GROUND ENGINEERING LIMITED
Newark Road, Peterborough PE1 5UA
Tel: 01733 566566
Email: admin@groundengineering.co.uk

REPORT ON A PHASE 1 DESK STUDY
STATION YARD
MILL DROVE SOUTH
COWBIT
SPALDING
LINCOLNSHIRE

Report Reference C15840

On behalf of:

Seagate Homes
Holbeach Manor
Fleet Road
Holbeach
PE12 7AX

December 2022

CONTENTS

Introduction	Page 1
Location, Topography and Geology of the Site	Page 2
Site History	Page 4
Summary of Environmental Data	Page 7
Preliminary Risk Assessment	Page 10
Conclusions	Page 13

FIGURES

Site Location Plan	Figure 1
Site Plan	Figure 2

APPENDICES

Historical Map Extracts	Appendix 1
Environmental Database Information	Appendix 2

SEAGATE HOMES

REPORT ON A PHASE 1 DESK STUDY

STATION YARD

MILL DROVE SOUTH

COWBIT

SPALDING

LINCOLNSHIRE

Report Reference No. C15840 **December 2022**

INTRODUCTION

Ground Engineering Limited was instructed by the client, Seagate Homes, to carry out a Phase 1 desk study to establish the site history and likely ground conditions beneath a plot of land known as Station Yard, Mill Drove South, Cowbit, Spalding, Lincolnshire. These works were scheduled, by the client, in advance of proposed residential development of the site.

The study has been compiled from historical map research and reference to geological and environmental database information.

This report summarises the findings of the desk study and develops a conceptual model with an evaluation relating to the likelihood of ground contamination being present together with comments relating to the ground conditions anticipated beneath the site.

LOCATION, TOPOGRAPHY AND GEOLOGY OF THE SITE

The site lies on the northern side of the Lincolnshire village of Cowbit, as shown in Figure 1, and is situated about 5km to the south of Spalding. The site is centred at National Grid Reference TF 2653 1818.

The site comprises a 40m wide by 160m long plot of derelict land, former railway sidings, located to the north of Stone Gate, and to the west of Mill Drove South. A dirt track runs along the western side of the site, which was generally overgrown with grass, brambles, bushes, and Silver Birch and Hawthorn saplings. Centrally within the southern half of the site was a double height brick constructed building, believed to have been a goods or engine shed. A strip of concrete hardstanding runs around the former engine shed and along the eastern side of the site. There were some mounds of fly-tipped materials including soil, construction rubble, wood and timber scattered across the site. Trees around the site included Lombardy Poplar, Silver Birch and Leyland Cypress.

The fenland site was flat and level and stands at about 3mOD.

Barrier Bank comprises a flood defence embankment, that runs parallel to New River, which was about 550m to the south-west of the site. The River Welland was located about 1.6km to the south-west.

The geological map for the area, sheet 144 ‘Spalding' at 1:50,000 scale, and Geology of Britain online viewer, show the site to be covered by Tidal Flat Deposits. These comprise a thick superficial cover of clay, silt and sand tidal creek deposits of the Terrington Beds. Older salt marsh and tidal creek deposits of the Barroway Drove Beds are indicated to underlie the Terrington Beds the boundary of which is often marked by the Nordelph Peat. The underlying solid geology is indicated to comprise the Oxford Clay at depth.

It is known from previous work in the Cowbit area that the Tidal Flat Deposits comprise an upper 1m to 2m thick mixed sequence of very soft/soft organic clay/peat; and clay/silt/sand, which pass into very soft, grey, organic clay with interbedded peat layers. At a depth in the order of 10m to 12m the Tidal Flat Deposits are underlain by very stiff Glacial Boulder Clay

believed to be present to at least 20m depth.

SITE HISTORY

Research into the site history involved reference to historical Ordnance Survey (OS) maps, aerial photographs, and internet research. Selected extracts are presented in Appendix 1 and described below:

OS Map Extract	*Description*
1880 OS County Series 142SW/142SE Scale 1:10,560 **Figure A** **1883** OS County Series 142.10/142.11 Scale 1:2500 **Figure B**	The site is shown to be occupied by railway sidings with a large and a smaller goods shed. The railway sidings are on the Great Northern and Great Eastern Joint Railway and Cowbit Railway Station is located about 60m to the south-east on the outskirts of the Fenland village of Cowbit. The railway station coincides with a crossroads between Mill Drove to the north, Back Gate to the south, and Stone Gate to the east and west. There is a small pond located directly to the south-east of the site and a second larger pond to the west of the railway station about 60m to the south. Marshy ground is depicted directly to the north-east.
1904 OS County Series 142.10/142.11 Scale 1:2500 **Figure C**	The site appears as shown in the 1883 map. There is a set of dwellings located just outside the north-east site boundary along Mill Drove
1951 OS County Series 142SW/142SE Scale 1:10,560 **Figure D**	The site and immediate surroundings appears as shown in the 1904 map.
1969 OS Sheet TF2618 Scale 1:2500 **Figure E**	Whilst the main railway line remains, the sidings are no longer shown. The railway buildings remain and the dwelling to the north-east is identified as Railway Cottages. The railway station to the south is denoted as being disused. To the north of Railway Cottages is Coronation Cottage (presumably built in 1953). The ponds identified in the 1883 map are no longer depicted.
1979 OS Sheet TF21NE Scale 1:10,000 **Figure F**	The site remains as shown in the 1969 map and the main line is still depicted.

OS Map Extract	*Description*
1989 OS Sheet TF21NE Scale 1:10,000 **Figure G**	The railway line is shown to have been dismantled and the site is a vacant plot with the former goods shed remaining.
1992 OS Sheet TF2617/2618 Scale 1:2500 **Figure H**	The site and immediate surroundings appears as shown in the previous map. Trinity Nurseries are shown directly to the north of the site.
2001 OS Sheet TF21NE Scale 1:10,000 **Figure I**	The site and immediate surroundings appears as shown in the previous map.
1999 Aerial Photograph On Page 12, Appendix 2	The site layout appears as shown in the 1992 map. Whilst the majority of the site is overgrown the area to the east and south of the good shed are not. The northern part of the site, to the rear of Coronation Cottage, appears to have been cultivated.
2003 OS Sheet TF2618SW/SE Scale 1:1250 **Figure J**	The site and immediate surroundings appear as shown in the previous map.
2007 Aerial Photograph On Page 11 Appendix 2	The site layout appears unchanged from the 1999 photograph.
2010 OS Sheet TF21NE Scale 1:10,000 **Figure K**	The site and immediate surroundings appears as shown in the previous map.
2013 Aerial Photograph On Page 10 Appendix 2	The site layout appears unchanged from the 2007 photograph.
2018 Aerial Photograph On Page 9 Appendix 2	The site layout appears unchanged from the 2013 photograph.
2021 Aerial Photograph On Page 8 Appendix 2	The site layout appears unchanged from the 2018 photograph.

OS Map Extract	*Description*
2022 OS Sheet TF21NE Scale 1:10,000 **Figure L** **2022** OS Sheet TF2617/2618 **Figure M**	The site and immediate surroundings appears as shown in the previous map.

Historical Summary

Cowbit railway station is understood to have been opened by the Great Northern and Great Eastern Joint Railway in September 1867. The site was located directly to the north-west of the railway station and included a goods shed, a smaller building, and railway sidings as shown in the 1887 and 1888 map editions.

Whilst the railway station was closed by British Railways in September 1961, resulting in the removal of the railway sidings, the main line remained in use by diesel rolling stock through to its closure in November 1982. The railway lines were subsequently removed by November 1985. The plot and goods shed have remained as a derelict site through to the time of this report in December 2022.

SUMMARY OF ENVIRONMENTAL DATA

Appendix 2 contains information derived from Environmental Databases for a radius of up to 2000m from the site. The information covers datasets held by the Groundsure with contributors including the local authority, the Environment Agency, British Geological Survey, Ordnance Survey and the Coal Authority and the results, within a radius of 250m, are summarised below:

Historical Industrial Sites	**On Site**	**0-50m**	**51 - 250m**
Historical Industrial Land Uses	14	3	15
Historical Tanks	0	0	1
Historical Energy Features Database	0	0	0
Historical Petrol and Fuel Site Database	0	0	0
Historical Garages	0	0	0
Historical Military Land	0	0	0
Landfill and Other Waste Sites	**On Site**	**0-50m**	**51 - 250m**
Landfill Sites	0	0	0
Waste Sites	0	0	0
Waste Exemptions	0	0	0
Current Industrial Land Uses	**On Site**	**0-50m**	**51 - 250m**
Recent Industrial Land Uses	1	0	3
Current or Recent Petrol Stations	0	0	0
Electricity Cables	0	0	0
Gas Pipelines	0	0	0
Sites Determined as Contaminated Land	0	0	0
Permits/Authorisations	0	0	6
Pollution Discharges	0	0	0
Dangerous Substances	0	0	0
Pollution Incidents	0	0	0
Pollutions Inventories	0	0	0
Hydrogeology	**On Site**	**0-50m**	**51 - 250m**
Superficial Aquifer	Identified (within 500m)		
Bedrock Aquifer	Identified (within 500m)		
Groundwater Vulnerability	Identified (within 50m)		
Groundwater Abstractions	0	0	0
Surface Water Abstractions	0	0	0
Potable Abstractions	0	0	0
Source Protection Zones	0	0	0
Hydrology	**On Site**	**0-50m**	**51 - 250m**
Water Network (OS MasterMap)	1	8	19
Surface Water Features	1	2	9

River and Coastal Flooding	On Site	0-50m	51 - 250m
Risk of Flooding from Rivers and Sea	Medium (within 50m)		
Historical Flood Events	0	0	0
Flood Defences	0	0	0
Areas Benefiting from Flood Defences	0	0	0
Flood storage areas	0	0	0
Flood Zone 2	Identified (within 50m)		
Flood Zone 3	Identified (within 50m)		
Surface Water Flooding			
Surface Water Flooding	1 in 30 year, 0.3m-1.0m (within 50m)		
Groundwater Flooding			
Groundwater Flooding	Negligible (within 50m)		
Designated Environmentally Sensitive Sites	**On Site**	**0-50m**	**51 - 250m**
Environmentally sensitive sites	1	0	0
Natural Hazards			
Hazard			
Shrinking or Swelling Clay	Low (within 50m)		
Running Sand	Moderate (within 50m)		
Compressible Ground	Moderate (within 50m)		
Collapsible Deposits	Negligible (within 50m)		
Landslides	Very Low (within 50m)		
Ground Dissolution of Soluble Rocks	Negligible (within 50m)		
Mining, Ground Workings & Natural Cavities	**On Site**	**0-50m**	**51 - 250m**
Natural Cavities	0	0	0
Surface Ground Workings	0	2	1
Underground Mining	0	0	0
Radon			
The property is not in a Radon Affected Area, as between less than 1% of properties are above the action level. The site lies within an area where No radon protection measures are necessary.			

Database Summary

There are 14 historical records relating to the railway siding usage on the site and a further 12 railway references (dated between 1887 and 1951) within 250m. A further 5 uses relate to horticultural nursery usage and one to a corn windmill (dated 1887 to 1989) within 250m.

There is 1 unspecified tank record (1992) located within 250m of the site.

There are no landfill sites or waste sites within a 250m radius.

There is one recent industrial usage, which relates to a pumping station on the site and 3 within 250m relating to farming, Crowland Pallets and an electricity substation.

There are six records of a sewage discharge consent for Cowbit WRC located 97m to the north-west.

The site is indicated to be directly underlain by superficial Tidal Flat Deposits with the underlying solid geology identified as the Oxford Clay Formation, which are both Unproductive in terms of aquifer classification. There are no surface water or groundwater abstraction points within 250m distance from the site.

There are 28 drains listed around the site including the New River, a primary water course, which is located 0.6km to the west of the site.

The site lies within an area that has a low and medium risk of flooding and lies within an area that also has negligible risk below surface for groundwater flooding.

The property is in an area where less than 1% of properties are above the action level for radon. The site lies within an area where no radon protection measures are necessary.

PRELIMINARY RISK ASSESSMENT

Potential sources of contamination present on or beneath the site would relate primarily to; the historical use of the site; possible damaged drainage; the presence of contaminated soil; and the potential presence of soil gas beneath the site.

In order to assess the risks associated with the presence of ground contamination the linkages between the sources and potential receptors to contamination need to be established and evaluated. This is in accordance with the Environmental Protection Act 1990, which provides a statutory definition of Contaminated Land. To fall within this definition it is necessary that, as a result of the condition of the land, substances may be present on or under the land such that

- *Significant harm is being caused or there is a significant possibility of such harm being caused; or*
- *Pollution of controlled waters is being, or is likely to be, caused*

There are three principal factors that are assessed whilst undertaking a qualitative risk assessment for any site. These are the presence of a contamination source, the existence of migration pathways and the presence of a sensitive target(s). It should be noted that it is necessary for each element of source, pathway and target to be present in order for exposure of a human or environmental receptor to occur.

UK Government guidance on the assessment of contaminated land, requires risk to human health and the environment to be reviewed using source – pathway – target relationships. If each of these elements is present, the linkage provides a potential risk to the identified targets.

Contaminants or ***potential pollutants*** identified as ***sources*** in relation to the identified previous uses are listed overleaf in Table 1.

Table 1: Identified Potential Contaminant Sources

Contaminant Source	***Comments***
Drainage Beneath Site	Effluent from leaking drains would provide a contaminant source.
Soil Beneath Site	Contamination may be present within any made ground materials on the site and former railway use.
Soil Gas	Potential soil gas generated from any made ground present and underlying natural organic soil and peat Tidal Flat Deposits.
Ground Contamination Outside Site Boundary	Ground contamination migrating from adjoining sites.

A ***Pathway*** is defined as one or more routes through which a receptor is being, or could be, exposed to, or affected by, a given contaminant.

Potential ***Target or Receptors*** fall within the categories of Human Health, Water Environment, Flora and Fauna, and Building Materials.

There are a number of possible pathways for the contaminants identified on the site to impact human and/or environmental receptors and these are summarised in Tables 2 and 3.

Table 2: Human Receptors and Pathways

Human Receptor-Mechanism	***Typical Exposure Pathway***
Human Inhalation	Breathing Dust and Fumes Breathing Gas emissions
Human Ingestion	Eating -contaminated soil, for example by small children -produce grown on contaminated soil Ingesting dust or soil on vegetables Drinking contaminated water
Human Contact	Direct skin contact with contamination Direct skin contact with contaminated liquids

Table 3: Water Receptors and Pathways

Receptor-Water Environment	***Typical Exposure Pathway***
The site is indicated to be directly underlain by superficial Tidal Flat Deposits with the underlying solid geology identified as the Oxford Clay Formation, which are both Unproductive in terms of aquifer classification.	Surface infiltration of atmospheric waters into the soils beneath the site could wash or dissolve potential contaminants and migrate to underlying groundwater. Contamination leads to restriction/prevention of use as a resource, for example, drinking water, and can have secondary impacts on other resources, which depend on it.
There are 28 drains listed around the site including the New River, a primary water course, which is located 0.6km to the west of the site.	Surface infiltration of atmospheric waters into the soils beneath the site could wash or dissolve potential contaminants and laterally migrate. Contamination leads to a restriction/prevention of use: -as drinking water resource -for amenity use Effects on aquatic life

Preliminary Conceptual Model

Assessment of the potential linkage between ground contamination sources, human and environmental receptors have been assessed based on the desk study research documented in the preceding sections of this report.

A generalised preliminary conceptual model is presented below in Table 4.

Table 4: Preliminary Conceptual Model Relative to Proposed Development

Receptors	Pathway	Estimated Potential for Linkage with Contaminant Sources			
		Contaminant Source **Drainage Beneath Site**	Contaminant Source **Soil Beneath Site**	Contaminant Source **Soil Gas**	Contaminant Source **Ground Outside Site Boundary**
Human Health – site and ground workers	Ingestion and Inhalation of contaminated Soil, Dust and Vapour	Low likelihood	Likely	Likely	Low likelihood
Human Health – users of completed development	Ingestion and Inhalation of contaminated Soil, Dust and Vapour	Low likelihood	Likely	Likely	Low likelihood
Water Environment	Migration through ground into surface water or surrounding groundwater	Low likelihood	Low likelihood	Low likelihood	Low likelihood
Flora	Vegetation on site growing on contaminated soil	Low likelihood	Low likelihood	Unlikely	Unlikely
Building Materials	Contact with contaminated soil	Low likelihood	Low likelihood	Unlikely	Unlikely

Key to Table 4 Estimated Potential for Linkage with Contaminant Source	**Definition**
High likelihood	There is a pollution linkage and an event that either 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	There is a pollution linkage, and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such an event would take place and is less likely in the shorter term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long term.
NA	Not Applicable

CONCLUSIONS

Cowbit Railway Station is understood to have been opened by the Great Northern and Great Eastern Joint Railway in 1867. In 1887 the site, which was located directly to the north-west of the railway station, included a goods shed, a smaller building, and railway sidings. Following closure of the railway station in 1961 the railway sidings were removed leaving the main line, which remained in use until 1982, and was subsequently removed by 1985. Since then the site became derelict and its layout unchanged through to the time of this survey in December 2022.

Anticipated Ground Conditions and Bearing Properties

The Tidal Flat Deposits are expected to have very poor bearing properties and high compressibility, which could cause unacceptable total and differential settlements beneath new buildings. Traditional foundations may not satisfy modern building standards and it is likely that consideration should be given to adopting piled foundations.

A ground investigation in the form of deep cable percussion boreholes would be necessary to in order to provide information to inform the design of piled foundations.

Likelihood of Contamination - Drainage

When preparing for redevelopment redundant foul and surface water drain runs should be removed from beneath the site and precautions implemented to ensure that any remaining effluent is directly disposed of off-site. The integrity of existing drainage should be checked, and damaged sections replaced prior to re-use within the development. The latter measures should reduce the future likelihood of contaminants affecting human health and water environment to very low.

Likelihood of Contamination - Soil beneath the Site

Any contaminated soil present beneath the site would be expected within the made ground, which is likely to have a thickness of less than 1m to 2m.

The former railway use of the site suggests that it is likely that the cover layer of made ground could contain contaminants, such as ash, coke and clinker, which could contain elevated concentrations of polyaromatic hydrocarbons (PAH) and metals such as lead.

It would be prudent to carry out a ground investigation to determine the thickness and nature of the made ground across the site and screen selected soil samples for a wide range of potential contaminants outlined by the Environment Agency (EA) and National House Building Council (NHBC) document R&D 66; 2008 'Guidance for the Safe Development of Housing on Land Affected by Contamination'.

Likelihood of Contamination - Soil outside the Site

It is unlikely that soils outside the site could detrimentally affect future development of the site.

Likelihood of Contamination - Water Environment

It is anticipated that contaminants, if present within the made ground, could migrate into the underlying natural ground, it is unlikely that the Tidal Flat Deposits would be particularly transmissive as they are Unproductive in terms of aquifer classification.

Likelihood of Contamination - Soil Gas

Whist there are no landfills within 250m of the site, the likely presence of organic clay soils and peat means there could be a low hazard potential for methane or carbon dioxide soil gasses affecting the proposed development. A program of soil gas monitoring should be considered in view that there is a possibility that gas precaution measures may be required for new dwellings.

Further Works

It would be prudent to carry out a ground investigation, which should determine the thickness and nature of made ground across the site, and check the near surface soil and water for potential contaminants and soil gas.

The investigation should also determine the geotechnical properties of the natural soil beneath the site and be sufficient to facilitate foundation design including piled foundations.

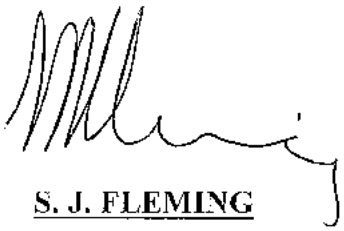
GROUND ENGINEERING LIMITED



J. H. GIBB

B.Sc.(Hons.), M.Sc.(Eng.), C.Geol., F.G.S.

Associate



S. J. FLEMING

M.Sc., M.C.S.M., C.Geol., F.G.S.

Director

Figures

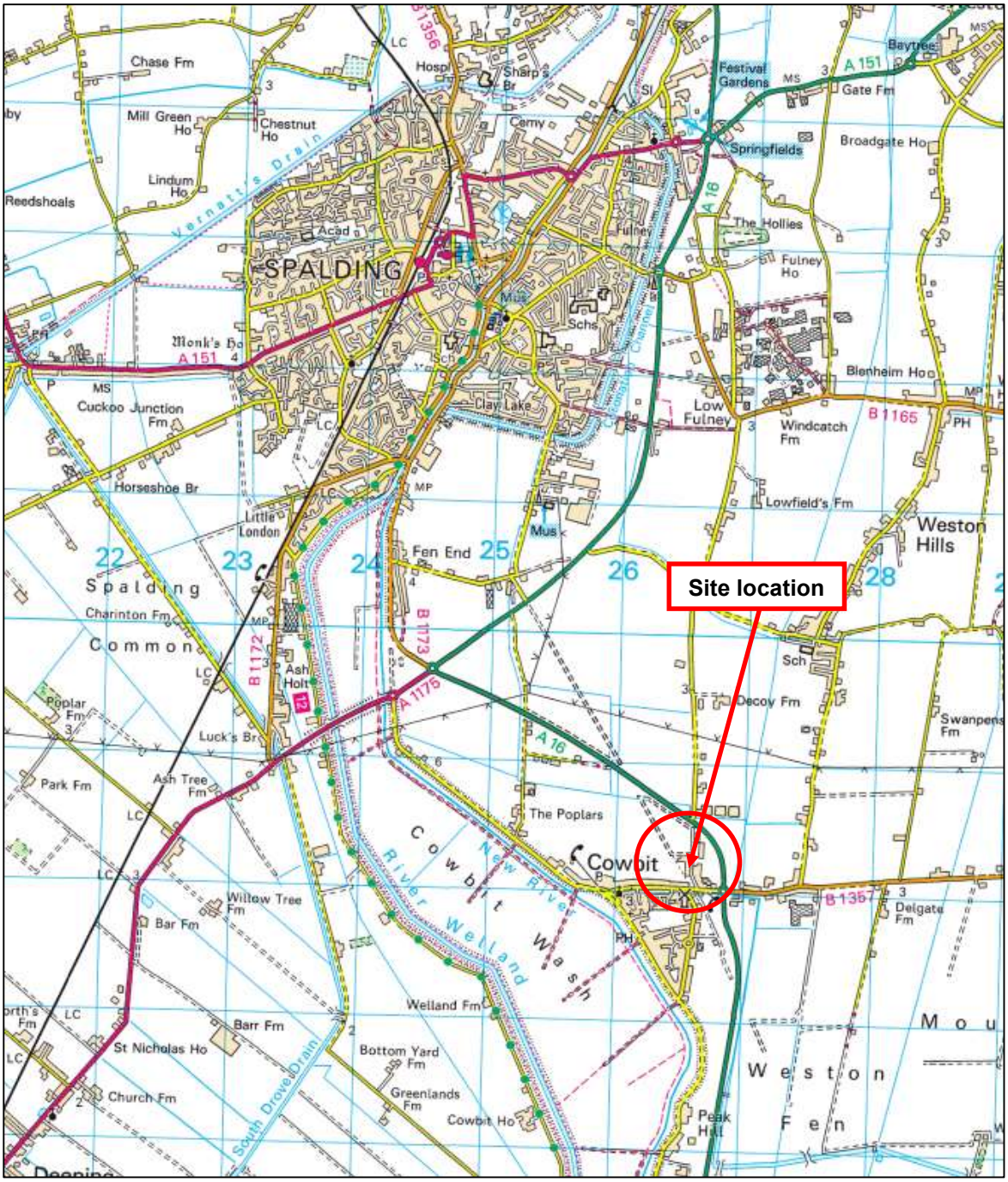
Figure 1: Site Location Plan

Figure 2: Site Plan

Site Location Plan

Figure 1

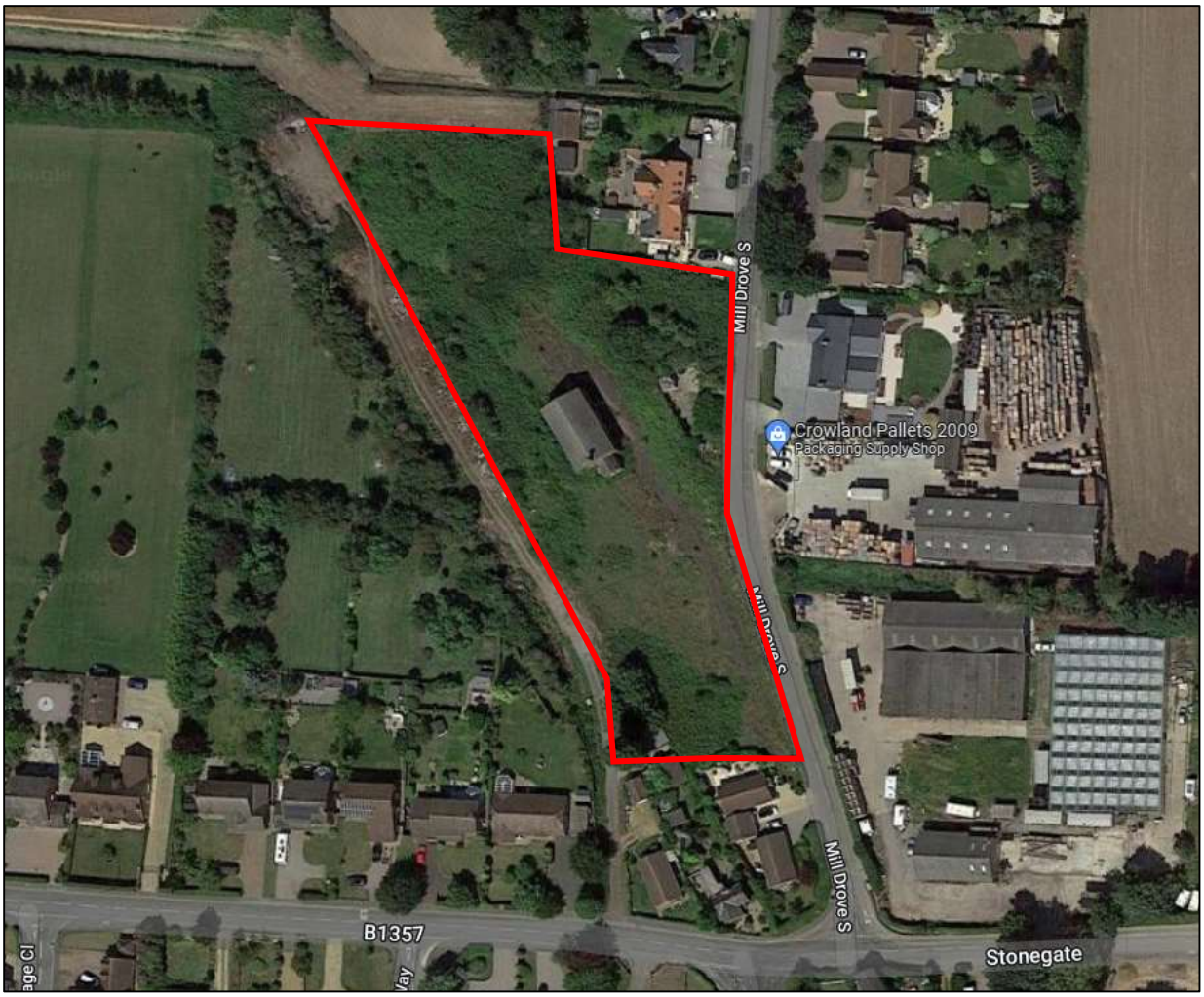
Reproduced from the Ordnance Survey sheet reproduced at **1:50,000** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site Plan

