information provided by site representatives, which is not readily verifiable through visual inspection, or supported by any available written documentation. RSK shall not be held responsible for conditions or consequences arising from relevant facts that were not fully disclosed by facility or site representatives at the time this Report was prepared.

3.4 This Report is a live document, to be continually reviewed and updated as the development progresses or other changes occur on site. RSK can only maintain the currency of this Report through the Client requesting support with supplementary site visits or attendance at meetings ahead of key stages of the development in relation to surface water management. Our risk rating assesses a number of risk factors in line with the source-pathway- receptor model and is therefore subject to constant change.

3.5 Standard design drawings are indicative. Material types, dimensions and construction details will need to be adjusted by the Client to suit the specific conditions / flows on Site.

3.6 The full responsibly for implementing the site-specific protection and maintenance measures to protect the surface water system as stated in this Report, remains with the Client and their site management team. Additional control measures may be required to achieve the objectives set out in the Surface Water Management Plan to be implemented and financed by the Client.

4. Service Constraints where the Report relates to Waste Management:

4.1 In accordance with the definition provided in the Waste Framework Directive (WFD), materials are only considered waste if 'they are discarded, intended to be discarded or required to be discarded, by the holder'. Naturally occurring soils are not considered waste if re-used on the site of origin for the purposes of development. Soils such as made ground that are not of clean and natural origin (irrespective of whether they are contaminated or not) and other materials such as recycled aggregate, do not necessarily become waste until the criteria above are met. Excavation arisings from the development may therefore be classified as waste if surplus to requirements and/or unsuitable for re-use.

4.2 It is the duty of the waste producer, to ensure that all waste is accurately classified prior to waste disposal. Technical Guidance WM3 (EA, 2018) sets out in its Appendix D requirements for waste sampling. It is a legal requirement to correctly assess and classify waste. The level of sampling should be proportionate to the volume of waste and its heterogeneity. Unless otherwise stated, the waste assessment presented in this Report should be considered as preliminary and further testing and assessment of the waste under the provisions of a Waste Sampling Plan may be required to obtain the necessary level of data required for basic characterisation of the waste in support of disposal.

4.3 Unless stated otherwise in the Report, information relating to historical operations at the site was not reviewed as part of the assessment by RSK. In addition, unless otherwise stated in the Services, RSK was not present during the collection of the samples nor had any input on the chemical testing suite. Therefore, the waste assessment and classification detailed in this Report are based solely on any information that were provided to RSK (e.g., laboratory chemical data, exploratory hole records) and were completed without prejudice for our Client.

4.4 RSK's assumes that any ground investigation data, chemical testing results etc., that were provided by the Client to inform the waste assessment and supporting review were carried out in accordance with current best practice and relevant guidance/ standards, where applicable. Thus, the

comments given in this Report and the opinions expressed are based solely on the information provided by the Client. However, it is noted that there may be conditions pertaining to the site that have not been disclosed by the investigation and therefore could not be taken into account as part of the RSK assessment.

5. Service Constraints for Construction Environmental Management Plan Reports:

5.1 This Report should be considered in the light of any changes in legislation, statutory requirement or industry practices that may have occurred subsequent to the date of issue.

5.2 The measures and comments outlined in this Report and any opinions expressed are based on the plans provided at the time and discussions with relevant parties. However, there may be conditions pertaining to the site that have not been disclosed by investigations and therefore could not be taken into account.

5.3 This CEMP is a live document and is subject to change throughout the project, as and when necessary, to ensure management of environmental aspects remains relevant, and to ensure continued compliance with legislation and commitments as they may change. RSK understands that this CEMP will be reviewed by the Client every six months and updated as and when necessary.

5.4 It is the full responsibility of the Principal Contractor/ Client to ensure that their works do not contravene legal requirements, and adherence to this CEMP alone cannot be a full defence regarding legal action against the Principal Contractor.

6. Service Constraints where the Report relates to Ground Gas Membrane Verification:

6.1 This Report is limited to the verification of the gas resistant membrane/vapour membrane/ radon barrier after installation and no inspections were undertaken of the substrate (i.e. prepared ground). The Report therefore does not constitute as a full verification of ground gas protection system.

6.2 The comments given in this Report and the opinions expressed, are based on the condition of the ground gas membrane as encountered at the time of inspection by suitably qualified personnel. RSK cannot accept liability for any subsequent change to the status of the gas membrane by follow-on trades or other construction activity.

6.3 Where not designed by RSK, the verification of protection measures is carried out with reference to the gas protection design provided by the Client. RSK assume the scope of gas protection measures as determined by third parties to be correct and to have achieved any required approval from authorities.

6.4 The Ground Gas Design Report/Remediation Strategy and Verification Plan contains details of the procedures to be adopted for inspection and validation of the works. However, it should be noted that responsibility for the correct implementation of the strategy lies with the appointed contractor. RSK cannot be held responsible for any remedial works that are carried out without the agreed procedures involving either direct supervision by RSK, or inspection and validation of the works by a representative from RSK.

7. Service Constraints for Environmental Due Diligence (EDD)Reports:

7.1 The comments given in this Report and the opinions expressed are based on the information obtained and reviewed as part of the desk-based assessment. However, there may be conditions pertaining to the Site that have not been disclosed by the assessment and therefore could not be taken into account. Furthermore, no intrusive investigations, monitoring or sampling have been undertaken to confirm the environmental status of the site, therefore any comments relating to ground conditions and subsurface contamination are based solely on a review of desk-based information.

7.2 This Report describes the results of the EDD exercise. The scope of this EDD Report, where appropriate, covers legal or regulatory compliance with respect to UK or international regulations associated with environmental matters.

7.3 As with any EDD exercise, there is a certain degree of dependence upon information provided by the target company. The EDD does not include a site walkover / visit or liaison with site representatives unless identified in the Services. Therefore, the assessment is based on the available desk study information. Also, there is a certain degree of dependence upon oral information provided by site representatives, which is not readily verifiable through visual inspection, or supported by any available written documentation. RSK shall not be held responsible for conditions or consequences arising from relevant facts that were not fully disclosed by facility or site representatives at the time this EDD exercise was performed.

7.4 This Report, including all supporting data and notes (collectively referred to hereinafter as "information"), was prepared or collected by RSK for the benefit of its Client.

7.5 The comments given in this Report and the opinions expressed are based on the information obtained and reviewed as part of the desk-based assessment and the site inspection visit. However, there may be conditions pertaining to the Site that have not been disclosed by the assessment and therefore could not be taken into account. Furthermore, no intrusive investigations, monitoring or sampling have been undertaken to confirm the environmental status of the Site therefore any comments relating to ground conditions and subsurface contamination are based solely on a review of desk-based information and observations collected during the site inspection visit.

8. Service Constraints for Ground source heat energy Reports:

8.1 It is understood that this is a desktop survey only and that there are no requirements for a site walkover, service utility survey, or provision of service plans. These services can be provided upon request if required.

8.2 At a later stage, it is possible that a thermal response test (TRT) will need to be completed, for which a test borehole will have to be drilled, and these would be costed at the time. RSK can provide all aspects of subsequent site work for a GSHP system if required.

9. Service Constraints for Water Abstraction Borehole Reports:

9.1 The Report aims principally to only identify and assess the suitability of the site for a water abstraction borehole. This Report should be considered in the light of any changes in legislation, statutory requirements, and industry practices, that have occurred subsequent to the date of the Report.

9.2 Unless stated in the Report, the opinions expressed in this Report including all comments and recommendations provided are on the basis of the information obtained from a desk-based assessment.

Appendix B
PROJECT-RELATED SUSTAINABILITY CONSIDERATIONS

As introduced in Section 2.5, sustainability considerations have been taken into account during the design, planning and implementation stages of the project. We manage and monitor this using the RSK Geosciences Sustainable Management Practices (SMP) tool. More detail is provided on this below.

Sustainable management practices (SMPs)

The UK Sustainable Remediation Forum (SuRF-UK) was established to develop a sustainable remediation framework that allows assessors to identify remediation strategies and techniques that are more explicitly linked to the goals of sustainable development. However, it was recognised that the same sustainability principles discussed in the framework underpin all aspects of land contaminated management and can be applied across the full range of activities. These include aspects such as site characterisation that would not normally have a formal sustainability assessment, but where sustainability-related benefits may be gained.

SuRF-UK defines Sustainable Management Practices (SMPs) as 'relatively simple, common sense actions that can be implemented at any stage in a land contamination management project to improve its environmental, social and/or economic performance. SMPs can be used to improve the benefits (e.g. resource efficiency, community satisfaction) or reduce the negative impacts (e.g. spillages, complaints, cost) of a project, leading to project 'sustainability gains', without requiring a formal sustainability assessment. SMPs may also be used where sustainability gains are sought at a programme of work level using generic criteria or standards that can apply to a range of project types' (CL:AIRE, 2021a).

RSK Geosciences has developed these SMPs further to identify those that are relevant to each phase of geo-environmental and geotechnical site assessment, along with methods of measurement and reporting. Some of the SMPs are mandatory as they an intrinsic requirement of our ISO-certified Safety, Health, Environment and Quality management system (SHEQMS) or of other procedures. In addition, for each project, optional items are selected either to:

- identify opportunities to reduce emissions during project delivery, and/or
- support achievement of more sustainable outcomes for clients.

Further details are available on request.

Sustainability-related considerations relevant to the project

The following sustainability-related considerations have been identified to be relevant to this project. Relevant aspects have been included in the appropriate section of the report.

Effective site investigation

Undertaking effective site investigations in accordance with standards, technical standards and good practice informs a better understanding of below ground issues. Where applicable, RSK recommends the application of geophysical surveys to optimise and supplement data from intrusive investigations. These aspects contribute to the overall sustainability of the development and reductions in associated carbon emissions.

For geo-environmental assessments, effective site investigation informs more site-specific land contamination risk assessment. This means that where remediation is required, it is targeted to have the greatest benefit in mitigating identified risks to human health and the environment, and avoids emissions and other negative environmental impacts associated with unnecessary remediation. Effective site assessment undertaken in accordance with good practice supports the achievement of wider sustainability goals including:

- Supporting the beneficial reuse of brownfield and other degraded land, or the development of nature-based solutions.
- Reducing risks from historical land contamination or on-going releases to groundwater, surface waters and ecological receptors.
- Supporting decarbonisation of the energy and other sectors through undertaking effective site assessment and providing advice on mitigation of ground-based risks.

For geotechnical assessments, effective site investigation informs lean, optimal design of foundations and structures ensuring efficient use of materials, long-term performance and stability including climate resilience, and a reduction in community disruption during construction. It also allows for early identification of geotechnical hazards to aid in the prevention of environmentally damaging issues during construction, for example, soil erosion and landslips. In earthworks, site investigations aid in confirming the material types and properties allowing for their reuse in construction. Furthermore, early identification of materials enables better planning and management of site resources, reducing waste and promoting retention and reuse of soils and other excavated materials.

Reuse and disposal of excavated materials

Reuse and disposal of excavated materials is a key issue on many development or construction projects. In accordance with the definition provided in the Waste Framework Directive (WFD), materials are only considered waste if ‘they are discarded, intended to be discarded or required to be discarded, by the holder’. Naturally occurring soils are not considered waste if reused on the site of origin for the purposes of development.

Excavated materials that are not of ‘clean and natural origin’ (irrespective of whether they are contaminated or not), such as made ground and other anthropogenic materials, may be considered waste after excavation. This means that they cannot be reused unless ‘recovered’ through use of waste licensing controls, such as exemptions, or a waste recovery permit. Alternatively, in limited circumstances, the CL:AIRE Definition of Waste Code of Practice (DoWCoP; CL:AIRE, 2011)) can be applied, in specific scenarios, to support suitable reuse on or off-site using materials management plans (MMPs). Otherwise, disposal is required, typically off-site, under an appropriate landfill permit. This has important implications for the assessment, excavation, temporary storage, reuse and disposal of excavated materials.

In accordance with the waste hierarchy (Ref. Defra, 2011) and circular economy principles, there are a range of approaches to reduce the volume of waste materials created from development projects with the following order of preference:

- Prevention – designing out the need for excavation and identifying during the development planning phase the potential for surplus soils to be generated during construction.
- Minimisation – implementing effective segregation, stockpile and materials management during construction.

- Reuse – assessing potential for reuse without treatment, either on or off-site.
- Recycling/recovery – processing of materials to allow reuse and support waste recovery.
- Disposal – the last resort, either on or off-site.

The potential for the generation of waste materials through land redevelopment must therefore be considered as part of any construction activity. Reuse of excavated materials, including topsoil, subsoil, aggregates and rock, generated through the works may also offer opportunities to reduce the amount of waste created, diverting it away from landfill, resulting in a more sustainable development. The materials may have reuse potential on the site of origin or at other development sites. In some instances, generated waste materials have the potential for beneficial reuse, with some non-waste materials needing to be disposed of to landfill.

Early consideration, planning and effective implementation are all needed to maximise the reuse of materials. As well as reducing cost for off-site disposal, sustainability-related benefits include reducing the volumes of materials for transport and disposal, quality and import of virgin materials and associated carbon emissions.

Assessment of the potential for reuse materials is essential, with information on the soil quality being collected and understood as part of the intrusive investigation phases where relevant.

Soil as a resource

Soil forms an important sub-category of excavated material. Soil contains approximately three times as much carbon as the atmosphere. As well as avoiding the generation of waste, minimising the disturbance of soils on site minimises the loss of carbon during soil handling and storage. Retaining as much soil as possible without damage also reduces flooding, dust and silt management risks, nutrient retention, and supports biodiversity net gain. Soil is therefore a valuable resource in its own right, requiring careful planning at an early stage in the project lifetime to ensure that it can be successfully retained or reused. Defra has published a Code of Practice for the sustainable use of soil on construction sites (Defra, 2009). This is intended to be a practical guide to assist anyone involved in the construction industry to protect the soil resources with which they work, with a focus on England.