Figure 2



Scale

70m

Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

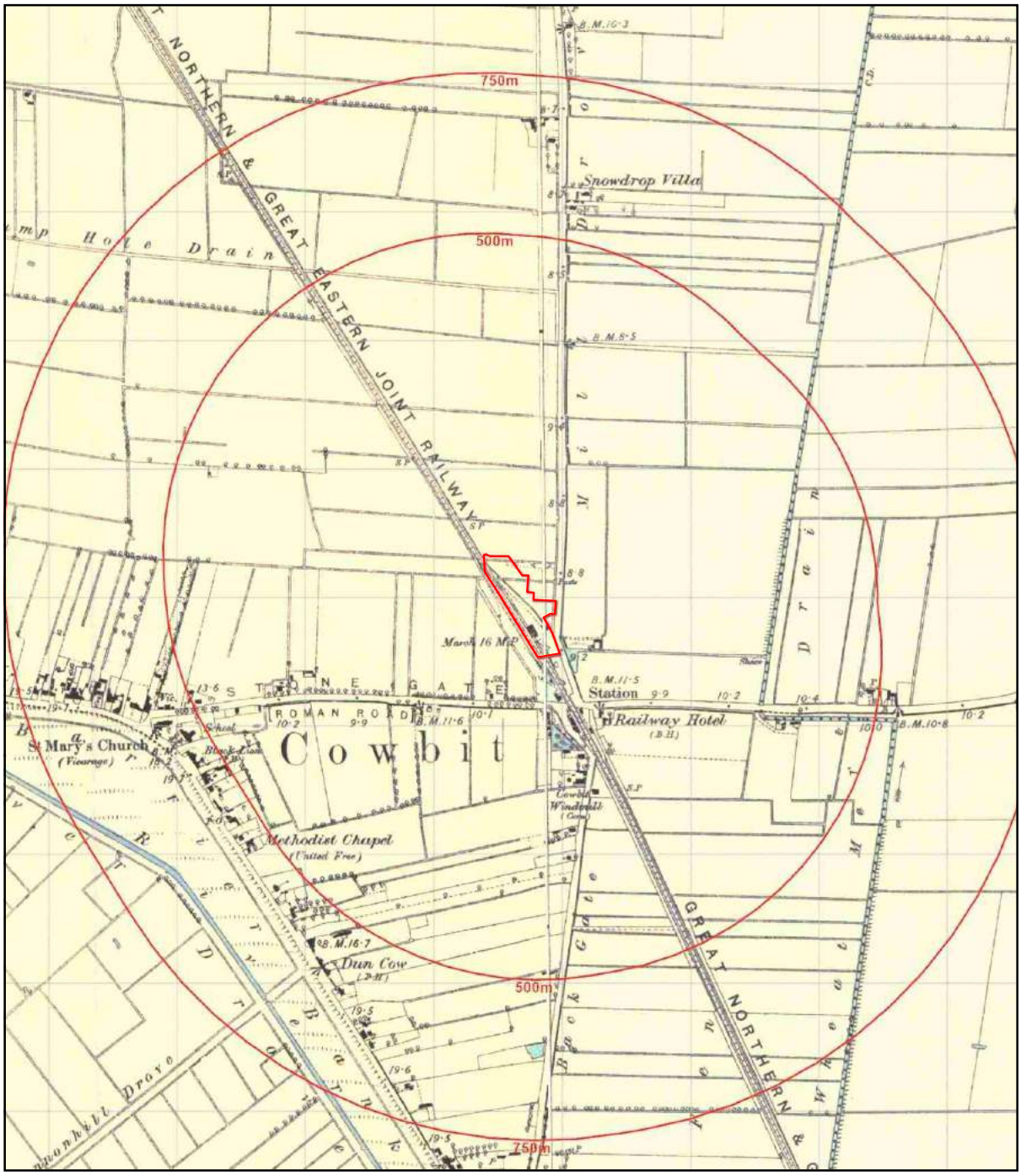
Appendix 1

Historical Map Extracts

Site History

Figure A

Reproduced from the **1887** edition Ordnance Survey sheets **Lincolnshire 142SW & 142SE** at **1:10,560** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

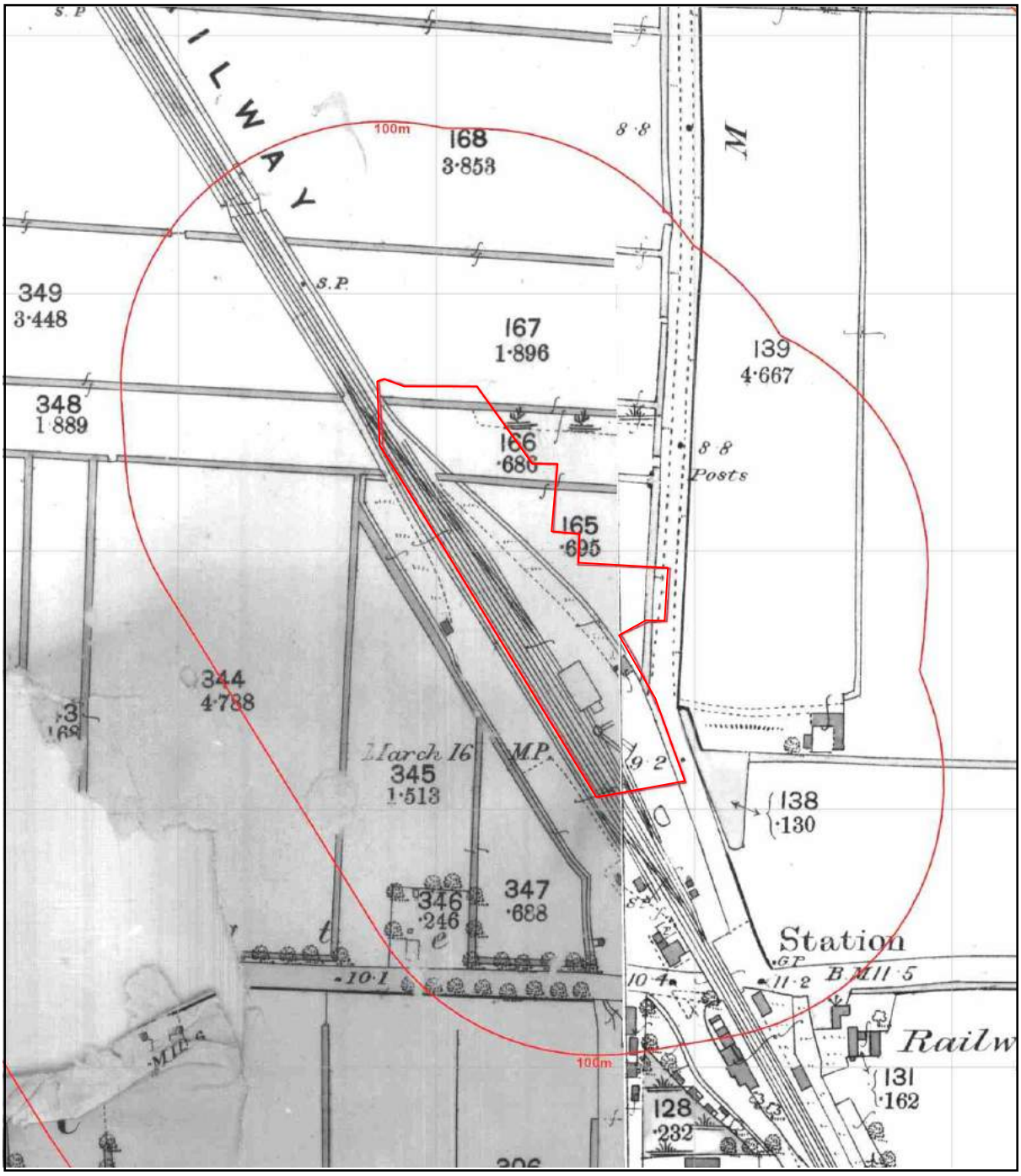


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure B

Reproduced from the **1888** edition Ordnance Survey sheets **Lincolnshire 142.10 & 142.11** at **1:2500** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

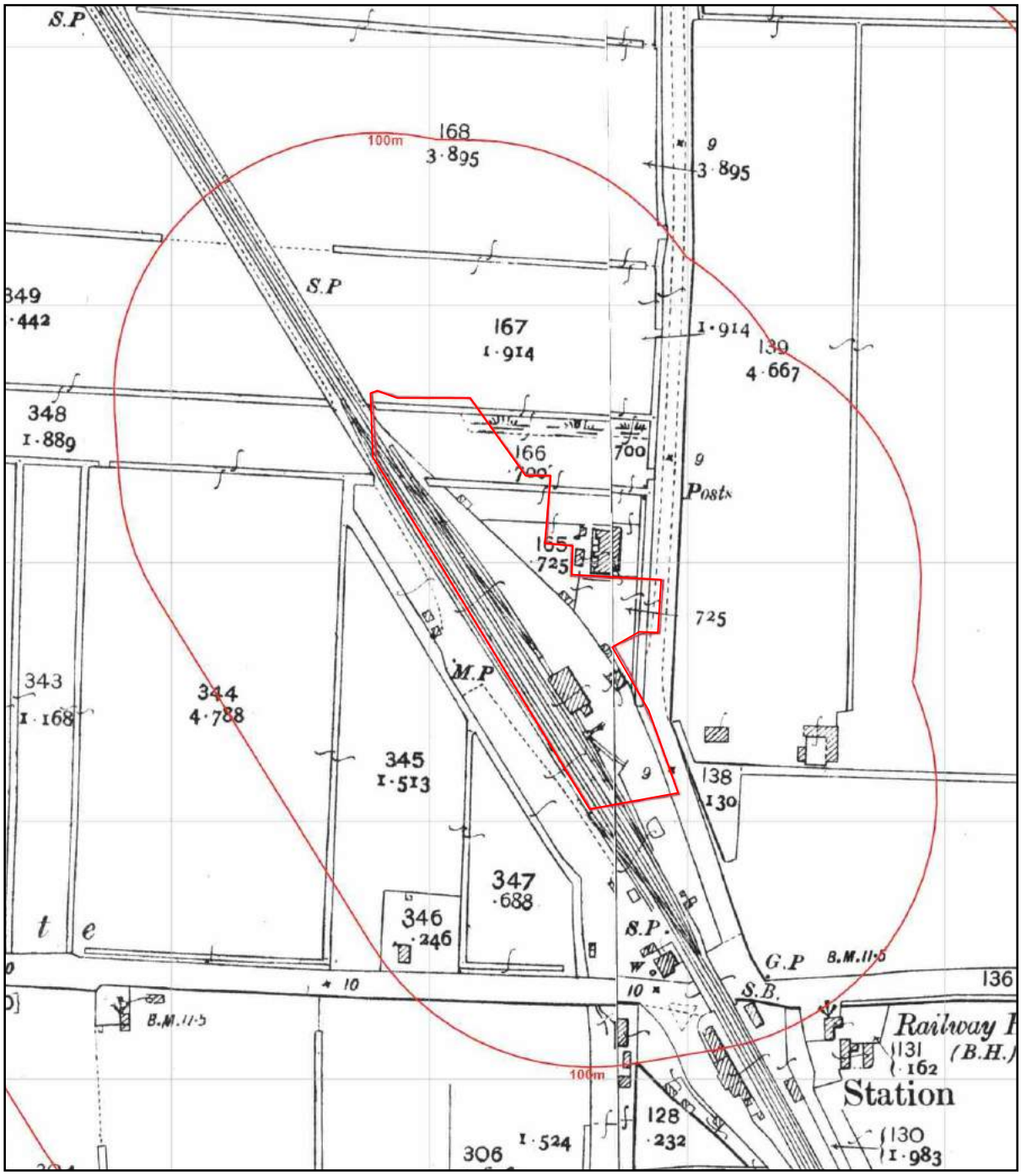


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure C

Reproduced from the **1904** edition Ordnance Survey sheets **Lincolnshire 142.10 & 142.11** at **1:2500** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

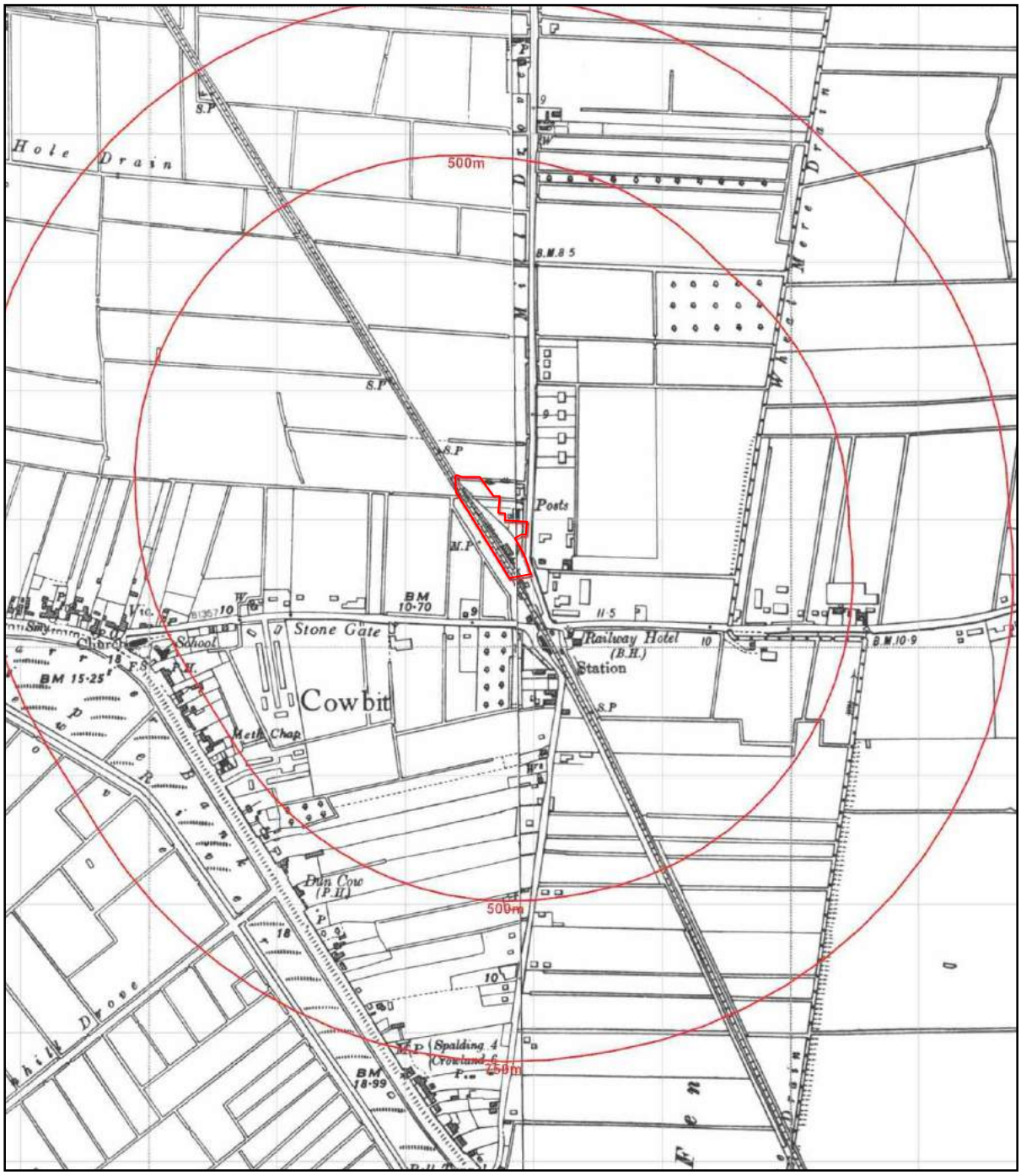


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure D

Reproduced from the **1951** edition Ordnance Survey sheets **Lincolnshire 142SW & 142SE** at **1:10,560** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

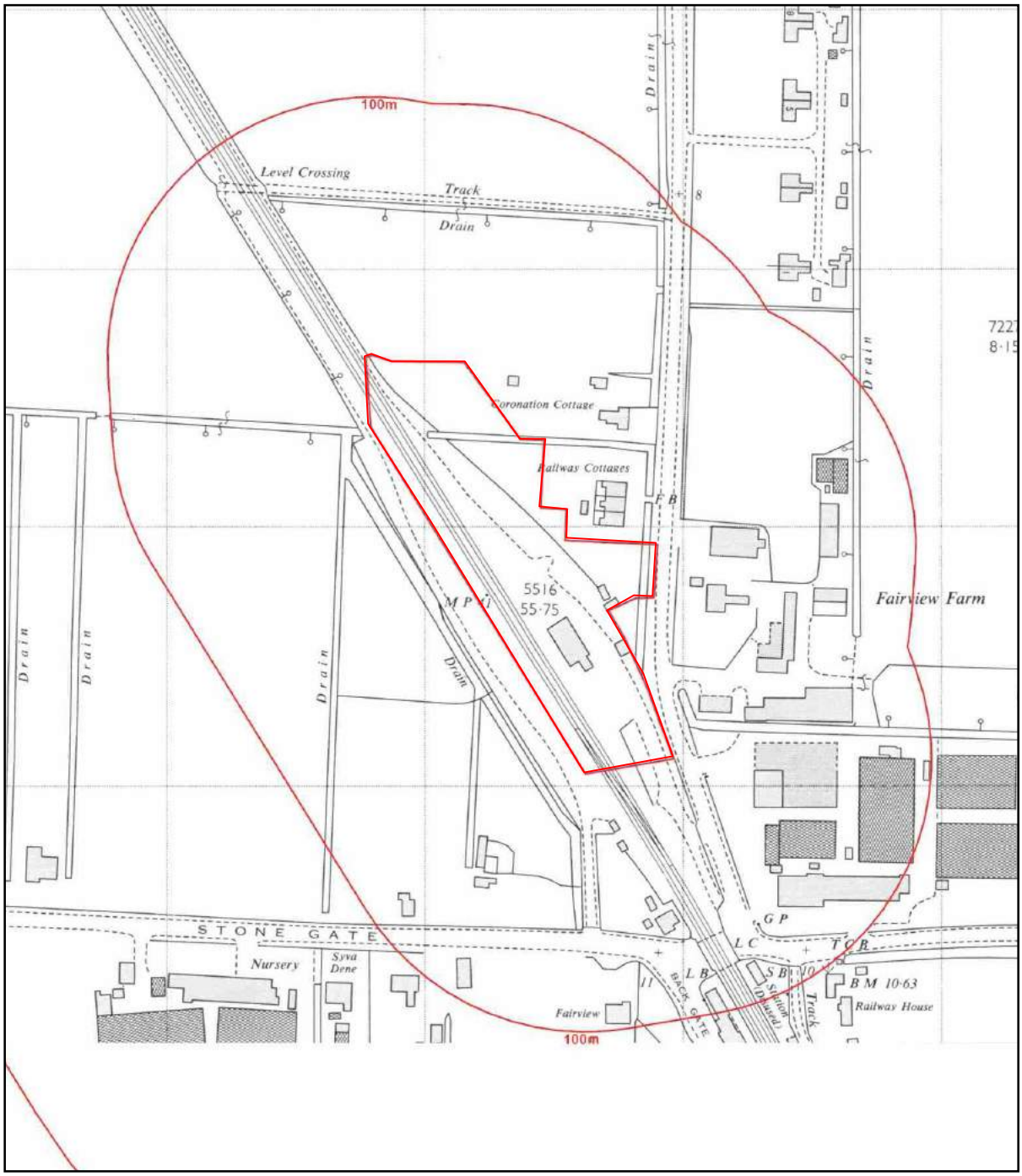


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure E

Reproduced from the **1969** edition Ordnance Survey sheet **TF2618** at **1:2500** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

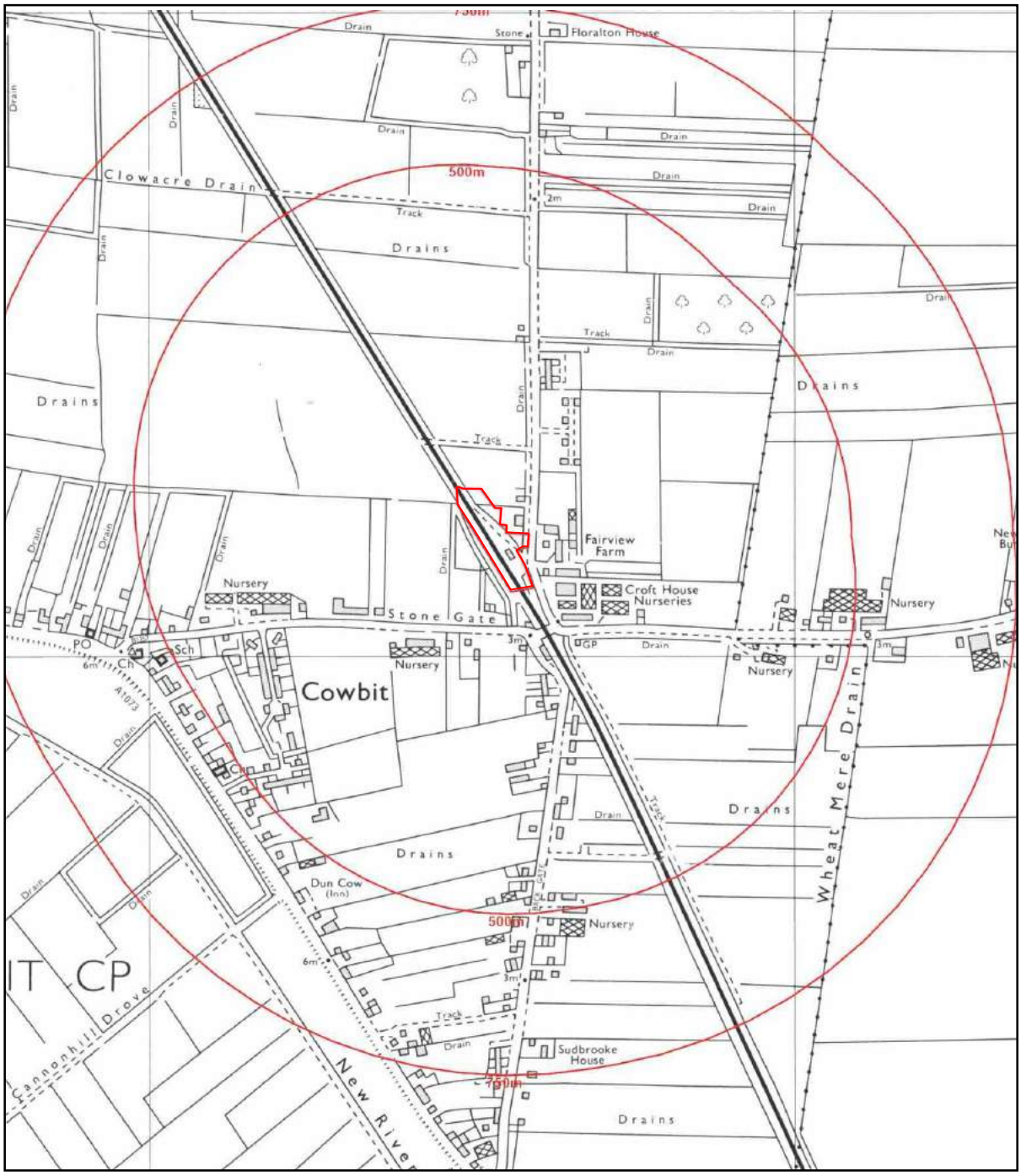


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure F

Reproduced from the **1979** edition Ordnance Survey sheet **TF21NE** at **1:10,000** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

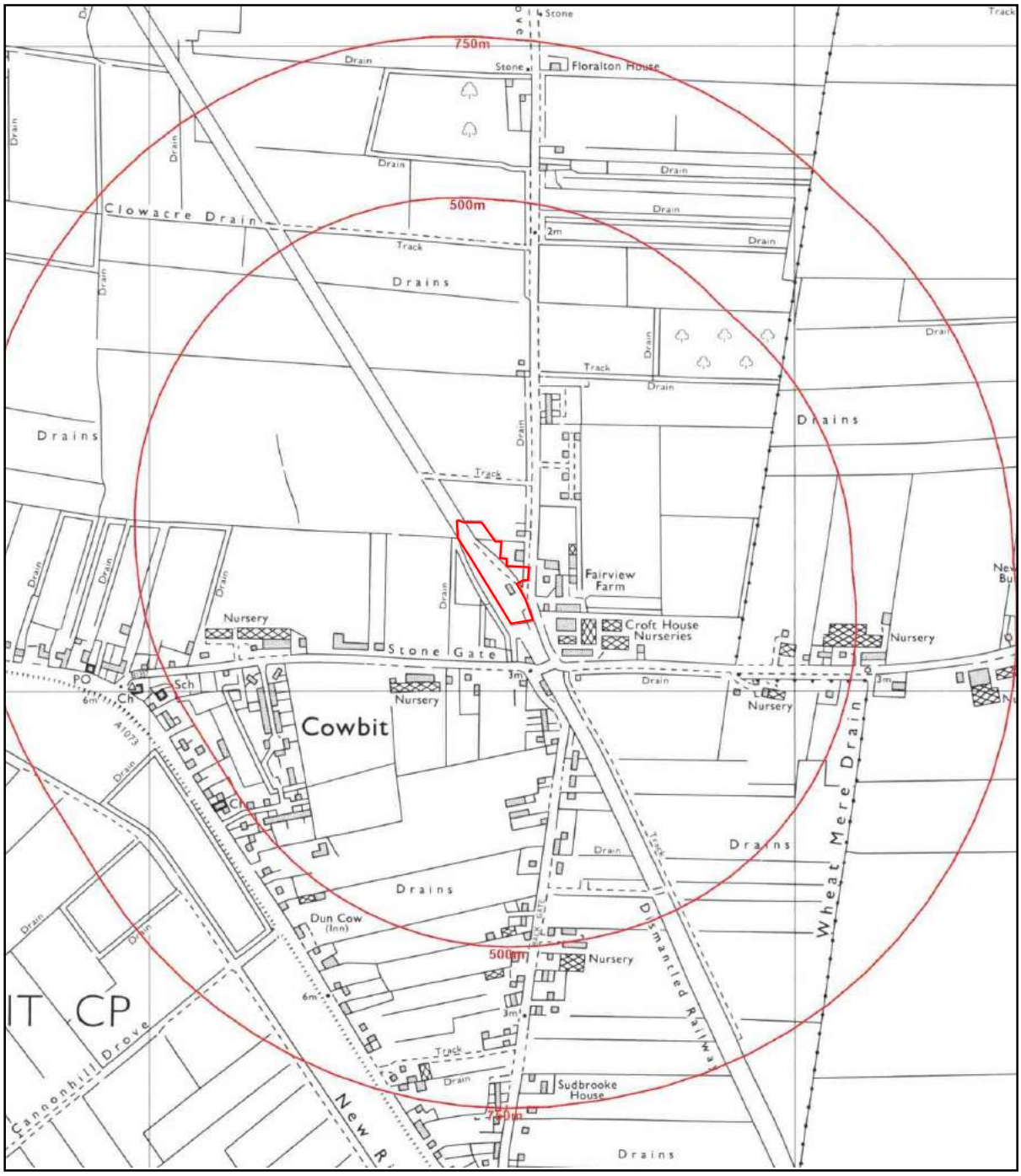


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure G

Reproduced from the **1989** edition Ordnance Survey sheet **TF21NE** at **1:10,000** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

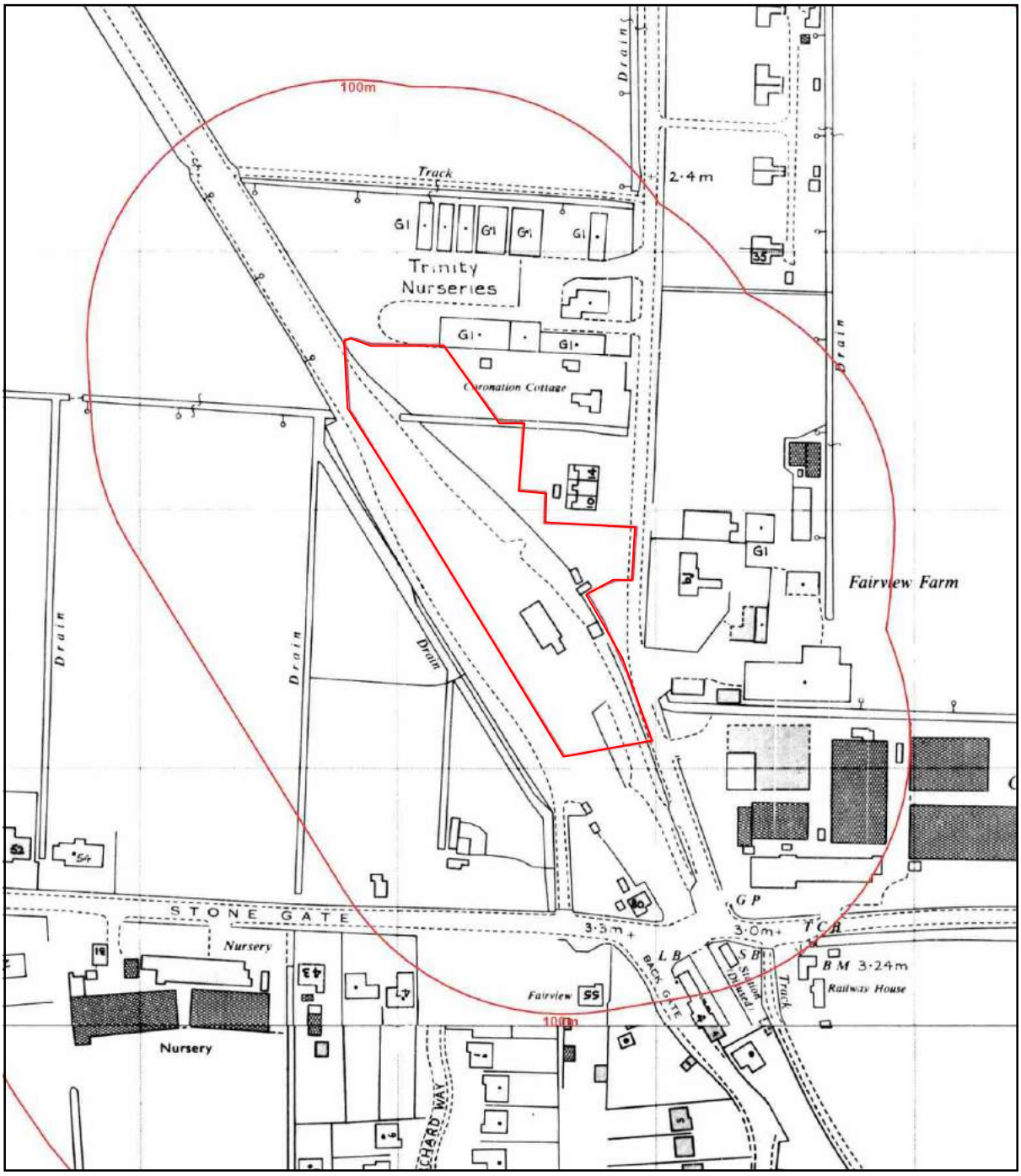


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure H

Reproduced from the **1992** edition Ordnance Survey sheets **TF2617 & TF2618** at **1:2500** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

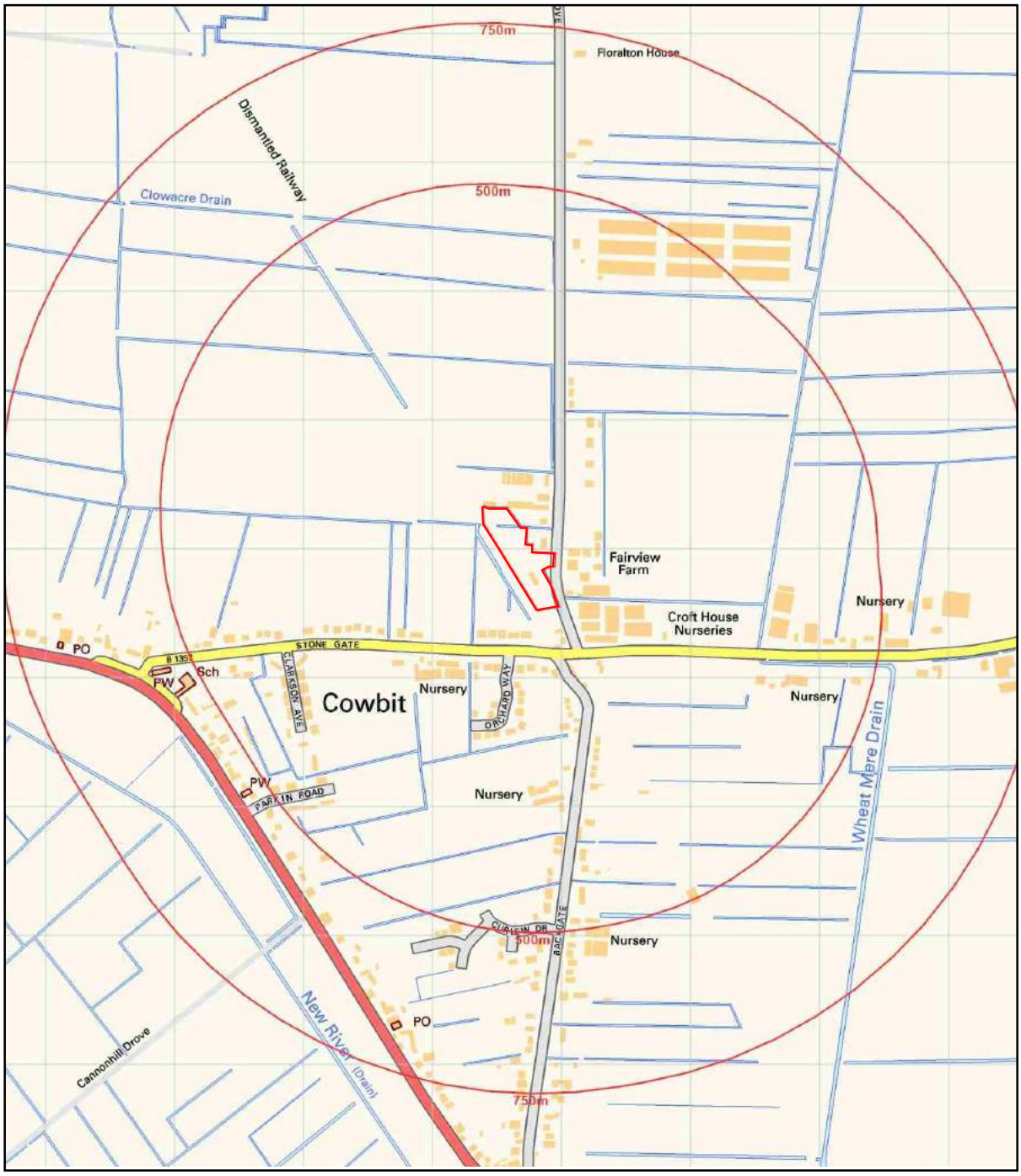


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure I

Reproduced from the **2001** edition Ordnance Survey sheet **TF21NE** at **1:10,000** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

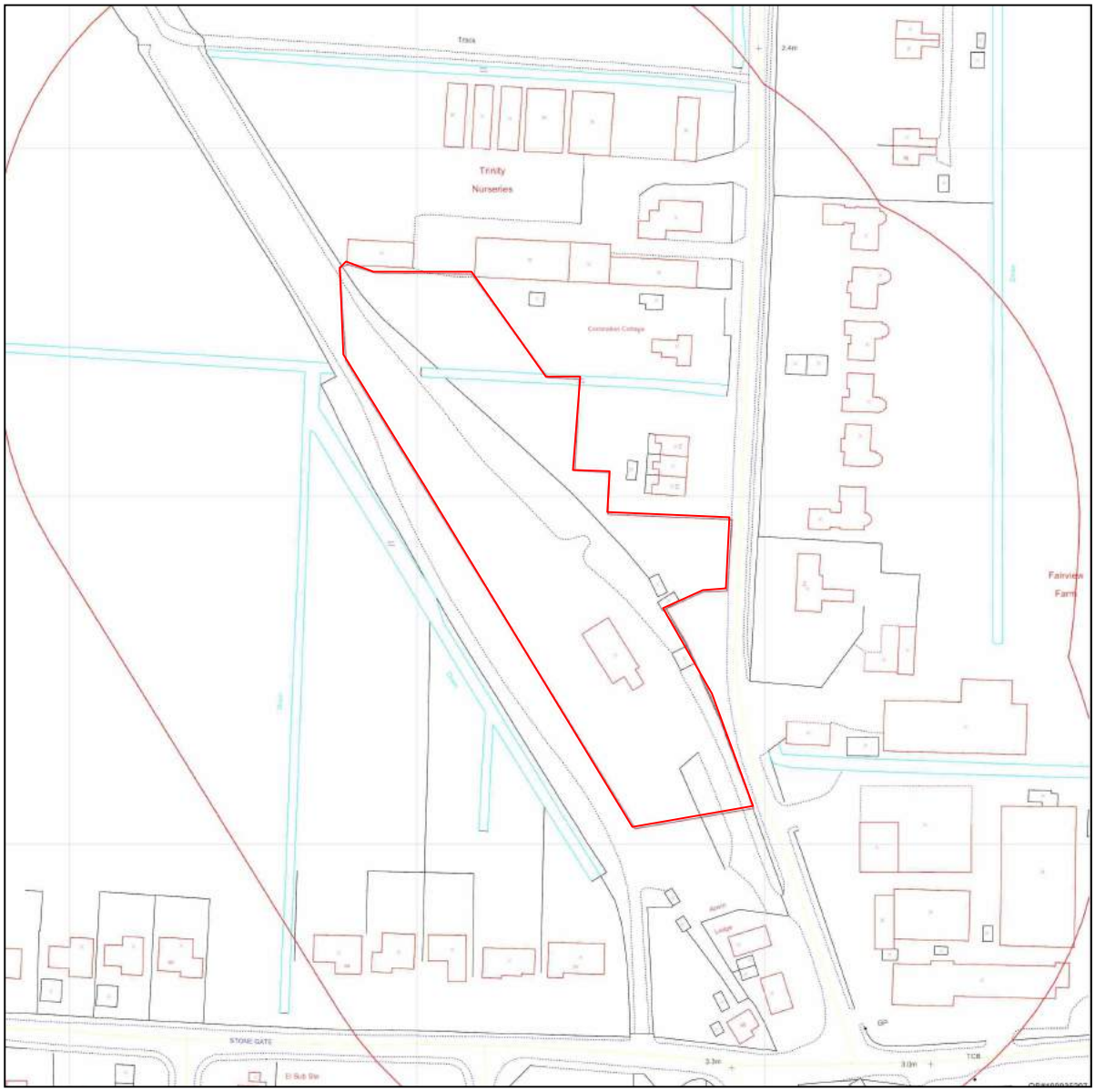


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure J

Reproduced from the **2003** edition Ordnance Survey sheets **TF2618SW & SE** at **1:1250** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

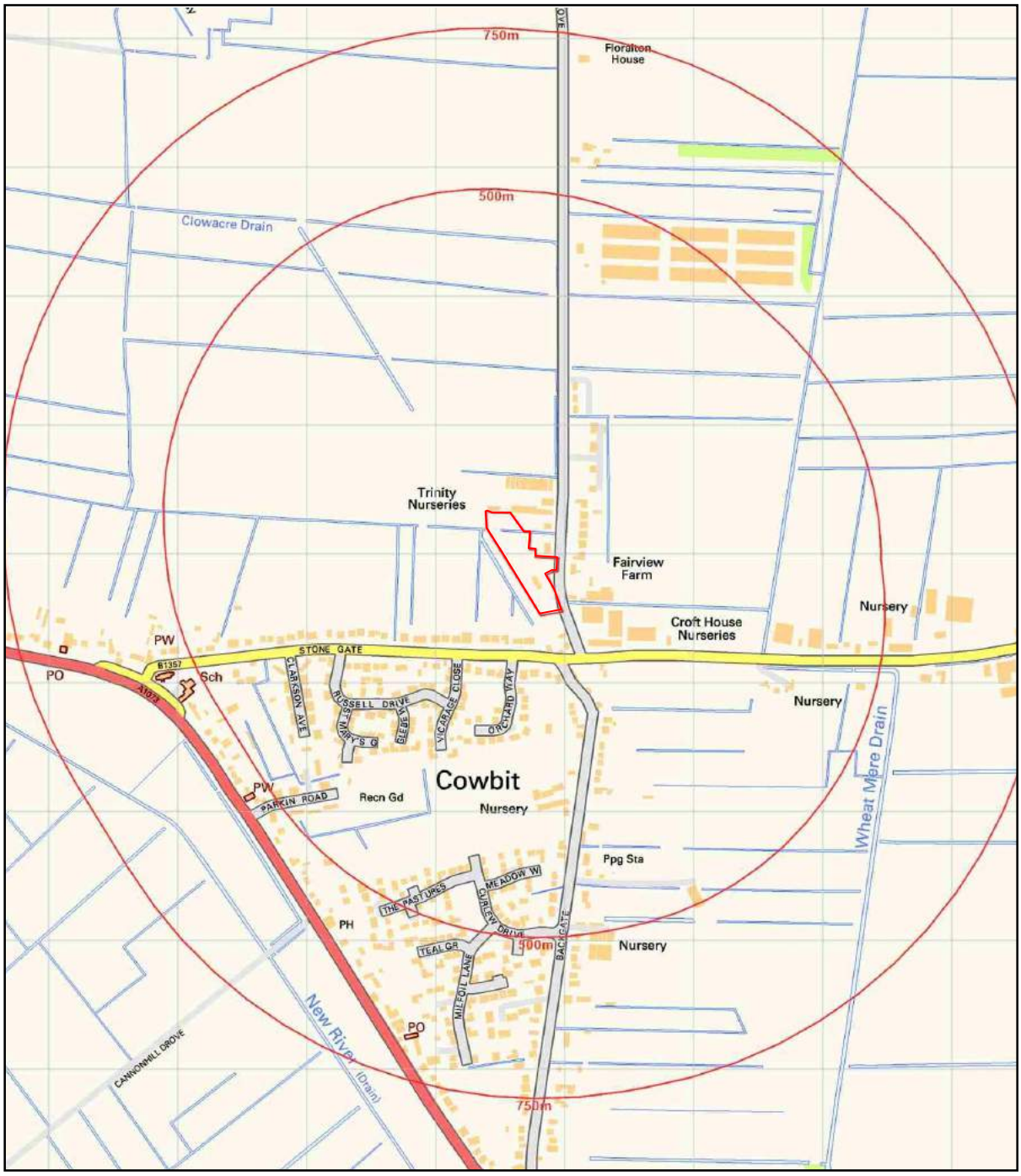


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure K

Reproduced from the **2010** edition Ordnance Survey sheet **TF21NE** at **1:10,000** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523

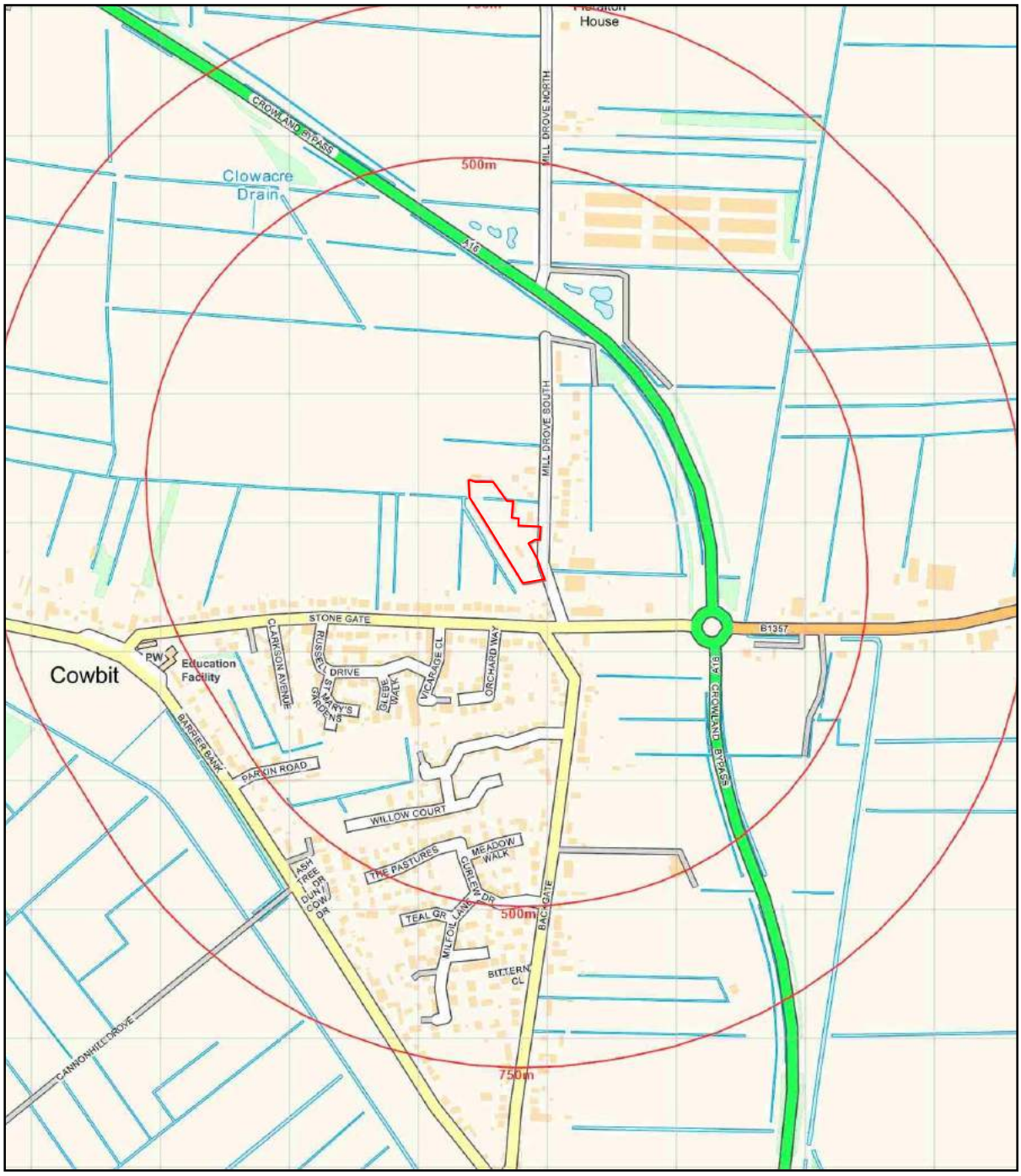


Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure L

Reproduced from the **2022** edition Ordnance Survey sheet **TF21NE** at **1:10,000** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Site History

Figure M

Reproduced from the **2022** edition Ordnance Survey sheets **TF2617 & TF2618** at not to scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Station Yard, Mill Drove South, Cowbit, Lincolnshire **Client : Seagate Homes**	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15840**

Appendix 2

Environmental Database Information

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

STATION YARD, MILL DROVE SOUTH, COWBIT, SPALDING, PE12 6FS

Order Details

Date: 06/12/2022

Your ref: SWC15840

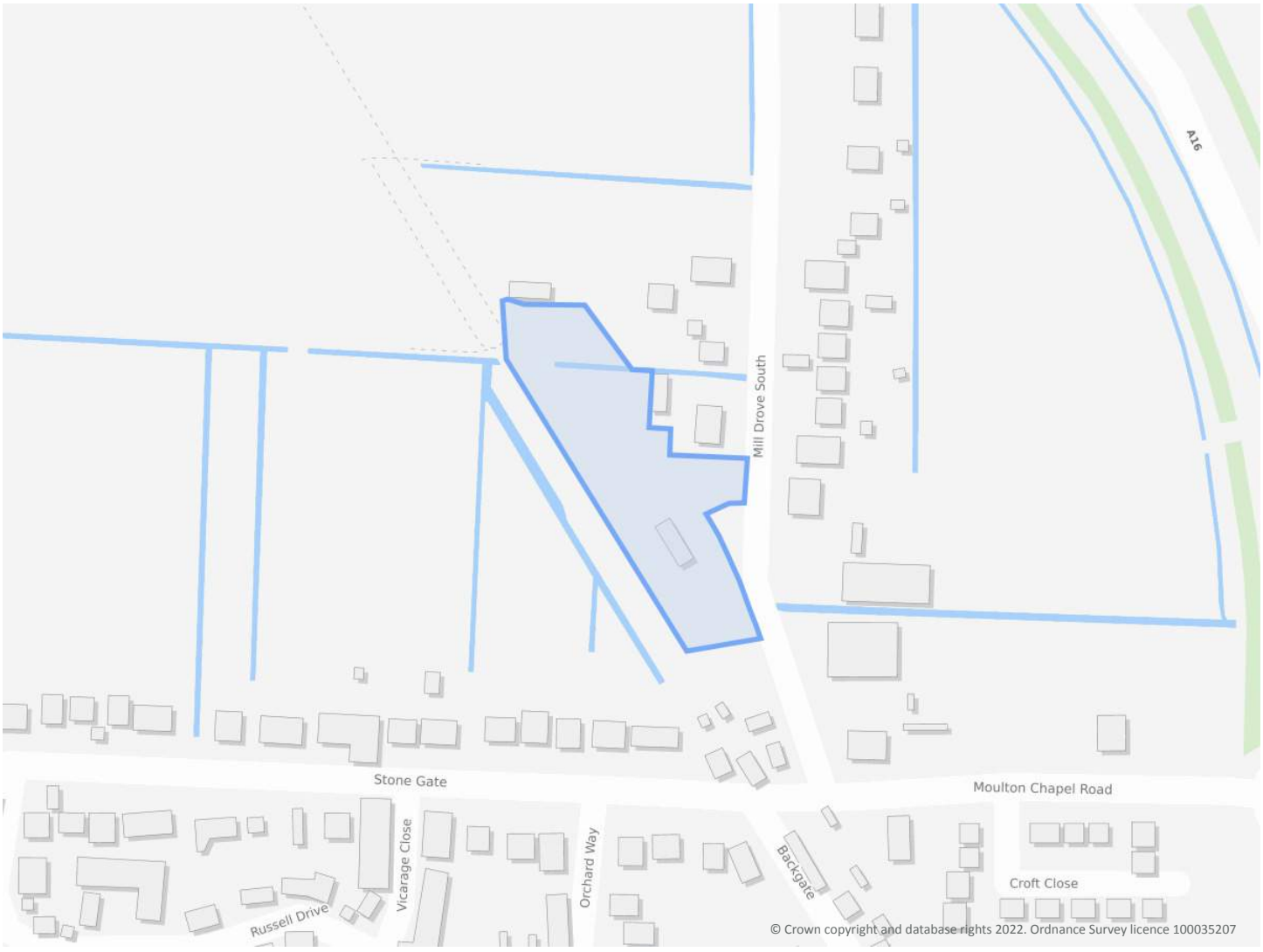
Our Ref: HMD-9245326

Site Details

Location: 526539 318186

Area: 0.81 ha

Authority: South Holland District Council



Summary of findings p. 2

OS MasterMap site plan p.13

Aerial image p. 8

groundsure.com/insightuserguide

Contact us with any questions at:
info@groundsure.com
08444 159 000

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	14	3	15	4	-
16	1.2	Historical tanks	0	0	1	1	-
16	1.3	Historical energy features	0	0	0	1	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
17	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
18	2.1	Historical industrial land uses	14	5	18	6	-
20	2.2	Historical tanks	0	0	1	2	-
21	2.3	Historical energy features	0	0	0	1	-
21	2.4	Historical petrol stations	0	0	0	0	-
21	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
22	3.1	Active or recent landfill	0	0	0	0	-
22	3.2	Historical landfill (BGS records)	0	0	0	0	-
23	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
23	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
23	3.5	Historical waste sites	0	0	0	0	-
23	3.6	Licensed waste sites	0	0	0	0	-
23	3.7	Waste exemptions	0	0	0	45	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
27	4.1	Recent industrial land uses	1	0	3	-	-
28	4.2	Current or recent petrol stations	0	0	0	0	-
28	4.3	Electricity cables	0	0	0	0	-
28	4.4	Gas pipelines	0	0	0	0	-
28	4.5	Sites determined as Contaminated Land	0	0	0	0	-