Site-won topsoil should, where possible, be left in situ or handled carefully to prevent damage to the soil structure. Where topsoil is to be stripped, stockpiled and re-used such activities should be undertaken during dry weather (generally August to September). Once stockpiled, topsoil should be kept dry. Significant working of topsoil whilst wet can damage the soil structure, reducing the soils' ability to drain and resulting in anaerobic rather an aerobic soil conditions.

Anaerobic soil conditions can have a negative impact on plants and their roots, which will impact the ability of plants to take root once the soil has been placed for its proposed end use. Machinery tracking over recently placed topsoil should be avoided. Should prolonged poor storage result in degradation of the soil some treatment is likely to be required. This may include sand amelioration to improve the soil structure or the addition of composts to reduce nutrient deficiency.

Where site-won topsoil cannot be reused on site, it may then be classed as a waste and consideration should be given to the donation of this material to another construction site where a deficit of topsoil material has been calculated. This would need to be carried out under an MMP. Alternatively, to prevent a valuable resource from going to landfill, consideration could be given to donating topsoil to a Soil Treatment Facility (STF) where it can be treated, processed and reused on other sites, assuming the STF has an appropriate Environmental Permit.

Where relevant, the presence of topsoil and subsoil is considered in site investigation interpretative reports, and how it may be valuable to retain this within the development. By assessing the quality of soils at the investigation phase, together with the anticipated volumes generated from the project, the potential for reuse of excavated soils can also be considered. This may include identifying opportunities for the reuse of surplus soils and minimising the generation of materials classified as waste. Where improvements in soil quality are needed or possible, recommendations can be given to assist in the reuse of this valuable resource.

DoWCoP and MMPs

DoWCoP was developed in consultation with the Environment Agency and the development industry to enable the reuse of materials under certain scenarios subject to demonstrating that specific criteria are met. The current re-use scenarios covered by DoWCoP comprise:

- Reuse on the site of origin (with or without treatment).
- Direct transfer of clean and natural soils between sites.
- Use in the development of land other than the site of origin following treatment at an authorised Hub site (including a fixed Soil Treatment Facility).

The importation of made ground soils (irrespective of contamination status) or crushed demolition materials is not permitted under the CoP and requires either a standard rules environmental permit or a U1 waste exemption.

In the context of excavated materials used on sites undergoing development, four factors are considered to be of particular relevance in determining if the material is a waste or when it ceases to be waste:

- The aim of the Waste Framework Directive is not undermined, i.e. if the use of the material will create an unacceptable risk of pollution of the environment or harm to human health it is likely to be waste.
- The material is certain to be used.
- The material is suitable for use both chemically and geotechnically.
- Only the required quantity of material will be used.

DoWCoP requires the preparation of a MMP that confirms the above factors will be met. This plan needs to be reviewed by a 'Qualified Person' (QP) who will then issue a declaration form to the EA. As the project progresses, data must be collated and on completion a verification report produced that shows the MMP was followed and describes any changes. The MMP establishes whether specific materials are classified as waste and how excavated materials will be treated and/or re-used in line with the CoP. The MMP is likely to form part of the site waste management plan (SWMP), where applicable.

Future climate change considerations

Future global climate change has been numerically modelled by the Intergovernmental Panel on Climate Change (IPCC) to the year 2100 based on potential anthropogenic greenhouse gas emissions scenarios. The modelling output results in projections, which the Met Office has used to determine the potential impacts of climatic change for the UK. 'UKCP18' is the most up to date set of climate projections for the UK and are based on Representative Concentration Pathways (RCP) greenhouse gas emission scenarios. All scenarios project warming with RCP 8.5 being the most extreme scenario with global temperatures increasing by 4.3°C. Typically projections indicate

changes will increase in magnitude with time. It is noted that RCPs have been superseded by Shared Socioeconomic Pathways (SSP) which were published by the IPCC in 2021, although the Met Office has yet to publish updated projections based on SSP data.

The Met Office defines climate change as the large-scale, long-term shift in average weather patterns and average temperatures and is assessed by averaging data over a 30-year period. The most recent reference period is 1991-2020. The UKCP18 data indicate that the UK climate is changing resulting in hotter drier summers and warmer wetter winters, with an increase in the frequency and intensity of extreme weather and significant weather events with a higher likelihood of heat waves, flash floods and droughts. Sea level is also rising. Further details on the technical background and data sources are provided in **Error! Reference source not found.**.

The key pieces of legislation associated with climate change are the Climate Change Act (2008) and the Climate Change (Scotland) Act 2009. They established the Committee on Climate Change (CCC) and require a UK Climate Change Risk Assessment (CCRA) to be published every five years to assess 'the risks for the UK from the current and predicted impacts of climate change', combined with a National Adaptation Programme. The adaptation programmes place requirements on the planning regime to incorporate the effects of climate change within their decision making. This is implemented through national planning frameworks and planning policy.

The need to incorporate the predicted effects of future climate change and associated extreme weather events (EWE) into qualitative and quantitative land contamination risk assessments is set out within Land Contamination Risk Management (LCRM) LCRM Stage 1 risk assessment (Environment Agency, 2023). BS 21365:2020 'Soil Quality: Conceptual site models for potentially contaminated sites' (BSI, 2020) includes the requirement to identify possible foreseeable events that could affect contaminant impacts or create new exposure pathways including potential for flooding (rivers, sea, groundwater), rising groundwater or seawater levels, extreme weather conditions and change of use. While there is currently no statutory guidance detailing how the effects of future climate change should be considered within land contamination assessments, several industry-led publications have been produced which provide details on how this can be incorporated, including:

- CL:AIRE, March 2007. Climate Change, Pollutant Linkage and Brownfield Regeneration (CL:AIRE, 2007).
- CL:AIRE, October 2021. Good Practice for Risk Assessment for Coal Mine Gas Emissions (CL:AIRE, 2021a).
- SoBRA, August 2022. Guidance on Assessing Risk to Controlled Waters from UK Land Contamination Under Conditions of Future Climate Change" version 1.0, (SoBRA, 2022)
- NHBC, 2023. NF94: Hazardous ground gas – an essential guide for housebuilders (NHBC, 2023).

Climate change-related impacts on the CSM and land contamination risk assessment are considered at each stage of the site assessment as per LCRM.

Climate change and EWE also have substantial implications for future geotechnical ground conditions, influencing the stability and durability of geotechnical structures, such as foundations, retaining walls, slopes and pavements to mention but a few. Therefore climate change will significantly impact the design of land development projects going forward over their lifecycle and beyond. Furthermore, climate change will significantly impact the future performance of existing land development projects that have not been designed taking into account these issues. Relevant standards and guidance are referred to in the relevant sections of the report.

Potential for ground source heating and cooling

Most locations in the UK are suitable for the installation of ground source heating or cooling (GSHC) systems. The most appropriate type of installation is determined by the available space, heating and cooling demands of the proposed development and a number of geological and hydrogeological factors, and drilling risks (amongst other factors). We have undertaken an initial assessment of the suitability of the site for this technology in Section 4.7.

Embodied ground carbon assessment

As part of achieving pathways to net zero for the construction sector, there is an urgent need to significantly reduce carbon emissions without compromising suitable and climate resilient development. Created by Leap Environmental (part of RSK Geosciences) in collaboration with the University of Surrey, CReDiT is a suite of carbon calculator tools designed to assess the embodied carbon in materials and associated transport. The tools provide information on relative embodied carbon for below ground aspects, such as foundations, cover systems, and reuse and disposal of soils and excavated materials. The results are intended to inform discussions with relevant parties about embodied carbon at an early stage in the design process and enable comparison and evaluation of different design options.

Support to biodiversity net gain/rewilding projects

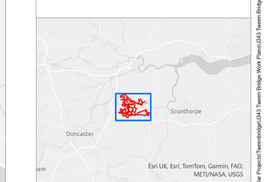
The quality and condition of soils is a key factor in the establishment or enhancement of flora, which then supports goals of achieving biodiversity net gain (BNG) or rewilding projects. For example, low fertility soils promote the establishment of wildflowers that support insect populations, which would otherwise be outcompeted by grasslands. Where applicable, RSK Geosciences undertakes soil sampling, soil fertility testing and assessments to support nature-positive actions.

Appendix C
DEVELOPMENT DRAWINGS

Tween Bridge Solar Farm

LEGEND

OrderLimits_Rev_AJ



Site Location Plan - Rev AJ

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Scale: 1:10,000	Paper Size: A0	DCO Application

RWE

			Revision: 1
			Drawing Status: Final
Drawn: EH	Checked: AD	Approved: MB	Date: 20/08/2025

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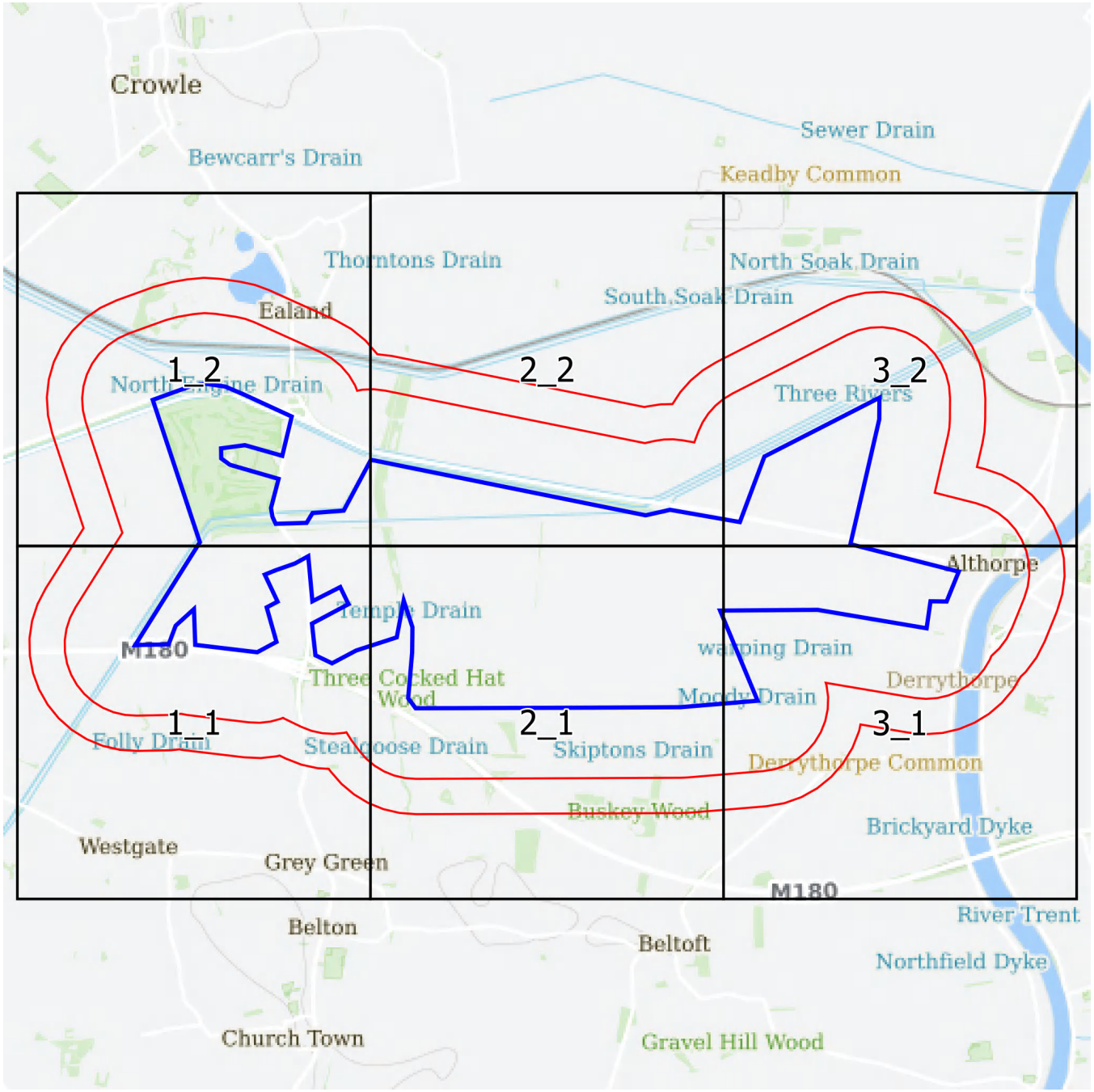
Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, GeoTechnologies, Inc, METI/NASA, USGS

Appendix D
ENVIRONMENTAL DATABASE REPORT



Groundsure INSIGHTS

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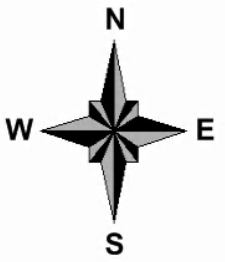