29	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	1	-
29	4.7	Regulated explosive sites	0	0	0	0	-
29	4.8	Hazardous substance storage/usage	0	0	0	1	-
30	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
30	4.10	Licensed industrial activities (Part A(1))	0	0	0	12	-
32	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
32	4.12	Radioactive Substance Authorisations	0	0	0	0	-
32	4.13	Licensed Discharges to controlled waters	0	0	6	13	-
35	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
36	4.15	Pollutant release to public sewer	0	0	0	0	-
36	4.16	List 1 Dangerous Substances	0	0	0	0	-
36	4.17	List 2 Dangerous Substances	0	0	0	0	-
36	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
36	4.19	Pollution inventory substances	0	0	0	3	-
37	4.20	Pollution inventory waste transfers	0	0	0	1	-
38	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
40	5.1	Superficial aquifer	Identified (within 500m)				
41	5.2	Bedrock aquifer	Identified (within 500m)				
42	5.3	Groundwater vulnerability	Identified (within 50m)				
43	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
43	5.5	Groundwater vulnerability- local information	None (within 0m)				
44	5.6	Groundwater abstractions	0	0	0	0	0
45	5.7	Surface water abstractions	0	0	0	0	10
47	5.8	Potable abstractions	0	0	0	0	0
47	5.9	Source Protection Zones	0	0	0	0	-
47	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
48	6.1	Water Network (OS MasterMap)	1	8	19	-	-

51	6.2	Surface water features	1	2	9	-	-
51	6.3	WFD Surface water body catchments	1	-	-	-	-
51	6.4	WFD Surface water bodies	0	0	0	-	-
52	6.5	WFD Groundwater bodies	0	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
53	7.1	Risk of flooding from rivers and the sea	Medium (within 50m)				
54	7.2	Historical Flood Events	0	0	0	-	-
54	7.3	Flood Defences	0	0	0	-	-
54	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
54	7.5	Flood Storage Areas	0	0	0	-	-
55	7.6	Flood Zone 2	Identified (within 50m)				
56	7.7	Flood Zone 3	Identified (within 50m)				
Page	Section	Surface water flooding					
57	8.1	Surface water flooding	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding					
59	9.1	Groundwater flooding	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
60	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
60	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
60	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
60	10.4	Special Protection Areas (SPA)	0	0	0	0	0
61	10.5	National Nature Reserves (NNR)	0	0	0	0	0
61	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
61	10.7	Designated Ancient Woodland	0	0	0	0	0
61	10.8	Biosphere Reserves	0	0	0	0	0
62	10.9	Forest Parks	0	0	0	0	0
62	10.10	Marine Conservation Zones	0	0	0	0	0
62	10.11	Green Belt	0	0	0	0	0
62	10.12	Proposed Ramsar sites	0	0	0	0	0

62	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
63	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
63	10.15	Nitrate Sensitive Areas	0	0	0	0	0
63	**10.16**	**Nitrate Vulnerable Zones**	0	0	0	0	2
64	**10.17**	**SSSI Impact Risk Zones**	1	-	-	-	-
65	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
66	11.1	World Heritage Sites	0	0	0	-	-
67	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
67	11.3	National Parks	0	0	0	-	-
67	**11.4**	**Listed Buildings**	0	0	1	-	-
68	11.5	Conservation Areas	0	0	0	-	-
68	11.6	Scheduled Ancient Monuments	0	0	0	-	-
68	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
69	**12.1**	**Agricultural Land Classification**	Grade 1 (within 250m)				
70	12.2	Open Access Land	0	0	0	-	-
70	12.3	Tree Felling Licences	0	0	0	-	-
70	12.4	Environmental Stewardship Schemes	0	0	0	-	-
70	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
71	13.1	Priority Habitat Inventory	0	0	0	-	-
71	13.2	Habitat Networks	0	0	0	-	-
71	13.3	Open Mosaic Habitat	0	0	0	-	-
71	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
72	**14.1**	**10k Availability**	Identified (within 500m)				
73	14.2	Artificial and made ground (10k)	0	0	0	0	-
74	**14.3**	**Superficial geology (10k)**	1	0	0	0	-

75	14.4	Landslip (10k)	0	0	0	0	-
76	**14.5**	**Bedrock geology (10k)**	1	0	0	0	-
77	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
78	**15.1**	**50k Availability**	Identified (within 500m)				
79	15.2	Artificial and made ground (50k)	0	0	0	0	-
79	15.3	Artificial ground permeability (50k)	0	0	-	-	-
80	**15.4**	**Superficial geology (50k)**	1	0	0	0	-
81	**15.5**	**Superficial permeability (50k)**	Identified (within 50m)				
81	15.6	Landslip (50k)	0	0	0	0	-
81	15.7	Landslip permeability (50k)	None (within 50m)				
82	**15.8**	**Bedrock geology (50k)**	1	0	0	0	-
83	**15.9**	**Bedrock permeability (50k)**	Identified (within 50m)				
83	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
84	**16.1**	**BGS Boreholes**	0	1	2	-	-
Page	Section	Natural ground subsidence					
86	**17.1**	**Shrink swell clays**	Low (within 50m)				
87	**17.2**	**Running sands**	Moderate (within 50m)				
88	**17.3**	**Compressible deposits**	Moderate (within 50m)				
89	**17.4**	**Collapsible deposits**	Negligible (within 50m)				
90	**17.5**	**Landslides**	Very low (within 50m)				
91	**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
92	18.1	Natural cavities	0	0	0	0	-
93	18.2	BritPits	0	0	0	0	-
93	**18.3**	**Surface ground workings**	0	2	1	-	-
93	**18.4**	**Underground workings**	0	0	0	0	4
94	18.5	Historical Mineral Planning Areas	0	0	0	0	-

94	18.6	Non-coal mining	0	0	0	0	0
94	18.7	Mining cavities	0	0	0	0	0
94	18.8	JPB mining areas	None (within 0m)				
94	18.9	Coal mining	None (within 0m)				
95	18.10	Brine areas	None (within 0m)				
95	18.11	Gypsum areas	None (within 0m)				
95	18.12	Tin mining	None (within 0m)				
95	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
96	**19.1**	**Radon**	Less than 1% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
97	**20.1**	**BGS Estimated Background Soil Chemistry**	2	0	-	-	-
97	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
97	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
98	21.1	Underground railways (London)	0	0	0	-	-
98	21.2	Underground railways (Non-London)	0	0	0	-	-
99	21.3	Railway tunnels	0	0	0	-	-
99	**21.4**	**Historical railway and tunnel features**	6	1	1	-	-
99	21.5	Royal Mail tunnels	0	0	0	-	-
100	**21.6**	**Historical railways**	1	1	0	-	-
100	21.7	Railways	0	0	0	-	-
100	21.8	Crossrail 1	0	0	0	0	-
100	21.9	Crossrail 2	0	0	0	0	-
101	21.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 29/05/2021

Site Area: 0.81ha

Recent site history - 2018 aerial photograph



Capture Date: 20/04/2018

Site Area: 0.81ha

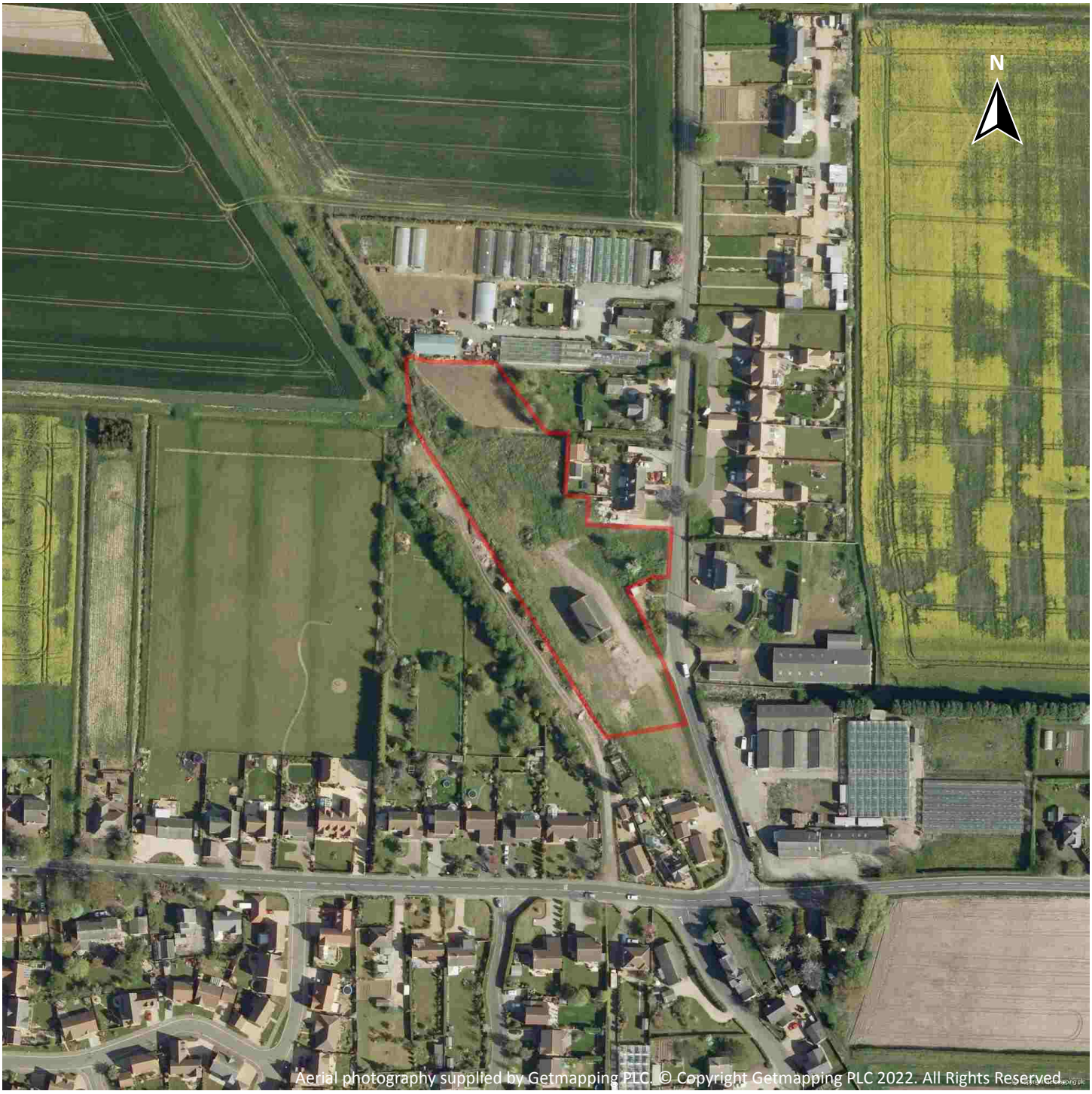
Recent site history - 2013 aerial photograph



Capture Date: 27/05/2013

Site Area: 0.81ha

Recent site history - 2007 aerial photograph

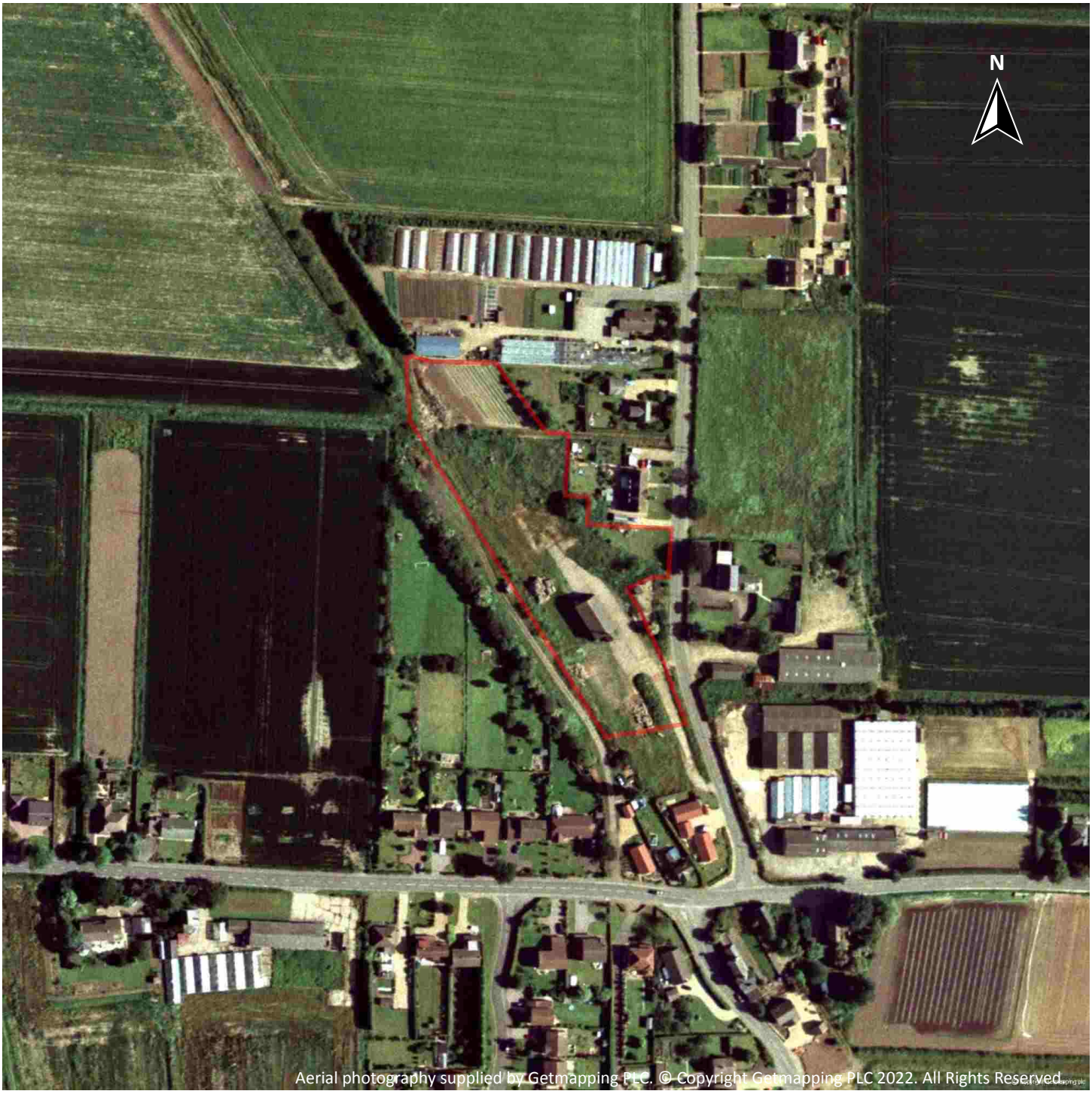


Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2022. All Rights Reserved.

Capture Date: 19/04/2007

Site Area: 0.81ha

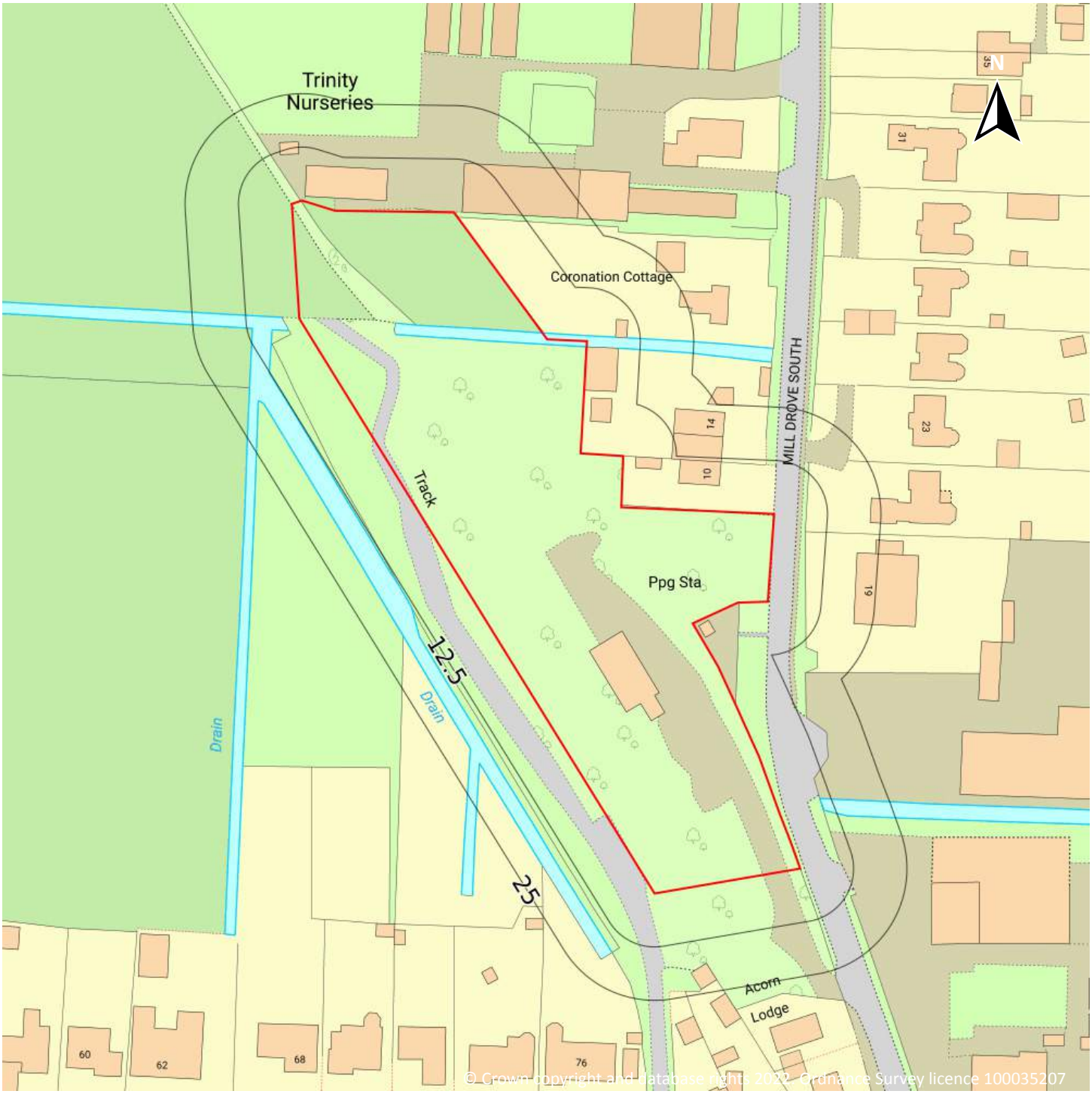
Recent site history - 1999 aerial photograph



Capture Date: 18/06/1999

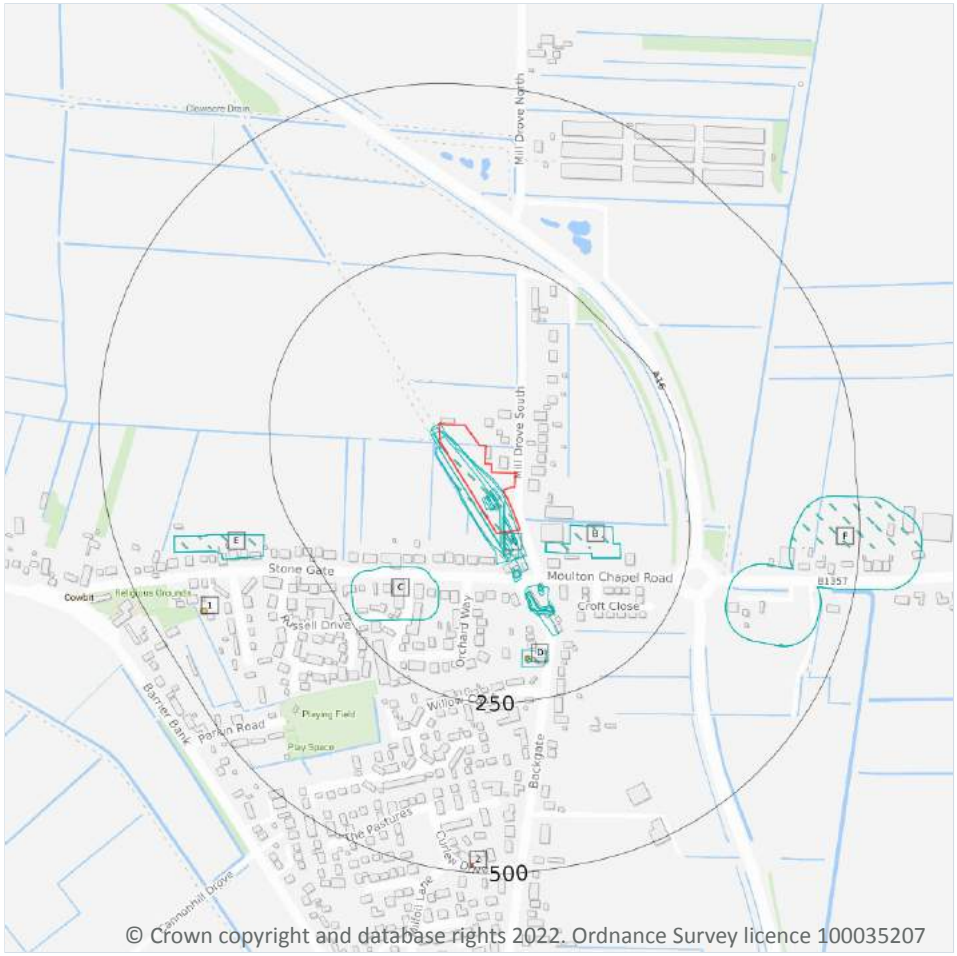
Site Area: 0.81ha

OS MasterMap site plan



Site Area: 0.81ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

1.1 Historical industrial land uses

Records within 500m	36

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**	**Railway Sidings**	**1938**	**2012328**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Railway Sidings**	**1903**	**2014195**
A	**On site**	**Railway Building**	**1977**	**2018524**
A	**On site**	**Railway Building**	**1887**	**2021875**
A	**On site**	**Railway Sidings**	**1887**	**2023076**
A	**On site**	**Railway Building**	**1951**	**2027857**
A	**On site**	**Railway Sidings**	**1951**	**2028099**
A	**On site**	**Railway Sidings**	**1951**	**2029616**
A	**On site**	**Railway Building**	**1951**	**2031009**
A	**On site**	**Railway Sidings**	**1887**	**2031399**
A	**On site**	**Railway Building**	**1906**	**2031682**
A	**On site**	**Railway Sidings**	**1903**	**2031766**
A	**On site**	**Railway Sidings**	**1903 - 1906**	**2034356**
A	**On site**	**Railway Sidings**	**1950**	**2039320**
A	6m SE	Railway Building	1938	2007573
B	43m SE	Nurseries	1977	2027419
B	43m SE	Nurseries	1989	2029378
A	54m S	Railway Building	1887	2033362
A	57m S	Railway Building	1938	2016103
A	59m S	Railway Building	1950 - 1951	2039433
A	85m SE	Railway Station	1903	2025881
A	85m SE	Railway Building	1887	2029151
A	85m SE	Railway Building	1938	2029489
A	89m SE	Railway Building	1950 - 1951	2030735
A	92m SE	Railway Station	1887	2012539
A	92m SE	Railway Station	1938	2014919
A	94m SE	Railway Station	1950	2026008
A	97m S	Railway Station	1951	2028169
C	115m SW	Nursery	1989	2012498

ID	Location	Land use	Dates present	Group ID
C	115m SW	Nursery	1977	2022068
D	175m S	Corn Windmill	1887	2006851
D	188m S	Unspecified Tank	1938	2004269
E	293m W	Nursery	1989	2019207
E	293m W	Nursery	1977	2026890
F	320m SE	Nursery	1977	2025271
F	320m SE	Nursery	1989	2036945

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
D	185m S	Unspecified Tank	1992	337795
1	422m SW	Unspecified Tank	1974 - 1992	339886

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	487m S	Gas Governor	1992	221452

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.

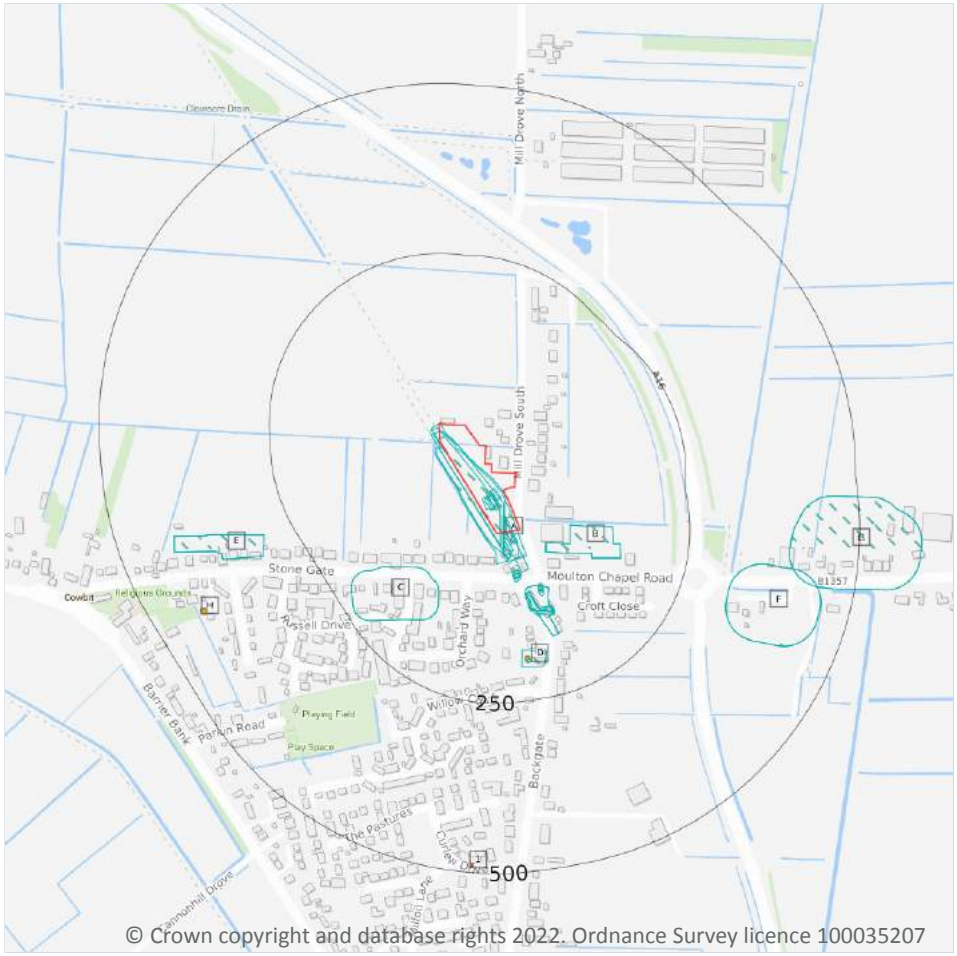
1.6 Historical military land

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	43

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 18**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Railway Sidings**	**1903**	**2014195**
A	**On site**	**Railway Sidings**	**1903**	**2031766**
A	**On site**	**Railway Sidings**	**1938**	**2012328**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Railway Sidings**	**1887**	**2031399**
A	**On site**	**Railway Sidings**	**1951**	**2029616**
A	**On site**	**Railway Building**	**1951**	**2027857**
A	**On site**	**Railway Building**	**1887**	**2021875**
A	**On site**	**Railway Sidings**	**1887**	**2023076**
A	**On site**	**Railway Building**	**1977**	**2018524**
A	**On site**	**Railway Sidings**	**1950**	**2039320**
A	**On site**	**Railway Building**	**1906**	**2031682**
A	**On site**	**Railway Sidings**	**1906**	**2034356**
A	**On site**	**Railway Sidings**	**1951**	**2028099**
A	**On site**	**Railway Building**	**1951**	**2031009**
A	6m SE	Railway Building	1938	2007573
A	16m S	Railway Sidings	1903	2034356
A	16m S	Railway Sidings	1903	2034356
B	43m SE	Nurseries	1989	2029378
B	43m SE	Nurseries	1977	2027419
A	54m S	Railway Building	1887	2033362
A	57m S	Railway Building	1938	2016103
A	59m S	Railway Building	1950	2039433
A	63m S	Railway Building	1951	2039433
A	85m SE	Railway Station	1903	2025881
A	85m SE	Railway Station	1903	2025881
A	85m SE	Railway Building	1938	2029489
A	85m SE	Railway Building	1887	2029151
A	89m SE	Railway Building	1950	2030735
A	92m SE	Railway Station	1938	2014919
A	92m SE	Railway Station	1887	2012539
A	92m SE	Railway Building	1951	2030735

ID	Location	Land Use	Date	Group ID
A	94m SE	Railway Station	1950	2026008
A	97m S	Railway Station	1951	2028169
C	115m SW	Nursery	1989	2012498
C	115m SW	Nursery	1977	2022068
D	175m S	Corn Windmill	1887	2006851
D	188m S	Unspecified Tank	1938	2004269
E	293m W	Nursery	1989	2019207
E	293m W	Nursery	1977	2026890
F	320m SE	Nursery	1989	2036945
F	320m SE	Nursery	1977	2025271
G	398m E	Nursery	1989	2036945
G	398m E	Nursery	1977	2025271

This data is sourced from Ordnance Survey / Groundsure.

2.2 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. 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 18**

ID	Location	Land Use	Date	Group ID
D	185m S	Unspecified Tank	1992	337795
H	422m SW	Unspecified Tank	1992	339886
H	422m SW	Unspecified Tank	1974	339886

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 18**

ID	Location	Land Use	Date	Group ID
1	487m S	Gas Governor	1992	221452

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	45

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 22**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	294m S	-	WEX115808	Using waste exemption	On a farm	Use of waste in construction

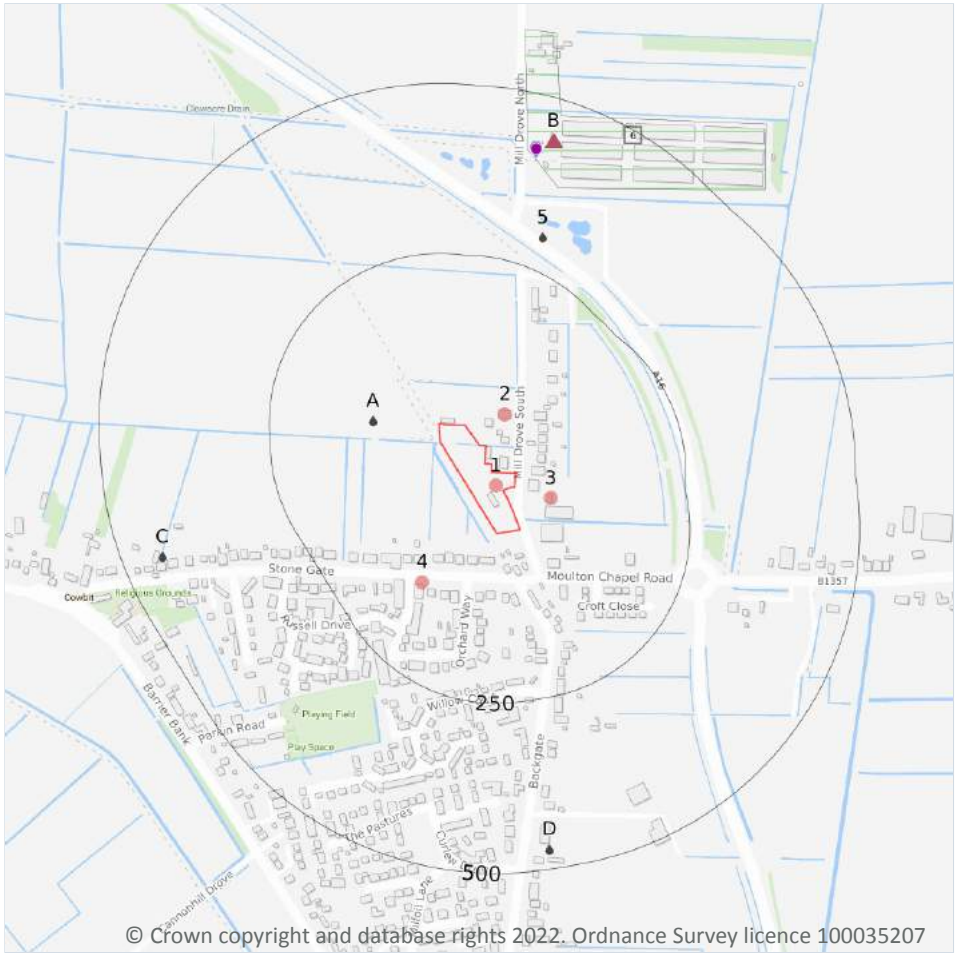
ID	Location	Site	Reference	Category	Sub-Category	Description
B	304m SE	-	WEX042310	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
B	304m SE	-	WEX042310	Disposing of waste exemption	On a farm	Deposit of waste from a portable sanitary convenience
B	304m SE	-	WEX042310	Disposing of waste exemption	On a farm	Burning waste in the open
B	304m SE	-	WEX042310	Storing waste exemption	On a farm	Storage of waste in secure containers
B	304m SE	-	WEX042310	Treating waste exemption	On a farm	Aerobic composting and associated prior treatment
B	304m SE	-	WEX042310	Using waste exemption	On a farm	Use of waste in construction
B	304m SE	-	WEX042310	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
B	304m SE	-	WEX042310	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
B	304m SE	-	WEX042310	Using waste exemption	On a farm	Incorporation of ash into soil
B	304m SE	-	WEX042310	Using waste exemption	On a farm	Use of waste for a specified purpose
A	307m S	-	WEX135968	Using waste exemption	Not on a farm	Use of waste in construction
C	460m SE	Farm buildings Backgate Lincolnshire PE12 6AP	EPR/RH0075VW/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
C	460m SE	Farm buildings Backgate Lincolnshire PE12 6AP	EPR/RH0075VW/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from a portable sanitary convenience
C	460m SE	Farm buildings Backgate Lincolnshire PE12 6AP	EPR/RH0075VW/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
C	460m SE	Farm buildings Backgate Lincolnshire PE12 6AP	EPR/RH0075VW/A001	Treating waste exemption	Agricultural Waste Only	Aerobic composting and associated prior treatment

ID	Location	Site	Reference	Category	Sub-Category	Description
C	460m SE	Farm buildings Backgate Lincolnshire PE12 6AP	EPR/RH0075VW/A001	Using waste exemption	Agricultural Waste Only	Use of waste in construction
C	460m SE	Farm buildings Backgate Lincolnshire PE12 6AP	EPR/RH0075VW/A001	Using waste exemption	Agricultural Waste Only	Spreading waste on agricultural land to confer benefit
C	460m SE	Farm buildings Backgate Lincolnshire PE12 6AP	EPR/RH0075VW/A001	Using waste exemption	Agricultural Waste Only	Spreading of plant matter to confer benefit
C	460m SE	Farm buildings Backgate Lincolnshire PE12 6AP	EPR/RH0075VW/A001	Using waste exemption	Agricultural Waste Only	Incorporation of ash into soil
C	460m SE	Farm buildings Backgate Lincolnshire PE12 6AP	EPR/RH0075VW/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
C	468m SE	-	WEX190185	Storing waste exemption	On a Farm	Storage of waste in a secure place
C	468m SE	-	WEX190185	Using waste exemption	On a Farm	Use of waste in construction
C	468m SE	-	WEX190185	Using waste exemption	On a Farm	Use of waste for a specified purpose
C	468m SE	-	WEX190185	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
C	468m SE	-	WEX190185	Using waste exemption	On a Farm	Spreading of plant matter to confer benefit
C	468m SE	-	WEX190185	Using waste exemption	On a Farm	Incorporation of ash into soil
C	468m SE	-	WEX190185	Treating waste exemption	On a Farm	Aerobic composting and associated prior treatment
C	468m SE	-	WEX190185	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters
C	468m SE	-	WEX190185	Disposing of waste exemption	On a Farm	Burning waste in the open
C	468m SE	-	WEX190185	Storing waste exemption	On a Farm	Storage of waste in secure containers
C	468m SE	-	WEX318383	Storing waste exemption	On a Farm	Storage of waste in a secure place

ID	Location	Site	Reference	Category	Sub-Category	Description
C	468m SE	-	WEX318383	Storing waste exemption	On a Farm	Storage of waste in secure containers
C	468m SE	-	WEX318383	Disposing of waste exemption	On a Farm	Burning waste in the open
C	468m SE	-	WEX318383	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters
C	468m SE	-	WEX318383	Treating waste exemption	On a Farm	Aerobic composting and associated prior treatment
C	468m SE	-	WEX318383	Using waste exemption	On a Farm	Incorporation of ash into soil
C	468m SE	-	WEX318383	Using waste exemption	On a Farm	Spreading of plant matter to confer benefit
C	468m SE	-	WEX318383	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
C	468m SE	-	WEX318383	Using waste exemption	On a Farm	Use of waste for a specified purpose
C	468m SE	-	WEX318383	Using waste exemption	On a Farm	Use of waste in construction
D	483m E	50, MOULTON CHAPEL ROAD, MOULTON CHAPEL, SPALDING, PE12 0XD	WEX022768	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
D	483m E	50, MOULTON CHAPEL ROAD, MOULTON CHAPEL, SPALDING, PE12 0XD	WEX022768	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
D	483m E	50, MOULTON CHAPEL ROAD, MOULTON CHAPEL, SPALDING, PE12 0XD	WEX022768	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
D	483m E	50, MOULTON CHAPEL ROAD, MOULTON CHAPEL, SPALDING, PE12 0XD	WEX022768	Using waste exemption	On a farm	Incorporation of ash into soil

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
- Control of Major Accident Hazards
- Hazardous substance storage/usage
- Part A(1) industrial activities
- Licensed Discharges to controlled waters
- 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 27**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Pumping Station**	**Lincolnshire, PE12**	**Water Pumping Stations**	**Industrial Features**
2	54m N	Fisher Bros	18, Mill Drove South, Cowbit, Spalding, Lincolnshire, PE12 6FS	Fruit, Flower and Vegetable Growers	Farming

ID	Location	Company	Address	Activity	Category
3	55m E	Crowland Pallets 2009 Ltd	Crowland Pallets Fairview Farm 19, Mill Drove South, Cowbit, Spalding, Lincolnshire, PE12 6FS	Packaging	Industrial Products
4	131m SW	Electricity Sub Station	Lincolnshire, PE12	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	**1**

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.

Features are displayed on the Current industrial land use map on **page 27**

ID	Location	Company	Address	Operational status	Tier
6	375m N	Turners Turkeys Ltd	Turners Turkeys Ltd, Mill Drove, Cowbit, Spalding	Historical NIHHS Site	-

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	**1**

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.

Features are displayed on the Current industrial land use map on **page 27**

ID	Location	Details	
B	438m N	Application reference number: H01/0818/96 Application status: Approved Application date: 30/08/1996 Address: Turners Turkeys Ltd, Mill Drove, Cowbit, Spalding, Lincolnshire, England, PE12 6AS	Details: Storage of 36 tonnes of LPG Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

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	12

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 27**

ID	Location	Details	
B	419m N	Operator: HOOK 2 SISTERS LIMITED Installation Name: COWBIT FARM POULTRY UNIT - EPR/KP3132YP Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: ZP3602SV Original Permit Number: KP3132YP	EPR Reference: - Issue Date: 01/12/2020 Effective Date: 01/12/2020 Last date noted as effective: 02/11/2022 Status: EFFECTIVE
B	419m N	Operator: BERNARD MATTHEWS FOODS LIMITED Installation Name: COWBIT FARM POULTRY UNIT Process: ASSOCIATED PROCESS Permit Number: RP3339YB Original Permit Number: VP3737DC	EPR Reference: - Issue Date: 30/03/2017 Effective Date: 30/03/2017 Last date noted as effective: 02/11/2022 Status: SUPERCEDED
B	419m N	Operator: HOOK 2 SISTERS LIMITED Installation Name: COWBIT FARM POULTRY UNIT - EPR/KP3132YP Process: ASSOCIATED PROCESS Permit Number: KP3132YP Original Permit Number: KP3132YP	EPR Reference: - Issue Date: 14/06/2017 Effective Date: 14/06/2017 Last date noted as effective: 02/11/2022 Status: SUPERCEDED
B	419m N	Operator: HOOK 2 SISTERS LIMITED Installation Name: COWBIT FARM POULTRY UNIT - EPR/KP3132YP Process: ASSOCIATED PROCESS Permit Number: ZP3602SV Original Permit Number: KP3132YP	EPR Reference: - Issue Date: 01/12/2020 Effective Date: 01/12/2020 Last date noted as effective: 02/11/2022 Status: EFFECTIVE
B	419m N	Operator: BERNARD MATTHEWS FOODS LIMITED Installation Name: COWBIT FARM POULTRY UNIT Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: NP3638VJ Original Permit Number: BT4745IL	EPR Reference: - Issue Date: 03/06/2014 Effective Date: 03/06/2014 Last date noted as effective: 02/11/2022 Status: SUPERCEDED

ID	Location	Details	
B	419m N	Operator: BERNARD MATTHEWS FOODS LIMITED Installation Name: COWBIT FARM POULTRY UNIT Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: RP3339YB Original Permit Number: VP3737DC	EPR Reference: - Issue Date: 30/03/2017 Effective Date: 30/03/2017 Last date noted as effective: 02/11/2022 Status: SUPERCEDED
B	419m N	Operator: BERNARD MATTHEWS FOODS LIMITED Installation Name: COWBIT FARM POULTRY UNIT Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: NP3639RD Original Permit Number: BT4745IL	EPR Reference: - Issue Date: 23/11/2015 Effective Date: 23/11/2015 Last date noted as effective: 02/11/2022 Status: SUPERCEDED
B	419m N	Operator: BERNARD MATTHEWS FOODS LIMITED Installation Name: COWBIT FARM POULTRY UNIT Process: ASSOCIATED PROCESS Permit Number: VP3737DC Original Permit Number: VP3737DC	EPR Reference: - Issue Date: 22/12/2016 Effective Date: 22/12/2016 Last date noted as effective: 02/11/2022 Status: SUPERCEDED
B	419m N	Operator: BERNARD MATTHEWS FOODS LIMITED Installation Name: COWBIT FARM POULTRY UNIT Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: VP3737DC Original Permit Number: VP3737DC	EPR Reference: - Issue Date: 22/12/2016 Effective Date: 22/12/2016 Last date noted as effective: 02/11/2022 Status: SUPERCEDED
B	419m N	Operator: BERNARD MATTHEWS FOODS LIMITED Installation Name: COWBIT FARM POULTRY UNIT Process: ASSOCIATED PROCESS Permit Number: NP3638VJ Original Permit Number: BT4745IL	EPR Reference: - Issue Date: 03/06/2014 Effective Date: 03/06/2014 Last date noted as effective: 02/11/2022 Status: SUPERCEDED
B	419m N	Operator: BERNARD MATTHEWS FOODS LIMITED Installation Name: COWBIT FARM POULTRY UNIT Process: ASSOCIATED PROCESS Permit Number: NP3639RD Original Permit Number: BT4745IL	EPR Reference: - Issue Date: 23/11/2015 Effective Date: 23/11/2015 Last date noted as effective: 02/11/2022 Status: SUPERCEDED
B	419m N	Operator: HOOK 2 SISTERS LIMITED Installation Name: COWBIT FARM POULTRY UNIT - EPR/KP3132YP Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: KP3132YP Original Permit Number: KP3132YP	EPR Reference: - Issue Date: 14/06/2017 Effective Date: 14/06/2017 Last date noted as effective: 02/11/2022 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	19

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 27**

ID	Location	Address	Details	
A	97m NW	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 1 Receiving Water: Moulton Mere Drn River Nene N	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 22/03/1988 Effective Date: 22/03/1988 Revocation Date: 17/09/1989
A	97m NW	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 2 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 18/09/1989 Effective Date: 18/09/1989 Revocation Date: 31/12/2009
A	97m NW	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 3 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 24/09/2009 Effective Date: 01/01/2010 Revocation Date: 30/03/2010

ID	Location	Address	Details	
A	97m NW	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 4 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 31/03/2010 Effective Date: 31/03/2010 Revocation Date: 31/12/2010
A	97m NW	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 5 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 31/03/2010 Effective Date: 01/01/2011 Revocation Date: 21/09/2015
A	97m NW	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 6 Receiving Water: Moulton Mere Drn River Nene N	Status: VARIED UNDER EPR 2010 Issue date: 22/09/2015 Effective Date: 22/09/2015 Revocation Date: -
5	298m N	MILL DROVE, COWBIT, SPALDING, LINCS	Effluent Type: UNSPECIFIED Permit Number: PRNLF03334 Permit Version: 1 Receiving Water: -	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 07/08/1990 Effective Date: 07/08/1990 Revocation Date: 01/10/1996
C	442m W	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 1 Receiving Water: Moulton Mere Drn River Nene N	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 22/03/1988 Effective Date: 22/03/1988 Revocation Date: 17/09/1989
C	442m W	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 2 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 18/09/1989 Effective Date: 18/09/1989 Revocation Date: 31/12/2009

ID	Location	Address	Details	
C	442m W	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 3 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 24/09/2009 Effective Date: 01/01/2010 Revocation Date: 30/03/2010
C	442m W	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 4 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 31/03/2010 Effective Date: 31/03/2010 Revocation Date: 31/12/2010
C	442m W	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 5 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 31/03/2010 Effective Date: 01/01/2011 Revocation Date: 21/09/2015
C	442m W	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 6 Receiving Water: Moulton Mere Drn River Nene N	Status: VARIED UNDER EPR 2010 Issue date: 22/09/2015 Effective Date: 22/09/2015 Revocation Date: -
D	470m S	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 1 Receiving Water: Moulton Mere Drn River Nene N	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 22/03/1988 Effective Date: 22/03/1988 Revocation Date: 17/09/1989
D	470m S	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 2 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 18/09/1989 Effective Date: 18/09/1989 Revocation Date: 31/12/2009

ID	Location	Address	Details	
D	470m S	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 3 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 24/09/2009 Effective Date: 01/01/2010 Revocation Date: 30/03/2010
D	470m S	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 4 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 31/03/2010 Effective Date: 31/03/2010 Revocation Date: 31/12/2010
D	470m S	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 5 Receiving Water: Moulton Mere Drn River Nene N	Status: REVISED BY NOTICE, AT DIRECTION OF SEC. OF STATE - 37(2) Issue date: 31/03/2010 Effective Date: 01/01/2011 Revocation Date: 21/09/2015
D	470m S	COWBIT WRC, OFF DELGATE BANK, WESTON HILLS, SPALDING, LINCOLNSHIRE, PE12 6DH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW5NF807 Permit Version: 6 Receiving Water: Moulton Mere Drn River Nene N	Status: VARIED UNDER EPR 2010 Issue date: 22/09/2015 Effective Date: 22/09/2015 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	0

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

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 27**

ID: B, Location: 419m N, Permit: KP3132YP
Operator: Hook 2 Sisters Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Cowbit Farm Poultry Unit Mill Drove Cowbit Lincolnshire PE12 6AS
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: B, Location: 419m N, Permit: KP3132YP
Operator: Hook 2 Sisters Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Cowbit Farm Poultry Unit Mill Drove Cowbit Lincolnshire PE12 6AS
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Ammonia	1000kg	11601kg

ID: B, Location: 419m N, Permit: KP3132YP
Operator: Hook 2 Sisters Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Cowbit Farm Poultry Unit Mill Drove Cowbit Lincolnshire PE12 6AS
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Particulate matter - PM10	1000kg	11374kg

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 27**

ID: B, Location: 419m N, Permit: KP3132YP
Operator: Hook 2 Sisters Limited
Activity: INTENSIVE FARMING; > 40,000 POULTRY
Address: Cowbit Farm Poultry Unit Mill Drove Cowbit Lincolnshire PE12 6AS
Sector Agriculture, Sub-sector: Intensive Farming
Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R1	Use principally as a fuel or other means to generate energy	2946	Absolute Value	02 01 06	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site	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 01	paper and cardboard 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 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.