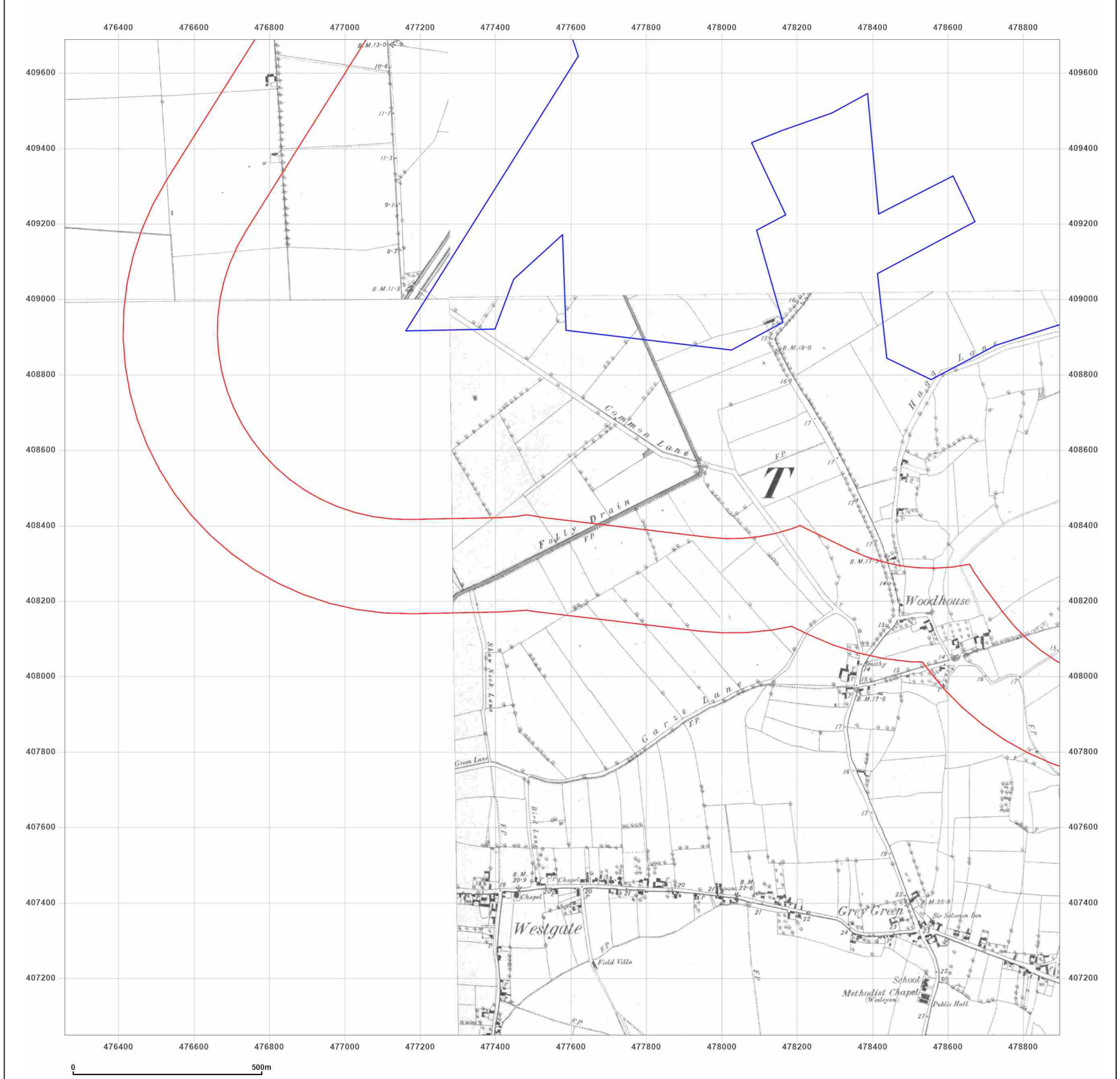

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Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: County Series

Map date: **1885**

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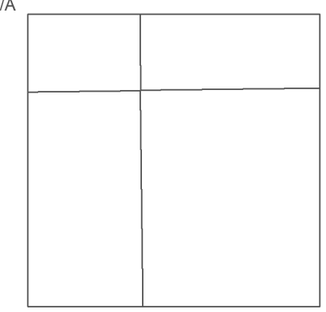

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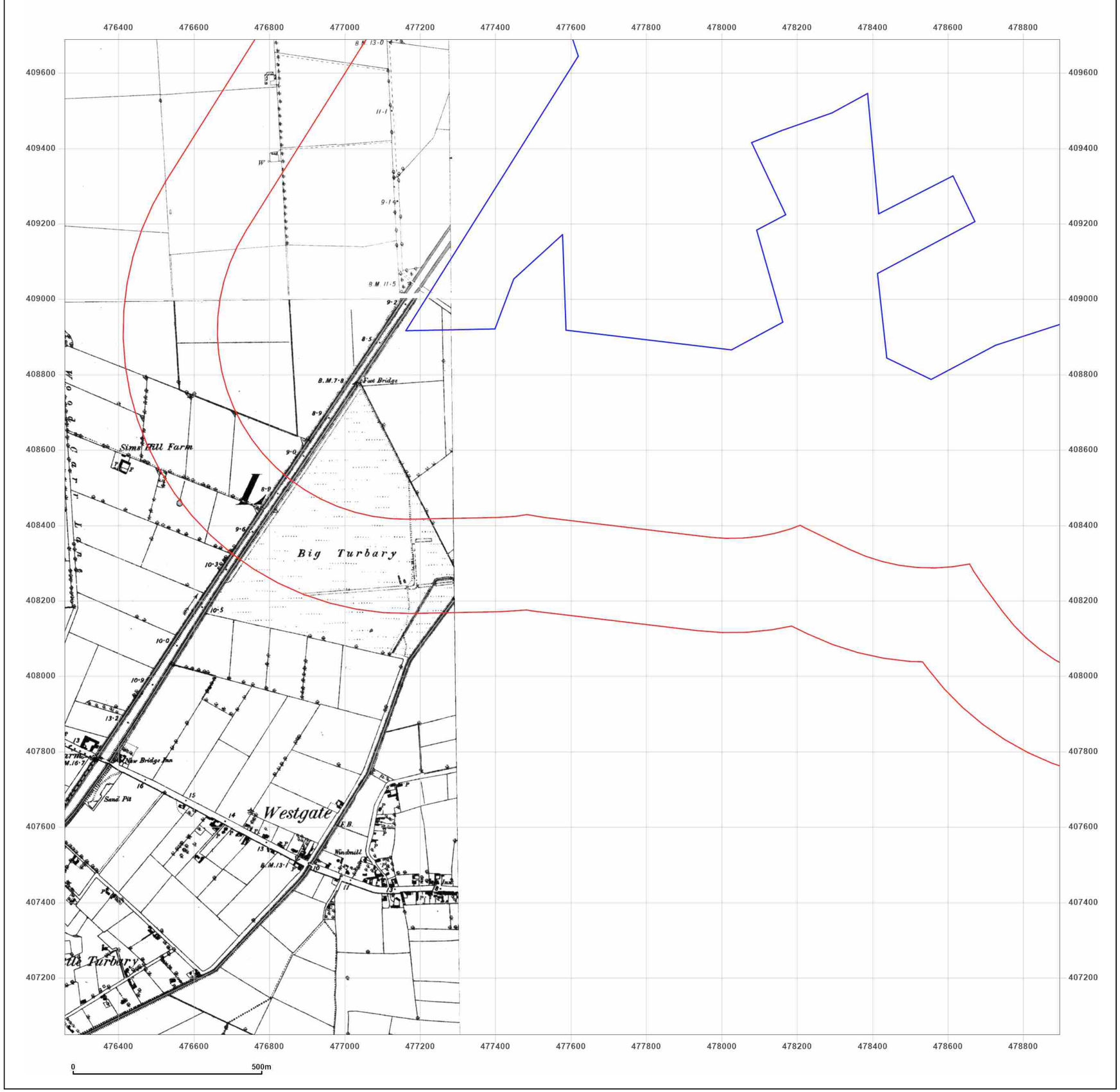

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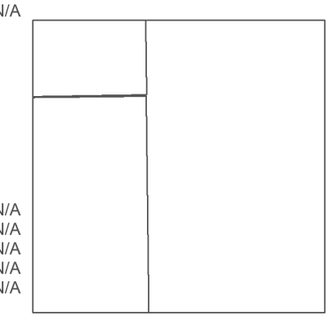

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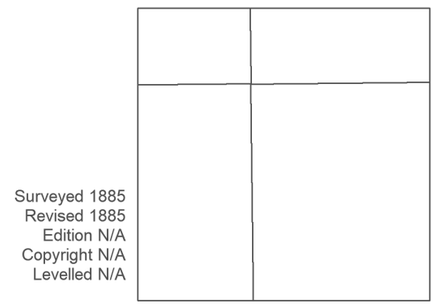

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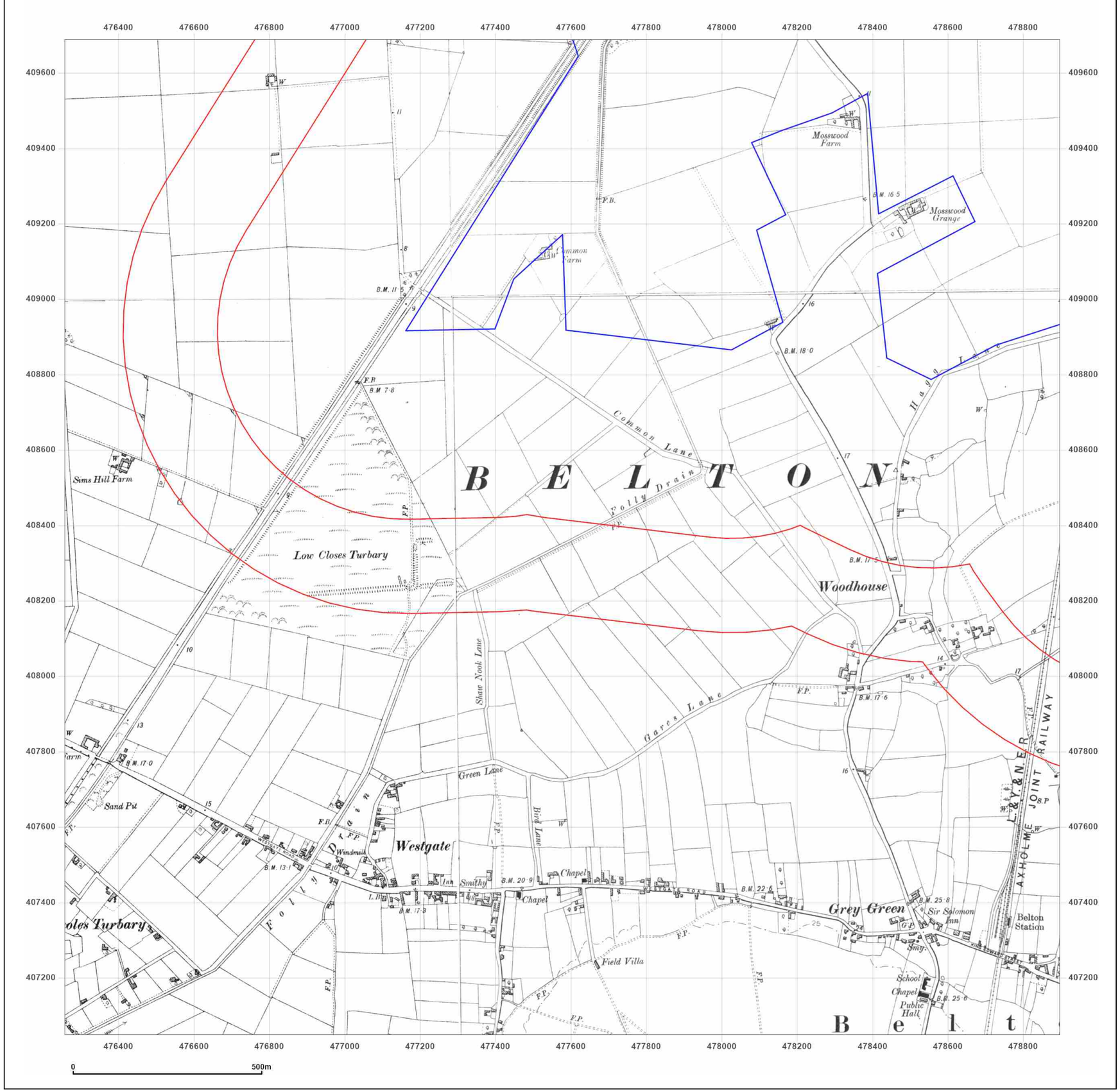