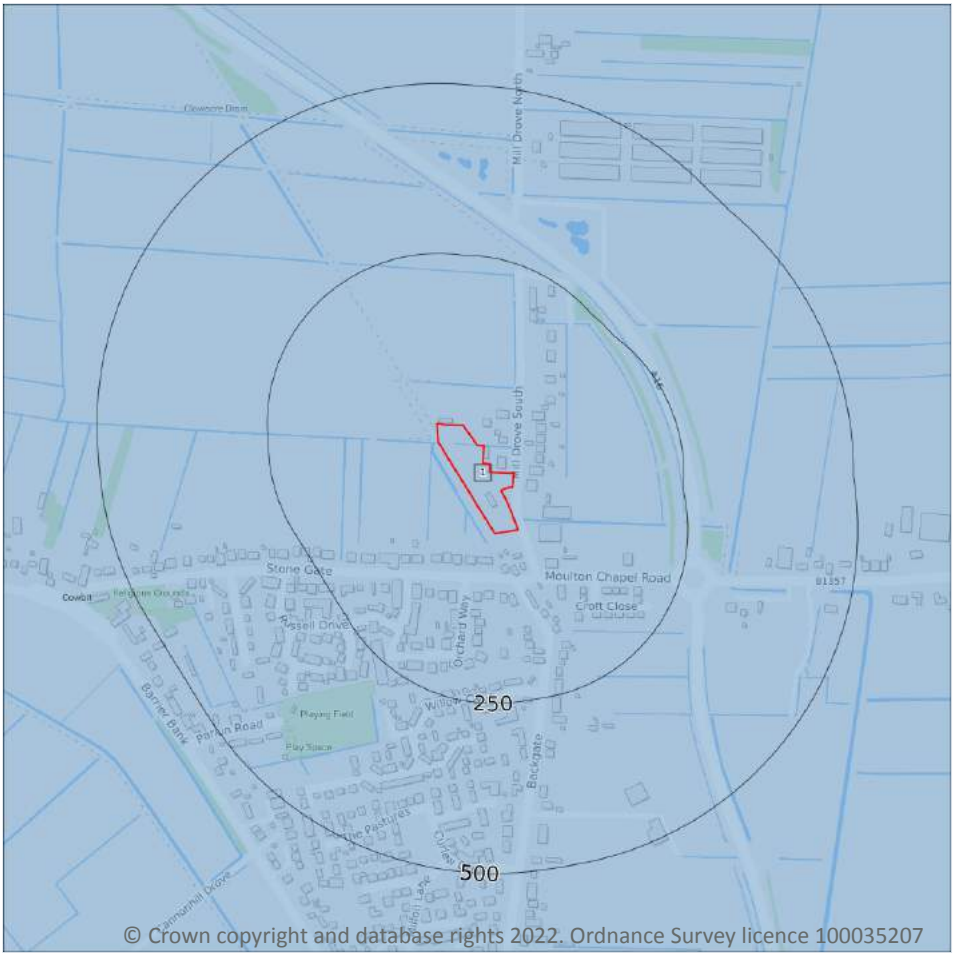
4.21 Pollution inventory radioactive waste

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



5.1 Superficial aquifer

Records within 500m	1

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 40**

ID	Location	Designation	Description
1	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**

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

Bedrock aquifer



© Crown copyright and database rights 2022. Ordnance Survey licence 100035207

5.2 Bedrock aquifer

Records within 500m	1

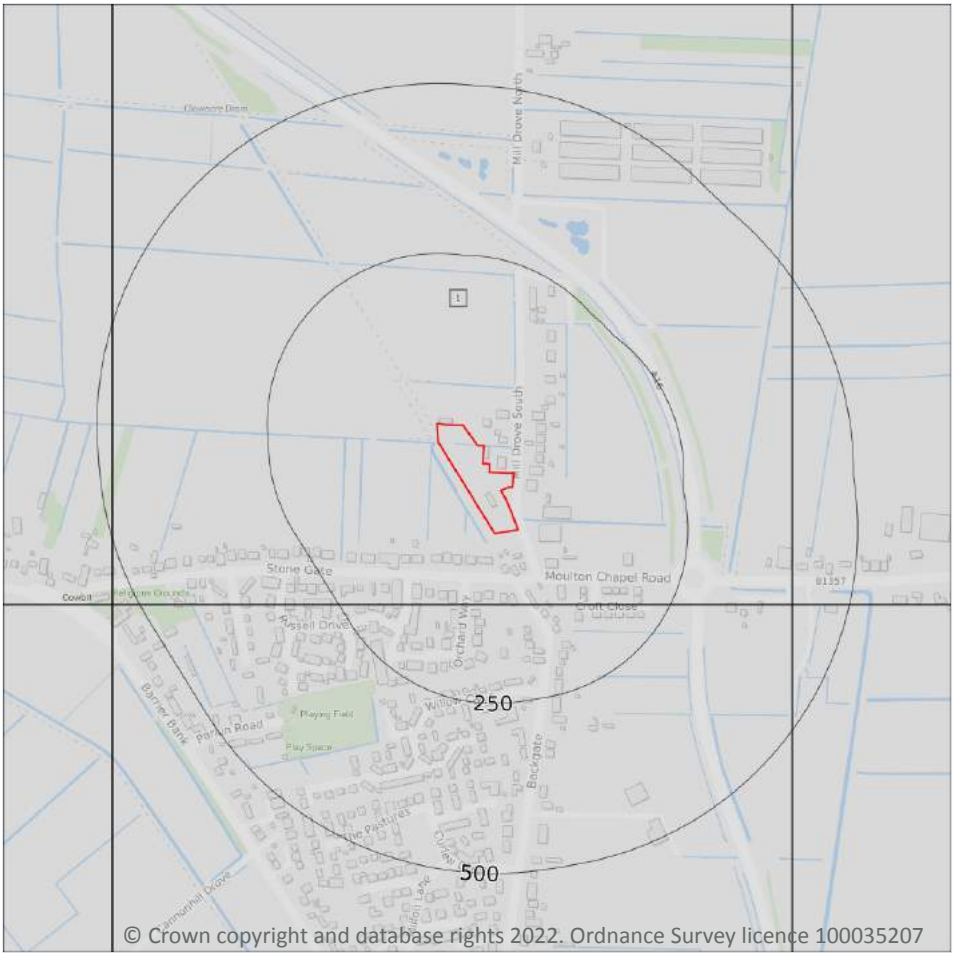
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 41**

ID	Location	Designation	Description
1	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**

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	1

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 42**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	**Summary Classification: Unproductive aquifer (may have productive aquifer beneath) Combined classification: Unproductive 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: Unproductive Aquifer type: Unproductive 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.

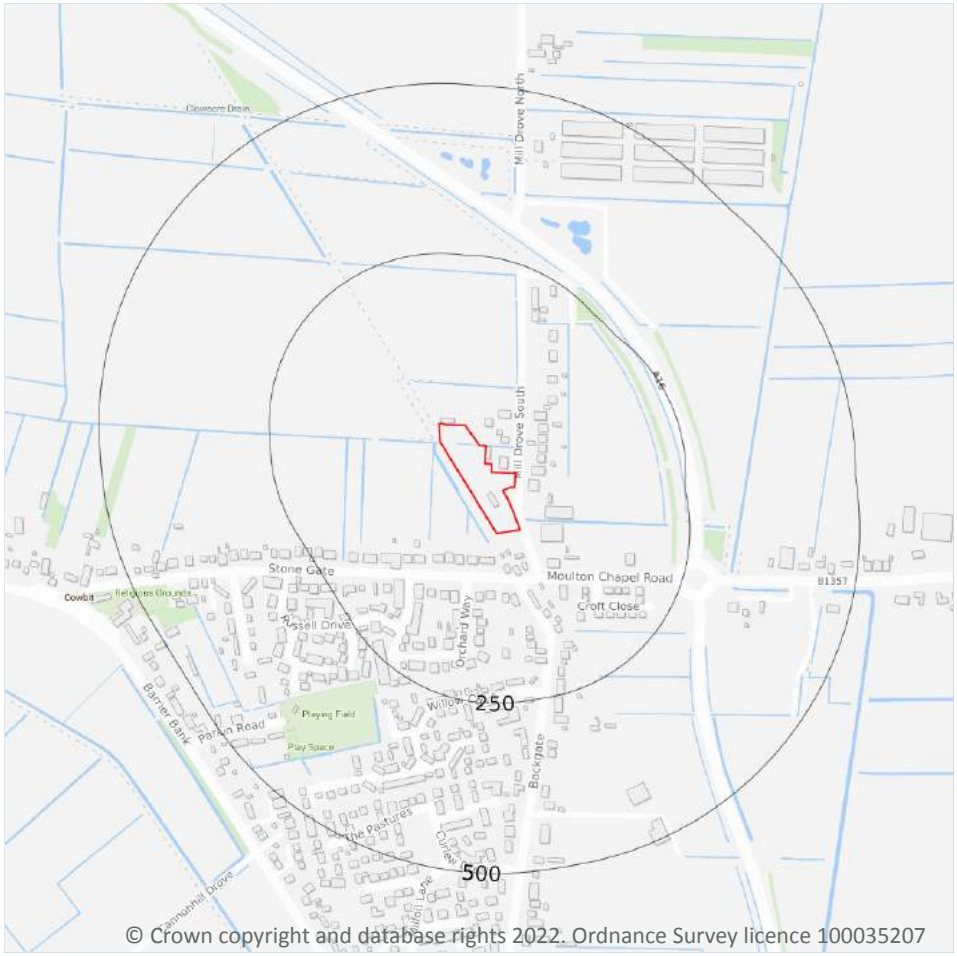
5.5 Groundwater vulnerability- local information

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



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	0

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.

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

5.7 Surface water abstractions

Records within 2000m	10

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 44**

ID	Location	Details	
-	986m SE	Status: Historical Licence No: 5/31/14/*S/0263 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: WHEATMERE DRAIN Data Type: Line Name: J W E BANKS LTD Easting: 527000 Northing: 317210	Annual Volume (m^3): 4546 Max Daily Volume (m^3): 545.5 Original Application No: - Original Start Date: 28/02/2005 Expiry Date: 31/08/2013 Issue No: 1 Version Start Date: 28/02/2005 Version End Date: -
-	1242m E	Status: Historical Licence No: 5/32/11/*S/0052C Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: MOULTON MERE DRAIN Data Type: Line Name: A H CLARK FARMS LTD Easting: 527700 Northing: 316000	Annual Volume (m^3): 4000 Max Daily Volume (m^3): 818.3 Original Application No: - Original Start Date: 01/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 02/04/1966 Version End Date: -
-	1454m SW	Status: Historical Licence No: 5/31/14/*S/0185 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: THE NEW RIVER AT COWBIT Data Type: Line Name: BOOR Easting: 524170 Northing: 319130	Annual Volume (m^3): 10000 Max Daily Volume (m^3): 2000 Original Application No: - Original Start Date: 01/06/1986 Expiry Date: - Issue No: 101 Version Start Date: 23/02/2005 Version End Date: -
-	1456m SW	Status: Active Licence No: 5/31/14/*S/0185 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: THE NEW RIVER AT COWBIT Data Type: Line Name: J and L D Boor Easting: 524184 Northing: 319104	Annual Volume (m^3): 10,000 Max Daily Volume (m^3): 2,000 Original Application No: NPS/WR/034552 Original Start Date: 01/06/1986 Expiry Date: - Issue No: 103 Version Start Date: 08/12/2020 Version End Date: -

ID	Location	Details	
-	1676m SW	Status: Active Licence No: 5/31/14/*S/0185 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: THE SOKE DYKE AT COWBIT Data Type: Line Name: J and L D Boor Easting: 525346 Northing: 316951	Annual Volume (m^3): 10,000 Max Daily Volume (m^3): 2,000 Original Application No: NPS/WR/034552 Original Start Date: 01/06/1986 Expiry Date: - Issue No: 103 Version Start Date: 08/12/2020 Version End Date: -
-	1681m SW	Status: Historical Licence No: 5/31/14/*S/0185 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: THE SOKE DYKE AT COWBIT Data Type: Line Name: BOOR Easting: 525340 Northing: 316950	Annual Volume (m^3): 10000 Max Daily Volume (m^3): 2000 Original Application No: - Original Start Date: 01/06/1986 Expiry Date: - Issue No: 101 Version Start Date: 23/02/2005 Version End Date: -
-	1702m SW	Status: Historical Licence No: 5/31/14/*S/0185 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: RIVER WELLAND AT COWBIT Data Type: Line Name: BOOR Easting: 525320 Northing: 316940	Annual Volume (m^3): 10000 Max Daily Volume (m^3): 2000 Original Application No: - Original Start Date: 01/06/1986 Expiry Date: - Issue No: 101 Version Start Date: 23/02/2005 Version End Date: -
-	1718m SW	Status: Active Licence No: 5/31/14/*S/0185 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: RIVER WELLAND AT COWBIT Data Type: Line Name: J and L D Boor Easting: 525305 Northing: 316934	Annual Volume (m^3): 10,000 Max Daily Volume (m^3): 2,000 Original Application No: NPS/WR/034552 Original Start Date: 01/06/1986 Expiry Date: - Issue No: 103 Version Start Date: 08/12/2020 Version End Date: -
-	1868m SW	Status: Active Licence No: 5/31/14/*S/0254 Details: Trickle Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: RIVER WELLAND - CROWLAND Data Type: Line Name: F G TANSLEY & SON Easting: 521510 Northing: 309786	Annual Volume (m^3): 50,000 Max Daily Volume (m^3): 4,000 Original Application No: NPS/WR/032045 Original Start Date: 01/07/2001 Expiry Date: - Issue No: 2 Version Start Date: 12/01/2021 Version End Date: -

ID	Location	Details	
-	1868m SW	Status: Active Licence No: 5/31/14/*S/0254 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: RIVER WELLAND - CROWLAND Data Type: Line Name: F G TANSLEY & SON Easting: 521510 Northing: 309786	Annual Volume (m^3): 50,000 Max Daily Volume (m^3): 4,000 Original Application No: NPS/WR/032045 Original Start Date: 01/07/2001 Expiry Date: - Issue No: 2 Version Start Date: 12/01/2021 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	0

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

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

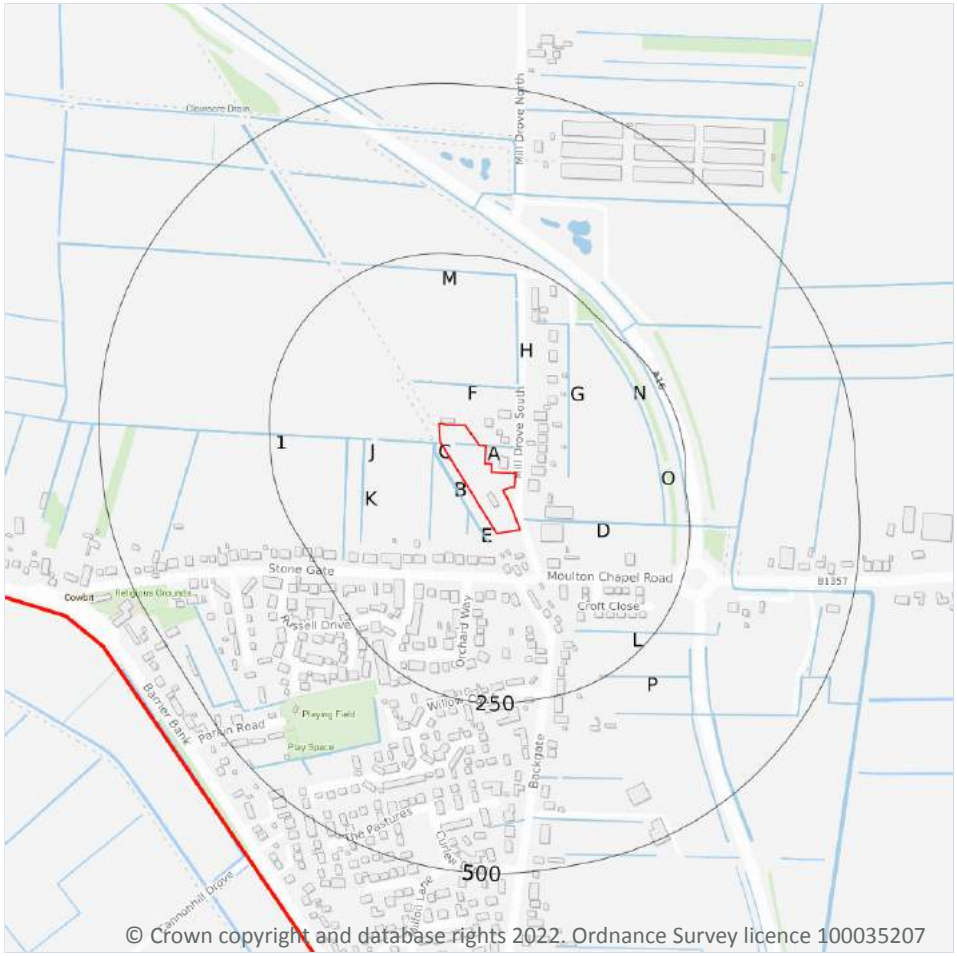
5.10 Source Protection Zones (confined aquifer)

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	28

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 48**

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)**	**-**

ID	Location	Type of water feature	Ground level	Permanence	Name
C	3m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	8m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	8m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	10m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	15m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	16m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	17m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	18m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	58m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	77m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	98m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	100m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	111m 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
J	111m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
1	136m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	136m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	169m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	202m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
N	206m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	210m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
O	211m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	213m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	219m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
N	237m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	237m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	244m 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
O	247m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**12**

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 48**

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 48**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**South Holland Main Drain**	**GB205032050405**	**Nene Lower**	**Nene**

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 48**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	2219m S	River	South Holland Main Drain	GB205032050405	Moderate	Fail	Good	2019

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

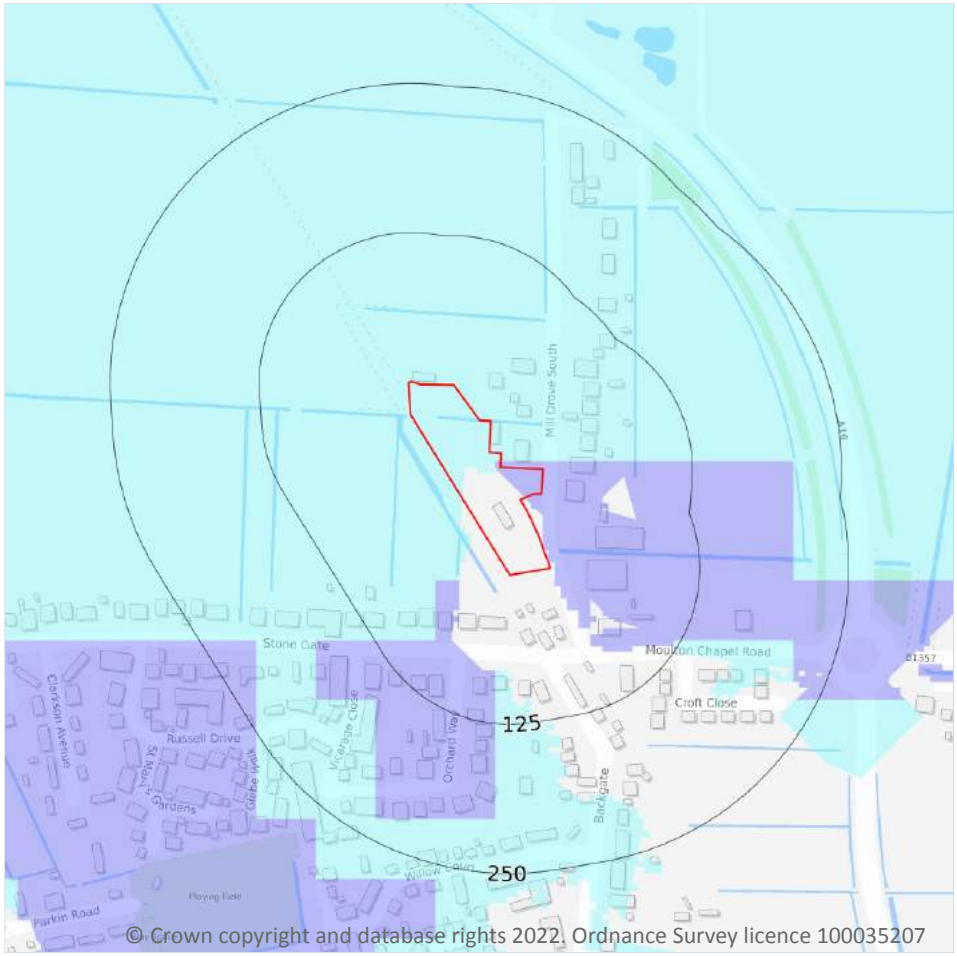
6.5 WFD Groundwater bodies

Records on site	**0**

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.

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	3

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 53**

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

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.

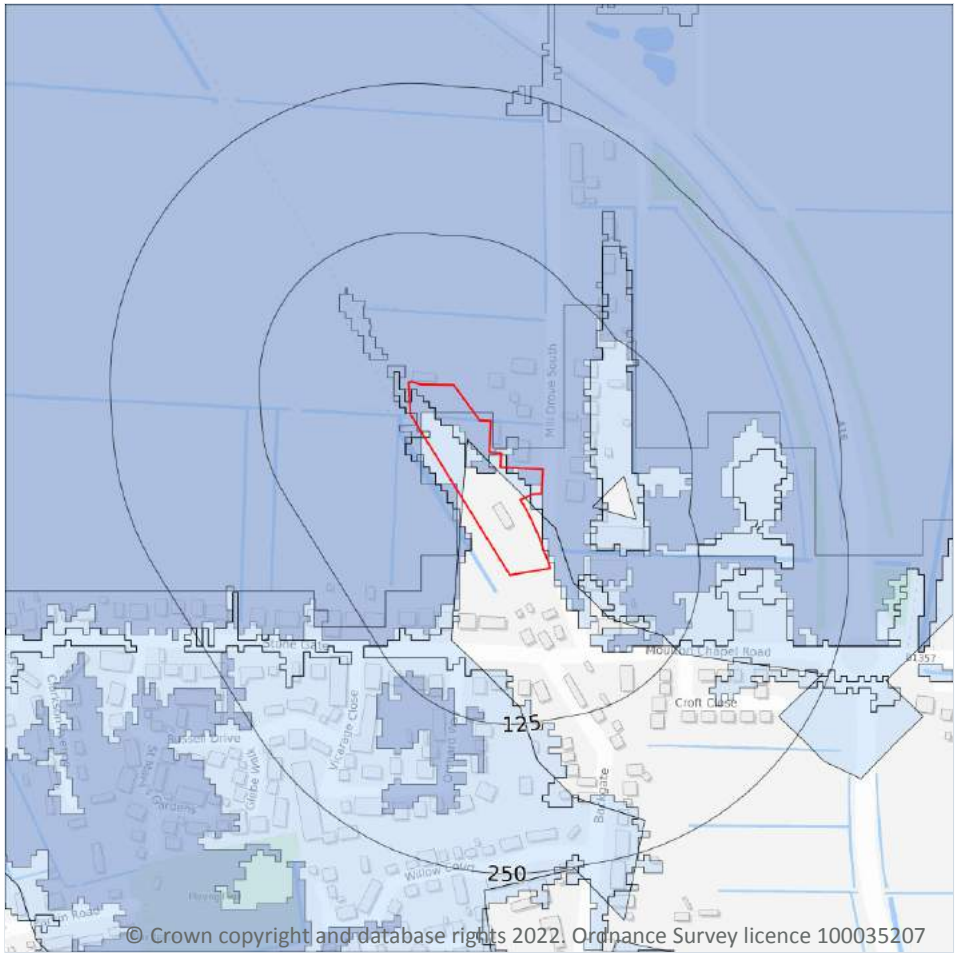
7.5 Flood Storage Areas

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 53**

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

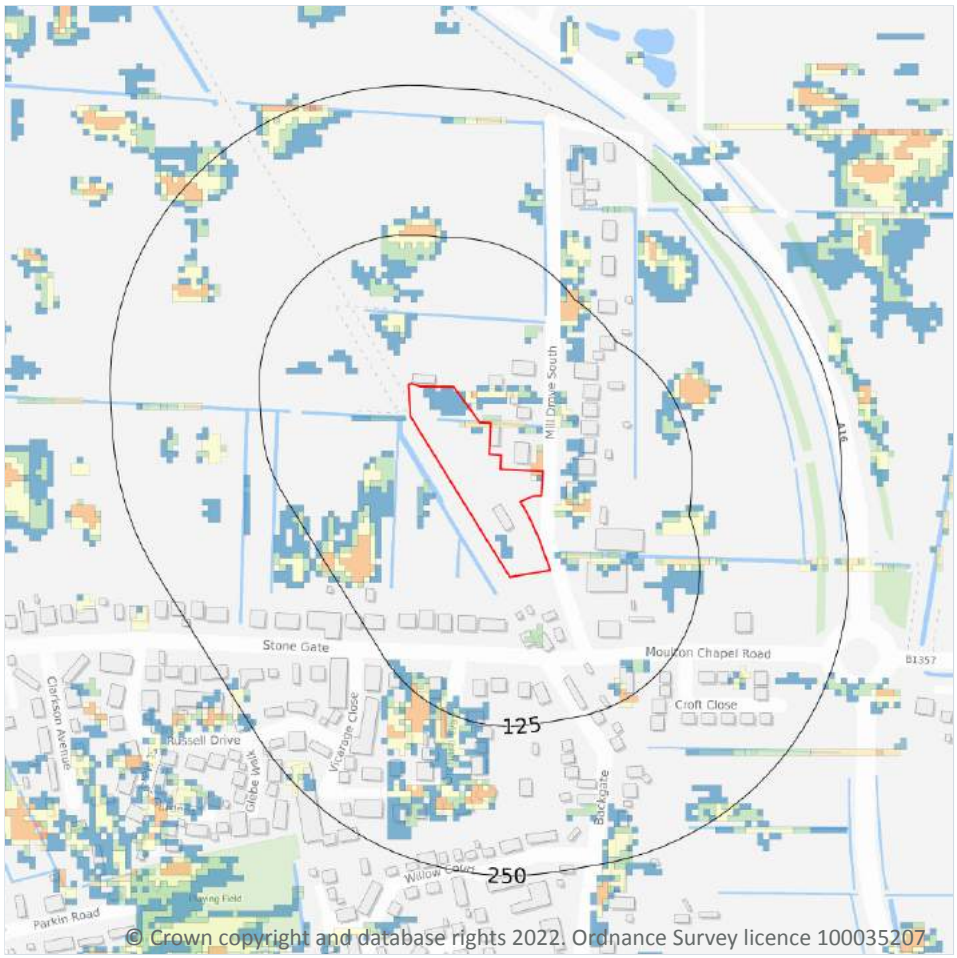
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 53**

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, 0.1m - 0.3m**
Highest risk within 50m	**1 in 30 year, 0.1m - 0.3m**

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 57**

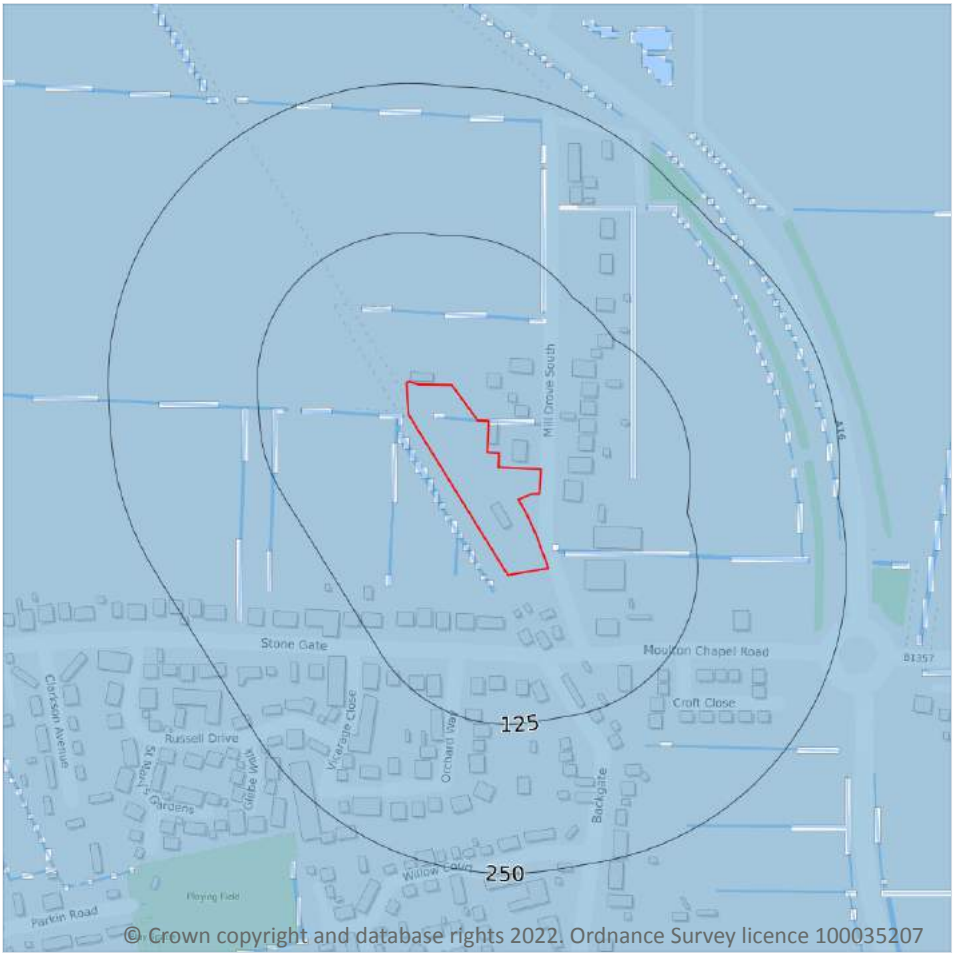
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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 0.1m and 0.3m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

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

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 59**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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.