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: County Series

Map date: **1904-1906**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

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

Surveyed 1885
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

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

Surveyed 1885
Revised 1905
Edition N/A
Copyright N/A
Levelled N/A

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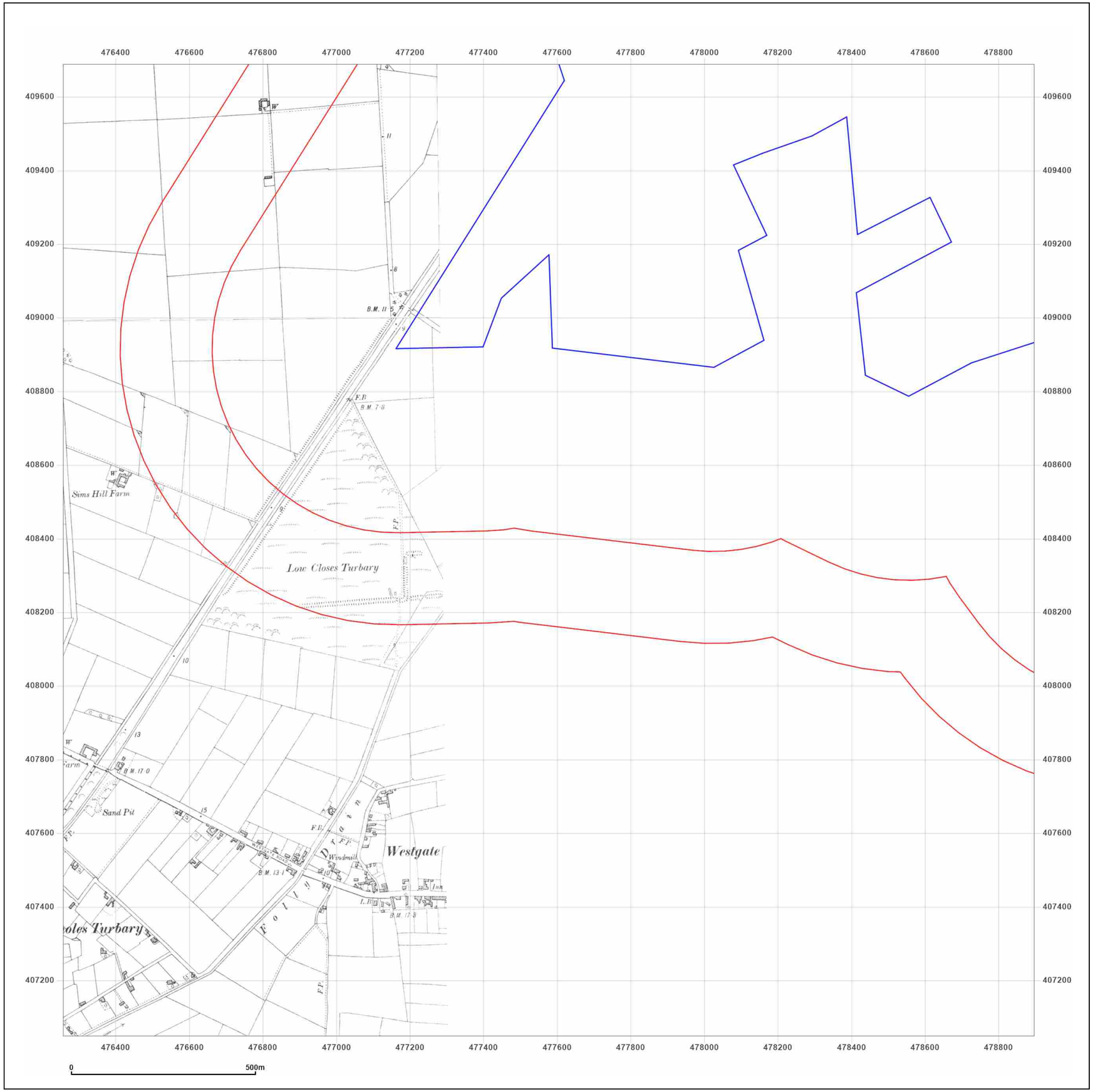


Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: County Series

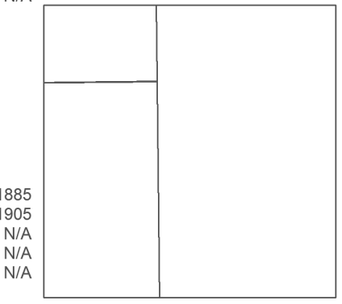
Map date: **1905-1908**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1885
Revised 1908
Edition 1908
Copyright N/A
Levelled N/A



Surveyed 1885
Revised 1905
Edition N/A
Copyright N/A
Levelled N/A

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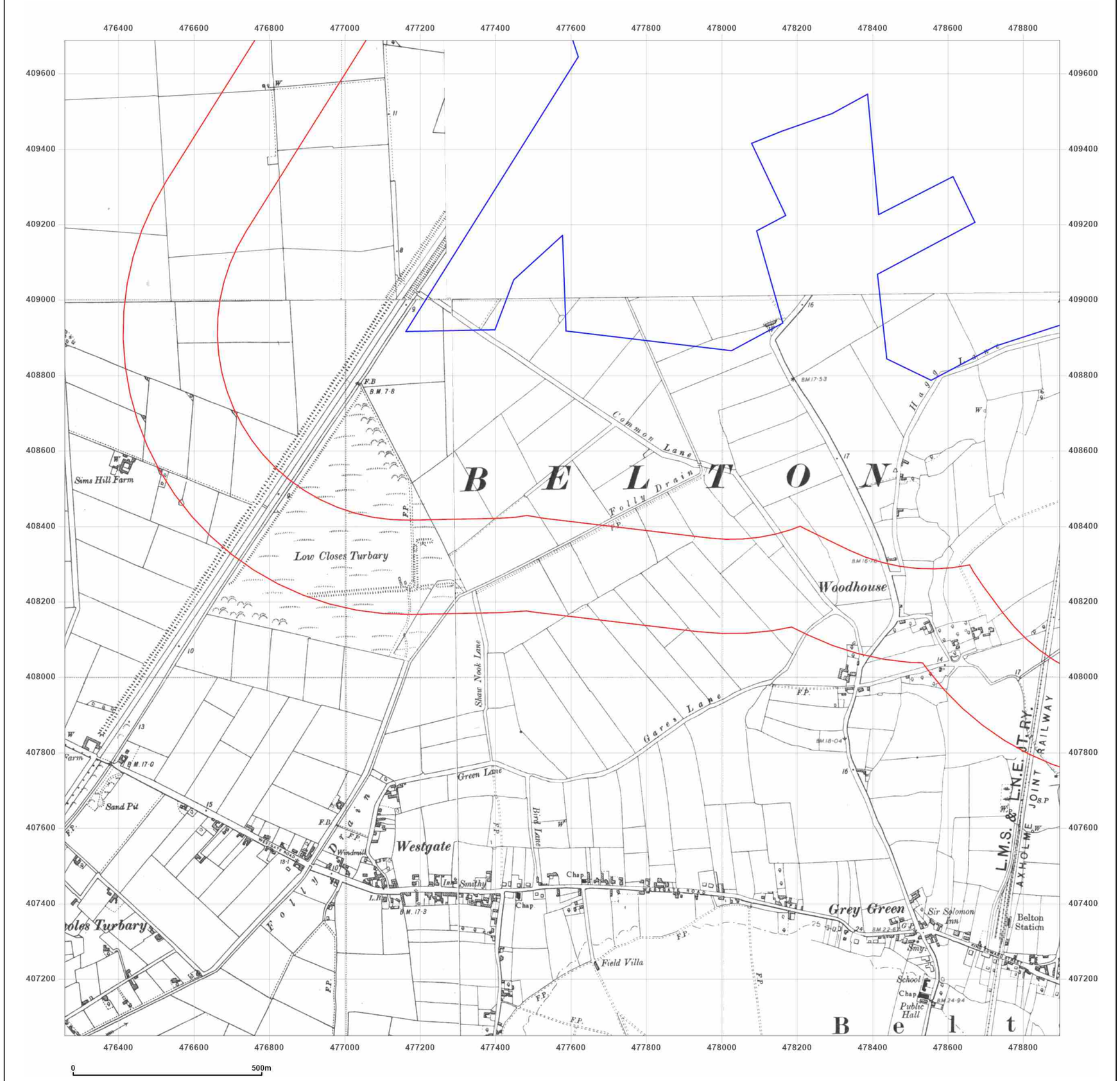

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

N
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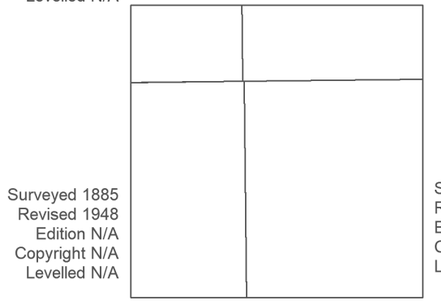
Surveyed 1885
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A



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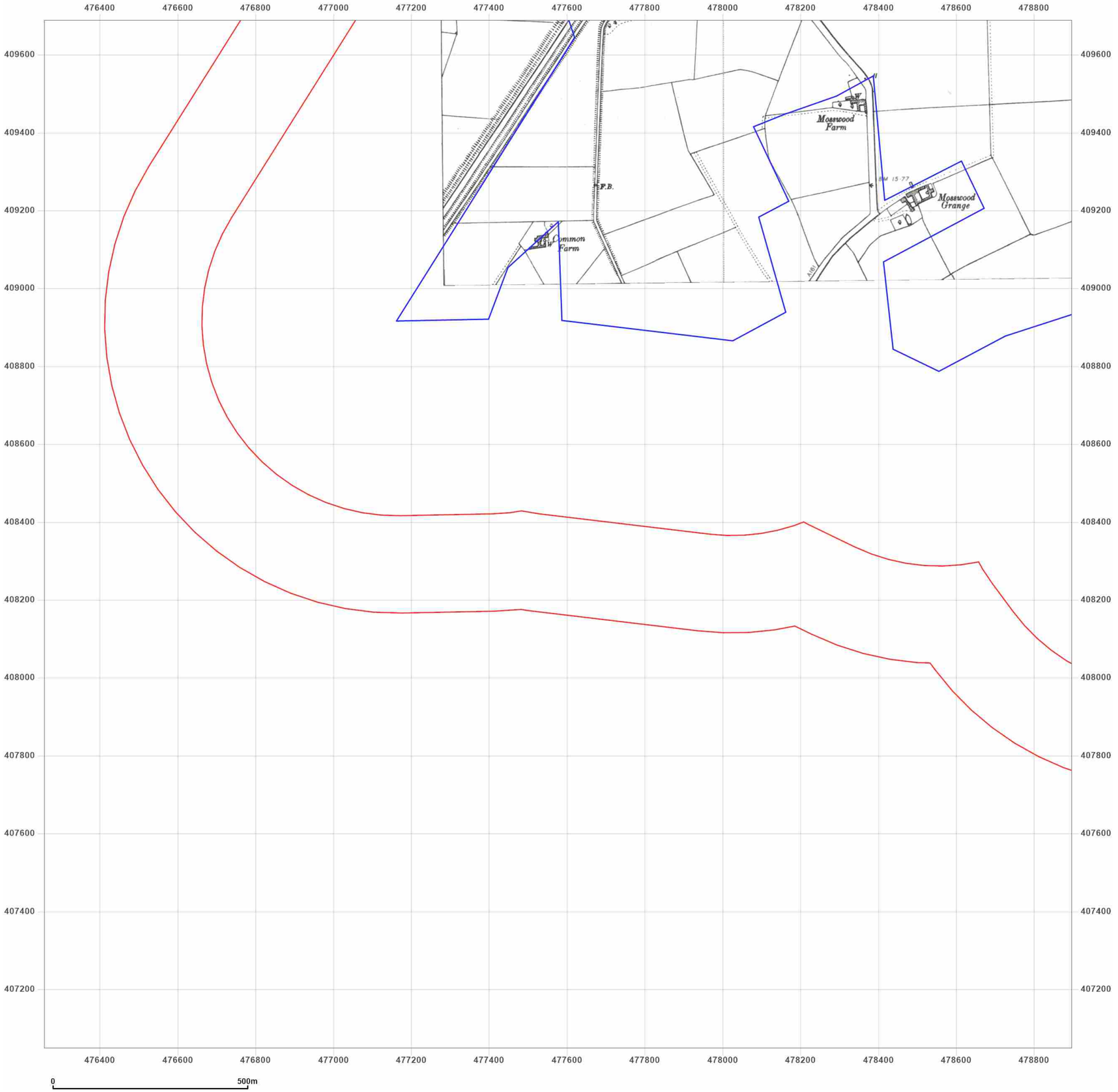

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
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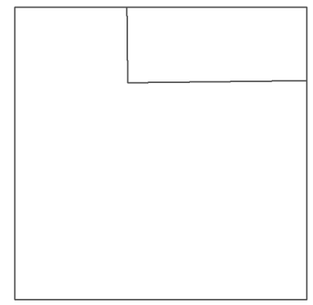
Surveyed 1885
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A



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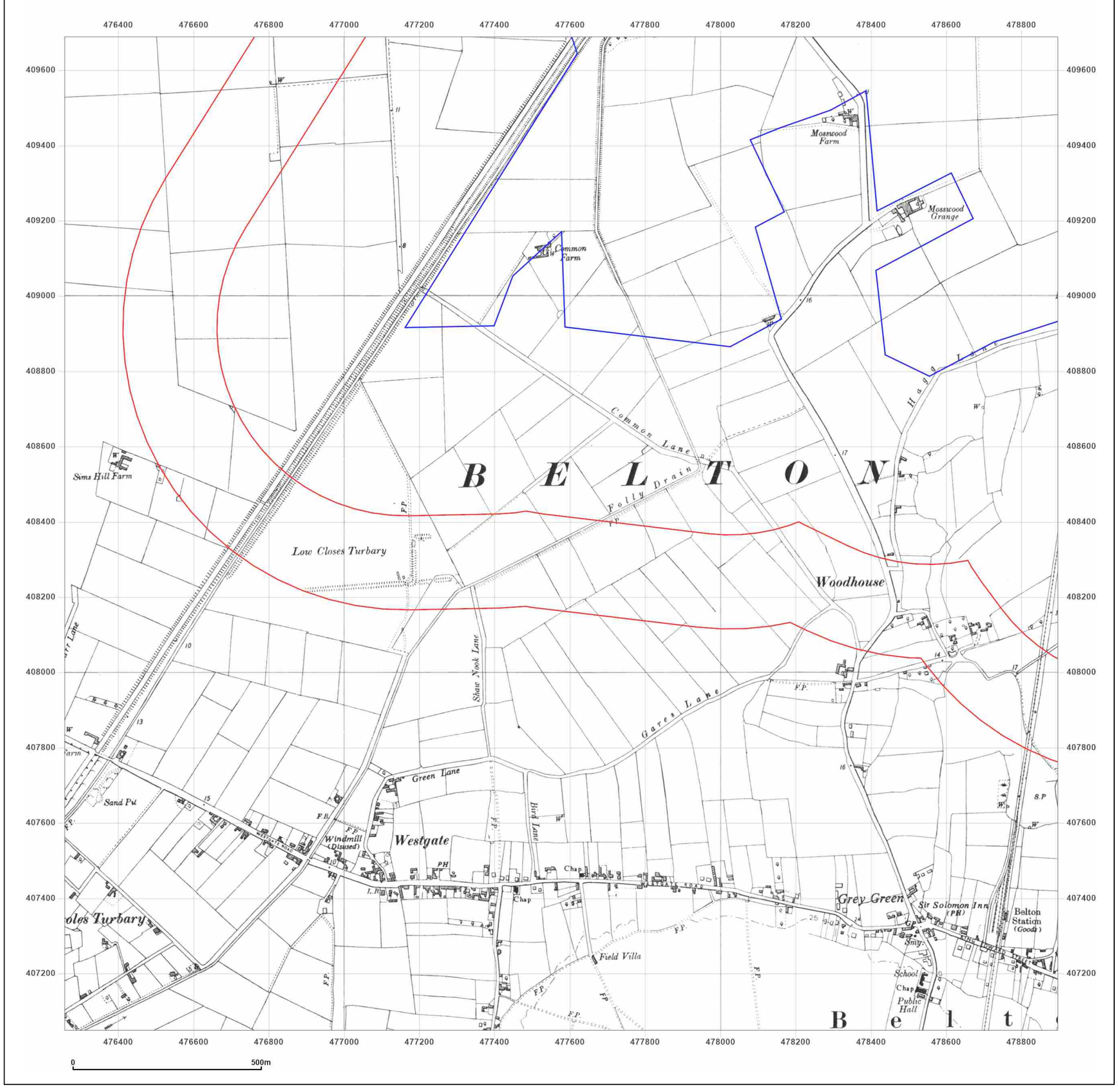