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

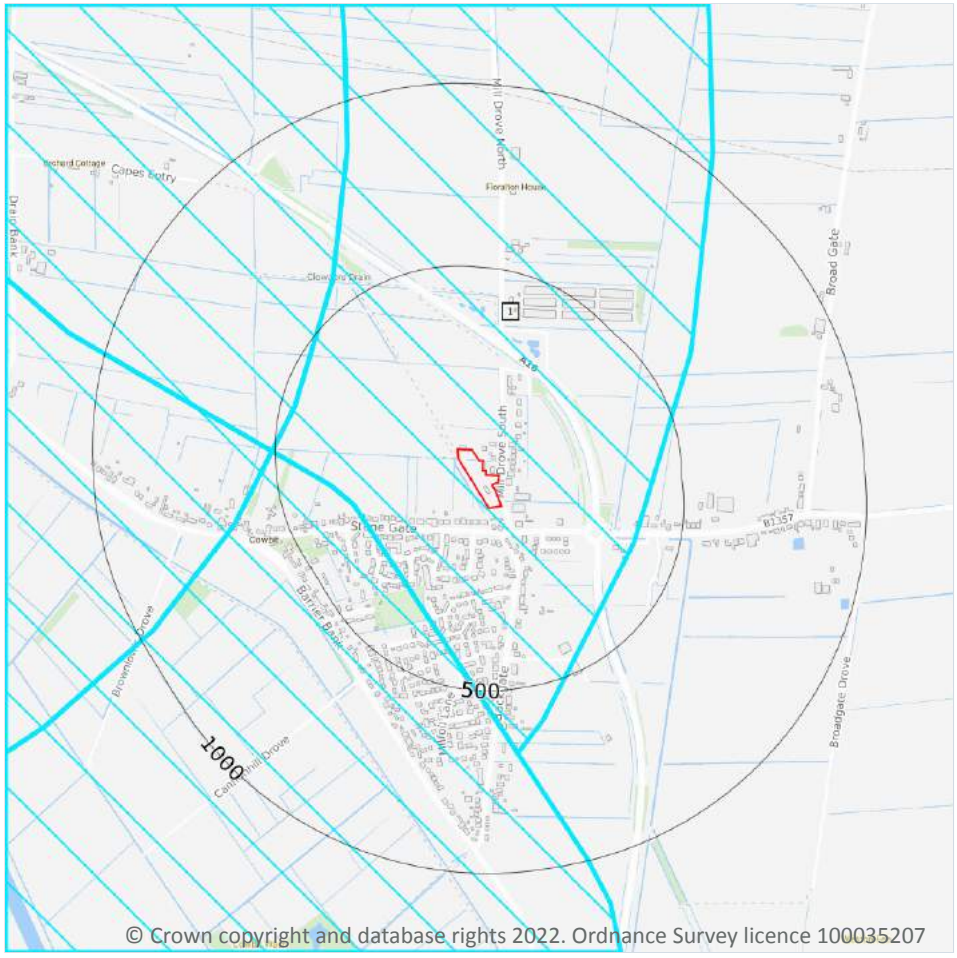
Records within 2000m	2

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
560m SW	River Welland NVZ	Surface Water	832	Existing
1638m SW	Vernatt's Drain NVZ	Surface Water	379	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	1

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 64**

ID	Location	Type of developments requiring consultation
1	**On site**	**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.**

This data is sourced from Natural England.

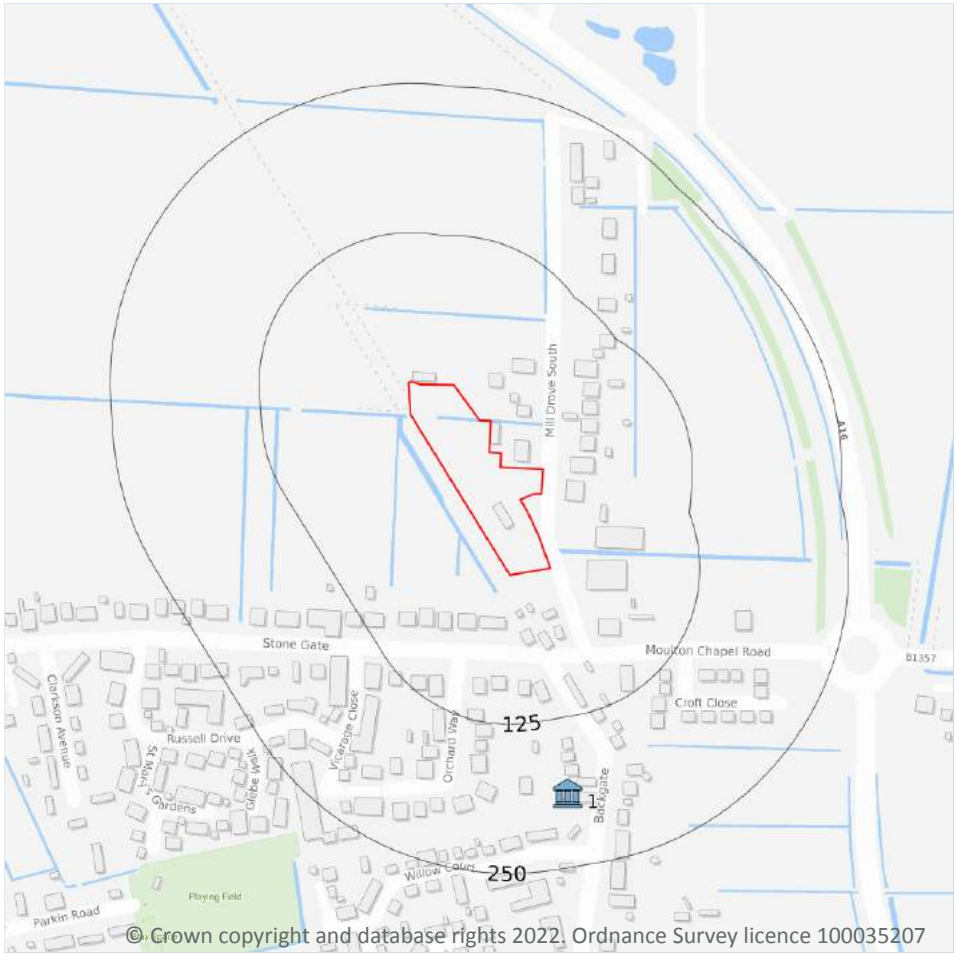
10.18 SSSI Units

Records within 2000m	0

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.

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

11 Visual and cultural designations



© Crown copyright and database rights 2022. Ordnance Survey licence 100035207

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	1

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 66**

ID	Location	Name	Grade	Reference Number	Listed date
1	189m S	Mill, Cowbit, South Holland, Lincolnshire, PE12	II	1359258	13/01/1988

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.

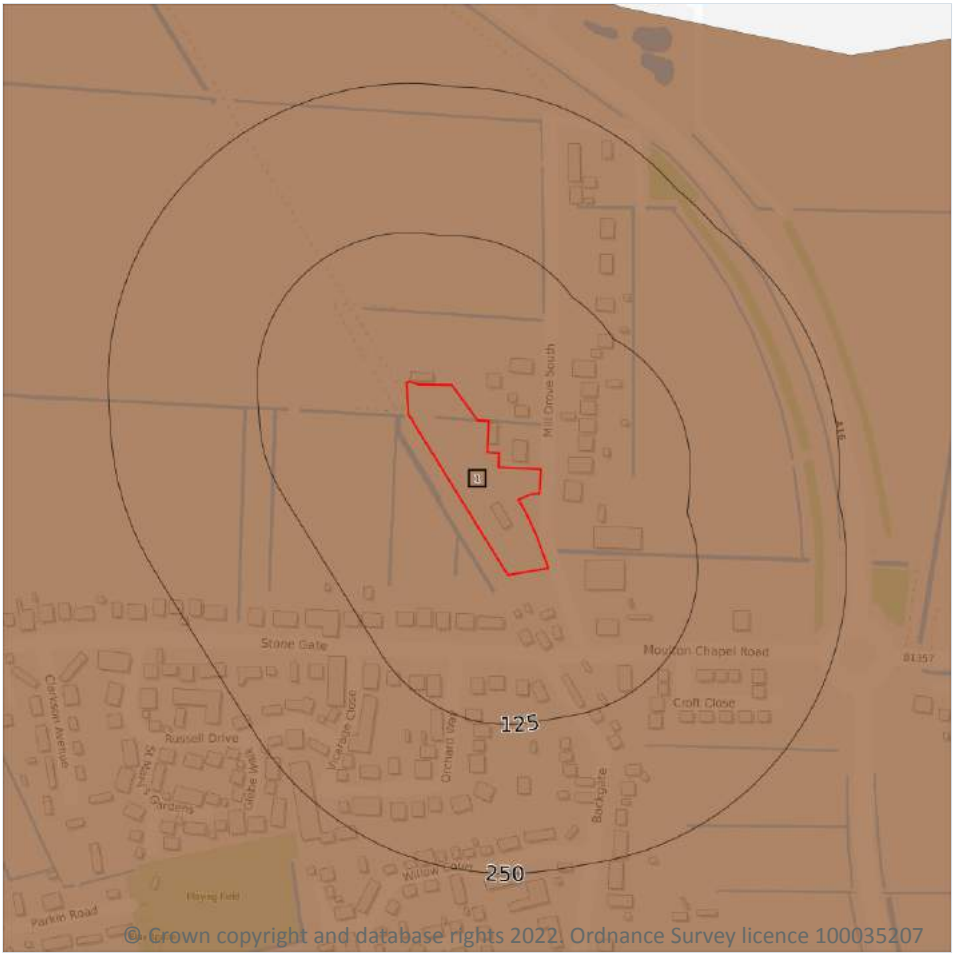
11.7 Registered Parks and Gardens

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	1

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 69**

ID	Location	Classification	Description
1	**On site**	**Grade 1**	**Excellent quality agricultural land. Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.**

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	0

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.

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	0

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.

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m	0

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

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	1

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 72**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**TF21NE**

This data is sourced from the British Geological Survey.

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

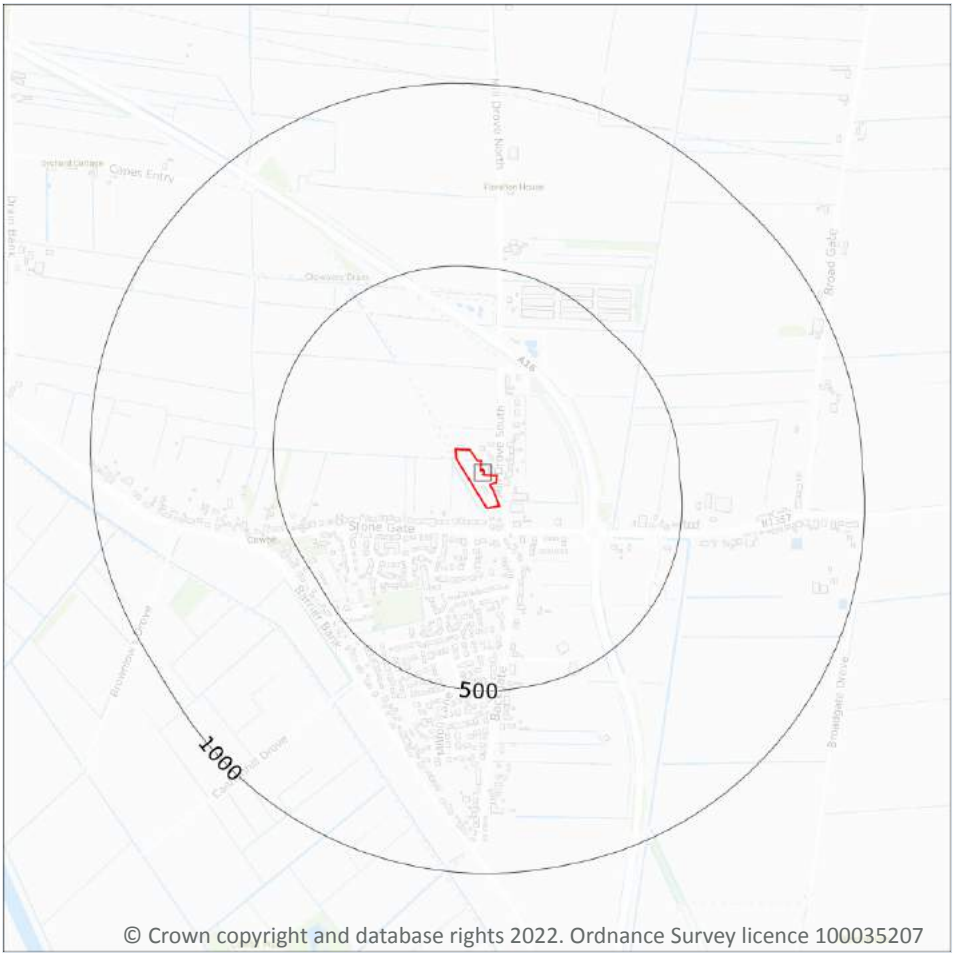
14.2 Artificial and made ground (10k)

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 **1**

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 74**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**SUPNM-UKNOWN**	**Superficial Theme Not Mapped [for Digital Map Use Only] - Unknown/unclassified Entry**	**Unknown/unclassified Entry**

This data is sourced from the British Geological Survey.

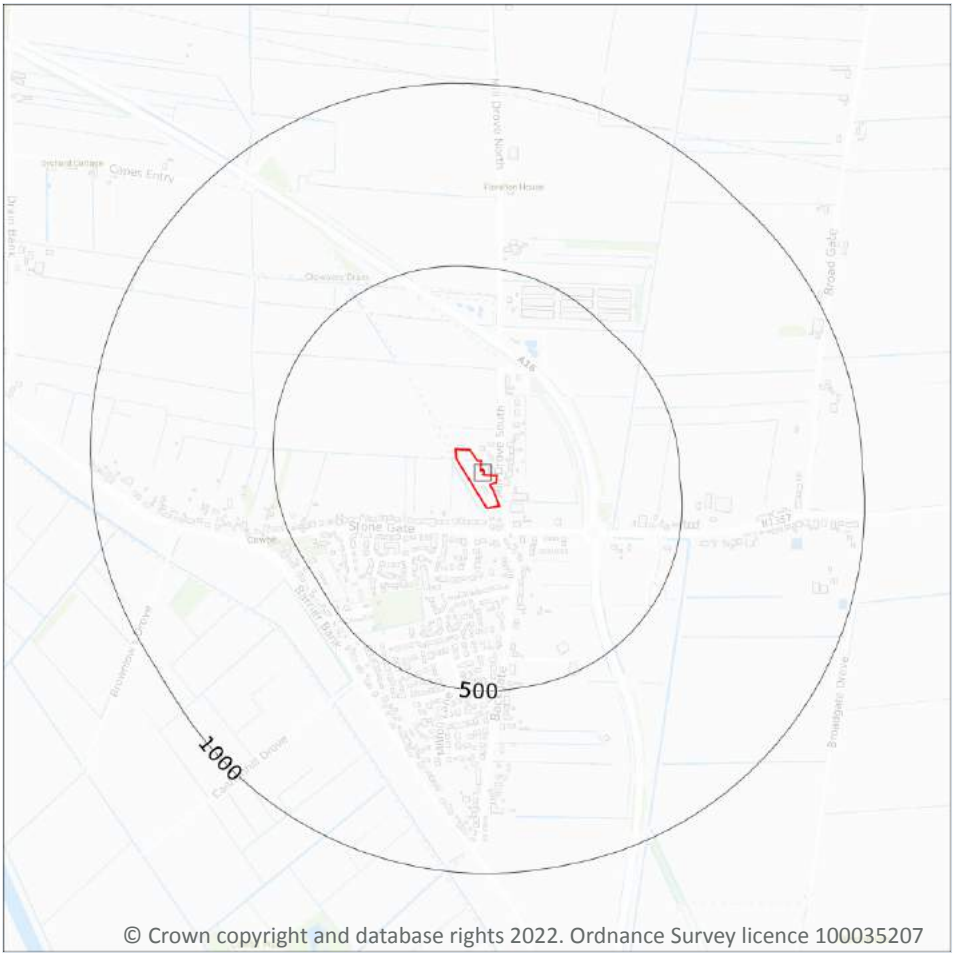
14.4 Landslip (10k)

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	1

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 76**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**BEDNM-UKNOWN**	**Bedrock Theme Not Mapped [for Digital Map Use Only] - Unknown/unclassified Entry**	**No Details**

This data is sourced from the British Geological Survey.

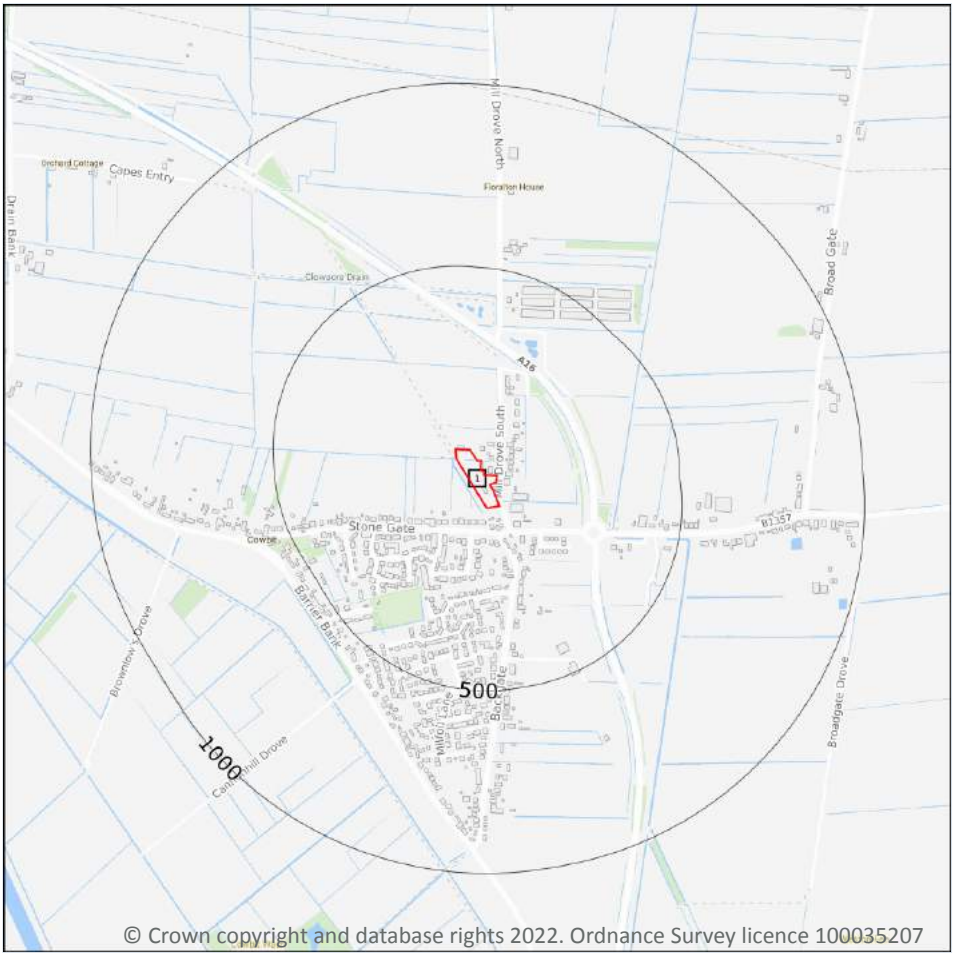
14.6 Bedrock faults and other linear features (10k)

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 78**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**EW144_spalding_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.

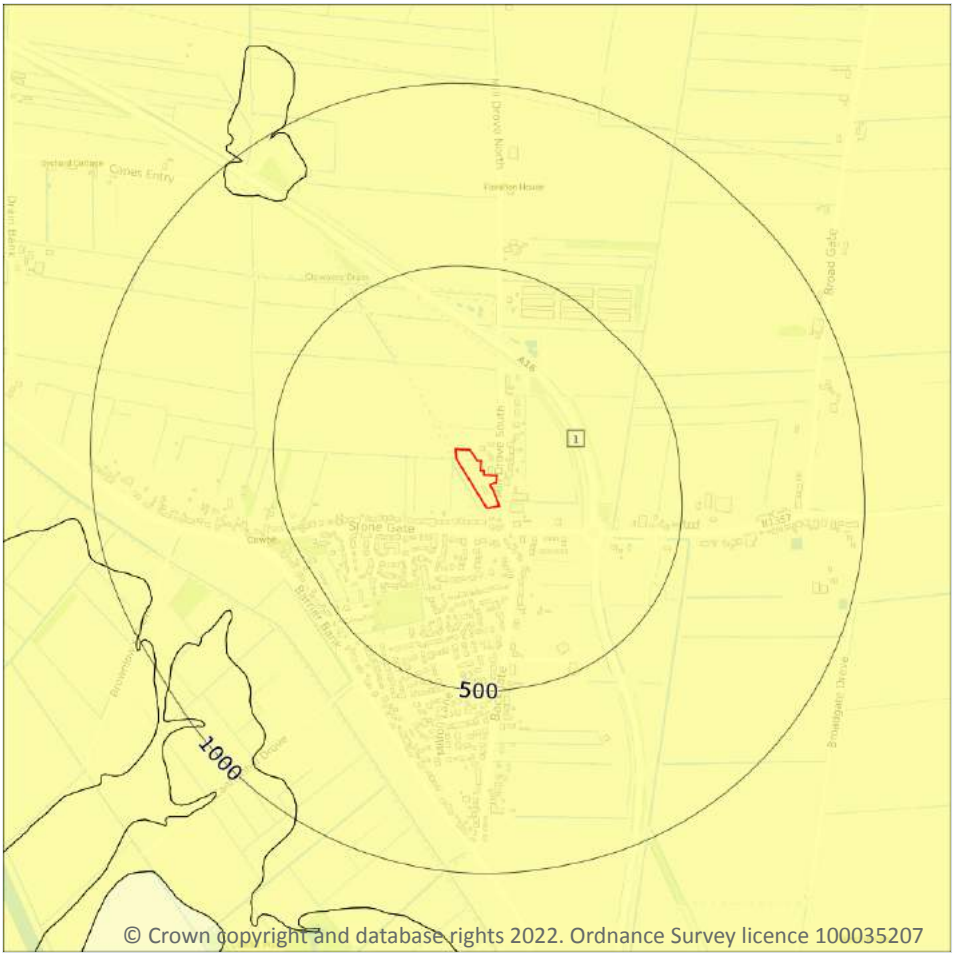
15.3 Artificial ground permeability (50k)

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 **1**

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 80**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**TFD-XCZ**	**TIDAL FLAT DEPOSITS**	**CLAY AND SILT**

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

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**	**Low**	**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 82**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**OXC-MDST**	**OXFORD CLAY FORMATION - MUDSTONE**	**CALLOVIAN**

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1

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	**Fracture**	**Low**	**Very Low**

This data is sourced from the British Geological Survey.