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: Provisional
Map date: **1951**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

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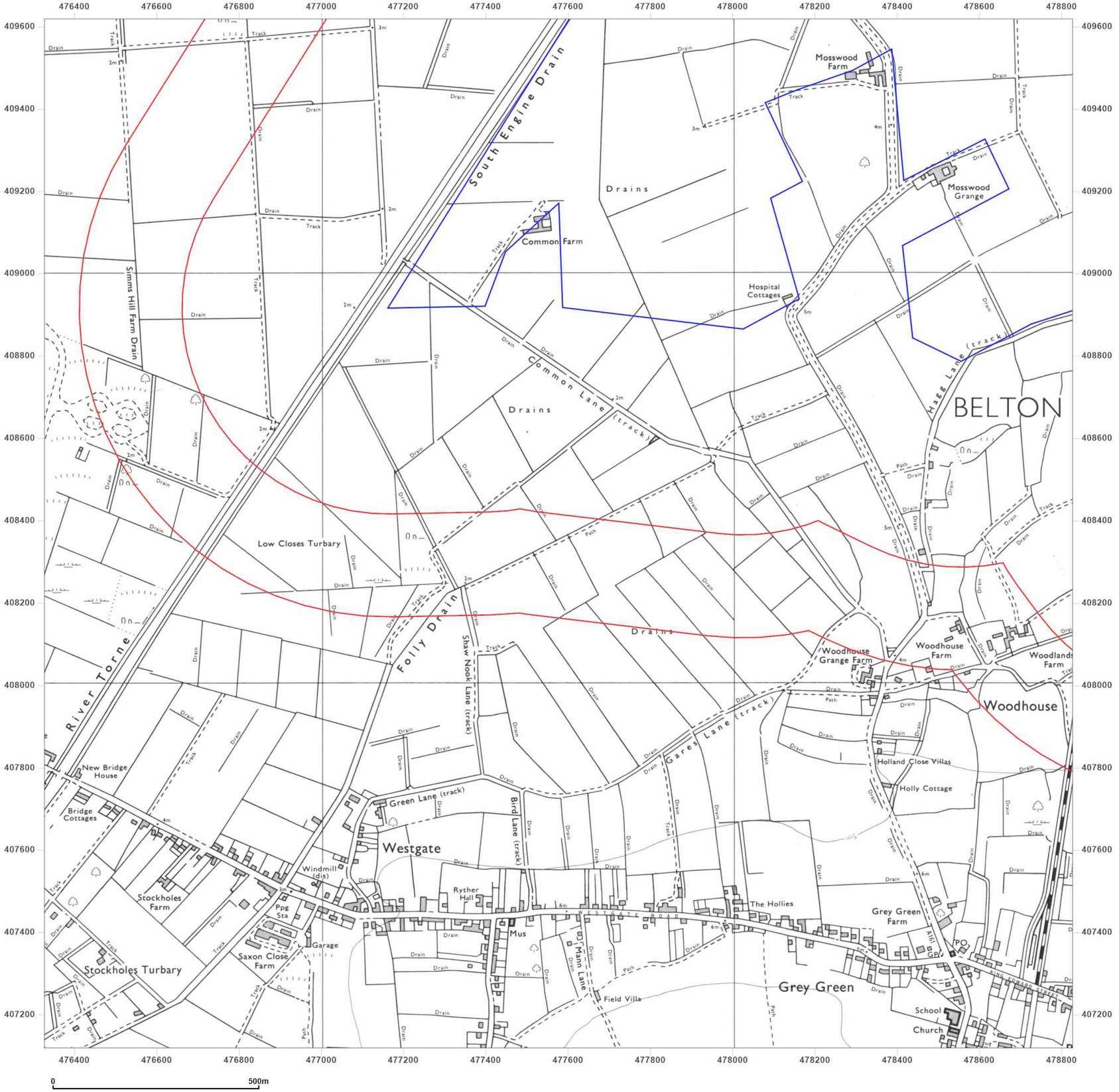

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: National Grid

Map date: **1973**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A

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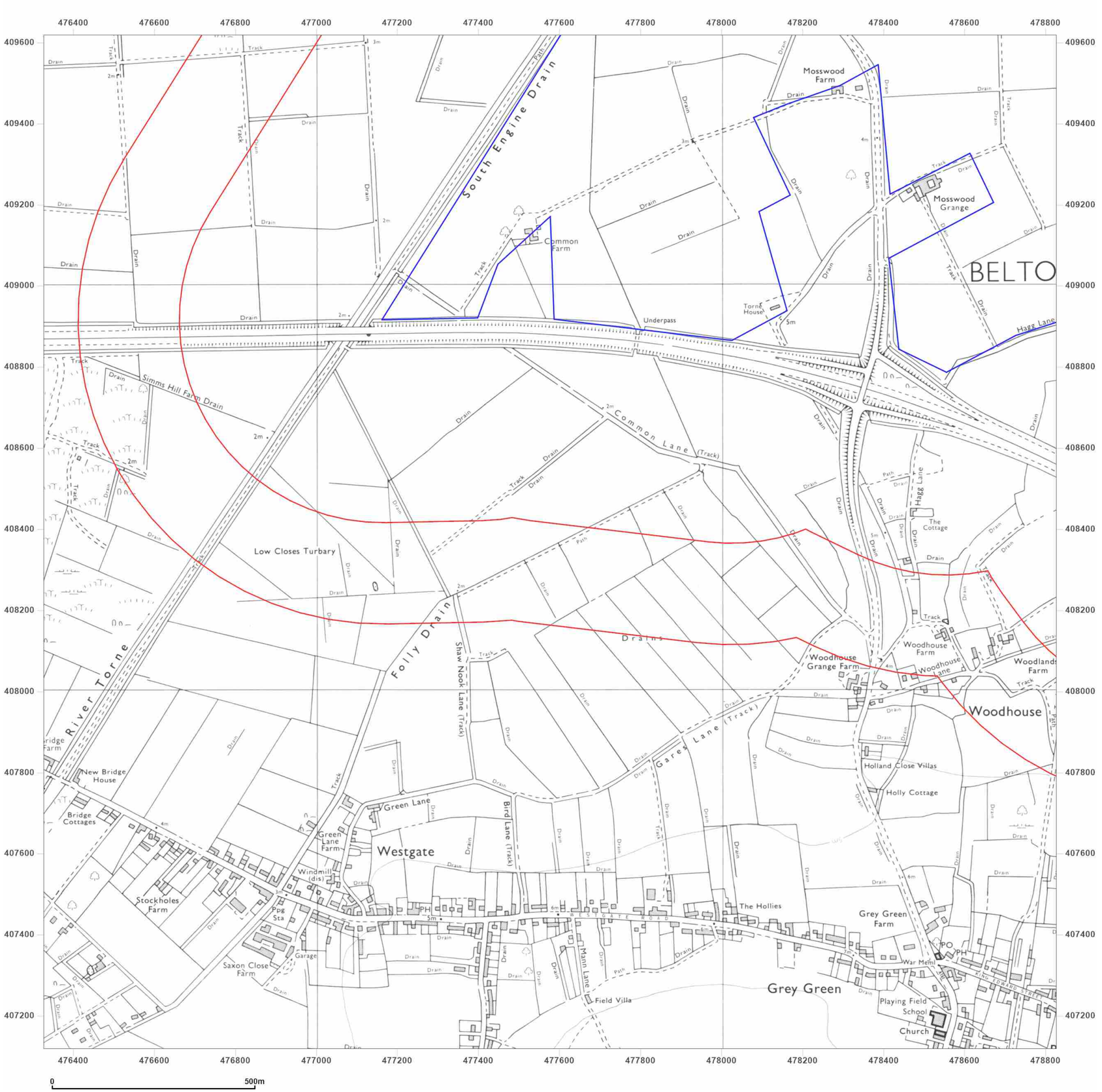

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: National Grid

Map date: **1982**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1981
Revised 1982
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

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

N
W E
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2001

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Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N
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2010

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Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_1
Grid Ref: 477576, 408368

Map Name: National Grid
Map date: **2025**
Scale: 1:10,000
Printed at: 1:10,000

N
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2025

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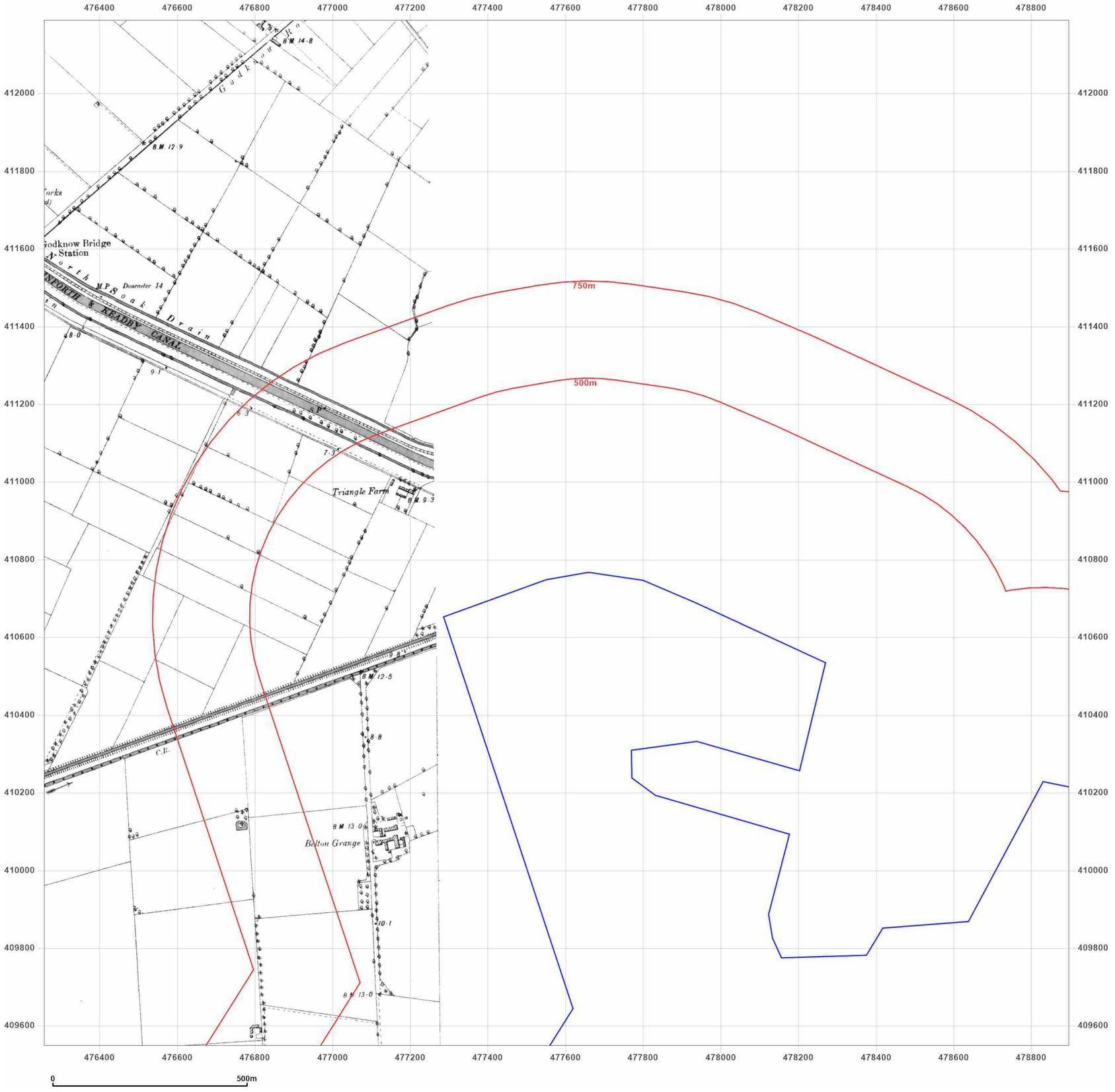

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: County Series

Map date: **1885**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
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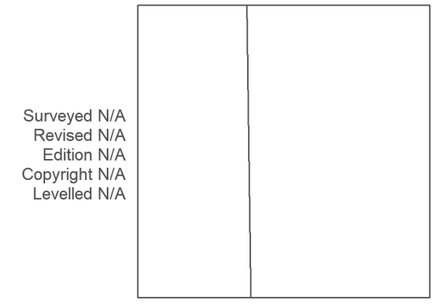
Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A



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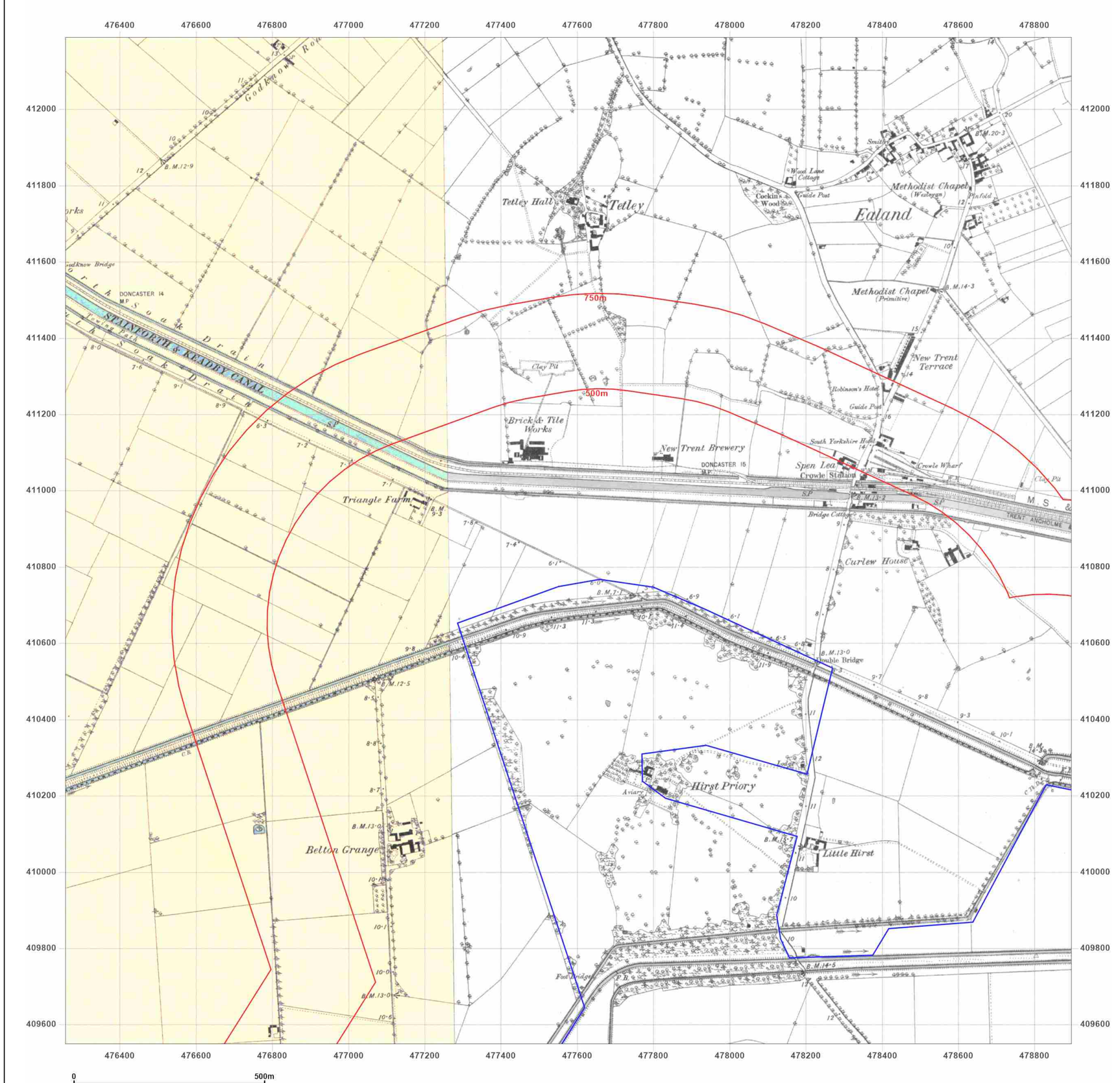

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: County Series

Map date: **1885**

Scale: 1:10,560

Printed at: 1:10,560

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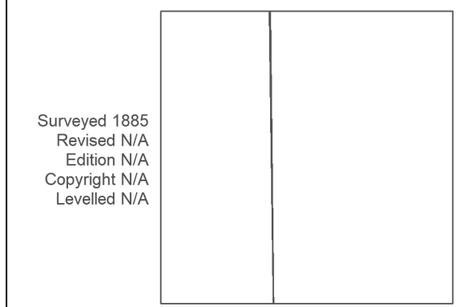

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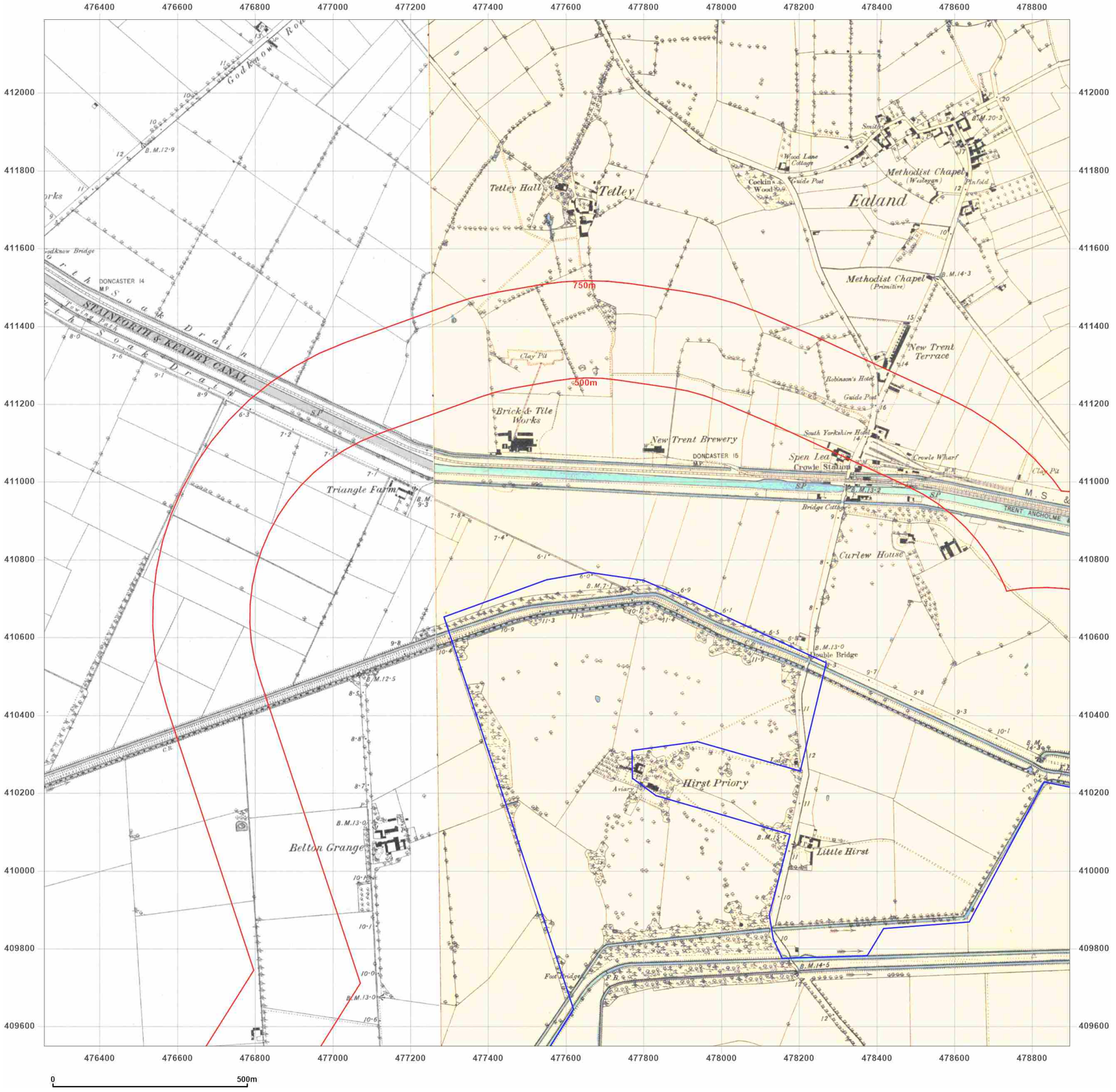

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: County Series

Map date: **1885**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1885
Revised 1885
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1885
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: County Series

Map date: **1890**

Scale: 1:10,560

Printed at: 1:10,560

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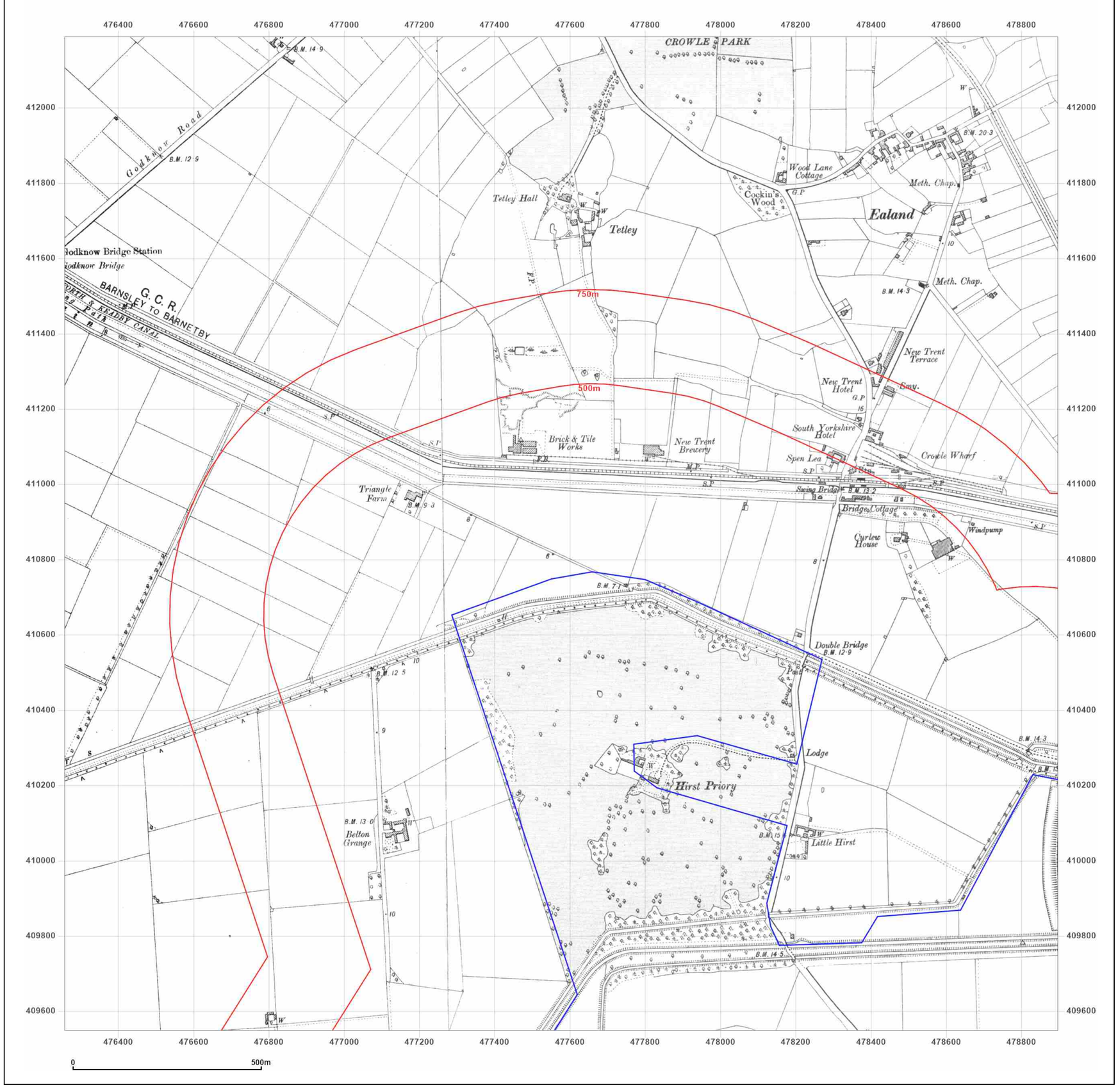