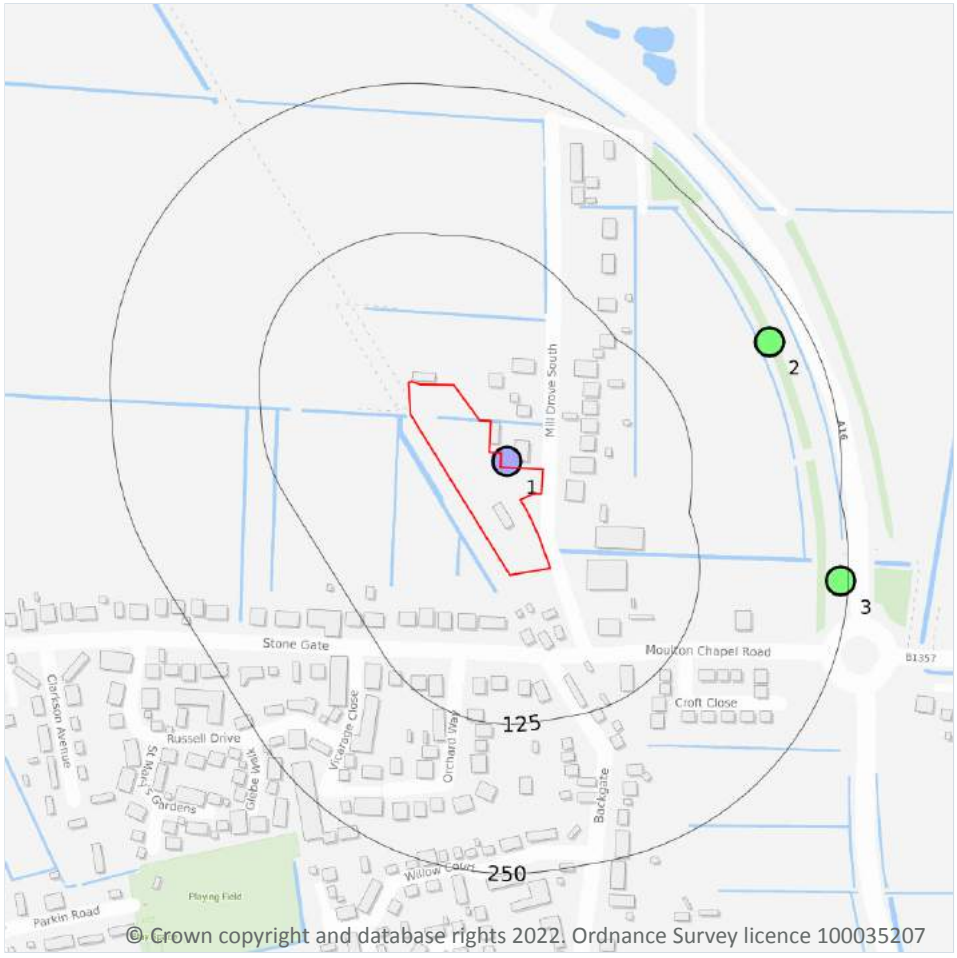
15.10 Bedrock faults and other linear features (50k)

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



Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m	3

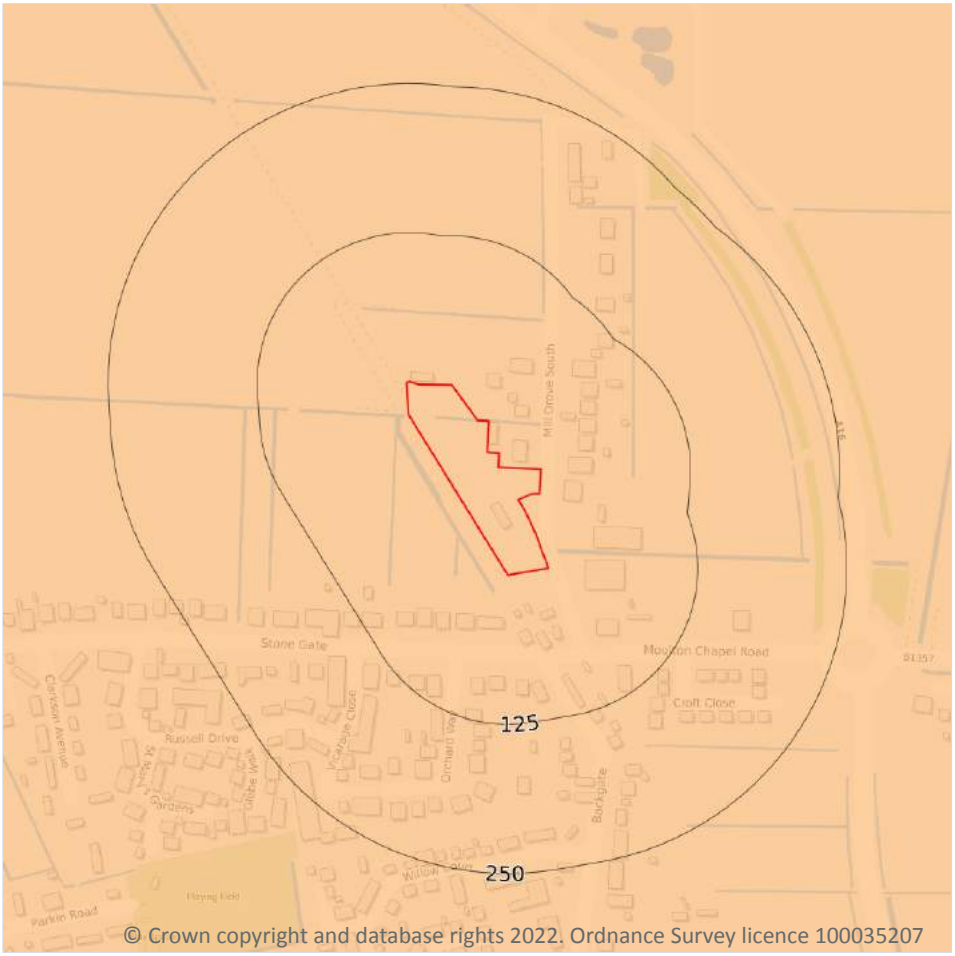
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

Features are displayed on the Boreholes map on **page 84**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	5m NE	526560 318200	C5 COWBIT	7.0	N	473366
2	218m NE	526780 318300	A1073 LINE 5 RE-ALIGNMENT 43	13.5	N	473399
3	244m E	526840 318100	A1073 LINE 5 RE-ALIGNMENT 46	10.6	N	473400

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	1

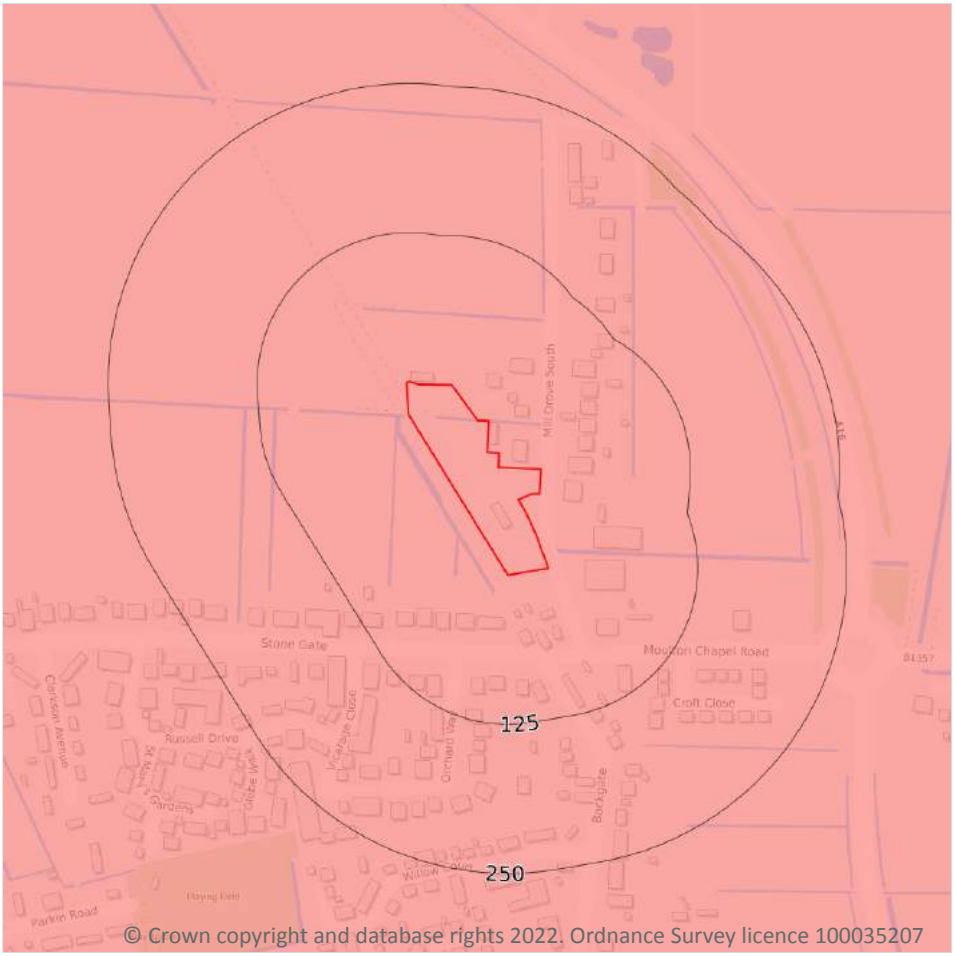
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 86**

Location	Hazard rating	Details
On site	**Low**	**Ground conditions predominantly medium 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

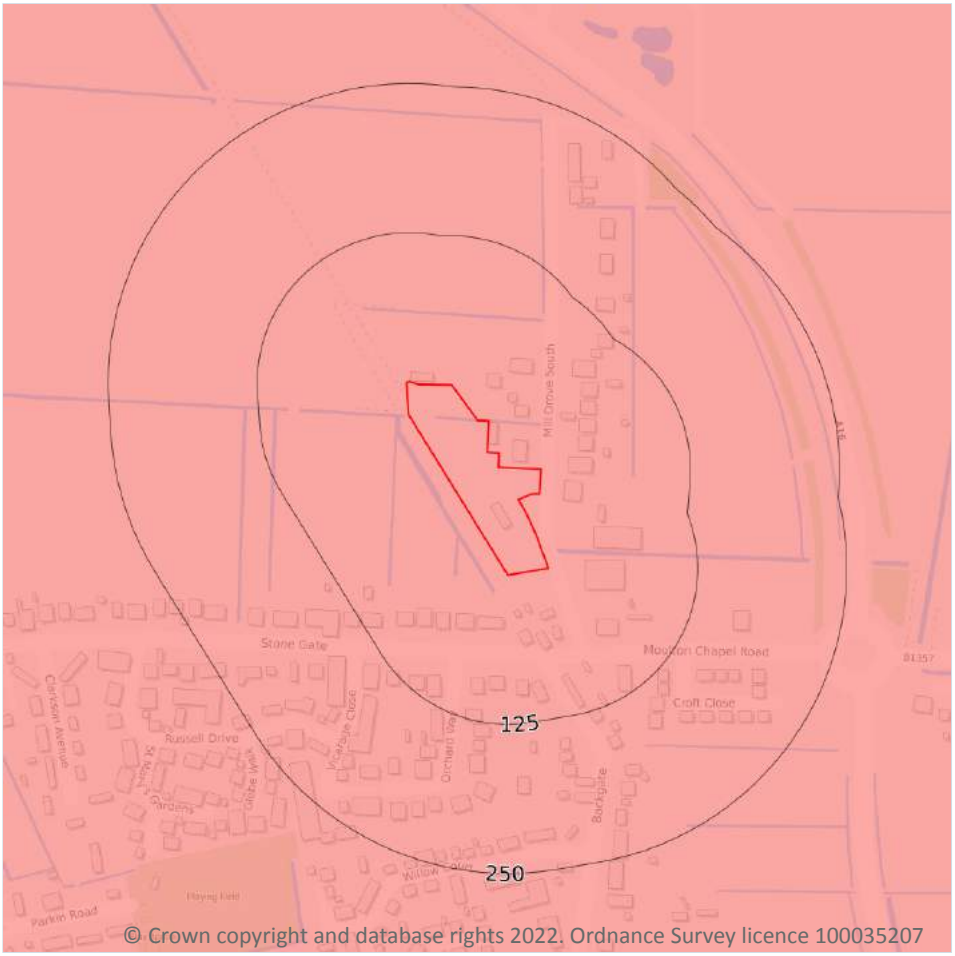
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 87**

Location	Hazard rating	Details
On site	**Moderate**	**Running sand conditions are probably 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	1

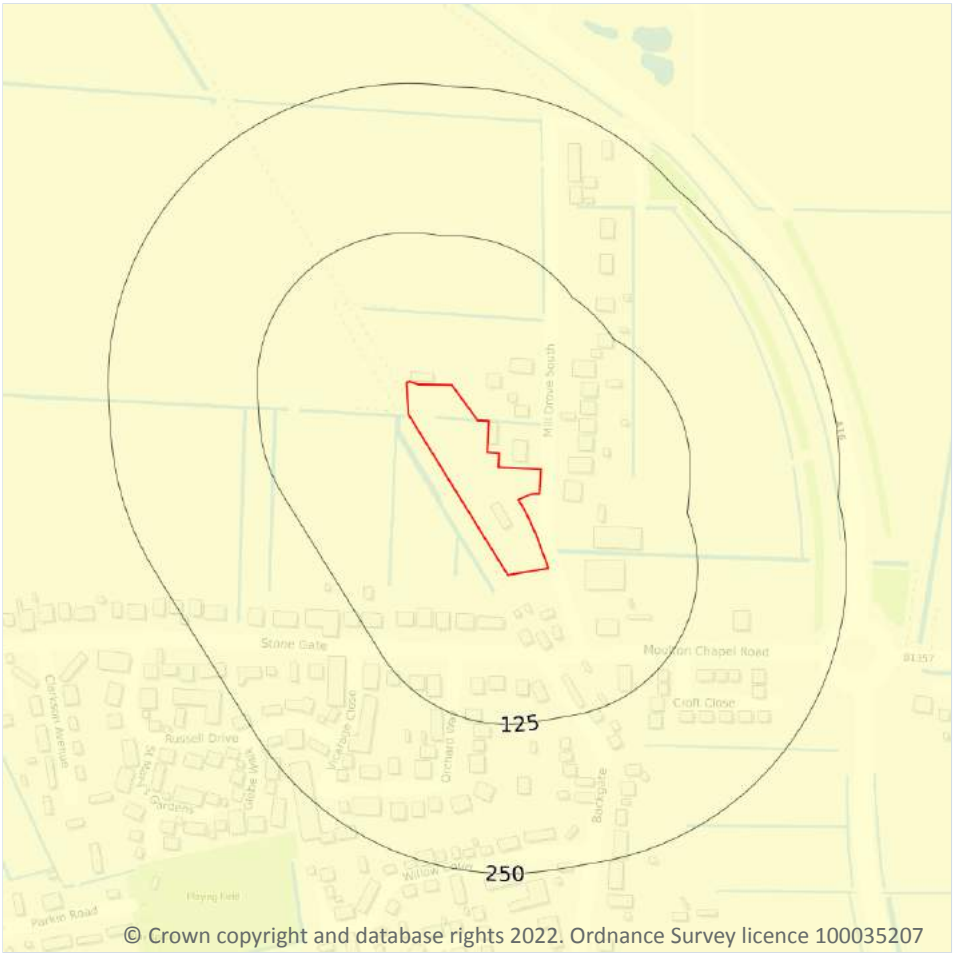
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 88**

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



© Crown copyright and database rights 2022. Ordnance Survey licence 100035207

Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

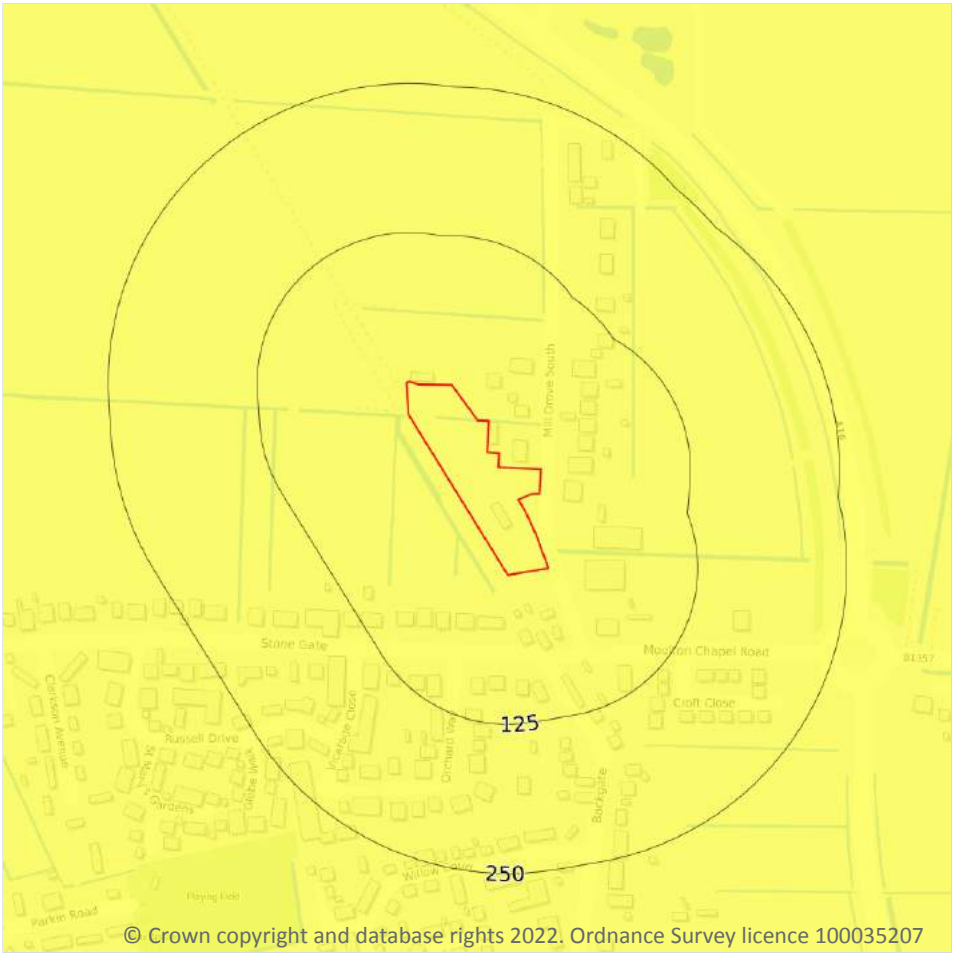
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 89**

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

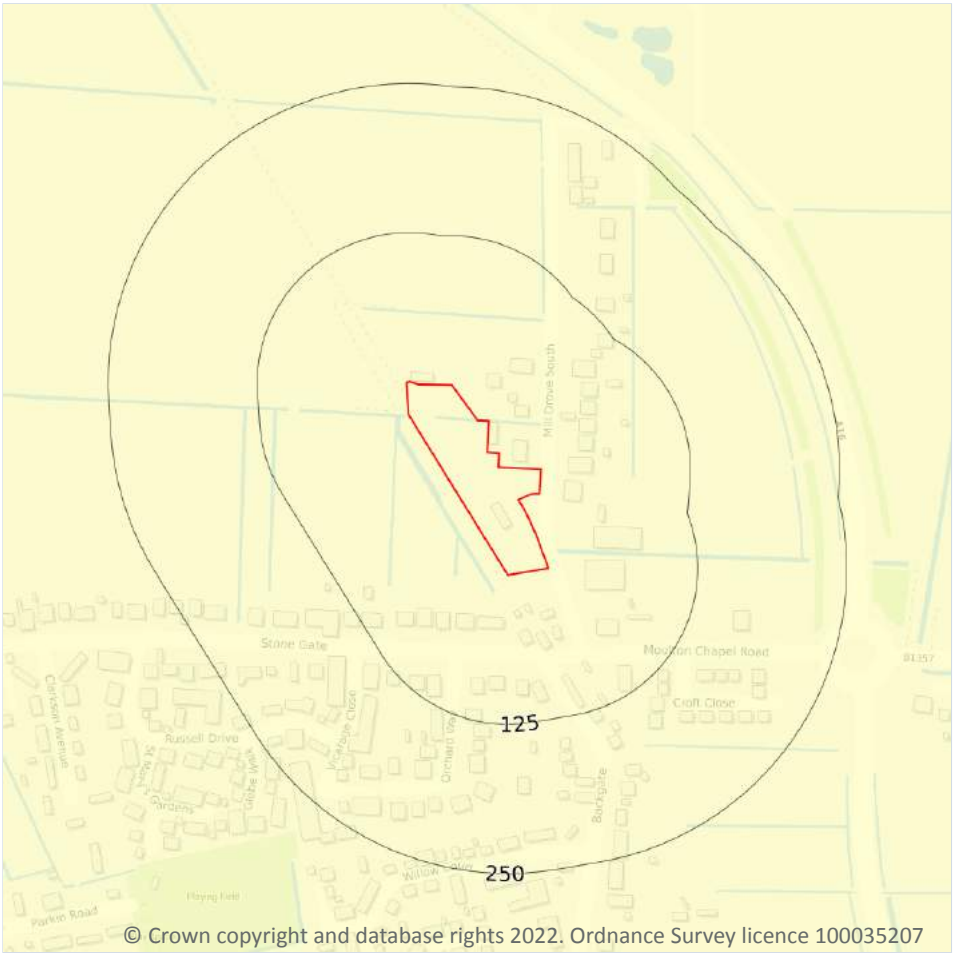
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 90**

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



© Crown copyright and database rights 2022. Ordnance Survey licence 100035207

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 91**

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	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.

18.3 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, ground workings and natural cavities map on **page 92**

ID	Location	Land Use	Year of mapping	Mapping scale
1	6m SE	Pond	1887	1:10560
2	19m S	Pond	1887	1:10560
3	99m S	Pond	1887	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	4

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 92**

ID	Location	Land Use	Year of mapping	Mapping scale
-	914m S	Tunnel	1989	1:10000
-	914m S	Tunnel	1977	1:10000
-	932m S	Tunnel	1951	1:10560
-	935m S	Tunnel	1951	1:10560

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	0

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

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.

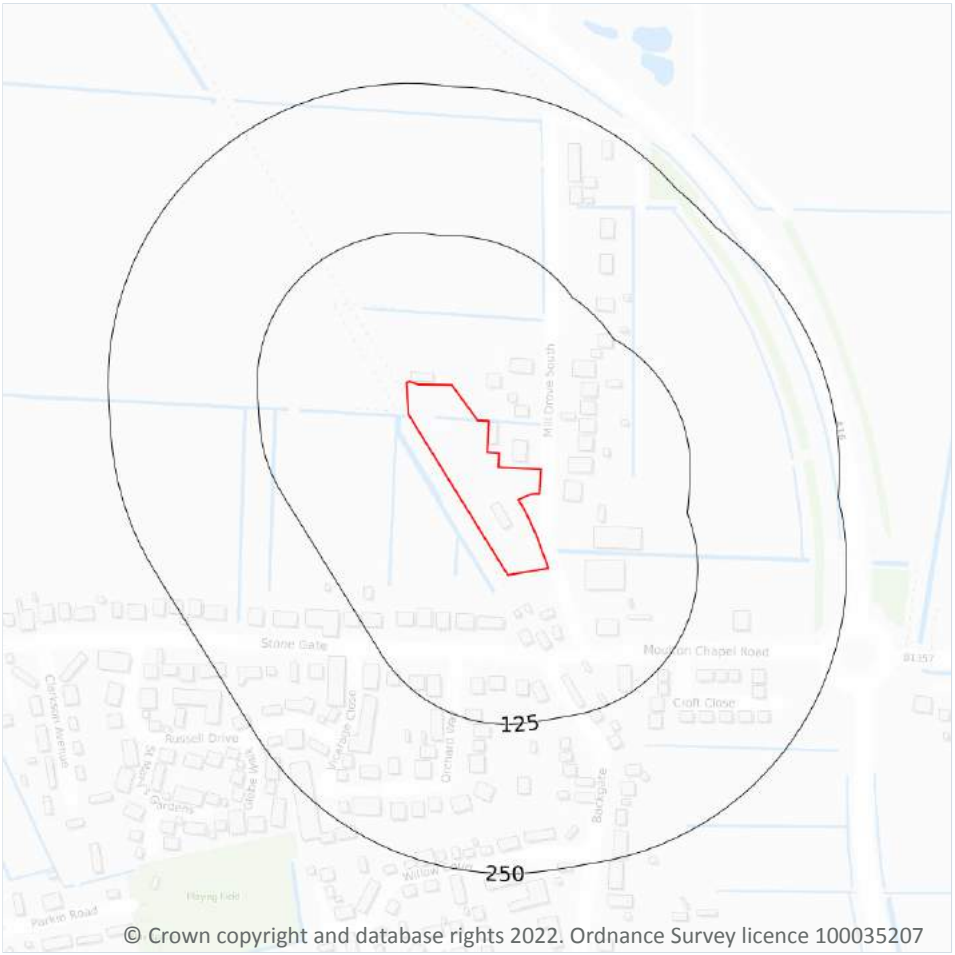
18.13 Clay mining

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

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 96**

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

This data is sourced from the British Geological Survey and Public Health England.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m	2

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**

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.

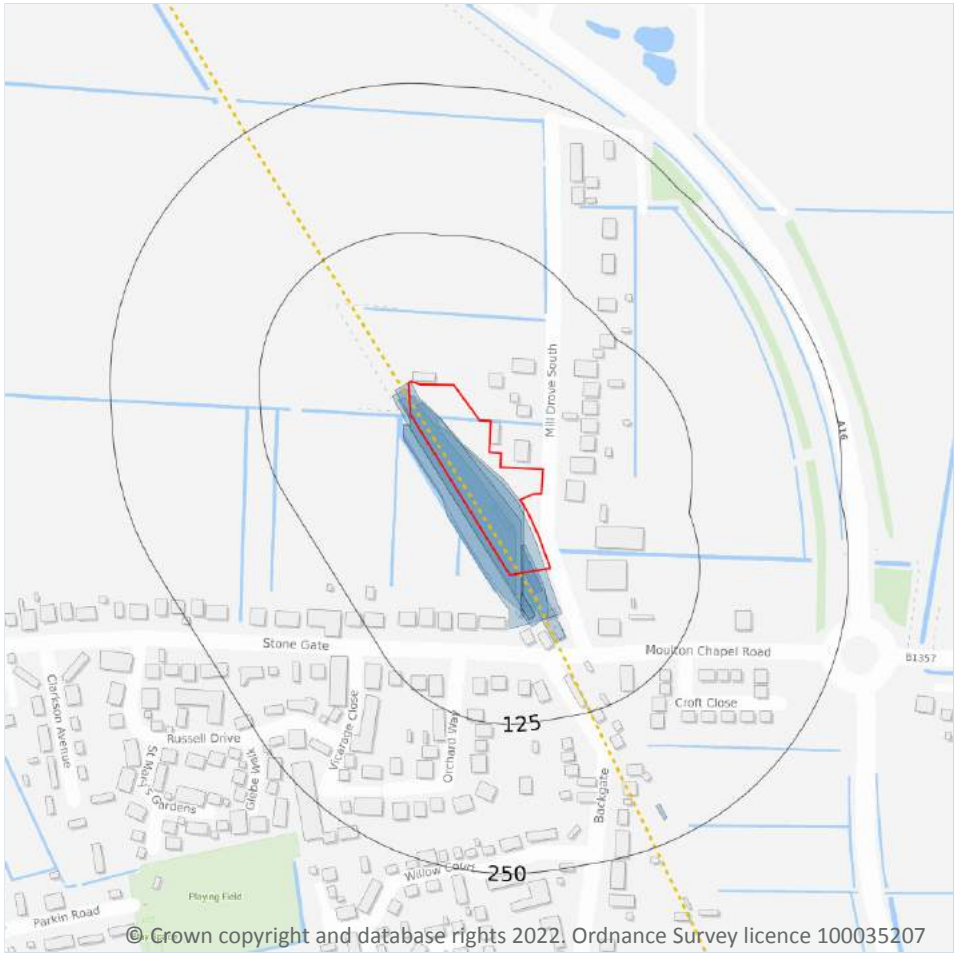
20.3 BGS Measured Urban Soil Chemistry

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



© Crown copyright and database rights 2022. Ordnance Survey licence 100035207

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	8

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.

Features are displayed on the Railway infrastructure and projects map on **page 98**

Location	Land Use	Year of mapping	Mapping scale
On site	**Railway Sidings**	**1938**	**10560**
On site	**Railway Sidings**	**1887**	**10560**
On site	**Railway Sidings**	**1951**	**10560**
On site	**Railway Sidings**	**1903**	**10560**
On site	**Railway Sidings**	**1950**	**10560**
On site	**Railway Sidings**	**1906**	**10560**
16m S	Railway Sidings	1903	10560
218m SE	Railway Sidings	1974	2500

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	2

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

Features are displayed on the Railway infrastructure and projects map on **page 98**

Location	Description
On site	**Abandoned**
0m NW	Abandoned

This data is sourced from OpenStreetMap.

21.7 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.

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.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-jan-2020/.