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: County Series

Map date: **1904-1906**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

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

Surveyed 1885
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

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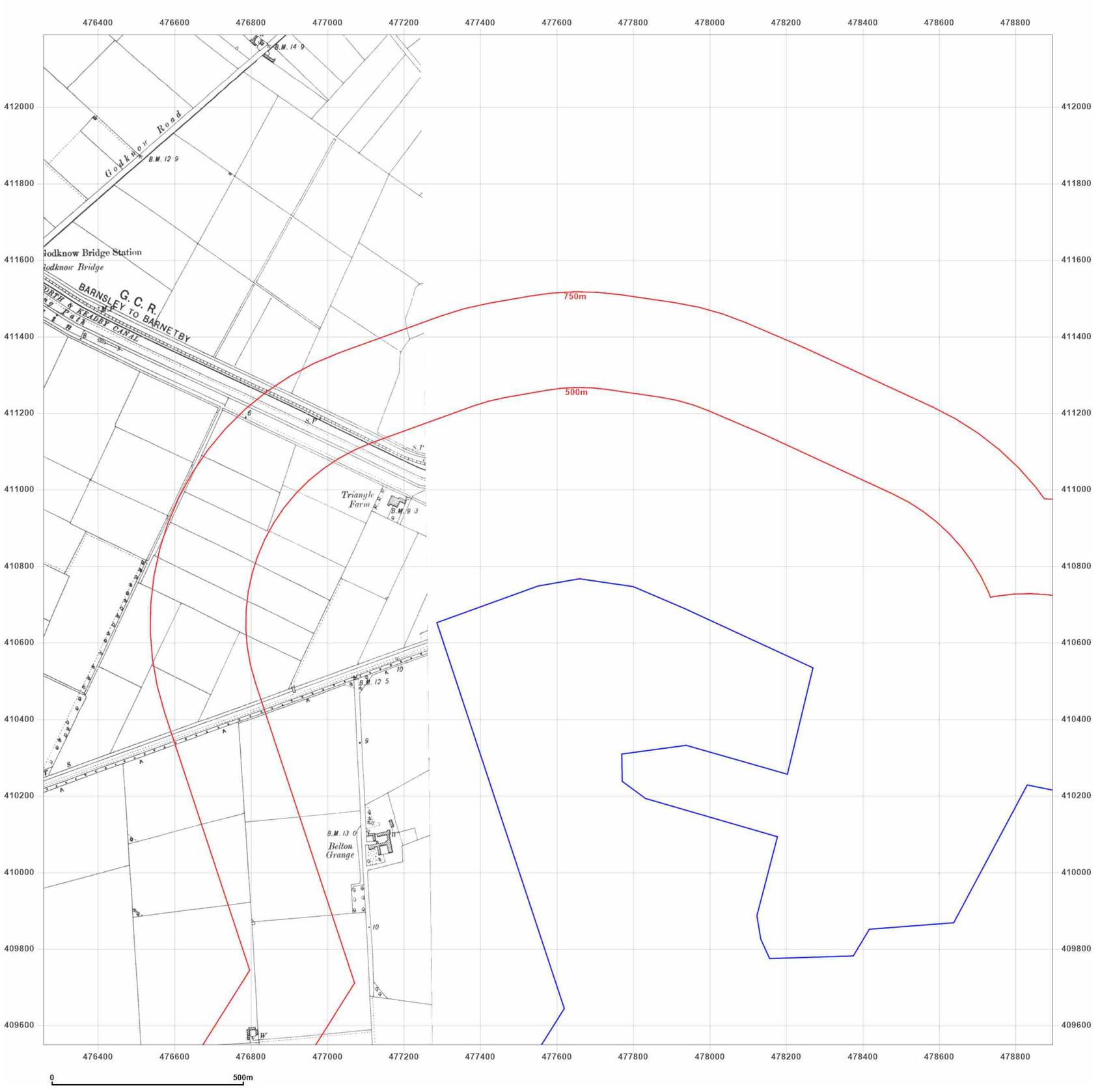


Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: County Series

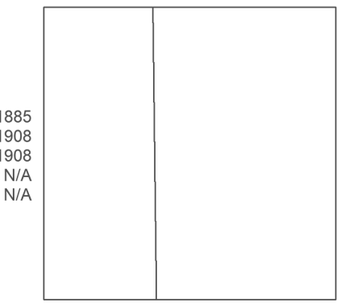
Map date: **1908**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1885
Revised 1908
Edition 1908
Copyright N/A
Levelled N/A



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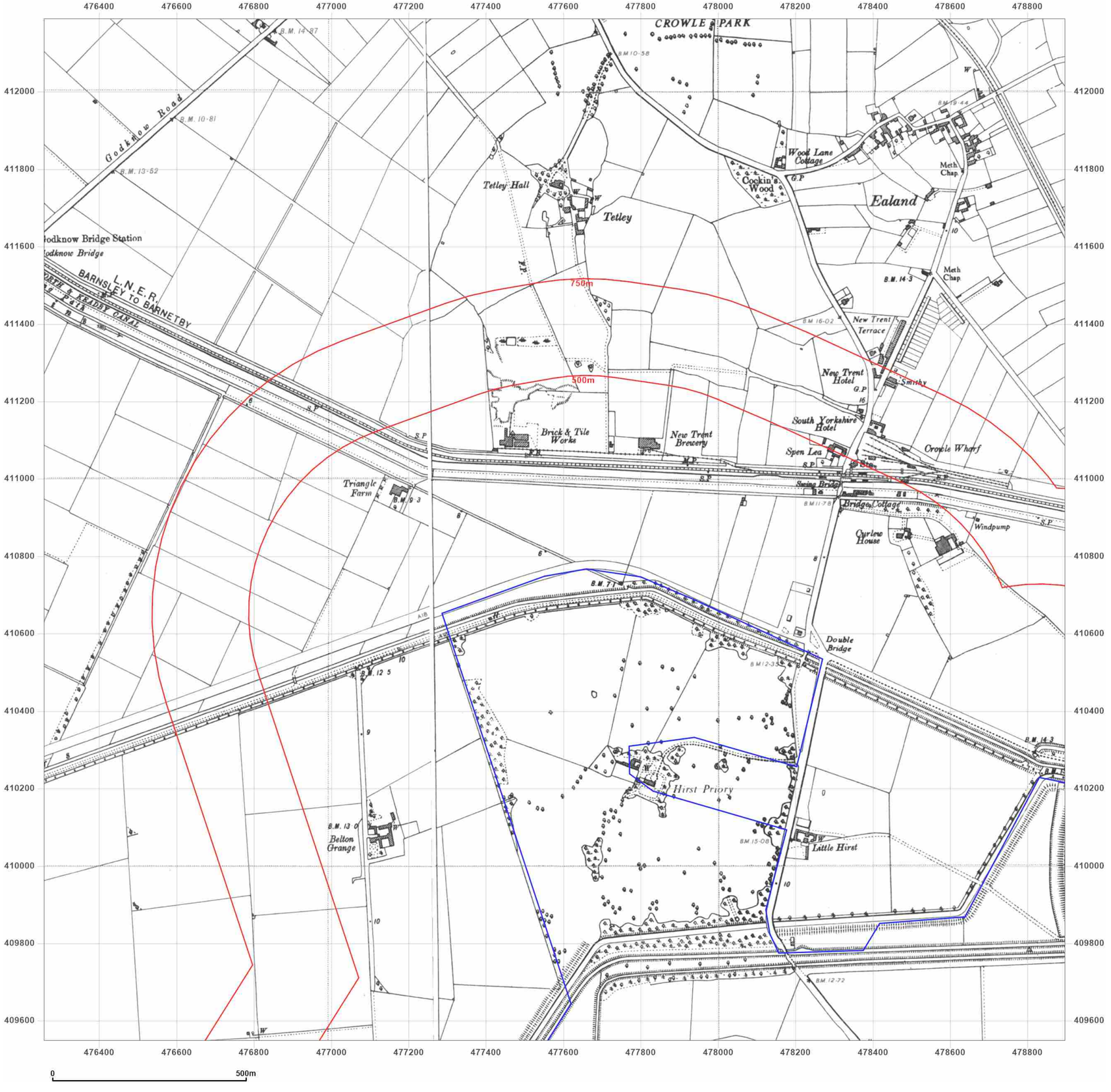

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
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Surveyed 1885
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1885
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

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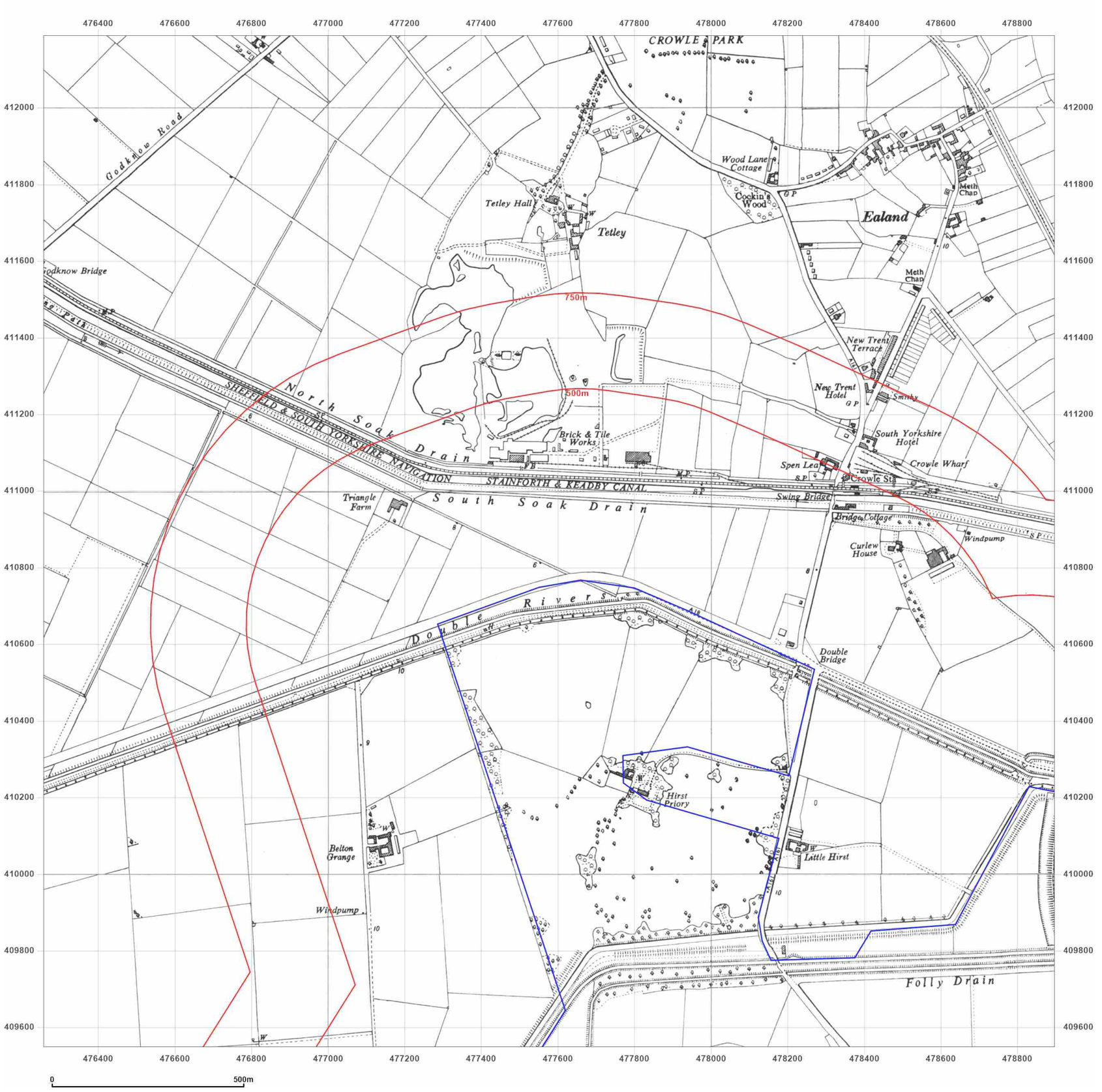


Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: Provisional

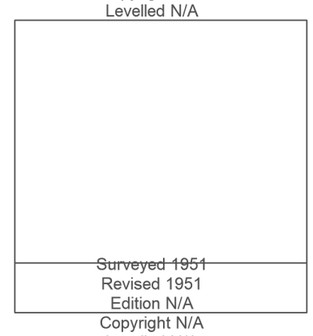
Map date: **1951**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A



~~Surveyed 1951~~
Revised 1951
Edition N/A
Copyright N/A
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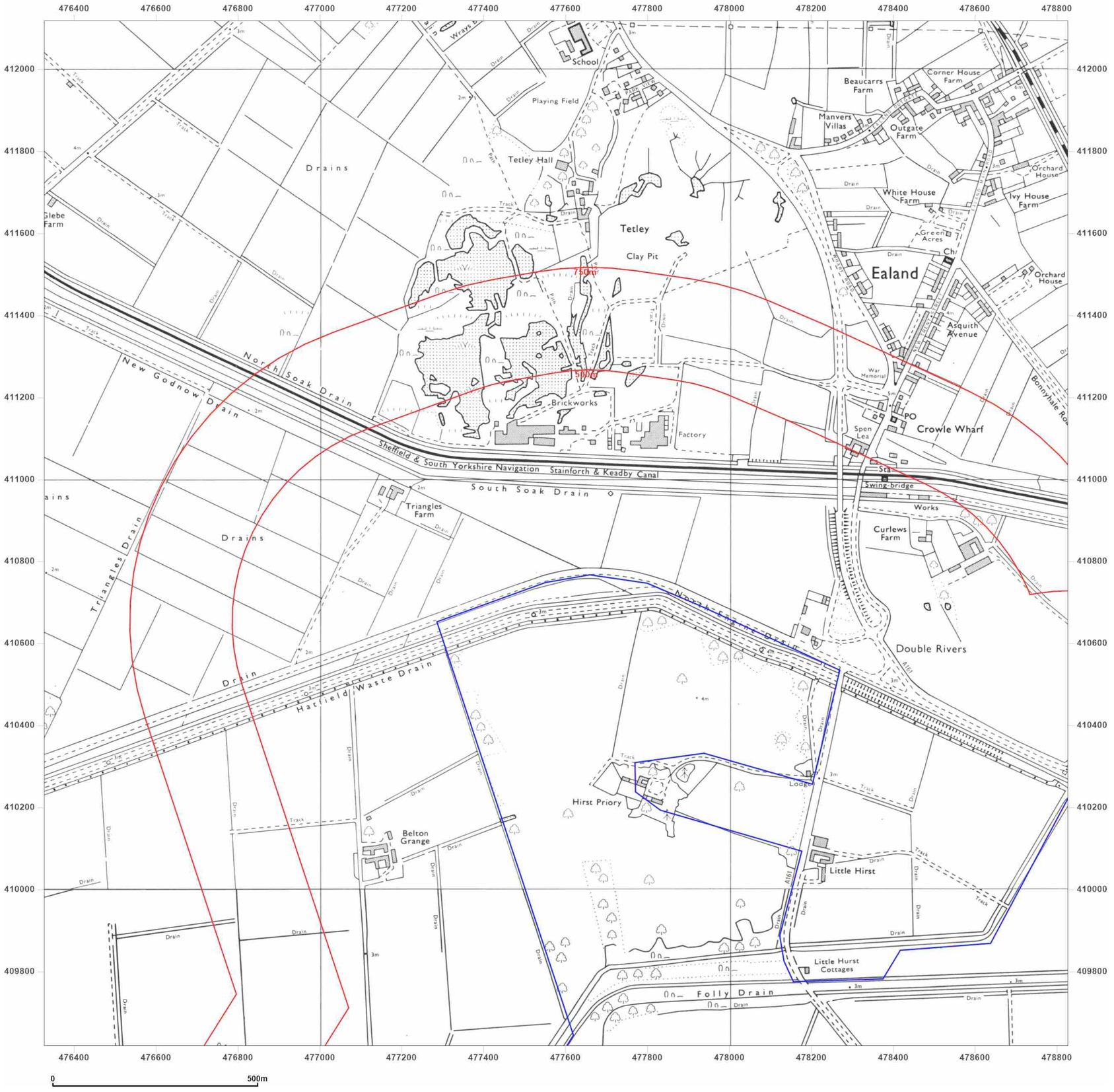

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: National Grid

Map date: **1973**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
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Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
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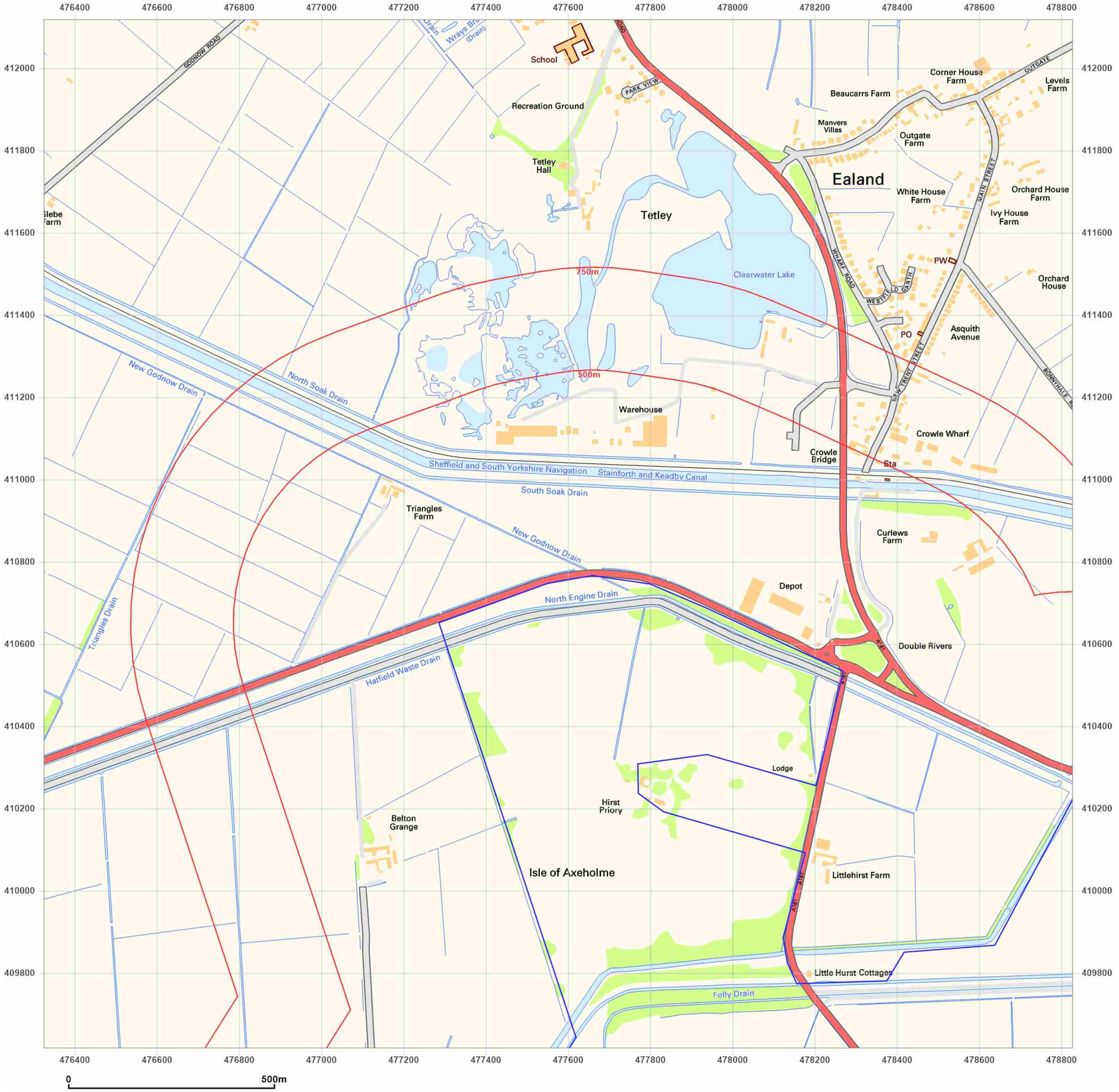

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

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

N
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2001

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Production date: 04 March 2025

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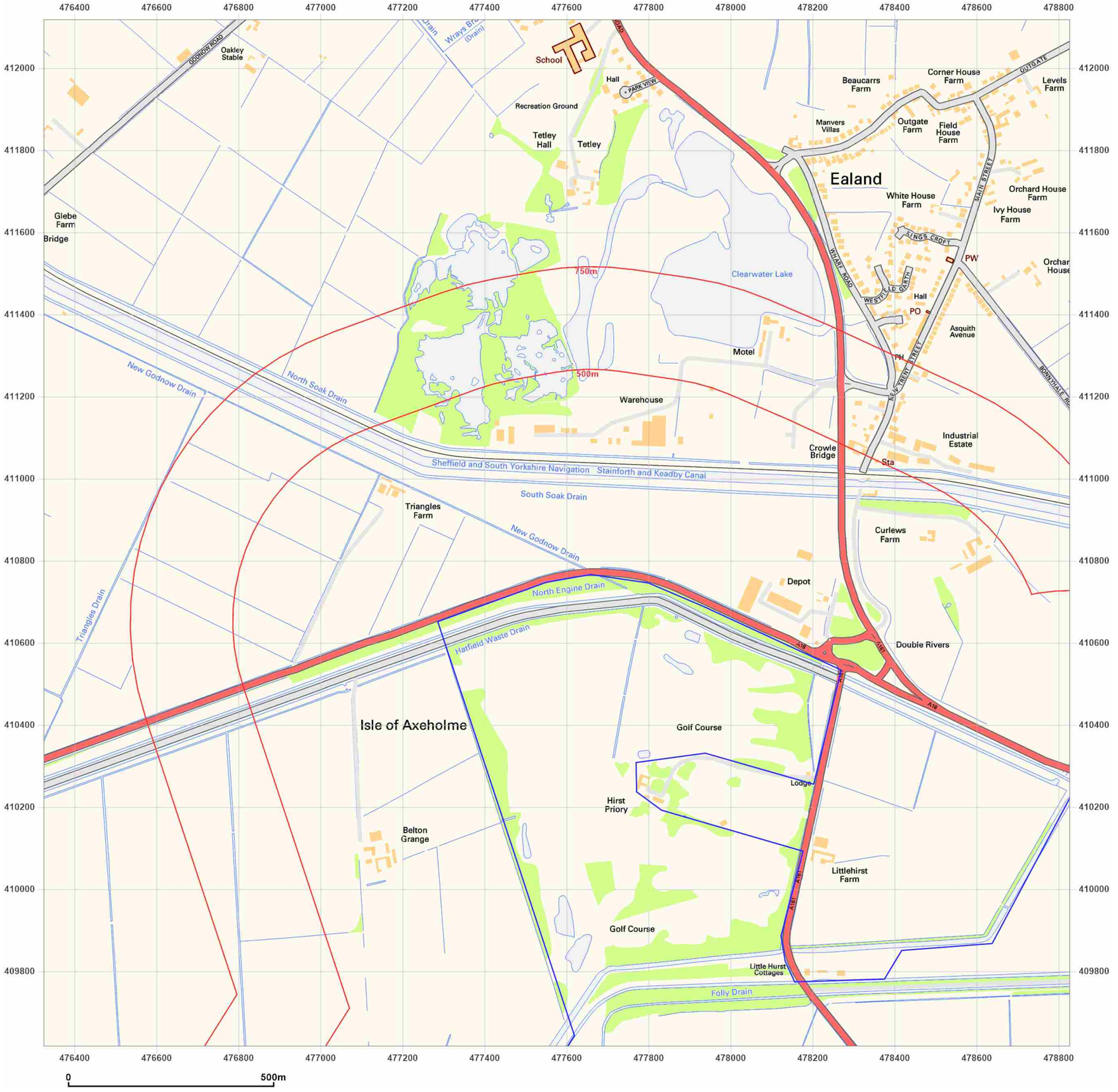

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_1_2
Grid Ref: 477576, 410868

Map Name: National Grid
Map date: **2025**
Scale: 1:10,000
Printed at: 1:10,000

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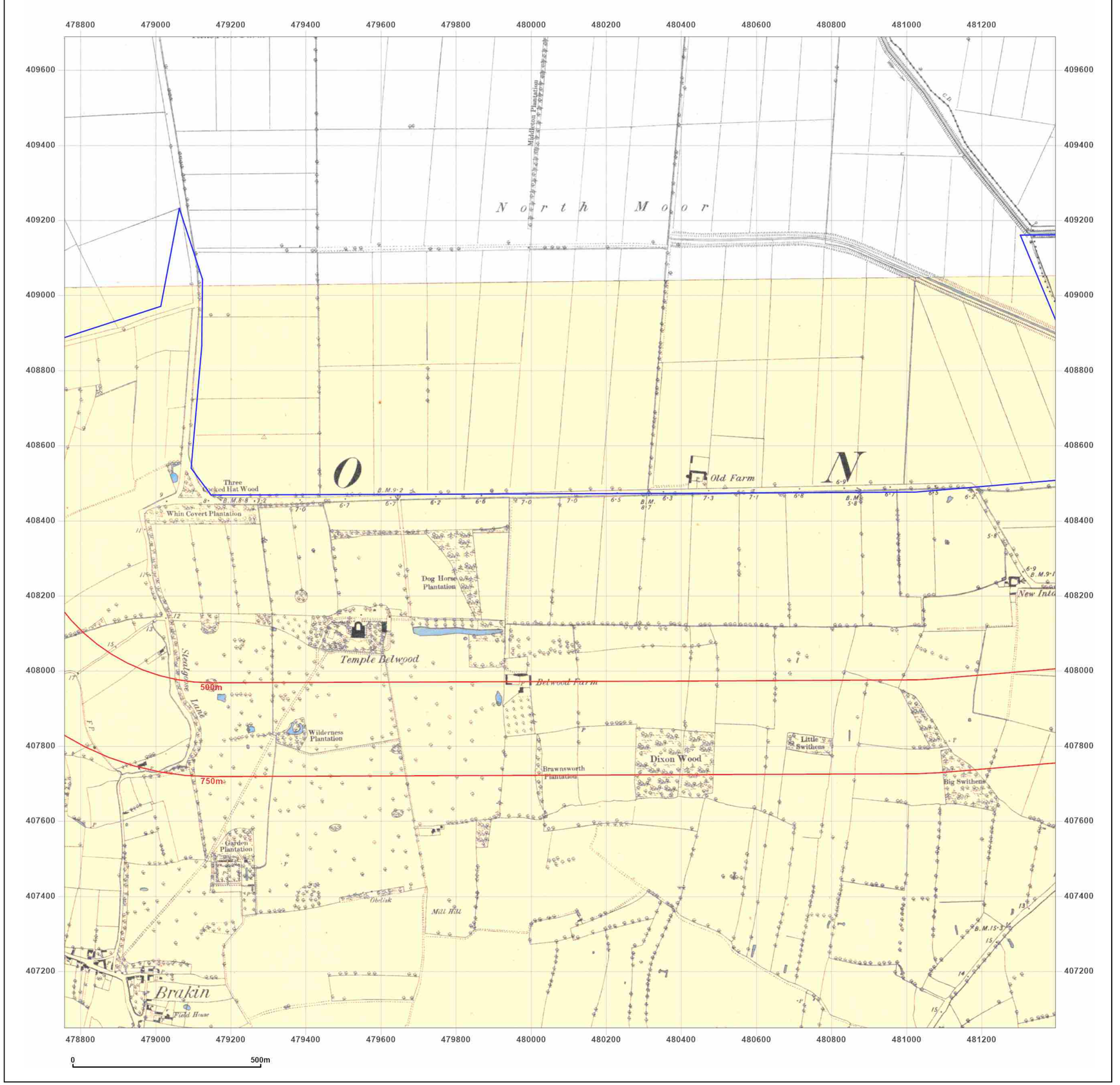

Groundsure INSIGHTS

Site Details:

Tween Bridge Area F

Client Ref: P02159615
Report Ref: GS-91E-HSN-TBG-8PG_SS_2_1
Grid Ref: 480076, 408368

Map Name: County Series

Map date: **1885**

Scale: 1:10,560

Printed at: 1:10,560

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